1915.

NEW ZEALAND.

TRENTHAM CAMP COMMISSION

(REPORT OF), TOGETHER WITH MINUTES OF EVIDENCE.

Presented to both Houses of the General Assembly by Command of His Excellency.

COMMISSION

TO INQUIRE INTO AND REPORT ON THE ADMINISTRATION OF THE CAMP OF THE NEW ZEALAND EXPEDITIONARY FORCES AT TRENTHAM.

LIVERPOOL, Governor.

To all to whom these presents shall come, and to the Honourable John Henry Hosking, a Judge of the Supreme Court of New Zealand; William Ferguson, Esquire, of Wellington, Civil Engineer; and Arthur Anderson Martin, Esquire, of Palmerston North, Medical Practitioner: Greeting.

WHEREAS it is expedient that inquiry should be made into the administration of the camp of the New Zealand Expeditionary Forces at Trentham during the present war so far as such administration relates in any manner to the health, comfort, feeding, clothing, treatment, and accommodation of the troops:

Now, therefore, I, Arthur William de Brito Savile, Earl of Liverpool, the Governor of the Dominion of New Zealand, in exercise of the powers conferred by the Commissions of Inquiry Act, 1908, and of all other powers and authorities enabling me in this behalf, and acting by and with the advice and consent of the Executive Council of the said Dominion, do hereby constitute and appoint you, the said

JOHN HENRY HOSKING,
WILLIAM FERGUSON, and
ARTHUR ANDERSON MARTIN,

to be a Commission to inquire into the administration of the camp of the New Zealand Expeditionary Forces at Trentham during the present war so far as such administration relates in any manner to the health, comfort, feeding, clothing, treatment, and accommodation of the troops, and in particular to inquire into the following matters:—

(1.) The extent, nature, and causes of sickness among the troops at the camp.
(2.) The extent and causes of mortality among the troops.
(3.) Whether due care and efficient measures have been at all times taken to prevent or minimize such sickness or mortality.
(4.) Whether an efficient system for the treatment of the sick has at all times existed in connection with the camp.

(5.) Whether an efficient system of medical inspection of the troops has at all times existed.

(6.) Whether in any cases the sick have been neglected or improperly treated.

(7.) Whether undue delay has in any cases taken place in the removal of the sick from the camp to a hospital.

(8.) Whether proper notification has at all times been made to the relatives of the sick, and sufficient facilities given to those relatives to afford assistance or comfort.

(9.) Whether an efficient system of drainage, water-supply, and sanitation has at all times existed in respect of the camp.

(10.) Whether the camp is suitably situated, equipped, and arranged for the purposes for which it is used.

(11.) Whether sufficient sanitary or other reasons exist for the removal of the camp from its present situation.

(12.) Whether the food supplied to the troops has been at all times sufficient and of good quality, and properly prepared and served.

(13.) Whether the clothing supplied to the troops has been at all times of proper quality and sufficient in amount.

(14.) Whether the tents, huts, and other accommodation for the troops have at all times been sufficient, suitable, and proper for the purpose.

(15.) Whether in any respect the troops have been at any time exposed to undue and preventable hardships or discomforts.

(16.) Whether any officers of the Defence Forces, or of the Expeditionary Forces, or of the Public Service, charged with the administration or control of any of the matters aforesaid, have in any respect been incompetent or negligent, or have in any manner been guilty of neglect of duty or misconduct in their office.

And with the like advice and consent I do further appoint you, the said

JOHN HENRY HOSKING,

to be the Chairman of the said Commission.

And for the better enabling you, the said Commission, to carry these presents into effect you are hereby authorized and empowered to make and conduct any inquiry under these presents at such times and places in the said Dominion as you deem expedient, with power to adjourn from time to time and place to place as you think fit, and to call before you and examine on oath or otherwise, as may be allowed by law, such person or persons as you think capable of affording you information in the premises; and you are also hereby empowered to call for and examine all such books, papers, writings, documents, or records as you deem likely to afford you the fullest information on the subject-matter of the inquiry hereby directed to be made, and to inquire of and concerning the premises by all lawful means whatsoever.

And, using all diligence, you are required to report to me, under your hands and seals, not later than the first day of August, one thousand nine hundred and fifteen, your opinion as to the aforesaid matters.

And it is hereby declared that these presents shall continue in full force and virtue although the inquiry is not regularly continued from time to time or from place to place by adjournment.

And, lastly, it is hereby further declared that these presents are issued under and subject to the provisions of the Commissions of Inquiry Act, 1908.

Given under the hand of His Excellency the Right Honourable Arthur William de Brito Savile, Earl of Liverpool, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Member of the Royal Victorian Order, Governor and Commander-in-Chief in and over His Majesty's

Dominion of New Zealand and its Dependencies; and issued under the Seal of the said Dominion, at the Government House, at Wellington, this tenth day of July, in the year of our Lord one thousand nine hundred and fifteen.

J. ALLEN,
Minister of Defence.

Approved in Council.
J. F. ANDREWS,
Clerk of the Executive Council.

EXTENSION OF TIME FOR FORWARDING REPORT OF TRENTHAM INQUIRY COMMISSION.

LIVERPOOL, Governor.

To all to whom these presents shall come, and to the Honourable John Henry Hosking, a Judge of the Supreme Court of New Zealand; William Ferguson, Esquire, of Wellington, Civil Engineer; and Arthur Anderson Martin, Esquire, of Palmerston North, Medical Practitioner: Greeting.

WHEREAS by a Warrant dated the tenth day of July, one thousand nine hundred and fifteen, and issued under my hand and the Public Seal of the Dominion, you were appointed a Commission to inquire into and report upon the administration of the camp of the New Zealand Expeditionary Forces at Trentham during the present war so far as such administration relates in any manner to the health, comfort, feeding, clothing, treatment, and accommodation of the troops, and you were directed and required to report to me on or before the first day of August then next ensuing your proceedings and your opinion touching the matters mentioned therein: And whereas it is expedient that the said period should be extended as hereinafter provided:

Now, therefore, I, Arthur William de Brito Savile, Earl of Liverpool, the Governor of the Dominion of New Zealand, in exercise of the powers conferred by the Commissions of Inquiry Act, 1908, and of all other powers and authorities enabling me in this behalf, and acting by and with the advice and consent of the Executive Council of the said Dominion, do hereby declare and appoint that the time at or before which you shall present to me your report aforesaid is hereby extended to the sixteenth day of August, one thousand nine hundred and fifteen.

And with the like advice and consent, and in further pursuance of the said power and authority, I do hereby confirm the said Commission.

Given under the hand of His Excellency the Right Honourable Arthur William de Brito Savile, Earl of Liverpool, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Member of the Royal Victorian Order, Governor and Commander-in-Chief in and over His Majesty's Dominion of New Zealand and its Dependencies; and issued under the Seal of the said Dominion, at the Government House, at Wellington, this twenty-ninth day of July, in the year of our Lord one thousand nine hundred and fifteen.

J. ALLEN,
Minister of Defence.

Approved in Council.
J. F. ANDREWS,
Clerk of the Executive Council.

FURTHER EXTENSION OF TIME FOR FORWARDING REPORT OF TRENTHAM INQUIRY COMMISSION.

LIVERPOOL, Governor.

To all to whom these presents shall come, and to the Honourable John Henry Hosking, a Judge of the Supreme Court of New Zealand; William Ferguson, Esquire, of Wellington, Civil Engineer; and Arthur Anderson Martin, Esquire, of Palmerston North, Medical Practitioner: Greeting.

WHEREAS by a Warrant dated the tenth day of July, one thousand nine hundred and fifteen, and issued under my hand and the Public Seal of the Dominion, you were appointed a Commission to inquire into and report upon the administration of the camp of the New Zealand Expeditionary Forces at Trentham during the present war so far as such administration relates in any manner to the health, comfort, feeding, clothing, treatment, and accommodation of the troops, and you were directed and required to report to me on or before the first day of August then next ensuing your proceedings and your opinion touching the matters mentioned therein: And whereas by a Warrant dated the twenty-ninth day of July, one thousand nine hundred and fifteen, the time within which you were required to report to me was extended to the sixteenth day of August, one thousand nine hundred and fifteen: And whereas it is expedient that the said period should be further extended as hereinafter provided:

Now, therefore, I, Arthur William de Brito Savile, Earl of Liverpool, the Governor of the Dominion of New Zealand, in exercise of the powers conferred by the Commissions of Inquiry Act, 1908, and of all other powers and authorities enabling me in this behalf, and acting by and with the advice and consent of the Executive Council of the said Dominion, do hereby declare and appoint that the time at or before which you shall present to me your report aforesaid is hereby extended to the thirtieth day of August, one thousand nine hundred and fifteen.

And with the like advice and consent, and in further pursuance of the said power and authority, I do hereby confirm the said Commission.

Given under the hand of His Excellency the Right Honourable Arthur William de Brito Savile, Earl of Liverpool, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Member of the Royal Victorian Order, Governor and Commander-in-Chief in and over His Majesty's Dominion of New Zealand and its Dependencies; and issued under the Seal of the said Dominion, at the Government House, at Wellington, this sixteenth day of August, in the year of our Lord one thousand nine hundred and fifteen.

J. ALLEN,
Minister of Defence.

Approved in Council.

J. F. ANDREWS,
Clerk of the Executive Council.

REPORT.

In the matter of a Commission dated the 8th day of July, 1915, under the hand of His Excellency the Governor, to the Honourable Mr. Justice Hosking, William Ferguson, Esq., and Arthur Anderson Martin, Esq., to inquire into and report on the administration of the Camp of the New Zealand Expeditionary Forces at Trentham.

To His Excellency the Governor.

MAY IT PLEASE YOUR EXCELLENCY,—

We have the honour to report as follows:—

ACTION OF COMMISSION.

Arrangement of procedure

1. We entered upon the duties imposed on us by the Commission at as early a date as was practicable after its issue. We sat first on the 13th July, 1915, in order to settle the procedure. It was arranged, on the suggestion of the Commission, that counsel should attend to act on behalf of those who desired to make complaints, and that separate counsel should do so on behalf of all those who might be involved in any charges that arose in the course of the inquiry. Mr. Skerrett, K.C., and Mr. Gray, K.C., afterwards appeared in those capacities respectively. The Solicitor-General attended to assist the Commissioners, but upon the footing that he was not to be regarded as in the light of prosecuting counsel.

Advertisements.

2. We caused advertisements to be inserted in the newspapers at the four centres and at Palmerston North inviting those who desired to give evidence to communicate with Mr. Skerrett or Mr. Gray according to the nature of their evidence.

Dates of sittings.

3. The first sitting at which evidence was given took place on the 16th July, and the sittings were repeated on the 17th, 19th, 20th, 21st, 22nd, 23rd, 24th, 26th, 27th, 28th, 29th, 30th, and 31st July, and on the 2nd, 3rd, 4th, 5th, 6th, 7th, 9th, and 10th August, that of the 31st July being held at Trentham Camp.

Expenses and immunities of witnesses.

4. An announcement was made at the meeting on the 17th July to the effect that all witnesses attending upon subpœna would be entitled to maintenance and travelling-expenses in accordance with the Code scale of allowance to witnesses in a civil action in the Supreme Court, and also that all witnesses giving evidence would possess the same privileges and immunities as a witness in such an action is granted.

Witnesses taken at Trentham.

5. In anticipation of the sitting at Trentham on the 31st July, the attendance of the Commission was announced in the camp orders, so that it might come within the cognizance of all those in camp. Several witnesses were examined there, four of them having been picked at random from men about the camp by the secretary to the Commission.

Inspection of camp and hospital accommodation.

6. On the 18th July we paid a visit of inspection to the camp and the racecourse hospital. We also supplemented our visit of inspection when we visited the camp on the 31st July. On the 2nd August we inspected Berhampore, then unoccupied. Nurse Faram accompanied us to indicate the various quarters occupied by patients. One of the Commissioners, Dr. Martin, inspected in detail the accommodation for patients at Levin and Co.'s store, Kaiwarra, and the racecourse hospital.

Note of evidence.

7. We examined in all 100 witnesses, and a shorthand note of their evidence was taken, the transcription of which was afterwards signed by them. The Index A herewith sets forth the witnesses' names and with a brief statement of the topics to which each spoke. In addition to the oral evidence, which was taken on oath, numerous plans, returns, and other papers were presented and considered.

Visit of medical men at request of Commission.

8. As the result of the Commission's visit to the camp, seven representative medical men, including the Acting-Chairman and Secretary of the Council of the New Zealand Branch of the British Medical Association, were asked by us to visit the racecourse hospital with a view to giving evidence. They paid two visits, one on the 19th and the other on the 31st July, and subsequently evidence was given by one of them on behalf of all. These gentlemen were Drs. Christie, Elliott, Gibbs, Giesen, Herbert, Mason, and Pattie.

Counsel.

9. Throughout the inquiry the counsel above named attended in the capacities mentioned, and rendered great assistance to the Commission in the presentation of the evidence. The Solicitor-General at all times caused persons and papers to be produced whenever suggested by the Commission. With the concurrence of the Commission, Mr. Skerrett exercised a discretion in dealing with the communications he received, so that immaterial evidence should not be given and unnecessary expense incurred.

Thanks.

10. Thanks are due in particular to Dr. De Lautour, the Rev. Mr. Bates, Mr. Robb, and Dr. Frengley for the great pains taken by them in preparing the matter they submitted and for the authorities they brought before us.

Opportunity to answer charges.

11. It was announced at an early stage of the proceedings that every person who might be involved in anything of the nature of a charge against him was to have the opportunity of meeting it, and this offer was availed of by some three or four, more particularly by Colonel Purdy, to the extent of giving their evidence in reply.

Ascertainment of charges.

12. As no specific charge was submitted to the Commission for inquiry, all the charges or matters which might be deemed charges developed in a desultory way as the evidence was taken. This involved the recall of witnesses in certain cases, and a certain amount of repetition. We cannot, of course, assume that we have discovered or had brought before us all cases which may have been considered sufficient to justify an expression of complaint, or which have been alleged as justifying charges made elsewhere than before this Commission; but we have had numerous instances of individual experiences typical of various complaints, which we deal with under general heads.

Absence of witnesses from Dominion.

13. A most important matter to be borne in mind is that several officers of the Medical Staff and others connected with the camp during its existence who might have cast light on various points are with the Expeditionary Forces abroad, and so were unavailable either to answer for themselves or as witnesses.

Scope of Commission.

Extends to what is past, not the future.

14. We desire especially to emphasize the fact that by the terms of the Commission our inquiry was, with the exception of those questions relating to the suitability of Trentham Camp, limited to *what had taken place*, and did not extend to questions of *what should be done in the future*. As the Commission is dated the 10th July, 1915, that was perhaps the strict dividing-line, but we have received evidence of matters subsequent to that date where it might cast light on the past or form the basis of suggestions for the future. Of course, notwithstanding the limitation referred to, any findings showing wherein past failures have occurred may have the value attached to them of indicating what should be, if not already, remedied, or what should be guarded against in the future.

Introductory.

15. Before discussing the charges or criticisms which emerged in the course of the inquiry, it will be advantageous to describe the organization of the Military Forces both as to the combatant and medical sides, the organization of the camp, and, in particular, the history of the sickness which prevailed there, and to give a list of the various persons who occupied executive positions, and set forth other matters which the evidence deals with.

Organization of the General Staff and Subordinates.

Officers' titles and duties.

16. The whole of the Forces are under the control of the General Officer Commanding (G.O.C.) or Commandant. The Headquarters Staff come under the G.O.C., and this consists of three branches—viz., those of the Chief of General Staff, the Quartermaster-General, and the Adjutant-General respec-

tively. The G.O.C. is directly responsible to the Minister for the carrying-out of the policy laid down with regard to military defence and arrangements. He looks to the Chief of General Staff for, amongst others, all matters connected with the instruction, training, and efficiency of the troops for war. The latter therefore sees to the instruction and training of the Expeditionary Forces. The duties of the Adjutant-General comprise control, amongst other subjects, of those of the medical services. The Commandant himself is the Quartermaster-General. The work of his department is divided up amongst other officers. We are only concerned with the Q.M.G.(2) and the Q.M.G.(3). The duties of the Q.M.G.(2) extend, amongst other things, to the supply of food and to the providing of hospitals, buildings, and works of all kinds, and medical supplies. The Q.M.G.(3) attends to the control, supply, and issue of clothing, boots, and stores of all kinds, and sees that they are procured and issued as they are requisitioned for by those having authority to requisition, such as the Camp Quartermaster.

Director of Medical Service and his duties.

17. Under the Adjutant-General there is a Medical Officer known as the Director of Medical Services (D.M.S.), who is attached to Headquarters Staff, and has the appointment, direction, and control of all the Medical Staff. Normally he has to see that all hospital accommodation is provided, including equipment and staffing. He is responsible for the health of all the troops in camp and otherwise, for the sanitation of camps, and for the training and equipment of all medical units, including all the Ambulance Staff. These duties, it must be noted, extend not only to the Expeditionary Forces, but to all the Territorial Forces. He is responsible for the medical examination of all recruits, for the inspection of all transports, and for the supply of all hospital stores and comforts for transports. This is how things stood up to the 23rd June.

New Post: Director of Military Hospitals.

18. An important adjustment was then made by the Government by which a new office—that of Director of Military Hospitals (D.M.H.)—was created, the office of D.M.S. being still retained, but with restricted functions. Under this adjustment the D.M.H. is responsible for all the arrangements and provision for the sick in Trentham (and presumably in other camps connected with the Expeditionary Forces). He is responsible, through the Principal Medical Officer, for the sanitation of Trentham Camp (and presumably of other camps), and the training of the Ambulance Staff. The documents submitted and evidence given do not clearly define the respective responsibilities of the Directors. Under the new adjustment the Adjutant-General disappears as the official head of the medical services so far as Trentham Camp is concerned, the object being "to give direct responsibility of the two Directors to the Minister, through the Commandant." We presume that this subdivision of duties can only be of a temporary nature pending the arrival of the new Director of Medical Services, who, we understand, is now coming to the Dominion.

Names of officers.

19. Those who have held the posts referred to during the period covered by the inquiry are :—

General Officer Commanding ...	Brigadier-General Robin.
Chief of General Staff ...	Colonel Gibbon.
Adjutant-General	Lieut.-Colonel Pilkington.
Quartermaster-General ...	Brigadier-General Robin.
Assistant to Quartermaster-General (2)	Major Robinson.
Assistant to Quartermaster-General (3)	Major O'Sullivan.
Director of Medical Services ...	Colonel Purdy, but not as regards Trentham Camp after 23rd June, 1915.
Director of Military Hospitals	Colonel Valintine, as regards Trentham Camp from 23rd June.
Assistant Director M.H. ...	Major Frengley, from 23rd June.
Sanitary Medical Officer ...	Captain Finch, from 23rd June. Captain Sydney Smith, from 4th July.

Organization and Working of Camp.

Titles and Duties of Officers.

Commandant. 20. The Trentham Camp is controlled by a military officer known as the Camp Commandant, who is responsible, through his executive officers, for the whole conduct of the camp. For the purpose of this inquiry the principal P.M.O. executive officers are the Principal Medical Officer, the Camp Quartermaster, and the Supply and Transport Officer. The Principal Medical Officer up to the end of June was the senior Medical Officer attached for duty with the Expeditionary Forces in camp. There was therefore no continuity of medical control. Since the advent of the D.M.H. a permanent P.M.O. has been in charge of the camp and hospitals. The duties of the Principal Medical Officer in camp are to watch the health of the troops, to draw attention to errors and defects in sanitation likely to affect their health, to keep the D.M.S. advised by returns as to the state of health, to take all safeguards for the prevention of diseases, and to treat all the sick.

Quartermaster. 21. The Camp Quartermaster at Trentham is responsible for the requisitioning, storage, and issue of all material, including clothing and equipment, for the troops entering and leaving camp. He is responsible for the organization of the camp, including cleanliness and sanitation, and the control of the cookhouses apart from food-supplies.

Supply and Transport Officer. 22. The Supply and Transport Officer is responsible for obtaining and distributing food, forage, fuel, and light.

Sanitary Officer. Since the 23rd June, 1915, a medical man has acted as permanent Sanitary Officer.

Names of military officers. 23. The officers who have held posts in connection with the camp are as follows :—

Camp Commandant	Colonel Potter.
Camp Quartermaster	Captain McCristell.
Supply and Transport Officer	Lieutenant Petty.

Names of P.M.O's and periods of office. Those who have held the post of Principal Medical Officer are :—

From October to December, 1914	Colonel McKillop.
From December, 1914, to 13th February, 1915	Major Holmes.
From 13th February to 17th April, 1915 ...	Major Fyffe.
From 17th April to 19th May	Major McGuire.
From 19th May to 12th June	Major McAra.
From 12th June to 29th June	Major Stout (acting).
Since 29th June as Permanent Principal Medical Officer	Colonel Morice.
Sanitary Officers. Sanitary Officer since 23rd June	Major Finch.
Sanitary Officer since 4th July, 1915 ...	Major Sydney Smith.

Duties of P.M.O. 24. Taking the duties of the Principal Medical Officer and his staff in more detail, we find that he is assisted in carrying out his duties by regimental officers and by Medical Officers attached to the Field Ambulances and other details. These Assistant Medical Officers are responsible under the P.M.O. for the inspection and examination of all sick troops, their treatment while in camp, and their transportation from camp to any hospital.

Names of Assistant Medical Officers and periods of office. 25. The following were Assistant Medical Officers under the P.M.O. during the following periods :—

Captain Ferguson ...	From 20th May to 14th July.
Captain Harrison ...	From 1st June to 14th July.
Major Stout	From 20th May to 12th June, and from 29th June to 14th July. He also acted during part of this time as Sanitary Officer.

Sick-parades. 26. For the purpose of inspection and examination, those men reporting sick through their non-commissioned officer are paraded at what is known as the sick-parade. The sick-parade takes place at the medical lines, which con-

sist of a portion of the camp set aside for medical purposes. Here were erected two or more marquees at which the Medical Officers attended at definite times. These marquees comprise accommodation for the examination of the men reporting sick, with a dispensary and a limited number of beds for the housing temporarily of those men who were subsequently to be removed or to be locally treated there. A man wishing to report sick informs his orderly-corporal of the fact. The orderly-corporal marches the men, if they are able to walk, to the medical inspection tent, where they are handed over to the charge of a senior non-commissioned officer of the Army Medical Corps, who passes them on to the examining Medical Officer, who examines and prescribes any required treatment. The Medical Officer decides whether the sick man is to be treated locally in the camp or to be sent to any other hospital provided for the purpose. All cases admitted to the camp hospital for treatment are under the executive control of the medical service whilst treatment continues. The names of those reported as unable to walk to the medical lines are conveyed to the medical sergeant in charge of the sick-parade, who apprises the Medical Officer on duty, who should visit the man at the place where he is and arrange as his judgment dictates. Any man suddenly taken ill may report sick at any time through his corporal to the Orderly Medical Officer on duty for the day, who should at once deal with the sick man. Any sick man who, in the judgment of the Medical Officer, is not fit to get up would be conveyed by stretchers to the camp hospital.

Cases at a medical sick-parade may include all classes from those of the mild, such as cut finger, to those of a serious character. Many of the mild cases would receive immediate treatment and be returned to duty. Others of a mild nature would be put under medical treatment and excused duty. These men would return to their tents or hutments, and would report at a future sick-parade according to the instructions of the doctor. Those requiring to be kept under observation would be at once conveyed to either the camp hospital or a central hospital such as the Wellington Hospital.

Duties of Orderly Medical Officer.

27. One Medical Officer is detailed each day as Orderly Medical Officer for the day. He accompanies the Camp Quartermaster or his deputy on an inspection of the camp, with the special view of examining and reporting on the cleanliness and sanitary condition of the camp and the men's quarters, including the cookhouses. It is the duty of the Orderly Medical Officer during his period of duty not to leave the camp, so that there shall be a Medical Officer always available. It is also his duty, through the Quartermaster's orderly, to furnish the Camp Commandant with a daily return of the sick and the nature of their troubles, so that he may know what men are excused from duty, and the general health of the men under his command.

28. The Orderly Medical Officer has also to report to the Commandant all matters militating against the health or comfort of the men. Any matters requiring attention are either dealt with on the spot by the Orderly Medical Officer and the orderly-officer (military), or by the Camp Commandant on his own initiative or after consultation with the Principal Medical Officer.

Issue of Outfit.

Advice of requirements.

29. When it is determined to place any quota of troops in camp the Headquarters Staff advises the Camp Commandant of the probable date of arrival and the manner and class of the troops, so that the necessary preparations for their reception and outfit may be made by the Camp Quartermaster. At the same time the Stores Department, in charge of Q.M.G.(3), are advised to the like effect. No stores are supposed to be delivered to the camp except upon a requisition from the Camp Quartermaster, who determines what is required from time to time from the probable demands, having regard to the stocks he may have in hand.

Mode of issue to troops.

30. On a detachment of troops arriving at the camp their equipment is served out to them by the staff of the Camp Quartermaster. Each man then becomes entitled to the immediate issue of waterproof sheet and blankets. Two

blankets were given during the summer, but with the cold weather three were supplied. For mattresses one truss of straw is issued to every eight men. Until recently the men had either to use the straw loose for bedding or to purchase a scrim palliasse-cover at a cost of 2s. from the camp canteen. Now the palliasse-covers are supplied free. With the first issue of equipment there was issued as clothing a suit of denims for rough camp work, a greatcoat, hat, shirt, undershirt, drawers, one jersey, two pairs of socks, and one pair of boots, as well as towels and food utensils. Within a few days after arrival a suit of khaki should be issued. A second pair of boots, with other equipment, was issued shortly before embarkation, but early in June provision was made for the earlier issue of the second pair of boots, a matter which we will deal with later. It was contemplated that the men would retain as a dry change the clothes and boots they wore on coming into camp, in addition to the camp outfit, and they were at liberty to purchase further underclothing or boots at the camp canteen. The camp canteen was a private enterprise within the limits of the camp, but with restrictions as to the prices to be charged.

To receive their outfit the detachment is paraded at the Quartermaster's store, and each man had not only to have his equipment served out to him to suit his size, but he had to check and sign for each article that he had received. It is obvious, especially with large numbers arriving at once, that considerable delay would be experienced before all the men could be served. If the hour of arrival at camp was late, each man was at least served with his straw and blankets and immediate essentials, the rest of the issue being deferred to the following morning. On occasions the particular size of clothes or boots might be exhausted before all were served, or might not be in stock, and delay would follow in that case.

Description of Camp.

Relative situation

31. The camp is about eighteen miles from Wellington, where the headquarters, the military stores, and the Wellington Hospital are situated. It is near to the railway, which has extensive sidings laid down for dealing with the special traffic to the adjacent racecourse, with a special siding now laid into the camp. It is close to the Hutt River, which is available for the bathing of the troops. In area the camp is 1,260 acres, of which about 400 acres are flat land, almost all available for camp and drilling purposes, only a small portion being swampy and unsuitable. The balance of 860 acres is hilly and broken, but of great service for military exercises. In addition to this area the military authorities have had the use for camp purposes of about 100 acres of the lands owned by the Wellington Racing Club, as well as the centre of the racecourse. It is not suggested that the area mentioned is sufficient to allow of marching or military manœuvres, as many square miles are required for that purpose. The use of extra land has, however, been granted by the good will of the neighbouring owners, who have without any material exception given every facility to the Department. The site of the camp, according to the report of the Director of Geological Survey, "has a gentle slope of about 20 ft. to the mile towards the Heretaunga Stream" (which flows into the Hutt River). "Much of the original surface is characterized by small bumps and hollows, probably the result of the former growth of trees. The surface soil is very shallow, say, 6 in. or less, and may be called a stony or gravelly loam. . . . Clay is not excessive in amount. Southward towards the Heretaunga Stream is a low-lying strip, flooded at the time of my visit; part of this may well be of a swampy character. The soil at the present time is of a fairly permeable character, but as it is shallow the nature of the subsoil is of much more importance." Owing to traffic, "the original permeability of the soil has been lessened. The camp subsoil consists mainly of river-gravel, the first 2 ft. or 3 ft. containing a good deal of clay, together with some oxide of iron . . . these materials being produced by the partial decomposition of the stones forming the gravel. Thus the upper portion of the subsoil to some extent approaches the condition of hard pan, but that name can hardly be fairly applied to it, for it still admits of considerable percolation through

Physical features, nature of soil, &c.

it. . . . At 2½ ft. to 3 ft. below the surface the subsoil becomes free from clay and iron oxide. Water drains with great freedom through the unaltered gravel. . . . Probably in ordinary weather the water-level is quite 15 ft. below the surface of the present camp. This statement does not apply to the southernmost group of tents, which are near the area liable to be flooded by the Heretaunga Stream." Mr. Morgan states that the site of the camp is not an unfilled lake, but was filled by the Hutt River with gravel and a smaller proportion of finer material. He adds that his inspection of the Trentham Camp, combined with his own experience of camping, gives him the opinion that the locality, as far as regards the soil and subsoil, is suitable for a military camp, and that while the permeability of the upper portion of the subsoil is only moderate, this drawback can easily be overcome by draining. The small hollows previously mentioned "need to be filled if tents are to be erected in regular rows, and naturally also require filling if built over." He is of opinion that "the mud difficulty has been greatly exaggerated, and can be very easily overcome by a regular system of roading, for which an unlimited supply of gravel is available within the limits of the camp." The evidence of witnesses who have seen camps at Salisbury and elsewhere would indicate that Trentham has been less muddy than those camps.

Mr. Aston's anlayses of soil.

On Mr. Morgan's suggestion we have had the soil analysed by Mr. B. C. Aston. Mr. Morgan has reported on the results, and states that "on the whole the analyses indicate a soil and subsoil suitable for a camp or for settlement. Better localities can be found, but personally I would be quite satisfied with the Trentham Camp site." He adds that the analyses in themselves quite dispose of the contention that the camp is on the site of an ancient swamp.

Climate.

32. The climate of that portion of the Hutt Valley where the camp is situated has been spoken of by all witnesses acquainted with it as being healthy and bracing. The keenest critic of the camp—Dr. De Lautour—in his evidence, spoke of the climate as a very good one, and said that there was nothing to prevent a hygienic camp being established at Trentham under proper conditions and regulations, and that there was nothing in the site to cause preventable diseases. In confirmation of the character of the climate we have the fact that a considerable portion of the valley is largely occupied by the country residences of many Wellington citizens.

Fogs.

There is evidence that under certain atmospheric conditions fogs arise over the lower-lying portions of the ground adjacent to the Heretaunga Stream. Those fogs are of a transitory character, and have caused no inconvenience to the camp from a military point of view. There is no evidence to show that the fogs have affected the health of the troops. The Public Works Department have now in hand the clearing and deepening of this stream, and this, with the consequent drainage of the lower-lying lands, will result in reducing the liability to fogs.

Rainfall

The Director of the Dominion Meteorological Office (the Rev. Mr. Bates) reports that records from Silverstream or Trentham show that the rainfall is 20 to 25 per cent. greater than at Wellington, the average of which is a little under 50 in. He states, according to his evidence as corrected, that frosts are occasionally very severe at Trentham. The winds are generally from north-west and squally.

Rev. Mr. Bates's opinion.

33. The conditions of the site are, in his opinion, very favourable for a permanent standing camp, though the flatness of the river-valley he considers a disqualification. (Note.—There is a fall of 20 ft. to the mile towards the Heretaunga Stream.) He further states that neither the soil nor the climate of Trentham can be blamed for the sickness there. It is, he says, "Quite a healthy place, and probably more invigorating than Wellington."

Dust and mud.

34. There has been evidence to show that Trentham has been dusty during the summer, but there is none to show that it is more dusty than any other camp might well be. With the completion of the works of the roadmaking which are now being executed there is every reason to believe that both the dust of summer and the mud of winter will be materially reduced, and with due care neither ought to be in any way objectionable.

Targets. 35. The existence of some seventy-five targets and of the necessary facilities for training in rifle shooting is an invaluable adjunct to the camp, and one which could not readily be replaced if the camp were shifted.

Water. 36. An ample supply of good water has been laid down, and evidence has been given that the water has been submitted to an official analysis and been pronounced good.

37. Colonel Gibbon, who lives in the neighbourhood and has had the training of the men, considers the ground "as eminently suitable. The only drawback, if there is one, is that it is not as suitable for training mounted men as it might be."

Sanitation.

System. 38. At the initiation of the camp the drainage provided by military practice was installed, proper catch-pits being provided to strain off greasy material from the liquids from the cookhouses and ablution-places, with drainage therefrom to soak-pits in the gravelly subsoil, which was eminently adapted to the system. When the numbers in the camp were increased further drains and soak-pits were prepared, and when the hutments were started the system was enlarged on the same lines, but did not prove quite satisfactory. It is, we think, a matter of regret that when it was decided to make a permanent camp at Trentham the Public Works Department were not called in to lay out the drainage, both for surface and for polluted water, as well as to do the road-making. They have now been called in, and the work is in hand. Had this been done at first a large amount of fatigue-work thrown on the recruits would have been avoided, and the time of the men devoted to their military training. Mr. Holmes, the Engineer-in-Chief, states that when the roading, draining, and other improvements in hand are completed the camp will be in an absolutely satisfactory condition. It is to be regretted that the services of the Engineer-in-Chief were not resorted to before July.

Latrines. 39. When the camp first started ordinary military shallow-trench latrines were adopted. These were placed at a considerable distance from any spot where tents were afterwards erected, and there is no evidence to show that any complaint or harm arose from them. They were only used as a necessary temporary expedient and until permanent latrines were erected. These are of the pail type, having fixed timber seats on a concrete graded floor, and having properly formed gutters. There was a proper system of daily removal and cleaning of the pails, and the cleansing of the floors. All fluid excreta was drained off by water-carriage to soak-pits. The number of latrines and their position were satisfactory and proved adequate.

Ablutions. The ablution-places were located and constructed in accordance with military practice, and until the huts were occupied fulfilled their object. In connection with the huts, improved ablution-places have been constructed which will, by the adoption of sloping concrete floors and gutters, be drier and more comfortable for the men.

Capacity of Camp.

Origin. 40. The camp was first occupied when the delay occurred in sending away the Main Expeditionary Force. The men were disembarked from the ships, and camping-grounds had to be found for them in various parts of Wellington. The Mounted Brigade were sent to Trentham, with some of the Artillery, making a total of nearly two thousand men. It being found necessary to obtain a regular supply of reinforcements to maintain the Expeditionary Force, Trentham was decided upon as a suitable place to form the requisite camp, and steps were taken to test it as regards sanitation and water. The D.M.S. (Colonel Purdy) stated in evidence that he made a rigid inspection over a period of eight days with Colonel McKillop and other Medical Officers, and that the camp was laid down on the lines of the model camp at Tauherenikau, which he himself had planned. He says it was laid down on the most up-to-date lines, and that the placing of the tents and everything else was done according to the latest manual issued by the Imperial authorities. The camp was then laid out to accommodate a force of two thousand men. This was the quota to

be sent away every two months to repair wastage. Subsequently further details were provided. The number of men constantly grew until some four thousand five hundred men were in training. Then in April last an additional force was promised, which came in at the end of May and beginning of June, so that the total carried by the camp was increased to seven thousand men.

41. The following table shows the growth :— Table of growth.

Units.	Strength.	Date arrived.	Date embarked.
Second Reinforcements	1,969	20–22/10/14	12/12/14
Third Reinforcements	3,035	13–15/12/14	13/2/15
Samoan Relief Force	500	2/1/15	27/3/15
No. 4 Company, A.S. Corps	85	7/2/15	17/4/15
No. 1 Company, N.Z. Engineers	238	7/2/15	17/4/15
N.Z.F.A. 18-pr. Battery	156	7/2/15	17/4/15
Fourth Reinforcements	200	12/1/15	17/4/15
Fifth Reinforcements	2,294	14–16/2/15	12/6/15
No. 1 Stationary Hospital	116	18–20/4/15	20/5/15
Sixth Reinforcements	1,791	18–20/4/15	..
N.Z.F.A. Battery and Ammunition Column ..	464	18–20/4/15	12/6/15
No. 2 Stationary Hospital	93	12–14/5/15	12/6/15
Officers and N.C.O.s, Trentham Regiment ..	168	28/4/15	..
Pool for Infantry, Fifth Reinforcements	200	1/5/15	12/6/15
A.S.C., extra	44	5/5/15	..
Engineers to complete Fifth Reinforcements ..	71	15/5/15	12/6/15
Hospital Ship	62	25–26/5/15	10/7/15
Trentham Regiments	2,200	29–31/5/15	..
Seventh Reinforcements	1,657	14–16/6/15	..
A.S.C.	16	18/6/15	..
Ambulance Corps	30	1/7/15	..
Extra Mounted Rifles	200	1/7/15	..
Ambulance Corps	18	5/7/15	..
Total	13,607		

42. The addition of the extra men in May–June undoubtedly overtaxed the capacity of the accommodation and the sanitary system. This event synchronized with an accession of wet wintry weather and the cutting-up of the roads and grounds by the traffic connected with the extensive building operations and cartage then going on, and there was, of course, the extra traffic caused by the addition of 3,850 men to the number in camp. Capacity exceeded.

43. The evidence of various witnesses having practical experience of the camp goes to show that it ought not to be regarded as sufficient for more than from 4,000 to 4,500 men, and with this we agree. Capacity recommended

Berhampore.

44. Before dealing with the history of the sickness amongst the troops we think it desirable to first describe "Berhampore," as so much controversy has centred round it. It was built by the City Council fifteen years ago at a time when it was thought desirable to provide for a possible outbreak of plague. It is situated on the Town Belt of Wellington, about five minutes' walk from the tram-line, and is detached from all civil buildings, which is a factor in its favour in dealing with measles. It lies in a steep and narrow gully running in a southerly direction. The enclosure of nearly 2 acres is imperfectly fenced. The buildings consist of a main building, with two wards each 18 ft. by 22 ft., provided with three windows on each side, ventilated at the top with a central exhaust ventilation rising through the ridge. These wards are separated by a space containing a central bathroom and hall. Off each ward is a side room containing a sink. Connected to this building is a duty-room, detached and at a lower level. There are other buildings, comprising—(1) An isolation ward, consisting of two rooms opening off each other, 12 ft. by 10 ft. and 8 ft. by 10 ft., with an entrance porch; (2) two rooms originally built as disinfecting-rooms for use of the doctor and nurses, each 9 ft. by 6 ft., with rooms attached having baths therein; (3) a cottage for the nurses; (4) a detached Description.

building containing men's room, coachhouse and stable, with harness-room, the stable being 10 ft. 6 in. by 6 ft., the coachhouse 15 ft. by 8 ft., men's room 15 ft. by 12 ft., and a small harness-room, 6 ft. by 4 ft. In addition there are three water-closets, a washhouse, a kitchen, an incinerator, and other offices. Water is laid on throughout. The buildings are all at different levels on the side of the hill, and have approaches partly by steps and partly by paths, which were improved by the construction of wooden pathways. At the bottom of the gully there were erected on the farther side of a small stream two marquees with wooden floors for patients, and a bell tent for the orderlies. These were approached by a wooden bridge across a stream. There was also pitched on the steep hillside another marquee for patients, the side of which, after occupation, was cut into four steps or terraces to provide level footing for the mattresses, the ground being covered with straw and a waterproof material. A rough track was formed round this marquee to divert the water running down the hillside in rainy weather.

Evidence as to suitability discussed.

45. Dr. Valintine described it as a sunless, cheerless place with a bad approach, and so it is, and presents difficulties as regards extension and administration. Dr. Harrison said it was adapted for the purpose of a measles hospital if better places could not be obtained, but it served its purpose quite well, and that he had all the proper equipment there. Dr. Thacker considered it a very bad makeshift of a place, and no place at all for the purpose for which it was used. Dr. Elliott did not think the place suitable, but it may have been the only place available at the time. He says, "I had charge of it under Dr. Ewart in 1903 when we had scarlet-fever convalescents there, and found it very unsuitable, as we could not control the patients, who got loose on several occasions; and the nurses could not get about properly at night." There was evidence that patients went out of bounds while it was in use on the present occasion. Dr. Herbert, from a cursory view, stated that there did not seem to be sufficient sunshine, and the whole position for acute pulmonary cases seemed not satisfactory by any means. On the other side, Dr. Purdy, in a report to the G.O.C. of the 8th June relating to measles, stated that the hospital at Berhampore "proved in every way most satisfactory. The patients did remarkably well there, as shown by the fact that there has not been (8th June) a single case of pneumonia in that institution, or a single bad result, a wonderful record for seven weeks' work." According to Colonel Purdy it was only measles patients who were not ill who were supposed to be sent there, and that if any change for the worse occurred the patients should be sent on at once to the General Hospital. (Compare paragraph 73.)

Finding.

46. The preponderance of the evidence shows that Berhampore, on the whole, was ill-conditioned for the purpose for which it was used, a circumstance which in itself should, we think, have prompted the Director of Medical Services to seek for better accommodation to take its place.

Nurses: Orderlies.

47. From almost the opening of the hospital there were trained nurses—first two and afterwards three—in charge, assisted by untrained orderlies, but on the 1st June a non-commissioned officer, Sergeant Yallop, was appointed to take military charge; but we note that no military guard was at any time provided, although this was an infectious hospital.

Closed.

48. Berhampore buildings were used as a hospital from the 15th April to the 13th July, the accommodation being increased during the latter part of that period by the erection of marquees.

Destruction of records.

49. In consequence of a misconception of a telephone message received by one of the nurses from the Stores Department, which was to burn anything that had been in contact with the patients and not to return it to the store, the records, including those of admission and discharge, temperature books and charts, were burnt with the other articles. The result has been that there are no data showing the admissions and discharges, and individual cases cannot be inquired into with the desired particularity.

No telephone provided till 12th June.

50. The place was not connected by telephone until the 12th June, a somewhat distant neighbour's instrument being made use of in the meantime. The Director of Medical Services states that he had requisitioned for one, but no record of this is forthcoming, and Headquarters deny any knowledge of it.

Review of Outbreak of Illness at Camp.

51. In reviewing the outbreak of serious illness at the camp it is important to consider— Questions to be dealt with.

(1.) The type and nature of the maladies.
(2.) Whether there were any indications in the early months of the year that the maladies might assume dangerous proportions.
(3.) If such indications were present, did the authorities concerned realize their significance and prepare ample and sufficient means for treatment and prevention?
(4.) When the maladies had actually assumed large and dangerous proportions, were energetic and effective methods pursued both in treatment and in the prevention of further spread?

The types of sickness prevalent in the Trentham Camp may be grouped under the heads—(*a*) Measles; (*b*) colds and sore throats; (*c*) influenza; (*d*) cerebro-spinal meningitis; and (*e*) pneumonia.

52. It can be stated with certainty that the measles, colds, septic sore throats, and influenza ran on concurrently. As the number of measles increased, so did the number of the other groups. As the measles increased in virulence, so did the virulence of the other groups increase. The illnesses that occurred at Trentham Camp were almost entirely of a respiratory character. The respiratory organs and tissues, nose, throat, bronchial tubes, lungs, and pleura were affected in a very marked degree. Measles, influenza, bronchitis, pneumonia, and cerebro-spinal meningitis are all associated with catarrh or inflammation of one or other of these tissues or organs. This camp was singularly free from serious sickness connected chiefly with the alimentary system, such as typhoid fever, dysentery, or epidemic diarrhœa. It is also worthy of note that the respiratory troubles prevalent in camp were all of an infectious or contagious character. From an examination of the medical reports and causes of death, one of us (Dr. Martin) finds that when the outbreak of sickness in the camp assumed the character of the epidemic many of the measles cases took on a "suffocative," a "typhoid," or a "malignant" character. Some died from one or other of this type of measles, and some contracted and died from a rapidly fatal pneumonia. For instance, one man apparently convalescing satisfactorily from measles, and being up and about, became suddenly ill one afternoon and died the next day of pneumonia. In July some of the patients diagnosed as suffering from influenza, and apparently convalescing well from that complaint, suddenly became ill with cerebro-spinal meningitis, and some of these men died from this disease. For example, Private F——, admitted to the kiosk at the racecourse hospital on the 7th July with influenza, apparently progressed well till the 16th July, when he became grievously ill, and died from cerebro-spinal meningitis two days afterwards. Character of maladies.

53. An examination of the sick returns shows that pneumonia was, in many of the patients attacked, of a very serious nature, but that the number of those so attacked was not a large one considering the size of the camp and the fact that there were so many men in it suffering from various forms of respiratory troubles. The pneumonia influence in the illnesses at camp is shown by the following table of admissions to hospital and deaths from this cause:— Pneumonia.

	Admissions.	Deaths.
December	3	1
January	5	...
February	2	...
March	6	...
April	2	1
May	5	...
June	14	7
July	21	8

A comparison of the death-rate with the total number of admissions in the above list is not of much value, because many of the deaths from pneumonia occurred in patients who were admitted with a diagnosis of influenza or

measles, and whilst under treatment contracted pneumonia and died from this malady. In the returns of the camp sick submitted to the Commission, some of those entered as admissions for pneumonia could not have had this complaint. For instance, Private H. F—— is scheduled as admitted for treatment for pneumonia on the 30th December, and discharged cured on the 4th January. Private B. A—— is scheduled as admitted with pneumonia on the 22nd March, and discharged cured on the 26th March. The return shows that fourteen patients were admitted with pneumonia in June, and that there were seven deaths from pneumonia in this month. Yet only three of these fourteen admittances died from pneumonia, the other pneumonia deaths in this month occurring amongst patients who were admitted with the diagnosis "measles" and who subsequently developed pneumonia. It is therefore impossible to ascertain from the returns of sickness sent in the true number of patients actually suffering from pneumonia at any one time. The death returns are, however, more definite, giving for December one death from acute septic pneumonia, one death from pneumonia in April, seven in June, and eight in July, making a total of seventeen deaths from pneumonia from 1st December, 1914, to the 31st July, 1915. Fifteen of these deaths occurred in June and July, when the epidemic of infectious diseases at the camp was at its worst stage. During these two months 2,130 patients were admitted for treatment for the various prevalent complaints. This number, added to about a hundred patients still remaining under treatment in June from May admissions, gave a total of 2,240, with fifteen deaths from pneumonia. The number of deaths from pneumonia from December to the end of July cannot be considered a large one, and it certainly cannot be said, judging from the returns admitted, that pneumonia was epidemic at any time at the Trentham Camp. It can also be assumed, judging from the character of the cerebro-spinal meningitis diagnosed at a later period, that some of the patients reported as having died from pneumonia following measles died from cerebro-spinal meningitis. This would make the pneumonia casualty returns smaller still. Up to the end of May the number of men who had passed some time in the camp and those still resident in camp totalled about 11,480. On the 29th May about 3,000 men remained in camp. From the 29th May to the 14th June nearly 4,000 men arrived in camp. It was about this period that the pneumonia, hitherto not an illness causing great anxiety, became more aggressive.

Measles.

54. The first cases of measles in camp—from the return submitted by Dr. Valintine—were those of Private F. G——, sent to Wellington Hospital on the 11th November, 1914, and discharged on the 19th November, 1914; and Private W. McG——, admitted 11th November, 1914, and discharged 30th November, 1914. The Director of Medical Services (Colonel Purdy) in his evidence said that measles first appeared on the 14th November, and was brought into camp by Private McD——, who had just come from Addington Camp at Christchurch. No evidence was adduced to prove this. No evidence has been brought before the Commission to prove how or by whom measles was introduced into camp at Trentham. Measles, however, is generally present at all times in any large city, and there were cases of measles in the City of Wellington and elsewhere in New Zealand before the camp started, and during all the time it has been in existence.

Measles statistics.

55. A review of the measles outbreak in camp is afforded by the following list of admissions for the various months:—

November	14
December	16
January	23
February	24
March	59
April	95
May	180
June	492
July	132

On the 10th July the camp was reduced in numbers, and detachments of men were sent to Tauherenikau, Waikanae, and Palmerston North, where many of them were under treatment for measles. The return of cases of measles given above, therefore, refers only to those under treatment at Trentham, Kaiwarra, Wellington Hospital, and other places in or near Wellington, and does not include the large numbers treated at Palmerston North, Waikanae, &c.

56. A review of the influenza, colds, and sore-throats group shows the following number of admissions for the various months:— Statistics of influenza and colds.

December	27
January	77
February	32
March	40
April	69
May	126
June	707
July	736

The remarks on the July return for measles apply equally to that for influenza, colds, and sore throats.

57. Measles and a few cases of influenza appeared in camp in the month of November. From December onwards measles, influenza, colds, and sore throats ran concurrently. At first all of these maladies were of a mild character. At a later period the mild character evolved into a more threatening one, and the number of men struck by them increased. When this group assumed an aggressive character pneumonia, and then cerebro-spinal meningitis, appeared as serious sequelæ. Summary.

58. In February 3,035 men left the camp, and the Fifth Reinforcements, with other details, entered the camp, making, with those remaining over from January, a total of 6,508 men who were "possible contacts" to any infectious disease present. In February there were twenty-four cases of measles and thirty-two of influenza and septic sore throats. In February the incidence of measles was therefore ½ per cent. During March and April 1,179 men left the camp for abroad, 2,294 men of the Fifth Reinforcements remained over from February, and 2,371 new troops arrived, making a total of 5,844 "possible contacts" for influenza, measles, and septic sore throats. Possible contacts.

59. Taking the months of March and April together there were 154 admissions for measles and 109 for influenza and septic sore throats. The measles incidence was therefore about 2·6 per cent., and the other group about 1·7 per cent. In April it was important to have noted these figures for measles, because during those months influenza and septic sore throats were occurring concurrently, although in a slightly smaller ratio, all the groups had been present since December, and from December to April the camp had not been free from influenza and sore throats. It was advisable also to have taken notice that the two groups of maladies were of an infectious character, and were present in a soldiers' camp where the men were young and untrained, unaccustomed to strict hygienic camp laws, and possibly a little careless in observing them. Percentage incidence of sickness.

60. In April, therefore, these figures were significant, and, if they had been appreciated by the medical service, should have caused some disquietude. Given suitable conditions, such as overcrowding, imperfect sanitation, and the approach of the cold and wet of winter, any infectious disease of a respiratory nature might assume menacing proportions. Figures significant.

In May the total number of measles, influenza, and septic sore throats was 306. The Director of Medical Services (Colonel Purdy) deposed that, as far as he could judge, "infectious diseases became epidemic on the 26th May."

61. During the period from the 18th to the 26th May, 116 men had left camp for abroad, and 5,187 still remained, making a total of 5,303 men "possible contacts" for measles. The percentage of measles in this group was 2¾ per Percentage of measles.

cent., and that of influenza and sore throats was a little less. The percentage of measles amongst the troops was, therefore, roughly—

February	...	0·57 per cent.
March and April	...	2·6 ,,
1st to 26th May	...	2·75 ,,

Troops brought in after epidemic realized.

62. It was on the 26th May that the Director of Medical Services recognized the outbreak to be now an epidemic. Three days after this fresh troops began to arrive in camp—viz., 2,200 men of the Trentham Regiment; and from the 14th to the 18th June, 1,673 men of the Seventh Reinforcements arrived, making, with troops already in camp, a force of over 7,000 men.

Effect of this.

63. It has been stated that it was the arrival of this large number of men that was the cause of all the serious epidemic trouble. We, however, note that these new troops were quartered into an already infected camp, that the overcrowding in the hutments which then took place, and to which we shall hereafter refer, would favour the spread of the infectious disease, and tend to increase the virulence of the infection, and that the infectious disease was recognized to have reached the stage of an epidemic before the new troops arrived.

Discontinuance of segregation camp.

64. In this connection it must be observed that the Director of Medical Services in his evidence said that "some time in May" (in one place "early in May") it became impossible to carry on the segregation camp, and after conference with the camp Medical Officers (now at the front) it was discontinued owing to the large number of measles admissions. It is doubtful whether the memory of the Director of Medical Services has not deceived him as to the date, as the information since given to us by the camp authorities is that the segregation camp was given up on the 31st March—that is, before Berhampore was opened. Therefore, certainly from "some time in May," and probably from the 31st March, actual measles contacts were not segregated. Up to this date contacts were alleged to have been segregated or quarantined for a period of twenty-one days. Therefore, taking "some time in May" as the date, the Trentham Regiment of 2,200 men, who arrived from the 29th to the 31st May, and 1,657 men of the Seventh Reinforcements, who arrived on the 14th to the 18th June, were quartered in a camp where an epidemic of measles was raging and where the segregation or isolation of contacts had entirely ceased.

Medical measures taken.

65. An inquiry into what medical measures were taken for the accommodation of the sick of the Trentham Camp shows that a camp hospital of two or three marquees was pitched early in the history of the camp. Beds were provided, and the sick men were treated by the Medical Officers on duty at the camp. All cases of serious illness were sent by ambulance to the Wellington Hospital, and only minor surgical and medical cases were treated in the camp hospital.

Wellington Hospital arrangements.

66. The arrangements with regard to Wellington Hospital require notice. Dr. Hardwicke Smith, then Superintendent of the Wellington Hospital, deposed that he made a verbal arrangement with the Director of the Medical Services that he would take as many military patients as he could into the Wellington Hospital. Dr. Hardwicke Smith stated that as far as he could remember he told the Director of Medical Services that fifty was the maximum number of beds available for this purpose, and that this number was for "all kinds of patients, infectious and otherwise." He further states it was understood, but not definitely arranged, that the Wellington Hospital was to act as a base hospital for the camp, and he proposed to take in all surgical or medical cases requiring hospital treatment. He also states that the Wellington Hospital could not accommodate more than thirty cases of measles at one time. Colonel Purdy, the Director of Medical Services, in his evidence stated, "I understood then that we could have put up to fifty beds. I thought that this was apart from the ordinary run of special cases, that never totalled more than twenty per month." He thought that the hospital would take in seventy patients per month, including measles and general medical or suspect cases. It is unfortunate that the "understanding" was not made more definite by Colonel Purdy.

Wellington Hospital filled.

67. Dr. Barclay, the present Superintendent of the Wellington Hospital, deposed that about the beginning of April there was "increased congestion in

the measles ward, and that he had more patients than he could accommodate at one time." He said, "At Wellington Hospital the fact was that more measles patients were arriving than we had accommodation for, and the overcrowding became so serious that I had to decline to admit any one in the interests of the patients themselves. Most of the patients admitted were in acute stages." In this connection the Director of Medical Services says, "We had no trouble in any shape or form until one day in April, and I submit this with a knowledge of what I am saying: I was suddenly told in the camp that the Wellington Hospital had refused to take any more cases of measles. I said it was an impossibility, that such a thing could not be. I went straight to the telephone and rang up the hospital, and got Dr. Barclay. I said, 'It cannot possibly be true, as I hear, that you have refused to take any further measles cases?' and he replied, 'It is true.' He said, 'We are full up, and we want to clean out the tin shed."

Berhampore taken.

On this occasion the Director of Medical Services discussed this position over the telephone with Dr. Barclay, and Berhampore Hospital was mentioned as a possible place for the reception of further measles patients. The D.M.S. then asked the Wellington Corporation for permission to take Berhampore. Permission was granted at once, and the Wellington City Engineer took immediate steps to improve the fitness of the place by the erection of further sanitary accommodation. On the 15th April twelve measles patients were sent there. Soon after the main building and the various outbuildings were filled with measles patients. Additional accommodation was then provided by pitching three large marquees about the buildings, and these were soon occupied by further measles patients.

Overcrowding there.

69. On the 31st May Dr. Elliott, at the request of the Director of Medical Services, visited Berhampore to see patients there. He noticed that the place was overcrowded, and at once informed the D.M.S. of the fact. On the 2nd June—two days later—there were 104 patients in the main building, outbuildings, and marquees. Orders were then issued by the Director of Medical Services that no more patients were to be sent from Trentham to Berhampore. On the 5th June Dr. Elliott was desired by Headquarters to visit Berhampore, and on the same day Dr. Valintine was directed by the Defence Minister to report on it. Dr. Valintine visited the hospital on the same day, and reported that he found eighty-seven patients in the main building, outhouses, and marquees. In the two wards of the main building, built to accommodate four patients each, he found twenty patients, ten in each ward. In one outbuilding there were nine patients, in another outbuilding two patients, and two side rooms off bathrooms had two patients each. The three marquees held fifteen, nine, and sixteen patients respectively. The rest of the patients were distributed in other outbuildings. As a result, Dr. Valintine reported that Berhampore was overcrowded. He recommended that no more patients should be sent there, and that the congestion should be eased. To relieve the congestion Dr. Valintine on the same day definitely arranged with the Medical Superintendent of the Wellington Hospital for forty-four beds in the Victoria Ward.

Arrangements made with Wellington Hospital.

Berhampore closed.

70. Berhampore continued as a hospital till about the 5th July. On the 13th July it was finally closed.

Responsibility for medical service at Berhampore.

71. The Director of Medical Services states that he ceased absolutely to have any connection with Berhampore on the 12th June, and that Captain Harrison was then appointed as "Medical Officer in charge of all measles patients." In other respects the Director of Medical Services stated that he ceased to have any responsibility in connection with the camp, or camp hospitals, or patients from the 15th June.

Conditions at Berhampore in detail.

Referring more particularly to the conditions at Berhampore, the Director of Medical Services stated in his evidence that the centre block of Berhampore was adapted to hold twenty to twenty-four men—ten to twelve in each ward. Dr. Valintine, in his report to the Minister of Defence, wrote that each of these wards was able to accommodate four patients, allowing 2,000 cubic feet for each patient, but could accommodate six patients. On his visit there were ten patients in each ward. The Director of Medical Services said that the

outbuildings and isolation ward could accommodate comfortably thirty patients, and in a squeeze at least forty patients. The marquees erected, he said, could easily accommodate sixty-four men. He stated that there were four marquees erected, exclusive of the orderlies' hut, and each marquee was capable of holding sixteen patients; but the nurses and other witnesses only mention three marquees, which number we believe to be the correct one. According to the evidence of the Director of Medical Services, the Berhampore buildings and the marquees could comfortably hold ninety-four patients, and at a squeeze 104 patients. Dr. Valintine reported that "the place should not accommodate more than forty or fifty at the outside—that is, *with* the marquees."

Serious cases at Berhampore.

73. The Director of Medical Services in his evidence stated that Berhampore was at no time intended for the treatment of serious cases, and that any patient there who showed signs of developing anything serious was to be sent at once to Wellington Hospital. The sister in charge was to use her own discretion and judgment as to which patient should be sent away. On the 4th June one man, K——, was sent to Wellington Hospital from Berhampore, and died there on the 10th June from pneumonia following measles. Private A. McF—— was sent from Berhampore to the General Hospital on the 2nd June, 1915, and died there on the 14th June, 1915, from pneumonia following measles. Private E. P—— was admitted to Wellington Hospital from Berhampore on the 11th June in a delirious state, and died in the hospital from pneumonia and meningitis following measles. S. C—— was sent from Berhampore to Wellington Hospital on the 10th June, and died there on the 11th June from pneumonia. Privates F—— and P—— died at Berhampore from pneumonia following measles on the 2nd July. These instances show that serious illnesses did occur at Berhampore.

Overcrowding at Berhampore.

74. The overcrowding was evidently due to some want of system by which Medical Officers at the camp could be kept informed whether there was room at the other end for patients proposed to be sent in.

Dr. Purdy's visit there.

75. The Director of Medical Services informed us he paid visits to Berhampore on the following dates: April 16th, 17th, 19th, 21st, 23rd, 26th, 28th, 30th; May 3rd, 5th, 8th, 10th, 12th, 14th, 17th, 19th, 21st, 24th, 26th, 28th; June 2nd, 6th, 7th, 9th, 11th, 12th.

Leaves for South on 2nd June.

76. On the 2nd June the Director of Medical Services left Wellington for the South Island on administrative duties connected with the hospital ship "Maheno," and did not return to Wellington till the 6th June. He left for the South without definitely appointing any doctor to actual medical charge of the hospital during his absence. He had, however, asked Dr. Elliott to visit the hospital if his services were sought by the nurses in charge. During the absence of the Director of Medical Services no application was made from the hospital for Dr. Elliott to visit any patient. His visit of the 5th June was at the request of Headquarters.

No visit for four days.

77. It is noted that no visit was paid to Berhampore by the Director of Medical Services or any one on his behalf the day after he had been informed of the overcrowding, and that during the period of increasing congestion from the 28th May to the 2nd June—a period of four days—he had made no visit to the hospital.

Requires explanation.

78. It seems to require explanation why the Director of Medical Services, whilst occupied with the general duties of his office, should have undertaken the personal charge of the patients at Berhampore instead of detailing some subordinate officer to make daily visits.

Further accommodation secured. Mr. Izard's house.

79. In addition to securing a definite number of beds at the Wellington Hospital in order to relieve the congestion, Dr. Valintine, with great energy, set about procuring further hospital accommodation and beds. He obtained Mr. Izard's premises at the Upper Hutt, which has previously been offered to the Government as a sanatorium for returned troopers. This provided room for fifty patients, and was occupied on the 8th June.

Equipment to be provided.

80. It must be recollected that in providing accommodation outside of previously equipped hospitals, beds and other requisites have to be procured, and sanitary and cooking arrangements and other details have to be attended to before such accommodation can be properly occupied.

81. On the 13th June Dr. Valintine visited Trentham Camp at the request of the Minister of Defence, who wished to ascertain exactly how matters then stood with reference to the accommodation for treatment of the sick. Dr. Valintine, although Inspector-General of Hospitals, on this date had no official military status. It was a wet and stormy day, and it appeared to him, after inspecting the marquees where the sick lay, that it was imperative to at once secure better accommodation. Dr. Valintine stated that the sick marquees "struck him as being overcrowded," and that they "would not have been overcrowded like that except in a case of emergency." He saw sick men lying on the floor in one marquee. The measles were separate from the influenza cases. One of the measles marquees was for the acutely sick, and the other for convalescents. Dr. Valintine asked the Medical Officers in camp if they were satisfied with the existing conditions, and they said "No." On his own initiative he commandeered certain buildings belonging to the Wellington Racing Club, and, in conjunction with Colonel Purdy and his staff, had the patients all removed into those buildings that day. This was done in closed motor-cars. The buildings consisted of the quarters occupied at racing meetings by the trainers and jockeys, and when these were filled the rest of the patients and the orderlies were placed in the adjacent loose-boxes. These boxes, notwithstanding their purpose, were clean and sanitary, as after each race meeting—so the secretary stated—the mangers are disinfected and the whole of the boxes perfectly cleaned. Dr. Valintine was informed that there were forty measles cases and some sixty other patients, but when the removal took place the numbers were found to amount to 140. There was an insufficiency of bedsteads, and the new accommodation, such as it was, was overcrowded; but notwithstanding these drawbacks it was considered better to get the men out of the tents. He at once reported his action to the Minister, who approved of it.

Racecourse buildings commandeered.

Removal of patients.

82. On the following day the racecourse authorities offered the use of the tea-kiosk as being more suitable.

Kiosk.

83. Having before this failed to obtain permission to utilize the racecourse buildings, he had accepted an offer generously made by Mr. Pearce, of Levin and Co. (Limited), of the use of a large wool and hemp store situated at Kaiwarra, which proved very valuable. This building had to be fitted out, and was ready for occupation on the 18th June, on which date 170 measles patients were accommodated there, and finally 250—on one occasion the number rising to 260—patients were provided for in that building.

Levin and Co's. store at Kaiwarra.

84. At first only a hundred bedsteads were put in, that being all that could be then obtained. Dr. Valintine had resolved to obtain a thousand bedsteads, but these were not immediately procurable in the Dominion. He was disappointed in not receiving a certain number promised from Dunedin, nor could the Defence Stores supply them. Many were obtained from private sources, as well as at least fifty from Porirua Mental Hospital. That many patients here and elsewhere were at the outset temporarily without beds is thus explained.

Difficulty in obtaining bedsteads.

85. On Dr. Valintine taking charge under his appointment on the 23rd June as Director of Military Hospitals, the accommodation was becoming congested in the trainers' quarters, and seventy-six influenza patients were placed in the kiosk. There was still a shortage of beds, and so some of the patients had to lie on their palliasses on the timber floors inside. On the open veranda of the kiosk, which had a concrete floor, the men were given beds so far as and as soon as they were available.

Removal to kiosk.

86. At this time the number of patients was increasing daily, and from the 23rd June till the 9th July, the date on which the last large number was admitted for hospital treatment, 1,157 patients were received, or an average of sixty-eight per day, the maximum of 122 for one day being reached on the 8th July. Dr. Valintine states in evidence, "On the night of the 24th June, although I am not responsible for the treatment of the sick, I went round and found there were some men who were seriously ill. I had been led to understand that the majority of cases of influenza were only minor cases and would not require very much medical or nursing treatment, but it was obvious to

Increase of illness.

Orderlies.

me that some of these men were seriously ill and required nursing. . . . . It was also obvious to me that the orderlies could not be relied on for nursing purposes, although I may say they did their very best—they stuck to their posts and worked like men. On a parade of the orderlies on the following day there were twenty-three, of whom thirteen were available for hospital purposes, and only two had nursing experience, and that of a very minor degree." Hence Dr. Valintine says, "I immediately took measures to get trained nurses out, and the first trained nurse arrived on Sunday, the 27th June. There were two nurses at first, and then within a week seven nurses, and within ten days of my taking over there were twenty-nine trained and twenty-one untrained nurses."

Nurses.

Causes of conditions on 28th June.

87. It is to the circumstances mentioned—the bad weather, the improvised character of the hospital accommodation, the difficulties about the beds and their equipment, the large and increasing daily pressure on the available resources, and the lack of trained orderlies—that the conditions described by Dr. Thacker as existing on the 28th June are attributed by Dr. Valintine.

Grandstand.

88. Early in July the Racing Club offered the use of the members' luncheon-room in the grandstand, holding about forty beds. This and the grandstand and all the available buildings were taken advantage of, and the plant and cooking-appliances of the club utilized either for patients or for administrative hospital purposes. Up to the 10th July the racecourse buildings were only temporarily employed as a receiving hospital, and from there all the acute cases were sent to the Wellington Hospital. After that date serious cases had to be treated at the racecourse. These racecourse buildings were the better adapted, in the emergency, for use as a hospital because they were provided with kitchen and sanitary accommodation.

Further accommodation at racecourse.

Golf-house.

89. Dr. Valintine also obtained the use of the Heretaunga Golf-house on the 26th June, which became available for fifty patients.

Virulence of illness increasing.

90. On the 2nd July Captains Harrison and Ferguson, Medical Officers on duty at Trentham racecourse hospital, informed Dr. Valintine that they were not satisfied with the influenza cases that were coming in from camp. They mentioned that these cases (influenza and septic sore throats) had assumed a more malignant character, and that they were very concerned about it. Mr. Hurley, the Government Bacteriologist, was then summoned to Trentham to make a bacteriological examination of swabs taken from the throats of some of the sick men under treatment. Mr. Hurley prepared a vaccine which later on was employed in the treatment.

Typhus suspected.

91. On the 8th July Captains Harrison and Ferguson again reported to Dr. Valintine about the virulence of some of the cases, and also mentioned their suspicion of typhus fever. It is to be noted that from the 2nd to the 8th July inclusive 587 patients were admitted to the racecourse hospital for treatment. On the 8th July Dr. Hector was called in consultation, and agreed that the disease should be treated as typhus. This opinion Dr. Valintine reported to the Minister of Defence, and strongly advised him to break up the camp. Next morning, 9th July, large details of troops were sent by train to other areas, Waikanae and Tauherenikau.

Break up of camp.

Cerebro-spinal meningitis diagnosed.

92. Professor Champtaloup, of Dunedin, was telegraphed for, and he and Mr. Hurley made a further investigation of some of the acutely ill cases, and reported on the 12th July from bacteriological examination that cerebro-spinal meningitis was present amongst the sick.

How dealt with.

Patients now actually ill with cerebro-spinal meningitis, or under observation as suspects, were isolated in a room under the racecourse grandstand and in the trainers' quarters, and the special treatment for this disease was carried out by the Medical Officers. Other cerebro-spinal meningitis patients were treated in the Wellington Hospital.

Number affected.

94. On the 18th July, when the Commission visited the racecourse hospital, there were seventeen patients actually ill with cerebro-spinal meningitis, or under observation as suspects. The returns of meningitis cases given to the Commission show that in June there were five admissions, and in July twenty-four admissions, for this disease. As the diagnosis was not definitely esta-

blished till the 12th July, this diagnosis must have been made on or after that date in respect of those admitted during June and still under treatment in July.

95. From the opening of the camp to the end of July the total number of cases of cerebro-spinal meningitis is given as twenty-nine. The total number of deaths was six, making a death-rate of 20·69 per cent. on the figures supplied, which are only accurate for the period following the bacteriological report. It is highly probable that there were deaths from cerebro-spinal meningitis anterior to the date of this report. For example, Private E. P—— died on the 1st July in a delirious state, and the cause of death is returned as para-typhoid meningitis. Other such instances could be cited, thus showing that the returns of the numbers of cerebro-spinal meningitis cases and the death-rate are open to some question, and cannot be accepted as a true representation of the actual state. Deaths.

96. On our first visit to Trentham Camp and the racecourse hospital on Sunday, the 18th July, deeming it desirable to obtain independent medical evidence as to the state of the racecourse hospital and the treatment of the sick therein, we called upon seven Wellington medical men to form a committee to visit and inspect. We chose for this purpose Drs. Herbert, Mason, Christie, Gibbs, Pattie, Elliott, and Giesen. This committee visited the Trentham racecourse hospital on the 19th July in company with the medical member of the Commission, Dr. Martin. The committee again visited the hospital by themselves on the 31st July, and deputed one of their number, Dr. Elliott, to place their views before the Commission. Dr. Elliott did so, and in his evidence said that after their first visit they drew up a short report as follows:— Visit of medical men on 17th and 31st July.

Opinion of first visit.

"1. We are not satisfied with the accommodation at Trentham for infectious cases.

"2. We consider that there is need for a change in the method of administration and supervision.

"3. There is urgent need for a proper system of—(*a*) Hospital records; (*b*) up-to-date steam sterilizer; (*c*) increased medical equipment; (*d*) increased help to Medical Staff; (*e*) pack storehouse for equipment; (*f*) proper hospital clothing for lying-down cases; (*g*) a change in the present system of wet sterilization with formalin, which is bad, useless, and inadequate; (*h*) we are of opinion that all details of nursing and equipment require organization.

"4. We are concerned that at the present time men are being sent out on sick-leave who may possibly be a menace to the health of the community.

"5. We consider it to be absolutely necessary to appoint a bacteriologist to be in constant touch with the Medical Officers of military hospitals, and who will be able to offer his help and services at all times.

"6. This committee consider that the authorities acted rightly in making the Trentham racecourse buildings a temporary expedient for the accommodation of the sick, but consider that more suitable quarters are urgently required for the treatment of the very dangerous cases.

"7. We are strongly of opinion that a separate hospital staff is required in every large camp in addition to the Regimental and Ambulance Medical Officers.

"8. We consider that all the present cases of cerebro-spinal meningitis, in view of the inadequate accommodation at Trentham, should be removed, and in view of the probable extension of the epidemic we strongly recommend that a properly equipped central hospital should be at once arranged for.

"9. * * * * *

"10. We consider that a fully equipped hospital train should be arranged for the conveyance of sick men from any camp to any recognized hospital centre receiving from that camp.

"11. Motor-ambulances are urgently required both at the camp and at the receiving-end."

No reflection on Medical Officers.

Dr. Elliott concluded by stating that the visiting committee wished to make it clear that the above suggestions were not intended in any sense as a reflection on the capability or industry of the Medical Officers at the camp, who were obliged to work exceedingly hard, and did their utmost to cope with the situation.

Minister informed.

97. Your Commission, on verbal receipt on the night of the 19th July of the gist of the findings of the committee, verbally placed the information before the Hon. the Minister of Public Health.

Opinion on second visit.

98. Dr. Elliott, in giving evidence as to the result of the second visit of the medical committee on the 31st July, stated that the accommodation at Trentham for infectious cases "is satisfactory at the present time and under the present conditions, but there is no provision for subsequent epidemics. Provision should be made for such." He further stated that "a marked improvement in medical administration and supervision and in hospital records had taken place. An up-to-date steam sterilizer had not been provided, and they were still emphatically of the opinion that it is required. The medical equipment has been much improved, and the Medical Staff was sufficient under the present conditions."

Present position.

99. Dr. Valintine now states that ample and sufficient accommodation for the sick has been arranged to meet the present or any further epidemics in the camp. He also explained that the overcrowding at the racecourse hospital was, at the time it occurred, unavoidable owing to the enormous influx of patients and the difficulty of removing sick men in the then boisterous weather. With regard to the recommendations made by the committee as to disinfection, evidence was given by Dr. Valintine, Dr. Frengley, Dr. Hector, and by Dr. Sydney Smith that the present method of disinfection by formalin is effective and satisfactory. All, however, agreed that the ideal method would be a steam disinfector, but this would involve considerable expense. Dr. Valintine stated that the purchase of a steam disinfector is now the subject of consideration.

Dr. Batchelor's opinion.

100. Dr. Batchelor, who gave evidence on the 3rd August, having been associated with the camp from the 20th July, stated that the medical administration and supervision existing, and especially in the cerebro-spinal meningitis cases, was excellent, and that there was an ample staff of medical men and nurses to cope with the position; but he did not think there was a thoroughly trained staff of orderlies. He considered that the disinfection was quite sufficiently met by the formalin process in use.

100A. We have referred to these matters, though probably outside the scope of our report, because they are of great moment. Further details may be gathered from the evidence of Drs. Elliott, Herbert, Batchelor, Valintine, and Sydney Smith.

Thanks.

101. The Commission feel that thanks are due to the committee of medical men who, at their request, with great promptitude and at considerable inconvenience to themselves, visited and reported on the condition of the camp hospital. They also voluntarily offered their advice if at any time it should be required.

Difficulties of D.M.H. and officers.

102. In considering the period following the 8th July, when it was decided to break up the camp at Trentham, it must not be forgotten that Colonel Valintine and his officers in the Health Department were involved in the task of providing suitable accommodation for the sick not only at Trentham, but at the outlying camps to which the troops were sent to Waikanae, Palmerston North, Rangiotu, and Tauherenikau, and that great anxiety was added to their work by the bad state of the weather.

General illnesses.

103. A review of the general or ordinary cases of sickness present in camp, apart from those of an infectious nature, shows no special features. The character of the complaints and the numbers, we understand, were such as might be met with in any military camps. Serious surgical or medical cases were sent from camp to Wellington Hospital, and minor complaints were treated at the camp hospital by the Medical Staff. Under this head in December there

were 34 patients, January 73, February 45, March 67, April 101, May 127, the large majority being of a simple character.

Statistics.

104. The total number of cases of illness of any description from opening of camp to the 22nd July, 1915, excluding fatal cases, was 2,813, and the death-rate amongst the sick was 1·16 per cent. The total number of deaths was 33—viz.: December, 2; January, 1; February, 1; March, 1; April, 1; May, 1; June, 7; and July, 19.

A return furnished to us gives the following as causes of death in the above list:—

Pneumonia	17
Cerebro-spinal meningitis	6
Cerebral hæmorrhage	1
Malignant measles	2
Acute phthisis	1
Septicæmia	1
Epistaxis	1
Peritonitis	1
Intestinal obstruction	1
Accident	1
Acute mania	1

The return given in paragraph 41 shows that 13,607 men in varying numbers and at various periods occupied the camp from the 20th December, 1914, to the end of July, 1915.

Special review by Dr. Martin.

105. We transmit as an appendix to our report a short medical description by Dr. Martin dealing with the infections from a medical point of view. We also transmit charts and tables illustrating the history of the later stages of the epidemic, prepared and sent to us by the Health Department.

Answers to questions relating to medical service.

106. Turning back to the questions proposed at the beginning of our review of the outbreak of sickness, we answer that—

(1.) The type and nature of the maladies have been dealt with fully in the review.

(2.) There were indications in the early months of the year that the maladies might assume dangerous proportions.

(3.) The medical administrative service did not realize the significance of the indications, and therefore did not, in anticipation, provide sufficient means for the treatment and prevention of the maladies.

(4.) Energetic and effective methods were not pursued until Dr. Valintine intervened.

We supplement these answers with the observation, which appears to us to be of great importance, and that is that had the true significance of the indications been realized there would not have been introduced into the camp the large bodies of troops that were brought in there in May and June, and the epidemic would not have therefore reached the proportions that it did.

Effect of Cerebro-spinal Meningitis on the Future Occupation of the Camp.

Dr. Martin's remarks thereon.

107. In the opinion of Dr. Martin, the medical member of the Commission, which he has formed upon the medical evidence submitted to us, as well as upon his own knowledge of the subject, an opinion with which the other members of the Commission see no reason to disagree, cerebro-spinal meningitis was introduced into the camp by a "carrier"—that is, an infected person who is "carrying" the organism in his throat and is capable of infecting those with whom he comes in contact—and that it can certainly be said that the Trentham Camp site was not in itself responsible for the appearance of this disease. He states that the organism causing this form of meningitis has a very short life outside the human body, and that it would be incorrect to say that "Trentham Camp site has ever been in the past, or will be in the future, an area infected with the organism of cerebro-spinal meningitis."

Experts' report.

108. The foregoing views are confirmed by the report which, towards the conclusion of the inquiry, we learnt the Government had obtained on the 13th July from a body of medical experts as to the propriety of bringing men back to Trentham. The experts referred to were Professor Champtaloup, Drs. Herbert, Truby King, Harrison, Frengley, and Valintine, and Mr. Hurley, Government Bacteriologist. On learning of the existence of this report we telegraphed on the 10th August to Professor Champtaloup as follows:—

"Trentham Camp: Referring to experts' conjoint report, in which you concurred, and having regard to history since, particularly in view of your subsequent experience cerebro-spinal meningitis or carriers, do you still adhere to the report? We ask this of you as if you were called as a witness, as we desire to report on the fitness of the camp for the return of men for occupation."

His reply was as follows:—

"Still adhere to report of Medical Board on which I sat *re* Trentham site, provided all conditions laid down by Board are given effect to."

We also subpœnaed Dr. Hector, and he attended as a witness and confirmed the report in the same manner as Professor Champtaloup. We do not refer in detail to the report, but select the following as immediately relevant to our inquiry. The Board, having first answered a question as to bringing in 2,000 men, were asked "whether the camp would be available for occupation by a larger number of men than the 2,000 already mentioned by the beginning of September, or by such time as the Seventh Reinforcements may be free from infection in the outlying camps and ready to undergo further training in Trentham."

The Board decided that there was no objection to the camp being occupied by 4,000 men, provided that the following important details were attended to:—

(*a.*) The thorough disinfection of the whole camp:
(*b.*) No more than thirty men should be allotted to each half-hut:
(*c.*) The provision of messing-accommodation:
(*d.*) The provision of stretchers:
(*e.*) The improvement of the huts as regards the exclusion of draughts, &c.
(*f.*) The improvement of the roads:
(*g.*) The improvement of the surface drainage:
(*h.*) The improvement of the sanitary arrangements, &c.

The Board specially recommended that if possible each man be allotted 600 cubic feet or its equivalent.

We may add that prior to learning the terms of this report we had arrived substantially at the same conclusions as to the conditions of continued occupation.

Charges or Complaints.

109. We now advert to the various complaints or charges that in the course of the inquiry have been made against the camp and its military and medical administration "so far as such administration" (to use the words of our Commission) "relates in any manner to the health, comfort, feeding, clothing, treatment, and accommodation of the troops."

(a.) *Overcrowded Tent Accommodation.*

Heads of criticism.

110. The charges with regard to this matter were that the tents were pitched too close together for health, that each tent was not after a time shifted to the space adjoining, and that the whole of the tents were not from time to time removed to an entirely new site. These points were especially emphasized by Dr. De Lautour on the strength of military manuals and other authorities cited by him. He estimated there were 648 men camped to the acre. Colonel Purdy contends that there were about 400 to the acre. He admits that in one line the tents were rather crowded owing to the conformation of the ground.

An engineer of the Public Works Department ascertained by measurement in different parts of the camp that there were in certain parts at the rate of eighty tents to the acre.

111. In the absence of any definite record as to the areas occupied by successive reinforcements, we can only accept the data obtained by the engineer from inquiries made at the camp. From this it appears that, for instance, the Fifth Reinforcements (Mounted and Infantry) occupied about 4 acres, which, for 2,300 men, corresponds to a density of 575 men to the acre.

112. Firth, in his work on "Military Hygiene," says, "You must not have more than 330 men for an Infantry battalion, and 262 if an Infantry brigade, to an acre." Authorities.

It is clear from this that the number of men recommended by the British Army medical authorities was exceeded in this instance. Blake Knox, in his manual "Military Sanitation and Hygiene," 1911, at page 88, says, "As it is impossible to move a standing camp frequently to a fresh site, tents should be struck once a week and pitched loosely on a fresh site for a few hours to allow of the vacated sites being thoroughly aired and cleaned." At page 86 he says, referring to tent intervals, "There should be 10 yards clean ground left between units, 3 yards between companies, 1 yard between squadrons, and 1 yard *between the pegs* of each tent." Also, on page 86 he says, "In standing camps the tents should be pitched at intervals of one and a half diameters apart."

From the evidence of the General Officer Commanding it appears that with regard to the tent-spacing it was desired to conserve space for the parade-grounds, and he stated that the outside pegs of tents were almost meeting. This confirms the statement by Dr. De Lautour that, having regard to the rules laid down, the tents were too compressed, and that in some cases the tent-pegs were overlapping. The tents used were the ordinary bell tents, in which fifteen men are placed in England. At Trentham only eight men occupied each tent, so that it does not appear that any individual tent was overcrowded at any time. It is obvious, however, that there must have been about twice as many tents to the acre at Trentham as in the case of a British camp.

113. All the evidence shows that the tents were undoubtedly pitched closer than is the recognized rule for standing camps, and that in that respect, at any rate, the claim that the camp was laid out on the most up-to-date lines cannot be sustained. Tents pitched too close together.

One very obvious disadvantage of the tents being spaced too closely is that there is less space for the night pails to be placed between the tents, and they are therefore in closer proximity to the occupants of the tents, with the contingency of the narrower space of ground between becoming polluted.

114. We do not find it established as essential in all circumstances that the whole camp should be moved from time to time, or that the individual tents should be pitched on the intervening spaces, provided the tents and floor-spaces are regularly aired and cleaned. The evidence shows that this was the practice at Trentham. Airing of tents and floor-spaces.

(b.) *Hutments.*

115. Much evidence was taken in regard to the hutments. They are an important factor in regard to the health and comfort of the troops, and require detailed treatment.

Towards the end of December, 1914, the Headquarters Staff decided that because of the great wear-and-tear and consequent expense of having troops in tents, the depletion of the stock of tents by an issue taken with the Expeditionary Force, and the probability that Trentham would become a more or less permanent camp, it was desirable to provide a permanent form of hutment. Plans were drawn up by the draughtsman attached to headquarters for a detached hut to accommodate fifty men. These plans were submitted to the Hon. the Minister of Defence, and by him to a Medical Board consisting of Drs. Elliott, Holmes, and Purdy. This Board, on the 11th January, approved of one of the plans submitted, having a floor-space of 36 ft. per man, but suggesting that this floor-space was not quite sufficient. The hut as so recommended provided for fifty men, although the text-books indicate twenty-four to thirty men per hut, with a floor-space of from 40 ft. to 50 ft. per man. A cablegram received by the Defence authorities in reply to a recent inquiry (in July) for particulars History of hutments.

of barrack huts built in England gave the size as 60 ft. by 20 ft., with an average height of 10 ft., to acommodate thirty men. This gives a floor-space of 40 ft. per man. We had evidence, however, that the huts erected recently on Salisbury Plain were occupied by about fifty men apiece.

Dealt with by special Board.

116. A special Board was set up on the 3rd February, composed of Dr. Frengley, of the Health Department, the Government Architect, Mr. Campbell, and Major Morton, City Engineer, of Wellington. This Board considered the plan that had been approved by the Medical Board, and amended it by proposing to build a hutment divided centrally so as to hold two lots of fifty men. The inside height of the building was reduced to 7 ft. 6 in. at the eaves. The aspect was approved, leaving a distance between the huts of 50 ft. It was recommended that the walls should be made of galvanized iron with a view to economy in material and time of construction. It was provided that there should be a wooden floor on which the mattresses could be laid. The ventilation was considered, and provision made for a continuous space at the eaves. The iron of the roof was laid upon a non-conducting material, and ample window-space was provided, each window being hinged at the top to open outwards. A central double door was provided at the front of each half-hutment, and the building was raised on piles so as to provide ample air-space underneath.

Course of erection.

117. On the 23rd February, 1915, the Public Works Department were requested to proceed urgently with the erection of sample huts, one for men and one for officers, in accordance with the approved plans, and with the preparation of specifications and the calling of tenders so soon as the sample huts had been erected and tested. These two sample huts were completed on or before the 19th March, and were approved subject to slight modifications by the military authorities, and instructions given on the 30th March to the District Engineer to call for tenders. The tenders received were all declined on the 15th April, and a commencement was made as soon as possible thereafter to proceed with the erection by day labour by the Public Works Department of thirty-two huts for men and eleven for officers, a number which was subsequently increased to fifty-one huts for men and fourteen for officers. In addition to these buildings, other structures were erected and work done by day labour under the supervision of the District Engineer of the Public Works Department at the same time.

Hutments defective.

118. Upon the evidence presented to us we consider that the hutments are susceptible of various improvements that would further the health and comfort of the troops, and to the extent to which they have lacked those improvements they must be deemed to be defective.

Matters to be remedied.

119. We are of opinion that if any more huts are erected at Trentham or elsewhere they should be built with an aspect nearly due north and south so as to obtain the maximum of sunlight on each side of the huts and on the spaces between them, and that the spaces between the huts should be increased to 30 ft. In any new huts built, the inside height and the eaves should be increased to 9 ft. We approve of the system and amount of eave ventilation provided, but recommend that by means of an inclined board or other contrivance the incoming current of air be deflected upwards underneath the roof so that it will not immediately descend in contact with the wall. We advise that a system of ridge exhaust ventilation be adopted in addition to the eaves openings, but we do not approve the suggestion made by one expert witness that the rooms should be ceiled. We recommend that in new hutments the windows be of such number and be spaced so that the places for the beds lie between the windows and not under them. We approve of the system adopted of hinging the windows to open outwards. We recommend that in the present huts the number of men be reduced from fifty to thirty-two, and that in new huts there be provided a wall-space of not less than 4 ft. 6 in. per man, and in all cases that simple stretchers be provided on which the straw palliasses can be laid, obviating the necessity for placing the mattresses on the floor. We are strongly of opinion that the existing galvanized-iron walls should be lined inside with some suitable material of low conductivity, preferably with poilite, uralite, or other form of asbestos sheets presenting a smooth surface, and, failing this, with some close-jointed timber. We consider

the evidence fully establishes that with galvanized iron as the only covering the variations of temperature within the huts are greatly intensified. In the cablegram before referred to it is shown that the huts in England are lined with either asbestos sheets or jointed boarding.

We recommend that a porch be provided to each hut, either by cutting off a portion next the door by a partition (in this case reducing the number of men using the hut), or preferable by building an ante-room. This room would provide for the changing therein of wet and muddy boots, and for the hanging-up therein of wet overcoats and outer clothes. One side of such a porch could be provided at little expense with a small stove so that the damp clothes could be dried. We recommend that spouting should be provided to the eaves so that the roof-water may be carried directly to the surface-water drainage-system, and not permitted to soak into the ground and under the hutments.

We are of opinion that a space between each hutment at the ends thereof should be graded and concreted in such a manner that on the removal of the night urine-pails therefrom the surface could be washed down to the drainage-system.

120. The evidence we have had, in our opinion, justifies the inference that the vitality of the men must have been reduced by the use of unlined iron-wall buildings, and by the overcrowding which rendered the men more liable to pollution by close contact. Effect of hutments.

121. If it is not feasible at present to provide separate hutments for meals, we recommend that whenever the number of soldiers in camp are so few as to permit it, that special hutments should be set aside for that purpose. Hutments for meals.

(c.) *Erection of Huts or Tents on Latrine-sites.*

122. The camp-site has been used for many years for successive meetings of the Rifle Association. In connection with these meetings earth-latrines for the men, with urinals, were in use. Separate accommodation for this purpose existed for the officers. The officers' sanitary accommodation has been described to us as being provided with boarded floors and pail-closets enclosed by galvanized-iron fences. These places were removed in October, shortly after the present Trentham Camp was established. From the information supplied by the Assistant Engineer to the Public Works Department, who examined the ground and provided us with plans, we find that the urinals and latrines for the men were situated in a position to the south-west of the officers' latrines, and upon what is now open and uncovered ground. The site of the officers' latrines was within the area of land occupied from December, 1914, to February, 1915, by the camp of the Third Mounted Reinforcements, and from February to April by the camp of the Fifth Mounted, and is now included in the area occupied by the first row of hutments.

We find on the evidence that no tents or hutments were erected on the site of earth-latrines, and, having regard to the structure of the officers' latrines, we consider the criticism under this head is reduced to a minimum.

(d.) *Overcrowding of Hutments.*

122A. The hutments were projected for the Forces which had hitherto been accommodated in tents, but they were instead appropriated to the new reinforcements which came in on and after the 29th May. No detailed information has been placed before us as to the number of huts which, whether completely finished or not, were then available for occupation. On the 8th July, a month later, there were forty-three completed, including the sample huts, and three nearly so. The workmen occupied at least one of them, and one of the troopers told us that there were no window-sashes at first in the hut he occupied. As the erection kept going on there were necessarily fewer huts at the end of May and beginning of June than on the 8th July. There was, therefore, considerable overcrowding. As many as seventy men were in some of the hutments. That would reduce the floor-space from 31 ft. to 22 ft. per man. This pressure was lessened gradually as additional hutments were completed and by the transfer of men to hospital or by their going on leave. Hutments not ready in time. Overcrowding.

P.M.O. authorized this.

123. The Camp Commandant states that he had the authority of the then P.M.O. to put in the extra men, although beyond the number they were designed to carry. That P.M.O. is now at the front.

Responsibility

124. We are of opinion that the Headquarters Staff is primarily responsible for bringing men into camp before sufficient accommodation had been provided; but we think the medical service ought to have drawn the attention of the Camp Commandant to the risks attendant on the overcrowding which prevailed and was permitted. Whilst recognizing that the Headquarters Staff have been continuously working at high pressure, we think that as soon as it was known that tents were to be sent with the Expeditionary Force, and that the stock would be thereby depleted, some action should have been taken at once to provide a scheme for other accommodation, and that two or three months might have been saved. It is not proved that the District Office of the Public Works Department could have acted more promptly than it did in carrying out the instructions given to it.

The pressure leading to the overcrowding was no doubt regarded as temporary, and the exigencies of the moment may have left no other course open; but without doubt the overcrowding was due to the fact that the accommodation was not there by the date the extra men were appointed to come into camp.

(e.) *Food, Cooking, &c.*

125. The cookhouses and system of cooking, the stores for meat and perishable food, were satisfactory. Exception might be taken to the absence of special stores for holding vegetables.

Complaints.

The evidence adduced shows that the food both in quality and quantity was good. With slight exceptions the cooking was good. Complaints were made as to the quality of the tea served out. The fault, which was a slight one in connection with the boiling of the water, was discovered and remedied. Some complaints were made of a deficiency in the amount of vegetables provided, but in this respect the ration is greater than that laid down in the British Army Service Corps Regulations, although it may have been less than that to which the men had been accustomed in civil life.

The cookhouses appear to be well arranged, but there is an absence of cover for the food orderlies when waiting to be served with the rations for their men.

It is also in evidence that extra accommodation for the cooking of vegetables would be an advantage.

Several witnesses complained of lack of hot water for the washing-up of utensils after meals. This is a matter that can be easily remedied.

Other witnesses referred to the fact that no means were provided for the carriage of the bread from the issue store to their quarters, and that some of the men had met this difficulty by the use of a ground-sheet or a blanket, although this was contrary to camp regulations. The difficulty having been drawn attention to, it will no doubt now be remedied by the military authorities, if that has not already been done.

(f.) *Incinerators.*

126. Incinerators were constructed at the outset. These have been criticized, but we find they are according to an approved Army plan, and Captain Simson gave it in evidence that the like kind were in use in Egypt and on Salisbury Plain. We are informed by the Engineer-in-Chief that a destructor is now to be constructed to deal with camp-refuse. Proper arrangements were in force for the removal of vegetable and cook-shop refuse by carters, to be used for pigs' food.

(g.) *Boots.*

Practice as to issue.

127. Much complaint was made during the wet weather of May, June, and July of wet boots. The practice had been to issue to a man as soon as possible after coming into camp one pair of military boots. The boots that he came in with were probably in many cases of a light character, and the wearing of them for camp-work was not encouraged so that they might have a change.

Either the men did not avail themselves of their own personal boots for a change or both pairs were wet at the same time. At any rate, on realizing this condition of affairs, the desire of the Camp Commandant was that the second issue of boots should be made forthwith so as to provide an extra change of strong boots. The Camp Quartermaster states that he had requisitioned the Stores Department for boots in sufficient numbers to enable this to be done. By the instructions from the Headquarters Staff of the 17th May, 1915, the second issue of boots, except those for the Fifth Reinforcements, was directed to be provided before the 24th July in the case of the Sixth Reinforcements (1,900), the 17th September in the case of the Trenthams (2,250), and the 25th September for the Seventh Reinforcements (1,700). The Stores Department were therefore not called on to have the boots for the second issue to these detachments in stock at the beginning of June, and, although the Camp Quartermaster's requisitions up to and including the 31st May were, according to his view, sufficient to meet the demand for the second issue, the Stores Department were unable to comply therewith. On the 6th June the Camp Commandant spoke to the G.O.C. during a visit to the camp requesting him to urge on the delivery of the boots. The delivery depended upon the Stores Department obtaining the boots from contractors. Considerable time was spent by your Commissioners in endeavouring to elucidate the actual position of the Stores Department in regard to its supplies from contractors and its deliveries to the camp; but we feel that unless these questions were looked into by an accountant it was impracticable to arrive at a definite decision as to whether sufficient boots ought to have been in store, or as to whether any one was to blame for the deficiency. Up to the 4th July boots had not been supplied to the camp in sufficient quantities to enable the second pair to be issued all round. On that date the Hon. the Prime Minister visited the camp and gave instructions that a second pair of boots of some kind were to be procured at once. On the following day, out of some six thousand pairs of boots sampled, only some two thousand pairs of boots could be accepted for purchase, and Major O'Sullivan says the boots so bought have been a source of trouble ever since.

Second issue ordered.

Causes of delay.

Responsibility

128. Criticisms were offered by one of the witnesses on the quality of the material used in the boots and on the workmanship, but we have found that this criticism was not based on the boot made under the present specification. The evidence of Mr. Ward, works-manager for Mr. R. Hannah and Co., who was an instructor at technical colleges in Britain, shows that from April cowhide was substituted for split russet for the front lining, and this he deemed to be better. The chrome leathers now used for the uppers were selected by the Defence Department because they had been adopted by the War Office after lengthened experiments in place of the waxed kip, which was abandoned. He admitted that the feet were more quickly affected by wet through chrome leathers than through vegetable-tanned leathers. He also informed the Commission that the sole-leather used in New Zealand was not so good as that used in the British boot, as the British Government had prohibited the exportation of the best sole-leathers.

Criticism of boot.

The witness made three suggestions of value: (1) That the boots should be kept stored at least a month before use, and then dried by fans in a proper room either in the factories or in the Stores Department; (2) he strongly recommended that the boots should be viscolized, or, at any rate, oil-dressed before issue; (3) that a boot of somewhat lighter make than the military boot, but stouter than the ordinary civilian boot, should be made and issued to the troops in the first instance. This would gradually break the recruits into the use of a heavy boot, and would enable parts of the hides that are now wasted to be utilized for military purposes, and thus reduce the cost of the heavy boot. He was also of opinion that the extra four thousand pairs of boots could have been procured in New Zealand in the months of April and May if a business man could have been sent round to the manufacturers. His expression was, "If it had been a business proposition instead of an official one the boots would have been obtained all right." We mention this as the deliberate expression of opinion by a witness who ought to know; but the Stores Department had

Suggestions.

no opportunity of offering evidence in rebuttal. Perhaps it was a question of price.

(h.) *Drying Clothes.*

129. No artificial provision for drying clothes or boots was made in the camp until the beginning of July, when marquees with braziers in them were utilized. Prior to that the men had to fix up lines outside the tents and dry their greatcoats, clothes, and stockings in the open air as well as they could. The marquees were erected on the suggestion of Colonel Valintine. The Camp Commandant informed us that he had never known before of drying-appliances being provided in camps, but admitted the advantage when it was pointed out to him. Captain D. P. Simson, who had recently returned from the Dardanelles, and who had experience of camp life on Salisbury Plain and at other places, informed the Commission that there were no drying-appliances there up to the time of his departure, with the result that oftentimes men had to start the day with wet clothes and boots. The Chief of the Staff, Lieut.-Colonel Gibbon, stated that experience showed that there was no harm in wet clothes or boots so long as a man kept moving, but that wet things should be removed as soon as the men entered their tents. He was of opinion that drying appliances were an advantage, and that the medical men should have moved the Commandant as soon as they realized that the men's health might suffer from the want of them.

130. In the text-book called "The Royal Army Medical Corps Training," edition 1911, which is in possession of the General Staff, at page 77, the drying of clothes is recommended for the purpose of obviating personal discomfort, and simple means are indicated for the purpose. We think it has not been satisfactorily explained why this simple provision was not made earlier.

(i.) *Uniforms.*

131. The case of a misfit through the collar being considered too loose in regard to a certain size was brought before us. It was stated that there were five hundred of these, but the contractor says he knows of only thirty-two, which he says he altered and returned.

(j.) *Baths.*

132. A limited number of cold showers were provided during the summer. The necessity for further showers was not so imperative owing to the bi-weekly bathing parade in the river; but with the approach of winter the comfort of the troops would have been greatly enhanced by the introduction of a hot-water supply. This, we understand, is now being carried out, and further shower accommodation is being provided.

(k.) *Sick-parades.*

133. Considerable evidence was given to the effect that when the number of the sick so greatly increased during the winter the parades at the camp hospital were very long, and the men were kept standing about on the wet ground, and sometimes in the rain, without shelter and without seats for the weak. It is said, on the one hand, that there were marquees there which might have been used by the men, but that they preferred to be outside. On the other hand, several men who gave evidence stated that they were not aware that such accommodation existed. On the 24th June, the day after he took charge, Colonel Valintine wrote to the Camp Commandant on the subject, and then other arrangements were made for an examination nearer the hospital and in one of the huts. It appears to us that this was a matter in which the medical service failed by not realizing the position and asking for further accommodation earlier.

(l.) *Carriage of Sick.*

134. In February Dr. Fyffe, who was then the senior Medical Officer at the camp, in a letter to the Director of Medical Services, suggested that a motor-ambulance for the conveyance of patients to Wellington should be

obtained. The position then was that if an ambulance was wanted and the Wellington Hospital ambulance was engaged a taxi was hired. It has not been satisfactorily explained to us why an ambulance was not attached to the camp. Colonel Purdy states that he thought it was necessary to have one. He asked for one, and thinks it was in March or April that he did so, and says it was not obtained because one which was being obtained "was stopped on the way." Though vague statements have been made that patients were conveyed in open motor-cars who should have been carried in closed cars, no definite evidence of any such case was submitted to us.

(m.) *Treatment of Measles Contacts.*

135. Prior to the 31st March (Colonel Purdy says in May), if a case of measles occurred in the tents the subject was sent to the hospital and his tent-mates removed to the segregation camp, which was an area set apart for the observation of infectious-disease contacts. The tent from which the infected man had been taken was disinfected with formalin spray. When the observation-period was over the men in the segregation camp who showed no signs of infection were transferred back to camp. Colonel Purdy says that this practice was discontinued because the cases of infection became so numerous that the medical men then in charge throught nothing could be gained by continuing the practice.

Complaints have been made that men under observation as contacts mingled with the men in camp, but there is no satisfactory proof of this.

It has been proved to us that the methods of supplying the contacts with food, and the attendance, were carried out with due precautions.

(n.) *General Care of the Sick.*

136. Our observations under this head are contained in the previous paragraphs reviewing the medical aspect, and there is no occasion to repeat them here.

(o.) *Notification to Relatives.*

137. The rule in the camp has been that no notification was sent to the next-of-kin unless or until the Medical Officer in charge of the case reported it as serious. This report was made to the Camp Commandant, who would then transmit the message to the next-of-kin. This rule has now been relaxed. It was, of course, open to the men themselves to report that they were in hospital if they were well enough to write. At the height of the epidemic, when men were coming into hospital in large numbers daily, there was undoubtedly some delay in the transmission of messages sent by the sick themselves to their friends, and probably in some cases announcing serious illness. Excuse for this is to be found in the number of messages of inquiry and otherwise, and the replies, which at that crisis were being sent to and from the camp rendering it necessary to send them on to Wellington for transmission owing to the local line being blocked. In certain instances where the men had been sent to another hospital and became unconscious, delay in notifying the relatives occurred because particulars of the next-of-kin had not been sent with the patients. It appears not to have been the practice for these particulars to accompany the patient. If this practice has not been altered it should be.

(p.) *Camp Hospital Building.*

138. Early in January of this year the Council of the New Zealand Branch of the British Medical Association sought the aid of the public to raise sufficient funds to build and equip a hospital, which the Chairman of the Council, Dr. Elliott, then described as being urgently required at the Trentham Camp. On the 21st January Dr. Elliott wrote to the Hon. the Minister of Defence that it was merely a monetary gift the association was making to be used for a Trentham hospital. On the 3rd February the Minister replied that he presumed it was not desired to erect a large or permanent hospital, but one suited for the present camp, for demobilization, and for the use of future encamp- Origin.

Plans.

ments at Trentham. On the 18th February the Director of Medical Services, Dr. Purdy, reported that plans had been prepared by the Defence officers from a sketch-plan prepared in Trentham Camp by Dr. Holmes for an eighteen-bed hospital at an estimated cost of £1,500, and stated that the ladies of Wellington had made provision for the equipment of the hospital up to twenty-five beds, and expressed the opinion that the hospital, as shown by the plans, would be a most efficient one. These plans were submitted early in March to the same committee that had dealt with the hutments—viz., Messrs. Campbell and Morton and Dr. Frengley. This special committee amended the plans, and on the 16th March the plans were submitted to Dr. Elliott with a letter seeking certain information as to the amount of funds in hand, equipment, &c. Dr. Elliott, then ex-Chairman of the New Zealand Branch of the Council of the British Medical Association, gave the information asked for by marking his answers in the margin of the letter. He has satisfied your Commission that he did not in any way approve of the amended plans, either on behalf of himself or for his Council. The Defence Department apparently assumed that the medical men of the Dominion had approved of the plans, and proceeded thereon without further reference to the Council.

Not approved by Medical Council.

139. It is regrettable that any misunderstanding of this sort should have arisen, and that the hospital should have been proceeded with without the detailed approval of those members of the medical profession through whom the public subscription was so largely obtained.

140. On the 18th March the Hon. the Minister of Defence directed that the Public Works Department should prepare working plans and specifications, and treat the matter as urgent. The report of the special committee shows that the scheme they proposed was for a camp hospital for the reception of cases, including isolation, awaiting development until a final diagnosis decided whether the case should be removed to the base hospital or be of such a character as to be suitably treated at Trentham. The plans and specifications were finished on the 12th April, and submitted for final approval, which was given on the following day. The contract was let on the 27th April for completion in two months. This time was referred to by independent witnesses as being almost an impossible time within which it could be completed. Difficulties were encountered by the contractor, and the hospital was not completed when this Commission issued.

Contract let.

Benefit if completed earlier.

141. If this building had been completed to time it would have required to be furnished and equipped; but had it been ready even without complete equipment it would have been of service about the first week in July in relieving the pressure upon the accommodation, and it would have been particularly of service for the reception and treatment of the cerebro-spinal meningitis and pneumonia cases.

(q.) *Individual Complaints.*

142. Many troopers gave evidence of their individual experiences, and troopers and others spoke to what they knew or had heard concerning troopers who had died. Their evidence was directed to the following points:—

(1.) As to standing outside the medical tent on sick-parades:
(2.) As to absence of means to dry wet clothes and boots:
(3.) As to delay in the issue of a second pair of boots:
(4.) As to overcrowding in the huts:
(5.) As to the discomforts of the hospital accommodation at Trentham and Berhampore:
(6.) As to treatment in hospital:
(7.) As to want of attention by orderlies:
(8.) Other detailed experiences.

It would be impossible to come to any conclusion as to some of the hospital experiences special to the person speaking of them. In some cases they did not know the names of the Medical Officers or orderlies referred to by them. In the cases of the alleged non-attention of the orderlies when a hospital marquee was blown in on the 12th and 13th June, and the alleged consequent

necessity of patients going outside to fix it up, the evidence appears to us to negative the charge. The allegations made that thermometers and throat-brushes were by the orderlies dipped in water only before reuse would appear to be a misconception. What was supposed to be water was a disinfecting-fluid; but all the testimony shows, as regards the hospital attendance, a much-improved state of things after the nurses arrived. The substantial topics of criticism are but illustrations of the matters we have already dealt with under the general heads of charges.

143. There are five hospital cases, however, as to which considerable evidence was taken. We have collated the evidence and stated what appear to be the special facts of each case in an appendix to this report. The special facts must, of course, be read in connection with the general facts stated in the report with regard to hospital accommodation and treatment. The evidence with regard to any other individual case to which reference is required will be easily found by means of the index accompanying this report. Special cases.

Answers to the Specific Questions.

144. We now proceed to deal with the questions specifically put in the Commission, premising that the finding must be read in connection with our previous observations, especially with regard to the matters relating to the sick.

1. *The extent, nature, and causes of the sickness among the troops at the camp.*

(*a.*) The extent and nature of the sickness is sufficiently shown by the medical review.

(*b.*) The causes of the sickness: It is impossible to state the causes of the sickness in the full sense. The causes were obviously not confined to the camp, for the maladies of influenza and measles were concurrently present among the civil population. There were, however, several causes that contributed to the spread of sickness. In this connection the occupation of the camp must be divided into two periods, one to the end of April, and the other covering May, June, and July, which latter period may be termed the winter season. During the latter period we consider upon the evidence brought before us that the following were contributing causes:—

(1.) The aggregation of so many men in a confined space, and their close contact with each other, first, in tents, and afterwards in larger groups in the huts, and from time to time in the recreation-halls, often in wet clothes.

(2.) The bringing into an already infected camp of large bodies of fresh troops. This applies especially to the drafts brought in between the 29th May and the 16th June.

(3.) The wetness of the ground because of the absence of efficient surface drainage.

(4.) The absence of provision for drying clothes and boots.

(5.) On and after the 29th May, the deficiencies in the design and equipment of the hutments, combined with the overcrowding which continued for some time, and the presence of damp clothes in the hutments during the sleeping-hours.

(6.) Unnecessary exposure during sick-parades, causing fatigue.

(7.) The want of appropriate provision for rapidly and effectually dealing to the best advantage with an increasing number of sick.

(8.) The specially infectious character and increasing virulence of the diseases.

(9.) The sudden change from the habits and comforts of civil life to the conditions of life in a military camp, and the want of knowledge, until experience was gained on the part of the men, of how to act with a due regard to the care of themselves and others under those conditions. During the period prior to May the same contributing causes but in a less degree (excepting always those arising from the hutments) prevailed.

II. *The extent and causes of the mortality among the troops.*

These are shown in the medical review.

III. *Whether due care and efficient measures have been at all times taken to prevent or minimize such sickness or mortality*

Having regard to our findings under No. I, we say that due care and efficient measures were not at all times taken for these purposes.

IV. *Whether an efficient system for the treatment of the sick has at all times existed in connection with the camp.*

We answer this in the negative. Under this head we specially refer to the non-provision in advance of hospital accommodation and equipment at a stage when the necessity for it was imminent, thus rendering sudden action necessary when the emergency arose, with consequent disorganization, confusion, and overcrowding to the prejudice of the sick.

V. *Whether an efficient system of medical examination has at all times existed in connection with the camp.*

We group under this question—

(*a.*) Diagnosis: It is not established that the system adopted for the examination of the sick in camp was other than the usual system followed, and efficient.

(*b.*) Sanitation: We think the medical examination with respect to sanitation failed—(1) In permitting overcrowding of the huts-ments; (2) in not recommending drying-apparatus; (3) in not recommending better accommodation at sick-parades.

VI. *Whether in any cases the sick have been neglected or improperly treated.*

Evidence was given in regard to certain individual cases of hospital treatment, in some of which the suggestions either expressly or impliedly was that the patient had been neglected or improperly treated by the Medical Officer and nurses in charge of him. We consider that the evidence before us does not warrant a finding that there was neglect or improper treatment in any of the cases referred to. Instances were given of inattention by orderlies, but as these men could not be identified by name it was impossible to inquire further.

VII. *Whether undue delay has in any cases taken place in the removal of the sick from the camp to a hospital.*

There is no instance brought before us of any undue delay in the removal of any patient from the camp to a hospital.

VIII. *Whether proper notification has at all times been made to the relatives of the sick, and sufficient facilities given to those relatives to afford assistance or comfort.*

We find that there was for a time no provision made for notifying relatives or next-of-kin of cases of sickness unless or until the Medical Officer in charge of the case reported it as serious. There was some delay at a certain stage of the epidemic in the transmission of the messages sent by the sick themselves to their friends, and in certain instances, under the circumstances mentioned in paragraph 137, delay in the case of serious illness. We find that in no serious cases have other than full facilities been given to the relatives to afford assistance and comfort.

IX. *Whether an efficient system of drainage, water-supply, and sanitation at all times existed in respect of the camp.*

As regards surface and sewage drainage, at the outset the system was efficient, but as the camp grew the necessity for a better system arose, and at the period of the overcrowding of the camp we find that the system became inadequate. To remedy this inadequacy the aid of the Public Works Department has been invoked.

As regards water-supply, the evidence shows that this has at all times been efficient.

As regards sanitation, we find that the general system was efficient.

X. *Whether the camp is suitably situated, equipped, and arranged for the purpose for which it is used; and*

XI. *Whether sufficient sanitary or other reasons exist for its removal from the present position.*

We find that the camp is suitably situated. As regards equipment and arrangement, embracing under that head surface drainage and road-formation, sewerage, habitation, drying-apparatus, and hospital accommodation, upon the evidence that we have had before us we find that no sufficient sanitary or other reasons exist for the removal of the camp from its present situation. We consider it may continue to be used provided the following conditions are observed:—

(*a.*) A limitation of the size of the camp to a number not exceeding from 4,000 to 4,500 men.

(*b.*) The formation of roads with surface drainage with such ample outfall as we understand is now in progress.

(*c.*) The execution of a complete system of sewerage for the effective disposal of the liquid refuse of the camp.

(*d.*) The improvement in the construction and use of the huts by—

(i.) An amendment of the ventilation:

(ii.) The provision of stretchers:

(iii.) The lining of huts having galvanized-iron walls with a less conducting material:

(iv.) The construction of a porch or ante-room:

(v.) The carrying of roof-water clear of the huts and adjacent ground:

(vi.) The provision of a concreted space for night-pails:

(vii.) The restriction of the number of occupants:

(viii.) Where feasible, the use of separate hutments for meals.

(*e.*) The maintenance of an efficient provision for drying clothes and boots.

(*f.*) The retention of the right to use the racecourse buildings and other hospital accommodation so long as no other substituted provision is available.

XII. *Whether the food supplied to the troops has been at all times sufficient and of good quality and properly prepared and served.*

We find that, with trivial exceptions on isolated occasions, the food has been sufficient, of good quality, properly prepared and served.

XIII. *Whether the clothing supplied to the troops has been at all times of proper quality and sufficient in amount.*

We find that there is no evidence to establish that the clothing has not been of proper quality or sufficient in amount, but it was shown that with the wet condition of the camp during the winter season it was expedient that the issue of the second pair of boots should have been made as speedily as possible after the first issue, so as to enable each man to have a change of military boots, but that there was not a sufficient supply in hand to enable an immediate issue to be made.

XIV. *Whether the tents, huts, and other accommodation for the troops have at all times been sufficient, suitable, and proper for the purpose.*

We find that the accommodation for the troops was not sufficient after the 29th May, thus leading to serious overcrowding in the hutments. We have already dealt with the sufficiency and suitability of the hutments, and have pointed out where improvements should be made and the conditions under which they should be used.

XV. *Whether in any respects the troops have been at any time exposed to undue preventable hardships or discomforts.*

Except so far as is shown in our previous findings, we find that the troops have not at any time been exposed to undue or preventable hardships or discomforts. The prevention of hardships and discomforts to a great extent depends upon the men themselves and the care that they show in looking after their health and comfort. As they gain experience they become able to minimize the discomforts, and these, from the training, become of less importance and less noticeable. The evidence shows that camp life under favourable conditions is of the healthiest character.

XVI. *Whether the officers of the Defence Forces, or of the Expeditionary Forces, or of the Public Service charged with the administration or control of any of the matters aforesaid have in any respect been incompetent or negligent, or have in any manner been guilty of neglect of duty or misconduct in their office.*

In regard to this question we realize a grave difficulty which was perhaps not foreseen on the issue of the Commission. To find any person specifically chargeable with incompetence, neglect, or misconduct by the method of inquiry we had to follow (and which was the only one that could be followed) without first definitely formulating a charge and giving the person charged a full opportunity for answering it would be contrary to the ordinary notions of what is just. In respect of persons now absent from the Dominion such a procedure would be out of the question. There is, moreover, very grave doubt whether it would not be unconstitutional for such a body as this Commission to enter upon such a course of procedure. As indicated at the beginning of this report, the Commission had at the outset nothing in the nature of specific charges laid before them for investigation. These had to be developed by the evidence as it proceeded. It was not practicable to pursue them with continuity. Consequently, it could not be known in many cases until the Commission drew to a close what shape any charge ought to take, and the facts could not be appreciated until opportunity had been afforded to your Commission to collate the great mass of evidence which had accumulated.

To have regularly proceeded by formulating charges against such person or persons as we considered involved in order that they might be fully heard would have indefinitely protracted this Commission, now twice extended beyond the original date fixed for the report. Moreover, one of the members of the Commission (Dr. Martin) found himself unable to provide the time which such a proceeding would have involved.

In the course of the inquiry we did point out to some of the witnesses the matters which at that stage appeared to require some answer, but we cannot regard that as sufficient to have put them on their trial in respect of any of those matters. They might require to produce evidence besides their own in reply.

We have therefore refrained from specifically answering question XVI.

General.

145. Testimony was given as to the uncomplaining patience with which the sick men and the men generally faced the conditions arising not only from their ailments, but from the inclement weather and the discomforts that ensued, and the difficulties and disorganization that accompanied the rapid and comprehensive nature of the epidemic. That some of the men have given evidence before the Commission is not indicative of any general spirit of discontent. Many of them came unwillingly and only because they were subpœnaed. Others, responding to the invitation to come in the public interest, attended in that spirit to point out what they deemed to be the errors of the past in order that the future might be amended, and thus help the Commission to accomplish its end. We concur in the view that throughout the trying conditions described those of all ranks acquitted themselves as soldiers and as men.

146. On the militant side of the camp-administration we are entitled to say on the evidence produced before us that the duty of providing for training and despatching the troops had to be met with a short staff, which could not be supplemented; that it had to work under the difficulties caused by the repeated increases upon the number for which the camp was originally laid out, and, in particular, by the addition of the Trentham Regiment. The whole work was a new experience, and over and above all were the exigencies of war, the limited resources of the Dominion, and the stress of despatching the promised number of men—trained and fit—to the dates prefixed. The evidence is that the members worked unsparingly, and, from what we have gauged of them, with devotion to their task.

147. We transmit with this report the exhibits given in evidence and other relevant documents which we have had submitted to us, together with a list of the same.

We have the honour to be,
Your Excellency's obedient servants,
J. H. Hosking,
William Ferguson,
Arthur A. Martin,
Commissioners.

Wellington, 25th August, 1915.

APPENDIX A.

THE CAMP INFECTIONS.

Memorandum by Dr. Martin.

Measles is an infectious fever associated with an eruption of the skin, with catarrh of the nose, throat, and larger bronchial tubes. It is a fever that at times causes a heavy mortality amongst young children. In adults it is generally of a mild character. When it appears in a camp, barracks, or any slum area it can spread with great rapidity, and in the presence of overcrowding or insufficient ventilation it is frequently associated with severe and dangerous respiratory complications, such as laryngitis, pharyngitis, septic sore throats, and broncho-pneumonia.

The mode of infection in measles is by personal contact. The first signs and symptoms are usually very like those of a severe "cold in the head," and it is during this period of incubation that the risk of infection is greatest. The infection is greatest during the very early stage of the disease, and lasts certainly till the disappearance of the rash. Infection is not infrequently conveyed by clothes, and this is a point to keep well in mind in dealing with a measles outbreak in camps and barracks.

The interval between exposure to infection and the onset of the first symptoms is usually ten days. Sometimes it may be as short as four or five days, and sometimes as long as fourteen days. In this latter case the rash would not appear till the seventeenth, eighteenth, or nineteenth day after exposure to infection. In the vast majority of cases the rash appears fourteen days after exposure, but it may be longer. Therefore, in endeavouring to prevent the spread of measles, at least two weeks must be the period of isolation or quarantine allotted to any soldier in camp who has been exposed to infection, and he must at the end of that period be quite free from any "cold" or catarrh before being considered safe to be at large amongst the non-affected troops.

Any patient who develops pneumonia in the course of an attack of measles should be isolated from other measles patients, for pneumonia must be considered as one of the infectious fevers.

During the outbreak of measles the type of sickness may at first be of a mild character, and gradually develop into a malignant or virulent one. This tendency has always to be borne in mind in dealing with any outbreak in camps, barracks, or closely populated areas. There is a so-called "typhoid type" due to a complete toxæmia or poisoning. Here the patient becomes submerged in the poison or toxin of the disease, his nervous system is profoundly disturbed, delirium and excitement are followed by a comatose state, which ushers in a speedy death.

There is a "suffocative type" where the patient suddenly develops a severe bronchitis and is "drowned" in the excessive mucus in his bronchial tubes. In this form, in adults, death may occur with startling suddenness, and the whole course of the disease, from onset to death, may be appallingly short.

There is a "hæmorrhagic type" associated with bleeding under the skin and with bleeding from the nose or bowels. This is "hæmorrhagic measles," or the so-called "black measles."

The fact that some of our soldiers at Trentham Camp died from pneumonia following measles, from the "typhoid type," from the "suffocative type," and from the "hæmorrhagic type" shows that the outbreak, though mild and gently warning in its initial stages, became dangerous and ruthless at a later period.

Influenza.

Measles is frequently associated with true influenza, and the gravity of the former is always increased in the presence of the latter disease. "That two or more infectious diseases are capable of running concurrently in the same individual is not so generally recognized as the frequency of its occurrence would warrant" is a statement made by Dr. Foord Caiger, one of the greatest authorities on infectious diseases. When dealing with an infectious outbreak in a camp or barracks this medical observation should be carefully remembered.

Influenza is characterized by the extreme suddenness of its onset. It is relentless and swift in its attack, and the strongest men may be struck and overwhelmed. It has a very short incubation-period of two to five days, and the sick man is capable of conveying contagion for six or eight days and frequently very much longer. Influenza is a contagious disease, and is associated in a marked degree with such sequelæ as bronchitis, laryngitis, and pneumonia. In civil practice a very large number of pneumonias are associated with influenza, and the sinister partnership means a sharp illness. The influenzal organisms are the field artillery scattering bursting shrapnel and preparing the way for the solidly attacking infantry battalions of pneumonia organisms. In the Trentham Camp influenza patients not only developed pneumonia, but also cerebro-spinal meningitis.

Cerebro-spinal Meningitis.

Cerebro-spinal meningitis, cerebro-spinal fever, and malignant purpuric fever mean one and the same disease. It is sometimes called "spotted fever." It was not recognized till the beginning of the nineteenth century. In the nineteenth century two sweeping epidemics of this disease occurred in Europe, and three in the United States. In Dublin an epidemic attacked the troops and civil population in 1866. During the American War of Secession (1861–63) the epidemic spread widely. The epidemic at times has assumed "continental" dimensions, and has swept from one country to another. One military medical writer in England has written recently, "At the present time cerebro-spinal meningitis is a disease of the greatest moment because of its intense virulence and great rapidity of progression, and also because of its infectious nature. An early diagnosis is of the greatest importance, for it gives better hope of recovery to the patient, and also lessens the danger of the spread of infection, as it enables immediate attention to be given to the disinfection of quarters and isolation of contacts, matters of vital importance where moving troops are concerned."

Instructions have been issued to all doctors by the Local Government Board in England, and by the Inspector-General of Hospitals in New Zealand (Dr. Valintine), directing very special attention to (1) immediate diagnosis of the disease, (2) isolating patients suffering from it, (3) disinfection, (4) supervision of "contacts" and "carriers." The active causal agent in cerebro-spinal meningitis is the diplococcus intracellularis, commonly called the "meningococcus." This organism is present in the throat and naso-pharynx of those suffering from the malady, and is also present in the cerebro-spinal fluid—the fluid bathing the brain and spinal cord. Bacteriologists can isolate this organism and certainly establish the diagnosis, for on the speedy recognition of the disease depends the cure of the patient. For treatment a serum is in use. The best preparations are Flexner's and Jobling's. This serum is passed into the spinal canal through a hollow needle inserted in the back between two vertebræ. An early recognition of the disease and the employment of the serum give a large percentage of recoveries. Flexner obtained 82 per cent. of cures in cases treated within three days with his serum. In cases not treated by serum he found 74 per cent. of deaths. One writer with a large experience of this disease has written recently that "it is extremely likely that nearly every case except the most toxic or fulminant would be saved if the serum is given at the onset, or on the first day."

The early signs and symptoms of this disease are not pathognomic of meningitis, but are common to those of an ordinary "cold in the head," influenza, or measles. There is at first a catarrh of throat and nose, or dry cough, and a huskiness of voice. The onset of the disease itself is sudden, being characterized by headaches, vomiting, stiffness of muscles of neck, back, and legs. Maniacal excitement and delirium sometimes occur, and towards the end the fatal case becomes unconscious and dies in a state of coma. Outside the human body the meningococcus, the organism of this disease, has a very short life, and therefore clothes, mattresses, and blankets are not likely to be agents of infection. But—and this is all-important in dealing with this dangerous disease—the organism can be carried in the throat for long periods, and any person carrying this organism in his throat is known as a "carrier." A carrier can infect those who come in contact with him. Many observers have noted that apparently healthy persons can be carriers and spread the disease to those who come in contact with them. This makes the task of controlling the infection and spread of this disease an extraordinary difficult one. Also, a man sick of meningitis may harbour the meningococcus in his throat for some time after the acute stage has passed, and still continue to be a source of infection. It is the isolation and watching of these carriers, perhaps freely circulating amongst the general population, that presents such great difficulties. There seems to be no doubt, knowing that the organism of cerebro-spinal fever cannot lead a saprophytic life outside the body, and that it is peculiarly susceptible to cold, and has never been isolated from dust, air, or fomites, that it has been introduced into Trentham Camp by a "carrier."

The Trentham Camp site has certainly had nothing whatever to do with the appearance of cerebro-spinal meningitis amongst the troops quartered there. Neither in the air above, the earth beneath, or the water under the earth at Trentham did the meningococcus live.

New Zealand is not alone in having had this unfortunate visitation. This form of meningitis has appeared in the camps of England, France, Belgium, Servia, and Australia during the present year and towards the end of last year.

The question of "carriers" of infection in this disease is all-important, and in this connection it is of interest to read the following notes of Dr. Champtaloup, Professor of Bacteriology and Public Health at Otago University, and Dr. Bowie, Clinical Registrar at Otago University. These extracts are taken from an article which appeared in the *New Zealand Medical Journal*, August, 1915:—

"(1.) Seeing that so many carriers have been demonstrated among troopers on leave in Dunedin, we assume that a relatively equal proportion of trooper carriers are scattered throughout the Dominion.

"(2.) As the carrier state has in all probability existed for some time previous to the discovery of this infection, and troopers on leave have mixed with the civil population, a number of the latter must now be in the carrier stage.

"(3.) The protean nature of the disease has been well exemplified in the New Zealand outbreak, and if our assumption in the previous paragraph is correct, we suggest that some of the cases recorded as measles and influenza, both in military and in civil practice, have been mild infections due to the meningococcus, in which the meninges have not necessarily been attacked.

"(4.) We would go to the length of stating that the present strain of meningococcus is one of low virulence, so that the majority of those attacked from it suffer from its 'catarrhal' or 'influenzal' manifestations only, although in the unfortunate minority, from natural disposition or previous illness, the disease has assumed a meningeal or septicæmic type.

"(5.) In respect of attenuated virulence the present outbreak has certain features comparable with the recent epidemic of smallpox.

"(6.) As a result of our experience we would suggest that rigorous and efficient prophylactic treatment should extend over a period of at least two weeks, and that this period should be extended until all symptoms of relaxed or sore throat have disappeared, when, for geographical reasons, no laboratory investigation of the naspharyx is possible."

In reviewing the origin and course of this or any future epidemic it is perhaps useful to remember, as history shows, that in times of crisis and of great national anxieties and excitement epidemic illnesses are prone to appear and assume large proportions.

The mental state of an individual patient profoundly affects for good or evil the physical ailment that may be present, and what is true of the individual is broadly true of the nation.

ARTHUR A. MARTIN, M.D., Ch.B., F.R.C.S. Ed.

APPENDIX B.

THE CASE OF PRIVATE ARCHIBALD BADGER, OF CHRISTCHURCH.

Private Badger went on sick-parade on Tuesday, the 22nd June, and again on Wednesday, the 23rd, when he was sent into hospital. He was to have come out on the 28th on sick-leave, but on that day he had a relapse. On the 1st July a telegram was received by his relatives stating that he was dangerously ill. His mother arrived on the 2nd, but he was then unconscious, and had been so for two or three days. He died on the 4th July.

The brother stated that he considered that Private Badger was treated in the hospital with "cruelly criminal negligence." He based this charge mainly on information derived from Private Roy Glen. Private Glen's evidence, as given to us, consists of some details which, in our opinion, altogether fail to establish such a charge as that made. Other details spoken of by the brother were founded on hearsay and inference, and are contradicted by Sergeant Badger and by the doctor. But accepting the details of Private Badger's experiences as true, they were such as appear to have been incidental to the nature of the hospital accommodation and the circumstances of the time, such as being without a bedstead and the want of attention by orderlies before the nurses arrived; but in our judgment these are quite insufficient to warrant the allegation made. In any event, the brother qualified the charge as to the period subsequent to the mother arriving, because he states in his evidence, "I would like to say that the nurses were most kind during the three days my mother was here, and also the medical staff, and the Minister of Public Health gave instructions that no expense was to be spared."

We would briefly refer to the evidence. Glen says he was for a time at the kiosk. He had a bed on the floor next to Badger. Glen left on Tuesday, the 29th, and says that Badger did not feel very well on the Monday. "He was shivering, and got another relapse of influenza. When I was discharged I went over to him, and he was very bad, but he recognized me. I left on the Tuesday night. He looked very ill when I last saw him, and when I got to Christchurch I told Mrs. Badger and she wired up."

As regards this evidence, Sergeant Badger, of the Field Ambulance, who joined on the 28th June—struck by the similarity of name, though he was not connected—says that he spoke to him and took a special interest in him, and that he was quite coherent; but about 8.30 on the morning of Wednesday, the 29th, seemed to collapse suddenly. He states that Dr. Ferguson visited Private Badger frequently from the Tuesday to the Thursday, when Private Badger was removed to the trainers' quarters.

Dr. Ferguson says that when Private Badger came into hospital, with the exception of his temperature, which was 101·4, he showed no dangerous symptoms. "I diagnosed it as ordinary influenza with a certain amount of feverish symptoms. The disease ran on in the usual way till the fourth or fifth day, I cannot say which, and his temperature had dropped to normal. I distinctly remember seeing him, and seeing that he was able to get out of bed and go out. . . . He stood up in line with a number of others for examination. I had a long row to go round, and I purposely used to let the men stand easy while I went round the lines in order to test them and see I did not make a mistake, so I let them stand on their legs a little while. When I got to the end of the lines Sister Brandon told me Badger had had a rigor—a shivering fit—and I ordered him to be kept in bed with hot bottles. I saw him several times that day and the next day, and he seemed to be going backwards."

On Thursday, the 1st July, Badger was removed to the trainers' quarters so as to be near the doctor's room. "As soon as I was satisfied there was any danger I telegraphed to his people. . . . Badger had symptoms of cerebral hæmorrhage with certain facial paralysis." The doctor further says that "the nursing could not have been better. The sister in charge was a most magnificent nurse—one cannot speak too well of her attention."

THE CASE OF PRIVATES POLLARD AND FORDHAM.

Pollard and Fordham were transferred "as convalescents with colds and slight bronchial trouble" from Kaiwarra to Berhampore. Dr. Harrison was then in charge. On Friday, the 25th June, 1915, Sister Keith was head nurse, and under her were Sisters Hanna and Faram. While at Berhampore the patients were kept in bed. They were accommodated in one of the main wards, where there were six other patients. Their colds developed into bronchial septic pneumonia, and on the following Friday they died there.

With regard to Pollard, Sister Hanna says he was very weak when he arrived, and that he came with a high temperature—"it may not have been quite as high as 101." Sister Faram says it was 101·8; that it varied and went down to 101, and that it was 102·2 on the Monday. It is not possible to check the temperature figures because the charts kept were destroyed as infected material when Berhampore was closed. Sister Hanna thinks she first came to the conclusion he was dangerously ill about the Sunday. "It may have been the Monday or the Tuesday"; but when he did get so ill the sisters took it in turns to nurse so as to be in attendance day and night. They were in the habit of sending patients who took a bad turn to the Wellington Hospital, having had a discretion given to them to do so. As neither Pollard nor Fordham was sent there, the suggestion made was that both ought to have been.

It is not clear on what day Dr. Harrison noticed the rise in temperature. It was probably not before Monday, the 28th, because on that date Private Solomon, after inquiries, telegraphed in the afternoon to the latter's brother, "John in Berhampore Hospital with pneumonia—not serious." Dr. Elliott states that at request he paid two visits to Pollard on the 28th. On Tuesday, the 29th, at 2.50 p.m., a telegram was sent by Dr. Harrison from Trentham Camp to the man's mother, "Your son, J. W. Pollard, dangerously ill at Berhampore Hospital, Wellington." The brother arrived from Christchurch on Wednesday morning, and was told at Berhampore that Pollard was very seriously ill, and then saw him. "He was sometimes conscious and sometimes delirious." On the evening of Wednesday, the 30th, Dr. Steele visited both Pollard and Fordham at Dr. Harrison's request. Dr. Steele says that when he saw them they were both nearly gone—not on the point of death, but in a very bad way. He gave the sister instructions for the night about treatment. He says, "I asked why the men were there. I thought they ought not to have been there." The brother was not satisfied with the condition of things, and, through the Hon. Mr. Rhodes, arranged for a consultation on Thursday afternoon between Dr. Harrison and Dr. Herbert. Dr. Herbert told the brother the case was practically hopeless. Pollard died the next day, Friday, about 1 o'clock.

With regard to Fordham, he is said not to have had a high temperature when he came in, but got worse about Tuesday night. On the Wednesday he seemed worse, and Sister Keith telegraphed to his relatives. He died at 10 o'clock on Friday morning. Fordham informed apparently two of the sisters (Sisters Hanna and Faram) that the doctor had given him the option of going to the Wellington Hospital, but he declined. It is not clear what doctor this was. Dr. Harrison visited both daily at Berhampore, except on the Friday night, when Dr. McCaw attended. Dr. Harrison says, "I saw them [Pollard and Fordham] one day when their temperatures were up, and I considered that if they were not better next day I would shift them to the Wellington Hospital. . . . The next day they were markedly worse, and I considered it would be very dangerous to shift them. . . . I considered the nursing, plus the medical instruction to the nurses, was absolutely all that one could do in such a condition, and that the nursing they got there was such as they could not have got elsewhere." Later he says, "They could have been shifted the second day, but I considered it would have been detrimental to their chances if I did shift them. They were in a condition to be shifted, but it was taking a risk."

THE CASE OF PRIVATE COLLEY.

Private Colley was sent to Berhampore as a convalescent about the 3rd June. He was apparently getting on all right, but was taken ill about midday on the 10th June, was sent to the Wellington Hospital that evening, and died on the following day. The father complains that a doctor was not called in at once on Colley becoming unwell. The evidence of Sister Keith, who was on day duty at the time, is to the effect that on the 10th June he had been playing cards in the ward in the morning, and at 2 o'clock in the afternoon (one nurse says at noon) he came to her complaining of feeling very cold. His temperature was taken and found subnormal. He was put to bed. In the evening, on Sister Faram coming on duty, she took his temperature, and found it to be 103·6. The sister had him sent to the Wellington Hospital in the ambulance. She states that this was between 6 and 7 o'clock. We are satisfied that this is a mistake. It was about 9 when he was brought to the hospital. He died at 10.15 p.m. on the following day.

The evidence of Sergeant Yallop would seem to differ from the foregoing. He speaks of having got the Health Department to send a doctor at 9.30 one morning, and Dr. Clay came; but this seems to have been while Dr. Purdy was in Dunedin. That was before the 6th June. On that date Colley wrote a letter to his father stating that he was pretty well all right, and he

was taken ill again on the 10th. We think Sergeant Yallop has mistaken the individuality of the case, for the sisters do not speak of any doctor having seen Colley on the 10th before he was sent to the hospital. The telegram to Colley's father was sent on the 10th, but it was too late to reach him in time to get over from Nelson, where he lived.

THE CASE OF CORPORAL PHILLIPS.

The history of this case was given to the Commission by a relative, Mr. Edward Legge. On the 29th May Corporal Phillips was sent to the Berhampore Hospital. On the following day his sister went to Trentham to see him, but was told that he had been sent to town to "the hospital." On inquiry at the Wellington Hospital two or three days later he was not there. The camp was rung up, but they could give no information. On the suggestion of the Wellington Hospital authorities Mr. Legge later on went to Berhampore, and ultimately saw him in the grounds there on Sunday, the 6th June. He told Mr. Legge he was feeling very well except for a pain in the back of the neck and a slight cough, and expected to be out on the following Wednesday. On Friday, the 11th June, he was removed to the Wellington Hospital. On Saturday, the 12th June, Mr. Legge received a telegram from Phillips's parents saying that Phillips was dangerously ill at the Wellington Hospital. Mr. Legge saw him that evening. Up to then Phillips had been delirious and been unable to give any account of himself. Mr. Legge saw him pretty well every night after that. Phillips died on the 1st July. His father arrived in time to see him. This patient's stay at Berhampore was while it was overcrowded. At that time it was not the practice to warn relatives of illness unless it was serious. Dr. Barclay, in giving evidence on other matters, was asked about this, but could not then recall the details. He subsequently sent us a memorandum as follows:—

"Wellington Hospital, 10th August, 1915.

"Edwin Phillips, aet. 21. Adm. 11/6/15.

"Admitted from Berhampore, where was sent from camp for measles; there three weeks very ill. Carried into ward on stretcher, quite irrational, throwing himself about in bed and moaning; could give no account of himself. Temperature, 102·4°. Placed under care of Dr. Clay. Diagnosis, pneumonia with meningitis; enteric fever suspected at one stage, test inconclusive. Remained delirious; died 1/7/15."

THE CASE OF PRIVATE ERNEST SMITH.

Evidence was given by his brother, Charles Smith, in good faith upon the information which he had received on the 4th July. This information was that Private Smith was in Wellington Hospital. He telegraphed to the hospital inquiring, and was told in reply that Private Smith had been discharged from the hospital on the 4th July. On the 7th information was sent from the camp that he was dangerously ill at Trentham. Telegrams to the same effect were sent on the 8th by the Medical Officers at Trentham. The relatives came at once, arriving on the morning of the 9th. He died the same day. The relatives believed that he had been improperly treated in having been discharged from hospital on the 4th and found seriously ill again almost immediately after. From inquiries set on foot by Mr. Skerrett, K.C., during the course of the Commission, it appears clear that the information given to the relatives in the first instance, and the deduction from it, was incorrect owing to a confusion in the name of Smith. It was another Smith who had been in Wellington Hospital. Private Ernest Smith was never there. The information first conveyed to the relatives must have been based on a misconception of their informant, and Dr. Barclay's reply to an inquiry about a Smith in the Wellington Hospital, and who was the only Private Smith there at the time, was quite natural. It appears also that Private Smith was never at Kaiwarra, but in Trentham Hospital only. In a letter from Dr. Valintine to Mr. Skerrett, the former states the facts as follows:—

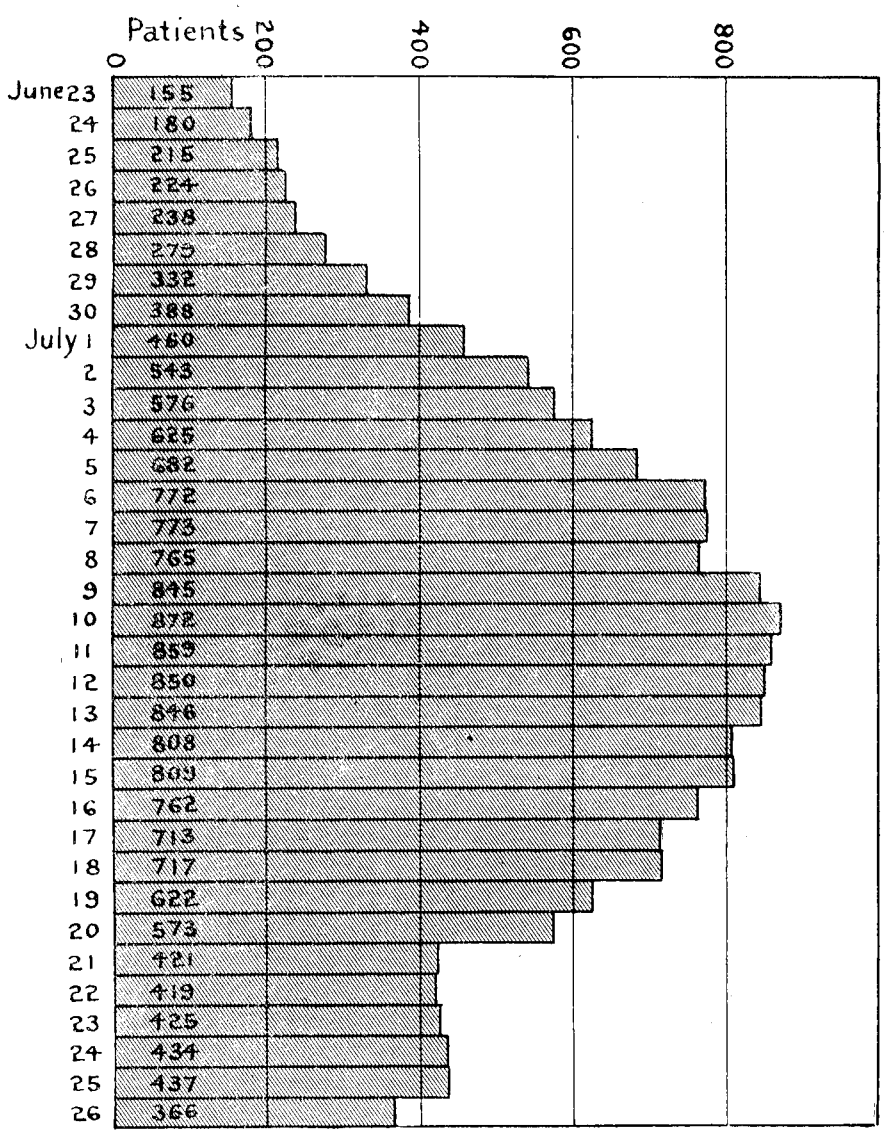
"(1.) Date of admission: 1st July, 1915.
"(2.) Date of death: 8th July, 1915.
"(3.) Cause of death: Cerebro-spinal meningitis.
"(4.) Was never at Kaiwarra.
"(5.) Condition during his stay in hospital: No information available as the nurse attending and the Medical Officer are not here now.

"In addition to the particulars furnished, I may say that I have made further inquiries regarding this case, and understand Private Ernest Smith was admitted to the racecourse ward on the 1st July with the usual symptoms of influenza, which gradually became more severe, as was often the case with influenza patients during the epidemic. On the fourth day from admission head symptoms developed, and he was isolated in a small room adjoining the racecourse ward. The head symptoms became gradually worse, and the day before he died he was removed to the cerebro-spinal meningitis ward, where he developed the rash. Subsequently his condition went from bad to worse, and unconsciousness supervened, which continued until his death on the 8th July, seven days after admission to the hospital."

APPENDIX C.

CHARTS OF SICK AND CERTAIN RETURNS.

CHART OF SOLDIERS RESIDENT IN HOSPITAL—FROM TRENTHAM MILITARY CAMP—23RD JUNE TO 26TH JULY, INCLUSIVE.



ADMISSIONS AND DISCHARGES FROM TRENTHAM MILITARY HOSPITAL FROM 23RD JUNE TO 26TH JULY (INCLUSIVE).

Date.	Admissions.	Discharges.	Date.	Admissions.	Discharges.
June 23	29	19	July 10	39	12
„ 24	45	20	„ 11	4	17
„ 25	45	10	„ 12	3	12
„ 26	46	37	„ 13	..	4
„ 27	24	10	„ 14	4	42
„ 28	49	8	„ 15	11	10
			„ 16	7	54
„ 29	74	21	„ 17	2	51
„ 30	80	24	„ 18	10	6
July 1	76	4	„ 19	10	105
„ 2	117	34	„ 20	4	53
„ 3	47	14	„ 21	12	165
„ 4	55	6	„ 22	5	7
„ 5	71	14	„ 23	10	4
„ 6	94	4	„ 24	9	..
„ 7	122	121	„ 25	3	..
„ 8	81	89	„ 26	4	74
„ 9	102	22			
	— 919			1,294	1,073

RATIO AND PERCENTAGE OF SICK.

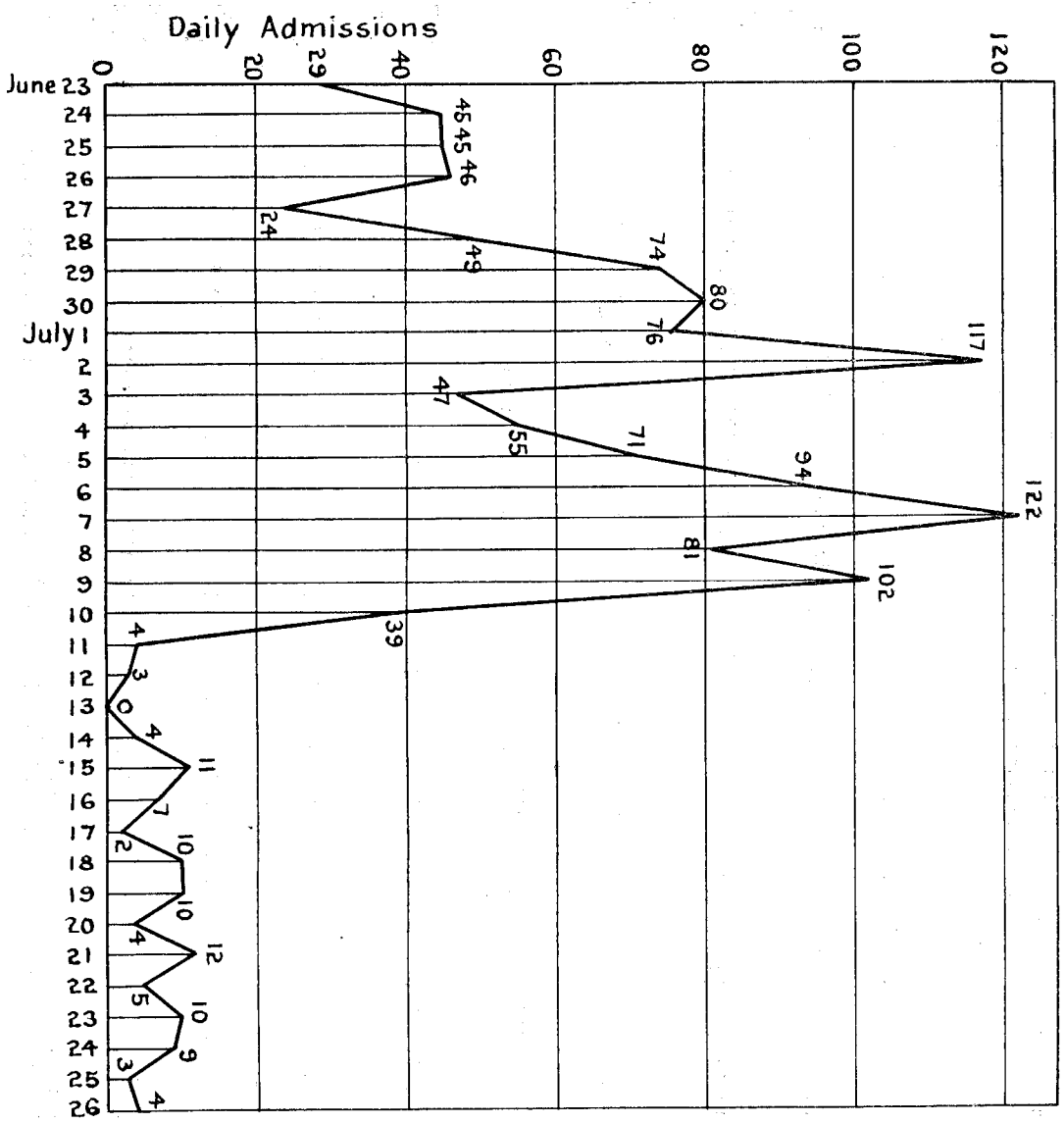
Date.	Camp State.	Admissions.	Ratio: 1 to every	Rate per Cent.	Remarks.
July 1	7,867	76	103	0·97	
„ 2	7,835	117	67	1·50	
„ 3	7,982	47	170	0·59	
„ 4	7,917	55	144	0·69	
„ 5	7,775	71	109	0·92	
„ 6	7,657	94	81	1·23	
„ 7	7,581	122	62	1·61	
„ 8	7,524	81	93	1·08	
„ 9	7,498	102	74	1·35	
„ 10	2,105	39	54	1·85	
„ 11	1,941	4	485	0·21	
„ 12	1,843	3	614	0·16	
„ 13	1,839	..	..	..	
„ 14	1,838	4	459	0·22	
„ 15	1,825	11	166	0·60	
„ 16	1,815	7	259	0·39	
„ 17	1,815	2	907	0·11	
„ 18	1,824	10	182	0·55	
„ 19	1,823	10	182	0·55	
„ 20	1,968	4	492	0·21	
„ 21	1,974	12	164	0·60	
„ 22	1,991	5	398	0·25	
„ 23	1,938	10	194	0·52	
„ 24	1,939	9	215	0·47	
„ 25	1,954	3	651	0·15	
„ 26	1,974	4	493	0·21	
„ 27	2,025	1	2,025	0·05	
„ 28	2,008	6	339	0·30	8 readmissions to hospital on return from sick-leave; disregarded for purposes of return.
„ 29	1,837	7	262	0·38	
„ 30	1,855	6	309	0·32	7 readmissions to hospital on return from sick-leave; disregarded for purposes of return.
„ 31	1,981	6	330	0·30	8 ditto.
August 1 ..	1,932	3	644	0·15	6 „
„ 2 ..	1,962	2	981	0·10	5 „
„ 3 ..	1,984	6	331	0·30	24 „
„ 4 ..	1,988	7	284	0·35	15 „
„ 5 ..	1,942	7	277	0·36	12 „
„ 6 ..	1,893	5	378	0·26	18 „
„ 7 ..	1,847	1	1,847	0·05	9 „
„ 8 ..	2,564	6	427	0·23	2 „
„ 9 ..	2,597	5	519	0·19	6 „
„ 10 ..	2,960	5	592	0·17	

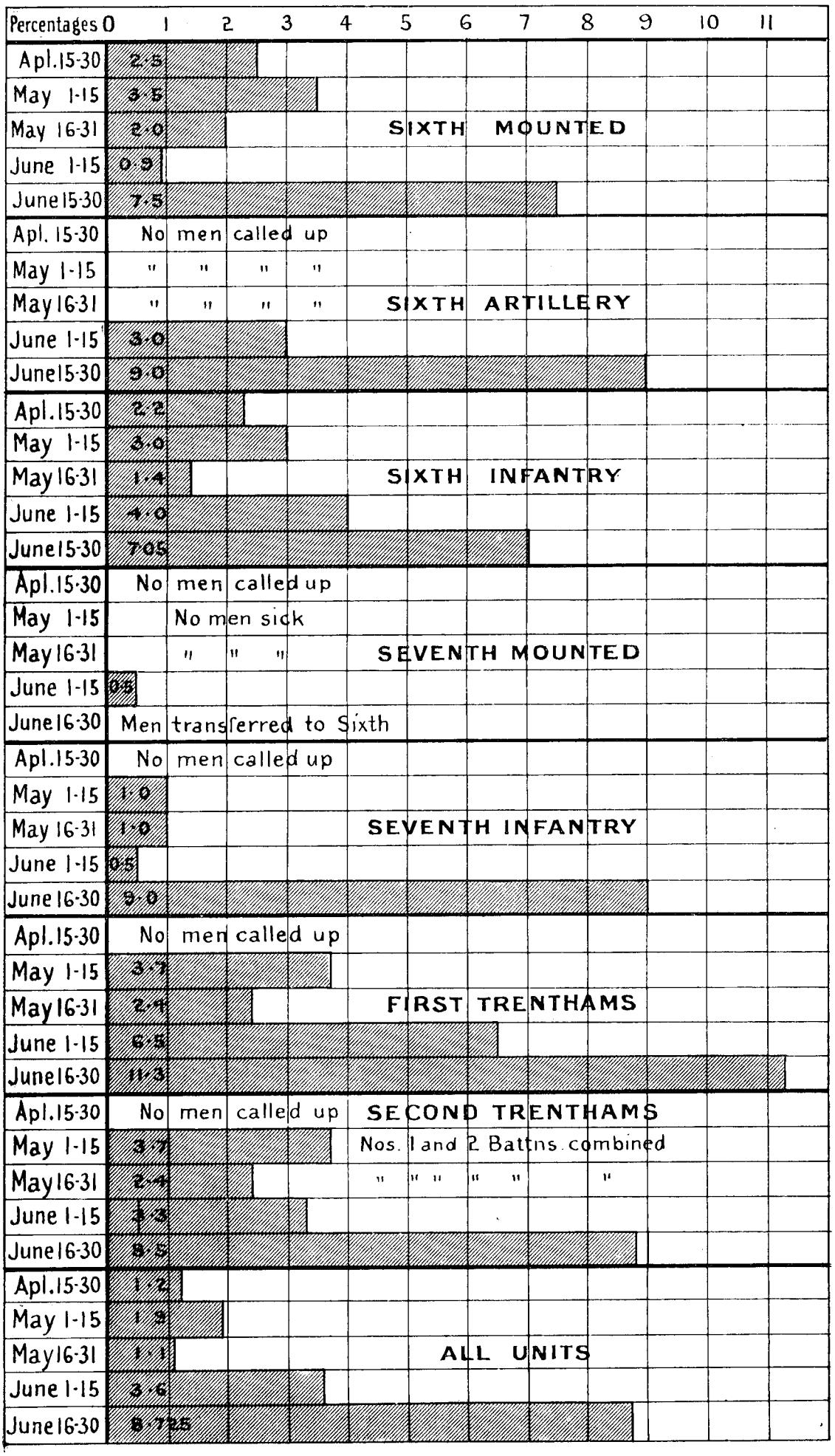
RETURN SHOWING THE DAILY STATE OF PATIENTS IN TRENTHAM MILITARY HOSPITAL AND SUBSIDIARY HOSPITALS.

Date.	Race-course.	Kaiwarra.	Welling-ton.	Golf Club.	Berham-pore.	Dr. Izard.	Mr. Duthie.	Mr. Von Haast.	Total.
July 1 ..	*	184	48	*	*	*	*	*	460
,, 2 ..	*	163	49	*	*	*	*	*	543
,, 3 ..	*	181	49	*	*	*	*	*	576
,, 4 ..	*	187	49	*	*	*	*	*	625
,, 5 ..	376	207	50	*	14	35	*	*	682
,, 6 ..	*	218	50	*	14	35	*	*	772
,, 7 ..	446	199	50	25	13	28	2	..	773
,, 8 ..	394	242	50	36	13	28	2	..	765
,, 9 ..	431	255	52	63	10	23	9	2	845
,, 10 ..	459	256	52	63	10	21	9	2	872
,, 11 ..	442	260	52	72	10	21	..	2	859
,, 12 ..	444	260	53	72	8	11	..	2	850
,, 13 ..	449	260	46	70	8	11	..	2	846
,, 14 ..	420	260	46	70	..	10	..	2	808
,, 15 ..	476	205	46	70	..	10	..	2	809
,, 16 ..	425	209	48	70	..	8	..	2	762
,, 17 ..	424	163	48	68	..	8	..	2	713
,, 18 ..	428	163	48	68	..	8	..	2	717
,, 19 ..	397	154	48	18	..	3	..	2	622
,, 20 ..	316	171	43	11	..	30	..	2	573
,, 21 ..	180	158	42	11	..	30	..	2	421
,, 22 ..	172	158	41	25	..	23	..	..	419
,, 23 ..	152	158	41	35	..	39	..	..	425
,, 24 ..	147	158	43	40	..	46	..	..	434
,, 25 ..	151	158	43	40	..	45	..	..	437
,, 26 ..	104	140	44	40	..	38	..	..	366
,, 27 ..	97	70	44	27	..	31	..	..	269
,, 28 ..	108	76	44	26	..	18	..	..	272
,, 29 ..	78	47	43	23	..	15	..	..	206
,, 30 ..	80	31	43	23	..	17	..	..	194
,, 31 ..	84	31	44	18	..	17	..	..	194
August 1 ..	93	31	44	18	..	17	..	..	203
,, 2 ..	75	21	43	16	..	14	..	..	169
,, 3 ..	94	22	47	23	..	13	..	..	199
,, 4 ..	101	4	44	33	..	13	..	..	195
,, 5 ..	93	..	46	32	..	12	..	..	183
,, 6 ..	114	..	46	32	..	10	..	..	202
,, 7 ..	109	20	46	35	..	9	..	..	219
,, 8 ..	113	20	46	35	..	11	..	..	225
,, 9 ..	94	20	46	22	..	9	..	..	191
,, 10 ..	93	20	44	22	..	10	..	..	189

* No record of distribution kept.

CHART SHOWING DAILY ADMISSIONS TO TRENTHAM MILITARY HOSPITAL.




Percentages 0 1 2 3 4 5 6 7 8 9 10 11
Apl.15-30 2·5
May 1-15 3·5
May 16-31 2·0
June 1-15 0·9
June 15-30 7·5
SIXTH MOUNTED
Apl. 15-30 No men called up
May 1-15 " " " "
May 16-31 " " " "
June 1-15 3·0
June 15-30 9·0
SIXTH ARTILLERY
Apl. 15-30 2·2
May 1-15 3·0
May 16-31 1·4
June 1-15 4·0
June 15-30 7·05
SIXTH INFANTRY
Apl. 15-30 No men called up
May 1-15 No men sick
May 16-31 " " "
June 1-15 0·5
June 16-30 Men transferred to Sixth
SEVENTH MOUNTED
Apl. 15-30 No men called up
May 1-15 1·0
May 16-31 1·0
June 1-15 0·5
June 16-30 9·0
SEVENTH INFANTRY
Apl. 15-30 No men called up
May 1-15 3·7
May 16-31 2·4
June 1-15 6·5
June 16-30 11·3
FIRST TRENTHAMS
Apl. 15-30 No men called up
May 1-15 3·7
May 16-31 2·4
June 1-15 4·3
June 16-30 8·5
SECOND TRENTHAMS
Nos. 1 and 2 Battns. combined
" " " " "
Apl. 15-30 1·2
May 1-15 1·9
May 16-31 1·1
June 1-15 3·6
June 16-30 8·725
ALL UNITS

INDEX TO SUBJECT-MATTER, WITH NAMES OF WITNESSES.

(NOTE.—This is only a very general index, and by no means fully analytical or exhaustive.)

The personal experiences deal with all sorts of topics, but mainly as regards—
Hospital treatment.
Sick-parades.
Wet clothes and boots.
Delay in issue of boots.
Hutments.
Tents.

Camp and Hospital Accommodation and Medical Service (General).

Colonel Potter.
Captain McCristell.
Colonel Purdy.
Dr. de Lautour.
David Robertson, school-teacher (in Dr. Fyffe's time).
Dr. Yeates (December to February).
Dr. Thacker, M.P.
Dr. Wallace Mackenzie.
Staff Sergeant-major Dorizac.
Dr. Elliott.
Dr. Batchelor.
Colonel Pilkington.
Dr. Valintine.
Dr. Stout.
Dr. Sydney Smith (disinfecting).
Dr. Morice.
Brigadier-General Robin.
E. E. Muir.
Captain Simson.
Quartermaster-General Robinson.
Colonel Gibbon.
Dr. Hector.
Rev. Mr. Bates, Meteorological.

Camp (Details as Site).

Rev. Mr. Bates (Meteorological).
R. W. Holmes, Engineer-in-Chief.
P. G. Morgan, Director of Geological Survey.
W. L. Newnham.

Hospital Treatment.

(See also previous heading.)

Dr. Ferguson.
Dr. Thacker, M.P.
W. H. Powell.
Staff Sergeant-major Dorizac.
Trooper Going.
Trooper Weldon.
Private Friedrich.
Sergeant Buchanan.
Private Dell.
Corporal Ellison.
Private Dorset.
Private Davidson.
Private Henderson.
Private Bothamley.
Private George McNeely.
Private Penk.
Private Linder.
Dr. Stout.
G. W. Hean, chemist

Hospital, Wellington.

Dr. Barclay.
Dr. Hardwick Smith.

Hospital, Berhampore.

Orderly-Sergeant Yallop.
Dr. Steele.
Dr. Harrison.
W. C. Pollard.
Sister Keith.
Sister Hanna.
Sister Faram.
Dr. Thacker, M.P.
Corporal Ellison.
Lieutenant F. C. Gentry, Supply Officer.
Dr. Elliott.

Hutments.

R. W. Holmes, Engineer-in-Chief.
John Campbell, Government Architect.
Dr. Frengley.
Reverend Mr. Bates.
Sergeant-major Hartley (overcrowding).
Sergeant Gair (overcrowding).
Sergeant Blackman (overcrowding).
Corporal Bisman (overcrowding).
Harold Lockwood.
Private Connor.
Trooper Going (overcrowding).
Private Weldon.
Sergeant Buchanan.
Private Owens.
George Robb, architect.
Dr. J. S. McLaurin, Government Analyst.
Dr. Elliott.
Dr. Mason.

Drainage, Sanitation, and Improvements (Special).

R. W. Holmes, Engineer-in-Chief.
W. H. Morton, City Engineer.

Boots.

Assistant Quartermaster-General O'Sullivan.
Dennis Hannan, clerk, Defence Stores.
Walter Reynolds, bootmaker.
Lieutenant Cowles.
C. J. Ward, works-manager for Hannah and Co. (Limited).

Clothing.

Leo Blake, Manufacturer.

Food.

Lieutenant Petty.

Blankets.

Assistant Quartermaster-General O'Sullivan.
C. H. Sewell, Defence Stores.
R. H. Williams, accountant, Defence Stores.
J. B. Hopkinson, clerk, Defence Stores.

Hospital Building at Camp.

John Campbell, Government Architect.
W. H. Morton, City Engineer.
Dr. Frengley.
Dr. Elliott.
Dr. Purdy.

Scarlet-fever Cases.

Dr. Goldstein.

The Case of Private Badger.

Ronald Badger (brother), indent agent.
Magnus Badger (orderly-sergeant).
Dr. Ferguson.
Private Glen.

The Case of Private Colley.

Orderly-Sergeant Yallop.
Sister Keith.
Sister Hanna.
Sister Faram.
William Colley (father).
Nurse Warren.

The Case of Private Fordham.

Dr. Steele.
Dr. Harrison.
Sister Keith.
Sister Hanna.
Sister Faram.
Dr. Herbert.

The Case of Private Going.

Trooper Going.

The Case of Private Pollard.

Dr. Steele.
Dr. Harrison.
W. C. Pollard (brother).
Private Solomon.
Sister Keith.
Sister Hanna.
Sister Faram.
Dr. Thacker, M.P.
Dr. Herbert.

The Case of Private G. G. Pearson.

Orderly-Sergeant Yallop.
J. T. M. Hornsby, M.P.
Private G. G. Pearson.

The Case of Corporal Phillips.

Edwin Legge, Storeman.

The Case of Private Smith.

Charles Smith (brother).
Dr. Crawford.

The Case of Private Thomson.

Private Thomson.

Personal Experiences.

Private Solomon.
E. A. Vincent.
Sergeant-major Hartley.
Sergeant Gair.
Sergeant Blackman.
Corporal Bisman.
Private Bartlett.
W. J. Luke.
W. H. Powell.
Sergeant-major Blaclin.
Private Connor.
Trooper Going.
Private Weldon.
Private Friedrich.
Sergeant Buchanan.
Private Dell.
Corporal Ellison.
Private Owens.
Private Dorset.
Private Davidson.
Private Henderson.
Private McNeely.
Private Penk.
Private Linder.

LIST OF DOCUMENTS, RETURNS, AND PAPERS SUBMITTED.

1. Two reports on camp-site by Mr. Morgan, Director of Geological Survey.
2. Report by Mr. Aston, Agricultural Chemist, on the soil and subsoil of the camp.
2A. Topographic plan of camp and vicinity, and plan of manœuvre areas
3. A report and memoranda and returns from the Rev. Mr. Bates, Dominion Meteorological Office, on the rainfall, temperature, and climate at Trentham.
4. Memorandum from the Rev. Mr. Bates, with letter from Mr. Peter Graham.
4A. Diagrams illustrating Mr. Robb's evidence *re* hutments.
5. Extracts from Notter and Firth.
6. Copy coded telegram from Army Council of London *re* construction of huts.
7. Memorandum from the Rev. Mr. Bates on same subject with reference to the thermal and atmospheric condition of hutments.
8. Letter from Dr. Frengley with reports of the local Government Board for Public Health.
9. Analyses of samples of air taken from hutments.
10. Letter from Mr. Holmes as to erection of tents and huts on latrine-sites.
11. Letter from Mr. Newnham on same subject.
12. Dr. Yeates's sketch of position of latrines.
13. Letter from Mr. Louch with particulars of tenders for hutments.
14. Sheets and diagrams from Public Works Department giving areas occupied by various bodies while in camp.
15. Return of units brought into camp, with dates of arrival and departure.
16. Return of sick at camp.
17. Return of deaths at camp and elsewhere.
18. Telegrams from camp summarizing admissions to hospital, with returns attached.
19. Copy rules of Wellington Hospital for guidance of military Medical Officers.
20. Letter from City Engineer giving particulars of Berhampore Hospital.
21. Letter from City Engineer to Colonel Purdy giving details of renting of Berhampore.
22. Copy report of Colonel Purdy to Commandant on measles cases.
23. Copy report of Colonel Purdy on deaths of soldiers at Wellington Hospital.
24. List of Colonel Purdy's visits to Berhampore, signed by him.
25. Chart of influenza cases.
26. Memorandum giving date of first measles case.
27. Copy reports by G.C.O. *re* camp hospital, dated 16th and 17th March, 1915.
28. Letter and journal from British Medical Association *re* camp hospital.
29. Correspondence received from Mrs. Luke through Mr. Skerrett with reference to the supply of requisites for the camp hospital in 1915.
30. Daily return form Kaiwarra.
31. Copy report by Medical Board, dated 13th July, on occupation of camp.
32. Memorandum specifying duties of medical staff of camp.
33. Memorandum from Mr. Hurley as to examinations of specimens of cerebro-spinal fluid.
34. Copy telegram to and telegram from Professor Champtaloup with reference to medical report.
35. Copy memorandum, 17th May, 1915, of requirements for Expeditionary Forces.
36. Return by Captain McCristell *re* boots.
37. Return from Stores Department showing position of orders for boots received and boots issued.
38. Captain McCristell's return and statement *re* blankets.
39. Memorandum with reference to uniforms returned.
40. Letter from Camp Commandant *re* taking away of third blanket.
41. Statement from Captain McCristell with letters attached having reference to sale of palliasses.
42. Copy of notes produced by Mr. Muir, *Evening Post* reporter.
43. *Gazette* showing distribution of duties of Staff Headquarters.
44. Print giving details of Quartermaster-General's Branch.
45. Letter from Colonel Potter with regard to his evidence.
46. Letter from R. Hannah and Co. (Limited) with regard to Mr. Ward's evidence.
47. Message received by telephone from Captain McCristell with reference to individual cases.
48. Sketch showing location of Fordham and Pollard in Berhampore Hospital.
49. Copy Medical Board report on Private Bartlett.
50. Telegram from Camp Commandant, and reply, *re* date of closing segregation camp.
51. Envelope containing sample of leathers produced by Mr. Reynolds.

In addition to the foregoing the following originals have been returned to the owners:—

1. To the Stores Department: Requisitions by Captain McCristell, dated 7th May, 10th May, 22nd May, and 25th May, with memoranda attached.
2. To Captain McCristell: Duplicate of his requisition to Stores Department, with original and copies of telegrams attached.
3. A letter from George McNeely to his mother.
4. Various letters produced by Mr. Pollard.
5. Extract from letter, and death-certificate, produced by Mr. Badger.
6. Photographs and diagrams submitted by Dr. de Lautour.
7. City Corporation plan of Berhampore Hospital.
8. Various plans produced by Public Works Department.
9. Letter and list of articles produced by Mr. Robertson.
10. The Government files relating to (*a*) the erection of huts; (*b*) camp hospital; (*c*) Colonel Valintine's correspondence *re* camp.

MINUTES OF EVIDENCE.

TUESDAY, 13TH JULY, 1915.

Mr. Justice Hosking (Chairman): This is a meeting which must be considered as informal, because Dr. Martin, the third member of the Commission, is not able to come to Wellington until to-morrow, but he has authorized the other Commissioners to meet in order that preliminaries may be arranged with a view to facilitating the inquiry. The formal opening of the Commission will be adjourned till Friday, at 10.30 a.m. It is proposed in the meantime to issue a general advertisement inviting all persons who can give information which will assist the Commission to hand in their names and addresses, either verbally or in writing, to the secretary, and it is hoped that some arrangement will be made by which the evidence of such persons can be presented under the most favourable circumstances by having counsel employed on their behalf. The same observation will apply to any one who has a complaint to make, although personally unable to attend and give evidence, if he is satisfied that the evidence is forthcoming to establish the complaint. So far as any defects in connection with the camp, or charges of responsibility against any person, are concerned, the minds of the Commissioners are, I might say, a blank, so that they have nothing before them in the shape of any distinct charge upon which they can proceed. The whole of the charges will therefore have to be developed by the evidence that is brought before the Commissioners. I see the Solicitor-General is present; I do not know whether he is able to make a statement on behalf of the Government as to whether they have arranged for the engagement of counsel, who will act as a sort of general advocate in the matter, so as to bring out the full force of all that has happened in connection with the camp.

Mr. J. W. Salmond (Solicitor-General): As you have indicated, the question has to be considered as to the propriety or necessity of the appearance of counsel before this Commission. If the Commission thinks it desirable I am prepared to assist the Commission to the best of my ability. I may say, however, that it would scarcely be consistent with my duties for me to take up the position of advocate for or against the various persons who may be affected; nor could I appear either as a prosecuting counsel in respect of any charges or suggestions made against officers, or as counsel to rebut such accusations or charges. I think, therefore, it is a matter for consideration by the Commissioners whether independent counsel, in addition to myself, should not be retained to represent those interests. I desire to say that I am authorized to state that the Government is prepared to engage such independent counsel—namely, two other men, one to represent the interests of officers against whom charges may be made, and the other to represent the interests of persons making charges or bringing matters under the notice of the Commission. If the Commission approves, the Government will take the necessary action accordingly to have the investigation conducted with the assistance of myself and two independent counsel.

The Chairman: We think that would be the most desirable course to adopt. It will be of great assistance to the Commission if independent counsel are engaged to represent the interests spoken of. The Commission quite agrees with your view as to the part you should play in the matter. We shall gladly welcome all assistance that you can give us, but we should not regard you as an advocate for either side. The advocacy in the matter may be left to the independent counsel retained. While we state that to be a desirable course to adopt, it will, of course, be open to any one who may be the subject of a charge to engage his own counsel in the matter, apart from the counsel which may be engaged to generally represent the interests of officers charged. I would ask you, Mr. Solicitor-General, to see that the counsel are retained in time for the meeting of the Commission on Friday next, and, if possible, to let the secretary of the Commission have the names, so that they may be published.

Mr. Salmond: Would the Commission indicate in any way the witnesses they desire to hear on Friday?

The Chairman: We have already asked the Minister to supply us with a list of the names of those who were connected with the administration of the camp.

Mr. Salmond: I can supply that now. [List produced and handed to Chairman.] Perhaps it would be necessary to take the evidence of Lieut.-Colonel Potter, the Camp Commandant, first.

The Chairman: It would be very desirable to take him first, because he will be able to lay before us the history of the camp, and what calls have come to be made on the camp in the course of its history, and whether those calls were emergency calls or calls that should have been foreseen in the ordinary course of things, and if emergency calls, what steps were taken to meet them. I think if he is prepared to give us evidence on those lines he would be a very fitting person to begin with, because then we should have a general plan of the whole matter. This is a valuable list.

Mr. Salmond: I shall endeavour to obtain the attendance of Lieut.-Colonel Potter, then, for Friday. If he cannot attend I shall supply some other man to take his place.

The Chairman: Yes; I think the first witness should be some one who can give us some authentic information respecting the history of the camp. That is really what we want to get first. We will have an advertisement inserted. We do not think it necessary to set out the details of the Commission, but we propose generally to state that the information desired by the Commission is such as will enable us to ascertain (1) what defects, if any, have existed in the camp-site and in its administration in regard to the health of the men; (2) what are the causes of the sickness

and deaths there; and (3) what persons, if any, are responsible for such defects and causes. That covers, in a general way, the scope of the Commission. The advertisement will be inserted, but the Press may make a note that any persons who have any information to give to the Commission should transmit their names and addresses to the secretary of the Commission, either verbally or in writing: the secretary may be found at the Supreme Court House, Wellington. The Commission will adjourn till Friday, at 10.30 a.m.

FRIDAY, 16TH JULY, 1915.

Lieut.-Colonel HARRY ROLAND POTTER sworn and examined. (No. 1.)

1. *Mr. Salmond.*] You hold the rank of Lieutenant-Colonel in the Territorial Forces?—No, Temporary Lieutenant-Colonel, New Zealand Staff Corps.

2. And you are Commanding Officer at Trentham Camp?—Yes; I am the executive officer, the Camp Commandant.

3. How long have you occupied that position?—Since October

4. Who occupied the same position before you?—No one. It is the reinforcements camp.

5. *The Chairman.*] There were no troops there in preparation before October?—Not to my knowledge.

6. *Mr. Salmond.*] There were no troops at Trentham before October?—No, not when I took over the camp.

7. *The Chairman.*] There was just the site and some buildings on it: I take it that there were some buildings there?—Yes, belonging to the Rifle Association.

8. What buildings were they, and what were they there for?—There were the mess buildings and the executive buildings for the Rifle Association's meetings.

9. No military equipment about the camp other than that?—No, none whatever.

10. *Mr. Salmond.*] What previous experience have you had in work of that kind?—I was Assistant Quartermaster-General of the Auckland District for eighteen months. I had the outfitting of all the camps. Then I was Assistant Adjutant-General of the Canterbury Military District for five years. I had charge of the arrangement of every camp held in that district during that time.

11. Two or three camps a year?—Small camps, and the usual big district camps every Easter.

12. Any further camp experience have you had?—Yes; as Brigade-Major of the Wellington Infantry Brigade I had the arranging of the camp for the five battalions of Infantry for Sir Ian Hamilton's inspection, and Camp Commandant, Awapuni, Main Expeditionary Force.

13. Have you the complete responsibility for everything in camp? Have you any responsibility for or control over the medical staff?—Not the medical staff, except as regards the discipline of the medical unit.

14. But for the medical administration of the camp you are not responsible?—No, I am not responsible for that.

15. *The Chairman.*] Who is? By what title is the chief in charge of the medical department known, so that we may identify him?—In camp he is called the Principal Medical Officer—what we call the P.M.O.

16. He is in charge of the medical administration of the camp?—Yes.

17. *Mr. Salmond.*] Then the Principal Medical Officer is not responsible to you?—He is in a way. I hold him responsible, if that is what you mean.

18. But you do not control him?—Except as far as discipline is concerned.

19. If he were to grossly infringe the discipline of the camp you could expostulate with him?—That is so.

20. *The Chairman.*] Supposing buildings were required for medical purposes, would the initial steps be taken by him or by you?—The P.M.O. would write to me as Camp Commandant stating that he required certain buildings, and I would immediately forward that on to the headquarters for authority.

21. What does "headquarters" mean as regards dealing with that requisition?—That would go to the Quartermaster-General's branch of the Defence Department.

22. *Mr. Salmond.*] Then, except with respect to the medical branch of the camp, all the rest of the administration of the camp is in your hands?—Yes, sir.

23. Is there any authority—a manual or service instructions—in existence as to the administration of military camps?—Yes; it is laid down in Field Service Regulations, Part II.

24. *The Chairman.*] That prescribes what are the duties of a Camp Commandant?—It gives certain responsibilities there.

25. Have you got a copy?—No, not here, but I can get a copy.

26. Is that Imperial or New Zealand?—Imperial.

27. And it is used in New Zealand?—Yes, it is the official text-book for New Zealand. There is also the Manual of Military Hygiene.

28. *Mr. Salmond.*] That is an official publication of the British Army?—Those are the official publications of the British Army, which we work under here.

29. What other permanent officials are there in camp besides yourself?—That is my staff you want: you mean the administration and instruction staff of the camp?

30. Let us have the administrative first, unless they are combined?—They are combined. The first is the Camp Adjutant.

31. What are his duties?—He is really my chief executive officer.

32. What is his name?—Major Noel Adams.

33. And the next man?—I may say that Major Adams has not been the only Adjutant I have had, but he is the Adjutant at the present time. My first Adjutant was Captain Andrews, New Zealand Staff Corps.

34. For how long was he Adjutant?—During the period of the Second Reinforcements.

35. Did he leave with the reinforcements?—Yes, he left with the Second Reinforcements; he would be with me from the 19th October till the 12th December.

36. He was the Adjutant of the camp?—Yes.

37. That was from the beginning?—Yes.

38. Who followed him?—Captain Eastwood, an Imperial officer of the Rifle Brigade, and A.D.C. to the Governor.

39. And he also went away with the Expeditionary Forces?—Yes; he was with me for a short period.

40. How long?—About a month.

41. And the next?—Major Pinwill, Imperial General Staff.

42. And he also has gone?—He left with the Third Reinforcements.

43. But these officers can scarcely be said to have been on your permanent staff?—Those are the officers I had to use; you must have an Adjutant in camp.

44. Who was the next one?—The present officer, Major Adams.

45. Then you have had four Adjutants acting as your chief executive officers since October last?—Yes.

46. What other officers have you?—The next is the Camp Quartermaster.

47. Who is he?—Captain McCristell.

48. Have there been a series of Quartermasters?—No, the same Quartermaster from the beginning of the camp.

49. What are the duties of the Quartermaster?—He is the man responsible for the clothing, equipment, sanitation, and everything connected with the camp.

50. Feeding?—No, we have a Supply Officer for that.

51. He is responsible for the clothing, equipment, sanitation, but not for the food-supply?—It does come under him, but he has another officer under him to attend to that—the Supply Officer.

52. Who is he—the Supply Officer?—Lieutenant Petty, an Imperial officer.

53. Have you had him all the time?—Yes

54. What others are there?—There are the permanent non-commissioned officers and my Training Branch.

55. But the chief administrative officers are those you have named?—Yes, except the P.M.O.

56. Now, as to the medical branch: who is the Principal Medical Officer?—Well, I have had different ones; the present one is Colonel Morice.

57. He was appointed only about a fortnight ago?—About three weeks ago.

58. That was since Dr. Valintine?—Yes.

59. Who was the Principal Medical Officer before him?—Major Stout.

60. For what period?—From the 12th June.

61. Who was the P.M.O. before Major Stout?—Major McAra. He was with me from the 19th May till the 12th June.

62. Did he leave camp?—He went with the reinforcements.

63. Who was P.M.O. before that?—Major McGuire, from the 22nd April till the 19th May.

64. And he also then left with the reinforcements?—Yes.

65. And before him?—Major Fyffe. He had charge of the camp during the period that the Fourth Reinforcements were in camp. They left on the 17th April. The next was Major Holmes.

66. He also went with the reinforcements?—Yes, with the Third Reinforcements, which left on the 13th February. My first P.M.O. was Major McKillop.

67. That would be from October till December?—Yes; he went with the Second Reinforcements.

68. Therefore you have had no permanent P.M.O. at all: they have only been there temporarily while they were getting ready to go with the Expeditionary Forces?—That is so.

69. *The Chairman.*] There is no continuity except as an apostolic succession?—I want to explain that the Director of Medical Services was continually there.

70. Over all these Principal Medical Officers there was a Director of Medical Services?—Yes, Colonel Purdy. Although he did not sleep in camp he was out there three or four times every week.

71. *Mr. Salmond.*] He was there the whole day?—No, I would not say that: about three or four hours a day three or four times a week. He comes under the Adjutant-General's branch of the Defence Department.

72. *The Chairman.*] Then your order is—Adjutant-General, Director of Medical Services, and P.M.O.?—Yes.

73. Who is the Adjutant-General in the Defence Department?—Colonel Pilkington.

74. Has he been in that position all through the period since October?—Yes, he took Colonel Chaytor's place when he left for the front.

75. Is he a medical man?—No.

76. *Mr. Salmond.*] Is Colonel Purdy still occupying the same position?—No.

77. What change has taken place?—Colonel Valintine, of the Health Department, has now taken Colonel Purdy's place.

78. *Dr. Martin.*] He is not D.M.S. now?—No; they created a new position, which is Director of Military Hospitals.

79. Colonel Valintine is doing now what Colonel Purdy did?—Yes.

80. What is Colonel Valintine's new title?—Director of Military Hospitals.

81. *Mr. Salmond.*] Do I understand that Colonel Purdy still occupies the position of Director of Medical Services?—He is still Director of Military Services as far as I know, but his powers are, I think, limited.

82. Has he nothing to do with the camp?—No, except with the selection of the material.

83. Drugs?—No, the personnel to go into camp.

84. Medical inspection?—Yes.

85. He has no longer charge of the medical administration of the camp?—No; that comes under Colonel Valintine.

86. When did that change take place?—About three weeks ago, speaking from memory.

87. Shortly before the appointment of Colonel Morice?—Yes.

88. *Dr. Martin.*] You spoke of the Inspector of Military Hospitals?—The Director of Military Hospitals.

89. He is responsible to the Health Department?—That is so.

90. He has no military position at all, then?—They have given him the rank of colonel, and as Colonel Rhodes is also a colonel they have made him Assistant Minister of Defence.

91. Who is Colonel Valintine's military chief?—He comes under the Adjutant-General's department.

92. You see the possibility of confusion with the two titles?—Well, those are the titles they have created.

93. *Mr. Salmond.*] Would it be correct to say that Colonel Valintine is responsible for the work which Colonel Purdy formerly did?—That is so.

94. What other Medical Officers are on the staff of the camp?—There are the medicos that are appointed to go with the reinforcements.

95. The only other Medical Officers are those appointed to go with the reinforcements?—Yes; they serve in camp and then go with the reinforcements.

96. How long would they be in camp?—For different periods. A medico might be in for two reinforcements or only for one.

97. Can you indicate what is the longest period that any medical man was there?—No, not from memory.

98. It might be from one to three months?—Yes.

99. Or more—four months?—Yes, fully four months.

100. *The Chairman.*] For two reinforcements it would be four months?—Yes.

101. *Mr. Salmond.*] How many of these medical men would there be in the camp at the same time?—They vary—from four up to twelve.

102. And how many were there when the camp broke up a few days ago?—That I could not say, because the whole thing was confused. They got medicos from the hospitals.

103. How many men were there in the camp when it recently broke up?—Approximately, in round numbers, about seven thousand.

104. Is that the largest number that has ever been there?—Yes.

105. And what was the smallest?—About two thousand—at the opening of the camp.

106. So that the number of men in camp ran from two thousand to seven thousand: on an average how many would there be?—After the Third Reinforcements, about four thousand.

107. How long does the same man stay in camp as a rule—the same soldier—three or four months?—About four months.

108. Does he get any period of leave during that time?—Yes, he gets leave according to where he lives. We allow him sufficient leave for him to have seven complete days at home.

109. *The Chairman.*] Out of the four months?—Yes.

110. He may be away from seven to twelve days, then?—Yes.

111. *Mr. Salmond.*] Then, in regard to leave for a day at a time or an afternoon?—If he has any special or urgent business to do we generally allow him off for half a day or a day.

112. To go to the theatre or something of that sort?—That is general leave. We grant 15 per cent. of the troops leave every night, and 30 per cent. two nights in the week—Wednesdays and Saturdays it used to be.

113. And how long would a soldier be compulsorily in camp without being able to get away, say, during the first week or fortnight?—There is no leave granted the first week he comes into camp.

114. But after that, I mean, into town?—There is nothing to stop him from getting into town two or three times a week.

115. Now, as to the site of the camp: do you consider it was suitable in respect of size for these men? You say there were seven thousand men: was it large enough?—It would be if the buildings were completed.

116. *The Chairman.*] Then the area is quite ample, is it—the superficial area?—Yes, if the buildings are completed.

117. Then the present buildings are deficient for seven thousand men?—I want to make it plainly understood that the area would be sufficient provided the buildings are completed. It makes a big difference to have to house troops in huts instead of in tents.

118. If the hut accommodation were increased it would be sufficient?—Yes, because that is permanent.

119. *Mr. Salmond.*] But for tents you do not think it is a sufficient area—supposing all the men had to be put in tents?—That is so.

120. *The Chairman.*] It would not have been large enough if they were all in tents?—That is so.

121. But with the tents and the huts you had has the area been at all times sufficient? I suppose you have under the Military Regulations certain lines laid down upon which camps are to be constructed—that there must be a certain amount of space between the rows of tents, and so on?—There is no hard-and-fast rule, but it is generally recognized that for a standing camp there should be a certain amount of space between the tents themselves and the rows of tents.

122. That is what we have to deal with. What are the regulations with regard to the area per thousand men or per hundred men: do you know what the war-books say?—I can get you the information.

123. Would it be possible to get these books here in Wellington?—Yes, from the headquarters. [Witness telephones to headquarters for books.]

124. *Mr. Salmond.*] Do you consider, as a matter of fact, that the camp has been overcrowded at any time?—Well, I do not think it has been overcrowded—not for the time we have had it. It would have been if the numbers recently there (seven thousand) remained long.

125. *The Chairman.*] Then you think it is too small for a permanent camp for seven thousand men?—That is so, if we had had to keep that many men there for any length of time. But this was not our intention. You see, over two thousand men were to go out in August.

126. If you had huts it would not be too small?—Yes, even with huts I think it would become too small—that is, for a permanent camp of that size.

127. For a temporary camp it is large enough—you could do with it?—We would be able to get on with it.

128. What is the area?—I do not remember that.

129. *Mr. Ferguson.*] Are your views as to the sufficient size of the camp based upon the area for drilling purposes or that set apart for living purposes?—For living purposes.

130. You have to reserve an area for drilling purposes which leaves an area too small for living purposes?—As a temporary expedient I think it answered the purpose for the time that the men were in occupation of the tents until the huts were built.

131. *Mr. Salmond.*] Now, as to the nature of the ground: is it a suitable site for a camp, or is it too wet or otherwise unsuitable?—As to the nature of the ground, it is the finest ground we could have got for a camp.

132. *The Chairman.*] Are there any conditions laid down in the regulations with regard to a site for a camp?—Yes, there are.

133. *Mr. Salmond.*] And in respect of the nature of the ground it is a perfectly satisfactory camp?—Yes.

134. As to the climate?—The climate is excellent, barring fogs during the winter. It is a bracing climate—an excellent climate to work in.

135. *The Chairman.*] Do you keep a rain-gauge out there?—I have not done so.

136. *Mr. Salmond.*] Then your only objection is as to the fogs?—Yes.

137. Do you regard that as serious?—It is inconvenient as far as training goes.

138. *The Chairman.*] But you do not think of it from a medical or health point of view?—That is so, only from a training point of view.

139. *Mr. Salmond.*] And there is a good deal of mud about in wet weather?—Yes.

140. Has any attempt been made to pave or road the camp?—Yes, there has been. Since the occupation of the huts we have had working fatigue parties, consisting of two hundred men, roadmaking, draining, &c.

141. *The Chairman.*] Daily?—Yes, daily.

142. *Mr. Salmond.*] Is that still going on?—No, they are all away now.

143. Until the breaking-up of the camp it was going on?—Yes.

144. *The Chairman.*] Since the putting-up of the huts?—Since the occupation of the huts.

145. When was that: when were the huts occupied?—About the end of May.

146. *Mr. Salmond.*] Before then had any roads been made in the camp?—Yes, the main roads were made.

147. How many main roads?—Two main roads.

148. Were they metalled or paved in any way?—They were made with river-shingle.

149. And were they satisfactory and sufficient?—They got muddy with the terribly heavy traffic on them.

150. What new roads have been made?—The roads leading down to all the huts—the roads running along each row of huts and along the ends of them.

151. When the process of roading is completed, will there be a sufficient system of roads to enable the troops to obtain access to their huts without going through mud?—If the huts are completed as laid down, and the drainage and roading is carried out as laid down by the Engineer, I am certain there will be no mud.

152. *Mr. Ferguson.*] This is the first time we have heard the Engineer mentioned: who is the Engineer?—Captain Jickell, Borough Engineer, Palmerston North.

153. When was he first consulted?—I could not say from memory.

154. *Mr. Salmond.*] When did you first hear of this scheme for roading and drainage?—I saw that it was necessary for roads to be made. I verbally asked what could be done in the matter, and the Wellington City Engineer, Mr. Morton, was consulted.

155. That was before the huts were occupied?—Just prior to the huts being occupied.

156. Was the scheme arranged by the other Engineer whom you referred to?—No; that was prior to my consulting Captain Jickell. I had spoken to Mr. Morton and the Public Works Engineer, Mr. Louch. I consulted them on the possibility of tarring, but they advised me that it was absolutely impossible to tar in the winter, and I would have to wait till the summer; and I thought that the only thing I could do this winter was to shingle it right through.

157. How long would it have taken to finish that job if the troops had not left Trentham?—I could not say, but I think at least two months.

158. *Mr. Ferguson.*] That is, to finish the roads?—Yes, as laid down by the Engineer.
159. That is, two months more?—Yes, to carry out the roads and drainage.
160. Two months to finish the roads and drains?—Yes.
161. That is, with two hundred men?—That is my opinion, but I am not an expert. Of course, the weather interfered with us.
162. Was there any reason why the drainage and roading should not have been put in working-order before then?—I do not see how it could have been done owing to the terrible traffic, with the number of men employed about there, and the tremendous amount of timber lying about.
163. *The Chairman.*] That is, it could not have been done on account of the traffic, and the men building, and the material?—That is so.
164. *Mr. Salmond.*] What have you to say about the water-supply?—The water-supply is ample.
165. Where is it obtained from?—From a ravine overlooking the camp and the rifle range; it is brought down by pipes. This water has been analysed by the Analyst and tested by him.
166. Is it reticulated through the camp?—It is laid on right through the camp.
167. When was that done?—In a small way it has been done since the commencement of the camp, but owing to the increased numbers of men coming in we had to increase the water-supply, and that was done before the great bulk of the troops came in—the extra Trentham Regiment, for instance.
168. *The Chairman.*] That would be last year?—No, this year.
169. *Mr. Salmond.*] It has always been sufficient?—Yes.
170. *The Chairman.*] Have there been any complaints about the water-supply?—There have been one or two complaints about the frosts stopping up the pipes.
171. But not as to the quality of the water?—Not as to the quality of the water.
172. There have been complaints about the stoppage through frosts?—Yes, and the changing from one pipe to another when connecting temporary pipes.
173. *Mr. Salmond.*] Is there any other respect in which you think the site of the camp is unsuitable, or in which you desire to criticize the site of the camp?—That question puts me in an awkward position, because it was selected by my superior officers.
174. *The Chairman.*] Is it, for instance, too far from or too near to the Town of Wellington?—I think it is very suitable in that respect. I cannot criticize my superior officers at all in connection with the camp.
175. We are the superior officers for the time being, and what we want is your candid disclosure of what is in your mind?—In my opinion, the camp is in every way suitable from every point of view, except that we might have some more training-ground area.
176. You mean, now the huts are there?—Yes; and with the reduced numbers of men it will be suitable in every way.
177. But it is really too small for seven thousand?—Yes, too small for seven thousand. But, as I say, it was only a temporary camp for the Trentham Regiment, consisting of 2,200 men, as it was intended that they would be there till August only.
178. It was the addition of the two new regiments which came in on the 29th and the 31st May which made it too small?—Yes, as a permanent camp.
179. *Mr. Ferguson.*] As a permanent camp it would be large enough for about four thousand, but it was not large enough for seven thousand?—That is so.
180. It would have been large enough for the men there before?—That is so.
181. *The Chairman.*] Large enough for five thousand as a permanent camp?—Yes.
182. Now, when these extra 2,200 men came in at the end of May, what steps were taken for their accommodation, and the extra call that was made upon the camp's resources?—Well, we gave them the huts.
183. And turned out other men?—No, they were still in the tents.
184. *Mr. Ferguson.*] But some men besides the "Trents" went to the huts?—Yes.
185. *The Chairman.*] They (the huts) were put up in view of their coming?—No, they were built for the other men, but they were just finished, and they were given to the new regiments.
186. *Mr. Salmond.*] As to the system of sanitation adopted in the camp, what was done about the disposal of camp-refuse?—The surplus food was taken away two or three times a day by men who came there to use it for pigs.
187. *The Chairman.*] You disposed of it to consumers?—Yes. Other refuse was burned in an incinerator made out of sods.
188. There was no refuse left lying about?—No. Every company and squadron has its two permanent sanitary men appointed, and they are responsible for this work.
189. A squadron consists of how many men?—A hundred—Mounted Rifles.
190. *Mr. Ferguson.*] That is, 2 per cent. of the men are set aside for this work?—Yes; but that does not apply to infantry, because there are two hundred in a company of infantry. The company commanders are responsible for their own particular lines, but there are two men appointed for the purposes besides them. In addition to that we have what we call a Camp Quartermaster's fatigue party appointed every day for general camp-cleaning. That attends to other places which are not in the company lines.
191. *Mr. Salmond.*] Is any refuse buried?—No, except it comes from the incinerators; nothing but what has been burned first.
192. As to the latrines, will you describe the arrangements?—For the initiation of the camp—that is, for the Second Reinforcements—we had the ordinary field latrines—a short latrine about 18 in. deep, called a "straddle," and about 1 ft. wide and 3 ft. long. But after the Second Reinforcements we adopted the pan system and erected permanent latrines.

193. *The Chairman.*] That would be in October?—Yes, in October. It was after that that we adopted these permanent latrines. I cannot give the exact date, but it would probably be at the end of December.

194. *Mr. Ferguson.*] What number of men would be in camp up to the time that the Second Reinforcements went away?—Only about two thousand.

195. After that you put in permanent latrines?—Yes. The reason for that was this: these field latrines were only used for a day, then covered up and a fresh one dug. With the limited area of the camp it was occupying too much ground.

196. *Mr. Salmond.*] What became of the nightsoil?—It was covered over and buried.

197. Buried on the site of the camp?—Yes, where the latrines were.

198. *Mr. Ferguson.*] If you could get continuously fresh space that is the healthiest system to adopt—the field latrine?—Yes, except you had the water system.

199. *Mr. Salmond.*] How far is that site of the field latrines removed from the residential quarters of the camp?—Well, we have never encroached upon that; it is still the same.

200. *The Chairman.*] How far would the men have to go?—About 100 yards.

201. From any part of the camp?—We built the latrines about 100 yards from the tents.

202. *Mr. Salmond.*] Were they all in the same place, or scattered?—All in one place.

203. How far is that place now from the nearest tent or hut?—About 50 yards.

204. And the site of the old ones—are they a reasonable distance from the present tents and huts?—Yes, about 50 yards.

205. From the nearest place where the troops are living?—That is, the old latrines, which have not been used since December. That is approximately the distance.

206. As to the new system, what becomes of the nightsoil?—The pans are emptied every night.

207. Where?—In a paddock at the rear of the camp.

208. And buried there?—Yes, and buried there is deep trenches.

209. Covered over?—Covered over; it is buried in a field at the left rear of the camp.

210. Are these latrines properly equipped with all reasonable appliances: is a sufficient supply of sanitary paper provided?—Sanitary paper is not provided.

211. Any paper at all?—No, they get their own paper.

212. *The Chairman.*] The daily paper?—Yes, that is what they use.

213. *Mr. Salmond.*] Are not disinfectants supplied?—Yes; there are special sanitary police to look after that. Their duties are to clean out these latrines, and wash them down with disinfectants, while the men are out on parade every morning. They are washed down with disinfectant solution.

214. Has that always been so?—That has always been so with these new latrines. They are again done when the men go on parade at 2 o'clock.

215. Is there any system of drainage from them?—Yes; large pits are dug 20 ft. deep and covered over with reinforced concrete.

216. *Mr. Ferguson.*] Are these connected with the urinals?—Yes, the urinals are in these latrines.

217. *Mr. Salmond.*] How many horses are there in the camp?—About four hundred and fifty.

218. Is that about the average number?—It depends on the size of the reinforcements: if we had a Field Artillery and Ammunition Column we would have more horses than if we only had Mounted Rifles. But with Mounted Rifles we would have four hundred horses and an extra fifty for the Army Service Corps.

219. Are they kept in a particular part of the camp?—They are in a special paddock near the racecourse, right away from the main camp: that is on the other side of the road from the camp. The paddock belongs to the Racing Club.

220. And as to the proximity of these horses, is there not a danger to the sanitation of the camp?—No, because it has nothing to do with the camp. There is a main road running between that paddock and our camp—a public road.

221. Are there not a number of tents close to those horses on the other side of the road?—Yes, there is the Field Artillery there when they are in camp; but they must be 200 or 300 yards from the horse-lines.

222. What about flies?—We have not been troubled with flies to any extent. We used to spray with kerosene for flies in the summer; but we were not troubled with flies even during the summer.

223. Are there not open drains of any kind on the site of the camp in connection with the cooking buildings or for taking away water that has been used for washing dishes and so on?—That is run into pits, and these pits are covered over with tea-tree (manuka).

224. *The Chairman.*] That is ordinary waste water—washing-water?—Yes, from the cook-houses; we have constructed grease-traps by which the grease goes on to the manuka. Then in the mornings the manuka is removed and burned, and a fresh supply put down to catch the grease.

225. *Mr. Ferguson.*] Is there only one set of latrines, or are there more?—There are three at the present time.

226. *The Chairman.*] Since when?—There have always been two since the Second Reinforcements, and the third was erected about the end of May, speaking from memory.

227. When the extra men came in?—Yes, it was rushed up for them.

228. Are there latrines in the horse-lines for the men attending to the horses?—They have temporary latrines over at the horse-lines—ordinary field latrines.

229. And for the Field Artillery?—They use the latrines at the back of their camp.

230. Or are supposed to. Were they in fact used, or is there a certain amount of freedom exercised by the men? Do they use the latrines, or any convenient part of the camp?—They use the latrines.

231. *Mr. Ferguson.*] You are not troubled with breaches of the regulations in that respect?—That is so.

232. They would be severely punished?—Yes, if they were caught. Whenever fresh reinforcements come into camp, the whole lot are lined up and receive a lecture by me personally on the discipline and sanitation of the camp. They are warned especially on this subject. That is a general lecture I give to each reinforcement when it first enters camp, and I lay special stress on sanitation.

233. *The Chairman.*] Then, at night: are there pans provided, or what?—At night there are urinal pans provided.

234. For each tent or hut?—For every hut there are so-many pans and so-many for each company. These are put there at sunset and removed at reveille in the morning.

235. Could you give any idea as to the number of pans—how many pans to a tent or to a company? Would a man have to go far for one?—They are put in lines outside in the lines. They have white stones put round and the pans are put there. After these pans are taken away the ground is disinfected.

236. *Mr. Ferguson.*] And do the men go from the tents to these special lines, or have there been breaches brought before you?—I only had one case brought before me: that was a man who was caught on a dark night. He was punished.

237. What steps are taken to see that the men use the appliances provided: it is the sort of thing for which one man will hardly tell on another?—We have military police in camp always going about.

238. Is there any idea in your mind that that regulation has been in any way avoided by the men, or are you reasonably satisfied that it is properly carried out?—Yes, I am reasonably satisfied that it is.

239. You do not suspect any insanitation is brought about by the men misbehaving in this respect?—There have been odd instances.

240. Nothing serious?—Nothing serious. It has not been brought under my notice. Every nook and corner of the camp is inspected every day by what we call the sanitation officer, accompanied by the captain of the day, the subaltern of the day, and the Camp Quartermaster-Sergeant.

241. He is a Sanitary Medical Officer?—He is the medico appointed for the day. Their duty is to immediately report anything which is wrong in the matter of sanitation in the camp. That report would come to me in writing from the sanitary officers through the P.M.O. But anything of a minor nature would be dealt with immediately, because the captain and the subaltern are there for the purpose.

242. At the time they go round the men are all away at drill, and the camp is empty?—Yes; and their duty is to inspect every nook and corner.

243. Do they spend the whole day doing that?—The whole morning.

244. The inspection of a camp of seven thousand men would take them all their time to get through in a morning?—It might take longer. I do not know exactly how long it does take. Their duty is to go everywhere, and they do it, because it is in the orderly-officer's report: he has to make a report every day.

245. *Mr. Salmond.*] What arrangements are made to secure the personal cleanliness of the troops?—They have ablution benches for their ordinary washing, and we also have about twelve shower-baths. In addition they have two bathing parades a week, one on Wednesday and one on Saturday. Every man has a bath, barring in the winter months, when it is not necessary for him to go in, but it is compulsory that he must wash his feet.

246. *The Chairman.*] Harking back to the Medical Officer's daily visits, is a report made daily by the Medical Officer?—Yes, he should—to the P.M.O.

247. Can we get those reports from the P.M.O.?—The P.M.O. should have daily reports from his sanitation officers, and any reports the P.M.O. had to make to draw attention to anything serious regarding the sanitation of the camp would be sent on to me.

248. You have got a file of any references from him?—There would be references in the office.

249. Can you produce that file?—Yes, I will do so later on.

250. And will the present P.M.O. have all the reports made to his predecessors?—The Director of Medical Services would have all those reports, as he is up there all the time.

251. You will have the references?—Yes, from the P.M.O.

252. *Mr. Salmond.*] You said, I think, that every man in the camp had an opportunity to bathe in the river twice a week, Wednesdays and Saturdays?—Yes.

253. And that there were also ablution benches?—Yes, ordinary washing-benches.

254. Is there any hot water supplied?—No hot-water baths, but hot-water showers are being arranged for; but the men can get hot water.

255. *The Chairman.*] But not for bathing?—No, but for washing, if they need it.

256. Where do they get the hot water?—We have tanks outside every cookhouse.

257. They can take it away in a can?—Yes.

258. Have they cans for the purpose?—They have their ordinary washing-basins.

259. Each man has a basin of his own?—Yes; he could take it to the hot-water tank and get hot water if he wanted it.

260. *Mr. Ferguson.*] Without asking the cook?—It has nothing to do with the cook. It is entirely outside the cookhouse.

261. *Mr. Salmond.*] If every man of the seven thousand wanted hot water could he get it?—No, certainly not.

262. How are you going to distribute it?—The hot water is there for washing-up basins, but there is nothing to stop a man from getting some.

263. If all the men wanted hot water they could not get it?—No, certainly not.

264. That water goes down in the ground?—There is a pit there. There is a rough drain which takes it into the soakage-pits. The newer ablution benches stand on concrete, so that there is no mud.

265. When was it first suggested that the troops ought to have hot water to wash with, in the way of hot showers or otherwise?—I would not like to say.

266. You say the baths are being made: when were they started?—About a couple of months ago.

267. Has the work of making shower-baths been carried out energetically for two months?—No. I would like to say that the reason for their erection was because some money for the purpose was given by some patriotic society.

268. When was that offer made?—I could not say exactly.

269. Six months ago?—No, about two months ago.

270. You say it was started two months ago?—They were put in hand directly the offer was made. We had to look out a suitable boiler and get the best plan for the work.

271. Who was employed to make the plan?—I left that to the Quartermaster. I think it was a Mr. Anderson, connected with the Asylum at Porirua, who drew the plan.

272. Did you consider it right that a camp should be run at Trentham without any hot water being available for the troops?—You mean for washing in?

273. Yes?—It would add to their comfort considerably by having hot water.

274. And their health?—I would not like to speak from the health point of view.

275. *The Chairman.*] The men frequently come to town and get hot baths at their friends' places?—Yes.

276. *Mr. Ferguson.*] Did you ever hear of a case of illness arising through a man not having hot water for washing or bathing?—No; no case was ever brought to my notice.

277. *Mr. Salmond.*] Have any complaints ever been made about not having hot water for washing?—Not to me, nor to my knowledge.

278. What arrangements were made for the washing of the clothing?—Well, we have two laundries in camp, and the men take their clothes there, paying for their washing, of course. The original idea was to make the men wash their own clothes, because at the front they would have to do so. There were very few men who took advantage of the opportunity of washing their clothes; it was sent to the laundries.

279. *Mr. Ferguson.*] The laundries are established in the camp?—Yes; there are two—Excelsior and, I think, Victoria.

280. Do they do the washing there?—No, they are only receiving-depots.

281. *The Chairman.*] The washing of the clothes at the river-bank was not followed up?—Not to any extent.

282. And the men paid for the laundry-work themselves?—Yes.

283. Where were the clothes washed?—They are Wellington laundries, but I do not know whether the clothes were washed in Wellington.

284. They were under the inspection of the camp officers?—Yes.

285. *Mr. Ferguson.*] There is a large laundry at Petone: was that represented at the camp?—I could not say.

286. *Mr. Salmond.*] What arrangements are made in the camp for drying the clothes of the troops and their boots?—No arrangements were made.

287. How did they get their clothes and boots dried?—The clothes were hung out to dry in the air. They did not parade and work in the wet much, and they should only have got their overcoats wet.

288. And their boots and their trousers?—Yes; well, they would have a change of clothing.

289. Have the soldiers got two uniforms?—Yes, they have two uniforms. A soldier coming into camp on the first day receives the following outfit: a greatcoat, a hat, a kit-bag, three blankets, one pair of boots, one pair of drawers, one working-shirt, one undershirt, one set of denims, two pairs of socks, one jersey, a knife, fork, spoon, and mug, two towels, and a waterproof sheet. Those are issued to every man immediately he goes into camp. He takes these things away with him.

290. *The Chairman.*] Is a man allowed to wear his own clothing or underclothing in camp?—He comes into camp in his mufti, and he is allowed to keep it.

291. Then he has what he comes into camp with; but, then, can he add to it?—He can please himself, but the stipulation is made that he cannot take it away with him when he leaves camp for embarkation.

292. He can get a pair of extra boots?—Yes, if he likes to buy them.

293. He might overcrowd the camp with his luggage?—That is so.

294. Is there anything in the regulations to prevent him getting two or three extra pairs of drawers, for instance?—Nothing whatever. Indeed, there are shops at the camp, and a canteen, which have done excellent business, so that the men must have bought a good deal of personal clothing.

295. *Mr. Salmond.*] Does he get two khaki uniforms?—No. During the first week he gets a uniform suit—that is, the ordinary khaki uniform with putties. Then he gets his second issue of clothing—a pair of drawers, a working-shirt, an undershirt, and an extra pair of socks, and a housewife. He would also be issued a second pair of boots if we had them, but he may have to wait till they come to hand from the manufacturers.

296. *The Chairman.*] There have been times when you have not had the boots to supply during the first week?—That is so.

297. I would like to know if that has happened since October, or when you began to be short: when were these periods when you were short of boots?—I cannot say which reinforcements were the first we were unable to supply with boots during the first week. My Quartermaster would be able to say from his books.

298. How was it that this shortage of boots came about?—I believe they could not get them.

299. Was it before the "Trents" started, or was it due to the coming of the "Trents"?—I think that was one of the principal causes that we were so short—the extra units ordered into camp. I could give you the units ordered in, and the dates.

300. Have you that on your sheet?—Yes; I will have you a copy made.

301. You are speaking from that now?—Yes. These are the dates when these units arrived in camp.

302. As regards this shortage of boots, had they not been ordered? How was the supply of boots arranged—was there any one manufacturer who had the sole contract?—I do not know: that is done by the Department of Stores. We simply requisition for the number that we require.

303. To the Supply Department?—To the Stores Department.

304. That is in Wellington?—Yes. The Stores Department is notified by headquarters from the Chief of the General Staff. He notifies the Defence Stores of the total number of reinforcements going into camp from time to time, and he knows the number of pairs of boots required.

305. Properly speaking, the requisition for boots should be made some time before the reinforcements go into camp?—Yes.

306. In other words, the Stores Department has a certain stock which is kept up to that standard: when it gets notice that you will require more it has to requisition for additional boots to keep its stock up?—I cannot say as to that. You will get that from the Director of Stores.

307. *Mr. Salmond.*] Who is the head of the Stores Branch?—It comes under the Quartermaster-General.

308. It is the duty of the Quartermaster-General to see that the Stores Department has sufficient boots, and it is the duty of the Headquarters Staff to notify the Stores Department of the number of reinforcements anticipated?—That is so.

309. *Mr. Ferguson.*] Then if there is a sudden decision arrived at by some power outside headquarters to increase the numbers going into camp they could not anticipate it?—No, that is so.

310. For instance, that 2,200 was never anticipated?—No, that is so. We had 20 per cent. of reinforcements and 5 per cent. monthly afterwards: that was the basis of the camp when it was first started.

311. *The Chairman.*] That was your standard, and upon that you were acting?—Yes, that would give us 500 men monthly to send away; but instead of that we have been enormously increased from time to time by different units.

312. *Mr. Salmond.*] How many men have passed through camp in your time altogether? Does that show on your table?—This will show the number of the reinforcements, but it will not show the number of men I have had in camp altogether. That would be, roughly speaking, about seventeen thousand men who have passed through the camp.

313. *Mr. Ferguson.*] Can you tell us the mortality of that seventeen thousand men—the number of deaths while in camp, or as the result of being in camp?—The first death which occurred was on the 29th December, and I have them up to the 2nd July. From October to the 2nd July there were eighteen deaths from all causes.

314. That is, roughly, one per thousand of the men who passed through camp?—Roughly speaking, yes.

315. *Dr. Martin.*] Can you give us the disease from which each man died?—Yes, the names and diseases.

316. *The Chairman.*] We would like a copy of that. Why was that date fixed—2nd July?—That was when the new man took charge.

317. Will you complete it from your files for us?—Yes.

318. *Mr. Ferguson.*] I think we will want the normal death-rate in the camp, apart from this epidemic as the result of the insanitary conditions. We want to find out whether this camp was in an insanitary condition?—I can hand you this return, but you must have a more complete one later on.

319. *The Chairman.*] I see by this return of deaths that there was one on the 29th December, another on the 30th December, in Wellington Hospital; then, one on the 19th January in Porirua Hospital; and on the 2nd February there was a man killed as the result of an accident. On the 22nd March there was a death in Wellington Hospital; on the 17th April another in Wellington Hospital; 10th May, Wellington Hospital; on the 11th June, Wellington Hospital. Then, after that they began to be numerous—June 16, 20, 28, 29, 30, July 1 (two), July 2 (two)?—That is the epidemic period, 2nd July.

320. When it ended?—No, when it began.

321. But there are a number from the 11th June?—That was when we first started getting the epidemic cases. That is a return simply taken from my records.

322. Of course, the men will have taken ill before those dates. Have you anything in the camp in the nature of a hospital?—Not a permanent hospital.

323. Or a temporary hospital?—No. During that time a man was not allowed to stop in camp when he had taken sick, but was immediately sent to the Wellington Hospital. There is a hospital now under erection at the camp.

324. A sort of base hospital?—Yes.

325. Then at that time if a man were taken ill at the camp he had to be sent in to the

Wellington Hospital?—Yes, he was conveyed by the hospital motor-ambulance to Wellington, provided he was passed as fit for the hospital by the doctors. We would not detain any man in camp who was fit for the hospital. We would detain in the marquee any man who was ill temporarily for two or three days.

326. *Dr. Martin.*] Did you see any instance in the camp of any man suffering ill effects from overcrowding either in the tents or in the huts?—No.

327. You saw no ill effects from overcrowding?—No.

328. Did you see any ill effects from exposure: I am asking you as a military officer, not as a doctor?—I have not, personally.

329. *The Chairman.*] Was anything reported to you of that sort?—Nothing of the sort has been reported to me.

330. *Mr. Salmond.*] Did you have complaints brought to you of the men having wet clothes and wet feet for want of a place to dry their clothes or their boots?—No complaint has been brought to me, except for want of a change of boots. I have had that complaint.

331. No complaint on account of inability to dry clothes?—No; I have heard a great deal about it, but no complaints were brought to me.

332. None were made to you?—No, nor by the officers to me, although I knew that it existed during the wet weather.

333. You knew that the boot trouble existed during the wet weather?—Yes.

334. Apart from the question of dry clothes and dry boots, were there other heads of complaint made to you with regard to what may be called the comfort and health of the men?—I have never received one such complaint.

335. Except on the question of boots?—That is so.

336. Any complaints in regard to matters respecting comfort or care of the men?—I have received no complaints.

337. Either directly or from your subordinate officers?—That is so.

338. *Dr. Martin.*] You have received no complaints from men having slept under wet blankets?—I have not.

339. *Mr. Ferguson.*] Is it possible for an ordinary private to make a direct complaint to you?—Yes; he can demand to be brought in front of me, and that has been told them in my own address, when I address them when they first come into camp. He can demand to see me if he cannot get satisfaction otherwise.

340. *The Chairman*] And has that been taken advantage of?—It has, in certain cases. Men who have had no real complaint have approached me in regard to financial difficulties and other things. They have asked to see me, and the officers have brought them up.

341. It is rather done in regard to their own private affairs?—Yes.

342. *Mr. Salmond.*] I wish to ask you some further questions about this matter of dry clothing for the troops: you say that hitherto no arrangements have been made for drying clothes?—That is so.

343. Is it proposed to make such arrangements, or have any steps been taken for the purpose?—Yes, suggestions have been made, and we have already arranged for drying-marquees; that has been in operation for the last fortnight.

344. How many of them?—One to each company or squadron. Each marquee has a brazier in it.

345. It is a tent inside which is a brazier?—Yes, a drum which burns charcoal or coke—as a matter of fact, we are using coke.

346. Is there a man in charge of them?—Yes, a man appointed by the company to look after it.

347. Was that in active operation prior to the breaking-up of the camp?—Yes, it has been going for the last fortnight.

348. It was not going before the epidemic broke out?—We had no facilities then.

349. *Dr. Martin.*] No facilities for drying clothes up till about three weeks ago?—Up till about two or three weeks ago.

350. So that a man could not dry his boots?—Unless he put them in the sun.

351. *Mr. Salmond.*] What proportion of the men had only one pair of boots?—The whole of the Seventh Reinforcements did not have their boots, and also the bigger proportion of the Trentham Regiments. I could not say definitely how many, but the greater proportion of 2,200.

352. Would you say that about four thousand men had only one pair of boots?—About three thousand altogether.

353. *Mr. Ferguson.*] In addition to what they had themselves?—Yes, they had their own civilian boots.

354. Where are those boots?—They are in the camp. We keep them because the men are only allowed to take away a certain weight. We collect them and forward them to their homes.

355. *Mr. Salmond.*] But when they are in camp?—They have their own clothes.

356. So that they can put their own boots on: is that not contrary to regulations?—No.

357. *Mr. Ferguson.*] They could train in their own boots?—They could.

358. Are they allowed to train in their own boots?—Yes, if they had an excuse; and a wet boot would be a sufficient excuse.

359. And would that be recognized by all officers?—Yes.

360. *The Chairman.*] These extra clothes are available to them while they are in camp?—Yes.

361. Why, then, should complaints be made because men have not two pairs of boots?—Two pairs of official boots.

362. *Mr. Ferguson.*] Their own private boots are not suitable?—No, they are too light for military work.

363. *The Chairman.*] They would not be waterproof?—That is so.

364. *Mr. Salmond.*] Then you said the men had two uniforms: did you mean two khaki uniforms?—One khaki and one denim uniform.

365. If they got their khaki uniform wet, would they not have to wear it?—But they do not wear their khaki uniform when training.

366. They are in denims all the time they are training: if they get those wet——?—They would be allowed to wear their khaki. We use denims because they will stand plenty of hard wear.

367. If he got his denims wet would you allow him to wear his khaki uniform?—Yes, certainly.

368. No objection would be raised?—That is so.

369. So that there are two uniforms they could use alternately if one got wet?—Yes.

370. *Mr. Ferguson.*] But certain men on orderly duty would wear their khaki continually?—That is so—the police.

371. *The Chairman.*] Then in rainy weather they have overcoats: they all have overcoats?—Yes, sir.

372. Are they all served out to the men?—Yes, on the first day.

373. There has been no shortage of them?—That is so.

374. *Mr. Salmond.*] How would they dry their clothes outside: are there any lines to hang them on?—The most of them constructed pieces of lines, and there are also wire fences which can be used for the purpose. The Trentham Regiments hung their clothes from the huts. The most of them spread out their clothes on their oil sheet to dry.

375. Have you never heard complaints that soldiers had to sleep on wet blankets or wet mattresses?—I have not.

376. *The Chairman.*] That is, were complaints ever made to you or reported to you?—I have had no complaints either made or reported to me.

377. *Mr. Salmond.*] Do you think the braziers are an improvement for drying clothes?—Yes, they are a success for drying clothes.

378. And boots?—Yes.

379. Is it usual in camps to have any drying-appliances?—They have never had them in New Zealand as far as I know.

380. *The Chairman.*] Is it prescribed by the Military Regulations?—I do not remember anything being laid down in them.

381. *Dr. Martin.*] You have a marquee with a brazier now?—Yes.

382. That is like what they have in France?—I believe so. It is also used by the Imperial Army. It was adopted here by my own Quartermaster, who was in the Camerons.

383. Is it referred to in the instructions about camps?—I do not remember seeing it.

384. *The Chairman.*] In regard to the boots, over what period did the shortage of boots for these 2,200 men exist: how long were they without the second pair?—From memory, I think it would be about three or four weeks.

385. There was a period of wet weather?—That was the wet-weather period.

386. *Mr. Salmond.*] About the accommodation for the troops: the buildings in which they slept and fed up till recently—I understand they had only tents?—That is so.

387. Up to what time was that—in other words, when were the huts first occupied?—About the beginning of June.

388. So that from October till the beginning of June the whole of the camp was in tents?—Yes—under canvas.

389. How many men in a tent?—We only put eight men; the Imperial Army has sixteen. We only put half the number in a tent that they put in at Home.

390. And the tent is the same size?—Yes; it is a military tent—13 ft. in diameter.

391. Did that system prove unsatisfactory?—No; that system answered very well.

392. Why, then, were the huts substituted?—Personally I am not in favour of the huts. I am in favour of tents with wooden floors; but the New Zealand winters are severe, and I presume that the powers that be thought it advisable to put the men into huts.

393. Do you know which the men prefer?—I can only go by the Sixth Reinforcements: they have asked to be allowed to remain in the tents, and not be put in the huts.

394. *The Chairman.*] It seems that the epidemic began on the 11th June, and the movement into the huts took place at the beginning of June. After the huts were occupied the epidemic began?—The Seventh Mounted and Trentham Regiments were put direct into the huts.

395. *Mr. Salmond.*] How many of these huts are there, and how many men do they accommodate?—There are supposed to be fifty-five huts when they are all completed. There are now about forty-five or forty-six completed. They house 100 men each—that would be 4,600 men.

396. Is that system used in the British Army?—Well, I cannot say myself personally what is the difference in the huts. These huts were designed here.

397. *Mr. Ferguson.*] By whom, the military?—By a committee consisting of Mr. Morton, the City Engineer; Dr. Frengley, the Health Officer; Mr. Campbell, the Government Architect; Major Robinson, Assistant Quartermaster-General, Headquarters. I think that was the composition of the committee, but I am not certain.

398. *Mr. Salmond.*] Have any complaints been made about the huts?—Yes, there have been complaints about the huts.

399. In what respect?—That they are too draughty.

400. Is that the only complaint?—That is the only one I have had.

401. *The Chairman.*] They are not lined inside?—No, they are not.

402. They have a galvanized-iron roof?—A galvanized-iron roof over malthoid: that is to keep the moisture from dripping. I understand.

403. Do the tents have wooden floors?—Yes; at present they all have wooden floors—all the tents now in occupation by the Sixth Reinforcements.

404. Has there been any distinction as between the huts and the tents in regard to the sick-lists: where have the men been located who have taken ill?—The most serious cases have come from the huts occupied by the Second Battalion of the Trentham Regiment; but it must be taken into consideration that these men when put into the huts were not hardened to camp life, and they came in during the depth of winter, whereas the men in the tents had been in camp some time, and had become hardened.

405. *Mr. Salmond.*] Apart from that, where there is an infectious epidemic, the putting of a hundred men into the same sleeping-apartment would increase the liability of infection?—Yes, and I said so at the time before the huts were built. It stands to reason. If a man had measles in a tent it would immediately be isolated, and there would be only seven contacts, whereas if it broke out in a hut you would have to isolate at least fifty men in one portion of the hut.

406. The huts would prevent isolation on the small scale?—Yes.

407. And you pointed this out?—Yes; I drew attention to it when the sample hut was built. Then we have the military standpoint, which is also against the huts. You have to isolate fifty contacts if measles breaks out, if not a hundred, and that would seriously interfere with the training of those men.

408. What other buildings exist at the camp for the men to have their meals and recreation?—In the huts there are tables and forms for them to sit down. They have their meals in the huts, and the men in the tents have their meals in the tents. As for accommodation for recreation purposes, they have buildings erected by the different religious institutions, which have been built by the soldiers themselves—by camp labour. The materials were paid for by the different religious institutions.

409. Those are big halls where they can spend their evenings?—Yes.

410. Are they heated?—In some of them there is provision for heating.

411. Which of them are heated—supposing men are sick and want more comfort than is to be got in the hut or tent?—In one of the halls there are two fireplaces—in the Presbyterian hall.

412. Now, as to the feeding of the troops, who is responsible for the food supplied to the camp?—The Army Service Corps. There is a Supply Officer in the Quartermaster's branch.

413. What is his name?—Lieutenant Petty.

414. Is there a scale of food laid down by the authorities as to how much meat and vegetables shall be provided for each man?—There is a scale laid down.

415. Does it include a regular supply of vegetables?—No, it does not.

416. Is this scale the English Army scale?—No, it is a special scale. We are in excess of the Army service scale. I can bring our scale, and you can then compare it with the Army service scale.

417. *The Chairman.*] This is a New Zealand scale?—Yes; this is the scale laid down by the New Zealand military authorities.

418. And it does not include vegetables?—It contains vegetables when we can get them, but there is nothing laid down as to what vegetables shall be provided, except potatoes and onions; these the men always get regularly. The men get other vegetables when we can procure them—when they are not out of season.

419. Are cabbages ever out of season?—Yes, they are, as far as I know.

420. As a matter of fact, do the men get any green vegetables?—They are getting cabbages.

421. Regularly?—I can give you an absolute return of what they have had weekly. We keep the returns.

422. Might we say that all the troops get green vegetables twice a week?—That I would not like to say.

423. Say once a week then?—Yes, I should say once a week at least—that is, besides potatoes.

424. Has there been any alteration in the scale of diet?—There has been in connection with the butter and jam.

425. Since when?—Speaking from memory, about two months ago. We reduced the issue of butter and jam because of the fearful waste that was going on.

426. Was there any change in the scale, say, after the beginning of June?—No, this was before then.

427. There has been no change since the epidemic broke out?—Absolutely none.

428. *Mr. Salmond.*] Is there a head cook responsible for all the cooking in the camp?—We have a civilian cook, who has been with us since the inauguration of the camp, but the whole of the cooking is under the Quartermaster.

429. How many kitchens are there?—About six.

430. And a separate cook in charge of each?—Yes; a sergeant-cook appointed in each cook-house, who is responsible. He is a man who has had some experience or other in cooking.

431. So that the cooking is really done by the Forces themselves?—Yes, absolutely.

432. *The Chairman.*] Is that the usual plan in all camps?—That is so, barring our ordinary camps—Territorial camps—where we employ civilian cooks.

433. I mean for permanent camps?—The idea is to train the men in the art of cooking. They have to cook for themselves at the front, and there is no other way of training them. We never put a batch of new men into a cookhouse; there is always some one in charge to train them.

434. But when the reinforcements go away all the cooks go with them, do they not?—Yes, but not the man we have to teach them. We always have a competent man in each cookhouse.

435. *Mr. Salmond.*] Have any complaints been made about the cooking?—I have had no complaints.

436. Do you know whether the men are satisfied?—I am convinced in my own mind that they are satisfied.

437. Have you ever heard any complaint about the tea?—Yes; I have heard men in camp complain about the tea. It has been brought under my notice indirectly that salts have been put in the tea by the authorities.

438. *The Chairman.*] You say "the authorities"?—The camp authorities.

439. *Mr. Salmond.*] Is it not a fact that the complaints about the tea have been very persistent?—I cannot say that.

440. Is there any system of inspection of the cooking?—Yes; there is an officer appointed to visit the cookhouses, and he goes round and asks the men if they have any complaints to make. If there is a complaint the officer looks into the matter then and there.

441. *Mr. Ferguson.*] What rank is that orderly-officer?—He might be a captain or a subaltern.

442. Not a lance-corporal?—No, a commissioned officer.

443. *Mr. Salmond.*] For every company or squadron there is an inspecting officer, who may be a captain or a lieutenant, to investigate complaints in regard to the cooking?—Yes, he is at the cookhouses when meals are being issued, so that if a man complains that he has not enough the orderly-officer orders more to be issued.

444. Is there no system by which some higher officer goes round and examines the meals occasionally?—Well, my Quartermaster and myself go round occasionally. We need not do so, but we do it to satisfy ourselves.

445. Have you satisfied yourself that the feeding, cooking, and serving are satisfactory?—Yes, they are entirely satisfactory.

446. Have you tasted the tea?—I have not tasted it, but I have not received any complaints about it while I have been there.

447. *Mr. Ferguson.*] The meals are at regular hours?—Yes, as laid down in the standing orders.

448. But there are certain men who have duties during those hours: what provision is made for their meals?—Yes; the company sends down the meals to the guards.

449. There have been no complaints about that?—No complaints.

450. And men have not gone short of their meals, nor have they had to go to the canteen to get their meals?—Not to my knowledge.

451. *Mr. Salmond.*] How do the men get their meals: does each individual get his meal himself?—No; the meals are arranged, and every eight men appoint an orderly to get the meals from the cookhouse. The quartermaster-sergeant falls them in and marches them up to the cookhouse, and the meals are issued there.

452. If five men get leave to go into town and there are only three men left in the tent, do they get meals for eight men or only for three?—They get rations for eight men.

453. Is that so?—The cook asks how many men meals are required for, and if the orderly speaks the truth he says, "Three; five on leave." I dare say if there were only two or three men they would dine in the canteen. Of course, if men have a week's leave the others do not draw rations for him. There is a tally state goes in, which shows the number of men in the camp, the number in hospital, and the number on leave.

454. *Mr. Ferguson.*] There may be certain tents without any rations to draw?—As a matter of fact, we are often over in the joints, and there is always the cookhouse there, and a man can go back and get a further share. Even if the cook could not supply the man he could go to the Quartermaster, who would give him a dry ration.

455. *Mr. Salmond.*] Now, as to the hospitals, what hospital accommodation exists at the camp?—There is practically no hospital accommodation there.

456. Not even a tent?—There are marquees, but not hospital accommodation.

457. What would you do with a sick man?—Remove him to the Wellington Hospital. That has been the practice in the camp. If he were to be confined to bed for two or three days he might be detained in the camp.

458. In the meantime where would you put him?—In the marquee.

459. So that you have the marquee, which is a sort of temporary hospital for men who are not seriously ill, or pending their removal to the Wellington Hospital?—That is so.

460. Who is in charge of that marquee?—That would come under the medical authorities.

461. I suppose there would be some one in charge of it?—The doctors reside in the medical lines, and that is where the marquee is.

462. So that the doctors are practically resident physicians in this hospital?—Yes.

463. *The Chairman.*] And there is, as you say, a proper ambulance for conveying the men to town?—Yes; it belongs to the Wellington Hospital. Then when this epidemic broke out we employed taxis.

464. The ordinary public taxi?—Yes.

465. And disinfected them afterwards?—They were brought back immediately and disinfected in the ambulance lines.

466. Were these open taxis?—Ordinary taxis.

467. They have a cover—not open motor-cars?—Ordinary taxicabs.

468. Are they open or are they closed?—I could not say. They were engaged by the medical people.

469. *Dr. Martin.*] This part is entirely in the hands of the Medical Officers?—Absolutely.

470. *Mr. Salmond.*] You might tell us about the sick-parade that takes place every morning?—Every morning and afternoon.

471. Where does it take place?—The sick-parade takes place in their own company lines. The men are marched down by the orderly-corporal to the medical lines.

472. At what time in the morning?—The sick-parade has been lately at 8.30 a.m. and 4.30 p.m.

473. They are marched down to the medical lines: what happens then?—They are handed over to the Medical Officer on duty.

474. But do they all stand in a row and wait their turns?—The medical men occupy the marquee, and these men go in in turn.

475. One at a time?—According to the number of Medical Officers on duty.

476. And what do the others do in the meantime?—In fine weather they are simply left standing there.

477. Standing in a row?—Four or two deep.

478. In bad weather what do they do?—They get into the marquees.

479. There are empty marquees there?—There have always been three or four there.

480. *The Chairman.*] That can be used for shelter?—Yes.

481. What are they used for ordinarily?—They are put down there for the use of the medical people.

482. *Mr. Salmond.*] But are they intended as shelters from the rain?—Yes.

483. Is there any reason why the sick men should stand out in the rain while on sick-parade?—Unless we had phenomenal sickness which would overtax those marquees, then if a man took very bad he could be taken away on a stretcher.

484. Why should these marquees not be used by these sick men whether the weather is bad or good?—Because the men prefer to stand out in the open in the sun if it is fine.

485. *The Chairman.*] Because a man is in the sick-parade it does not mean necessarily that he is suffering from an illness: he might have a sore finger?—Yes; it might be any sort of ache or pain.

486. It does not follow that it might be made worse by his being in the rain or wet?—No; it might be from measles down to toothache.

487. *Mr. Salmond.*] Is there a system of medical inspection of the troops apart from this sick-parade?—No; there has not been, barring for inoculation. A man is medically examined when he comes into camp, and there is no other inspection.

488. So that if a man had a high temperature during this epidemic when he woke up in the morning, what would happen to him?—He would immediately report sick when the sick-parade is sounded at 8.30.

489. He would go down?—He would march down with the others.

490. He would have to go to the doctor—the doctor would not come to him?—That is so, unless he was very bad, and then they would take a stretcher to him.

491. If he were able to get out he would have to do so?—Yes.

492. *Dr. Martin.*] If a man got ill at any time and asked for a doctor he would always be attended?—Yes, certainly; his officer would see to that.

493. *Mr. Salmond.*] As to these measles patients, did the doctor go to see them or did they have to go to see the doctor?—They went to see the doctor.

494. In the middle of winter?—Yes.

495. How long would they have to wait standing in a row outside the doctor's office?—That I cannot say.

496. Have you ever been present at a sick-parade?—Only lately, when I heard the men had waited there.

497. How often have you been there?—Once.

498. How many men were there?—There must have been, roughly speaking, about seventy men.

499. Outside?—Outside. They could have gone into the marquees, but it was a fine day, and there were no men in the marquees.

500. This was at 8.30 a.m.?—No, in the afternoon.

501. You have never been at the morning parade?—No.

502. How long did the doctors take to get through this seventy men?—I do not know. When I saw what was happening I gave the doctors a hut for the sick-parade.

503. So that all the men up to a certain number would be able to get into the hut?—Yes. The hut holds fifty for sleeping, but it would hold four hundred for meals.

504. The marquees that you mentioned would not have been big enough?—Yes, except on a wet day. It would have been very uncomfortable on a wet day. It has only been since this epidemic that our sick-parades have been large.

505. *The Chairman.*] It was only during the epidemic?—That is so.

506. *Mr. Salmond.*] And did this method continue right through the sick-parades?—No.

507. Had you a hut ready to hand over for the purpose?—Yes; I gave them the hut.

508. *The Chairman.*] What was the date of that?—I could not give you that, but I can get it for you. It was only during the latter part of the sickness, of course.

509. Did the medical men ever apply to you for further accommodation or anything of the kind?—They have never applied to me.

510. *Mr. Salmond.*] You gave the hut on your own account: you were not asked for it?—That is so. I told the Quartermaster to let them have it.

511. Did you communicate with the medical men on the subject?—They were there at the time.

512. Did you have any talk with the medical men about the practice of bringing these men down on the sick-parade?—No.

513. Something must have been said about it?—Yes, when I was down there.

514. *The Chairman.*] This occurred since Colonel Morice was there?—Yes, I asked him, and he said he would like to have the hut there.

515. *Mr. Salmond.*] Was Colonel Morice resident in the camp before it broke up?—Yes.

516. For how long?—Something like three weeks.

517. He could only have been appointed a few days before the camp broke up?—Yes, probably about a week.

518. Can you say how long that new hut was in use for this purpose before the camp broke up?—I could not say.

519. *The Chairman.*] If it were in Colonel Morice's time it could only have been a week before the camp broke up?—That is so.

520. *Mr. Salmond.*] Was any system of inspection adopted to see that sick men were not left in the tents? Supposing they did not come to parade in the morning, would any one know that they were sick?—Certainly; the orderly-sergeant who called the roll: he would visit all the tents in the morning to see that every one was out.

521. What would happen if a man were found?—He would be "crimed" for not being on parade. He would be marched down to the doctor to see if he were sick.

522. But here is a man who lies in his tent and says he is sick, and you say he would be marched down to see the doctor?—He would be asked to come down; if he said he could not walk they would bring a stretcher for him.

523. *The Chairman.*] I suppose you have to meet cases of malingering?—Yes; there is very little of it, but still you have to guard against it.

524. *Mr. Salmond.*] There is no system by which a medical man goes round the camp to see men who do not get up in the morning?—No, certainly not, because if a man is sick he must report himself as sick. His orderly-sergeant would find out.

525. Although there is a dangerous epidemic in the camp?—Even then you would know it.

526. They would march him down to the doctor?—If he were able to walk.

527. Do you not think it would be better to get the doctor to walk up to see him?—But he would have to go to the marquee whether or no.

528. But might it not be advisable for the doctor to decide what is the proper treatment for him first?—The orderly-sergeant would see whether he was seriously ill.

529. And even during the recent epidemic there was no system by which the doctors could go round and see the sick men?—That is so, except in the Trentham Regiments, where the doctors are attached to those regiments.

530. But the doctors are attached to all regiments?—No. The Trentham Regiment is different: they are a unit on their own, and have their doctors attached to them, who are going to the front with them.

531. Can you give the Commission any particulars of the extent of the sickness which prevailed in the camp?—I have them, but I have not got them with me. I can get them.

532 Has there been any typhoid in the camp?—There has not, to my knowledge.

533. Or diphtheria?—Not to my knowledge.

534. A large amount of measles, I believe?—Yes, there was.

535. And influenza?—Yes.

536. How long have measles existed in the camp—right from the start?—No, I think it was introduced with the Third Reinforcements.

537. What date would that be?—In February.

538. *The Chairman.*] To what extent were the measles present?—There were very few cases—isolated cases.

539. Were they sent to the Wellington Hospital?—To the best of my knowledge they were.

540. I suppose we can get a return showing all the cases that have occurred: the hospital authorities or somebody else will have the information, so that we can see what was the amount of sickness as well as the mortality?—A summary can be got of all the cases that were admitted to the hospital.

541. There may have been a number of cases of sickness where the men recovered?—It is quite possible.

542. However, there have been only isolated cases up till June?—Yes.

543. *Mr. Salmond.*] Did the epidemic of measles suddenly become serious?—To the best of my knowledge it gradually increased.

544. Was not there a very considerable increase in May?—About April, I think—the latter part of April to the beginning of May.

545. Was it a sudden increase?—Yes, I think so; but that, again, I can get from my returns.

546. And do the medical people keep any reports?—They should do so, because we get sick-reports in triplicate, one copy being kept by the unit. I have a sick-file, and the Medical Officer has a sick-file.

547. We will be able to get those returns?—Yes, I will make a note of them.

548. The number of cases of illness that have occurred during the camp?—Yes; that can be got from my sick-reports.

549. *Dr. Martin.*] It might come better from the P.M.O., the course of treatment followed in each case, and such particulars?—That would come from the P.M.O.

550. *Mr. Salmond.*] What attempt was made to isolate the cases of measles or prevent the spread of them?—The medicos used to isolate the whole tent into what we called the isolation camp. If a man had measles the whole tent was put into quarantine. It was a portion of the camp set apart from the remainder of the camp. The tent was completely disinfected with formalin.

551. *The Chairman.*] This quarantine camp was a tent-camp?—Yes, put over on the far side of the ambulance lines.

552. The man who was ill was sent to the Wellington Hospital, and the contacts were put in the isolation camp?—Yes.

553. *Mr. Salmond.*] And did other cases of measles break out amongst those contacts?—I am not prepared to say now. I presume there were some such cases. If a man did not develop it, say, within ten or fourteen days he was returned to his duty.

554. Was that system continued?—No, that system was not continued.

555. I may take it that now when a man takes the measles there is nothing more said about the others?—Yes.

556. *The Chairman.*] But there was no isolating or quarantining after May?—To the best of my knowledge that was the time.

557. Do you know of any reason why that was discontinued?—I cannot say for certain, but I think there was no advantage in quarantining.

558. That would be a matter for the Medical Officers?—Yes.

559. *Mr. Salmond.*] Was the process of the disinfection of the bedding discontinued also?—Yes.

560. Do you know what steps, if any, were taken, when men were seriously ill, to notify their relatives?—Well, if we got information that a man was seriously ill we sent an urgent wire to his relatives.

561. Have you got a list of the relatives or next-of-kin?—We have the next-of-kin on our records. In the early stages of the camp it would be left to the hospital authorities to advise the relatives, because when the man goes in there his next-of-kin is taken.

562. *Mr. Ferguson.*] So long as it was a public hospital to which the man was sent that might be so, but if it were a temporary hospital you would send the notice?—That is so

563. When the man went into the Wellington Hospital they would do the notifying from the hospital?—Yes.

564. *The Chairman.*] Directly the man left the camp for the hospital until he came back to camp you took no cognizance of his movements?—Not unless it was reported to us that he was seriously ill.

565. Were the Wellington Hospital authorities instructed to let you know if cases of serious illness developed?—Yes; there was an arrangement come to by which the Director of Medical Services would arrange it.

566. But that is only recently?—No, in the early stages; and then when the epidemic took place we undertook it because it was such a big thing.

567. *Mr. Salmond.*] I suppose a number of these notifications were only sent out immediately before death took place?—Well, that I cannot say. We did not know how the patients were in the hospital. We would be notified that a man was seriously ill, and we wired immediately to his relatives.

568. *The Chairman.*] How were you notified—by letter, telephone, or telegram?—Sometimes by telephone, or by letter, or by telegraph. We would get a letter the same day.

569. Can you bring us a sample of one or two of these advices from the hospital?—Yes, I will make a note of your request.

570. *Mr. Salmond.*] It has been suggested that a number of parents have had no notice that their sons were dying until they were *in extremis:* do you know of cases of that sort?—I believe there have been one or two such cases, but, speaking from memory, I think they were cases where the men were suddenly taken worse. Within an hour perhaps they were unconscious; but that you will get from the medical men.

571. It is suggested that there was an outbreak of sickness among the horses as well as among the men?—There have been a few cases of "strangles" and a few cases of ringworm.

572. Is strangles an infectious disease?—Among horses.

573. With men, I mean?—That I do not know; but there has not been one case of mud-fever with the horses in camp.

574. Is that a common ailment of horses in camp?—No; but I think it has been reported that there have been cases.

575. Do you know whether similar outbreaks of disease have taken place in other military camps?—I know that it has been reported in Australia and at Home.

576. You do not know the particulars?—No.

577. In respect to the administration of this camp, have you been refused by the Government or by your superior officers any equipment or allowance which you wanted or asked for?—Yes, a railway-siding I asked for has been refused.

578. Rather a large thing to ask for?—I do not think so. Now they have to put one in.

579. Have any other suggestions made by you been rejected?—Yes. While the huts were being built I suggested that we should have cots: that was turned down.

580. *The Chairman.*] Have you a letter-book containing those suggestions?—No, they were verbal.

581. Where would your communications be recorded?—I have it in writing about the railway-siding.

582. *Mr. Salmond.*] You said there was a marquee for the sick men or for men that were proposed to be removed to the Wellington Hospital: is it not in contemplation to have a permanent hospital at the camp?—Yes, one will be completed in about three weeks out there. It is now in the hands of a private contractor.

583. When was that commenced?—I could not say exactly.

584. Three months ago?—About that.

585. What is the size of it?—I do not know the particulars of it.

586. Have you seen it?—I have seen the rough plan.

587. Is the building not up now?—Yes; but I have never been through it.

588. You have seen the outside of it?—But I do not know what it contains.

589. How many men will it accommodate?—It all depends how many beds it is built for.

590. Is it for half a dozen men?—I do not think it will hold more than fifty from appearances.

591. *The Chairman.*] That is not for the purpose of dispensing altogether with the Wellington Hospital, so far as the camp is concerned?—No.

592. Or for dealing with epidemics?—No; it is purely a hospital for simple cases in connection with the camp.

593. Has there been undue delay in completing that building?—Yes, I believe that the contract time has been overrun.

594. When ought it to have been completed?—I think, by the end of last month, June.

595. There will be a written contract somewhere: where is it—have you got it?—No.

596. *Mr. Salmond.*] How long will it be before it is finished?—About three weeks, so the Engineer told me yesterday.

597. Is the work going on now?—No, it is stopped.

598. *The Chairman.*] Who is the head man of the Public Works Department in charge of that?—I think, Mr. Louch, the District Engineer.

599. *Mr. Salmond.*] Have you any further facts that you desire to lay before the Commission apart from any specific questions asked?—I would like to lay before the Commission the whole of the difficulties we were placed under in the camp by not knowing the number of men we were to prepare for for months ahead—that a certain number of men had offered and were to be called up, and that they would come into camp on a certain date. What I mean is that we could not foresee these extra regiments, and consequently could not provide for them.

600. *The Chairman.*] Over and above the five hundred a month?—That is so.

601. When was the increase over five hundred a month decided upon, do you know?—Well, at different times. It started in February.

602. What happened then: how many more men were sent upon you beyond the expected quota?—We had, first of all, the Samoan Relief Force of five hundred men. They left at the end of March. Then in February we got a new company of the Army Service Corps, a small company of eighty-five men. In the same month we got a company of Engineers consisting of 238 men, and a battery of Field Artillery of 156 men. Then in March we had a Stationary Hospital (this is an extra) of 116 men. In April we had another battery of Artillery and an Ammunition Column of 464 men, and No. 2 Stationary Hospital, about ninety-three men. In May we had an extra Army Service Corps, fifty; Engineers, seventy-one; hospital ship, sixty-two. Then at the end of May we had new Trentham Regiments, 2,200. Then in June an Army Service Corps, about twenty-five; and Ambulance Corps, thirty; and extra mounted reinforcements, 200. And the strength of our reinforcements jumped up from 5 per cent. monthly to 45 per cent. every two months.

603. Equivalent to an increase from 10 per cent. every two months to 45 per cent.?—Yes.

604. *Mr. Ferguson.*] Was a corresponding increase of staff given you for dealing with those increased numbers?—I think we are not overburdened with staff. We are working at high pressure all the time. We work from daylight to 11 and 12 every night.

605. *Dr. Martin.*] You are short of Medical Officers?—Well, this latter part proved that we were.

606. That is from June?—We were short of medicos during the epidemic.

607. Did you point out that you were short of medical men?—No, it was only proved by the epidemic that we were short. The numbers were equal to meet all requirements in the ordinary course of things.

608. *Mr. Ferguson.*] That would not be your duty to point that out?—No.

609. *Dr. Martin.*] But would not the Medical Officer in charge of the camp point that out to you? Did he ever officially tell you that he was short of Medical Officers?—No, never.

610. *Mr. Salmond.*] Were further medical men brought into the camp to deal with the epidemic?—Yes.

611. How many?—Six or seven.

612. Resident in the camp?—No.

613. But while all these seven thousand men were in the camp I understand that six or seven extra medical men were added?—No.

614. *The Chairman.*] Were there extra medical men provided with the accession of numbers?—Yes; two came in with their units, the Trentham Brigade.

615. Otherwise it remained as before?—Yes.

616. Apart from the medical you had these men coming in unexpectedly, you say. There was a certain amount of publicity given to the fact that more men were coming in: were you not told that more men were coming in?—Certainly. I will give you the dates when I was notified and the dates upon which the extra men came in: Samoan Relief Force came into camp 2nd January, notified 4th December: Army Service Corps came into camp 7th February, notified 3rd February; Engineer Company came into camp 7th February, notified 29th January; Field Artillery Battery came into camp 7th February, notified 29th January; Stationary Hospital came into camp 18th March, notified 12th March; Field Battery and Ammunition Column came into camp 18th April, notified 14th April; No. 2 Stationary Hospital came into camp 12th May, notified 8th April; extra Army Service Corps came into camp 5th May, notified 3rd May; Engineers came into camp 15th May, notified 10th May; Hospital Ship came into camp 25th May, notified 20th May; Trentham Regiments came into camp 29th May, notified 19th April; extra Mounted Rifles came into camp 1st July, notified 24th June.

617. When you have these notifications sent you what have you to do? Take the case of the 2,200 men coming in on the 29th May, and of which you received notice on the 19th April: what had you to do in order to prepare?—We had to prepare the whole of their sanitary arrangements, their cooking arrangements, and their accommodation.

618. In the way of tents?—It was something to have to prepare a camp for a big body like that.

619. Take them as a typical example?—We had to prepare their sanitary arrangements and accommodation in advance, and their equipment ready.

620. Was there anything else in which the camp was not ready for them when they came?—No.

621. Then you had sufficient time in that case to prepare, as regards boots?—Yes.

622. Is there any other case in which you had to complain of the want of time?—I am not complaining of the time at all: it is having the men bumped on to you at short notice. There were the different bodies coming which I had to make provision for: it was upsetting the camp.

623. It upsets the general arrangement and strength of the various subordinate departments?—Yes, that is overtaxed.

624. You would want some new kitchens, and so on?—Yes.

625. Well, seeing that the men have been raised in an emergency—a sudden call suddenly responded to—is there any remedy by which the inconvenience you speak of could be reduced?—None that I know of. They are emergency calls.

626. *Dr. Martin.*] You cannot suggest any means?—I cannot.

627. Not in the nature of a larger camp and increased equipment?—A large camp capable of taking up to any number of men?

628. *The Chairman.*] For as many as the maximum you had—say, seven or eight thousand: you ought to have the camp for seven thousand at the start off?—That would have been the ideal.

629. You have reached your maximum now?—Yes; but what I have been trying to point out is the difficulties we have had to contend with.

630. The camp was originally designed for two thousand men, then it was increased to four thousand, and then finally you had to provide for seven thousand?—Yes.

631. *Mr. Ferguson.*] What deficiencies were there at the present camp which have arisen out of the large increase of numbers? Do you know of any means how those deficiencies could have been better provided for?—Well, take the Trentham Regiments: we might have been able to have provided for them if the huts had been ready and the whole of the facilities completed, but they were all delayed.

632. Who had charge of the building of the huts?—The Public Works Department.

633. That is not under the Defence Department in any way, except as regards the general supervision of the design?—I do not know.

634. *Mr. Salmond.*] In regard to the subsidiary hospitals, you have Mr. Izard's house, the golf-house at Heretaunga, Levin's wool-store at Kaiwarra, the Berhampore Hospital, the Victoria Wing of the Wellington Hospital, and the racecourse buildings at Trentham: are all these buildings under the control of the Defence Department or under the Wellington Hospital?—I think they are all controlled by the Director of Military Hospitals, barring the Wellington Hospital.

635. We may take it that all these institutions are under the direct control of the Director of Military Hospitals?—That is so.

636. Are there responsible physicians there?—I do not know.

637. This book you have handed in is the one you referred to in your evidence?—Yes.

638. That is the Field Service Regulations, Part II. You have also, I think, some manual of instructions in connection with camps?—Yes, the Elementary Military Hygiene. There is yet another book, but that is an Army medical book.

639. Have you got that?—It is R.A.M.C. Field-notes—purely a medical manual, issued to Medical Officers.

640. *The Chairman.*] Have you had any complaints brought to your knowledge either directly or by reports from your officers that the sick have been neglected or improperly treated?—I have not.

641. Have you had any brought to you by outside people?—I have only heard reports.

642. Have you got anything in writing in the shape of complaints?—No, I have not.

643. Have you had any complaints as to undue delay in the removal of the sick from the camp to a hospital?—Not officially, but only what has taken place lately in connection with the removal of measles cases—only what I have heard.

644. Are there any complaints which have come to your knowledge which you would like to say anything about—the delay in the removal of the sick, or other matters, although they have not come to you officially, but which you would like to make an explanation in regard to?—There is only the matter of the roading and draining at the camp, about which there has been such a lot of talk in the papers. I would like it understood that while you are trying to do that work out there you have these seven thousand men in occupation.

645. In respect to the members of the staff under you is there any inefficiency which you have reason to complain of?—No; I think the members of my staff are highly efficient.

SATURDAY, 17TH JULY, 1915.

The Chairman: I wish to make one or two announcements. In the first place, the Commission wishes it to be clearly understood that these proceedings are quite open to the public, so that any one who chooses to come in and listen may do so freely. The next point is that by law all witnesses attending and giving evidence before a Commission are entitled to the same privileges and immunities as a witness in a civil case in the Supreme Court. Further, all witnesses who attend under a subpœna issued by the Commission are entitled to their travelling-expenses and

to maintenance, on the same scale as witnesses in a civil action in the Supreme Court. We propose, in regard to the hospitals, to ask the Superintendent—of course, there is a hospital at Berhampore and at Levin's, but I do not know yet whether they are all under the control of the Wellington Hospital or not—to furnish a return (1) of all sick persons sent in from the camp, with the date of reception and discharge; (2) their complaints; (3) all cases of serious illness; (4) the deaths, certified causes of death, and dates; and (5) the dates when the camp authorities were informed of the existence of the serious illness or the death, and whether by letter, telegram, or telephone. We will issue a subpœna to get these if necessary.

JOHN DA VINCI LOUCH sworn and examined. (No. 2.)

1. *Mr. Salmond.*] What position do you occupy in the Public Works Department?—I am District Engineer for Wellington.

2. Have you been in charge of the works undertaken by your Department at Trentham Camp?—Yes.

3. When did the Public Works Department first have anything to do with the camp?—Early in March: it would be about the first week in March.

4. What was the Department asked to do?—We first had to erect a sample hutment.

5. *The Chairman.*] By whom were the Department asked?—I cannot say. I was instructed to erect a sample hutment. I received the instruction from my superior, the Under-Secretary.

6. *Mr. Salmond.*] Was that done immediately?—Yes.

7. *The Chairman.*] What do you call "immediately"?—Within a week or so. It was within a fortnight, I think. I see from the file that it was at the end of February I received instructions to erect the sample hutment.

8. And when was it finished?—It was completed before the 19th March. I then reported that one hut for officers and one hut for men had been erected.

9. Two sample hutments?—Yes.

10. Erected before the 19th March?—Yes.

11. Would those hold fifty men each, or a hundred?—The men's hutment was supposed to hold a hundred men.

12. And the officers, I suppose, thirty or forty?—Not so many.

13. *Mr. Salmond.*] Was that design ultimately approved?—With modifications.

14. Who prepared the original design?—I understand the military authorities prepared the original design, and it was approved by a Board consisting of the Government Architect, the City Engineer (Mr. Morton), Dr. Frengley, and, I think, some of the military authorities. The Engineer-in-Chief was not consulted in any way in regard to the camp.

15. On whose suggestion were the modifications made?—By the Board, I should say—the Board I have just mentioned.

16. What were the modifications?—They were very slight. In the first place they considered there was too much air-space under the eaves.

17. There was an open space, was there not, between the wall and the eaves all round the hut?—Along two sides of the hut.

18. *The Chairman.*] So as to create a draught along the top?—Yes; and there were some louvres in the gables: they were omitted.

19. *Mr. Salmond.*] What was the modification: was the aperture at the top partly closed?—No, it was reduced in depth.

20. What is the aperture now?—Four inches. It was six inches.

21. Were those the only modifications?—It was found that the draught got in along the corrugations at the foot of the iron sheets, and a fillet of timber was attached to the plate to prevent the draught getting up the corrugations.

22. In other respects was the original plan carried out?—Yes. In the first hut the felting was supported on wire netting. That was omitted, and the roof-battens to carry the felting and the iron were placed close up.

23. Do you consider that the plan as so modified was satisfactory?—Well, it was approved by the Board of experts.

24. You have no opinion otherwise? Was there too much ventilation in the huts?—Not in fine weather.

25. *The Chairman.*] In winter, then, there is?—I should not say there was too much ventilation: I think the trouble was that the men were sleeping on the floor with no beds. They slept, I think, on straw mattresses on the floor. I think that if these were raised off the floor and placed on bunks or something of that kind it would be a marked improvement, and they would not feel the draught.

26. The draught comes up through the floor?—Not through the floor, but round the building. The floor is quite tight, built of the very best seasoned timber.

27. *Mr. Salmond.*] Did the Department then proceed to build the existing huts forthwith?—Forthwith.

28. *The Chairman.*] How were the existing huts built—by day labour or by contract?—By day labour.

29. Then when did you begin with the further huts?—We were instructed then to invite tenders for these huts on the 30th March. We did so the same day—30th March.

30. Then, were these tenders abandoned?—Tenders were received and declined.

31. And you proceeded by day labour?—Almost immediately.

32. *Mr. Ferguson.*] On what date were the tenders received?—8th April.

33. And on what date were they declined?—On the 15th April I was notified that it had been decided to decline all tenders and carry out the work by day labour.

34. *The Chairman.*] When did you begin with the day labour?—I commenced to order material straight away—the next day.

35. And when did they start work?—I think we started within a couple of days—two or three days.

36. Was any time appointed within which they were to be finished?—We were instructed to proceed with them as quickly as possible.

37. How many huts were you to put up then?—I think about thirty-four for men and eleven for officers.

38. When did you finish them?—They are not completed yet. The thirty-four have been completed.

39. *Mr. Salmond.*] How many are complete altogether?—About forty.

40. *The Chairman.*] I suppose they were completed one by one, or were the different parts of a number proceeded with simultaneously?—Yes, that is so.

41. When did you get the first lot completed?—I think we erected them nearly at the rate of one every two days at first.

42. The point is this: delay is suggested. We want to know what delay there was?—There was no delay.

43. What time was allowed when tenders were called for?—I have not the tenders here.

44. I should like to get that information. Will you let us have it, please?—Yes, sir.

45. *Mr. Salmond.*] You have there a plan, I believe, showing the huts—those already built and those still to be completed?—Yes. [Plan produced.]

46. *The Chairman.*] Is this a plan of the whole of the building that was undertaken?—That shows the whole of the buildings to be erected, including the additional huts. There are fifty-five huts altogether.

47. You are erecting at the rate of one every two days?—Something like that.

48. That would be fifteen in a month. In three months, at that rate, you would have erected forty-five?—We have forty erected and complete now.

49. *Mr. Salmond.*] I think I am right in saying that all on the plan are completed with the exception of seven?—Yes.

50. *The Chairman.*] With the outside offices and everything—latrines, and so on?—They are not all completed. I can give you the exact number.

51. Let us have particulars, and the dates when they were completed. Does your assistant recollect the time that was allowed for tenders?—I do not think so.

52. Have you not got the specification?—I have not got it here. On the 8th July there were forty-three completed, including the sample hut. We knocked off work on the next day. One was completed with the exception of shelving; one with the exception of shelving and flooring; and one with the exception of shelving, flooring, and windows.

53. Three in course of construction?—Practically there were forty-four completed and seven in course of construction: that makes fifty-one.

54. Did you receive instructions to hurry on with the work at any time?—I think so. It was understood——

55. I mean, after you had started did you receive instructions to hurry on—make faster progress?—I have no doubt I received instructions. I could not say from memory; but I have been urged to push on by the military authorities and others.

56. What did you do then to meet the urgency?—I got all the men and all the material that I could get.

57. Had you any difficulties with regard to men or material?—We had considerable difficulties in regard to material; in fact, I think the merchants supplied nearly all the corrugated iron that was available in the city, and we had to send to Melbourne for some. There was difficulty in getting glass, and seasoned timber for the flooring; and we had difficulty in getting felt for the roofs.

58. Did those difficulties cause delays that otherwise would not have taken place?—They caused a certain amount of delay.

59. What about the men?—We got men from all over the country. The Labour Department got some from Auckland, and I think some from as far as Dunedin.

60. Could you have used more men if you could have got them?—Towards the end the men became rather frightened, and a number of them left. They became afraid of sickness in camp.

61. When do you mean when you say "towards the end"?—Towards the 8th July.

62. Did any leave before the 30th June?—I think the overseers could tell you that better than I can.

63. I suppose the pay-sheets will show the number of men?—Yes, they will show everything. I did not complete the list of buildings. There were fourteen officers' huts in addition to the others.

64. In addition to the forty-three?—Yes. The Army Service Corps building was completed; a power-house, with engine and foundations, completed; a considerable amount of electric wiring done; five cookhouses completed, and one with the exception of the floor: that would be six. Of the ablutions, six were completed, and fourteen in course of construction.

65. *Mr. Salmond.*] Are all these buildings shown on the plan?—I think so. Wash-ups—four completed and two partly completed; latrines—two: that makes ninety-three erections in all.

66. *The Chairman.*] When did you first come to the conclusion that bunks would be an improvement?—I thought from the very first that men should not sleep on the floor. It would be an advantage to have them raised off the floor.

67. Did you report that?—It did not come within my province.

68. You did not give expression to that opinion to your superiors?—I do not think so.

69. *Mr. Ferguson.*] You were doing the work for the Defence people?—I was carrying out the work under instructions from the head of my Department, and I had nothing to do with the class or style of building to be erected. I was simply carrying out instructions.

70. *The Chairman.*] An executive officer?—Yes.

71. Although you thought what you have stated, you did not communicate your opinion to any one in authority?—I might have mentioned that I did make a small sample stretcher when the work was started.

72. Did you put it in the hut?—No.

73. Who saw this sample stretcher?—I do not think any of the military authorities saw it. It was in our workshop.

74. To whom did you show it?—Lately it was sent to Defence headquarters.

75. But at the time?—I did not show it to anybody that I am aware of. We had to carry out instructions. I have to do with the furnishing.

76. Why did you make the sample if it was not to be shown to anybody?—I thought it would be desirable if the question came up. I think I made one or two different sample stretchers in case they should be required. It was a very small affair and very cheap, to keep the men off the floor.

77. Were bunks ever suggested to you by the military authorities or by any superior?—No.

78. Were you present at the meeting of the committee of experts?—No.

79. Were you invited to be present?—No; nor was the Engineer-in-Chief, my superior officer.

80. *Mr. Salmond.*] The Public Works Department had nothing to do with the plans until——?—They had to do with the architectural plans, but not the engineering plans.

81. *The Chairman.*] Did any one from the Public Works Department attend this committee?—The Government Architect was a member.

82. Is he in a different Department?—A different branch.

83. Did any superior officer to you in the Public Works Department attend that conference?—I cannot say.

84. *Mr. Salmond.*] The Government Architect is connected with the Public Works Department, but is not in the same branch, I understand, as you?—Oh, yes. I carry out the architectural work and the engineering work.

85. Is he your superior?—I do not know that he is. Mr. Blow and Mr. Holmes are my superiors. I took instructions from Mr. Blow.

86. *The Chairman.*] The Architect may supply you with material, as it were, from which you work?—That is so.

87. *Mr. Ferguson.*] These huts were not designed in your District Office but in the Government Architect's office?—I believe they were designed between the Government Architect's office and the military headquarters office; and I think the Health Department had something to do with the matter?—I know that Dr. Frengley was consulted.

88. *The Chairman.*] Have you on your file letters urging you to proceed faster with the construction of these huts?—There is a lot of correspondence. It would take some time to look through it. I do not remember any particular instance. It may have been so. No doubt I have been urged. At any rate, whether I was actually instructed or not, it was always understood that we were to proceed with the work with all possible despatch.

89. Could you have employed more men if they could have been got?—I suppose we could. We employed all the men who presented themselves, I understand.

90. The Labour Department got the men for you?—We employed some direct and some through the Labour Department—wherever we could get them.

91. *Mr. Salmond.*] How many men were employed?—I suppose, on an average, a hundred carpenters.

92. *The Chairman.*] Daily?—Daily; and I think we have one hundred and thirty men altogether. And then the military assisted with fatigue parties, in such work as carrying material. The overseer can state exactly how many men he had.

93. *Mr. Salmond.*] Had your Department anything to do with building the hospital which is now in course of construction?—Yes; that is being carried out by contract.

94. From plans prepared by your Department?—By the Government Architect.

95. *The Chairman.*] When did you get your first instructions to proceed with the hospital?—The contract was let on the 27th April.

96. That is part of the same job as the hutments?—No, it was a contract. The hutments were erected by day labour.

97. When did you get the instructions for the hospital?—The contract was let on the 27th April.

98. But when did you get the instructions?—That is the instruction. I did not receive any instructions as to preparation of plans. The Government Architect would do so.

99. We should have to get the Government Architect to find out when he was first instructed about it?—Yes. I began with the contract.

100. *Mr. Salmond.*] Who is the contractor?—Mr. H. H. Knight.

101. *The Chairman.*] What does the contract provide on the subject of completion?—It provides for completion two months from the 27th April. That would be on the 27th June.

102. Is that a short time for such a building?—A very short time. The contract amount is £2,889, exclusive of electric lighting and drainage, which is being carried out by the Public Works Department.

103. Then it should have been completed by the 27th June?—Yes.

104. It is not yet complete, is it?—The contractors were stopped by the outbreak of the epidemic.

105. When were they stopped?—On Saturday last—I think about the 9th July.

106. How was it they had not got the building done to time?—They had a very short time in which to complete it, to begin with.

107. Do you mean that they contracted for an impossibility?—More than they could carry out, I think.

108. *Mr. Ferguson.*] If you had secured all the men and material available, they would have great difficulties?—They had considerable difficulties in getting men and material at the beginning.

109. *The Chairman.*] You had absorbed the market to some extent, had you not?—So the contractors said.

110. *Mr. Salmond.*] Was there any difficulty about rates of pay?—Personally I do not know anything about that. I know that our men were being very well treated.

111. *The Chairman.*] How long do you think it would take to complete the building?—About three weeks.

112. They have not resumed, have they?—Yes; the contractors received instructions to do so.

113. When did they begin again?—Yesterday morning.

114. *Mr. Salmond.*] What accommodation will that hospital afford when it is completed?—Accommodation for sixteen patients. It is a building of a permanent character.

115. And it affords nurses' accommodation?—Yes.

116. *The Chairman.*] Is there accommodation for a resident doctor?—No.

117. Coming back to the hutments: was there to your knowledge any discussion on the subject of lining the huts at the time they were projected?—Not to my knowledge.

118. Did you make any recommendation on the subject of lining?—No.

119. They are not lined at all, are they?—No.

120. *Mr. Ferguson.*] Was there any suggestion made to you, in the course of construction of the huts, that they should be lined?—No.

121. *Dr. Martin.*] In your opinion are the huts perfectly warm and comfortable?—It depends on the weather.

122. Say, in weather like the present?—They would be all right.

123. *The Chairman.*] On a day like this?—Yes.

124. How would they be in wet, wintry weather: to-day is not the worst sample?—I have slept in many worse places.

125. I take it that you believe the huts would be cold on a cold day or on a cold, windy night?—On a cold, windy night I dare say they would be cold, particularly if you were sleeping on the floor.

126. You have been a good deal in the field in your time, I suppose?—Yes.

127. Would you have preferred a tent with a wooden floor to one of these huts?—I never had the luxury of a wooden floor.

128. Would you prefer a hut to a tent?—I should like a tent all to myself, for instance.

129. I mean from the point of view of warmth and comfort, not from the point of view of isolation. A man would like a tent all to himself, no doubt; but supposing you had a choice between one of these huts and a tent, which would you prefer?—It would depend on the situation. On a stormy night I think I should prefer the hut.

130. *Dr. Martin.*] In your opinion should those huts be lined?—I would not say so. I understand they are equal to the huts at Home.

131. Each of these huts holds a hundred men. Do you think they are comfortable and suitable in every way as they are now?—I think there are too many men in the huts, to begin with.

132. Have you any suggestions to offer regarding the huts as they are now?—I would suggest that the number of men in each compartment be reduced to thirty, and that the huts be provided with bunks or stretchers.

133. You do not suggest lining?—No; I do not think it would be necessary to line them. In my opinion if the men are raised up off the floor they will be much more comfortable.

134. Why do you suggest that the number of men in each hut should be reduced to sixty?—Because they are very close.

135. On account of air-space?—It would permit of air-space between each of the men. It would allow a space of about 2 ft. 6 in. for a bunk and about 2 ft. between the bunks—fifteen on each side of a compartment. The huts are 140 ft. long by 22 ft. wide.

136. *The Chairman.*] These huts, we may take it, were rather of a temporary character than intended for permanence?—That is so—in fact, it was suggested that some of the flooring be not securely nailed so that it could be taken up again in case it is required to be moved elsewhere.

137. *Dr. Martin.*] You have seen the tents out at Trentham?—The bell tents, yes.

138. Each tent holds eight men?—I believe so. I have had nothing to do with the tents.

139. Do you think your huts are more suitable than bell tents?—Yes, I should say they were more suitable. I think they are preferable to tents.

140. *The Chairman.*] With regard to drainage and roads, have you had to do with these matters at all?—I have had to do with the sewer drains—the construction of them, not the laying-out,

141. Who is responsible for the design?—I think the City Engineer, Mr. Morton. I think the plan was prepared by the military authorities.

142. A scheme, I suppose, was suggested by the military authorities, and Mr. Morton worked it up?—No; I think he suggested the scheme and the military authorities worked it up.

143. You got it as a complete scheme to go on with?—Yes. There were some slight modifications.

144. Was that completed by day labour?—It was. The skilled work was done by our staff and the excavation by the military authorities.

145. This is in connection with the hutments?—Yes.

146. When was it completed?—Some little time ago.

147. Before the place was occupied?—The hutments were occupied as constructed in most cases.

148. You say the drainage was completed a little while ago?—That is the sewer drainage. There is no system of storm-water drainage.

149. Was sewer drainage provided in connection with the hutments as the hutments were occupied?—The drainage was constructed simultaneously with the erection of the hutments.

150. They went on together?—Yes.

151. It was not for you to design or recommend any scheme of drainage, was it?—It was the duty of the Engineer-in-Chief to design it, but he was not consulted.

152. You would simply have to carry it out?—I simply had to carry it out.

153. When you say there is no system of storm-water drainage, do you regard that as a defect?—Yes, I do.

154. Is there provision made for carrying off the water from the roofs of the huts, or does it just stream down the sides when there is rain?—The eaves of the hutments have a considerable projection, which throws the water clear of the buildings. It does not stream down the sides of the building.

155. The water is all thrown into the space between the huts?—Yes, and the ground is very porous there, consisting of a gravelly subsoil.

156. The water soon runs away?—It soon runs away, unless the surface soil is tramped into a muddy state by the large number of men.

157. Then it becomes impervious?—Yes.

158. You think that if some system of disposing of the storm-water were introduced there would be an improvement?—I understand it is proposed to introduce a system of storm-water drainage—in fact, I believe it is almost in hand now.

159. You have to do with the wiring for the lighting?—Yes; my staff carries it out.

160. Is there anything in connection with that that you would like to remark upon?—No.

161. Have you had any difficulties to encounter?—There were difficulties in getting material and plant.

162. Had it to be imported?—A considerable quantity had to be imported from Australia.

163. *Mr. Ferguson.*] What is connected with the sewerage system?—The latrines and the cookhouses.

164. Are the latrines on the water system? Is it only the urinals that are connected?—Only the urinals. There is no water-closet system.

165. The urinals are connected, and the cookhouses?—And the washing-up places. All the ordinary soil-water is carried away.

166. The ablution water?—It is all carried away. The drainage system is shown on the plan.

167. In what respect do you think it could be improved upon—I mean, the sewerage system?—I think we shall have to disconnect the storm-water entirely from the sewage. The storm-water evidently flows down the sewage trenches and collects in the soak-pit.

168. *The Chairman.*] How many soak-pits are attached to the system? Do they all go to the septic tank?—There is no septic tank connected with the main drainage. There will be a septic tank in connection with the hospital drainage.

169. Will you describe what the sewerage system is?—I can describe it on the plan. [Drainage system explained on the plan.]

170. What is the name of the Architect?—Mr. John Campbell.

171. Is he in Wellington?—I think so.

172. Are you satisfied with the latrine arrangements, or can you suggest improvements? What in your opinion would be improvements?—I think there should be a urinal to every two huts, for night service only—between every two hutments. I believe provision is being made for that now.

173. *Dr. Martin.*] Something in the nature of a bucket urinal?—Yes. I do not think the present arrangement is at all sanitary.

174. What is the present arrangement?—Simply a bucket on the ground, emptied every night, and some disinfectant is sprinkled. I think the urinals are too far away from the hutments. I may say that I understand the whole matter of the construction of the camp and the drainage is now in the hands of the Engineer-in-Chief, having been referred to him within the last few days: I mean the question of roading and metalling and draining.

175. *Mr. Ferguson.*] Is the Engineer-in-Chief taking it in hand himself?—Mr. Holmes himself.

176. *Mr. Salmond.*] Have you hitherto had anything to do with the roading of the camp?—No. I was simply consulted some time ago as to tarring and sanding, but there was nothing to tar and sand: it was mud. There was nothing to tar; it was impossible.

NATHAN SEDDON sworn and examined. (No. 3.)

1. *Mr. Salmond.*] You are an officer of the Public Works Department?—An overseer.
2. And have been engaged at Trentham?—Yes.
3. How long were you there?—I have been there since the 19th April.
4. Were you in charge of the erection of these huts from the commencement?—Yes, sir.
5. You put up the sample hut?—Yes.
6. How many men did you have under your charge there?—During June and July we had 131 all told—somewhere about ninety carpenters, and the rest labourers, and plumbers, and electricians.
7. And during May how many men approximately would you have working for you at the same time?—I should say a hundred all told.
8. Was there any complaint in May that they were not getting on fast enough?—Not that I know of.
9. No complaint was made to you?—No.
10. *The Chairman.*] Did you ever receive any letter asking you to get on with more urgency?—No, sir.
11. Getting on with more urgency would have meant either overtime or more men, I suppose?—It was impossible to work overtime: it was too dark. We worked all the time we possibly could. During the earlier stages of the job we started at 6 in the morning and worked till 7, and then from 8 till half past 5. As winter came on we had to reduce the time.
12. You took advantage of all daylight?—Yes.
13. And Saturday afternoons?—Yes, working till 4 o'clock.
14. *Mr. Salmond.*] In your opinion has the work proceeded as rapidly as it could have done?—Yes, sir. It could not have proceeded faster.
15. *The Chairman.*] Were you delayed at times through material not being present?—No. The first week was awkward, because we had such short notice to start. We received notice on the Thursday, and were on the job on the Saturday. We started on the Monday. Afterwards we had no difficulty.
16. Had you any difficulty with regard to the men?—No, we seemed to get plenty of men. Of course, they were coming and going. There seemed to be a good supply of men.
17. They began to leave, without the gaps being filled up, some time in June, did they not?—No; we took on men as they came.
18. When the epidemic was pronounced at the end of June, did men go then?—I believe so. The numbers began to grow smaller towards the end. It may have been because the job was coming to a close.
19. Was there a demand for extra wages?—Not that I know of. We were paying a fair wage.
20. Was there some question about being paid if they took ill, or something of that sort?—Yes, a question arose during the last week of the work.
21. That was at the end of June?—Yes.
22. What was that?—We considered the work would be finished in a fortnight from the 8th July, and a lot of the men began to think it would not pay them to stop there if they were going to catch measles and take it home at the end of the job, unless we were prepared to pay them for lost time while they were sick.
23. It arose out of the very short time they would have had to work: to be laid up for such a very short time would not pay?—I suppose they consider it better to knock off and lose a week than have to lay up and incur the doctor's expenses.
24. *Mr. Salmond.*] Are you quite satisfied with the design of the huts?—No, sir.
25. What is wrong with them?—I consider they want ridge ventilation.
26. *The Chairman.*] To get rid of the bad air above the level of the air-spaces?—To cause the air to draw up instead of coming down.
27. *Mr. Salmond.*] Do you mean instead of the ventilation under the eaves, or in addition to it?—In addition to it.
28. Your idea is that the hutments are not sufficiently ventilated?—My idea is that the ventilation is coming down instead of going up. That is where the draught is coming from.
29. Have you been in one of these huts a night or on a morning after its occupation?—Yes, both morning and night.
30. What is it like?—I consider it is very stuffy in the morning, and there is not sufficient ventilation on a calm day. It was during the very calm period that I was in recently.
31. *The Chairman.*] That was in the morning after the hut had been occupied overnight?—Yes.
32. *Mr. Ferguson.*] Was there any trouble from condensation on the roof? Is the roof lined with malthoid or anything of that kind?—We have saturated felt in the roof.
33. Any trouble from condensation?—No.
34. *Mr. Salmond.*] Have you slept in these huts at night?—No; but I have slept in a small galvanized-iron place—not one of the large huts.
35. Do you think it is objectionable for the men to sleep on the floor?—From my own experience I think it is.
36. *The Chairman.*] From your experience in the small hut?—Yes.
37. *Mr. Salmond.*] What is the objection?—I could not keep warm. First one side would get cold and then the other. I got up on a bunk, and then I was all right.
38. *The Chairman.*] Was there a bunk in the place?—I put one in.
39. And then you found you could keep warm?—Yes. It was very frosty there at first.

40. *Mr. Salmond.*] Have you had anything to do with the drainage of the camp?—I was the Overseer in charge.

41. In your opinion was the system satisfactory so far as the sanitary arrangements are concerned?—Yes; I see no objection to the present system.

42. Do you think a system of surface storm-water drainage is necessary?—I do.

43. Do you know whether any plan has been adopted for that purpose?—Not that I am aware of.

44. Or proposed?—It is only recently if it has been proposed.

45. You lived in the camp for about three months?—Yes, from the 19th April to the 8th July.

46. What has been the condition of it with respect to mud and wet?—It has been muddy, but nothing more than I should expect with so many men about.

47. Very uncomfortable?—Yes, very uncomfortable.

48. Could you keep yourself dry?—Yes, with the aid of gum boots.

49. *The Chairman.*] You could keep your feet dry, you mean?—Yes.

50. *Mr. Salmond.*] Was it necessary for the men employed on the works to go about in mud—on wet ground?—Not so much as the Overseer in charge, because he had to go all over the place. The men were working pretty well in one spot, and were not so bad.

51. What part is worst?—The roads, I should say—the main roads round the hutments.

52. Is any system in operation for metalling or gravelling these roads?—There was a system carried out by the Defence Department.

53. *Mr. Ferguson.*] The Public Works had nothing to do with it?—No.

54. *Mr. Salmond.*] How is it being done?—The men were carting stones off the paddocks and metalling the roads, and digging soak-pits.

55. The men were doing it themselves?—Yes.

56. Regularly?—Not regularly; at periods, I suppose, when they could conveniently do so.

57. Do you think a proper system of roading is necessary in camp?—I do.

58. *The Chairman.*] In the meantime, I suppose, it is all right?—Oh, yes, there is no difficulty in the summer.

59. *Dr. Martin.*] Where did you live in the camp?—Next to the first row of hutments.

60. You did not live in one of the huts?—No, in a small orderly-room, 10 ft. by 10 ft. Here it is on the plan. [Place indicated.]

61. *Mr. Ferguson.*] Had you anything to do with the soak-pits?—The excavation of them was done by military labour. The laying of the drains was done by the Public Works Department.

62. Are they ventilated in any way?—The soak-pits are not ventilated, but the manholes are.

63. There is no ventilation of the drains taken up from the ground?—From the officers' quarters and the cookhouses they are ventilated by tubes above the eaves.

64. *Dr. Martin.*] Were you living near the soldiers?—Yes, I had soldiers on either side of me.

65. Did the men observe the ordinary sanitary rules at night and use buckets?—Yes, I think so.

66. Have you heard it discussed out there that the men were not using the buckets?—No.

67. You saw no instance of men breaking the ordinary rules?—No.

68. Nor heard of any?—No.

Captain THOMAS MCCRISTELL sworn and examined. (No. 4.)

1. *The Chairman.*] What are you?—I belong to the New Zealand Staff Corps.

2. At Trentham?—Yes; I am at present employed as Camp Quartermaster at Trentham.

3. How long have you been Camp Quartermaster?—At Trentham, since the 19th October, 1914.

4. What are your precise duties as Camp Quartermaster?—First, in connection with clothing and fitting out, to see that the men are fitted out with clothing when they arrive in camp: to equip them for service as far as clothing and equipment are concerned. Then I have to look to camp sanitation, and everything in connection with the cookhouses.

5. Does that summarize your duties?—And organization; but that will summarize the duties generally.

6. Now, with regard to clothing, we have heard, as regards the two thousand men who came in extra, that you had not enough boots?—Quite right, sir; that is a fact.

7. Is that the only case when you were short of boots?—Oh, no.

8. When have you been short of boots?—I have never been short of a first issue of boots. When any man arrives in camp he gets one issue of boots.

9. He is supposed to get a second issue within a week?—Occasionally I may have been short of a selected size. For instance, when the Third Reinforcements arrived there were a number of men who wore 12's and 13's in boots. Those men had to wait for a week or ten days until I could procure boots for them.

10. It is the unexpected size?—Yes. With the exception of a few pairs here and there in odd sizes, every man on first arrival in camp has been given one pair of boots.

11. With regard to the second pair, he is supposed to get that within a week, is he not?—He is supposed to get it within seven days, but that has been only since the end of the summer.

12. From about March or April, then, you have been——?—Giving the second pair out within seven days, if I had them, or as soon afterwards as I could get them.

13. You have not had them, we hear, on several occasions?—On several occasions,

14. How is that?—I am only the executive officer, and all I have to do is to requisition. I am instructed from headquarters that so-many men will arrive on a certain day. I requisition for the clothing and equipment and everything necessary for those men.

15. Begin with March. You were notified on the 12th March of the stationary hospital, and on the 18th March the men came in. Was there any difficulty with regard to their boots?—Not their first issue.

16. Did you requisition as soon as you got the number, in each case?—Yes, unless I had the supply in stock. If it was a small number of men I invariably had the boots in stock.

17. Take the material number we have—the 2,200 men: you were notified on the 19th April?—Yes.

18. And they came in on the 29th May?—Yes.

19. Six weeks after; yet you had not the boots for the second issue?—No. We had the boots for the first issue, within a few pairs of odd sizes.

20. How was it you did not have the second issue?—Because they were not delivered to me from the town stores.

21. On what date did you requisition for those boots?—I could not say exactly from memory. It would be some time in the vicinity of the date when I received intimation that the men were coming in.

22. Have you got a letter?—I can produce the requisitions.

23. I should like the requisition for these 2,200?—Very well, sir.

24. You might also send the requisition, or a copy of it, with regard to the 464 men who came in on the 18th April. You had only four days' notice there. But on the 29th May there were the 2,200. You might send us a copy of the requisition, so that we can find out how it was you did not get these boots?—Very good, sir.

25. Now, can you tell us when you did get these boots? You were short for the 464, I suppose?—Yes, but not for the first issue.

26. I mean for the second issue?—Oh, yes.

27. I want to know when you got the second lot?—I got the balance for the 2,200 men on the morning of the 8th July. I at once returned them to Wellington so that they would be forwarded on to the camp to which the troops were going.

28. Tell us when you received the different lots. I suppose you would receive some before?—Yes. I have the requisitons dealing with them.

29. The Stores Department here could give us the dates, could they not?—Yes.

30. Who is the man?—Major O'Sullivan, Q.M.G. 3.

31. Passing from boots, were there any other materials that you did not receive in time to be served out?—Yes. In connection with the 2,200 men who arrived on the 29th May, when they arrived it was a Sunday, and the blankets had not come to hand, and I had to get those up from town. We got over the difficulty by obtaining blankets from town. That was an error on somebody's part.

32. Had you requisitioned for these blankets?—Yes.

33. *Mr. Ferguson.*] Some weeks before?—Yes.

34. Five or six weeks before?—Some time in the vicinity of the date when I received word that the men were coming.

35. *The Chairman.*] When did the blankets come?—I got some on the Sunday and the balance on the following morning: that would be on the 30th May.

36. Anything else?—I do not think anything else was short for the first issue.

37. It is the business of some one at the camp to see that every man does get his complete lot, is it not?—It is my business.

38. If a man does not he comes to you?—Yes, he complains to me through his company or platoon commander.

39. Are those complaints made in writing by the company commander?—No; he generally comes along and tells me that So-and-so has not got his equipment.

40. The main defect, then, as regards material has been with respect to the second supply of boots?—Yes.

41. You attend to the sanitation. With regard to sewerage, we will say, how does that operate—satisfactorily?—Not at present.

42. What are the defects that you consider exist? State as candidly as you like, because we want to get at the bottom of things?—The first defect noticeable by me in the present system was with regard to the latrines and different places connected with the sewerage. The men walking over these places brought mud and earth on to the concrete beds. This was washed down into the traps, and following along the pipes came to the manholes. The result was that from the bottom of the manholes you could bring up shovelful after shovelful of earth. Then the water went through the manholes, one of which contained a cage, and in this cage all the grease and solids which had escaped the different traps on the way down was caught. But beyond this again is another manhole, and that again has contained—every day we have cleaned it out—a certain amount of grease which had not been caught by the previous cage, and also some silt. The water ran then from the last manhole into the soak-pit. The soak-pit was not able to carry the soakage. That, of course, was something that no one could foresee. The result was that the soak-pit filled up and the water backed up in the drain, and I had to open fresh soak-pits leading off the second manhole from the present soak-pit.

43. When did that occur?—Somewhere about the end of June or the beginning of July—after the three thousand men were placed on the sewerage.

44. It was that extra number of men coming in that showed the system to be inadequate?—Of course, as far as the soakage in the soak-pit is concerned, I do not think any man could foretell

the exact amount of soakage there would be in that ground. Provision was made for taking the drainage off the manhole by letting in leads and making fresh soak-pits, which we are doing now. Then there is the question of grease-traps beside the cookhouses. Grease-traps were not put in beside the cookhouse. The water from the cookhouse really should go through a grease-trap, but this should be sufficiently far away from the cookhouse to allow the water to cool prior to the grease running into the trap. It should be cool enough to allow the grease to form a solid, so that it will be caught in the trap.

45. There are none?—I think they put one in, or were in process of putting them in, when the camp broke up. I think there is one in.

46. *Mr. Ferguson.*] On whose advice was that put in?—I do not know. I complained about the thing.

47. To whom?—To the Commandant, verbally. I think I spoke to Mr. Scott, or Mr. Mackay, if I remember aright. He was the man who was in charge of the drains. I do not know who it was, to tell you the truth.

48. *The Chairman.*] With regard to drainage and sewage, have you other observations?—Yes, I have, sir. In my opinion, as a layman, each row of huts or row of cookhouses should have its own soakage, apart from anything else: that is to say, the drains from those places should be laid to one soak-pit.

49. *Mr. Ferguson.*] What is your reason for that?—With the quantity of water which is at present going into that area of country to be soaked away, it is only a matter of time when the strata will not be able to absorb any more. Soakage will be prevented owing to the quantity of grease and soap going into the pits and collecting round the sides.

50. *The Chairman.*] What further criticism do you offer? What did you observe that you thought should be remedied?—In connection with drainage, the only other thing is that a trap or a manhole or something should be placed immediately adjacent to the latrines to prevent the silt—sand or earth—after it has been washed down off the concrete going right through the drain. Something should be put there to hold this.

51. *Mr. Ferguson.*] Are you satisfied about the arrangement of the urinals: first of all, as to daytime?—We combine urinals with latrines.

52. I know, but the liquid from your urinal runs away from your sewage system?—Only one at present, and the one that is being constructed will presently.

53. And the others?—They go into the soak-pits which were constructed last November, and have acted admirably.

54. How far are these soak-pits from the living lines?—I should say, from 40 to 50 yards.

55. There has been no smell from them?—No.

56. How deep are those soak-pits?—14 ft. deep by 8 ft. square.

57. And they take the drainage from how many—I refer to the urinals only?—Roughly, one thousand six hundred men.

58. What do you find with regard to the soil: is it gravel all the way down?—Gravel all the way.

59. Any clay?—The subsoil is of clay, but it varies in different parts of the ground. In some parts it is 6 in.; in others 5 ft. 6 in. I never saw it below 5 ft. 6 in. I refer to the surface clay.

60. Below that is there good gravel all the way?—Splendid. It is porous material.

61. Much water in it?—No.

62. Quite dry the whole 14 ft. down?—I have soak-pits in use at present which have been in use since the 19th October last. They are still used and are sweet.

63. Have they been opened up from time to time to see the condition?—You can see them. I have a lid over the top to allow of a free circulation of air.

64. They are ventilated by means of manuka?—Manuka fascines placed across the top.

65. And from time to time you inspect them?—Yes; and the manuka is taken away and burned and replaced—on an average about once a month.

66. Do you find much mud in them?—Yes, a certain quantity of silt and fat collects.

67. When you take the manuka out you take it away and burn it?—Yes.

68. In your opinion there could be no better system than that: it has been perfectly satisfactory?—It has been perfectly satisfactory.

69. Now, about the night urinals: what is the system at night?—The system at night has been a system of tubs placed in the lines beside the tents—now, of course, at the ends of the huts. A row of earth is taken out and a quantity of stones put in, and the tub is placed on them. In the morning the tub is taken away and emptied, and the tub refilled with water and kerosene. The place between the tubs is disinfected every night with creasote, and then the formalin spray is used later on in the day. The position of the tubs is shifted. They are not kept in the one spot.

70. How many were there—one to each two tents?—One to each three tents—one for twenty-four men, roughly. These tubs were ordinary oil-drums.

71. Now, you have one at each end of a hut?—There are two in between each two huts.

72. That is one at each end of each hut?—Yes.

73. What distance is it between the huts?—Approximately, 10 ft. or 12 ft.

74. *Dr. Martin.*] Do you remember when the Trentham Regiment arrived?—Yes.

75. You were notified on the 19th April that it was about to arrive?—Yes.

76. You knew the number of men who were coming?—Yes.

77. Did you apply for boots and blankets?—Yes.

78. At what date did you apply?—I cannot say from memory. I can send you the requisition.

79. Supposing that you got a notification to-day, when would you apply?—It would be probably within a day or two at the outside. But apart from my requisitioning altogether, a system

was devised by the Chief of the General Staff whereby a schedule was drawn up showing the number of men coming in, the equipment required, and the date the equipment has to be with me. The Q.M.G. 3 gets a copy.

80. Without your communicating at all with the Q.M.G.?—He has that information.

81. Therefore the two of you know?—Yes.

82. In addition to that you send in a requisition?—In addition to the memorandum that he has.

83. Roughly, you would send the requisition a few days after?—Yes.

84. This is the regiment that became very ill?—Yes, the second battalion of that regiment.

85. You knew on the 19th April that they were coming in?—Yes.

86. You made a requisition a few days after for blankets, waterproof sheets, boots, and other things?—Yes.

87. And on the 29th May that battalion entered camp?—A portion.

88. Can you tell me when the blankets did arrive for these men?—I had a certain number there, but some came out on the Sunday by motor-lorry, and the balance on the Monday morning. No man had to sleep overnight without blankets.

89. How many days after the arrival of the battalion was it when the blankets came in?—On Sunday, the 29th, a portion of the men arrived, principally from the South Island. When I came to equip those men I found that a certain number of blankets had not arrived to enable me to complete doing so. I at once rang up town and got the blankets, or a proportion. What I did not have I had to get otherwise; but no man slept without blankets. Then on Monday morning the balance of the blankets due to me came from town.

90. Had all these men waterproof sheets?—Yes, every man.

91. You had considerable delay in getting the boots?—Yes.

92. There was no delay in getting the first issue?—There may have been in one or two sizes.

93. Do you know why there was delay in getting the second lot of boots?—No; I had nothing to do with the tenders.

94. You say all the men had blankets?—Yes.

95. How many blankets?—Three.

96. And a waterproof sheet?—Yes.

97. Every man on arrival got a waterproof sheet?—Yes.

98. You had no complaint at all?—I had no complaint from the Trentham Regiment about the blankets.

99. Every man who arrived got his three blankets and a waterproof sheet?—I would not swear that every man got three blankets. There may have been one or two who got two. But every man got his waterproof sheet and, as far as I know, three blankets.

100. There were no complaints?—No.

101. With regard to sewerage, I understand you are not satisfied with the sewerage arrangements at the camp?—I am satisfied that a lot of improvements can be made.

102. To whom did you suggest these improvements: did you make any suggestion to anybody?—No; I have no authority to make suggestions. I am never consulted about anything of that kind.

103. But you are in charge of the sanitation?—I am simply given a job to do, and the Medical Officer is the man I look to.

104. You are in charge of the sanitation?—Yes.

105. And you say there are certain things you are not satisfied with: you drew somebody's attention to them?—Yes.

106. Whom did you notify?—I did not notify any one in writing.

107. Whom do you notify about these things? That is your duty. Anything wrong you have to report to somebody?—I have to report if there are errors which I cannot correct.

108. In any case you would report?—No. If there is anything gone wrong which I cannot rectify myself, and is beyond my jurisdiction, I must at once report. If anything happens that I can correct, I do so and say nothing more about it.

109. If you see anything at all wrong in the drainage system you are bound to report that: is that not so?—I mentioned it to the Medical Officer.

110. To whom have you reported?—I mentioned it to the Medical Officer.

111. Can you tell me his name?—There was a different one every day.

112. I want to know about this?—I could not tell you. I have mentioned that matter to dozens.

113. You have reported these things to the Orderly Medical Officer?—I have spoken about them to the Medical Officer, and I spoke to Mr. Scott about the drainage, and to Mr. Morton about the drainage. I spoke to dozens about it, but I never sent in a written report.

114. *The Chairman.*] You mean about the defects which you have described?—Yes. The principal defect, in my opinion, was about the overflow. As a matter of fact I did report the overflow to the Commandant verbally, because I had to get the men then to open up the new pits.

115. *Dr. Martin.*] You noticed some defects in the drainage system, and you say you reported them to the Medical Officer: what Medical Officer?—I could not say. I spoke to Dr. Finch about the matter, and to several.

116. What was his position in the camp?—He came there as Health Officer, I think—or something.

117. You also reported to the Orderly Medical Officer of the day?—Yes, not officially. I spoke about the matter.

118. It is official?—If the Medical Officer is going round and I am with him I say, "There is such-and-such wrong there."

119. You have not put anything in writing?—No.

120. You have not communicated with the Principal Medical Officer?—I have spoken to Dr. Finch and Colonel Morice about this drainage. Colonel Morice has been there only a fortnight; but the defects were only found out when the extra men came in.

121. You have never officially reported any defect?—No, not in writing.

122. But you admit having seen defects?—Yes, I see them now. I reported verbally first of all that soakage was not taking place in the soak-pit, and that the water was backing up in the drains. I spoke verbally about that to Dr. Finch, Colonel Morice, and several others. They were sent there to take charge of that, and, as a matter of fact, they practically took it out of my hands. They had a man walking round all day looking at it. The matter is practically taken out of my hands.

123. *The Chairman.*] Now?—And was at the time of which I speak.

124. How long ago is that—before the camp broke up?—Yes; I should say a week or so before the camp broke up.

125. *Dr. Martin.*] You inspect the drainage system daily?—No, but I see that others do it.

126. How do you carry out your inspection?—I visit every part of the camp at some period of the day.

127. The latrines?—Yes.

128. And the urinals?—Yes.

129. And the cookhouses?—Yes.

130. Can you give me the date when you first noticed defects in the sanitation?—Not offhand. About the time Dr. Finch arrived—a little before.

131. *The Chairman.*] Can you get us the date?—I can find out the date when Dr. Finch arrived.

132. *Mr. Ferguson.*] Have you a sufficient staff? I know you are rushed when the men come into camp, but ordinarily have you a sufficient staff?—Yes.

133. No complaint to make against your staff at all?—No.

134. No requisition that you have made for assistance has ever been refused?—No.

135. *Dr. Martin.*] Up to the arrival of Dr. Finch you were the only officer who inspected the sanitary arrangements?—No, the Medical Officer did.

136. The Orderly Medical Officer or the Principal Medical Officer?—Both, as far as I am aware.

137. Did you ever inspect the drainage system with the Orderly Medical Officer during the day?—Yes.

138. You have gone on sanitary rounds with him, have you?—No; I did not go with either of them. I sent the quartermaster-sergeant.

139. Did you ever receive any instructions from the Medical Officer to alter the system of drainage or sanitation?—No.

140. Up till the arrival of Dr. Finch everything went well?—It was just about that time that the defect arose. It was the moment the extra men came on the sewerage system.

141. I am referring to the sanitation of the camp in general from the time you took it over. I want to know all about the complaints you have received and any defects you have noticed during the whole time—not in reference only to the sewerage?—That is another matter. I will give you an outline of the sanitation in October last. We started them with the ordinary soak-pits for soakage, with trenches for latrines and pits for ordinary washing purposes, and open drains filled with manuka, and soak-pits for wash-up places, these being attached to each cookhouse. That was, roughly, the domestic arrangement. The soak-pits have proved in every case a success. The soak-pits in connection with the cookhouses have been closed and renewed from time to time. With the exception probably of something gone wrong in the cookhouses, dirt or something accumulating about the lines, or a soak-pit needing removal, no one has complained about that part of the camp's sanitation.

142. There were no complaints, then, about the sanitation up till the time Dr. Finch took over?—I am not making a complaint about the sanitation when Dr. Finch took over. When this system of sewerage was in operation about 3,500 men were thrown on to it. All the wash from the cookhouse and one urinal—everything went down this particular sewer and went down to the soak-pit.

143. *The Chairman.*] The substance is that the sewerage system was constructed really only for about 4,000 men, and 7,500 came on to it?—No——

144. The extra quantity of fluid that went into the sewerage, as I understand, was too much for the pits?—Too much for the scheme that was originally designed.

145. It was not adequate to the requirements of 7,000 men?—No; it was not adequate for the 3,500 men who were on it. On the 29th May the 2,200 men started to come in. As the Public Works Department finished the huts I removed from tents to huts the Mounted Rifles, the Sixth Reinforcements, the Seventh Reinforcements, and then two hundred extra men to make up different units. That was, roughly, ten squadrons of mounted men extra placed on these drains, and they all came on as the huts were being finished. Everything happened from the 29th May. I am not saying the system is defective at present. All I am saying is that improvements can be made in it. On visiting the drainage one afternoon I noticed that water which was showing underneath a couple of stones had risen up. I went back to the manhole and found that the water was backing up. Then Mr. Scott came out and I spoke to him about it, and then to Mr. Mackay and to the Camp Commandant, telling them that there was not sufficient soakage.

146. *Mr. Ferguson.*] Let me put it in a nutshell, in this way: when the camp first started there were small units; each unit had its own soak-pit and its own surface drainage to that soak-pit?—Yes.

147. That was successful. When they commenced to build the hutments they put down a more elaborate system of drainage, which was to do for the whole of the hutments?—Yes.

148. But in connection with that system, in your opinion the soak-pit they put down was not sufficiently large, the result being that it soon got choked with grease and other matter, and the fluid backed up through the system?—Yes.

149. As soon as you discovered this you drew the attention of the Medical Officer, Dr. Finch, and of the Commandant to it?—Yes.

150. And in your opinion, as I follow it, had a different system been adopted and a number of small soak-pits been constructed, with less length of drains and suitable intercepting pits, it would have been more satisfactory?—Much more: that is to say, if each row of huts, as you see them on the plan, was connected with its own soak-pit, we should have better soakage.

151. Did the Principal Medical Officer ever inspect with you or with your sergeant the old soak-pits and the old system of drainage—say, in October or November?—During the construction of those soak-pits in October the Director of Medical Services came out and had a look at what I was doing. Then the senior Medical Officer in camp also was going round continuously. Right up till about the end of February or March I used to do the daily round, but I found it took too much time, and I had to give it best and get the quartermaster-sergeant to do it.

152. Up till that time did the sanitation officer go round with you, inspecting the soak-pits with you?—Yes; he used to pull the manuka aside and inspect the soak-pits.

153. So that up to the time that you personally gave up going round they were inspected by the Medical Officer as well as yourself?—Yes.

154. Since that time you cannot speak personally?—No, only from the reports I got from the quartermaster-sergeant.

155. *Dr. Martin.*] Up till a fortnight ago you were in charge of the sanitation of the camp: you are responsible for it?—No, the Medical Officer is responsible. I am at all times bound down by the Medical Officer's opinion.

156. You are responsible for the clothing and feeding of the men and the sanitation of the camp?—So far as the sanitation affects the military point of view.

157. You are responsible——?—For the cleanliness of the camp. Beyond that I do not go. The Medical Officer steps in there.

158. Are you still in charge of the sanitation?—No. I am still in charge of the cleanliness of the camp.

159. You have been advised, then, that you are not in charge of the sanitation?—No, I have not. I am in charge of the sanitation of the camp so far as the cleanliness of the latrines and the cookhouses and everything else is concerned. But as for looking after the drains and such things, I do not know who the person is. Since Dr. Finch came they have a man who goes round at all hours of the day.

160. What is his name?—I do not know.

161. You are in charge of the sanitation of the camp just now?—Yes.

162. You daily inspect the latrines?—Yes, every day.

163. The cookhouses?—Yes.

164. And the lines?—I do not inspect all the lines personally every day.

165. You go round the whole camp at least twice a week?—Yes. I visit pretty well the whole of it twice a week; but I make a point every day of going to some particular part of the camp.

166. Every latrine in the camp is inspected?—Yes, daily; and I personally see that the seats are cleaned every day and scrubbed. The latrines I attend to every day without fail. Other parts of the camp I do not inspect every day.

167. *Mr. Gray.*] Did you say that things went on all right up to the 29th May?—Yes, that is when our trouble seems to have started.

168. Do you know when the sewerage system was completed?—Some of it was in working-order then, complete.

169. Can you tell us when it was first used?—On the 29th May.

170. Had you any hand in the designing of this system?—No, I was not asked a question about it.

171. When anything has come under your notice that seemed to require improvement, about sanitation or sewerage, have you mentioned it—if not in writing, verbally—to the Principal Medical Officer or the Medical Officer of the day?—I mentioned it verbally in the case of that soak-pit being blocked up. I mentioned that to Dr. Finch, Colonel Morice, and others.

172. And that was all?—I got to work on it myself.

173. In respect of any other matter—sewerage or otherwise—have you reported any defect?—I mentioned the defect of the grease-traps to Dr. Finch or Dr. Morice, and I mentioned the matter of the silt and one or two other things.

174. Have any of your recommendations or suggestions been adopted?—There is the one in connection with the cookhouses. I am afraid they are too close.

175. You have mentioned what you consider a defect to the Medical Officer?—Yes.

176. You tell us that it is impossible for you to go round and accompany the Medical Officer on his round every day?—Absolutely impossible.

177. You always see that some responsible officer accompanies him?—Yes.

178. And you get a report from that officer?—Yes.

179. You have said that you have a sufficient staff. Is it efficient as well as sufficient?—Yes.

180. A capable staff?—Yes.

181. You have no complaint to make about the way in which they do their duties?—No.

182. *Mr. Salmond.*] You are responsible for the equipment of the troops that come into camp, and for their feeding?—Yes, for the food after it is issued by the Supply Officer.

183. As to the equipment, has the clothing always been sufficient in quantity, excepting the boots?—Otherwise than as regards the boots, yes.

184. Absolutely sufficient?—Yes.

185. Is it satisfactory in quality? What about the boots?—The boots now are satisfactory.

186. Were they not so before?—In the early stages of the camp, no.

187. What was wrong with them?—The boot in material was all right, but it was faulty in construction. The inside lining, for instance, used to come down, or curl up under the men's toes and cause sore feet. It was badly constructed.

188. Were they reasonably watertight?—Reasonably watertight, yes.

189. Was a change afterwards made in the construction of the boot?—Yes. The boot was made wider and more like military boots—wider in the toe, and the instep was made larger, and the boot was generally constructed better than before.

190. Who had charge of that department?—The Stores Department.

191. Did you complain of the quality of the boots?—Yes, I think I did.

192. Were complaints made to you by the men?—Yes; and the boot was altered.

193. On what date was that?—I do not remember the date—some time during the month of November, it would be; in connection with the First Reinforcements.

194. The First Reinforcements got the defective boots?—Yes.

195. And all the others since got the new class of boots?—Yes, they are much better.

196. As to the uniforms, was there anything wrong with them?—Well, in several respects the uniforms have not been built as they should have been. For instance, there were uniforms 35 in. in the chest and 18 in. in the collar: that is like putting a draught horse's collar on a Shetland pony.

197. *The Chairman.*] It was not made proportionately?—That is so.

198. *Mr. Salmond.*] Whose fault would that be?—The maker's.

199. Were any of the uniforms returned?—Yes, sir.

200. In large numbers?—I had 500 returned from the Trentham Regiment. The trousers were splendid and of good material, but the jackets were badly cut and badly finished. Uniforms were passed which could not be issued: a man would find, for instance, that the lining in the sleeve was sewn across so that he could not get his arm through.

201. Did I understand you to say that 500 uniforms issued from the Stores Department were returned?—They were returned to me from the officer commanding the Trentham Regiment because the top part of the coat and the collar were badly cut. I sent them back to the store. The trousers were good and there was no necessity to return them, but they were returned to me because the officer commanding the regiment wanted the jacket and trousers of the same make.

202. Did he get them?—The majority of those uniforms came back and were reissued to the unit.

203. Was the material in every case right?—There was a variety of materials. Yes, they were all right. The only big complaint was as regards the riding-breeches, which did not wear as they should: that is to say, one did not get the life out of them that you would expect.

204. Was the underclothing supplied good in quality?—Yes.

205. No complaint about that?—That is so.

206. Blankets and bedding, were they all right?—It was only one portion of the bedding that we issued—the blankets, and, of course, the straw.

207. What about the mattresses?—They were never issued until recently. Only last Wednesday evening I received a wire instructing me that the free issue of mattresses was authorized.

208. *The Chairman.*] For the huts?—For putting the straw into and sleeping on.

209. Then in the tents and huts there were no mattresses?—Yes, there were, but only what the men procured themselves; none were issued by us.

210. You supplied the straw and the men provided the covering?—Yes.

211. *Mr. Salmond.*] So that unless the men bought the coverings they would have to sleep on the boarded floors of the tents with straw supplied by you?—Yes.

212. Were mattresses freely bought?—Yes, 99 per cent. of the men had them.

213. What did they cost?—From 1s. 9d. to 2s. retail.

214. Is it usual to provide the men with straw to sleep on and expect them to provide the mattresses?—In camps, yes.

215. In permanent camps like this one?—Mattresses have never been issued that I know of at the regular camps here.

216. But what is the longest time that the soldiers were in those camps?—During the last ten years in New Zealand, I think about fourteen days.

217. But these men are in camp for four months?—Yes, and some of them longer.

218. Would it not be a reasonable thing to supply them with bedding complete as well as blankets?—Yes, quite reasonable.

219. *The Chairman.*] The point is that there was an alteration made in the rule, and that the men need not now pay for these mattresses themselves?—That is so: we issue them.

220. When a new draft of troops came into camp they were supplied with blankets, and did you also give them a bundle of straw each?—No; they get 80 lb. of straw for eight men in one tent. Each man takes his bundle of straw and makes his bed with it.

221. *Mr. Salmond.*] Now, as to the food supplied, has it in your opinion always been sufficient in quantity?—Yes.

222. And in quality?—Yes.

223. Have any complaints been made, to your knowledge, by the troops?—Yes, complaints have been made by the troops. Once or twice they wanted more fresh vegetables. They get them when we can procure them.

224. There is a dietary?—Yes.

225. Does it include vegetables?—Whenever we can obtain them. It says potatoes also.

226. Cabbages are only supplied as you can get them?—That is so.

227. But you can always get them?—No. Lieutenant Petty will explain that.

228. Then you are satisfied that in all respects the troops are sufficiently supplied with good food?—Yes; as a matter of fact, I have been compelled to reduce the supply of butter and jam because of the wilful waste that was going on. I make an occasional descent upon the cookhouses, and the last time I did so I found—it was in the early part of last month—I found three-quarters of a carbide-tin full of butter thrown away. I then reduced the supply per man.

229. How do the men get their meals: do they go for them to the cookhouse?—Yes; each tent consists of eight men, and two of those are appointed mess orderlies. They parade and get the food from the cookhouse, bring it to the tents, and divide it up amongst the men. After the meal is finished they gather up the scraps and wash up.

230. Whatever they do not use is thrown away?—No. Each platoon has a store in which they keep their surplus food. After each meal the unused food is brought back and placed in boxes in this store.

231. Then they do not get all their food from the cookhouse?—No; their dry rations are issued and stored in the food-tent at the end of the lines.

232. *The Chairman.*] Do you know of the complaints about the tea?—Yes, I have had occasional complaints about the tea, but it is not the tea itself which causes the complaints. I investigated the complaints, and found it originated from the cooker in use. They are boilers on either side of the fireplace. When you draw off the water from the boilers there is always about 3 in. left in the bottom, because you cannot empty the boiler of all the water.

233. The defect in the tea was due, then, to the fact that the tap was too high above the bottom of the boiler?—Yes, sir; there is always a certain amount of water left.

234. Has the defect been remedied?—I have sent a memorandum to the Chief of Staff about it.

235. It has been stated that the tea was very nasty?—Yes. We thought of boiling the water outside, but in wet weather you could not boil sufficient outside.

236. *Mr. Ferguson.*] Is the tea placed in those boilers?—No; but the water is drawn from them to make the tea. They are 20-gallon boilers.

237. *Mr. Salmond.*] Who attends to the cooking of the food?—I supervise all that, but the company cooks attend to it.

238. Are these company cooks soldiers?—Yes.

239. I understand that you have one civilian cook and the others are soldiers?—Yes.

240. You are satisfied with their efficiency?—Yes.

241. Going back for a moment to the question of equipment, when a new draft comes into camp they have to get their equipment at once: is it a fact that sometimes they have been kept late at night waiting for their equipment?—Yes. On one occasion I received 1,757 men in one day. I did not get a start on them until 11 a.m., and by the time they were fitted out it was very late. We can fit out about a hundred an hour. If I found I could not get through them all that night I would issue blankets in bulk, and complete the issue of their equipment next morning.

242. What is the latest time that men have been kept waiting for their equipment?—About 9.30 or 10 p.m. But I have had men coming in at 3 a.m.

243. Did they come into camp at 3 in the morning?—Yes.

244. Where did they come from?—There was one batch came down from Gisborne: they came down by way of Woodville with horses.

245. Have there been any cases where men have arrived in camp, say, in the evening, and have had to wait until 2 a.m. for blankets?—No.

246. Well, till 12 o'clock at night?—No; I think perhaps 10 p.m., apart from those men who were delayed on the line and did not get into camp till early morning.

247. But when it has been necessary you supply them with blankets in bulk, leaving the issue of the rest of the equipment till next day?—Yes.

248. *Mr. Gray.*] You went into the camp in October, I understand?—Yes.

249. Did you erect any buildings before the Public Works Department?—Yes.

250. With your own staff?—Yes.

251. You have carpenters?—Yes.

252. Who installed the water-supply?—It was done under my supervision.

253. You had plumbers there?—Yes.

254. And when the Public Works Department took in hand the erection of the huts did you assist them?—Yes, we worked with them.

255. Did you provide them with some men?—Yes.

256. For what purpose?—First of all, Mr. Scott, who had charge of the plumbing, came to me and said he could not get plumbers. I got them, and had the water laid on for them. We also lent them plasterers and bricklayers.

257. You had a staff of your own?—Yes.

258. And you lent them?—Yes, we did everything we could to help the Public Works Department in the work

259. *The Chairman.*] In connection with the case of a man who takes sick in camp, how does the news of that sickness reach the proper quarter?—The orderly-sergeant makes out the sick-report for the Medical Officer.

260. Do I understand that each morning the orderly-corporal goes round the tents of his company, and if any man is sick in a tent it is the duty of the orderly-corporal to report that to the orderly-sergeant?—Yes. The man reports himself sick to the orderly-corporal, who gives that information to the company orderly-sergeant. Then the orderly-sergeant makes out the sick-report for the Medical Officer.

261. Have there been complaints about sick men being left in their tents?—No.

262. Have you heard of any such complaints?—From the newspapers only.

263. What is the duty of the Medical Officer then?—The sick men are marched to the hospital by the orderly-corporal, or to the inspection-room. They are there inspected by the Medical Officer. Then he marks on the sick-report whether the man is to get light duty or go into hospital. If there is a man in the lines unable to walk to the hospital or inspection-room he is taken on a stretcher. If a man falls sick either day or night the line orderly would see him, and want to know what was wrong with him.

264. The line orderly would report any one who is lying in a tent?—Yes, the line orderly.

265. *Mr. Salmond.*] If a man is unable to walk down on the sick-parade he would be carried down?—Yes, on a stretcher.

266. And no inquiry is made as to whether he can be exposed to the weather or not?—That is so.

267. You think few men are so ill that they cannot walk on the first day that they are sick?—That is so.

268. Is it not a fact that a man might be seriously ill and be carried down at 8 o'clock on a cold morning?—In my opinion that man would be suffering a few days before.

269. *The Chairman.*] You said you had seen statements in the papers that men had been left lying in the tents neglected?—Yes.

270. Can you recall what those statements were in a more specific way?—No.

271. But you did read such accounts?—Occasionally.

272. You have read them?—Yes.

273. What comment have you to make upon them?—There are some of the statements which I have seen in the papers that are quite true.

274. Were these statements true?—No, not about sick men lying in the tents. The only men I have seen are men who have been given light duty, or something of that kind: that is to say, he would not have to go on parade or do any work—he would just have to knock about the camp for a day or two. Such men might be lying down in tents. But I would never pass a tent with a man in it unless I inquired what was wrong with him. But to say that there were sick men lying round in the tents is quite wrong.

Lieutenant PHILIP NEWMAN PETTY sworn and examined. (No. 5.)

1. *The Chairman.*] What are you?—I am Supply and Transport Officer at Trentham Camp. I am a lieutenant in the New Zealand Army Service Corps (Imperial warrant officer), attached to the New Zealand Forces.

2. What are your particular functions at the camp?—To distribute the supply of food, forage, fuel, and light, and attend to cartage of same.

3. To supply forage, food, fuel, and light?—Yes, and attend to all the carting.

4. Have you been at the camp since October?—Yes, since the 9th October.

5. We understand that you can give us information on the subject of the food. what do you do, exactly, in regard to the food?—The contracts are made by the Headquarters, Defence Department, on special forms, and for a certain period, and the food is brought by rail or by road to me at Trentham. I take it over and keep account of it, see that it is up to sample, and issue it to the various units in bulk—say, a day's rations for one unit at a time, or four days' groceries perhaps at a time, and bread, meat, milk, and vegetables daily. They have, of course, to divide it up between the companies, &c.

6. As regards the quality of the food supplied, have you any comment to make?—No, sir; it is very good indeed—splendid meat, and splendid bread, too.

7. And butter and milk?—Yes.

8. Do complaints come to you if fault is found with any of these things?—Yes, they come to me very often; generally they go to Captain McCristell first, but sometimes direct to me.

9. What has been the nature of the complaints?—It has been generally that somebody has been short through a mistake in the issue of stores by the unit. I have always done my best to remedy it in every way.

10. Have you had complaints about the quality of the food?—Once, I think, about the quality of the butter, or, at least, the condition in which the butter was received. One of the firms supplying it ran out of their own wrappers, and used wrappers intended for other butter. A little pink colouring came out of the wrapper on to the butter at the top, and the men thought they were going to be killed if they ate it.

11. That was remedied at once?—Yes.

12. You have heard what was said in the course of the examination of the previous witness about the tea?—Yes.

13. Have you anything to add?—There has been no cause for complaint in the quality of it, sir. Of course, New-Zealanders are very, very fond of strong tea. I think they make it too strong.

14. Did they think it was not strong enough?—I have not heard of that, but they like it very, very strong, and with a tremendous amount of sugar in it.

15. *Mr. Ferguson.*] The sugar is boiled with it, and if a man does not take sugar he cannot have his tea without it?—Sugar is not boiled with the tea—merely put into all tea when made and prior to issue for drinking.

16. *The Chairman.*] But you think that is a very exceptional kind of man who does not take sugar?—Yes.

17. In regard to the vegetables, do you forage for them?—Yes, sir. I think you should be supplied with the scale.

18. Well, we have that in the Army book?—But the scale here is different from that in the book.

19. Well, give us the scale here?—Bread, 1¼ lb.; flour, 1 oz. a day (that is for thickening soups, and so on); fresh meat, 1½ lb.; cheese, 2 oz.; coffee, ½ oz. (in the British scale there is no coffee provided); pepper, $\frac{1}{32}$ oz.; salt, ½ oz.; sugar, 4 oz.; tea, ¾ oz. (the British scale is ⅝ oz.); potatoes, 1 lb. (when there is fresh vegetables and new potatoes we cut it down to ¾ lb., because it is only wasted—if they want more potatoes they can get them); jam, 3 oz.; butter, 3 oz. (I cannot say if they are supplying that at the front: in the South African war there was no butter issued, and in the field-service book it is not provided); coal, 2 cwt. for cooker per diem; oatmeal, 2 oz. per man; onions, ¼ lb.; wood (to keep outside fires going), 2 lb.; candles, one per tent, or 2 lb. per hut (the electric light is not going yet); soap (this is only for washing in cookhouses), 1½ lb.

20. What do the men get in the way of soap?—They buy their own. If they want more for cleaning articles or in the cookhouses they can get it. Milk, ½ pint per man per diem, or one-eighth of a tin of condensed milk; rice, 2 oz. per man per week (there is just one issue of rice per week); currants, 1 oz. per week. Then there is the forage for the horses, and also fresh vegetables for the men.

21. The supply of vegetables is irregular: what provision is there for getting them?—Practically I attend to that on my own authority—the obtaining of fresh vegetables. There is nothing laid down in the scale.

22. You would require to buy at several markets in order to supply all these men?—A man named Kells, at Taita, offered to supply me at market rates with fresh vegetables straight from his gardens. When the full number of men were in camp we used to take from him up to 120 sacks of cabbages per week—that is, forty sacks three times a week.

23. What weight in a sack?—There would be about two dozen in a sack. It runs about ninety-six men to a sack of cabbages. I used also to get from him half a ton of carrots about once a week, and half a ton of parsnips: that was for stew.

24. And was this supply of vegetables regular up to the time of the breaking-up of the camp?—Yes, regularly three times a week; in fact, he is doing so now.

25. And were the vegetables of good quality?—Splendid quality, sir.

26. Have there not been complaints as to lack of vegetables?—Well, sir, if there has it has not been the fault of the supply.

27. Do you know of any complaint about the lack of vegetables?—I have heard men talking about it, but, of course, if they cooked enough for the whole lot in one day they would not be able to make tea for them. Some of the men would complain if they saw another man having cabbages and he got none.

28. It is because you have to give the cabbage alternately that complaints were made?—Yes; we issue it in bulk to the cookhouses, and they cook it to the best of their facilities.

29. You really want almost a separate cooker for vegetables?—Yes; it is mostly done in the trenches outside, and if you get a wet day it is almost impossible to do anything.

30. A cooker for the vegetables would be an advantage?—Yes, sir. Of course, they cook potatoes and onions every day. There is a scale laid down in the Home Regulations for active service—½ lb. of fresh vegetables per day, or 2 oz. of dry: that includes potatoes and onions and other vegetables.

31. Are there any suggestions that you would like to make by way of improving the organization of the stores and the supply of food?—No, sir, I do not know of any.

32. If you got a cooker for cooking vegetables you would be better off?—But I would like to point out to the Commission that that is out of my province entirely. I am speaking on this point as an ordinary civilian.

33. *Mr. Salmond.*] You said that if the troops were supplied with cabbage every day they could not get any tea: will you explain what you meant by that statement?—Yes. In a cookhouse they are usually cooking for two thousand men. If you came to cook cabbages, potatoes, onions, tea, and joints for that number the space required would be tremendous.

34. Do they boil the cabbage in the same copper as that in which the water for the tea is boiled?—Not to my knowledge.

35. You do not mean to imply that?—No.

36. Can you say whether every man gets green vegetables at least once a week?—Well, if he does not I do not know where it goes to.

37. How many sacks a week do you get?—One hundred and twenty.

38. How many men does each sack supply?—Roughly, ninety-six. I have never really worked it out, but that is what I think it comes to about.

39. In your opinion there is enough obtained to give the men fresh vegetables at least once a week?—More than once a week—at least twice.

40. And if they do not get it it is their own fault?—That is so.

41. Have you ever heard of any suggestion that vegetables have been sent into the camp with fruit as gifts, and are not cooked or used?—I have heard such a suggestion.

42. Is there any basis for it?—Not that I know of.

43. You do not suspect that the cooks may leave vegetables undressed and uncooked to save trouble?—They might do so, but as far as I know the vegetables all get used up.

44. You have never seen any accumulation of fruit and vegetables lying about—that is to say, wasted?—No, but sometimes a fatigue party is told off to peel potatoes; they have a lot to do—perhaps four sacks. They might say, "The faster we peel them the quicker we will get away," and they might peel them very thick. That is possible.

45. But I am now referring to a deliberate neglect to prepare the vegetables for cooking?—No.

46. You have no reason to suspect that sort of thing?—No.

47. Supposing a person sent a present of fruit or vegetables, would it go to you?—Yes.

48. Do you get such gifts?—Yes.

49. And they all have ultimately reached the troops?—Yes. If there is enough to go right round the camp they are evenly distributed. We keep a gift-book, and if there is not enough to go right round we keep a record of where it goes. The book shows the date it is received, where it comes from, if sent for any exclusive unit, where it goes to, and the date. There have been occasions when, say, a person has sent in a sack of potatoes for the Taranaki men: well, there are Taranaki men in every unit, and there would be great difficulty in picking these men out, and trouble also.

50. *The Chairman.*] That would account for a great deal of the misunderstanding?—Yes, sir.

51. The best way is to send it for the men generally?—Yes.

52. When it is sent to the men generally, by means of your gift-book you can distribute it fairly, giving each a share in turn?—Yes.

53. *Mr. Salmond.*] Have you anything to do with the daily inspection of the camp?—Nothing at all.

54. What officer from the Quartermaster's office comes round?—The quartermaster-sergeant.

55. Do you know anything about the daily inspection of the camp?—I simply know that there is a daily inspection.

56. You are inspected too: who forms that inspecting party?—The Medical Officer, the captain of the day, the subaltern of the day, the camp orderly-sergeant, the camp orderly-corporal, and the quartermaster-sergeant.

57. That is about a dozen men?—About six.

58. Do they all go round together?—Yes.

59. Do they, as far as you know, inspect every portion of the camp?—They inspect every portion of my camp.

60. Do they go into the tents?—I have no tents in my portion of the camp.

61. You do not know whether the backs of the tents are inspected?—I do not know whether they go round every tent. We have seen them going through the lines. I do not know that they could go through every tent.

62. So that there might be sick men lying in tents and the inspecting party would not find them?—If the inspecting party did find them they would be reported. But it would not be their place to deal with that. There is an orderly-corporal to every unit, and if a man is sick he has to report it.

63. *The Chairman.*] You say there is an orderly-corporal whose business it is to report any sick man in a tent?—That is so.

64. On fine days are the sides of the tents turned back so that you could get a view right into them?—There is a standing order to that effect.

65. The whole floor of the tent can be seen from outside?—That is so.

MONDAY, 19TH JULY, 1915.

ROBERT WEST HOLMES sworn and examined. (No. 6.)

1. *The Chairman.*] You are Chief Engineer in the Public Works Department?—Yes.

2. Will you tell us what you have had to do with the erection of huts at the camp?—I have had nothing to do with it yet.

3. Is it not in your Department?—It is in the Department, but from the way the Department is worked the instructions have apparently passed from the Under-Secretary to my subordinate and not to myself.

4. Would that be an intimation to you that you were not to be concerned in the matter?—Certainly.

5. And you then in consequence took no concern in the matter?—That is so.

6. You are now, are you not, engaged in some work in connection with it?—Yes. I was called in by the Hon. Mr. Allen on Thursday last and asked to take charge of the work to be done out there.

7. Have you seen the hutments that have been erected?—Yes.

8. And what is your opinion of them as to their suitability for the purpose intended?—I think they are very suitable for the purpose. They would be somewhat cold on a frosty night, being built of galvanized iron, and I think some requirements will be needed in regard to ventilation in order to prevent draughts during heavy weather.

9. Those openings just underneath the eaves may require some alteration?—Yes; we will have to provide some means of closing them on the weather side of the building.

10. It was suggested on Saturday that some opening in the ridge would be desirable?—Well, it may be, but I hardly think so. I think that is more a question for trial. That is a matter that can be easily rectified if an alteration is found to be necessary when the buildings are inhabited.

11. Have you to look into the drainage scheme at all?—Yes.

12. That had already been under the charge or had been directed by some of the Health authorities—I think Dr. Finch?—Yes, I think so; but I think more directly under Mr. Jickell, of Palmerston North, who has been attending to the sewage system; and I think Mr. Morton has done something towards the system of water drainage, but not very much.

13. Have you been over the camp and seen the sewage arrangements?—Yes.

14. Of course, we cannot look at this camp from the point of view of an old town that has raised large loans to put in the most modern system, and, making allowance for that, what is your view of the provision that now exists for the sanitation of the camp?—As regards the collection of sewage from the kitchens and washing-places, that appears to me to possess all that is possible. The disposal of that sewage would offer some difficulties, but I am now having investigations made. With regard to the soil, that is now being dealt with by the pan system. I have not looked fully into that yet.

15. You have seen the nature of the ground there?—Yes.

16. There is a slight stratum of clay, and then below that comes gravel to a considerable depth. Is that proper soil in which to dispose of sewage in the way it has been disposed of in the past?—I think so, as long as it can be got to soak away; and as long as there is no great amount of extra matter with it it has a chance of getting away; but I think great difficulty will be experienced in getting rid of it in that way owing to the ground becoming clogged with solid particles.

17. It will stop filtration?—Yes.

18. Then you have under consideration means for a more effective disposal?—Yes.

19. Although you say it will be one of difficulty?—Yes.

20. With regard to roading, you saw what had been done there?—Yes.

21. And you know that during the winter months there was a large amount of traffic rendered necessary because of the erection of those hutments in addition to the camp traffic?—Yes.

22. Do you consider that during that period it would have been possible to have put the main roads into anything like order?—It would have been possible. I think most difficulty has occurred through its not being realized what was actually required to deal with such a large number of men. The circumstances of the place on the whole are worse than an ordinary town, inasmuch as the men and the amount of traffic are so much concentrated.

23. I suppose it may be more compared to the state of things you would get in a diggings "rush"?—Something like that.

24. *Mr. Ferguson.*] Do you consider that any insanitary or unhealthy condition has arisen out of the drainage up to the present—have the levels and soak-pits been sufficient to carry off all sewage, or has any insanitary difficulty arisen?—I have not had the opportunity of examining the part of the camp occupied by the tents—I have only had time to go over the part occupied by the huts.

25. *The Chairman.*] Can you tell us about that, because the tents have been practically immune from trouble?—As far as the drainage has been done it appears to me to be fairly good—nothing practically wrong with it.

26. It is not the real point of danger that a continuance of the present arrangements would bring about?—No, not yet, because as a soakage-pit has become clogged they have filled it in and shifted the point of discharge.

27. *Mr. Ferguson.*] Have you in your Department particulars as to the acreage in the camp covered by the buildings and tents, and the population per acre?—We could get that. I do not know whether any one has worked it out.

28. *The Chairman.*] Would it be possible to get some one in the Department to prepare a general sketch showing where the tents are, the huts, the horse-lines, and where the racecourse comes in?—Yes, we will get that done.

29. There will be particular parts marked where the latrine arrangements are and the wash-basins?—Yes, we can easily get that supplied within two or three days.

30. *Dr. Martin.*] Do you think that any young soldier sleeping in those hutments would suffer any ill effect from sleeping on the floor?—I do not think so; I have slept on many worse places in the course of my ordinary vocation.

31. You do not think they would suffer any harm?—No.

32. Do you think the hutments should be lined?—I do not think it necessary.

33. Do you think a hundred men in each hutment too many?—I have not gone into that.

34. *Mr. Salmond.*] Are you preparing any scheme for the alteration and improvement of the camp?—No; we are merely carrying out a scheme that has been prepared with regard to the position of the huts. That has already been outlined and approved by the Defence Department.

35. But the huts are already built except seven?—No; we have twenty-two more huts to build.

36. And what other buildings?—We have to build some further kitchens that are required, and washing-places, and places for washing up culinary utensils, and drying-rooms.

37. Instead of the present marquee?—Yes.

38. And any other buildings?—There is a destructor to be built to deal with camp-refuse, and I have heard talk about a disinfector for dealing with infected clothing.

39. Any additional system of surface drainage?—Yes, we are putting in a complete system of surface drainage.

40. Is that being put in hand at once?—Yes; probably to be started to-day.

41. How much will it cost?—I could not tell you. We had a rough estimate that the cost would be £28,000.

42. That is the whole of the improvements, including buildings, surface drainage, and roading?—Yes, and sanitation.

43. When that work is done do you consider the camp will be in an absolutely satisfactory condition?—Yes.

44. What system of roading is being adopted?—Ordinary town-street roading. It will be graded to drain to proper channels, the water to be taken from those channels by means of a system of storm-water drains, and led away to a point of discharge in the Silverstream.

45. *Mr. Ferguson.*] There is a water-supply put in by the military authorities with the assistance of your Department—have you looked into it in any way?—No, not yet.

46. You have seen the soil?—Yes.

47. Have you formed any theory yourself as to the reason of the outburst of illness there, having relation to the soil and district?—No, I have not.

48. Could you give us any expression of opinion as an engineer as to whether that is a suitable site for a camp, or has it any disabilities?—I think it is a very suitable site for a camp. It has a gravelly subsoil, and that is always looked upon as the best for a camp.

49. *Mr. Skerrett.*] In answer to Dr. Martin you said you had not considered the question whether the complement of a hundred men to each hutment was excessive or not?—No, I have not: that is a matter that rests, I think, more directly with the officers of the Health Department. It hardly comes within my province.

50. You will observe that those buildings are more in the nature of barracks, are they not?—Yes; they would be very much like barrack-rooms, except that perhaps they would not be quite so comfortable.

51. You have not considered, I suppose, what is the regular allowance of floor-space and air-space in the case of the barracks provided for the Imperial Army?—I have done so years ago, but not in connection with this place.

52. In considering the erection of huts now contemplated, have you considered the possibility of having buildings similar in character to but smaller than the existing hutments?—No; the Health Department is dealing with that.

53. You did not consider the danger of as many as a hundred men living in one hut or barracks?—They are only putting in thirty now.

54. Of course, the larger the hut and the greater the number of men the more difficulty there is in isolating them in case of any sickness?—Certainly.

JAMES O'SULLIVAN sworn and examined. (No. 7.)

1. *The Chairman.*] What are you?—I am Assistant Quartermaster-General, Headquarters Staff.

2. Will you tell us when you received instructions that certain boots were required for the two thousand odd men that were coming in in June or May?—I could not tell you the exact date.

3. Well, we have had it from the Camp Commandant that it was notified on the 19th April?—It is quite possible that is correct if he said so.

4. How do you get your requisitions?—Signed by Captain McCristell at the camp.

5. He told us that from the Department he gets one copy of the proposals and you get another at the same time?—It is the notification stating when the contingents are coming into camp.

6. The evidence he gave us as to that was that the notification was sent on the 19th April and the men came on the 29th May?—Yes.

7. A period of about six weeks?—Yes.

8. And then when they did come in the boots were not there?—Not when they came in, sir, I think.

9. Yes, that they could not get the boots—the second pair?—Yes, they got the one pair.

10. What steps did you take when you got the notice on the 19th April of the men coming into camp?—With your permission may I go back a little way to give an explanation? The first order for reinforcements was one thousand two hundred Infantry and four hundred mounted men—about one thousand seven hundred men.

11. Have you any notes with you?—No, I have not; there is another inquiry going on, and the notes are there.

12. Is that inquiry dealing with boots?—Yes, boots and other things.

13. Tell us what the history was?—The Chief of the General Staff gave us the notification. We made contracts then for boots sufficient to meet more than half of the requirements—that is, 2,250 pairs of boots per month.

14. When did you make that contract?—I could not tell you from memory—somewhere about January; it is an annual contract.

15. Who were the contractors?—Robert Hannah and Co., Wellington, and O'Brien and Co., Christchurch.

16. Well, what happened?—On top of that one thousand seven hundred men they put in two companies of Artillery, the Trentham Regiment, two lots of Maoris of five hundred each—I could not tell you the exact number.

17. But you supplied the boots—there was no complaint up to May?—That two thousand came too many on us.

18. There was no complaint up to May, and on the 19th April you got an announcement that the new Trenthams, some two thousand men, were coming in?—Yes.

19. Did you take any special step when you heard that?—Yes; I tried to get as many pairs of boots made to our pattern as I could in this country by outside people and contractors.

20. Could not the contractors give you those quantities?—No.

21. When did you begin to get them made outside?—I suppose, about the time or before the Trentham Regiment came in—about the time they rushed some extras on us.

22. Have you not a book to give the dates?—Yes.

23. You must attend again to give the dates. What we want to get at is whether there was sufficient activity displayed in getting those boots, having regard to the date of the order and the date of announcement?—Yes.

24. You say you tried to get as many boots made as possible outside?—Yes.

25. And you did not get enough?—And we have not enough to-day with all the factories coming in—that is, if they are keeping seven thousand men going on training as they have been lately.

26. You have not enough if you provide extra boots after a man gets two pairs?—The Camp Commandant lays down the rule that they get a new pair when they go into camp, and about a fortnight before they leave they get a second pair. It occurred through the wet weather at Trentham that they wanted boots quicker, so that the men could get a change of boots, and we were not able to meet the demand.

27. Has not the Camp Commandant altered the system: does not he now issue a new pair within a week?—I could not tell you whether they altered the system at Trentham.

28. Do you get the communications yourself from Trentham?—They come into the office through the post, and all the requisitions will be in the office and open to me. I think it would be better for the men who deal with the requisitions to attend before the Commission—there are two of my officers who do that work particularly.

29. We want to find out why the boots were not there?—Well, we did not have them.

30. Your two men could give us all the information you can?—Yes.

31. Now, I understand when the men arrived the blankets were not out at the camp, and they had to be sent for on the Sunday?—Yes.

32. Do you remember that incident?—Yes, very well.

33. How was it the blankets were not out there?—There is a man in charge of that particular department—underclothing and blankets. He got an order some days before to send out some underclothing and blankets, but he neglected to send out part of the supply of blankets, and the reason was that he had been at the camp a day or two before and some storeman told him they had more blankets than they required.

34. Who was this man?—Mr. Sewell.

35. Did he report that to you?—No, he did not.

36. Ought he to have done so?—Yes.

37. You did not know then but that the blankets had gone?—Certainly not.

38. Is Mr. Sewell in your department now?—Yes.

39. It was not that you were short of blankets?—No. May I explain. I was communicated with by telephone at my own house on a Sunday morning that there had been an insufficiency of blankets for the men coming in that day, and I was asked if I could do anything. Mr. Williams and myself communicated with Munt, Cottrell, and Co. and hired a motor-wagon, and we put the blankets on the wagon ourselves and sent them out to Trentham. They arrived at Trentham at 2.30 in the afternoon, so no man was without a blanket that night, as I went out myself to see.

40. Ought they not to have gone out on the Saturday?—Yes, unless something happened that we could not get sufficient transport.

41. Have you had other cases occurring like that where verbal instructions have been acted on by your subordinates without reference to you?—No, sir, I have not. I should like to say, sir, that in the newspaper report of Captain McCristell's evidence he said that there were five hundred defective uniforms returned to the Defence Store from the Trentham Regiment through bad fitting. I should like to say that that statement is not according to fact. I have here the correspondence, which I hand in to be read. [Correspondence put in.]

42. They were too big in the neck?—Yes.

43. Whose fault is that?—Colonel Fulton did not like the large-size neck.

44. Who was responsible for the difference?—The Inspector of Clothing, Mr. Frost.

45. What is his military title?—He is a civilian.

46. Is he in your department?—Yes.

47. Is he to blame for taking those collars?—Yes.

48. Is he a professional tailor?—He has been with us for five years now examining the clothing, and has two other tailors with him.

49. Who was the manufacturer?—The correspondence shows that Blake was.

50. Were they made to a pattern?—Yes; there is a set sample of uniforms.

51. Was it the fault of the sample?—No, the fault of the make.

52. They were faultily made and received in the store and passed by the Inspector?—Yes.

53. And sent out to the camp and then returned as being too large in the neck?—Yes, that is the position. Personally I cannot say as to the fault.

54. *Mr. Salmond.*] How many boots were to be supplied under those contracts of Hannah and Co. and O'Brien?—Hannah 100 a month and O'Brien 1,250.

55. How many reinforcements did you expect at that time?—One thousand seven hundred for two months.

56. You were supplying 4,500 pairs of boots each month—more than two pairs apiece?—Yes.

57. What additional boots were ordered afterwards from other firms?—As many as they could supply.

58. No fixed contract?—No, only at a price. As many as they could turn out. The Northern Boot Company, Auckland, Staples and Co., Wellington, the Colonial Factory, Wel-

lington, and Skelton, Frostick, and Co., Christchurch, have been making boots, but no one else has offered up to now. We should be glad of any firm coming in.

59. You are willing to take the boots if people will come in and offer to make them?—Yes.

60. You are getting as many boots as possible from the factories in New Zealand?—I have not refused any.

61. Have you tried to get boots?—We called for tenders.

62. The original contract was made in January?—But at that time there were only four firms who tendered.

63. You got the contract in January for 2,250 pairs of boots per month: when did you try to extend that supply?—The Northern Boot Company was the first to come in.

64. Your explanation of there not being enough boots is that it was impossible to get them?—Yes.

65. Were the boots sent satisfactory in quality?—There is an Inspector who examines every pair of boots that comes into the store. He has a sample, and any boot that is not up to the sample he rejects. The same applies to all stores.

66. After being passed equal to sample were they found to be satisfactory?—Yes. [Sample boots explained.]

67. It has been said by some witness that the lining of the boots proved to be unsatisfactory. Were the boots issued complained of as being unsatisfactory?—Never.

68. And none returned in order to get further supplies?—No.

69. Was any alteration made in the lining of the boots afterwards?—No.

70. Do you consider that the clothing supplied to the troops was in every way satisfactory?—I think so. It is quite as good as the English clothing, because I have seen it.

71. *Mr. Ferguson.*] Do you make any practical test as to the amount of water which the boots would absorb?—No, it has never been done.

72. Would it be practicable to stand the boots in 2 in. of water, weigh them before you put them in and weigh them after twenty-four hours, and see the amount of absorption?—We have never made any test like that.

73. Is it done in the British military system?—I could not say. With the boots that come back from Egypt they are not making tests of that kind.

JOHN CAMPBELL sworn and examined. (No. 8.)

1. *The Chairman.*] What are you?—Government Architect.

2. You have had to do with the erection of hutments at Trentham Camp?—Yes, I had to do with the preparation of plans.

3. Tell us what you had to do when you began to act?—I was appointed one of the Advisory Board to criticize the plans submitted by the Defence Department for hutments at Trentham. We suggested a few alterations.

4. A sample hut had at this time been erected?—No, none had been erected. We criticized the plans and suggested a few amendments. Then working drawings were prepared under my direction for the erection of the hutments.

5. Did your drawings carry out the suggestions that were recommended by the Board?—They did.

6. Did the Board consider the question of the size of the huts?—We did.

7. Did it consider the question of whether a hundred men were not too many to put into a hut?—We did not think so, with adequate ventilation.

8. There are fifty in each division?—I might say the plans as we received them from the Defence Department were huts for fifty, with a space between them placed end on. For economical reasons we brought the two together, having one wall. We thus saved one wall, and so the huts were twice the length that they were originally, the same width, but accommodating a hundred instead of fifty.

9. What was the object of that space between?—I suppose it was for better ventilation—for free air between the huts; but we considered that with the ventilation provided under the eaves there was no necessity for ventilation at both ends. It was a cross-ventilation from side to side, and we did not think it necessary to have ventilation from end to end. We thus saved the cost of one wall—about £40 on the total cost.

10. Did the Board consider the question from the point of view of lining or not lining?—Yes, we thought lining unnecessary.

11. Why?—Those huts were supposed to take the place of tents. It was represented to the Board that the tents were very costly: they were being constantly injured by storms and by the men, and it was costing the Defence Department many hundreds of pounds to maintain the tents. That was one reason, I believe—perhaps the chief reason—for substituting huts for tents. The tents are not lined, and we thought that hutments with iron walls would be quite as comfortable as tents—as comfortable and less draughty.

12. Do you know if any steps were taken to block up the corrugations in the galvanized iron?—The sample hut was not built on suggestions made by the Board. The reason was that the Defence Department sent on a second plan prepared by me which had not on it all the suggestions made by the Board. There was a plan submitted for criticism to the Board. There were several short notes in that plan which I made myself, the intention being to prepare further working drawings, but by some mistake of the Defence Department they sent on the second plan to the overseer builder, who was acting under our District Engineer, and some suggestions made by the Board had not been attended to. They were very simple matters and soon put right.

13. But the suggestions of the Board were all followed out in the subsequent huts?—They were. I may point out that one omission was a small fillet under the corrugated iron at the floor-level to stop the draught getting up between the corrugations. That was a simple matter, and was put right. That was one of the recommendations of the Board, and the Defence Department's plan did not show that.

14. Do you say that the huts were afterwards provided with those fillets?—Yes.

15. Did the Board consider the question of how much space should be allowed between the two huts?—Yes. I think we measured the distance, and we considered that by lowering the height of the walls considerably more sunshine would get in between the huts; but I do not think we altered the distance between the huts as given by the Defence Department. We reduced the height of the walls from 10 ft. to 7 ft., thus allowing more air and sunshine to get in between the rows of huts.

16. Had you given you a certain area of ground with the indication that out of that area so-many huts had to be got in to provide for a certain number of men?—We received the plan from the Defence Department showing the area on which they were going to make huts. We did not see any reason for enlarging that area.

17. They gave you the area and told you they wanted so-many huts on that area?—Yes. We could see the huts were not shown too close together, and we could see there was ample free air-space round each hut and ample sunshine getting in.

10. *Dr. Martin.*] Do you think it was any hardship for a young recruit to sleep on the floor of those huts?—Not at all.

19. You did not consider that a hundred men to each hut would be too many?—Each man in a hut has 300 cubic feet of air-space, while each man in a tent has only about 60 ft. In a tent each man has somewhere about 15 ft. of floor-space, while in the huts each man has 31 ft. of floor-space—that is, allowing eight men to a tent.

20. *The Chairman.*] You know something of the new hospital in course of erection?—Yes, I prepared the plans.

21. When did you get instructions?—I really could not say the date from memory. The plans were completed on the 29th March, and I do not think it took longer than three or four weeks to prepare the plans and specifications.

22. What guidance had you as to the requirements you were to fulfil?—The Advisory Board.

23. The same Board as for the hutments?—Yes.

24. Who was the personalty?—Dr. Frengley, of the Health Department; Mr. Morton, City Engineer; and myself. We had plans submitted to us again by the Defence Department showing the number of beds required. We provided for an isolation ward, which was not shown in the Defence Department's plan, and we provided for a treatment duty room for performing minor operations, and other small additions were made.

25. *Dr. Martin.*] How many beds did you provide for the isolation ward?—Four beds.

26. And the main ward in the hospital?—Ten beds in the main ward, and two rooms with single beds separate for, I suppose, special cases: sixteen beds in all.

27. *The Chairman.*] I suppose Dr. Frengley represented the medical side of the case. Were no medical men outside Dr. Frengley consulted in the matter?—I think not.

28. *Dr. Martin.*] Was this the hospital that the medical profession subscribed a large sum for?—That I could not say. It is generally understood that they did.

29. There is no suggestion that any member of the medical profession who subscribed was on the Board?—No.

30. You never received any suggestions or plans from the medical profession?—No, we did not.

31. *The Chairman.*] The plans were completed on the 29th March: can you tell us the date when the building was begun?—No. The erection was not under my control at all—it passed entirely from my hands.

32. *Mr. Ferguson.*] To the District Engineer?—Yes.

33. And he would call for tenders?—Yes.

34. In the acceptance possibly he would consult you?—I am a member of the Tenders Board, and we recommended a certain tender, and I think it was accepted.

35. *The Chairman.*] Can you say when that was?—No.

36. *Mr. Ferguson.*] Have you anything to do with the superintendence and erection?—It is left entirely to Mr. Louch.

37. If he thought fit to make alterations he would have authority to do so?—He would consult me.

38. Some portions of the building are plastered and some wood-lined?—Yes.

39. Did the Advisory Board decide upon that, or is that done by yourself?—The Advisory Board knew all about what was decided as regards the finished walls. I think I myself suggested plastered walls. The first intention was to line the whole building so as to get it done quicker, but I said it could be plastered just as quickly as wood-lined, and that it would be better to plaster the walls, because if the lining shrank it would be very insanitary, and I adopted a quick-drying plaster, which would be carried out as quickly as the lining and make a more sanitary job.

40. Would it not have been better if the whole building had been plastered?—Certainly; but we did not think it was necessary. Plaster also costs a little more than lining.

41. *The Chairman.*] I suppose the hospital is not designed with a view to great permanence?—It would last as long as an ordinary timber house.

42. *Mr. Ferguson.*] Then, as to the operating-room, was any special advice taken as to that beyond Dr. Frengley?—No special advice.

43. No special windows?—No; it was represented that only very minor operations would be performed there.

44. Still, the Board has made the door wide enough to carry a stretcher through?—Yes, a double door.

45. *Dr. Martin.*] Supposing a man had appendicitis at the camp and was too bad to bring to the hospital in town, do you think the hospital there would be sufficient to perform an operation?—I do not think it would be sufficient for such a serious operation as that.

46. You were instructed that a small room of this design was required?—Yes.

47. Did that come from Dr. Frengley?—Yes.

48. You are certain it was said that the hospital was required only for minor operations?—Yes, I am certain. We provided a large window on the south side of the room to give ample light, but still the lighting is not what would be required in a permanent ordinary operating-room.

49. *Mr. Ferguson.*] You said you received instructions: whom did you receive them from?—From the other members of the Board. Dr. Frengley and Mr. Morton thought new plans were necessary. They considered the plans submitted by the Defence Department unsuitable for a hospital, and they thought I should prepare new plans, and we talked the matter over.

50. I want to get at whether you received instructions from the Under-Secretary to do certain things?—I did receive instructions from the Under-Secretary. I always do.

51. But they were not detailed instructions?—No, merely general instructions.

52. *Dr. Martin.*] Your plans were completed on the 29th March?—Yes.

53. When would that hospital have been completed if the work had been pushed on?—Two months were allowed for erection. Tenders were called for two weeks, I think. It would be towards the end of April when the tenders came in, and then there might be a week before the tender was accepted and directions given.

54. As a fact, do you know the date fixed for completion?—I cannot remember.

55. Are the contractors behind time now?—Very much behind time.

56. Do you know the reason of that?—No, I cannot give any reason for the delay—it is entirely with the contractors.

57. Where can we get particulars of the contract so as to find out when it was begun and when it ought to have been finished?—In the Head Office, or from Mr. Louch, the District Engineer.

58. You received no instructions when preparing the plan for a room for sterilizing instruments or for sterilizing dressings for emergency operations?—No; those were entirely omitted from the contract, and Dr. Frengley was to give advice as to how provisions for these were going to be made.

59. *Mr. Ferguson.*] In fact, the building was to be fitted up after the contract was finished?—So far as the surgical requirements were concerned, that is so.

60. And in regard to furnishing, had you anything to do with that?—Nothing whatever.

61. Who has that in hand?—Probably the Engineer.

62. *The Chairman.*] Should not that be provided by some Medical Board?—He will undoubtedly require to get information from the Medical Officers in the camp or from Dr. Frengley.

63. *Dr. Martin.*] There is no room in the hospital to put a sterilizing apparatus?—I think not. There is an examination-room and dispensary, but no room for sterilizing.

64. If a man comes in badly injured from the camp and requires an operation performed, there is no room to sterilize the instruments or dressings?—No, not unless it was done in one of the rooms. There is no special room. [Plans examined by members of Commission.]

65. There is no means provided for heating the operating-room?—No. Dr. Frengley said it was to be used for minor operations.

66. *Mr. Salmond.*] In preparing plans for the huts, did the Advisory Board have before it any manual or instructions used by the British Army?—Yes, we had. I think Dr. Frengley produced military manuals as to construction and ventilation. We did not look upon those as barracks.

67. But huts?—As an encampment.

68. Do you know whether the huts conformed to the requirements laid down in England?—I cannot say. I do not think we had any directions for the Dominion.

69. Do you suggest any improvements in the huts?—I cannot think of any.

70. Not as to ventilation or draughts?—We considered the ventilation sufficient, and at the same time not too much.

71. You do not suggest sometimes closing up the apertures, windows, and sides?—I do not. We designed the ventilation so that it could not be closed down.

72. You do not suggest there should be ventilation in the ridge?—It is quite unnecessary. I have seen it stated that there should be openings in the ridge to allow the foul air to escape, but we maintain there is no foul air to escape. It was considered there was too much fresh air.

73. Is it not part of the ventilation system that there should be an exit for foul air and an inlet for fresh air?—So there is here.

74. Drawing out the foul air?—Yes. There must be a current crossing the room. When there is cross-ventilation there is no necessity for ridge ventilation.

75. *Mr. Ferguson.*] You spoke about battens to fill up the openings in the corrugated iron. Would battens fill them up completely?—Any draughts that came in by means of the corrugation would be very trifling. At night-time with fifty men sleeping in a hut there is considerable warmth from the bodies, and the warm air that would make a hut uncomfortable is cooled by coming in contact with the cold iron and passes down the sides, and they might consider that a draught. The building will not heat up by the warmth from the bodies as it would if it

were a wooden building or some other substance than galvanized iron. We did not consider the comfort of the men, but the health of the men.

76. *Mr. Skerrett.*] There was no military representative on the Advisory Board?—That is so.

77. *Mr. Ferguson.*] Mr. Morton has military rank?—He has had experience.

78. *Mr. Skerrett.*] Did the Advisory Board make any inquiries as to the military practice with respect to the erection of huts, hutments, and barracks?—We received plans from the Defence Department, and evidently they had considered the plans.

79. The Board made no inquiry as to the military practice in camps connected with the erection of huts, hutments, or barracks: for example, did you know it is not usual to put more than twelve men in a hut?—I never heard that.

80. It is suggested it is not usual to put more than twenty-four men in a hutment?—I heard that, but the Defence Department gave us a plan showing fifty men.

81. At any rate, you made no inquiries as to the military practice?—We did not.

82. Was your attention directed to the area which those hutments would occupy—the actual area of ground they would cover?—We had a block plan showing the position of the hutments on the ground. I do not think we suggested they should be opened out in any way.

83. My question is directed to ascertain whether the Advisory Board directed their attention to the fact that these hutments were erected upon a comparatively small extent of ground?—Yes, I think so.

84. You cannot remember the area now?—I cannot remember the exact area. The huts are 25 ft. apart, I think. There is an enormous air-space in front of them.

85. It is suggested that the space occupied by those huts was too congested and that it ought to have been a considerably larger space?—Well, it seemed to me that the space was ample. The ventilation is so great in those huts that the air is always fresh. The men are almost like sleeping in the outside except that they are protected from the winds.

86. It is suggested that these hutments should be put in a circumscribed area of military design?—It is a question of ventilation.

87. Do you know that the floor-space you have allowed in these hutments is exactly one-half the regular floor-space allowed in barracks?—That is so.

88. Do you know the cubic air-space is less than one-half the regular air-space?—600 ft. is the usual allowance, and we have allowed 300 ft.

89. Well, apparently the alterations made by the Advisory Board were in the direction of cheapening the structure rather than improving it?—Not altogether. We increased the window area for light, and provided wooden floors. I believe the Defence Department meant to simply have a little wooden platform rising from the ground for men to sleep on. We considered it would be far more healthy to floor them—that the men should sleep on the floor instead of having wooden platforms.

90. I understand the alteration you made was a reduction in the height of the wall and the construction of the hutment to hold the men in two divisions?—Yes, and reducing the ventilation-openings.

91. Did you or the Advisory Board consider that what was being done was the erection of a military town within quite a small area of space—a military town containing seven thousand people?—We did not think there would be seven thousand men there at all. We got instructions to prepare huts for three thousand five hundred.

92. But there were in camp at this time four thousand altogether?—Yes.

93. And that was increased ultimately to seven thousand?—Yes.

94. What area of living-space did they occupy: did it exceed 10 or 12 acres?—I cannot tell you, because it is largely a matter of the height of the buildings and the free circulation of air.

95. Is it not a fact that here was a population of about seven thousand people occupying an area of between 10 to 12 acres—that is like the population of a place like Petone being congested into only 10 or 12 acres?—I believe in some cities there are as many as three hundred or four hundred people to the acre.

96. You have no observations to make upon the fact that there was about a population of seven thousand upon a very small area?—Well, I never attended to that matter, because I never knew that there were to be seven thousand.

97. *Mr. Gray.*] I understand the design of the huts is the outcome of the general deliberations of members of the Board based upon the original design of the Defence authorities?—That is so.

98. And that in building your design you took into consideration the question of ventilation and air-space?—Yes.

99. In your opinion are both those requirements provided for in the existing scheme, and are they sufficient?—Yes, they are.

100. Mr. Skerrett has suggested that the air-space is only half that allowed by military authorities in barracks?—Yes.

101. Those huts were not designed for permanent residence?—No.

102. But for sleeping purposes?—Yes, and for feeding.

103. The men would not occupy the huts at any time during the day except when having meals?—Yes.

104. There are some omissions, you said, in the plan which the Defence authorities sent to the District Engineer: were any of those omissions serious?—No.

105. You spoke of one being the fillet at the bottom of the galvanized iron?—Yes.

106. Was there anything else?—The eaves had not sufficient projection to prevent the rain being driven in with a very violent storm.

107. Was that remedied before any of the huts were completed?—Yes.

TUESDAY, 20TH JULY, 1915.

WILLIAM HOBBARD MORTON sworn and examined. (No. 9.)

1. *The Chairman.*] You are the Engineer to the Wellington City Corporation?—Yes.

2. You were a member of the Advisory Board in connection with certain matters at Trentham Camp?—That is so.

3. Will you tell us, please, what you have had to do and what you did in connection with the camp?—In a letter from the Hon. the Minister of Defence I was asked to confer with Dr. Frengley and Mr. Campbell, Government Architect, regarding the construction of the hutments.

4. And what did you do?—We had two or three meetings, and considered plans which had been prepared by the military authorities.

5. You did not adopt those plans in their entirety?—That is so.

6. Will you tell us about those plans, and then say what consideration led you to depart from them?—Their plans were for corrugated-iron buildings, unlined. They had no floors other than the earth. The provision for ventilation was very similar to what has been adopted. The amount of window-space as shown on the plans was very considerably increased by us.

7. You enlarged the size of the huts?—We lowered them in height. The original huts were to provide accommodation for fifty men. After going into the matter the result of our careful consideration was that we came to the conclusion that there was no necessity to limit them to accommodating fifty men, and we considered that each hut might be made to accommodate a hundred men, with a division in the centre.

8. Just an ordinary partition?—Yes, a partition right across.

9. No communication between the two?—There was air communication.

10. No doorway?—No doorway. Instead of having merely raised platforms for sleeping on we decided that in view of the fact that the huts would only be occupied by the men for sleeping and eating it would be much better to put wooden floors over the whole area. That was one of the essential features of the alteration which we recommended.

11. Was the question of bunks discussed?—Yes.

12. And you did not adopt them?—No.

13. Why were they rejected?—One reason was the difficulty of cleaning about the bunks, and the difficulty also in connection with the access of air.

14. To the whole contents of the building?—Yes.

15. And then, I suppose, bunks would have interfered with the area available for eating?—Yes, and for lighting. Of course, they might have been placed transversely. But we considered it advisable that the huts should be so made that the whole of the room might be thoroughly cleansed, both by ordinary cleansing and the admission of air into all parts of the room.

16. The sanitary point of view was a vital factor in the matter?—Yes, sir.

17. Did you take into consideration the number of huts that had to be erected, and the area of ground upon which they were to be erected?—Well, the number of huts to be erected, I think, was given to us as huts sufficient to hold, exclusive of officers, 3,500 men: that was at the time we were considering the matter. The officers' accommodation was to be additional.

18. Were you given a certain area of ground on which the huts were to be placed, or had you to consider that point at all?—The only order of reference, if I remember aright, was the plan which had been prepared by the military authorities showing the location of the huts.

19. That showed the total number spread over a particular area?—Yes.

20. It did not specify the area?—No.

21. So that they might have occupied 1 acre or 10?—No; they indicated the space they considered ample for the huts, after, I take it, considering the question of overcrowding, and also from the point of view of the ground available for a parade-ground. We went into the matter closely, and decided, after full consideration, that these huts would be quite satisfactory if placed at a distance apart of one and a half times their height.

22. That is with a view to sunlight and air?—Yes.

23. And that was the view acted upon?—I believe that was acted upon, but I have not seen them since.

24. You had nothing to do with the construction of the huts afterwards?—No.

25. Then, had you anything to do with respect to the sanitary provision for the hutments?—Do you mean the drainage?

26. Yes: did you simply approve of the form of the huts, or did you go further and deal with the question of the sanitation of the buildings?—We considered the question of the disposal of the polluted water. We did not deal with the question of surface drainage. Although we did provide for the disposal of polluted water I do not remember that we were asked to do so. I have not the letter by me which I received from the Minister in connection with the matter. My recollection is that what we were to go into was simply the question of the huts as indicated on the plans submitted by the military authorities.

27. Could you find that letter?—I have been looking for it but cannot see it. I take it there should be a copy available. I may say that when we visited the camp the question of drainage was immediately shown to be a very prominent matter for consideration. We gave it consideration although there was some difficulty in getting a proper fall. A system was adopted for gathering up the polluted water, and a drain laid conveying it to a point, roughly, 15 chains away from the camp. The total length of the drain would be about 24 chains. There was only one direction in which the fall could be obtained without considerable excavation. I ascertained that by taking levels. A difficulty existed in connection with the ultimate disposal of the water. Before this work was done all the dirty water was thrown into soak-pits about the camp. I considered that very unsatisfactory, because the ground would become polluted in time, and these

soak-pits were too near the positions which were to be occupied by the buildings, so it was decided that all polluted water should be taken away from the camp by these drains. It was suggested that the same method of disposal which had been adopted inside the camp could be adopted at the outlet of these drains.

28. That is, by means of a pit?—Yes. It was found that there was sufficient fall in the ground to give a fall to the drain of about 1 in 140. I considered that that was necessary under the circumstances. But when the ground was opened I saw that it would be necessary to materially increase the filtration area. I advised Mr. Seddon, of the Public Works Department, that some difficulty might occur in that respect, and that it would be advisable, some distance up the drain, to put in two junctions in order that branch drains be taken away from there and so obtain a very much greater area for filtration.

29. So that there would be no difficulty in tacking on any future drainage?—Yes; my particular object was to remove all the polluted water from the vicinity of the camp as far as I possibly could.

30. Was that based upon any particular number of men, or the number of men who would possibly occupy these huts under the scheme shown on the plans?—I take it that the huts would not extend beyond a certain line—that is, towards the parade-ground—and that if they were to be extended they would be extended more westerly towards the main Hutt Road, so as not to encroach upon the parade-ground, because the military authorities were very anxious to preserve as much as possible for their military operations.

31. Would the drainage provision made be sufficient for not only 3,500 men but for 7,000 men?—It is somewhat difficult to say what the consumption of water would amount to, and consequently the amount of drainage required for polluted water; that is the only workable calculation. I consulted military books, and found that they make an allowance of 5 gallons per head per day. The drain provided was worked out on that basis, and was more than ample for the requirements we were considering.

32. You were considering provision for about four thousand men?—Yes; but if the camp had been extended very much farther in the direction of the main Hutt Road it would undoubtedly become necessary to put in another drain parallel to that existing, because the branch drains could not have been laid with sufficient fall to cope with the water from further ablution-places and cookhouses which would have been found necessary.

33. Was this provision which you made in any way connected with the occupation of the tents?—No, except the ablution-places which were immediately adjacent to the tents. We were informed that it was intended to take away the whole of the tents, as they encroached upon the rifle range, and that all the drainage would be from where the tents began, in a westerly direction, and that consequently there would be no drainage beyond that given point.

34. Beyond the huts and drainage, you were consulted with regard to the roads, I think?—I was merely asked a question on the telephone, sir.

35. As to what?—Colonel Potter rang me up one day from the camp and told me that in view of the mud about the place a great number of suggestions had been made to him, and he asked me about some of them. One was the question of tarring the surface. I told him it was absolutely futile to do such a thing at that time, and I recommended him, from what I had seen of the place, to have the roads properly formed, graded, and gravelled.

36. Did you see them afterwards?—Yes, I have seen them since that.

37. And has anything been done in the direction of your suggestion?—I did not take very much notice. I know that something was done at the time, but as to the extent I would not venture an opinion.

38. We have seen what has been done, and we thought you might be able to say whether that was the proper thing?—No; I went out there privately and did not take very much notice.

39. That deals with the hutments, the drains, and the roads: were you consulted about anything else?—No.

40. Were you a member of the Board which considered the hospital building?—Yes.

41. Had you any special knowledge of the construction of hospitals?—My only knowledge is as to the building; I do not claim to be an authority on the fitting-up of the building.

42. You have no knowledge as to the equipment of a building for hospital work?—No, other than in the nature of the construction of the building and the disposal of the drainage.

43. And what is the part you were to take as a member of the Board: from the engineering point of view?—Yes, along with Dr. Frengley and Mr. Campbell we were to decide the nature of the materials to be used, and certain things with regard to the arrangement, which I discussed with them.

44. Was any indication given to you as to the purpose of this hospital?—The information I obtained came through Dr. Frengley. It was he who had the opportunities of discussing the purpose for which the hospital would be required, and the accommodation it would be necessary to provide.

45. *Dr. Martin.*] What was discussed at the meetings of the Board as to the nature of the building and the number of patients it was to accommodate?—My recollection is that there were eighteen patients to be provided for. Of course, the possible necessity for extending the building was also considered.

46. What was the idea of the hospital—to treat emergency cases from the camp?—Yes, emergency cases.

47. Accidents that occurred in the camp?—Not accidents requiring serious operations.

48. For instance, a man getting his skull smashed by a kick from a horse: would he be taken there for treatment?—I can only tell you that it was put to us that the hospital was to be used for merely minor operations.

49. You would consider such a case as I have instanced when you were going into the plans for the hospital?—Yes.

50. It was intended for minor surgical cases?—Serious operations would be taken by the motor-ambulance to the Wellington Hospital.

51. You considered that any serious accident cases that occurred at Trentham would not be taken into this hospital?—I did not say "any serious accidents," but "accidents requiring serious operations."

52. No, but I mean accidents requiring urgent and immediate treatment?—Cases for immediate treatment would require to go to the hospital out there.

53. Was it discussed by the Board? Did you go into this question?—I cannot say that those points were considered by me. I think I took it that Dr. Frengley had consulted with others on the subject.

54. *The Chairman.*] Had you an order of reference upon this matter?—No; I do not remember seeing any.

55. You were just called in?—Yes.

56. *Dr. Martin.*] But the subject was discussed by the Board—the possibility of serious accidents at the camp?—Yes; the general use of the hospital was discussed. Its uses were put to us by Dr. Frengley, who, I take it, had consulted with other persons as to the provision which was to be made; and there was the plan of the hospital which was submitted to us for approval. I think it was prepared by the military authorities, and we condemned it.

57. The military authorities prepared the plan?—I think so.

58. Can you tell me the date of that?—I cannot tell you exactly—somewhere about May.

59. Why did you condemn it?—Because of the general arrangement of the building, and the way the rooms were bound together.

60. How many cases did the military authorities provide for?—The same number.

61. Eighteen?—I think that was the number. Unfortunately I have no correspondence on the matter with which to refresh my memory.

62. Were you aware that the medical profession of New Zealand subscribed a large sum of money to build a hospital out there?—I have heard so, and know it from the newspapers.

63. Was any representative of the medical profession ever called to a Board meeting?—No.

64. Did you consider any correspondence from them?—I saw none.

65. Were they invited by the Board to give an opinion or to see the plans of the proposed hospital?—That I could not say. Dr. Frengley carried out most of the work in connection with the erection of the hospital, and he may have given such an invitation, but I cannot say. The question as it appealed to me most was as to the construction of the building and the materials that should be used, and the question of the drainage. I did make certain suggestions as to the enlargement of some of the rooms, where the men would present themselves for daily examination, and where the men were required to report themselves sick. When the general arrangement of the building was discussed I concerned myself principally with the drainage.

66. *The Chairman.*] Your point of view was as to the building and not as to the hospital?—That is so.

67. As lawyers say, it was *qua* building and not *qua* hospital with you?—Yes.

68. *Dr. Martin.*] What was the date of the first meeting of that Board?—I really could not tell you. I have nothing in the way of correspondence on the subject to refresh my memory. I should say it was some time about May.

69. Have you seen the hospital recently?—No, sir, except from some distance off.

70. If the work had been pushed on it would have been built by the 27th June: is that your opinion?—I am afraid my opinion on that point is not worth anything. The work was, I understand, carried out under the Public Works Department, which let a contract for it.

71. *Mr. Ferguson.*] Do you consider in connection with that building, which was to cost £2,800, that two months was a sufficient period of time to erect it in, considering the locality, and that the Public Works Department were carrying on large works in the neighbourhood? Do you think two months was sufficient time for the Department to provide for its erection?—I think that, unless the contractor had taken some very extra and unusual measures, two months would be insufficient.

72. Unless the contract price was such as to allow for a large amount of extra pushing?—Yes, by working extra time.

73. You said that you were consulted as to the materials to be used. We know that part of the building is lined with timber, not plaster: was that thoroughly discussed?—I think that was decided upon to enable the building to be finished quickly. It was considered necessary to reduce the amount of plaster to be done, especially in the rooms where patients were not to be treated or examined.

74. As to the soak-pits not being suitable: have you of your own knowledge any idea that they are insanitary—those that have been used?—I did not examine them, but I am perfectly satisfied in my own mind that to deposit polluted water in soak-pits day in and day out for a considerable period must unquestionably lead to contamination of the subsoil air.

75. Is there likely to be a variation of water-level there?—Yes, with that loose boulder formation the water percolating through the ground would displace the subsoil air.

76. These pits were 8 ft. square and 14 ft. deep: in the section so far exposed there is clay and gravel below, and we are told that so far there has been no choking?—No; I understood that the water got away freely. They were very careful to prevent solid matter getting down to the bottom of the pits; still, some small portions of grease and solid matter must get into the pits. As a temporary arrangement—even half-temporary and half-permanent—that would be quite satisfactory, provided the pits are not in the vicinity of the buildings.

77. What do you consider a minimum distance?—First of all, such pits should be on the lower side, if any, of the buildings, and they should be at least 50 yards away.

78. You have not, of your own knowledge, known that there are insanitary conditions arising from these pits, but on principle you disapprove of them for a permanent camp?—Yes, that is so.

79. But for a tent camp or for field operations?—I think it would be quite satisfactory; but even then the pits should be on the lower side of the buildings, and not less than 50 yards away.

80. You said that you were of opinion that it was desirable to provide one and a half times the height of the buildings (mean height) between the buildings in order to give the air-space and sun-space. We have been told that it is customary at night-time to place two tins for latrine purposes between these hutments, at each end, so that each fifty men have two tins: did you consider that at all when fixing the distance between the huts?—No; we were not aware that it was proposed to use those tins.

81. There must certainly be a certain amount of splashing from these tins—an ordinary kerosene-tin or an oil-drum—and, seeing that these tins have to be removed in the morning and the places disinfected, do you consider that a desirable arrangement?—I think that in any such places the surface of the ground should be made impervious to moisture.

82. They should have concrete bases, and provision made for draining the moisture away?—More branch drains should be provided for those purposes into the drainage system which was provided; but at the time we had no information that such tins were to be used, or what was to be done in that respect.

83. *The Chairman.*] Did you not consider that with a hundred men in a hut night necessities would arise with some of them, or did you think they would have to go to the ordinary latrine?—I might say that there were a lot of things which might have arisen but which I did not consider were referred to us, and I think myself that we went out and did very much more than was asked of us.

84. *Mr. Ferguson.*] It was purely voluntary work?—Exactly; and that which we did beyond what was referred to us we thought necessary, because it came particularly under our notice without anybody having directed attention to it. The question of latrines was under consideration at one time. I remember, when visiting the camp, that I suggested that there should be latrines on the opposite side.

85. You are quite satisfied with the present arrangement of the latrines?—No, hardly.

86. *The Chairman.*] You do not know the present arrangement?—I have a pretty good idea.

87. *Mr. Ferguson.*] As a latrine you are satisfied with it?—Where you have no means for the proper disposal of the sewage—and except you waited a considerable time to adopt proper means—I consider that the earth-pan is the proper means to adopt. I felt that some latrines should have been provided on the opposite side of the camp. I was informed at the time that the military authorities had considered the question of latrines, and that the position in which they were placed was decided upon because of the fact that the carts which removed the nightsoil were not required to enter the camp-grounds. They would deal with it from the road more satisfactorily. I do not think that the concentration in one particular spot is altogether satisfactory.

88. *The Chairman.*] In dealing with the buildings and the sanitation, you would not have to deal with it on the same footing as if it were a permanent town: I take it you would have some regard to the semi-temporary character of the camp?—It is very difficult to get exact information as to how it should be considered. So far as I was concerned, I came to the conclusion that it was neither really temporary nor yet permanent, but that it was necessary to take steps to prevent any possible pollution of the air in which the men were living.

89. *Mr. Ferguson.*] Do you think there was too great a density of the population in the camp?—I cannot conceive that to be the case in view of the large open space in which the camp was situated.

90. And in view of the large open area, and the nature of the soil, and the winds which sweep across that plain, you are of opinion that it should be a sanitary camp?—I can see no reason why the camp should not be sanitary. I would like to make it clear that the question of surface drainage was a matter which I did not consider was referred to us, and we also had the impression that the military people themselves would make all the roads about the hutments.

91. And, as a matter of fact, you know that they employed Captain Jickell to lay out those roads?—I only know that from the newspapers.

92. *Mr. Gray.*] You have had a certain amount of military experience in the Territorials?—I have had about seventeen years' military experience, both in Australia and in New Zealand.

93. With experience in camps?—Yes, and barracks.

94. And were you able to apply your knowledge of these matters in considering the questions of hutments and drainage at Trentham?—Yes, I endeavoured to do so.

95. In your opinion was the system of drainage that you recommended satisfactory for that camp?—Thoroughly satisfactory as far as polluted water affecting the sanitation of the camp is concerned, and the health of the men.

96. These were matters which you had before you when planning this drainage system?—Yes.

97. Have you any reason to suppose that insanitary conditions have arisen in that camp by reason of the lack of drainage of polluted water?—No, I am not aware of any. The only thing I did hear was that the drain had become blocked, and I told them to open out a larger area, which would be necessary.

98. You have naturally given special consideration to the drainage by reason of your position?—Yes.

99. As regards the hospital, you do not claim to be an expert in hospital arrangement?—No.

100. The matters of the design and requirements were left to Dr. Frengley as the medical expert?—Yes.

101. In your opinion is the system of hutments satisfactory?—I cannot see any reason why the hutments should not be satisfactory. I may say that I anticipated some complaints would be made to the system of ventilation. Some people, I know, cannot live where there is an open space, and I felt that possibly complaints would be made. And I think I was responsible at the meeting of the Board for suggesting that before the Government committed themselves to the construction of the whole of the huts they should put up one hut and find out if there were any complaints found with it. That applied to the huts for the officers as well as to those for the men.

102. *The Chairman.*] The sample hut, as it has been called?—Yes; but it was really put up to see whether it met their requirements, because there was very little to go upon with regard to the difficult conditions under which they were working—they were to be neither temporary nor permanent.

103. When the test hut was put up was there any report made as to how far it met the requirements?—No written report. We visited the ground, and a number of officers went round with us to see it. We found that the construction of the hut had not been carried out as originally intended in regard to a fascia-board.

104. *Mr. Gray.*] That was remedied?—Yes; since that I have heard no complaints. The only information I have about the matter is from the "man in the street" and what I have seen in the Press at times—that there have been complaints about draughts coming from between the corrugations. Special provision was made in the drawings for that, which we thought would be sufficient. It may be that shrinkage of timber has had something to do with this, but I cannot see any reason why it should not have been prevented when the occasion arose.

105. It would be a simple matter?—Yes. If tar and sawdust were jammed in that would fix it.

106. I suppose that many men who went into those hutments were unused to sleeping in such places, coming direct from their homes?—That is very likely.

107. They would feel it more than men accustomed to camp-life?—Yes.

108. You have done a good deal of camping out yourself?—Yes.

109. You would have no objection to sleeping in one of those hutments?—Not the slightest.

JOSEPH PATRICK FRENGLEY sworn and examined. (No. 10.)

1. *The Chairman.*] What office do you hold?—Deputy Chief Health Officer for New Zealand.

2. You might perhaps mention your qualifications?—I am a Bachelor of Medicine, and a Doctor of Medicine of the Royal University, Ireland, a Fellow of the Royal College of Surgeons, Ireland. I hold the diploma in Public Health of the Joint Royal Colleges of Physicians and Surgeons of Ireland, and also diploma of Public Health of the Royal College of Physicians, London, and Surgeons, England.

3. How long have you held the position of Deputy Chief Health Officer of New Zealand?—Some two years, sir. I have been a district officer since 1902—thirteen years; my position includes also the Deputy Inspector-Generalship of Hospitals.

4. You have had certain duties to discharge in connection with the camp?—Yes.

5. What was the first duty you had to undertake?—The first duty—I was asked to confer with Mr. Morton and Mr. Campbell, and go into the question of the plans for the hutments, the order of reference being the plans actually prepared by the military authorities and a report to the Minister of Defence. The plans disclosed that the hutments were being built upon open-air principles—that is to say, there was a through-current space, a space allowing for an inlet and outlet of fresh air. That principle is by no means new to New Zealand. I present to the Commission the plan used by my Department since 1904 for shelters for consumptives, which shows the system of ventilation under the eaves, and on a par with that for these hutments. These plans are the outcome of much detailed work by Public Works officers and Drs. Mason and Makgill. We have had a medical officer from the Brompton Hospital, London, now Medical Superintendent of the Cambridge Sanatorium, and he has expressed very great satisfaction with the arrangement of our open-air shelters. Therefore, when the Defence Department suggested huts on the open-air principle, knowing that our shelters had given satisfaction for delicate persons, I thought hutments on a similar principle would give every satisfaction for the men at the camp.

6. These were the conditions under which they would be housed in the field?—Yes. Further, by Army Regulations, 1912, page 1010, it is provided that "The windows of every barrack-room will be opened sufficiently to allow of free ventilation, and will be kept open as far as the weather and season admit." In a former regulation of 1906 it said that the top sashes were to be kept open 3 in. Now, these huts provide for a 4 in. top sash right round the whole building. At Hamilton there has been put up a building open to the front, and it has given very great satisfaction. It is built of ferro-concrete. Further, there have appeared in the papers within the last two months references to the wonderful success of the open-air wards at Cambridge, England. There appeared in, I think, the *Sketch* pictures, which were shown to the Minister of Defence, showing by photographs the construction of these places. Unfortunately those pictures have got lost, but I am making a search for them to endeavour to show the Commission that the walls of these hutments are practically identical with the walls of the open-air shelters at Cambridge, about which we have heard such good reports.

7. *Dr. Martin.*] The walls are made of uralite?—Yes; that is a form of asbestos. We decided that asbestos would be useless in a camp; because a man could put his arm through it; it would be broken very easily.

8. *Mr. Ferguson.*] You could not have got a sufficient quantity?—That is so; moreover, a large amount of it is made in Germany. So that I hold emphatically that these hutments have been designed on the most modern lines; and I would like the Commission to allow me to mention that Dr. Makgill, when consulting with the authorities at Home, found that the Local Governing Board then was discussing the making of shelters for consumptives similar to those which New Zealand had erected something like ten years before. They were considering the same plans as we had already worked upon. I deny that these hutments are draughty. I admit they are cold on a winter's night, but you should provide the man then with more blankets; keep the body warm, but do not do it by making the air stifling. Reference has been made to the cubic space in these hutments. Roughly speaking, they provide 300 cubic feet per man, and it has been said that a departure has here been made from the principles laid down in military hygiene books. The authority selected by me all along has been Lieut.-Colonel Firth, Royal Army Service Corps. He is also the standard authority on general hygiene. He is Professor of Military Hygiene in the Army, and Lecturer on Camp Sanitation. He lays it down that there should be provided 600 cubic feet for a barrack and 57 square feet. For huts he lays it down as 500 cubic feet and 50 square feet. But, sir, my point is this: that the inlet and outlet of air laid down in these text-books is 1 square inch per 60 cubic feet. Worked out on that principle 300 square inches would have done for these hutments. It would have been practically useless to provide for the admission of air through about 300 square inches, and the provision that has been made in these hutments allows for nearer 5,000 square inches, which in this climate is much more reasonable. All rules and regulations as to cubic space, in England or elsewhere, are purely arbitrary. It is laid down that a soldier in barracks requires 600 cubic feet, and with these small inlets it is laid down that a soldier in a hutment requires 500 cubic feet. If that poor fellow happens to leave the Army and goes to an artisan's dwelling the Local Governing Board has laid it down that 300 ft. is enough for him. If he drops lower down in the scale of life and has to go on a canal-boat, the same Board has decided that 60 cubic feet is enough. These figures are not scientifically assigned. Then, if he happens to get ill and has to go into a hospital with bronchitis he must have 1,000 ft. If he requires a surgical operation he must have 1,500 ft., and for an infectious trouble he must have 2,000 ft. In the Infectious Diseases Hospital, Wellington, of which I had the initial planning, we there reduced the space from nose to nose of the patients from 12 ft. to 9 ft., 12 ft. being the Local Governing Board's standard (England). We decided upon that course because we were providing much more ventilation current through the ward than is provided for in the English plans, and in that case, though the air-space is very much less than is laid down by the Local Governing Board of England, there is no one but has praised our hospital here as being one of the most up-to-date and best-arranged infectious-diseases hospitals that they have seen. A reduced air-space is not a drawback provided you get more air. There is a big difference between the available air and air-space. Take a man in a paddock—his air-space is infinite. If you put a box round him 10 ft. by 10 ft. by 10 ft. it is reduced to 1,000 cubic feet; but if that box has an opening in the four sides of 4 in., it is wrong to say that that man has only an air-space of 1,000 cubic feet. In regard to the criticism of these hutments, it cannot be considered a fair thing to say that that man has only 300 ft. of available air. I say his actual air-space is less, but the amount of air given to him is a long way ahead of the requirements for the English barracks. I am a distinct believer in plenty of air. It would be monstrous to have an opening of 1 square inch for 60 ft.

9. *Mr. Ferguson.*] And I presume that those are for permanent hutments such as they have at Aldershot?—Barracks.

10. They have practically become barracks: therefore it is necessary to have a larger capacity than for hutments used for temporary purposes?—That is so. I have always regarded these hutments as of a partially permanent character, and my colleagues on the Board have referred to them as being of a partially permanent character. We never at any time regarded them as permanent barracks. Now, sir, these hutments are designed for fifty men as an absolute maximum.

11. By the military?—They were put before us by the military to hold fifty men, and in view of the ample air-space I, as a member of the Board, decided that they would be suitable for fifty healthy men, but absolutely no more. It is a big number—fifty—and my reasons for fixing the maximum at that were (1) the fact that every man who goes into camp is medically examined first; (2) that generally our soldiers who have gone away are a fine physical type of man; and (3) it is an axiom in the Army that every officer ought to know everything about his men, and that should hold good for the Medical Officers also. He ought to be cognisant of each man's physical condition, and with adequate inspection he ought to have been able to pick out any man in that hut who had a temperature or was out of condition. By that means you could have continually fifty men in those huts, but absolutely no more. Once a man becomes infected, however, then I do not say that fifty men should be put into those huts, particularly when there are grave infectious diseases about. And that is why I say it was wrong to put more than fifty men into a half-hut.

12. Has that been done?—On the 29th June I inspected the huts at night-time. It was a muggy, calm night. There was no wind. I wished to satisfy myself if there was too much air. Could the opening be said to be too small for such conditions as that? Because these huts have to serve for windy weather and calm weather, summer and winter. I found fifty-five men in one hut. I was never consulted as to whether more than fifty men could be put into one of those huts. I always regarded fifty as the maximum. I was then informed by the Medical Officers

going round with me that they had had more than fifty in a hut. I have no knowledge of any other occasion when a hut contained more than fifty-five men, apart from this one—no personal knowledge.

13. *The Chairman.*] Did you condemn the practice of putting more than fifty men in a hut? Who would be responsible for that number going into one hut—the medical authorities or the military authorities?—Most certainly, the medical authorities.

14. This was after the infection had started?—Yes.

15. *Dr. Martin.*] Do you think the medical authorities were responsible for that?—Certainly, the medical authorities should have been asked whether it was safe or not.

16. But the officer in charge of the company ought to know?—I could not say.

17. *Mr. Ferguson.*] You think the medical men should be asked before more than fifty are put in there?—Yes, they should be consulted. Otherwise it is possible for any one to put in very nearly a hundred men. The buildings will hold easily a hundred men, but that is not what they were designed for.

18. *Dr. Martin.*] But this could occur frequently without the doctors knowing it?—I do not deny that.

19. The doctors would have no method of finding out whether more than fifty men were in a hut?—But I do not think that Trentham Camp was so badly disciplined as to allow that to go on.

20. *The Chairman.*] Without somebody's consent or knowledge?—That is so.

21. *Mr. Ferguson.*] You have no personal knowledge from your military knowledge as to what the military duties of a medical man would be?—No, sir.

22. *Dr. Martin.*] This may become a definite charge against the medical men: can you give me the names of the medical men who went round that evening?—Captain Bogle, in the presence of Major Stout and Captain Simpson, now with the hospital ship. I asked Captain Bogle, and he said there had been other cases, but I cannot say when, nor have I any further information more than the fact that I then found fifty-five men in one hut.

23. *Mr. Ferguson.*] But did he know the number from his own knowledge?—I asked him if there had been more than fifty in a hut at any one time and he said "Yes."

24. Did Captain Bogle himself know there were more than fifty, or did he ask?—I requested to be shown a full hutment, and he brought me to this one himself, No. 33.

25. *Dr. Martin.*] But unless there had been any sickness in that hut, could Captain Bogle have known of the overcrowding officially?—No.

26. The military put their men into these huts—fifty to each hut—but the Medical Officer does not inspect those hutments unless there are any men sick there. As far as your knowledge goes, there had been no sickness in this hut?—No; they were all sleeping comfortably.

27. Then there was no blame attachable to Captain Bogle or the medical men?—No; I could not assess the blame.

28. The medical men are not to blame for overcrowding in this particular hut?—I say there should not have been over fifty in that hut.

29. But you say that you think the Medical Officers were responsible?—Yes.

30. Why?—I gave that as an opinion—that the Medical Officers would have been consulted; I cannot say whether it was a fact.

31. If these men were put into that hutment without consulting the Medical Officers then the military were to blame?—Yes.

32. Did you hear whether the military had consulted the Medical Officers on this occasion?—I believe I did, but I am not sure.

33. You see the importance of your definite charge?—Yes.

34. Can you give me the name of the military divisional officer for the day—the orderly-officer?—No; I only went round with these medical men.

35. Lieut.-Colonel Potter was Commandant of the camp?—Yes. I went out on a close night, and I am satisfied from the condition in which I found the air there in that hut that to have such a number of men confined in that hut under such meteorological conditions was dangerous to the health of the men. It was decidedly close in there, with fifty-five men.

36. There was no wind blowing?—That is so. I do not say it was injurious to their health with fifty-five men in the one hut.

37. *Mr. Ferguson.*] You mentioned 4 in. as being the space right round: is that what the huts were built with?—That is what our plan shows them as having.

38. *Dr. Martin.*] That is the only occasion on which you went round at night?—Yes.

39. Was it in consequence of something that you had heard that you went out?—Yes.

40. *The Chairman.*] There had been a complaint then?—That too much air was being admitted. It was not exactly a complaint. It was in consequence of a report that I went out.

41. *Dr. Martin.*] This was at the time after the epidemic of cerebro-spinal meningitis had been diagnosed?—No; at that time every one was beginning to be nervous about it.

42. There were six deaths in Wellington Hospital in June, and it was at this time that you make the definite statement that the hut was overcrowded?—Yes, with five men over the number allowed.

43. *The Chairman.*] Did you count them?—They were counted by Captain Bogle and Captain Simpson separately, who reported outside that there were fifty-five.

44. Did you try another hutment?—I did, and found only thirty-three. I then tried the sergeant-major's rooms, and I found (that was the so-called sample hut in which mistakes were made) that they had boarded up every opening, and of the eighteen movable panes of glass only one was opened, and that only about 4 in. The consequence was that that hut, which contained only nineteen men, was as stuffy as the one with thirty-three, where the windows were open all the way to the top, and nearly as bad as the one with fifty-five men. I regard that as

a bad example to the rest of the men, to think that their officers should keep their windows shut on an absolutely calm night—decidedly damp, too.

45. Did you examine all the hutments that were occupied?—No, just these three, after consultation with the Medical Officers, telling them what I wished to do.

46. These were selected at random?—Yes, except in the case where I asked to see a hut with fifty men in it.

47. *Dr. Martin.*] Did you make any recommendation to the medical men that night?—I did. I said there should not be more than fifty men in a hut. I also said that I was satisfied that to close up the openings, as had been demonstrated that night, would be very dangerous to the health of the men.

48. *The Chairman.*] Did you draw special attention to the way in which the sergeant-major's hut was closed up against the air?—Yes, sir; I put it all in writing and reported it to the Defence Department.

49. *Dr. Martin.*] These names that you have told us of to-day?—Yes.

50. Had you any position at this time to insist upon your recommendations being carried out?—No. I have held a position since 1909 as Sanitary Officer.

51. In what capacity did you visit the camp?—As Deputy Chief Health Officer.

52. Did you go out again to see that your suggestions had been carried out?—No, I have not been out since.

53. *Mr. Ferguson.*] Your Department does not, but do the military officers or Medical Officers give any lectures upon sanitation to recruits when they come into camp?—No, sir; our officers do not, except those who have been finally attached to the Defence Department.

54. Have you any knowledge as to whether the medical men attached to the Defence Department do so?—I cannot say. The next point I wish to refer to is the question of the aggregation of the buildings together—that is, the distance between the hutments. This matter is dealt with in Burdett's Rules on Hospital Construction. The best arrangement is what is called the pavilion system—a number of buildings off the main corridor, which we are accustomed to. It lays it down that if of two wards one be the higher the distance between should be the height of the higher, and that is exactly the rule that has been followed in assigning the distances between the hutments—roughly, one and a half times their height.

55. *The Chairman.*] The object being to allow the free passage of sunlight and air?—Yes; and that being an established rule for years, I can be emphatic in saying that, with regard to the air-space, it is sufficient between the hutments. I would like to see these spaces between the hutments planted with grass to prevent dust. There is no other standard of which I am aware by which one can say how buildings should be laid off on an area of ground.

56. *Dr. Martin.*] In hospital pavilions it is quite customary to have temporary urinals between the different pavilions, to be used by the patients at night-time?—That is not so.

57. How does that affect the question?—I look upon it that the proper way to deal with that matter would be not to alter the distance between the huts, but to make the conditions more sanitary for these temporary urinals.

58. By putting them in the middle of the street?—Yes, or by concreting round them, so that any splashings could be mopped up completely and easily.

59. *The Chairman.*] They have stone bases for them?—It must be something that will prevent the urine splashing about on the ground and remaining there. Now, I would like to appeal to the Commission to alter the huts, though it will probably appeal to you as a kind of contradiction on my part. My reasons are these: I am a great believer in mental suggestion, and I am quite satisfied that every doctor practises mental suggestion. The suggestion has been made and promulgated right throughout the Dominion that Trentham Camp is nothing more or less than a death-bed. Most of the criticism has fallen upon the hutments, and it has been argued that, because their erection (or, rather, the first use of them) unfortunately coincides with the outbreak of the epidemic, the hutments are at fault. In consequence it has been suggested to men, to doctors, and to officers that there is something wrong with the Trentham Camp, and particularly with the hutments. I hold that that suggestion is at the present moment reducing the resisting-power of the soldiers, doctors, and everybody. Some of them are in a sad condition in regard to this epidemic disease. It has been suggested to the men going out there that things are very much worse than they realize, and I do think that these men are in greater danger of contracting the infection than they were before the suggestion was made to them that things were very bad. I regard the camp as a sanitarily sound camp. The sanitary conditions are by no means defective, and therefore I would appeal to the Commission to alter the huts in some way (though it may sound like a contradiction), because if they still continue to be occupied by fifty men, then men will always have the idea that they are going into death-beds, which is practically rubbish, since we know that we are putting consumptives into similarly ventilated shelters.

60. It might be desirable that you should deliver lectures on the lines upon which you have addressed us here?—I would be very glad to do so, sir. In plain language, the whole Dominion is in a funk, from politicians right down. Then I would suggest that the number of men to be housed in each hut be reduced from fifty to thirty, and that they be provided with sleeping-stretchers, and not asked to sleep on the bare floors.

61. Movable stretchers?—Yes, movable, so that the place can be more readily cleaned out. My objection at the beginning to the men sleeping on stretchers was that they might as well become accustomed to sleeping on the ground. My other objection to wooden stretchers was that it meant more furniture, and therefore more difficulty in cleaning out the huts.

62. If movable stretchers are adopted the men will leave this place, and then have to accustom themselves to sleep on floors or bare ground?—Yes.

63. And one object of the camp is not only to give them military exercises, but also to accustom them to what may be called the hardships of military life?—That is so.

64. And you cannot send men from feather beds to the front?—That is so. I only advance these reasons from this point of view: that a large proportion of the men are in a condition of funk on account of what has been published and said, and I think that some alterations to these hutments in the directions I have indicated will give more comfort and increase the natural resistance of the men. The third point I wish to make is that flaps should be placed over the permanent openings, hinged below. You will see them on the sanatorium plans I have handed in, and that these flaps be entirely under the control of some responsible officer.

65. So that they may not be shut up when they ought not to be?—That is so. A man ought to be accustomed to breathing fresh air at any time. So that you will see that I appear to contradict myself in saying in one breath that these hutments are quite satisfactory, while subsequently I urge that alterations be made in them to have the necessary mental effect upon the men.

66. Are you not in a position to make this recommendation at once?—It has been made, sir. There is just one further point with regard to the epidemic. It is a fact that the organism of influenza, the organism of pneumonia, the organism of cerebro-spinal meningitis—all these organisms cannot live for any length of time outside the human body. Unless special precautions are taken the organism will die before you get it to the laboratory in Wellington from the camp. It follows, then, that the diseases at present in the camp, influenza (I leave out measles), pneumonia, and cerebro-spinal meningitis—these organisms would not live about the ground of the camp. These epidemics are therefore not associated with insanitary conditions. It means that the epidemic has been carried to the camp by what nowadays are called "carriers." I would also mention the fact that during the last six months we have had in the Wellington District influenza of an extraordinarily severe type. And I also make a point that in one particular instance that influenza of a severe type arose in a public school which is practically, from a sanitary standpoint, one of the best south of the Line—a new building.

67. Where was that?—I will write down the name for you [handed to Chairman]. When the boys returned after their summer holidays influenza broke out, and approximately 80 per cent. of the boys attending that school caught this severe type of influenza, keeping them in bed from three to four days. These boys came back to the school in good condition. They went into a perfectly sanitary building, under good discipline. Influenza breaks out; there is a very capable doctor there and a capable nurse, and yet we find that 80 to 90 per cent. of the boys are attacked. So that we have had in the last few months in the Wellington District severe influenza. It was said that the outbreak in that particular school was due to a boy from Wellington. Of that I cannot be sure, but I know that prior to the outbreak Wellington had a number of cases of severe influenza.

68. *The Chairman.*] Now we will deal with the question of the hospital: do you know who proposed it, or how did it come into existence?—The first I knew of it was by a plan submitted by the Minister of Defence—a plan, I understood, prepared in the Defence Office from suggestions made to the draughtsman by the Medical Officers attached to the camp.

69. What date?—Without the file I could not give the date. It was some time after February last. I will get the date.

70. Will you give us the names of the Medical Officers in camp at that time?—Speaking from memory, there is a memorandum, I think, signed by Colonel Purdy, Colonel Elliott, and, I think, another Medical Officer whose name I cannot remember.

71. Could you get the file?—Yes. That plan was submitted to Mr. Morton, Mr. Campbell, and myself, and it was regarded as unsuitable, and as a result an entirely new plan was prepared from which the Government Architect prepared the plans which I understand have been before the Commission.

72. When you say it was regarded as unsuitable, would that mean by you?—By myself and the other members of the Board, after I pointed out various reasons.

73. *Dr. Martin.*] The committee composed of Colonel Purdy, Colonel Elliott, and the other man agreed with you?—Yes.

74. Their suggestions were embodied in the first plan?—Yes.

75. When the Board decided to alter the first plan and adopt a new one, were Colonel Purdy, Colonel Elliott, and the third officer consulted?—I could not say. We reported back to the General Officer Commanding.

76. *The Chairman.*] Did you understand that this hospital was to be paid for partly by subscriptions raised from outside?—I understood that from the newspapers.

77. *Dr. Martin.*] Then the plan, after being sent back from Colonel Robin, was sent back to you again?—It was decided to go on.

78. Could you give the date you sent the new plan?—No.

79. *The Chairman.*] Could you get the particulars?—Yes, I will.

80. *Dr. Martin.*] We would like an outline from you as to what you considered the object of the hospital at Trentham was to be, what nature of cases you have to take in, what equipment you considered necessary, and any other point?—As I understood the needs of the hospital it was to be only regarded as a camp hospital in front of the base hospital, which was to be the Wellington Hospital; that no major surgery would be done there—minor operations would be performed; and there was introduced into the plan, as distinct from the plan submitted, provision whereby case-isolation could be carried out—that is to say, there were four rooms provided in which a man might be placed quickly whose case raised any doubt as to the diagnosis being infectious or otherwise. There was in the original plan provision for eighteen beds. There was no provision for dealing with one case separate from the eighteen.

81. Just keep to the present hospital ?—In the present hospital ten beds are provided for in the main ward, and two in inside wards, and four in case-isolation wards. There is also room for two to six cases on the veranda.

82. Quite independent of the inside ?—Yes. The veranda has been designed for cases separate from inside. The plan provided for the main block being separate from that connected with the general block. As a part of any modern hospital pavilion there is a room known as the "treatment duty room," which we call it in New Zealand, as distinct from the "diet duty room," where nurses would prepare the food; and it seemed to the Board easier to take the treatment duty room and put it into the administrative block near the main block, and in that position it could be used for minor surgery and cases in the camp as well as cases from the ward. The treatment duty room is provided with a special "Fama" floor, with the object of its being aseptic as possible. It will have proper surgical washing-basins, and in that room would go the sterilizers for instruments and dressings. That room is also provided with a good light so that in the event of an urgent operation requiring to be done at the camp it could be carried out in that room.

83. There is no operating-room provided in the hospital ?—No.

84. Is there any room you call the operating-room ?—That is the room marked on the plan "Treatment duty room—minor surgery."

85. And in that room you keep your sterilizer ?—Yes.

86. And that room is in a distinct block from where the patient is under treatment ?—Connected by a closed corridor.

87. What is the light arranged in that room ?—A light to the south-west.

88. My recollection of the hospital is quite different. Is the present operating-room at Trentham not in the same room where the patients are to be treated ?—[Plan explained to Commissioners].

89. You say that this hospital is only designed to treat minor cases ?—That is so.

90. What do you mean by a "minor case" in surgery ?—I had in my mind such a thing as a man chopping his finger badly, or getting a kick, or perhaps breaking a leg.

91. I put this case to you: A man gets kicked by a horse in the camp on the skull, and gets a compound depressed fracture of the skull: where will that man be taken to ?—Requiring an operation at once ?

92. He is found lying in the camp with a compound compressed fracture of the skull: where would he be taken to ?—Straight into the operating-room, I take it.

93. He would be taken into the hospital ?—Then, there are two extra rooms provided for. If it were a serious case he would be put into one of the side rooms.

94. When an urgent operation is deemed necessary, as it always is in such a case, where would he be taken ?—Into the operating-room.

95. Where there is everything in the room ready to perform major surgery ?—I have not gone into the question as to the sterilizers—that has been left entirely by me to the military officers, who would be asked to say what fittings would be required.

96. Now, here is a man with a compound depressed fracture of the skull brought into this operating-room: would everything necessary be in the room to treat him—every modern appliance ?—So far as I am aware there will be.

97. That is major surgery ?—Yes.

98. Then you admit the hospital is for more than minor surgery ?—Intended for minor surgery, but equipped for possible major surgery as a matter of emergency.

99. You admit the present arrangement is wrong: you stated it was only intended and designed for minor surgery ?—Quite true.

100. Now, I put it to you that a major case arrives, and you say it would be put into the hospital ?—Yes.

101. Then you admit the present arrangements are wrong ?—No, I do not. The arrangements that are there are quite as good as could be obtained in any other circumstances where a major operation is required and a big hospital is not immediately available.

102. You will admit that a compound depressed fracture of the skull is a major operation ?—Yes.

103. And you say that could be efficiently done in that room ?—Yes, safely done.

104. Therefore you would have all the modern surgical instruments for that type of case ?—Yes.

105. And all the necessary sterilizing-apparatus ?—Yes.

106. Then I put it to you it will be arranged for major surgery ?—It will be arranged for major surgery.

107. Then your statement that it will be only arranged for minor surgery is not correct ?—I qualified it by saying "minor surgery, and major surgery as a matter of emergency."

108. "As a matter of emergency" you could leave out ?—Oh, no, as a matter of emergency.

109. Then, supposing a man is brought in with acute peritonitis from ruptured abscess of the appendix: that is a surgical emergency. Would that be done there ?—Certainly.

110. Do you tell me that every arrangement will be there to treat a severe abdominal case such as that ?—If it is not, the camp will not be properly equipped.

111. Do you say that the hospital will be equipped to treat such a severe case as that ?—I do.

112. Have you ever heard of a hospital which takes on major cases having the sterilizing-instruments in the operating-room ?—Yes.

113. And approved of it ?—No. Most of our small hospitals in New Zealand have that arrangement, and almost all private hospitals.

114. Mr. Morton and Mr. Campbell told us that at the meeting of the Board it was their impression that this operating-room and the hospital generally was designed only for minor surgery ?—That is so.

115. And it was their impression that no major work would be done there ?—That is so. The major work was to be taken to Wellington, but the cases you have quoted are cases that could not

be transferred, I take it, by a good ambulance all that distance to Wellington. They would have to be done somewhere. Even in a tent a man has to be attended to.

116. Those are cases you would get in camp?—Yes.

117. And I want to find out if the hospital is properly equipped to deal with them. I would like to ask who would operate on those dangerous cases when they arrive in this hospital—what surgeon?—That I cannot say.

118. *The Chairman.*] I suppose it would be in charge of what is called the Principal Medical Officer?—Yes.

119. *Dr. Martin.*] You understood that the medical profession had contributed largely towards the erection of the hospital?—Yes, that is so.

120. As far as you know, their opinion was not asked as to its construction, nor was their opinion asked in any way?—I could not say that. So far as I know, the plan which I referred to as being prior to that one was the outcome of the medical opinion of three or four men. As to whether they consulted the medical profession generally I do not know.

121. But the Board consisting of Mr. Campbell, Mr. Morton, and yourself did not cousult them?—No; our duty was to report, and we put it in writing.

122. Do you think they ought to have been consulted?—Most certainly. Not by us, but before that.

123. Were the military Medical Officers consulted in regard to the new plan, such as the Principal Medical Officer of the New Zealand Forces and also the Wellington District?—I believe I am right in stating that Colonel Purdy, Director of Medical Services, told me he was quite satisfied with the new plans. I could not swear to it, but it is my belief he said that he was satisfied with them.

124. In regard to the light in the operating-room, is that a good light?—It is not a good light for an operating-room for major surgery.

125. Is it satisfactory?—I believe it will be quite satisfactory. There will be electric light provided in the hospital.

126. Do you consider it a satisfactory light for an operation on the abdomen or brain?—No.

127. Then in emergency cases a surgeon would be hampered by want of light?—He would have to make the best of it in emergency cases.

128. You consider the light there is not sufficient for performing major surgery?—No, certainly not; it is not designed with that intention.

129. Nor the surroundings either for major surgery?—The surroundings are all right.

130. With the sterilizer in the same room?—There is no objection to that. It is an objection of convenience in general hospitals.

131. You see no objection to that?—I do not. The question of steam is hardly a sanitary objection.

132. *Mr. Ferguson.*] What would have been the difference in construction to have made this room suitable for major operations? You have said the light is unsuitable: what would you have had to do to make it suitable?—Put in a bigger window; and there is a considerable difference of opinion in the medical profession as to whether skylights are necessary, but the majority are in favour of skylights.

133. Would it have added materially to the expense, or was there any other reason why it was not adopted?—It would not have added much towards the expense, but in my opinion and in the opinion of others it was desirable that no encouragement should be given to major operations being done at the camp. They should be done, if possible, at the Wellington Hospital.

134. Yes, I agree with that; but the emergency may be only once in a dozen years, and when that emergency does come, is it not reasonable to have all facilities to deal with the emergency?—Yes; but I think a competent surgeon could perform a major operation in that room, and his patient would come out all right. Many emergency operations have to be performed in ordinary bedrooms, and many surgeons are successful.

135. In regard to fitting up the building, I notice that some wards are plastered, but not the whole building. Would it not have been advisable to have gone to the additional expense of plastering throughout?—As far as I remember, the main reason for that was to get the hospital up and finished as quickly as possible. It was thought the plastering meant further delay on account of drying, and therefore the plastering was only put in certain places.

136. Still, the wards you have got are plastered, and they cannot be occupied till dry: is there any reason why the passages and the rest of the place should not be plastered? If you had to start again, with your present knowledge would you still put it in with V-boarded lining?—I think so, with good seasoned timber, when painted.

137. Is the painting included in the present contract?—I understood so.

138. You do not know what the finish is to be?—Painted in white enamel, I understood.

139. You mentioned that the passages were to be enclosed?—That particular one I mentioned leading to the administrative block.

140. And not the others?—The other passages represent merely covered ways.

141. *Dr. Martin.*] The hospital cost £2,800?—About that.

142. Do you think the operating-room and the whole of the hospital represents value to that?—It seems to me a very high estimate.

143. You think it is a rather a costly business?—I cannot understand where the cost comes in, because there is no "frill" about it; but I can say that the cost of hospital construction in the last few years has gone up extraordinarily. The cost per bed is becoming a very severe tax on hospital bodies. In this case every building is designed to be readily extended, and at the time that was designed the Matron-in-Chief advised that accommodation for three nurses was quite sufficient, with the orderlies to assist.

144. When designing the hospital you reckoned on a sick-list of one in a hundred?—Yes, about that.

145. And what would be the number of men in the camp ?—We were assuming about four thousand in camp.

146. Then for seven thousand it would not be sufficient ?—It would require to be extended.

147. *The Chairman.*] Is the 1 per cent. a constant factor or per annum ?—A constant factor. But that forty in number must be regarded as being distributed between the base hospital and the receiving hospital.

148. Is it not a very substantial building for a temporary or semi-temporary camp ?—I regard it as a substantial building. I advised that it would be unwise to put up anything in the nature of a partially permanent hospital structure. It should be as sound as it could reasonably be made.

149. One that would be available for a camp if it is continued there for two or three years ?—Certainly.

150. It is not intended that sick-parades shall always take place near this hospital ?—That I understood was the view at the time. The number of sick is so very great at present that it would be necessary to make other arrangements, or else to make the men congregate in one place. With ordinary sick the men would go down there to be examined.

151. *Dr. Martin.*] You assume that Wellington is going to act as a base hospital to the camp ?—Yes.

152. Why assume that: Wellington is a civil hospital, and has just room for civil patients ?—It is a civil hospital, but it is not a civil hospital in the same sense as a civil hospital at Home. The expenditure for civil hospitals here is made up out of consolidated revenue and local rates.

153. *The Chairman.*] From the General Government ?—Partially.

154. They are under the local bodies ?—They are controlled by the local bodies, but half their money comes from the consolidated revenue, and therefore the Defence Department would pay and are paying the cost of every person admitted to the local hospital. Further, Wellington Hospital is absolutely equipped in every direction, with X rays and everything else. In order to work the hospital at the camp to eliminate entirely the making-use of Wellington Hospital you would have to put up a building costing something in the way of £10,000.

155. *Dr. Martin.*] Hospital marquees ?—That would be for an entirely temporary camp.

156. They have been used entirely from the beginning of the war in France ?—But I am afraid with the feeling in New Zealand at present New Zealand would not stand the troopers being treated in tents.

157. Coming back to the 29th June: you inspected the hutments, and you said it was found that in one hut there was overcrowding ?—That is so—five more than the number ought to be.

158. And you drew the attention of the Medical Officer of the camp to that fact ?—Yes, he counted them himself.

159. You visited the hospital as Health Officer and not as military Medical Officer ?—Yes.

160. Did you make a report to the Health Department that you found overcrowding ?—I reported to the Director of Military Hospitals, Dr. Valintine.

161. Was he at that time in the same position ?—He was.

162. Was any action taken by the Health Department in that matter ?—I cannot say what action was taken.

163. It would be under your Department ?—Yes, it would be.

164. Did you see that some action would be taken ?—I did not. I did not go out personally to the camp.

165. But you were in the Health Department at that time, and you found things were not right: did you take any action ?—No, not beyond reporting to the Director of Military Hospitals.

166. Cannot you understand that you and Dr. Valintine are the heads of the Public Health Department ?—Yes; but we have no standing in the camp except under the new arrangement as Director of Military Hospitals and Deputy Director. I went there in the capacity of an individual who originally was concerned to design the hutments.

167. The Health Department found the huts overcrowded, and I want to know what action was taken to prevent a repetition of that ?—I think it would be necessary to ask Colonel Valintine, to whom I directed my report.

168. Your responsibility ended when you reported to Colonel Valintine ?—Yes.

169. You never inquired further in the matter ?—No.

170. Can you tell me whether there has been any scarlet fever in the camp from the time the camp was opened till the present day ?—One case was discovered amongst the measles.

171. Will you give the date of that ?—No, I cannot.

172. Recently ?—Yes, and removed to the Infectious Diseases Hospital; and another one within the last few days.

173. From Trentham ?—I think, from Kaiwarra. That was also removed to the Infectious Diseases Ward.

174. And can you tell me what date the patient was taken from Kaiwarra and sent to the Infectious Diseases Hospital ?—No, but I will get the dates.

175. And would you find out if all those who came in contact with that man were isolated ?—Yes.

176. Can you tell me whether any man who came in contact with this last scarlet-fever case has been discharged to go home or allowed free ?—There is a special officer in charge of those cases.

177. I am asking you as Deputy Director of Public Health ?—I do not know.

178. Could I get that information ?—Yes, from Dr. Goldstein.

179. Is it under the Public Health Department ?—Yes.

180. Was there any other case of scarlet fever ?—Not that I know of.

181. Not in the Wellington District affecting any military man ?—Not that I know of.

182. Any soldier ?—Not that I know of.

183. Will you find out if there was a case at Masterton amongst the soldiers ?—I will.

184. You told us that in cerebro-spinal meningitis the organism micrococcus will die very easily under exposure away from the human body ?—Yes.

185. And that there is a difficulty in bringing the swabs from the nose and throat to a laboratory ?—Yes.

186. And difficulty in making a culture ?—Yes.

187. There was a difficulty in bringing those swabs from Trentham Camp to a laboratory in Wellington ?—Precautions have to be taken. There is a difficulty.

188. And elaborate precautions have to be taken ?—I take it that putting it into a Thermos flask will keep it just warm enough.

189. Do you think a laboratory should be established at Trentham to overcome the trouble ?—I hardly think so, because of the delay of getting it going. It would be better to improve the present arrangements.

190. You do not think it is necessary ?—I do not think so. A motor-car would run at a quicker speed and meet all the difficulties practically.

191. Measles is not a notifiable disease now ?—No.

192. Cerebro-spinal meningitis is ?—Yes.

193. Pneumonia is not ?—No.

194. If in any community there is an outbreak of measles, does the Health Department take any action ?—We control the measles only in so far as school attendances are concerned. We have regulations advising the schoolmaster not to allow a child back to school from an infected house, and there is under the Education Act power given to the schoolmaster making it lawful for him to prevent the attendance of any child likely to convey any contagious disease to any other child. "Contagious" includes "infectious," and measles are dealt with under that.

195. If there is an epidemic of measles followed by pneumonia, would you take any action ?—We would take action, but we have no legal authority to do it. We would deal with it as a special epidemic of disease.

196. Supposing in a town in New Zealand, say, Masterton, there is an epidemic of measles followed by pneumonia in which there is a high death-rate, would the Health Department, as at present constituted, take any action ?—We would certainly if we were cognisant of it.

197. What would you do ?—We would adopt such precautions as in the case of diphtheria, and isolate them.

198. Much the same as in regard to pneumonia ?—Yes.

199. When the Health Department heard of the outbreak of measles followed by irritant pneumonia, did they take any action ?—No.

200. When did the Health Department know that virulent measles had broken out at Trentham ?—We knew there was measles amongst the troopers when the first troops left for the front, in October, 1914.

201. *The Chairman.*] It was an epidemic then ?—It was amongst the troops. It had broken out on the ships.

202. Had it broken out on land before they went ?—Yes.

203. *Dr. Martin.*] You are aware that a very virulent outbreak of measles broke out at Trentham followed by pneumonia ?—Yes.

204. The Health Department know that ?—Yes.

205. Was any action taken by the Health Department to cope with it ?—The whole matter is in the hands of the Defence Department.

206. You took no action ?—No. While the Chief Health Officer was away I was Acting Chief Health Officer for New Zealand, and I offered the services of myself and every officer of the staff to the Defence Department—to the Commandant.

207. What date was that ?—I will get you the letter.

208. And what reply did you get to that offer ?—They thanked me for the offer, and said that our services would be used if found necessary.

209. Therefore the Health Department is in this position : they recognize that a very grave epidemic is going on at Trentham, but their hands are tied, and they could not take any action at all ?—That is so; we were outside.

210. The Health Department were willing to help and anxious to do so, but they could not come in ?—Yes.

211. Owing to the fact that the illness was amongst men serving under the colours ?—Yes, that is so.

DENIS HANNAN sworn and examined. (No. 11.)

1. *The Chairman.*] You are a clerk in the Defence Stores at Wellington ?—Yes.

2. You produce a list of boots that have been received into store since the 1st April up to the 19th July ?—Yes.

3. I see you produce requisitions that came in on the 25th May, and in regard to the order for the extra 4,000 pairs of boots the Commission would like to know what special measures you took to obtain them ?—The requisitions illustrate the manner in which they are dealt with. [Witness explained the requisitions and papers attached.]

4. We come now to the deliveries in May. I understand that in April there was a requisition for 2,200 boots. What date did you get the requisition to supply ?—On the 21st April the order was written for 2,000 pairs of boots.

5. That is over and above the ordinary supply?—Yes.

6. When were they sent out?—There were several issues. They were ordered and sent out as follows: April 21, 274 pairs; April 23, 260 pairs; April 27, 80 pairs; April 30, 468 pairs; May 1, 156 pairs; May 4, 126 pairs; May 7, 91 pairs; May 8, 182 pairs; May 11, 162 pairs; May 12, 148 pairs; May 13, 80 pairs; May 17, 160 pairs: total, 2,187 pairs.

7. Then the reason you say that those deliveries were spread over that period was that you had not the boots to supply?—That is so. Immediately they came in from the contractors they were inspected without any delay and sent out.

8. None of those came out of stock?—No.

9. You would only perhaps have excess of the sizes that were not required?—That is the position.

10. Had special orders to be given when the order came in?—The position was that on the 1st April we had a contract with two firms to supply 2,250 pairs per month. That would have been quite sufficient were it not for the additional Trentham Regiment. Then an arrangement was made with other firms, and three extra firms are making now, but have not made any deliveries.

11. *Mr. Ferguson.*] In normal times, when there were no Expeditionary Forces, what stocks of boots would you be likely to have?—2,250 per month.

12. But before the war?—Before the war we had a contract for only 5,000 pairs per annum, but they were to be bought by Territorials—not for free issue.

13. Still, they passed through your hands?—Yes.

14. What stock would you have in store at any one time—1,000, 2,000, or 3,000—taking the average through the year?—Yes, easily 1,000 pairs. It all depends on the time of the year. Just after camping-time there would be a big run out.

15. *The Chairman.*] Your range in sizes is usually up to 11's?—Yes.

16. You did not keep 12's and 13's?—No; 5's to 11's were the main sizes.

DANIEL CROSS BATES sworn and examined. (No. 12.)

1. *The Chairman.*] You are the Government Meteorologist?—Yes, Director of the Meteorological Office.

2. It is an official post that you now hold?—Yes, I am a Civil servant. I have prepared a statement of the weather and statistics for Silverstream, which adjoins Trentham, and although I am not able to correlate the sickness with the weather, you will be able to consult these statistics, and I therefore hand them in. [Statement and statistics handed in.] I now wish to make a short statement which will cover the points I wish to bring before the Commission. The general conditions of weather since the camp has been in existence are shown in the following table based on the Wellington Meteorological Observatory records:—

Month.	Weather.	Sunless Days.	Rainfall per Cent. of Average.	Remarks.
October ..	Dry, windy	3	33	Cold S., ·65 rain, 28th.
November ..	Changeable, passing showers	2	50	
December ..	Sunny, windy	1	60	
January ..	Seasonable	4	50	
February ..	Dry, windy	1	27	
March ..	Dull and wet	7	135	
April ..	Bright and dry	0	17	
May ..	Fair and dry	3	23	Average temperature.
June ..	Unsettled, dull, and humid	6	47	Six days also with less than one hour of bright sunshine, and five days in succession without sunshine—viz., 22nd–26th.

This may be regarded on the whole as a mild and fair season. Records from Silverstream or Trentham show that the rainfall is from 20 to 25 per cent. greater than in Wellington. The temperature-conditions are controlled by the physical features of the neighbourhood. It is situated in a broad river-valley lying north-east and south-west, surrounded by hills to the north-east and west and almost to the south. It would therefore be colder by night and warmer by day the cold air descending from the hills on to the flats. The frosts at night are very severe, and I estimate them from 15° to 20° lower than Wellington. The winds are generally from the north-west, and squally. Under settled anti-cyclonic conditions day winds are up the valley, and night winds down. Fogs are often prevalent in the evening and mornings, and are caused by a humid atmosphere being cooled either by cold surfaces or descending currents of air. I am well acquainted with the site of the camp, and have twice recently visited it—in the last week of May and again on the 10th June, when I took out two minimum thermometers, with which I hoped to secure an absolute determination of the results of radiation which I believe from knowledge and personal experience to obtain there, for I have had experience of such huts and tents both in Australia and in South Africa during the war. I examined the hutments at Trentham, and regard them as dangerous and unsatisfactory. They would be draughty in stormy weather, and very chilly and unsanitary in calm or damp weather. Corrugated iron has a high coefficient for the

absorption and emission of heat, and, while affording protection against rain, would only intensify every change of temperature. In the daytime, with bright sunshine, the hutments would become exceedingly hot, and at night, under anti-cyclonic conditions especially, excessively cold. The walls and roofs would radiate an enormous amount of heat from the building, and make it a real freezing-chamber—at times much colder than outside, in fact. If the roof only were protected with a non-conductor the sides would set up serious convection currents. The men would wrongly regard these as cold draughts, and attribute them to too much ventilation. The chilling of the bodies of the inmates would create liability to all the consequences of checked perspiration, and respiratory troubles would be prevalent, especially in calm, cold, and damp weather. Influenza, sore throat, bronchitis, and pneumonia have, I believe, as a matter of fact, shown obedience to weather-control—but I would protest against this being regarded as the unhealthiness of Trentham. Epidemic diseases, as measles, however introduced, would naturally spread to an alarming extent, and germs of contagious diseases find the culture media for propagation in a humid atmosphere, calm, damp, and chilly conditions being most favourable to the spread of such epidemics. Both sickness and death show relation to the weather, but it is only indirectly, for "good hygiene has very largely replaced climate." Acclimatization depends very largely upon a rigid observance of sanitary and hygienic rules. Neither the soil nor the climate of Trentham can be blamed for the sickness there, but want of proper precautions and provision for the large body of men. I also regard the hutments as unsatisfactory, because there is a minimum of comfort and privacy at a maximum of cost—for galvanized iron is now quoted at about £32 per ton. The surface soil is not porous, and ground-moisture creates mud and pools unless it is pierced and broken up. The subsoil is gravelly, and the water-level of saturation is generally about 15 ft. below the surface. Such conditions are, on the whole, favourable for a standing permanent camp, though the flatness of the river-valley is certainly a disqualification. There was no storm-water drainage, and mud and tiny pools lay about the camp. I thought a competent man with a little common-sense could in half an hour do as much in a good rain as a whole squad would do in a day in fine weather. There appeared to be no barrows and a scarcity of carts for the men who worked with earth and stones, and I regarded labour and fatigue duties at the camp as wasteful and trying. I inquired for and was told there was no shed or apparatus for drying boots, clothes, or bedding. Dampness is a very great danger to health, on account of the evaporation of moisture being accountable for conduction of heat. I saw there was a good guard on the "bird-cage," but none on the hospital quarters where men were lying ill with measles.

Mr. Gray protested against the witness giving evidence of the character contained in the statement when he was called to give evidence with regard to the rainfall.

The Chairman ruled that, as the statement had been read and the views expressed, the Commission would have to accept the statement and decide what weight should be given to it.

Witness: I have mentioned ventilation because it and radiation are matters that concern me very much. In addition to that I have had experience as an officer of the Territorials and also experience in South Africa. I have only made this statement in order to bring the matter out, as I thought it necessary.

The Chairman: There is this point, Mr. Bates, that Dr. Frengley has this morning given us reasons why the huts should be constructed as they are, and his views are on an opposite footing to yours. Probably you might be asked some questions on the assumption that Dr. Frengley's evidence is accurate, and Mr. Gray might like to question you.

Witness: Yes.

Mr. Gray: Yes, I would like to have that opportunity.

The Chairman: You will be able to attend again, Mr. Bates?

Witness: Yes.

3. *Dr. Martin* (to witness).] You say that the air at Trentham at night is colder than by day compared with Wellington?—Yes.

4. You do not wish to convey the impression that it is a more unhealthy place to live in than Wellington?—No.

5. You are quite satisfied Trentham is quite a healthy place?—Yes, quite a healthy place, and probably more invigorating than Wellington. It is warmer because of the confinement in the valley, the sun's radiant heat warming it up in the daytime, and colder through chilled and denser air descending from the hills at night.

6. It is quite a satisfactory place for a camp?—Quite a satisfactory place.

7. *Mr. Ferguson.*] You said the saturation-level was 15 ft. below the surface?—Yes.

8. How did you arrive at that?—By inquiries from the people in the neighbourhood who have wells.

9. Have you any knowledge as to whether the saturation-level varies?—No. It varies, of course, with the rainfall, but not much apparently through the district.

10. You think it will vary with the rainfall?—It varies with the rainfall and with the season, but it averages 15 ft.

11. Of course, you have no data about that?—I have not made personal investigation. I got the best information I could, and mentioned it because it has a most important bearing on the sanitation of the camp.

12. *Dr. Martin.*] The question has been raised that the authorities should not have put the camp at Trentham that it was an unhealthy place. You do not agree with that?—No, it is not so in my opinion. It is want of precautionary measures in dealing with such a large influx of men that was the trouble.

13. They were not unwise in choosing that place for the camp?—No; it is a splendid place for a camp. There is only one disqualification, and that is the flatness. The ideal place for a camp is a grassy slope.

CHARLES HOLMES SEWELL sworn and examined. (No. 13.)

1. *The Chairman.*] What is your position?—I am in charge of the Expeditionary Underclothing Department of the Defence Stores, which includes blankets.

2. There is a certain matter in connection with some blankets that were to have gone out to Trentham Camp on the 29th May: there were not sufficient blankets there, and some were sent out out on Sunday. The Commission desires to know why they were not there?—I will endeavour to explain. I have been in charge of my department since the Trentham Camp started. Orders required for Trentham Camp are issued to me, sometimes verbally and sometimes in writing. I have kept a record of all lines sent by me to the Trentham Camp. On this date in question an order came through for 6,000 blankets.

3. What date did the order come through?—It was dated the 24th May. Owing to inadequate storage accommodation with the big stocks coming to hand from time to time, loads of blankets had been sent out to relieve our stock. Those blankets were sent out without any written order, and when this order for 6,000 blankets was issued to me I immediately made up my list of blankets that had been delivered at Trentham and communicated with the Accountant's Office and put the matter before them.

4. You made up a list of all blankets you had sent out without orders?—No; I made out a list of all blankets that had gone out there with and without orders. I drew the attention of the Accountant's Office to this matter and explained about the blankets that had been sent out to relieve our stock. I told them the number of blankets that had been sent out there, and I considered they were quite sufficient for requirements.

5. What number did you make up had gone out?—The total number of blankets forwarded to Trentham up to the 29th May, 1915, was 34,979. Those are the approximate figures, and they are almost correct. That is from the commencement of the camp up to the 29th May. My reason for querying the order for 6,000 blankets was that the blankets required for the total number of men who had been called into camp to that date was 33,170 blankets. That is the actual number required according to the number of men who had gone.

6. Where did you get your figures as to the number of men who had gone in?—I got my figures from time to time, and I have since verified them.

7. Were you supplied with figures from time to time?—I could get the figures, and I made a point of getting them.

8. That is on the assumption of three blankets to each man?—The second, third, and fourth, and Samoan bodies, approximately comprising 6,700 men, two blankets per man, comes to 13,400 blankets.

9. Then it was increased to three blankets?—That is two blankets for those bodies; and then the fifth, sixth, seventh, Stationary Hospital, and Trentham Regiment, approximately 6,590 men, at three blankets per man, worked out at 19,770 blankets. Those two amounts added together came to 33,170 blankets required for the body of men in camp and those coming to camp up to the date we were accused of a shortage.

10. What I understand, then, is that you queried the order for 6,000?—On account of goods sent out without written orders.

11. It would appear, then, they ought to have had a surplus of 1,800 blankets?—Yes, 1,800 blankets over, instead of a shortage.

12. Has that 1,800-odd blankets ever been cleared up?—No, it has not been. It was nothing to do with me; I simply issue the goods, and I keep the records.

13. Then, as to the troops that were going in—what about blankets for them?—Those figures included the troops that were going in. There were only 2,000-odd men, which comprised the Seventh Reinforcements, which were not in camp at that time. We have since supplied 8,561 blankets.

14. Is that since that Sunday when they went out?—Yes; since then we have supplied 8,561, approximately. Only 2,000-odd men have gone in since then, and according to my figures there should be 4,000-odd blankets as a surplus in Trentham Camp, and not a shortage to date.

15. Is there a shortage there now?—I am not aware.

16. According to your figures there are now at Trentham Camp—what?—A substantial surplus. The bales vary from 54 to 120.

17. If they have gone out of your store and are not at Trentham Camp most of them have been lost on the road?—If they have left my store they have gone to Trentham Camp. They are all sent out per motor-lorry, and I get a receipt from the man on the lorry. Immediately any goods are issued by me I enter them in an issue-book, which is handed over to the office. The office makes out a voucher in duplicate or triplicate, which is forwarded to the Quartermaster at Trentham Camp, and he keeps one copy and returns one signed to the office, and that is our receipt.

18. Do you suggest that the blankets that ought to be there are not there?—According to my figures and my way of working it out there should be a surplus there.

19. I have not yet understood why the blankets did not go out on the Saturday: you said they ought to have 1,800-odd over?—I immediately drew the attention of the Accountant's Office to it. I explained to them what had been sent out and not ordered, and they said if I was satisfied there was ample at the camp it was all right, and I was quite satisfied there were ample supplies there.

20. You did not telephone to the camp to ask them if they had what you thought they had?—No, I did not.

21. Possibly that might have been a good business step to take?—That rests with the office, not with me. I have never had any communication direct by telephone. I had occasion to go out there when pressed for room. I went out at my own expense and in my own time, more in the interests of the Department, and I had an interview there with Captain McCristell and Major Mounsey, and I explained to them at the time what my mission was.

22. What was your mission ?—My mission was to see if they could relieve us of some of the stocks on account of our having inadequate room. The reply was that they had more stocks than they could deal with, and their accommodation was inadequate. They told me not to send anything out —that they had plenty to go on with. This was immediately prior to this order for blankets coming in. It was specially on account of blankets I went out there.

23. You appear to have assumed that they had got enough, and that this requisition for 3,000 pairs of blankets was a mere formal requisition ?—Yes. I explained to the office the blankets I had sent out without written requisitions, and that the goods sent out would more than balance this order just received.

24. The unfortunate thing apparently was that you came to this conclusion and may have acquainted the office, but the office did not inform the camp ?—Apparently not.

25. You did not communicate with the camp ?—No, sir.

26. Whose business was it to have informed the camp ?—I should say it rested with three men in the office who might have done that. I communicated with the Assistant Storekeeper, Mr. Williams, and also with Mr. Hopkinson. Either of those men usually deal with requisitions and orders from the camp. The matter at the time was never referred to Major O'Sullivan.

27. If it was not referred to Major O'Sullivan it would be the other men who should have informed the camp of the position ?—It was their place, not mine. It rested with the office. Furthermore, the blankets arrived at midday on the Sunday, and the squad of men who went into the camp on the Sunday had plenty of blankets before the night. They were never short of blankets for a night.

28. As to the blankets, there should be some sort of check instituted, should there not, between what you suggest they ought to have at the camp and what they actually have ?—Of course, it is nothing to do with me. Immediately the goods go out from me my responsibility ceases.

29. Is this question of the blankets being the subject of an inquiry ?—I believe not, sir.

30. It seems rather to be the work for an accountant to check the vouchers you hold, and then for some one to count the blankets at the other end ?—Of course, that could be done. We have got a record of all goods issued by us to Trentham Camp. The way they are disposed of does not interest me—I know nothing about that: it is entirely out of our hands.

31. Have you treated any other requisition in the same way as a formal requisition except this one ?—I might state that it is our common practice for verbal orders to be given and for goods to be sent out. An order will be executed, and the next day or two after a written order from the office will be handed over. In the meatnime the goods have been sent. Those goods had been previously sent, and I treated that order the way I have just described, and, of course, if we did not treat it like that we would be double-banking and sending twice. You must use your own discretion a bit under those conditions.

32. *Mr. Ferguson.*] When did you first commence to send blankets out without orders ?—Many goods have gone out without orders.

33. Under your control, I mean: had you sent out much underclothing without orders ?—Here is an instance. There was a body of 4,000 men in camp—I have not got the date—and certain issues had been made to complete the equipment for those men of which I had a record. I was instructed by the Accountant to complete the issue for those 4,000 men. We have a schedule of what each man is entitled to for equipment, and that is an instance of a verbal order.

34. Is it the custom to send out other goods besides blankets under your control in anticipation that there may be a written requisition for them ?—Of course, blankets have been the chief point, owing to their taking up so much room. I have had numerous other orders for underclothing and various other things, such as deck-shoes, &c., and never received any signed order from the office. I have been just told to send so-and-so, and I have not always had a covering order afterwards.

35. Have you on your own responsibility sent out deck-shoes to Trentham ?—No, not on my own responsibility.

36. Have you ever sent out singlets ?—Yes, acting under verbal orders only.

37. Drawers ?—Possibly.

38. Jerseys ?—Possibly any line.

39. Have you sent out any other line except deck-shoes in anticipation of receiving a written order ?—When certain bodies of men were coming into camp we have anticipated their wants, and have forwarded certain supplies that they would need without a requisition.

40. Do you not receive at the stores from headquarters a statement that on such a date so-many hundred men are going into camp and you will be called on to provide for them ?—I could not say —I have not cases of that kind. We have sent out goods as a result of a notification that certain bodies of men were going into camp, but I never see any communication or anything from headquarters at all.

41. *The Chairman.*] You go on sending out with a view of relieving your pressure on your own stocks ?—That is only on very rare occasions, but it has happened chiefly with blankets owing to their bulkiness.

42. *Mr. Ferguson.*] When a requisition comes in from Trentham you look upon it merely as an informal matter ?—I never see a requisition from Trentham.

43. Who is the man who does attend to requisitions from Trentham and communicates with Trentham ?—Both Mr. Hopkinson and Mr. Williams.

44. What experience had you had before you went into the Defence Stores ?—I have had ex-experience as a commercial traveller and warehouseman extending from my youth. I have been commercial traveller for twelve years, representing a leading house in Australia and New Zealand My experience has simply been in Australasia.

15. And how long have you been in the Defence Department?—Since the war broke out. On account of the war I had to give up my commercial pursuits when representing Mandel and Carr. I then joined the Defence Stores.

46. *The Chairman.*] You get receipts, I suppose, for everything you send out, whether on requisition or not?—The duplicate vouchers are forwarded from the office for all goods sent out.

47. And do you get that returned signed?—That is the business of the clerk in the office who handles the vouchers—I never see them.

48. *Mr. Ferguson.*] What instructions do you receive from the office?—I receive a page out of a duplicate book with instructions to issue to Captain McCristell goods for Trentham Camp, and signed by Mr. Hopkinson or Mr. Williams.

49. And you got one in this case, but you did not fulfil the order because you thought they had had the goods already?—Because sufficient goods had been forwarded.

50. And then we have it that of your own volition you have sent out goods without an order?—Yes, without a written order, but acting under verbal instructions.

51. One custom is to send goods out on a proper written order, and the other is to send out goods on a verbal intimation to the office that you have done so?—And on a verbal intimation in most cases from the office to send them.

52. *The Chairman.*] Is Mr. Hopkinson and Mr. Williams still in the Department?—Yes.

WEDNESDAY, 21ST JULY, 1915.

ROBERT HENRY WILLIAMS sworn and examined. (No. 14.)

1. *The Chairman.*] What are you?—Accountant in the Defence Stores.

2. What is precisely your duty with regard to stores that go out to the camp?—The writing of orders on the foreman, or the storeman, for stores that come in on requisition.

3. You receive the requisitions from the camp?—Yes.

4. Upon receiving them you write out directions to the storeman?—Yes, in the domestic-order book to the storeman or the foreman.

5. He does not get the requisition?—No.

6. What do you do after that?—Then it is his duty to carry out the written order and issue the stores.

7. What happens then?—The goods are sent out to the camp, and we obtain a receipt from the Quartermaster for them.

8. Do you get it yourself: is it handed to you?—Not always.

9. How do you know that the order that you have given to the storeman is carried out?—I am acting as Assistant Director of Equipment and Stores—that is my duty. I visit the different departments frequently, and see how the work is getting on.

10. How can you tell by a visit to the department whether all the things have gone out?—Only by asking the man in charge of that department.

11. You say that the receipt comes from the camp: who gets that receipt and keeps it?—The clerk in charge of the issue day-book.

12. Do you not see it?—Only occasionally—not every receipt.

13. What is his duty then?—He has to mark off his entry after this receipt has been returned; then it is filed with others in consecutive order.

14. Apparently your active duties consist chiefly in passing on orders to the storeman upon requisitions that you receive?—Yes.

15. And in going round from time to time and inquiring if those orders are receiving attention?—Yes.

16. Have you any other functions in connection with the stores?—The writing of requisitions for the purchase of stores.

17. In regard to the supply of blankets on the 29th May, they did not go out in time: they were sent out on the Sunday. Can you tell me how that happened?—Through an error on the part of the storeman in charge of blankets.

18. Who is the storeman?—Mr. Sewell.

19. Did you investigate the error?—No.

20. How was the error made?—Mr. Sewell explained that he considered they had sufficient blankets there, as the result of a visit he had made to the camp the previous week, also judging from the schedule which he keeps, adding daily to it as the stores are issued.

21. I understand that it is the practice, as you get an accumulation, to send them out in advance without receiving any orders?—When we are blocked for room we sometimes ring up the Quartermaster and ask if he requires them. If he says "Yes," we send them out and get the requisition afterwards.

22. Do you always get a requisition?—Always.

23. Whose business was it to see that the requisition was got?—It was my duty then.

24. Who would communicate with the camp on that subject?—By telephone, either myself or Mr. Hopkinson.

25. What we inferred from the storeman yesterday was that he is not yet clear that they have not had more blankets than they admit. He said that he considered from the return that there were enough blankets out there to answer the requisition?—I do not know how he could be in a position to know the actual number of blankets required at the camp.

26. Have any steps been taken to see if his supposition is correct?—Not as yet.

27. Are any proposed to be taken ?—Naturally we will have to do so.

28. When did you first hear of the supposition ?—I heard of it from Mr. Sewell. On the 31st May he explained that he thought there were sufficient blankets out at Trentham for the men in camp, with what he had sent out about the 24th May; adding those to his previous totals he considered the supply sufficient.

29. He says that there would be approximately 8,561 out there. Is there no return made from time to time and got from the camp as to what supply they have in hand ?—We have not had a written return for some time.

30. Is there any check or audit of the supplies at the camp ?—Not that I know of.

31. Do you think that a periodical audit would be desirable, so as to reconcile the output from the stores with what they have in hand ?—It would be.

32. With regard to the boots, we have heard that the position was that when the requisition for the extra boots—4,000 pairs—was sent in, you had not enough in hand and they could not be got ?—At that time.

33. Is that a correct statement of the position ?—Yes; there were not sufficient of the sizes required in store.

34. On the subject of making good the call for boots, what steps did you take ?—There were two contractors supplying the Department under public tender, and as they could not supply all that we required at the time we obtained further supplies from some four or five other firms.

35. And have you been able to keep up the supplies to the present satisfactorily or not ?—Yes, we are now practically keeping up with all demands.

36. According to Captain McCristell's return for blankets, he puts the blankets in hand on the 27th May as 3,956, and the balance of requisition short-delivered on the 27th May was 2,760. He required 6,000 on arrival. Will you take a note of those figures and test them. I will hand you this return, and you can take some notes from it yourself, and you can explain anything later ? May I be allowed to quote Captain McCristell's requisition of the 22nd May, received by me on the 24th May. The order No. 516 was written out for Mr. Sewell, in charge of blankets, to supply 6,000 blankets.

37. There was another order for 1,000 blankets on the 4th May ?—On the 5th May an order was written for Mr. Sewell to supply 1,000 blankets besides other items.

38. I see that the new Trentham Regiment was notified on the 19th April: you get a notification of future requirements, do you not ?—Yes.

39. Then it was notified on the 19th April that this 2,200 men were going into camp: you might say why there was no requisition until the 22nd May ?—That is the Camp Quartermaster's duty.

40. But did you not act upon the notification and get ready ? —Yes, we get ready, but he perhaps may not be able to take the goods until a certain date. At that time, I think, they were enlarging their store.

41. It may be that there is nothing in this supposition on the part of the storeman that they were oversupplied with blankets, but you now have the information, and you might check the figures ?—Yes, I can check it from our ledgers, and we have all the requisitions from the Quartermaster. We can see whether they agree.

42. And you can see whether they tally. Certain blankets were destroyed, though ?—Yes; but they would be written off. His ledger would show his issue to every man and the receipts from the Defence Stores.

43. We were told that there should be 4,000-odd blankets at Trentham at the present time, and the surplus sent out, of 1,809 blankets: is this one of the matters that are the subject of another inquiry at the present time ?—No, I do not think it is being touched upon.

44. *Mr. Ferguson.*] Mr. Sewell distinctly stated that in the week prior to this requisition coming in he had gone to you and explained to you that they had quite sufficient blankets out there, which he knew as the result of his observations when visiting the camp, and thereupon you authorized him to short-supply the requisition ?—No, that is not correct.

45. We went on to examine him as to whether in other cases the Stores Department had neglected to supply requisitions in full. Is it a fact that the Stores Department neglected to complete requisitions, and sent supplies by their own knowledge and judgment ?—It is not a fact.

46. *Mr. Gray.*] The practice is that if the Quartermaster wants a supply of clothing or other things he sends in a requisition on that pink form: who receives the requisitions when they come in from the Quartermaster ?—Mr. Hopkinson.

47. Then what have you to do with it ?—He generally passes it to me to look through, and if the Stores Department requires to make purchases to complete the requisition we decide as to how we will obtain the goods. If we have sufficient time we would call for quotations, but if the goods are required immediately we procure them to the best advantage.

48. You remember this requisition coming in from Trentham on the 24th May for 6,000 blankets ?—Yes.

49. There were enough blankets in stock to supply the requisition ?—I would not swear that there were enough on the 24th May, but they were coming in daily from the contractors.

50. The requisition is passed on to Mr. Hopkinson ?—Yes.

51. Have you any recollection of being told about the 29th May that there was already a sufficient supply of blankets at the camp, or that there were not as many as 6,000 required ?—I have no recollection of that.

52. When did you first hear that the total quantity of 6,000 blankets had not been sent out ?—About 10.30 a.m. on Sunday, the 30th May. I was working in the office then.

53. Did you receive a message from the camp that they would require a further supply of 5,000 blankets ?—Yes.

54. Did you understand that it was part of the 6,000 ? Yes.

55. What did you do ?—I immediately rang up for a motor-lorry, and went and informed Major O'Sullivan of the position immediately. Then we assisted to load the lorry, and they were sent out at once. I arrived at the camp about 2.30 the same afternoon, and the lorry was unloaded when I got there.

56. There was no delay on your part ?—No.

57. When did you hear from Mr. Sewell or anybody else that the total 6,000 were not sent out ?—As far as I know it was the next day. I went up to find out why the whole order was not completed. Mr. Sewell went through the books with me, and we took out a schedule showing what he considered was the position.

58. Showing how many blankets had been sent out from the time the camp was inaugurated ?—Yes, until that day. He then informed me what he had done in regard to this requisition, practically on the same lines as it has been stated here.

59. This was after the event ?—After the event.

60. After the error had been discovered at the camp and duly remedied by you ?—Yes; I may say that Mr. Sewell had previously informed me on the previous Monday or Tuesday that there was a great quantity of blankets in store at Trentham.

61. *The Chairman.*] He informed you that there would be a considerable number out there. What was the occasion for doing so: was that to indicate that it would not be necessary to send out the full 6,000—because he says that he informed you that they had a considerable number out there, and that you agreed with him—that is the effect of his evidence; and in consequence he only sent out enough to make up the total, judging from what he assumed they had in hand ?—That was on his own authority.

62. But why did he come to you to say that they had so-many blankets out there ?—It was in his own store where he made the remarks to me on the subject. He did not come down to make the statement to me. It was in discussing the issues that day. We were discussing what we would send out that day, as we had a lorry to go.

63. *Mr. Ferguson.*] Then it was not in your mind that Captain McCristell's requisition was too large ?—No.

64. You did not query that ?—No.

65. You would not say that he had more blankets than he needed ?—No.

66. *The Chairman.*] There has been no attempt since to clear up that question ?—Not yet.

JOHN ROOTH HOPKINSON sworn and examined. (No. 15.)

1. *Mr. Gray.*] What are you ?—Clerk in the Defence Stores.

2. In regard to requisitions for stores from Trentham Camp, who receives them in the first instance ?—I do.

3. They come by post ?—Yes.

4. On receipt of a requisition what do you do with it ?—Put the date-stamp on it first.

5. What next ?—Then write the orders on the various departments.

6. Do you make any inquiry before doing that as to whether the goods ought to be supplied or not ?—Mostly. The schedule is made out, and we know from the number of men going into camp.

7. *The Chairman.*] Do you get a return of the number of men going in ?—Yes.

8. *Mr. Gray.*] And you know also how many men are in camp ?—Yes. From the strength of men we know what will be required and the amount of equipment.

9. You prepare in advance for the requisitions ?—Yes.

10. Then it is for a specific number of articles, and you proceed to supply them ?—Yes.

11. You have to write orders on the various departments whose duty it is to keep the stores in stock ?—Yes.

12. Do you recollect this requisition coming in from Trentham, dated the 22nd May, for 6,000 blankets and other things ?—Yes.

13. When did you receive it ?—On the 24th May, as the date-stamp shows.

14. What did you do with respect to the ordering of the blankets ?—I wrote an order on Mr. Sewell, who was in charge of the department for blankets, to send 6,000.

15. Can you produce a copy of the order ?—Yes [produced].

16. This is a carbon duplicate ?—Yes: "Please issue to Captain McCristell 6,000 blankets."

17. On the top it is marked "516" ?—That is the order number.

18. And the requisition number is 571 ?—Yes.

19. You issued the order on the same day as it was received by you ?—Yes, on the 24th May.

20. Had you anything further to do with it ?—No, I had nothing further to do with it after the order left me.

21. You had nothing to do with the despatch of the goods ?—Sometimes, when Mr. Williams is busy, I see that the goods do go out.

22. Was there any suggestion made that 6,000 was too big an order ?—No, sir.

23. You know nothing about the alleged surplus in camp ?—No; the only thing I knew was on the Monday morning, when Mr. Sewell reckoned this order for 6,000 was a duplication.

24. He meant that he had already supplied this 6,000 in advance ?—Yes; he said he had seen Captain McCristell on the previous Saturday and he had told him he did not want blankets because he had enough.

25. Are goods ever issued without a requisition ?—Occasionally. Captain McCristell might ring us up from the camp and tell us the requisition was coming in, and ask us to supply the goods before the requisition arrived.

26. Does the requisition come subsequently when the order comes by telephone ?—Yes, the telephone orders are always followed by a requisition.

27. And all requisitions are upheld by receipts ?—Yes. We get the receipt back from Captain McCristell after the goods have been supplied.

28. *The Chairman.*] It can only be a matter of memory or memorandum of the fact that goods have gone out for which no requisition is received ?—In the case of a telephone message coming in, I take a note of it on a scribbling-block and keep that until the requisition comes to hand.

29. Do you say that these verbal orders are always supplemented by requisitions ?—Yes.

30. *Mr. Ferguson.*] Mr. Sewell stated that it is customary to send goods out in anticipation of their being required: what is your system in such cases ?—Since I have been in charge there has been no such cases.

31. He stated that was the case in regard to underclothing as well as blankets ?—I could not say. I do not think it has been done since I have been in the Department.

32. *The Chairman.*] How long have you been in the Department ?—For fifteen years.

33. You have been in charge since October ?—Yes.

34. In your present position ?—Yes.

35. And you say that you are not aware of any sending-out of any goods in advance ?—I say that it might have gone in advance, but it is backed up by an order always.

36. Do you say that practice does not exist—that when it is known that certain requirements will have to be supplied by a certain date, that in the meantime, and before the requisition has come in, the goods have been sent out in anticipation, so as to relieve storage, for instance ?—In my case Mr. Williams would have dealt with that.

37. Do you know of any such practice ?—No.

38. Who should know of the practice ?—Mr. Williams.

39. Why should not you know ?—Mr. Williams is head of the Department; I only get the orders from the requisitions.

PERCY GATES MORGAN sworn and examined. (No. 16.)

1. *The Chairman.*] What is your position, Mr. Morgan ?—Director of Geological Survey.

2. You know the locality in which the Trentham Camp is situated ?—Yes, I know the locality, but not well. I have been there on one occasion only.

3. Are you able to speak of the deposits and the soil out there ?—Not certainly. When I was there I did not examine the soil to any extent. I was interested in the men. But I think that if the ground had been unsuitable for a camp I would have noticed it.

4. Did you see the pits and examine the subsoil there at all ?—No, I have no recollection of having seen the subsoil.

5. You are not then in a position to give us any information as to the suitability of the soil, or any special conditions which might militate against its suitability for a camp ?—I thought the site suitable for a camp. If the Commission wishes, I could go out and examine the locality.

6. I think the Commission should have something in the nature of a report from you. There has never been any report made by your Department as to the character of the soil out there ?—No; it is a locality that we have not examined geologically.

7. There are pits sunk 15 ft. deep in certain portions of the camp ?—The material that came out of them and the sides of the pits would be quite sufficient to show the nature of the soil and subsoil. But at the present moment they would be full of water.

8. No ?—Then it must be a well-drained soil. If the water does not reach to the surface of those pits just now, then the ground must be as suitable as any you could get.

9. You might go out and examine it now that we have wet conditions, so as to be able to give us further information later ?—Yes, I can go out this afternoon if necessary. [Arrangements made accordingly.]

JOSEPH PATRICK FRENGLEY re-examined. (No. 17.)

1. *The Chairman.*] I think there was certain information from the file you were to give us ?—Certain questions were asked as to whether any cases of scarlet fever had occurred at Masterton. No report has been forwarded to my Department to show that they were cases of scarlet fever. Then, your Commission asked for a copy of a letter addressed by me as Acting Chief Health Officer, offering the services of the officers of my Department to the Defence Department. It is dated the 11th August, 1914. [Letter produced and read.]

2. You say that that offer was never taken advantage of ?—That is so. This is the reply, dated the 17th August, from Colonel Robin. He says in it that he sincerely hopes it would not be necessary to call upon us, but if it should become necessary he would do so. [Letter produced and read.]

3. Do I understand that until recently no advantage has been taken of the services of the Health Department ?—Yes, prior to the return of my chief, Dr. Valintine, from England—about a week before—Colonel Robin spoke to me regarding an arrangement for the treatment of soldiers in hospitals. As Dr. Valintine was just returning—that would be in February last—I suggested to Colonel Robin that he should await Dr. Valintine's return.

4. What followed upon that ?—I know that Colonel Robin, immediately after Dr. Valintine's return, got into touch with him over the matter of the treatment of soldiers. I do not know the particulars of it: Dr. Valintine will know them.

5. Dr. Valintine returned in February ?—Yes, sir.

6. Then, after that, were your services engaged in connection with camp matters ? —No, sir. Beyond my being a member of the special Board referred to previously, I have not acted in any capacity for the Defence Department in connection with the camp, nor been called upon.

7. Are you aware whether any officers of your Department have been referred to ?—No, sir, except the officer in Auckland, Dr. Makgill, who acted locally as an officer of the Defence Forces; he was actually in camp and acted as Sanitary Officer as well as Medical Officer. You also asked me for particulars of the different scarlet-fever cases in Wellington, and I advised you that Dr. Goldstein was in charge of them. The previous case was in charge of Captain Harrison ; and as I had no personal knowledge of these cases I respectfully suggest that Captain Harrison and Dr. Goldstein should answer the Commission's questions.

8. *Dr. Martin.*] But you will have the notification of scarlet fever ?—I have not.

9. Then there are two cases of scarlet fever in the Wellington District of which you have not received notification ?—I have not heard anything of the first one. The second one may be on its way—I have not seen the notification. Both occurred in patients actually in hospital. I was incorrect in stating that one was at Kaiwarra.

10. *The Chairman.*] Were they soldiers ?—Yes, from Trentham Camp.

11. *Mr. Ferguson.*] If they are in the Wellington Hospital, would not the Wellington Hospital authorities notify you : I understand that these men are under the civil doctors at Wellington Hospital ? —No ; Captain Harrison would be in sole charge.

12. Even though they are in the infectious wards of the Wellington Hospital ?—That is so ; a special arrangement was made in connection with the matter.

13. *Dr. Martin.*] But if a civil practitioner did not notify any case of scarlet fever the Health Department would take action against him ?—That is so.

14. Has the Health Department taken any action at all ?—I should like to qualify my remark by saying that I am not aware of any notification, but I am not the District Health Officer. The notification may have gone to Dr. Finch, the District Health Officer, in both cases.

15. It is not in your Department ?—No ; I do not deal with the district work. Then, sir, you asked me regarding the camp hospital. On the 3rd March I received a communication from Colonel Robin, or rather the Quartermaster, forwarding the plans and specifications of the proposed military hospital at Trentham, and asking that the Board be called together to prepare a report on the proposed scheme, and submit suggestions on same if necessary. On the 8th March I wrote to the Government Architect on the subject, so that between the 3rd and the 8th March I put together a sketch of what I thought was suitable, to save time. Then, between the 8th and the 16th March our report was drawn up and forwarded to Colonel Robin, and plans were being prepared. Then, on the 18th March a letter was written by Colonel Robin to the Chairman, Council of British Medical Association, regarding the camp hospital. [Letter read and put in.] That letter asked certain questions, which were replied to in Dr. Elliott's writing in the margin.

16. Can you say why the letter of the 21st January was not acted upon earlier : you got the reference somewhere about the beginning of March ?—On the 3rd March. I had no official knowledge of the matter before the 3rd March.

17. Somebody else may be able to tell us what was the cause of the interval : it may have required the whole time to deal with the subject ?—Yes.

18. This, then, was regarded as the approval by the Medical Association of the hospital ?—On the 17th March Colonel Robin wrote to the Minister of Defence submitting the correspondence with the Chairman of the Council of the British Medical Association, and stating that the association's monetary gift could be applied to the buildings and the equipment ; that £1,680 was immediately available, and that this sum would reach £2,000 later ; that the Medical Association agreed to the plan, and that the Director of Military Services also agreed with the report and plans. Colonel Robin adds, " I now recommend that the plan and report submitted by the Board, at an estimated cost of £2,454, be approved, and that the balance of £454, with any reasonable extras, will be a fair charge against the war vote or loan." This was approved by the Minister of Defence in the following minute : " The Commandant.—For action at once. What about drainage ? I await report *re* lighting and drainage.—J. Allen, 18th March, 1915." The specifications were then taken over by the Public Works Department, tenders were called for, and the date of the acceptance of the contract is the 27th April, 1915.

19. In regard to the operating-room in that hospital at Trentham, is there any arrangement made for heating it ?—I understand that was to be done by electrical radiators, when the electric light was arranged for ; that is my impression.

20. This is a quotation from Mr. Campbell's evidence : " There is no means arranged for heating the operating-room " ?—At that time the matter was under consideration as to the electric lighting and heating.

21. Have any means been provided now for heating the operating-room ?—I cannot say, sir.

22. That would be in the Public Works contract ?—I do not know.

23. Do you not think it is rather necessary to find out ? Here is a hospital operating-room and no arrangement for heating ?—Certainly.

24. Will you find that out ?—I will find out whether a heating-plug is proposed to be put into that room.

25. In regard to the drying-sheds at the camp, do you consider that drying sheds and marquees are necessary ?—Most certainly.

26. At Trentham the drying facilities have been provided only about three weeks ?—I do not know that of my own knowledge.

27. Do you consider that drying-marquees should have been provided long before ?—Facilities for drying are essential at all times.

28. And if they were not provided in a camp holding from four thousand to five thousand men there was an error in administration ?—I must say that drying facilities are necessary. They were not there: therefore the conclusion is clear.

29. You spoke yesterday of Colonel Firth, R.A.M.C., on the question of the hutments: do you approve of their holding fifty men ?—Certainly; but he says twenty-four men.

30. Why did you not stick to his regulation number of twenty-four ?—Because the design provided amply for fresh air. His huts, as I explained yesterday, provided only for a very small inlet of air——1 square inch to 60 cubic feet—whereas our plan provides for something like ten times that amount. Practically it is an open-air shelter. Therefore you could put a very much larger number of men into the huts, and you would probably never reach the degree when either the moisture, temperature, or amount of CO_2 had increased to anything like an objectionable amount.

31. *The Chairman.*] If you could always ensure a hurricane you might have a building of unlimited size ?—No, sir, the fifty men to a hut appeared on the Defence plans, and we were advised that was suitable for military purposes, and we offered no objection to that number from a health point of view.

32. It was from a military point of view, as regards discipline ?—Not from an infectious-diseases hospital point of view.

33. *Dr. Martin.*] Do you not think they should be built in echelon—one behind the other ?—No, not in our New Zealand climate: we get so much sun and wind. I speak as a Dublin man.

34. You are quite satisfied with the present way of placing the huts instead of building them in echelon ?—Yes.

35. *The Chairman.*] With regard to the question of summer and sunlight, we have a letter from a correspondent. Can you make any observations with reference to the sunlight there ?—I have not been out at the camp in the early morning, but I have been there late in the afternoon in the winter, and found that the camp gets the sun until late in the afternoon, even in the winter.

36. Is the Health Department in sole charge of the infectious cases ?—The military authorities are in sole charge of infectious cases by means of military officers appointed.

37. *Dr. Martin.*] You are not responsible to any military authority ?—I cannot say that. That is a question which Colonel Valintine should answer. I am responsible to him.

38. You are satisfied with the sanitary arrangements at Trentham Camp now ?—Some improvements require to be made.

39. Do you suggest any ?—The surface drainage has to be improved.

40. And has the Health Department carried out any inspection of Trentham Camp recently ?—We have special officers there, Major Finch and Captain Sydney Smith, who was the District Health Officer at Dunedin.

41. He inspects from the sanitary point of view ?—He is the sanitary officer for camps.

42. There is no occasion for public anxiety about sanitation now ?—Not the slightest. Of course, in weather like this you cannot get ahead very fast, but I may say that all necessary improvements will be carried out with the greatest possible speed.

43. *The Chairman.*] The erection of the hutments has prevented the completion of the surface drainage: could you have had good surface drainage until the hutments were practically finished ?—It would be very difficult to plan out the drains to catch the water off the roof without the hutments being erected.

44. Could you have had a complete system of surface drainage before the hutments were put up and while the ground was being cut up by the traffic ?—No, sir.

45. Do you suggest that owing to the state of national excitement this epidemic is worse than it would have been at a quieter time ?—I think that at other times the men would have said, "We are all right"; but now they are being frightened—undoubtedly I think the population is.

46. Do you think that the epidemic of influenza among the civil population is worse than at ordinary times ?—I do.

47. Do you suggest as to the future housing of meningitis patients that they should be put in one central fever hospital ?—A cerebro-spinal meningitis case does not stand moving well. It ought to be treated wherever it occurs.

48. You would send bacteriologists to the various centres of camps ?—Captain Sydney Smith will be there to examine the cases.

49. Is he a bacteriologist ?—He is qualified. As the holder of the diploma of public health he must have studied the subject.

50. *Dr. Martin.*] I have asked my questions so that the public will know that the epidemic is under control ?—Yes, it is under proper control.

51. Would there be sufficient facilities out at the camp for investigating cases of meningitis ?—Yes, sir.

52. *The Chairman.*] So that the matter would not have to be brought by train to Wellington to the laboratory in the cold, as has been suggested ?—Precautions have been taken to permit Captain Sydney Smith to bring in the organisms.

53. When was Captain Sydney Smith first in a position to take charge ?—I do not know.

54. A week or a fortnight ago ?—He came up last Sunday fortnight; he has been three Sundays in Wellington.

55. *Dr. Martin.*] It has been suggested that men with measles have been hiding in their tents and not presenting themselves for medical inspection: would you blame the Medical Officer entirely in that case, or the military authorities: would you not blame the company officer ?—I think most decidedly that the blame is attachable to the man himself. It is possible to deceive the most careful doctor.

56. You suggested that the company officer should know each day where and how his men are?—Yes; I understand that it is an axiom in the Army that an officer should be in constant personal relationship with his men, and my idea is that the Medical Officer should be equally in touch with his men. At the same time it is quite possible for any man who sets himself out to do so to deceive the Medical Officer, even if he has the measles.

57. Did you inspect the Berhampore Hospital at any time?—No, sir, I have not made any inspection of Berhampore, though I have been out there. I went out with the Minister once.

58. *The Chairman.*] Was that designed by the Public Health Department or by the medical authorities connected with the military?—No; at the outbreak of the war certain cases arose on the "Waimana," one of the ships going to England. I was asked by Colonel Will to deal with those cases. I knew as a Health Officer that the Wellington Hospital Board did not like to take these cases, and I rang up the Mayor and asked him if he could allow the Berhampore Hospital to be used, and he said "Yes."

59. It was built as a fever hospital?—Yes, originally for plague patients, I think; but according to my recollection it was used by the returned troopers from South Africa as well. In regard to these "Waimana" cases, Dr. McGavin, P.M.O., decided they must go to the Wellington Hospital, into what is known as the tin shed. The next day Colonel Will rang me up again asking for some more cases to be taken. I said I was prepared to take the whole of these cases in hand and arrange for their accommodation, but I declined to have anything to do with the matter if six or seven different medical men were dealing with it. Dr. Purdy afterwards informed me that Dr. McGavin had nothing to do with it. I declined to have anything to do with the matter unless I received definite instructions that I was to be in control.

60. You were anxious to step in and assist?—Yes, and do everything I could that was necessary.

61. This correspondence also refers to the fact that the tents have been on the same ground all the time?—The tents should be removed frequently. They should be taken down whenever it is possible to let the sun in. If the tent has a floor, it should be taken down and the floor exposed to the sun. If possible, also, the floor itself should be removed so as to let the ground have the sun. If there is no floor-boarding, the tents certainly should be removed. I think the writer is quite right in saying that the tents at Home are removed.

62. We are only assuming as a general principle that that has not been done?—I do not say that it has not been done. I was out there on one occasion when the tents were being pulled down and exposed to the sunlight, and in the evening they were re-erected.

63. You have read the statement made by Mr. Bates before the Commission?—Yes, sir.

64. Have you any observations you would like to make with regard to it?—Yes. I am not aware what experience Mr. Bates has had in regard to the open-air treatment of the sick. It is the experience of sanitoria doctors that patients suffering from consumption, under open-air conditions in buildings almost similar in design to these hutments, do not suffer from catarrh or influenza. Medical superintendents of such institutions are in the habit of tracing catarrh or influenza or colds to a visitor, and they dread visitors for that reason, more especially in winter. It is also a fact that competent medical authorities advise that penumonia cases be nursed under open-air conditions, and in Wellington I think I am right in saying they have been nursed on the veranda of the Wellington Hospital under Dr. Hardwick Smith. So that I deny that "the chilling of the bodies of the inmates would create liability to all the consequences of checked perspiration, and respiratory troubles would be prevalent, especially in cold and damp weather." Patients under open-air conditions do not suffer more from respiratory troubles than others. In fact, if that were so the whole open-air treatment for consumption would be on an absolutely unsound basis, and it is not.

65. I suppose it is in pursuance of that theory that we often find children put to sleep in tents in the open at night?—Yes. A large number of people at the present day, if they happen to have a French door opening on to a veranda, sleep with it open so that they are practically in a temperature equivalent to that outside, and they find themselves in good health thereby. Then, I do not know what time of the day the thermometer tests were made, and I do not know under what conditions they were made.

66. *Mr. Ferguson.*] He does not say he got any tests at all in his evidence: he says he hopes to secure them?—Then I would like to know when he did make any tests.

The Chairman: Did you make any tests, Mr. Bates, and get any records?

Mr. Bates: I took the thermometers with me, and I have a file dealing with the matter. I took the thermometers with me but did not take any tests.

Witness: Then I assume the conclusions are not made upon any tests?

67. *The Chairman.*] No, they must be upon general principles?—Then it is pointed out that the hutments would be exceedingly hot in the daytime with bright sunshine. I am anxious to know under what circumstances it is possible for soldiers under quick training to be allowed to remain for any length of time lolling about in the hutments. I think it would be impossible; they could only be there during the night-time.

68. And perhaps at meal-time?—The question of whether the meals are to be continued to be taken in the hutments is a matter receiving the attention of the Defence Department. He further states, "and at night, under anti-cyclonic conditions especially, excessively cold." It is beyond me to really understand how the temperature of these hutments can possibly be lower than the surrounding temperature. Certainly I should like to have a definite test made to see if it is possible to have the temperature inside lower than the temperature outside.

69. It is said that is due to the galvanized iron?—I understand so. Then he stated, "If the roof were only protected with a non-conductor the sides would set up a series of conduction currents."

70. The roof is protected by felt, is it not?—With a substitute for felt—a recognized building-material which was approved by the Government Architect and the Public Works Engineer, Mr. Louch. The hutments were designed so that the temperature should be as near as possible to that of the outer air. The men were to sleep under open-air conditions, and I would like to have more evidence to show how conduction currents can be set up under such conditions. Then he says, "Both sickness and death show relation to the weather, but that is only indirectly, for 'good hygiene has replaced climate.'" Nevertheless the fact has remained that good hygiene will never eliminate from enteric fever the name which is given to it in America—namely, "fall fever." It occurs in the autumn, at the fall of the year. Typhoid is always worse during the fall. Notwithstanding good hygiene we have still to contend with climatic conditions in the same way.

71. *Dr. Martin.*] An epidemic of diarrhœa?—An epidemic of diarrhœa is a thing we can say we will have despite the sanitary conditions. He further says, "I also regard the hutments as unsatisfactory because there is a minimum of comfort and privacy at a maximum of cost." It never occurred to me to be necessary to provide in a camp intended for quick training of soldiers comfort and privacy. I do not know what exactly is meant by "comfort." I trust it is not meant that there should be curtains over the windows and carpets on the floors, which would, of course, be for comfort. Then he says, "for galvanized iron is now quoted at about £32 per ton." The position is that it is not to be had, as a matter of fact, and some of the new hutments will have to be built with malthoid roofing. That will be practically a tight roof, and there will have to be further ventilation; but with iron there is the chance for a good deal of air to pass through the roof. It is not a sealed roof. I think it is reasonable to suppose that some air does pass through the ridge.

72. *The Chairman.*] Then, as to the soil?—Yes, he says, "The surface soil is not porous." That is not denied for one moment, sir; but openings have been made here and there to make it more porous. Then he states, "I thought a competent man with a little common-sense could in half an hour do as much in a good rain as a whole squad would do in a day in fine weather." Nevertheless I think the fact remains that it would cost over £2,000 to make an effective storm-water drainage system such as would deal with a storm such as we had last night.

73. That is a matter the Public Works Department now has in hand?—Yes. He further says, "Dampness is a very great danger to health on account of the evaporation of moisture being accountable for conduction of heat." Dampness is a great danger to health, but where that dampness is due to atmospheric conditions which are not always existent I do not know how that is to be overcome.

74. *Dr. Martin.*] You agree with Mr. Bates when he says there are no drying arrangements?—I quite agree with that. You asked that question this morning. Now, I would like Mr. Bates to say if it would be possible to have condensation on a sheet of iron if the air on both sides is of the same temperature and the same constitution.

75. *Mr. Ferguson.*] We have your own statement that you went into the hut and found it warm?—Yes, on a very muggy night. That was the hut with the fifty-five men in.

76. Therefore the temperature would be different on the two sides of the sheet?—Yes.

77. *Mr. Gray.*] I think amongst your duties you have to pass the plans of public hospitals in New Zealand?—Yes; under the Hospitals and Charitable Institutions Act all expenditure on buildings for hospitals over the sum of £250 requires the consent in writing of the Minister in charge of hospitals, and it is one of my duties to consider any and every plan that comes in in which the consent of the Minister is asked for. I then report to the Inspector-General of Hospitals, making such notes as I think necessary.

78. That applies to both new hospitals and existing hospitals?—It does.

79. Do you also inspect private hospitals which require to be licensed?—I do not inspect them personally myself, but one of my staff does, and questions arising out of plans for additions are referred to me.

80. So that you have, in a sense, under your jurisdiction the arrangements both of public and private hospitals throughout the Dominion?—That is so; and not only that—I have made to some extent a hobby of it. I usually take home plans of hospitals to my house at night and go through them quietly, and make sketches according to scale.

81. I think you are responsible for the sketch-plan of the Trentham Hospital which was finally adopted by the Board, consisting of yourself, Mr. Morton, and Mr. Campbell?—Yes; my sketch-plan is on record.

82. That design differs in some respects from the plan submitted by the Defence authorities to you?—It does.

83. Did you understand that that plan submitted by the Defence authorities was the outcome of deliberations between the Defence authorities and the medical profession?—The medical Defence officers—I understand that was the position.

84. And was your plan as adopted by the Advisory Board submitted to Dr. Elliott as representing the medical profession in Wellington?—That is so.

85. In regard to the hutments: the hutments were designed for men who were trained and shortly to go to the front?—Yes.

86. And was it not part of the idea that the men should be accustomed by the training in camp to rougher conditions than would exist in ordinary civil life?—Yes, that is so.

87. And your view was that they should be trained under what were practically open-air conditions?—Yes.

88. In view of what has happened, do you see any reason to alter those views?—No, except that some concession be made in regard to what is called "funk."

89. We know, of course, that all sorts and conditions of men have gone training?—That is so.

90. Men from offices and men from the backblocks who are accustomed to open-air life?—Yes.

91. Would you expect that the city man, the clerk, would stand camp as well as the backblocker?—No, certainly not; and I can understand that the city man, being placed alongside the bushman accustomed to be constantly wet, in a sense of pride, which I admire, would be very anxious not to appear to take more precautions than the man beside him—quite mistaken, no doubt. Nevertheless, I can imagine it would be quite possible he would not like to worry about drying his boots and drying his clothes in such a case.

92. *The Chairman.*] Although it would be better if the city man did take those precautions?—Most certainly.

93. *Mr. Gray.*] Now, as to the hospital: it is suggested that the hospital is deficient in some respects with regard to the operating-room. You have already told the Commission that the idea was that this building was designed for minor surgical operations and not major operations. One member of the Commission has suggested that there may be a serious accident in the camp which could not be attended to at the hospital. Do you as a medical man see any objection to an emergency case such as has been suggested being treated in that hospital at the camp?—None whatever.

94. You instanced, I think, the fact that operations have sometimes to be conducted in private houses without hospital equipment?—Yes.

95. And are serious operations sometimes performed at sea on ships without having hospital equipment?—Yes, and at the front.

96. So that this hospital is intended to be more of a temporary character—rather a sort of feeder to a large hospital?—Yes, a feeder to a large hospital.

97. *Dr. Martin.*] Do you think that a camp containing seven thousand men should only have an emergency hospital seeing that the profession contributed such a large sum?—When I dealt with the plan we had only under consideration four thousand men.

98. For them you arranged a hospital containing eighteen beds?—That is so.

99. Do you think that is sufficient?—Yes, always with the proviso that there is an ambulance ready to take cases to the Wellington Hospital.

100. From Trentham?—Yes.

101. There is no ambulance at Trentham?—There is an ambulance, I believe, actually in Wellington—one that has been donated for the camp for use of the military.

102. Do you think a camp of seven thousand men should only have an emergency hospital such as that?—For seven thousand men that hospital is not big enough.

103. That camp had seven thousand men there, and probably may have seven thousand again?—But special accommodation was arranged, about which the Director of Military Hospitals will explain. He overcame the difficulty by using the emergency buildings. So long as the emergency buildings are available I think we can get along with the amount of hospital accommodation. If the emergency buildings cease to be available, then, of course, the hospital is not near big enough.

104. What are the emergency buildings?—They are those on the racecourse.

105. Therefore seven thousand men will require this small hospital plus the racecourse buildings?—Yes.

106. That you consider absolutely essential?—Yes.

107. Then we must look upon the Trentham Hospital plus the racecourse buildings as the hospital area?—Yes.

108. You admit the present hospital is not capable of accommodating in emergency or serious cases for seven thousand men?—Not all of them, no.

109. *The Chairman.*] I understand also that it is not put up in view of an epidemic?—No.

110. But only for what may be called sporadic cases, for operations that might be performed before sending a man to Wellington?—No, sir; I would put it this way: if I had had the fortunate foresight of knowing there were going to be five hundred cases I would have asked for that accommodation; but no one would have believed that such a thing was likely to arise. I did not anticipate it, nor did any one else. Five hundred cases out of a body of picked or selected men is unusual.

111. *Mr. Gray.*] Who had also all undergone medical tests?—Yes.

112. *The Chairman.*] And living an open-air life?—Yes.

113. *Dr. Martin.*] With regard to operating in the room, you compared it with operating at sea and operating in the firing-line: do you think that is a fair comparison? These are men in camp?—Just as I have said that the men ought to be trained to service conditions, so I think it would be a good thing to train the medical men who have to look after the men under service conditions, and not to expect everything to be ready, but to get accustomed to work with the minimum and not the maximum.

DANIEL CROSS BATES further examined. (No. 18.)

1. *The Chairman.*] You heard the criticisms that Dr. Frengley passed on some of your observations: the first is with reference to the determination of results of radiation: did you, as a matter of fact, make any determinations?—It was impossible for me to make determinations without staying out the night, but I went out to the camp and took two standard minimum thermometers for testing inside and outside the effects of radiation in the hutments, in the tents, and in the open air. I went out on the 10th June, and saw Dr. Purdy in company with Colonel Potter. Dr. Purdy was unwilling to have anything whatever to do with the matter, and I then asked Colonel Potter, who told me to go to the medical men at the hospital quarters.

I walked over to the hospital and met Dr. Bogle, who undertook to investigate and report to me upon the subject. I promised to lend him radiation thermometers, and also a standard hygrometer to test the humidity if he made very good use of those I lent him then. I had no report from him, but when I was subpœnaed to give evidence I at once received a telegram from him in reply to one I sent, in which he said, "No reliable data available." I went out at my own expense and initiative, because I thought it was so necessary after the experience I had had and the knowledge I had of the evil effects of those hutments in South Africa and elsewhere, and I wanted to have absolute determination or proof of what I maintained chiefly on theoretical grounds.

2. Well, with regard to the hutments, do you mean to say there should be no hutments at all, and that there should be tents, or what?—No. These hutments can be, I believe, improved, but they should not have been constructed in the way they are without lining; and the outsides should be painted white or some non-radiant colour. There is the ventilation, too, to be considered; it is by no means satisfactory.

3. Would the matter, in your opinion, be improved by enabling the ventilation to be closed on one side?—Only in storms. Cross-ventilation in a general sense does not do harm, but in absolute storms it would. It would be desirable in calms to have more ventilation than is provided for at the present time. It is not so much a matter of ventilation: it was, in my opinion, primarily one of temperature, and I have mainly directed attention to that matter here concerning the radiation of heat.

4. You see, if there is ventilation which is at the command of the men, there is one man, as you find in a railway-carriage, who very often wants everything closed and another man who wants everything open. There will be difficulties on that score, and probably you would find the ventilation closed when it ought to be open?—Quite so.

5. So that you must have some system, must you not, by which it is out of the control of the men—they must be ventilated willy-nilly?—Quite so. That difficulty is, however, overcome in all sorts of places, even in the House of Parliament.

6. Then you have no basis, at any rate, on which to establish the facts of radiation out there?—Not absolute determinations. I can only give you my experience, and speak from scientific knowledge and reports.

7. You have had experience of the hutments in South Africa: what were the hutments there, and how were they made?—In Ladysmith provision was made for nine thousand men, mainly in hutments of corrugated iron, and it was called "Tin Town." The soldiers there suffered very much from extreme temperatures, maximum and minimum, and respiratory diseases particularly cut off hundreds of men. More men died of disease there than from bullets, and finally Tin Town was abandoned. It stood there at the time I visited Ladysmith as a monument of slackness in scientific matters.

8. *Mr. Gray.*] Were they in use when you were there?—No; they were abandoned because of the evils that came through them. I know of men in this town who were there and who can prove it.

9. *The Chairman.*] What time of the year was it that those huts were used in Ladysmith?—At the time of the siege. I could not tell you the exact date—they were abandoned just after the siege of Ladysmith began.

10. What sort of hutments were they?—Just iron.

11. And held how many?—I could not tell you how many. I did not go up to them and examine them.

12. I want, if possible, the size?—I cannot tell you.

13. How high is Ladysmith above the sea?—Between 3,000 ft. and 4,000 ft.

14. It is rather a cold place in the winter?—Very cold. Hot by day and extremely cold at night.

15. You could not compare the cold and heat there with the cold and heat at Trentham?—No; but relatively exaggerated conditions obtain in these huts.

16. Had they anything in the roof underneath the iron?—I did not go up to them or examine them.

17. Here they have. Were they raised above the ground?—As far as I could judge. It was pointed out to me, but I can get full particulars here, because I know a man who, I think, slept in them.

18. We want to know a good deal before we can compare the hutments here with the hutments in Ladysmith?—Yes.

19. Perhaps you could get your informant to give us some definite information as to what those huts really were?—I will. I had personal experience of corrugated-iron sheds on several occasions when I was away from the column. I had to take refuge in these erections, which are very common in South Africa, because wood is scarce. They are quickly put up, and I suffered very much indeed from the intense cold, more so than when sleeping in the open.

20. Have you slept in the huts at Mount Cook?—No, I have not; but surely they are lined. Then, in Australia I was a clergyman and travelled a great deal in the backblocks, and had to put up with all sorts of accommodation which the selectors could give me. I occasionally had to go into unlined, roofed, and sided iron dwellings, and on every occasion found my vitality was lowered, and I suffered from the cold very much, although I used to cover my face to prevent radiation.

21. It was not shortage of blankets that made you cold?—No; it was the radiating effect of the iron under the clear skies of Australia. The iron concentrates the heat, making the place like an oven in the day, and a refrigerating-chamber at night, dispersing the heat. One thing Dr. Frengley asked me was in regard to conduction currents and cold on the walls. The air

is chilled in contact with the iron, and being cold it is made heavier and descends to the floor, and then taking up the bodily heat and breath of the men drives this up to the centre, and then this chilled and deoxidized air either soon descends or is taken away by a draught through the vents to a certain extent. The iron, you may say, is really like a suction pump for the heat in the place.

22. Apparently one must be very careful about sleeping in a galvanized-iron building?—That is my experience; and I have known the strongest of men inclined to take colds and pneumonia, and seen many strong and full-blooded men go off with pneumonia under conditions that a weaker person has withstood.

23. A timber building roofed with shingle or covered with wood would be preferable?—Far preferable, and could, moreover, be obtained in the country. Timber cut of a certain length at the mill for the walls could be supplied in the country, and the interstices of the walls covered with small battens, so that it was made perfectly draught-proof; the nailing-work could be done even by the soldiers themselves, or rough carpenters or common labourers. I was surprised to hear Dr. Frengley talk in the manner he did with regard to corrugated iron, because it is just a matter of the A B C of physical science that certain substances act as radiators of heat—absorb and emit heat with definite coefficiency—in the same way as copper and other metals conduct or resist the transmission of electricity.

24. Is not the question of fire also to be considered when you put up a number of contiguous buildings?—It would have to be considered, certainly.

25. Galvanized iron is less likely to ignite from sparks than wood?—Certainly; but the dangers from fire are less than the loss of life we have suffered at the camp. I have also had experience of unlined galvanized-iron churches, and after they have been lined the disagreeable effects of extreme heat and cold have disappeared. As to what Dr. Frengley said in regard to my not having had experience with consumptives, I am not a medical man, but I have taken a great deal of interest in and studied this matter in years gone by, because it is one than concerns climate and the health of the people. I have visited sanitoria and read several books upon the subject, and the hutments as I have seen them illustrated have not been of the character seen at Trentham. Usually they have been more on the open-air system than these—one side has been open so that there were no draughts created in any way, except perhaps suction draught by a passing current of air.

26. You would not put fifty people in a room in a sanatorium?—No, only one or two at the most.

27. If you have a large number of people in a room—anything from twenty to thirty or forty—must you not have some draught set up or some continuous circulation of pure air ensured?—Of course; but this is quite a different thing. It would be very much healthier to sleep in a lean-to or anything of that character than in a room where conduction currents are set up of carbonized air and heat radiated from them as in the hutments out at Trentham. Every sanatoria system I have seen for the outdoor treatment of the sick has been on quite a different plan from these.

28. *Mr. Ferguson.*] Have you been in these huts?—Yes, I inspected them in course of construction, and have looked at them since.

29. Have you been in them since construction?—Yes; but only when the doors have been open and the men's clothes and things were lying on the floor.

30. Are you aware that along two sides of the hut at the level of the eaves there is a continuous opening?—Yes.

31. Are you satisfied that the area through which air can blow in or blow out, or both, is sufficient to keep the volume of air continually changing inside the building?—Not in calm weather, but it would be excessive in stormy weather.

32. Sufficient in moderate weather?—It would be a matter of calculation, for a man is supposed to require 3,000 cubic feet of air every hour, and it would be a simple matter of calculation how much would be supplied with a certain current of air.

33. Still, in moderate weather or in stormy weather the volume of air inside would be displaced and would be continually moving?—Yes.

34. A condition could approximate closely to the condition in an open shed?—Yes.

35. Assuming that the condition is approximate to that of an open shed?—Yes.

36. If the temperature is practically the same inside and out, how does it come about there is a reduction in temperature?—Is there reduction in temperature?

37. I understand you complain there is a reduction in temperature owing to the galvanized iron?—Yes, with men inside.

38. But if the circulation of air from outside carries into the hutment the same temperature as outside, how can there be condensation?—The loss would be from the heat of the men's bodies and through the iron itself.

39. There would be no more loss of heat from the men's bodies than if lying in the open air?—More loss.

40. Why more loss?—More, I say, because there is the radiation and cooling surface for the air that comes in contact with the iron.

41. And if it radiates, it radiates because of the hot air. If the temperature in a room is the same as outside by reason of ventilation I cannot see where there is condensation?—But it would not be the same; there would be the heat from the men's bodies to disturb the equilibrium of temperature.

42. Is radiation any greater in a man's body lying in the open air or lying inside a room well ventilated?—I see what you mean; but that is not an open shed.

43. Well, is it not so nearly approximate to an open shed that it practically is one. Dr. Frengley maintains that he has designed this as an open shed, with only sufficient closing to

keep out the rain and weather. You say it is not an open shed because its sides are of galvanized iron?—Even if there was no person in the shed, and wind or air was passing on and through that shed, heat would pass from the air in the room to the iron, and then into space from the iron. Again, if it were inhabited by men their bodies would give off a certain amount of heat. The temperature of the body of a man in health is fixed at about 98 degrees Fahrenheit. For instance, a room 12 ft. square at 45 degrees Fahrenheit inhabited by one person reaches 48 degrees in two hours—it gains 3 degrees; and if the room were of unlined iron that heat would not be gained, but passed through the radiation of the walls and then into space. Another question Dr. Frengley referred to was, if the air is of the same temperature on both sides, would there be any condensation?

44. That is the same question I am asking?—There would not be any condensation; but the condensation in every case in the Trentham hutments will prove what I say—the vapour from the men's breath condenses on the cold iron at night.

45. Do you know of your own knowledge there has been condensation?—I did not stay out there. I know of my own knowledge that it must be so when there is a frost outside.

46. You are assuming the facts coincide with your theory: do you know practically that the facts do coincide with your theory?—I have had no practical tests there, but I took it from others, and they have had far more ice in their jugs than at other places.

47. I do not know that there are any jugs in the place?—That is what I am informed—in the officers' huts.

48. *Mr. Gray.*] You were not instructed by any authority or person to make an inspection of the camp, were you?—No.

49. You had no personal experience of these hutments—never been in them at night?—No.

50. And never seen them in occupation?—No; the men were in the field.

51. You have had no experience of the hutments in Ladysmith?—No.

52. Never been inside them?—No.

53. And your experience is confined to some buildings in the backblocks of Australia and unlined churches in New Zealand?—And unlined sheds in South Africa.

54. What sort of sheds?—By the railway-side, where I had to sleep—galvanized-iron sheds.

55. Were they ventilated like these buildings?—There was too much ventilation.

56. How were they ventilated?—With openings in the top—in the roof.

57. There are openings and eaves extending along the walls of these huts: they were not like that?—It was not so deliberate as at Trentham.

58. Were those you speak of floored?—Some were and some were not. I slept on the floor, and the cold descended.

59. You might have thought it did?—I know it did.

60. *The Chairman.*] The man in the Australian backblocks does not provide any system of ventilation, does he, in addition to what may get through the crevices and cracks?—No.

61. As to the churches you spoke of, was any attention paid to the ventilation of them, or was it left to the natural conditions of their construction?—More or less to the natural conditions of the structure.

62. Then it may be that the evil effects would follow from the effects of the ventilation in the backblocks' room or galvanized-iron church?—By excess.

63. By want of proper ventilation?—No; fresh air would be a corrective.

64. I can understand draughts coming in from crevices, but here you have a condition where there is a continuous current. There is a great difference between those two conditions?—Yes, there is certainly a great difference.

65. *Mr. Gray.*] There is a strong prejudice held by some people against fresh air?—Especially in cold weather.

66. And even in warm weather?—Yes.

67. Does the backblocks settler who lives in an iron building pay much attention to ventilation?—In Australia they are very much open-air people.

68. Does a man who lives in an iron shed pay much attention to ventilation?—They mostly have too much ventilation, but they would suffer more from the evil effects of the radiation if they closed it all up. The oxygenized air that would be coming in would save them from the evil effects that people try to ward off by closing the ventilators.

69. Can you then say, having had no experience with these hutments, that they are not sufficiently ventilated?—No, I would not say so. I have not had experience of them, and I wanted to get absolute determination of the relative temperatures of the tents and hutments.

70. You have not had any experience of these hutments?—I have not slept in them at Trentham.

71. Are you a particularly strong man?—I am strong enough in that way, but know I would easily get inflammation of the lungs.

72. Have you ever suffered from chest-complaint?—Yes.

73. I suppose you know enough of this matter to know that time was the great factor here—they wished to get the huts up as quickly as possible?—Yes.

74. It goes without saying that the construction of the huts of wood would take longer than iron—you would have to get a sufficient supply of good dry timber?—I do not think there would have been very great delay, and it would still have averted the greater danger if we had made less haste. It is a case of "more haste and less speed."

75. I gather from what you say that you regard iron as an unsuitable material for huts to be made of?—Absolutely.

76. You prefer wood?—Very much; it is a non-conductor.

77. Now, do you suggest that if any severe case of influenza were introduced into the camp, even if the hutments were made of wood, it would not have spread as it has spread in this camp?—That depends how far it is infectious.

78. Well, take a severe case of influenza?—That is very doubtful. It would not, I believe, have grown to any such great extent, because influenza is caused and fostered to a certain extent by unfavourable conditions.

79. Influenza is an actutely infectious disease?—It has been.

80. Would you say it is not now?—I would not say it is not.

81. What is it?—It is an infectious disease.

82. And one which rapidly spreads; and you told the Commission that you think it would not have spread so rapidly if the building had been made of wood instead of iron?—I do, certainly. The ground it has to fall on is the question. If the ground is prepared for that by the lowering of the vital powers of the men by cold air, then that influenza will take root. [Witness quoted from Thomas on "Ventilation," page 12, "A frigid atmosphere from above has a most deleterious action upon the breathing-organs, giving rise to chill, inflammation of the lungs, and bronchitis. The effects are the same as when one descends into a cold crypt or dungeon, only that the person sleeping has far less vitality to resist the action of the sudden inrush of frigid air."]

83. Did you hear Dr. Frengley give evidence yesterday?—No, I did not.

84. Well, he told us of an instance of the rapid spread of influenza in a school, a brick building, wherein he said the conditions were entirely sanitary and everything up to date. Have you a theory to account for that?—No; it would be in an acutely infectious form.

85. And it may spread rapidly under any conditions?—Apparently.

86. And in any building?—But more so in an unfavourable building. Dr. Frengley mentioned "fall fever" in America—the name that typhoid fever gets—to prove weather was the cause, and I would like to refer the Commissioners to page 212 of Dr. Ward's book on "Climate." Typhoid is more common in the country than in sanitary cities, and arises from bad smells, polluted water, &c.—not directly from the season. Now, with regard to preparing the men for war—making them fit for the hardships they will have to undergo—that does not justify us in putting them through dangerous hardships to prepare them for it, because we are weakening their constitutions and powers of resistance to disease. The last night that the Fifth Reinforcements slept at the camp one blanket was taken from each man.

87. *The Chairman.*] Did you see it?—I saw the blankets taken away at the camp.

88. And they had to sleep with one blanket less that night?—Yes—two blankets instead of three.

89. *Mr. Ferguson.*] Were the men paraded with blankets?—Yes, and had to hand one in.

90. Did you see that?—Yes. That in the case of a man not used to hardship would, on a very cold night, probably give him pneumonia, which would develop in from twenty-four to thirty-six hours.

91. *Dr. Martin.*] Did they sleep in the camp that night?—Yes, in tents. That was the Fifth Reinforcements. Putting men suddenly in conditions like that is not preparing them for warfare.

92. *Mr. Ferguson.*] Is there anything else of your own knowledge that you saw yourself that was wrong?—I did not come to this inquiry in a hostile manner to complain.

93. *The Chairman.*] We asked you to come to give us some information about the weather, and we are quite conscious that you realize you are discharging a duty, and we shall be glad if you will tell us of anything you know or of any people who can give us information?—I do not desire to be regarded as a hostile witness, as Mr. Gray's attitude towards me and his questions seemed to imply.

94. We do not regard you in that light?—I only want now to see that the money is not thrown away on the hutments. I would like to suggest that they be painted white, better ventilated, and double-lined, because at present it is so dangerous, in my opinion. Another matter I would suggest is that in future huts should be built of wood, and roofed with shingle, and floored, as this is a permanent or standing camp. Walls of wood do not radiate the heat like iron does.

THURSDAY, 22ND JULY, 1915.

JAMES SANDS ELLIOTT sworn and examined. (No. 19.)

1. *The Chairman.*] You are at present Acting Chairman of the British Medical Association?—I am Acting Chairman of the New Zealand Branch of the British Medical Association.

2. And what was your position in the earlier part of the year—the same?—Yes.

3. How long have you been Acting-Chairman?—For a year and seven or eight months.

4. *Dr. Martin.*] You are also Principal Medical Officer of the Wellington District?—Yes.

5. How long have you been in that position?—Since the beginning of April.

6. And as P.M.O. of the district, the plans of all hospitals built in the district should be submitted to you?—Yes, according to the British Army and other regulations, but here there was an exception to the rule.

7. *The Chairman.*] You wish to make an explanation in regard to these particular plans?—Yes, sir.

8. Will you kindly say what it is?—Well, sir, what I take exception to is this report which has appeared in the Press in regard to the evidence given by Dr. Frengley yesterday. It says,—

"Dr. Frengley also produced letters regarding the camp hospital. He was asked by General Robin on 3rd March to advise on the plans, with Mr. Morton and Mr. Campbell. They met and prepared new plans before 16th March. On that date the Chairman of the Council of the British Medical Association was written to by General Robin, asking certain questions in regard to funds, and enclosing a copy of the plan recommended, with the remark that it was thought suitable. Dr. Elliott replied to the questions with notes on the margin of the original letter. Opposite the reference to the plans he wrote 'Yes.'

"His Honour: This was taken as approval by the Medical Association of the plans?—Yes.

"Witness read a letter addressed by General Robin to the Minister for Defence, dated 17th March, indicating that the association and the Director of Medical Services both approved of the plans."

Another paper stated that the plans had been approved by Major Elliott and another person. May I explain, with regard to this statement, that I was never asked, nor did I ever make any proposals, with regard to the plans of the proposed hospital at Trentham. With regard to the supposed approval that I gave on behalf of myself and the association by writing "Yes" in the margin of the letter, I had an opportunity of seeing that document yesterday, and the word "Yes" is not in my handwriting.

9. Will you look at it here?—[Witness examines document on file.] That "Yes" is not mine. Moreover, that refers to the speed in making the report.

10. Looking at this letter of the 16th March, 1915, from General Robin to the Chairman, Council of British Medical Association, the notes opposite paragraphs 1, 2, and 3 are yours?—Yes.

11. But the "Yes" on page 2 is not yours?—That is so.

12. It is not your writing?—That is so.

13. And you did not authorize it to be put there?—No.

14. The point in that paragraph was that the plans and report had been prepared, and that the plans, General Robin thought, would provide for a more permanent hospital than the first proposals. You did not make any comment upon that point as to whether you agreed or did not agree that the new plans would be an improvement: did you make any comment in a separate letter?—I would like to explain that this letter did not come to me through the post. I saw that letter in Dr. McGavin's rooms, where it was produced by Colonel Purdy. He asked if I could give him some information. I said, "What is it?" I looked over the letter and wrote the memoranda in the margin, and said, "That is all I can say; I do not know anything about the rest."

15. Did you see the plans?—I saw them casually. I was going away to some special work, and I could not stay to examine the plans carefully. Colonel Purdy, Dr. McGavin, and myself met at Dr. McGavin's house to examine some soldiers, acting as a Medical Board. After we had got through this work we had some tea, and while doing so I was shown this letter.

16. By Colonel Purdy?—Yes; and then, according to the newspaper report of yesterday's evidence, we find that on the strength of these notes of mine General Robin wrote to the Minister of Defence saying that the British Medical Association approved of these plans, whereas we had never been fully consulted about the matter.

17. Have you anything further to add to this point?—I do not think so.

18. *Mr. Gray.*] I might say that the statements made by Dr. Frengley yesterday were made in response to the Commissioners' request that he should supply the Commission with the dates of the memoranda relating to these several matters, and that they are not voluntary statements made by him with the suggestion that the British Medical Association had, of his own knowledge, been consulted. He knew nothing about that until he saw the file yesterday morning. Dr. Elliott will, I am sure, understand that. On the date of this letter you were the Acting Chairman of the New Zealand Branch of the British Medical Association?—Yes.

19. The letter, then, was properly addressed to you in your official capacity—it was meant for you and nobody else?—Yes.

20. Now, the memoranda which you wrote in the margin of this letter were intended as replies to General Robin's queries, were they not?—For the information of Colonel Purdy. I did not think that that rough-and-ready and rather discourteous reply was going to the Minister. It was memoranda written for the information of Colonel Purdy to show one thing, and that was what the money was being raised by the association for.

21. But you did not intend it to be used by the military authorities?—That is so.

22. Your first memorandum, "Yes," opposite paragraph 1, includes, I suppose, your approval of General Robin's suggestion that the money the association had collected would be available for expenditure on the building for the hospital?—Yes.

23. The second memorandum, "No," is in answer to the question, "Is this money—the amount collected by several ladies—included in your monetary gift; if possible, please say the amount"?—That is so.

24. And the next memorandum, "As above," is an answer to the third paragraph?—Yes.

25. I presume you read the letter?—Glanced through it.

26. And you saw that the plans of the hospital had been prepared by the Board consisting of Dr. Frengley, Mr. Morton, and Mr. Campbell?—I saw that, yes.

27. And you saw that the letter stated that the report by that Board recommended that the hospital be erected in accordance with the new plans: did you observe that the plan was said by the letter to be attached?—I have no recollection of that except that the plan was not attached—it was separate, in the packet produced by Colonel Purdy. There was no very definite con-

nection between the letter and the plan. I think it is most extraordinary to draw sweeping conclusions from a very casual look at the plan over a man's shoulder.

28. It was on the same occasion that the plan was produced?—The same afternoon and in the same room.

29. Not at the same time?—There was an interval of conversation: we met socially, not to discuss plans.

30. *The Chairman.*] The plan was brought out at an interval after you had seen the letter?—Yes.

31. *Mr. Gray.*] Had you anything to do with regard to that plan?—I had nothing to do in regard to it. It had been sent to another military officer junior to me, Dr. Frengley, Mr. Morton, and Mr. Campbell, the Government Architect. I repudiate any responsibility for the plan.

32. But Dr. Frengley had no appointment as an officer?—He was on the Army List.

33. But he had no local rank?—He was on the Army List.

34. Did you ever make any inquiry about the plan?—I repudiate the suggestion that I should go round looking for this plan.

35. You knew from this letter that the plan had been prepared, and that it was intended to erect the hospital in accordance with the plan?—I took that letter merely as a means to find out about the money, and that was what was in my mind; that the association was going to be consulted, and that there was no urgency, because the hospital has not been erected yet.

36. *The Chairman.*] Why do you say there could not have been any urgency—you are talking from a knowledge of what has happened since?—I have never been asked, anyhow, to take any bother about the plan.

37. *Mr. Skerrett.*] I understand you to say that the plan was produced at a casual social meeting at Dr. McGavin's house?—Yes; we did not meet for that purpose at all.

38. Was there such an examination of the plan at that meeting as to justify any person in supposing that a critical examination had been made for the purpose of approving the general scheme from the details on the plan?—No.

39. *The Chairman.*] Had you seen the prior plan on which this was said to be an improvement?—No; but I think that Major Holmes had a rough sketch of what he thought would be suitable, and I saw that, if that would be regarded as a plan.

40. *Mr. Skerrett.*] But that was only an unofficial thing?—Yes, it was only drawn in a rough way, with no detail.

41. The plan produced by Colonel Purdy was on tracing-paper?—Yes, I think so.

42. It was not on the ordinary stiff, plan paper?—I would not be certain.

43. You had no opportunity of submitting the plan to the Council of your association?—None whatever.

44. And in point of fact it never was submitted?—No.

45. Do you know whether the preceding plan had ever been submitted to the Council of your association?—It had not.

[*Colonel Purdy* here made an explanatory statement, for which see his evidence.]

Witness: May I say, sir, that my only reason for bringing this matter up now was that I did not want to involve the whole British Medical Association of New Zealand in a course of action of which they might not approve.

46. *The Chairman.*] I think it is quite clear that your memoranda were not intended to convey the approval of your association of the plans?—As I said, to my mind the object of the letter was to find out about the money, and not anything in connection with the plans.

Colonel Purdy: I think the answer to that question was missed out altogether.

The Chairman: Reading this letter there was no occasion for Dr. Elliott to express the opinion of the British Medical Association in regard to the plans, or to involve the approval of them by the association.

Witness: That is so.

The Chairman: This "Yes" is more opposite to the last paragraph than to the other.

Witness: That is so.

The Chairman: There is nothing in this letter expressing the approval of Dr. Elliott himself of the plans.

Colonel Purdy: No.

The Chairman: Except in so far as it might be gathered from the discussion you had together: your letter to the Adjutant-General does not make any reference to the approval of the plan?

Colonel Purdy: That is so.

47. *Mr. Salmond* (to witness).] For what purpose do you think that plan was sent or produced to you with the letter?—I cannot say for what purpose it would be sent to me in that way, because any opinion I might have would be valueless in a casual inspection of that kind. It never passed into my possession, more than into my hands to look at.

48. You did not understand that your approval was being asked for when you read the letter? Is not that what the letter means?—I should not have taken that impression out of it, and the help I got from Colonel Purdy did not lead in that direction. My recollection is that there was the statement that the new plan was better than the previous one, but I do not think it was put in the form of a request that the association should approve of it.

49. *The Chairman.*] Nor for further suggestions?—That is so.

50. *Mr. Salmond.*] You did not regard yourself as responsible for the matter at all?—No; I should have thought any direct interference with the plan would have been an intrusion on my part under the circumstances.

Colonel JAMES ROBERT PURDY sworn and examined. (No. 20.)

1. *The Chairman*] You are a medical practitioner: what is your military position?—I am a colonel in the New Zealand Medical Corps, and I am Director of Medical Services for New Zealand.

2. How long have you been Director of Medical Services?—I was first appointed in 1909 as Acting-Director, and in 1911, when the territorial scheme was brought into existence, I was appointed permanently. My appointment was confirmed by General Godley. Under the terms of the new scheme the appointment was for four years, so that I had to go out on the 5th May, 1913—four years from 1909.

3. What happened in 1913?—According to the regulations, if the services of an officer are satisfactory, and the General thinks fit, he can extend his appointment for one year.

4. Did he extend yours?—Yes, for one year. Then I was to go out on the 5th May, 1914. In the meantime General Sir Ian Hamilton came to the colony inspecting the troops, and it was considered advisable to further extend my appointment for another month—till the 5th June, 1914.

5. Who was appointed on the 5th June?—Colonel Will.

6. When the war broke out what happened?—Colonel Will was taken away with the main body of the Expeditionary Force.

7. Did he go with the December lot?—He went with the main body, officially supposed to leave the colony at the end of August.

8. When did it leave?—About October. After the main body was mobilized they did all their own medical work. I was called up again at the end of August (27th), and reappointed Director of Medical Services.

9. That was because of Colonel Will being attached to the main body?—Yes.

10. Are you still holding that position?—Yes.

11. Is there a salary attached to it?—An honorarium of £150 a year.

12. What are your duties as Director of Military Services?—The general duties of administration by the Director of Military Services are laid down.

13. Who lays them down?—General Robin.

14. Is this scheme the one that was in force when you were appointed?—No, sir—practically, with the exception that I had full authority over all medical arrangements for the colony.

15. What had you to do before any change was made—in August, 1914?—I was responsible for all the medical details, equipment, and appointment of officers.

16. In connection with the whole of the military Forces?—Yes.

17. Whether in training or not?—That is so.

18. And the control of camp hospitals?—Well, I had general supervision over them, of course, right throughout the colony.

19. In fact, you had to look after the health of the Army?—Yes, except that of the Expeditionary Force, which at that time had not left the colony—they did all their own medical work.

20. That was the lot that left with Colonel Will?—Yes, ten thousand men.

21. Then had you to do with every other contingent camp that afterwards went away?—Yes, sir.

22. From August to October you had practically little to do because Colonel Will was in charge?—That is so.

23. Did you appoint officers under you at that time?—I was asked to appoint officers to the Second Reinforcements—that is, the first batch of men that went away after the main body. The main body took the First Reinforcements with them. The Second Reinforcements occupied the camp at Trentham first.

24. They left in December?—The 12th December. It was mobilized about the middle of October. On the 19th October I was told that these troops were to go into camp at Trentham, and that as it was a general camp for the whole of the colony it was to be a headquarters camp. The headquarters would have charge of it, and not the district office.

25. On the 19th October headquarters gave you charge of the Second Reinforcements?—Yes. I was told that the number of men would be, I think, two thousand, and I said I wished to appoint six doctors. I notified the Adjutant-General to that effect.

26. *Dr. Martin.*] You practically set to work and asked for six doctors?—Yes.

27. *The Chairman.*] Did you get those doctors?—Yes, I started the camp with six doctors. I might explain that on the list left behind by Colonel Will, of the doctors who had volunteered, there were practically only six doctors.

28. You had a list of only six to select from handed to you?—Yes.

29. *Dr. Martin.*] Had the profession been asked by the military to come forward?—I understand so, at the beginning of the war.

30. In England when the war broke out the Medical Branch of the War Office issued an appeal to surgeons: was that done in New Zealand?—Yes.

31. What was the date of that appeal?—As soon as I found that there was only a list of six doctors available I approached the editor of the *New Zealand Medical Journal* and asked him if he would be good enough to put a notice in the *Journal* to the effect that we would be very glad to have volunteers for medical services at the front. This was done, I think, in the next issue of the *Journal*.

32. You invited medical men to offer their services: what issue was that in?—I think it was in November. It was the earliest issue after I made the request to the editor. Since that time I have never been short of officers.

33. *The Chairman.*] The notice you had put in the *Journal* was quite effective?—Very effective. That was the first and only appeal I made to the profession.

34. Then the first six men you appointed went with the Second Reinforcements?—Yes.

35. You might tell us their names—Dr. McKillop—he had been in Samoa with the advance party.

36. But let us have the list of officers?—I would like to give you his qualifications, because we have been charged with appointing men who knew nothing at all about camp sanitation.

37. That is important, then: my own mind is rather a blank as to what the charges are?—You see, under the regulations I cannot say anything in regard to any charges. These six doctors were Drs. McKillop, Simpson, Sinclair, Widdowson, Harvey, and Abbott. They were all excellent practitioners. Three of them were asked to come in on Wednesday, and three on the Thursday: Drs. McKillop, Simpson, and Sinclair reported to me on the Wednesday, and Drs. Abbott, Harvey, and Widdowson reported on the Thursday. I insisted that the doctors should be in camp when the troops came in—there should be at least one doctor in camp even if there are only ten men.

38. As a matter of fact, was there always a medical man there to receive the troops?—Always. I appointed Captain McKillop administrative officer of the camp, because he had been in Samoa with the advance party, and had done good work there. He was on the Special Reserve of the R.A.M.C. He had all the certificates. He had taken the special Army course.

39. In England?—Yes; he was on the Special Reserve of the Imperial R.A.M.C., and he was going Home to join the Army as a Special Reserve man. He had seen seven years' service, starting as a private and finishing as an officer. He had been in camp year by year. He went through the whole of the ambulance training at his university, and he had also been in the so-called Territorials in Scotland, so that he was well up in all the latest details of camp sanitary life. He had just been at Aldershot before he came to the colony. He had been in New Zealand two years, I think, when he volunteered for service at the war. The other five officers were all good men also; some of them had had previous military experience, some had not; but they were all excellent men, and had proved good men since they went to the front.

40. Perhaps you can tell us at this stage what was the state of the camp: had it been occupied by large numbers, and had any sanitary arrangements been brought into force up to that time?—The camp was laid out.

41. Before that?—Yes, but not occupied.

42. Where did the ten thousand men—the First Contingent—collect?—There were local camps: there were some of the men collected at the Lower Hutt, some at Addington, and so on.

43. The position was that Trentham Camp simply had the provision that was permanently there for the shooting gatherings?—Yes, sir. I was surgeon to the New Zealand Rifle Association from its inception at Trentham, and I knew the place well for years. While the Rifle Association held their meetings there I did the medical arrangements.

44. Which included the sanitation?—Yes.

45. Had you then when you took charge a practically free area to deal with?—Yes; and I made a rigid inspection of everything myself personally, not once only, but at least half a dozen times within about eight days.

46. *Dr. Martin.*] This was from the 19th October?—Yes; I was there before the troops came.

47. With Dr. McKillop you made these daily inspections?—By myself and also with Dr. McKillop and other Medical Officers. The officers were appointed for certain duties every day. We inspected the water-supply, took a sample of the water, and sent it to the Public Health Department, who had it analysed and sent us a full report about it. All the usual precautions were taken which are laid down by military authorities. I laid out the military camp at Tauherenikau in 1911, when the officers and N.C.O.s of the territorial scheme were mobilized. I was asked to plan a model camp there, because I had had more experience than any other officer in the colony. I have had charge of many important camps. I had charge of the Tenth Contingent camp. So they asked me to lay out this model camp at Tauherenikau. I used to take officers and N.C.O.s round and explain matters to them.

48. The Trentham Camp was laid down on the lines of the model camp at Tauherenikau?—Yes.

49. Did the model camp at Tauherenikau conform to the Imperial requirements on the subject of camps?—Yes, absolutely.

50. Could we have the books containing these directions?—Yes.

[At this stage Dr. Elliott was examined in regard to the statement made by Dr. Frengley respecting the alleged approval by Dr. Elliott on behalf of the New Zealand Branch of the British Medical Association of the proposals for the hospital at Trentham, and the examination of Colonel Purdy here following has reference to same subject.]

51. *The Chairman.*] Do you wish, Colonel Purdy, to first dispose of this question of the alleged approval by Dr. Elliott of the hospital at the camp?—Yes. There is, to my mind, a simple explanation of the whole business. There was a general mix-up about the position of the Medical Association and the hospital. I made it distinctly clear that the money subscribed was not for the hospital building. One morning when I was talking to General Robin he said, "Now this sort of thing must end: we must know exactly where we are. Now, what is the position?" Then I addressed a meeting of the Wellington Division of the British Medical Association. I drew a rough plan of the proposed hospital that the Government would put up. We had a discussion about it. I made it perfectly clear then to the Medical Association.

52. Dr. Elliott was present?—Yes. I told them that the Minister of Internal Affairs, who was Acting Minister of Defence, had informed me that the Government were prepared to do anything I asked them in reason, and that they did not want the hospital to be put up by outside people. Now, I made that perfectly clear, and that the money that the Medical Association had subscribed for the benefit of the medical side of the work should be devoted to the purchase of

necessities and needs at the hospital at Trentham. I also made it perfectly clear that it was to be a camp hospital, and not a base hospital. It was to be a small camp hospital built in such a way that in the future it might be used as a convalescent home, or something of that nature, for the benefit of the men returning from the war. Our plan also embodied a small isolation hospital, which we also wanted, and the plans were afterwards properly prepared by a draughtsman, and they were sent then to the Board consisting of Dr. Frengley, Mr. Morton, and Mr. Campbell—a doctor, an engineer, and an architect. When I had that conversation with General Robin about the money and the indefinite position we were in in regard to the Medical Association he said that something must be done to straighten the matter out, and he wrote that note and said to me, "Can you get answers to those questions?" I said "Yes," and he had it typewritten, and said, "When can you see Major Elliott about it?" I told him that we were having a meeting at Dr. McGavin's house that afternoon, and that I would see Dr. Elliott there. Dr. McGavin was the P.M.O. for the district, and he had been on the original Board with Major Holmes and myself, who drew up the original plan. Colonel Robin said I had better take the letter with me and also the plans, and that was the first time I had seen the new plans of the proposed hospital. I said that this was very much more elaborate than we intended, but I quite approved of it, because all the block had been brought in together. Then I took it along, and after the Board meeting I said to the other doctors, "Wait a bit, here's a letter I would like you to discuss." I suggest that Dr. Elliott has forgotten that it had been made perfectly clear that the Medical Association had nothing whatever to do with the hospital—that the money they had collected was not for the hospital building at all, but for the equipment of it.

53. Then, do I understand from you that the real point in consulting the authorities of the British Medical Association was to find out about the money being available?—That is so.

54. "Please state how much you have in hand to be expended on the buildings": I thought the point was that they had not to put up any buildings, but only to provide for needs and necessities?—Quite so; they got rather mixed up about the whole affair.

55. Was that the real position, then, that none of this £1,800 or £2,000 was to be expended on the building?—It was to be understood that the Medical Association was not putting up the hospital.

56. Then the Government, after expending £2,000 on the hospital, might consider that they had that sum still available for needs and necessities, or equipment?—Yes; of course, the whole thing would cost between £4,000 and £5,000. The £1,700 provided by the Medical Association—or, rather, the North Island branches of the association, because the South Island would not give anything—would reduce the cost to about £2,000.

57. Then may we take it that there was no necessity to get the approval of the British Medical Association to the plans at all?—Well, they were approached originally in order to get the money.

58. Was the position the Government took up such that it was not necessary to get the consent to the plans on the part of the British Medical Association?—Quite so; it was out of courtesy that the plans were submitted to them.

59. Is it to be assumed that the British Medical Association's approval of the plans was not essential to the adoption?—Quite so.

60. Did you see Dr. Elliott writing those marginal notes?—Well, sir, we were all sitting together.

61. Did he write them?—I cannot remember. Colonel McGavin was there and Major Elliott was there, but I could not say who wrote them.

62. Dr. Elliott says that those three questions are answered in his own handwriting: what about the "Yes" to the fourth?—I cannot say.

63. Do you know Dr. McGavin's handwriting?—Yes. I do not know if this is his. We were sitting there, and I think probably that when Dr. Elliott was going out it was then that it was put in.

64. Is the "Yes" to the fourth paragraph in your handwriting?—I do not know; but it has nothing to do with the matter.

65. It is assumed to be evidence of the consent of the British Medical Association?—The question simply says that the hospital to be erected is in accordance with the new plan attached, "which I think you will agree will be an improvement on the first proposal"—which undoubtedly it was; but I could not say who put in the "Yes."

66. Would not that "Yes" imply that it was so considered by the British Medical Association or by the person who wrote that "Yes"?—By the three of us. We were all prominent members of the British Medical Association—all ex-Chairmen. We had already discussed the position.

67. What became of that letter after the interview: did you return it to any one?—Yes, to the Adjutant-General; I just took it back.

68. Was the "Yes" there when you took it back?—Yes.

69. Then that "Yes" must have been put in either in the course of the interview at Dr. McGavin's house or afterwards, before it reached the Adjutant-General?—We were all there together.

70. *Mr. Ferguson.*] How do you know it was there?—I surmise it was there.

71. *The Chairman.*] Is there not a memorandum from you to the Adjutant-General, dated the same day?—Yes, there is.

72. What date is that?—The 16th March.

73. That is the same date?—Yes.

74. Then you would return the letter with that?—Yes. [Letter read.]

75. It says nothing about the approval of the plans, but only in regard to the destination of the money?—Yes; question 4 does not ask for the approval of the plans.

76. If it does not ask for the approval by the association, what was the point in putting it there?—I am not quite clear as to whether that "Yes" was not put in after the final paragraph, and the other one (the third) missed out altogether. The third paragraph has no answer to it.

77. You laid out the Trentham Camp in accordance with the model camp at Tauherenikau?—I inspected it and pointed out certain things I wished altered, and that was done. The camp was laid down on the very latest and most up-to-date methods.

78. At that time all the men were housed in tents?—Yes.

79. And there were a number of horses in the camp?—The horse-lines were on the other side of the road—the left-hand side.

80. On the racecourse side?—Yes, sir; a considerable distance away from the camp.

81. What number of men did you lay out the camp to accommodate?—About two thousand.

82. Now, in regard to the placing of the tents, and so on, was that done in accordance with the regulations as to putting the tents proper distances apart: did you see to that?—Yes, sir; everything was done according to the latest manual issued by the Imperial authorities; but the Imperial authorities lay down nothing as to the number of tents to the acre. Our authority is the Manual of Elementary Military Hygiene, 1912, reprinted in 1914. Very curiously there is nothing laid down in that book about the number of tents to the acre. What is laid down is the minimum space for an infantry battalion—five hundred men to the acre—in a standing camp. We have never had five hundred men to the acre. It says, "While the minimum space allowed for an infantry battalion in camp is at the rate of five hundred men per acre, or more than in the most crowded parts of London." You see, in England they put fifteen to eighteen men in a tent, whereas we never have more than eight men in a tent, which makes a great deal of difference.

83. You say the English rule is fifteen to eighteen men to the tent?—Yes.

84. You never put more than eight in a tent?—That is so.

85. The same size of tent?—The same tent, exactly.

86. But do those regulations apply to a camp which is going to last two or three months?—Yes, a standing camp.

87. *Mr. Ferguson.*] Do you know the number of men to the acre in that first encampment at Trentham?—We had more than 4 acres.

88. Do you know how much?—I do not know exactly.

89. Do you know what distance apart the tents were?—I could not say exactly, but there was at least 4 ft. between the most cramped of them.

90. *The Chairman.*] What does the regulation say about that?—There are no definite regulations laid down upon that point.

91. But surely you must have some sort of regulation on that point: there must be a certain space for the ropes holding the tent down?—I could not say exactly what distance there is, but there is ample room for the ropes and pegs to each tent.

92. That would be more than 4 ft.?—Probably it would be. It was only in one line that the tents were rather crowded: that was a very small part which was crowded owing to the conformation of the ground.

93. Were there not complaints made about the tents being too close in the first camp?—No.

94. Had you any later on?—Yes.

95. As regards sanitation for the tents, what did you provide in the camp?—You mean the latrines?

96. Yes, and other things?—We did everything that is laid down in the manual. We provided the modern shallow latrine at the proper distances.

97. Are those the latrines we see there now?—No; these are permanent ones that were put up when the Third Reinforcements came. We had also day urinals provided.

98. They were all done according to the book?—Yes.

99. For drainage what did you do?—We had soak-pits.

100. Where were these soak-pits in connection with the camping-ground?—There were none of them in the tent-space. Then we had incinerators built. I said there was not enough provided, and we had some more built. I am a great believer in burning all garbage.

101. Do the regulations prescribe the number of incinerators?—No; that is merely a matter of judgment.

102. Can you say whether these soak-pits were filled in afterwards?—There would be a drain from the cookhouse to one of these soak-pits: it would be open but covered with brushwood laid on the top.

103. What depth did you sink your soak-pits?—From 10 ft. to 14 ft.

104. Were any soak-pits filled in afterwards?—I think they are still in use: they answered very satisfactorily.

105. Did the tent-space area extend over any parts previously occupied by soak-pits?—No, sir.

106. You might say in this connection whether the hutment area extended over any spot previously occupied by soak-pits?—No, with the exception of the first line of hutments the whole of them are on virgin ground. I was told that the first line of hutments were on ground where tents had been a considerable time before.

107. You laid down Trentham Camp in October for two thousand men: how long was that camp occupied by those two thousand men?—Up till early in December.

108. Then they left and took their Medical Officers with them?—Yes.

109. So far as you were concerned it became a blank, leaving only yourself as regards Medical Officers?—Yes; but other Medical Officers were brought in.

110. All those previously in the camp had gone?—Yes.

111. During this period what sickness had you?—Practically none.

112. Have you got any report to show that?—Yes. As a matter of fact, during the whole period of the tent life of the camp our sick-returns show a record that is unsurpassed by any camp anywhere: we had only two deaths out of twenty thousand men attributable to the camp—one in December, from pneumonia, and one in April, from pneumonia. These are the only two deaths during that period as the result of camp life.

113. There was, then, practically no disease during the eight months?—No serious disease. We had six deaths altogether from the 20th October to the 10th June.

114. *Dr. Martin.*] What were your deaths from the opening of the camp in connection with the Second Reinforcements?—We did not have a single death.

115. You made a general statement that it was the healthiest camp in the world, taking the period?—I think so, from the records.

116. You are basing that on the returns of the deaths per cent.?—Yes, sir. As I say, up to 10th June we had six deaths altogether. The first man, Clark, died from pneumonia in Wellington Hospital; then a man called Keating was picked out of a truck at the station on Boxing Day morning, and it was supposed he had been injured in a drunken row. He was operated upon, but they could not find any trace of injury, and he died next day.

117. We do not wish all those details?—There were only six deaths and two cases of very serious illness.

118. In a return which has been supplied to us it appears there were seven, apart from the man who was killed?—Yes, there were seven.

119. That is up to but not including June?—And only two practically attributable to the camp life—one from pneumonia, and one from pneumonia after measles.

120. That covers the various camps up to June: had you much sickness?—Very little sickness.

121. Are you considering the measles that broke out as sickness?—Yes. Of course, they had measles in the main body.

122. When did the first measles break out?—On the 14th November. It was brought from the Addington Camp at Christchurch.

123. What date did the man arrive?—He came with the Canterbury Mounted, and it was on the 13th November that he was diagnosed as having conjunctivitis and influenza.

124. How do you prove that he brought it up from Addington?—We always reckoned at the time that he brought it from Addington.

125. *The Chairman.*] Unless you can prove it, all that we could find would be that the camp authorities thought it came from Addington. Can you not find the date he came up?—I do not know, but that was the first man who had measles in the camp.

126. *Mr. Salmond.*] What would be the period of incubation for measles?—It varies from fourteen to twenty-one days.

127. Before they would manifest themselves?—Before the rash comes on. In a measles epidemic you could diagnose measles four or five days beforehand. There is an entry in the hospital register: "Macdonald, C. Nov. 14. Macdonald to go to hospital; all men in tent to be sent to isolation tent."

128. What date was he sent to Wellington Hospital?—The 14th November.

129. The same date; and his tent isolated?—Yes, the whole of the contacts were isolated.

130. *Dr. Martin.*] Was this done on the 14th, too?—Yes.

131. *The Chairman.*] Who would order that to be done?—The Medical Officer, Major McKillop.

132. And the man reached the Wellington Hospital on the 14th?—I would not like to say that; they may have treated him in the camp. It simply says, "Measles cases to go to hospital."

133. During November did further cases of measles occur?—We had altogether in November twelve cases of measles.

134. There is a report here from Dr. Fyffe that there were thirty cases sent in to the hospital?—But they could not all have been measles. I interviewed Dr. Hardwick Smith, and said that I did not like to treat measles cases in the camp in tents in any sort of weather, and he agreed with me. He said that he would look after them, and keep them over the pneumonic stage of measles. They were kept in the Wellington Hospital for fourteen days.

135. We have then in this report of February 119 cases of sickness, a large proportion being measles, during November, December, and January?—No, sir; there were twelve cases in November, twelve in December, and twenty in January, and fifteen in February.

136. *Dr. Martin.*] How many in March?—Forty-eight.

137. In April?—Eighty-six.

138. In May?—Two hundred. 256 up till about the 20th June.

139. Are these all cases of sickness, or measles?—Measles.

140. Did they all go to Wellington Hospital?—Not all of them. On the 12th April some cases of measles went to Berhampore Hospital. There was very little sickness in the camp during the Second Reinforcements—from the 22nd October till the 12th December.

141. How can you understand that Dr. Fyffe should report that during November there were thirty cases, December thirty-seven, and January fifty-two—that is 119 cases altogether—a large proportion being measles?—I cannot say, sir, because Dr. Fyffe had nothing to do with the camp in November.

142. This is written in February, reviewing the matter?—Well, these are the records.

143. Did you see this letter by Dr. Fyffe?—I cannot say. [Witness examines letter.] Yes, I have seen that letter.

144. He has overstated the case, apparently?—Quite so. My return was made out to the end of June, to find out exactly how many cases of measles we had, and the doctor made it up carefully from the records.

145. What was the other sickness?—Just the ordinary camp sickness—sprained ankles, varicose veins, boils, and so on.

146. And pneumonia?—We did not have any pneumonia.

147. And influenza?—I have never seen a camp without influenza—what we call "influenza" in camp.

148. Did your influenza cases increase suddenly?—No. The first thing I ordered was that every one should be inoculated for typhoid. It was intended to inoculate them on the voyage, but I laid it down that it would be very much better to inoculate the men for typhoid straight away, and that was done very soon after they went into camp. We had about half a dozen cases which looked very like enteric early in November.

149. You had a suspicion of enteric in half a dozen cases?—There were symptoms suspiciously like enteric in half a dozen cases originally diagnosed as influenza.

150. That was why you had the typhoid injection made?—No. The first man we had sent to Wellington Hospital with a covering note to say that we suspected enteric, and that the Medical Officer was to be on the lookout for it. Then the Health Department heard of this and sent an Inspector round.

151. What date was this?—Some time in November. I can give you the exact date from home, but I think it would be somewhere about the 14th or 15th November. We wanted them at the hospital to look out for enteric, and somehow or other the Health Department heard of it. Then there was talk in town that typhoid fever had broken out in camp, and that a man had died from it. An Inspector from the Health Department came out and asked why these cases had not been reported. We said that we did not think it was necessary to report them as they were really not cases of enteric or typhoid fever, although we might have suspected them. He said, "Well, suspected cases should be reported"; and we promised that it should be done in the future, and the cases reported to the Health Department.

152. I understand that in November six cases suspected to be enteric fever were admitted to the hospital, and no notice was sent to the Health Department?—Yes; but after the first case the notices were sent.

153. On what date were the notices sent to the Health Department?—The very day I was informed of it. They turned out not to be enteric.

154. The third case was notified to the Health Department, and the Department at once took action?—They sent an Inspector out. I am speaking from memory as to the number of the cases. At the same time we were not satisfied with the water-supply, which was not copious enough, and so we went to get another supply. The Health Inspector came out, and I asked him myself if he would prefer us to send samples of the water for analysis, but he preferred to take them himself. He took the samples and had them tested, and a report was sent out from the Health Department as to the second water-supply. We did not notify measles to the Health Department because it is not a notifiable disease.

155. There were no cases of proved enteric from the camp?—No.

156. At any time?—That is so.

157. All the measles, you say, were sent in to the Wellington Hospital: were there steps taken to ensure that all contacts were isolated?—Yes.

158. What steps?—A segregation camp was fixed.

159. A tent?—All the contact men in the tents were put there.

160. Drafted off from their own tents; and where was this segregation camp fixed?—On the left-hand side of the road, far away from the camp.

161. Near the horse-lines?—No, close to the road; right away from the horse-lines.

162. More over in the direction of the entrance to the racecourse?—No; right high up, at the top of the camp—towards the hill in the direction of the railway, just behind the Seddon range.

163. Would these contacts have to frequent any other part of the camp, or would they be paraded separately from the other men?—Yes: paraded separately and fed separately.

164. For how long?—Twenty-one days.

165. *Mr. Ferguson.*] And there would be new men coming into this segregation camp every day?—Yes.

166. Would they all be kept twenty-one days after the last man came in?—No; each one would be for the twenty-one days after he went in. The infective period of measles is in the catarrhal stage. The least infective period is when the rash comes on.

167. *The Chairman.*] Is that the recognized safeguard—that period?—It was rather carrying it further than was necessary, because it is practically never done in civil life. Out in the bush a man is out working three days after measles. Measles is rampant all over the colony, but we wanted to try and stop the epidemic, and so we adopted this plan. We carried out the same procedure as we would have done if it were a virulent disease like scarlet fever.

168. Was this plan of the segregation of contacts carried out all the time you were connected with the camp?—No: up to about May.

169. You said that some of these cases were sent to Berhampore?—Yes, on the 12th April.

170. Were they urgent cases that were sent there?—We got measles cases with each fresh batch of troops which came into camp, so that by about April we had eighty-six men down with measles. We never had any trouble as long as Wellington Hospital gave us beds. Then the hospital suddenly reduced the number of beds by more than 50 per cent., and afterwards said they could not take in any cases of measles at all, because they were cleaning out the ward.

171. What date was this?—It is all on the file—the Berhampore Hospital file. It must have been early in April.

172. Could not you have the file brought here to enable you to speak as to the dates?—Yes.

173. How many cases had they taken in up to that time?—We understood from Dr. Hardwick Smith that he could let us have up to fifty beds.

174. Then you were told that they would have to be reduced to one-half, and then they stopped altogether?—Yes; they stopped them altogether while they were cleaning out the ward.

175. What date was that?—The Berhampore Plague Hospital was opened for the reception of measles patients on the 15th April, 1915.

176. Under whose charge?—Under my charge.

177. You personally?—Yes.

178. You were in medical charge?—Yes; it was not considered advisable to put in a Medical Officer for such a small number of cases; besides, they were not bad.

179. *Mr. Salmond.*] Is that the report you made to the Minister?—All my reports go through the Adjutant-General. I was asked to make a report and I did so. [Report read and put in, dated 8th June; Exhibit N.]

180. *The Chairman.*] Was this report made after a complaint had been made?—Yes.

181. Is that your report?—Yes.

182. And the statements in it are true?—Yes.

183. Upon what date was the Health Department communicated with?—About the 12th April.

184. Marquees were pitched at Berhampore?—Yes, in the grounds.

185. Whom is your report addressed to?—The Commandant, General Robin.

186. Would you tell us, Colonel Purdy, what specific charges in connection with Berhampore were brought to your notice? We understand that certain complaints, whether rightly or wrongly, were made with respect to Berhampore?—The charge made was that there were too many people in the Berhampore Hospital—that it was overcrowded. I heard that on the 6th June when I got back from Dunedin.

187. Was not there some complaint about two men who had died?—No; none died.

188. Did two men die immediately on their removal or after their removal?—No, because no man died. I never heard of it.

189. Do you say that no one died at Berhampore?—No one ever died at Berhampore during the time I was in charge of it.

190. *Dr. Martin.*] Do you know two men named Fordham and Pollock?—No, sir; never heard of them.

191. *The Chairman.*] Have you a list of the names of those who died?—Yes.

192. Will you see if their names are on the list?—No; they are not on my list.

193. What does your list comprise?—All the men up to the 29th June; that is long after I gave up.

194. You gave up when?—Practically on the 6th June.

195. You say the only charge of a general character or in detail that you had was that the Berhampore Hospital was overcrowded?—Yes.

196. And that there was no charge whatever in connection with any man who died there, because none died there during that time?—The earliest death was on the 11th June.

197. And you had ceased then to be in charge?—Yes.

198. You have told us you were personally in charge of Berhampore?—Yes.

199. But you say you first heard about this when you came back from Dunedin. Who was in charge during your absence?—The men in Berhampore Hospital were not ill; they did not need medical attention to any extent. I arranged that I would go over there some two or three times a week if any of the men were ill. It was arranged that if their temperature went up or they showed the slightest signs of illness they were to be admitted into the Wellington Hospital. I had arranged that with the Superintendent of the Wellington Hospital. The nurse had instructions to that effect.

200. The men who were put into Berhampore were suffering from what?—They were ordinary measles cases.

201. Not cases that were merely getting well, but cases that may be getting ill?—All acute cases at this time were sent to Wellington Hospital. We were allowed a certain number of beds there.

202. But this was when Wellington Hospital was closed against you; you sent every one to Berhampore?—Yes, for a certain number of weeks; but then Wellington Hospital was opened again.

203. But you still kept Berhampore going?—But there were no complaints made about Berhampore Hospital till the first week in June.

204. Who was in charge of the hospital then—the first week in June?—I was.

205. What had you there in the way of assistance?—I had trained nurses and ward orderlies.

206. They were only to go messages—the orderlies?—No; ward ambulance orderlies.

207. How often did you visit?—I should think about three times a week—every other day.

208. Then, would they be coming in from the camp every day, or would you know every case before it left the camp?—No, not always; they might come in every day.

209. But you would not know when they were being sent in?—No; they always had instructions to ring me up if anything extra happened in the hospital.

210. If a man got measles at Trentham he is sent in to Berhampore without any reference to you?—Yes, or to the Wellington Hospital at that time.

211. That would be done by the Medical Officer in charge of the camp?—Yes.

212. You might therefore see a man for the first time when you paid your next day's visit?—Yes. I saw all new cases that came in from my previous visit. If a man was reported pretty badly sick in camp at Trentham he was sent to Wellington Hospital as an acute case.

213. But that would not be so during the first few weeks while the Wellington Hospital was closed?—No, not while the hospital was closed.

214. How did you deal with them then?—We did not have any very bad cases the whole time the hospital was closed.

215. *Mr. Salmond.*] Was the Wellington Hospital closed the whole of your time?—No; only about a fortnight for cleaning. They reduced us from about fifty beds to about twenty-five.

216. *The Chairman.*] What was the greatest number you had there up to the first week in June when you were in charge?—The greatest number that were ever in Berhampore Hospital in one day was 104 patients, and that was only for about twenty-six hours.

217. Was that too many or too few?—I considered it was too many, but under the circumstances it could not be avoided for the time; but I immediately took steps to rectify it.

218. How many do you think it ought properly to have carried?—I should say we could comfortably do forty.

219. Did it suddenly rise from forty to 104?—Yes, about that—quite suddenly—within a week.

220. What date was that it made a sudden rise?—Between the end of May and the beginning of June.

221. You say towards the end of May there was really only an average of forty?—About that. As soon as the average admissions had begun to increase I said we would have to prepare for 200 cases. In May we put up a marquee, then we put up a second marquee that would hold altogether thirty-two, then another two marquees when the sudden rush came. They would hold sixty-four people, and the forty would make 104. At least eighty of those people had practically nothing the matter with them at all; they were quite well.

222. *Mr. Salmond.*] In bed?—No; been up for days.

223. *The Chairman.*] Who was in charge so that they could not leave?—They were not allowed to leave till the quarantine period was up.

224. Were they kept in the building all the time or in the grounds?—Kept in the grounds.

225. Were the grounds fenced?—Yes. When the scarlet-fever epidemic was on in Wellington the Health Department had over a hundred people there for days and weeks housed in marquees. It was the only thing that could be done pending something being done to meet the sudden inrush.

226. You say you went to Dunedin?—Yes, on the 2nd June.

227. Who was in charge while you were away?—I left Major Elliott, if he was called upon.

228. Who was to call him?—The nurse or head orderly. I laid down what had to be done before I went to Dunedin. I told them in the camp that I must have a first-class man who knew his job from the ambulance lines, and they recommended Sergeant Yallop. I gave him orders that he was to go to Berhampore with the orderlies, and then on the 2nd June, the day I left for Dunedin, I was at Berhampore in the afternoon.

229. How many were in the hospital then?—I think, 104.

230. Have you got any record showing the daily attendance?—Yes; they have books in the hospital at Berhampore.

231. So that we can see from that what number were there on any given day?—Yes. I went through the cases personally myself, and found that there were, I think, twenty-four or twenty-six men who were ready to go out. Their convalescent period was over, and so I told Sergeant Yallop that there were so-many men ready to go out, and there would be so-many more ready to go out by Friday or Saturday. "Their quarantine period will be up," I said, "and by the time I come back on the morning of the 6th June I expect there will not be sixty patients in the hospital." Then I gave orders in the camp that they were to send no more cases to Berhampore at all—that they must put up marquees at Trentham until we found out where we were going to send the sudden increased inrush of measles cases, and that was done.

232. *Mr. Salmond.*] On what date did you give those orders?—On the 1st and 2nd June, before I went to Dunedin; and when I came back on the 6th June I paid an early visit to the Berhampore Hospital, and found there were fifty-eight patients then in the hospital.

233. *The Chairman.*] The number had gone done to fifty-eight?—Yes, from 104.

234. You have told us of the gradual increase up to 104, and it must therefore have been under you that the four marquees went up?—Yes.

235. Did you consider it right that so many persons, the number running up from forty to a hundred, should be there without a Medical Officer on the spot continuously?—I did not think it was necessary.

236. Is that proper from a medical point of view?—I should say that if there were going to be a hundred people in a hospital you should have a Medical Officer continually in attendance, but more than eighty of these men were perfectly well. There were not above six men who were really ill in Berhampore Hospital at any time. No man was ever allowed to stay there if ill; he was sent to the Wellington Hospital immediately. We always arranged that.

237. Then with that condition of things you think it was quite proper to have a visit paid only every other day?—Yes.

238. And during the four days you were away you thought it was quite proper to leave the 104 cases, good or bad, in the hands of Sergeant Yallop?—And under the supervision of Major Elliott if called in, because there were no bad cases in the hospital at all when I left.

239. What was your last visit to Berhampore?—There was a sort of interregnum between the 6th June and the time the departments were brought together again, and I think I paid my last visit to Berhampore on the 20th June to clear everything up.

240. Who was attending Berhampore between the 6th and the 20th?—I went there right up to the 20th

241. You went there every other day as before?—Not every other day. I think I paid six visits in June.

242. How many after you returned?—Six altogether.

243. And there was no other Medical Officer in charge during that time?—No; we were on the telephone.

244. Was Mr. Yallop in charge?—Yes, and an excellent charge he gave too.

245. Have you a record of the names of patients who went from Berhampore?—Yes.

246. Does the record give the state in which they were discharged or what became of them?—Yes.

247. They were all either discharged or sent to the Wellington Hospital?—Yes.

248. So up to the 20th June no one died there?—No; no one died in Berhampore as long as I had any connection with it; and, what is more, not only no one died in Berhampore Hospital, but no one died in Wellington Hospital who went from Berhampore Hospital until the 11th June.

249. That will be some one who went from Berhampore during your time?—Yes; he was sent to Wellington Hospital on the 5th June from Berhampore, as it was suspected he was developing pneumonia. That was the Saturday. The man Kennedy was admitted to Berhampore on the 29th May, and sent to Wellington Hospital on the 5th June. Then the next man was admitted to Berhampore Hospital on the 2nd June, and he was transferred to Wellington Hospital on the 10th June.

250. *Mr. Salmond.*] When did he die?—On the night of the 11th. I think the first man died on the night of the 10th June. There was another man who was admitted to Berhampore Hospital on the 30th May, and he was sent to the Wellington Hospital on the 2nd June. His name was Archibald McFarlane. He died there of acute phthisis on the 6th June.

251. *Dr. Martin.*] Who diagnosed it as that?—The doctors at the hospital. Those were the only three men.

252. This was a man who had been examined by the military authorities and died, and he had been admitted to the Army with phthisis?—Yes. We have had several cases admitted with incipient tuberculosis.

253. *Mr. Ferguson.*] Do you know what district he came from?—No, I do not. That is the report that was sent to me. The case was certified as acute phthisis. In any case, those three cases were the only cases near or remote that have any connection with the Berhampore Hospital.

254. *Mr. Salmond.*] Did not one of the orderlies, a man named Olliver, die?—Not that I know of. There is a special report about Olliver somewhere. He was never in Berhampore at all. The report says that Private Olliver was admitted to the General Hospital on the 12th June with measles and bronchial pneumonia. He continued well for a week, and despite the best of attention he died on the 21st. This man did not report sick to the Medical Officers when he became sick, as he thought it would prevent his going away with the Fifth Reinforcements. Had he reported at once his chances of recovery would have been good. He was found on the boat going away. As a matter of fact, he collapsed on the boat. His mates helped him to get away, and he was discovered in a state of collapse and taken to the hospital.

255. Did you not know that was one of the Berhampore orderlies?—I did not.

256. *The Chairman.*] Then he must have been at Berhampore and gone back to camp again?—He must have done so if he was an orderly at Berhampore.

257. *Mr. Gray.*] He was admitted from the camp?—No; he was taken off the ship. Captain Harrison told me. Sergeant Yallop would know whether he was orderly at Berhampore.

The Chairman: Was this man Olliver one of the orderlies, Sergeant Yallop?

Mr. Yallop: Not during the time I was there.

The Chairman: How long were you there?

Mr. Yallop: From the 1st to the 12th June.

Witness: He could not have been there in my time.

258. *The Chairman* (to witness).] Did you hear of any charge connected with Berhampore and Olliver?—No. The Minister asked me about sending a report of all of those as they occurred, and that was sent on to him by the doctor attending.

259. You say that the only charge to your knowledge that was brought against Berhampore was on the 6th June—that it was overcrowded?—Yes.

260. And that that was on the 6th June, or when you got back from South, and by that time it was reduced?—Yes.

261. Your answer as to the overcrowding is contained in the memorandum to the Commandant which you have read?—Yes; that was my report, dated the 8th June. There was a further report I sent in partly in connection with Berhampore. It was sent in on the 6th July in regard to the whole military camp at Trentham. [Report referred to.] I may say also that the three men who were sent to Wellington Hospital from Berhampore were not in the marquees at all, and never had been. They were in the main ward of the building, which was never overcrowded.

262. *Dr. Martin.*] You say, Colonel Purdy, that if anything went wrong with the patients at Berhampore you would be communicated with at once?—Yes.

263. Was there a telephone in the building?—No, not at first, but there was one not very far away—about 200 or 300 yards away, in another house—and the orderly used to go and telephone if I was wanted.

264. He had to walk from the hospital to this house, 200 or 300 yards away, and telephone you?—Yes.

265. Supposing you had to be rung up, where were you living?—It was arranged in the event of anything happening—first of all, if a man took ill in the hospital he was at once removed

to the Wellington Hospital, and if they wanted to get hold of anybody then a doctor was got from Wellington. I was rung up, I think, once or twice on my own telephone.

266. I understand that when the orderly or nurse considered a case serious they would go 300 yards away and ring you up?—Yes.

267. *The Chairman.*] Was it a private house that had the telephone, or a penny-in-the-slot telephone?—No, not a penny-in-the-slot telephone; it was in a house somewhere near the tramline.

268. *Dr. Martin.*] Where were you living at this time?—At the Hutt.

269. Supposing you wished at any time to communicate with the hospital at Berhampore, how did you arrange it—did you ring up the house?—No; I never rang up the house.

270. How would you ring up—you would naturally communicate?—I never rang up, because there was no necessity. I could not have done so if I had wanted to, and there was no necessity.

271. You did not communicate from the Hutt?—No. I did communicate with a doctor and asked him to go and see.

272. Were you satisfied with this means of communication?—Absolutely satisfied up to the time of that week.

273. When was the telephone put into the Berhampore Hospital?—Early in June. We had wanted a telephone from the very beginning, but we could not get it. It was put in after the 6th June.

274. After you returned from the South?—Yes, and I used to ring up twice a day then.

275. *The Chairman.*] No injurious consequences followed, to your knowledge, from this absence of the telephone?—I am absolutely certain no injurious consequences followed.

276. *Dr. Martin.*] You say you asked for a telephone and it was refused?—Yes.

277. Who refused?—I suppose those in authority.

278. You asked for a telephone to be put in an infectious-diseases hospital and it was refused?—Yes.

279. Could you produce the correspondence?—It will be on the requisition. I will try and get it. We never laid very much stress on it because we never had had more than twenty or twenty-four patients there.

280. You would have sent the requisition in through the Adjutant-General?—Through the Stores. Captain Duncan Stout went out and he made a report on the building, and he put in a requisition for everything he thought was necessary, and I think on that requisition was a telephone.

281. That report went into the Adjutant-General?—Yes.

282. And you backed up the requisition with your weight as D.M.S. and it was refused?—Yes. They said, "Could you not do without it?" and I said "Yes, I suppose we can." There were no serious cases there, and we had nurses, and Wellington Hospital is close at hand, and it is so easy to transfer a patient who shows the slightest sign of illness, and I arranged that that was to be so.

283. *Mr. Ferguson.*] Who refused the requisition?—I do not know who does those things.

284. You say it was refused?—Well, we did not get it.

285. *Dr. Martin.*] Then the Adjutant-General is responsible for those things?—It generally comes from the Stores. I expect Colonel Pilkington struck that off. I think Captain Duncan Stout put it on the requisition. I was told it was applied for.

286. You thought it was necessary?—I should have liked it.

287. *Mr. Ferguson.*] Do you of your own knowledge know that it was requisitioned for?—No.

288. *Dr. Martin.*] Were you satisfied to have the hospital there without a telephone?—Yes, quite, under the conditions we were working up to the time of the big rush, and then something different had to be done.

289. Who was the judge if a case was going wrong at the hospital?—The head nurse; the temperature would tell her.

290. What would she do?—She nearly always rang me up, and sent the patient straight away to the Wellington Hospital. I said, "If you have the slightest suspicion in any shape or form that a patient is not doing well, send them to the Wellington Hospital." I had arranged that with Dr. Barclay, and it was always done; but I say not a single case did badly.

291. *Mr. Ferguson.*] How many cases were sent back from Berhampore to Wellington Hospital?—I could not say from memory.

292. *The Chairman.*] You are speaking of the time up to the 20th June?—No, up to the 6th June.

293. Were you not responsible for the fourteen days?—In that way there was a sort of interregnum.

294. Who was responsible during those fourteen days?—I think I was. I take the responsibility, anyhow. I think Dr. Harrison went to see the patients also.

295. *Dr. Martin.*] You say the patients were sent to the Wellington Hospital on the authority of the sister in charge?—On my authority and the authority of the sister in charge.

296. But the sister used her own judgment?—Yes, if she thought a case was at all of a serious nature.

297. Was that always done?—Yes, always done.

298. There is no instance on record of the sergeant in charge having sent patients to Wellington Hospital?—I do not know, because Sergeant Yallop, when he came on, being a man of authority and having knowledge, may also have taken authority. I gave him orders also to the same effect—that if a man was not doing well he was to be sent to the Wellington Hospital immediately—not to wait even an hour, and even if they had to bring a man from the Wellington Hospital who was convalescent.

299. Did the Wellington Hospital at any time refuse admittance to patients who had already arrived?—Not to my knowledge. I am not quite clear about that, but if it was so there was a misunderstanding, and it was soon put right. They refused patients from the camp, but I do not think they ever refused a patient from Berhampore.

300. To your knowledge no patient has ever been refused admittance to Wellington Hospital from Berhampore?—No, not from Berhampore. I cannot recollect any case.

301. You never heard of the sergeant having sent cases there and then ringing you up subsequently and saying that they were not admitted?—If it was so it was soon put right. I cannot remember any instance. It is all vague to me, but I know it was not of a serious nature.

302. Do you consider it a right thing for a hospital containing infectious cases not to be visited daily by a Medical Officer?—In measles cases I do not think it necessary to send a Medical Officer every day.

303. Say chicken-pox?—In a small number of cases. You do not do it in civil life.

304. When you left for the South on the 2nd June you left the hospital in charge of Major Elliott?—I asked him to stand by if wanted at all.

305. You instructed him to look after the patients?—Yes.

306. And Major Elliott would have complete power to do whatever he wished during that period?—Yes.

307. And if he wished to put a Medical Officer on duty he could have done so?—Yes.

308. He knew that?—I told him distinctly.

309. Do you think he understood that he had complete power at Berhampore during your absence?—I should imagine so—he had a perfectly free hand. There were no serious cases there.

310. *Mr. Ferguson.*] Did you telephone instructing him, or see him face to face, or write to him about it?—I think I saw him personally.

311. *Dr. Martin.*] You say you communicated with the Health Department about the overcrowding at Berhampore?—No. I communicated with the Health Department in the first instance early in April, and asked them to get us a place.

312. You asked the Health Department to arrange accommodation for measles cases?—Yes.

313. You wrote to them?—No, telephoned them.

314. Who received that message?—Dr. Finch.

315. You spoke to him personally?—Yes.

316. What action did they take?—They did not do anything at that time.

317. What was the reason?—In a conversation I had later with Dr. Frengley he then told me for the first time they had wanted before to open Berhampore for infectious cases, but that they had been turned down by the D.M.S., Colonel Will, and I never knew anything about that.

318. Early in April you rang up the Health Department asking them to help you?—Yes.

319. And the Health Department would not give you any help?—I would not say that.

320. Did they give you any help?—No; they said I could do it myself quite well—why could I not open Berhampore myself.

321. *The Chairman.*] The help you wanted was to find a building?—Yes.

322. Were the officers of the Health Department colonels or captains?—Captains for special duty.

323. They could not issue orders to colonels, I suppose, could they?—No.

324. *Dr. Martin.*] You say that at the end of May is the first instance of overcrowding?—Yes.

325. There were 104 patients there?—Yes.

326. That is before you left for the South?—Yes.

327. Do you admit that is overcrowding?—I do. Where the trouble came in was that it was a very wet week, and a lot of those men came in late in the evening, and they could not be turned away into the street. The hospital could not take them, and we had to do the best we could to house them for the time being till we made other arrangements. We could not do anything else.

328. You admit there was overcrowding?—Yes, I said so at once, and that it must be put a stop to. We established a marquee hospital in the camp—five marquees to hold eighty patients—and we sent convalescents back the very next day. They started going back on the 3rd June. By the morning of the 6th June there were not sixty people in Berhampore Hospital.

329. There was overcrowding at the end of May?—No, not specially.

330. You said there was no overcrowding till the end of May?—No; on the 1st and 2nd June there was overcrowding.

331. That was before you left for the South?—That was the day I left for the South.

332. Did you take any action in that matter?—Yes.

333. By putting up two extra marquees?—I put up marquees on the 1st June—first one, and then another, and then two extra. They were all put up about that time.

334. *The Chairman.*] Before the 2nd June?—Yes, so as to be ready.

335. *Dr. Martin.*] And you are satisfied that met the difficulty?—I am certain it did. Sixty-four men could be accommodated in those marquees. We could easily accommodate ninety people without overcrowding.

336. *Mr. Ferguson.*] You never had more than 104?—No, never had more than 104. That was for one day, practically.

337. *Dr. Martin.*] When you left for the South there was no overcrowding?—Yes, there was the day I left. That was why I brought Sergeant Yallop down. He came on the 1st June, I think.

338. You pointed out to Major Elliott that there was overcrowding when you left?—No, I did not. I did not say anything specially about it, because I had given orders that that overcrowding would be remedied almost immediately, and it was the very next day.

339. You did not think it necessary to tell the Medical Officer succeeding you?—No, I did not think it necessary, because I had made all the arrangements before I left.

340. When did your responsibility cease—what date?—I should say on the 20th June—certainly on the 20th.

341. Then the Health Department took it over?—They practically had it before that.

342. There was a division of authority?—No; there was not that exactly, but one man cannot go straight out and another man come in.

343. When did the Health Department come in as a Department?—I could not say when they first appeared at Berhampore, but they first began to take charge on the 7th June.

344. *Mr. Ferguson.*] You say that from the 6th to the 20th June Dr. Harrison visited the place?—No.

344A. He is not a Health Officer, but a military officer?—But the arrangements were made with the Health Department on the 6th, so that we would provide all the medical attention that was necessary. The hospital at that meeting agreed to give us forty beds. That was on the Sunday morning; and later on I said, "What are you going to do if you have a sudden rush of a hundred cases? You will be in exactly the same position as we were." On the Monday Dr. Valintine wrote to say we could have sixty beds. On the Wednesday Dr. Finch rang me up in the morning to say the Victoria Ward would be ready for occupation any time after 2 o'clock that afternoon. On the Thursday we began to send patients back from the hospital in the camp, and then there were furious ringings-up to say we could only have twenty-four beds. In the meantime the Health Department were arranging the place at Kaiwarra, and it was also arranged to open Mr. Izard's Convalescent Home, and I think that was done on the 12th June.

345. Up to the 7th June you were in sole charge of Berhampore?—Yes.

346. Then on the 7th June the Health Department appeared?—They were going to give us accommodation.

347. May I take it that up to the 20th June you were in sole charge of the medical treatment?—Yes.

348. And you were responsible for the medical treatment up to the 20th June, and not the Health Department?—Yes, that is so. Then I appointed Captain Harrison O.C. of measles.

349. Now, on the 20th June there was in Wellington Hospital a death from pneumonia following on measles?—He was admitted on the 13th May.

350. And on the 11th there was another man?—Yes, there were three cases in that interregnum period.

351. One man was sent to the Wellington Hospital on the 10th and died on the 11th?—Yes, died the next day.

352. From pneumonia following on measles?—Yes.

353. *The Chairman.*] Did you send him or did the nurse send him?—That is Colley. He was admitted to the Berhampore Hospital on the 2nd June suffering from measles. He was kept in bed and treated in the ward. On the 10th June he was transferred to the Wellington Hospital. Up to that he was doing well, but he had a sudden rigor, and it was thought advisable to transfer him.

354. *Dr. Martin.*] Will you tell us when the man was last seen by a medical man at Berhampore?—Yes; either on the 9th or the 10th June.

355. Can you give me the date definitely?—If I looked up the record I could.

356. Will you look that up and also the temperature chart?—Yes.

357. Another man named Kennedy died on the 11th June?—Yes.

358. *The Chairman.*] Did you keep charts at Berhampore?—No, we never had any prolonged illness there.

359. *Dr. Martin.*] You had some very serious cases there?—No; he took ill suddenly and was sent away immediately: but I will find out. I remember the man Colley well—I saw him several times myself.

360. Did Kennedy come from Berhampore?—He was admitted to Berhampore on the 29th May: he was doing well till the 5th June. He was treated in a ward of the hospital. He was sent to the Wellington Hospital on the 5th June, as he was suspected to be developing pneumonia. He did well for a day or two: his people were communicated with and visited him. His doctor thought he would pull through, but he had a heart attack and died suddenly.

361. A man named Baker—was he in the Berhampore Hospital?—No, he never was in Berhampore.

362. *The Chairman.*] I suppose the language has the same sense at the camp as at the hospital?—Yes. There was a Baker who died on the 10th April, 1915.

363. P. C. Baker, 10th May, Fifth Reinforcements?—I think there must be some error there. I have two lists, one from the camp and one from the record-office. The record-office paper says that on the 8th May a Frederick Percy Baker died from intestinal obstruction.

364. Was he ever at Berhampore?—No.

365. Was Harsant at Berhampore?—No.

366. Was A. M. Brannan, who died on the 2nd March?—No. Nobody died that had any connection near or remote with Berhampore until the 10th June, and then there was Kennedy, Colley, and McFarlane; and those are the only three cases that could either directly or indirectly be connected with Berhampore.

367. After you left Berhampore certain cases of death occurred?—I do not know. I have records up to the 25th June, 1915.

368. Do you remember Fordham and Pollock?—No.

369. You do not remember if they died shortly after being there or after being taken away?—No.

370. I take it there was no daily medical inspection at Berhampore?—No.

371. But civilian doctors had been called up from Wellington to attend the patients there?—Yes.

372. Who?—Dr. Clay, once or twice. He was called in because Dr. Elliott could not get there at the time.

373. What other civilian doctor?—No one else to my knowledge.

374. *Mr. Salmond.*] Was it during your absence from Wellington?—No, it was in the evening.

375. *The Chairman.*] Was this before or after your visit to Dunedin?—I could not say. I think it was after.

376. *Dr. Martin.*] I take it the Health Department never inspected the Berhampore Hospital officially as the Health Department?—No. I rang them up and they asked us to do the thing ourselves.

377. That was about the buildings. Did you ask them to look after it from the hospital point of view?—No.

378. Did they ask to inspect it?—No; it was not considered necessary.

379. *The Chairman.*] Is Berhampore equipped with water, fire, and drainage?—Yes. The City Engineer helped us in many ways at Berhampore. The city did everything for us that could possibly be done.

380. *Dr. Martin.*] Did the Adjutant-General visit the Berhampore Hospital?—I believe he did when I was away.

381. Why?—I do not know.

382. Was it not on account of the complaints of overcrowding?—I believe he went when a complaint of overcrowding was made.

383. Did he make a report to you of his visit?—No. I did not see him when I came back.

384. Was there any report awaiting you when you came back?—No. I had to go and see the Minister.

385. There was no report from the Adjutant-General?—No, no written report.

386. Did Colonel Robin visit Berhampore Hospital on the Sunday morning?—Yes.

387. As a result of complaints?—No, not as a result of complaints, but we thought the meeting was going to be there.

388. Colonel Robin and the Adjutant-General were alarmed at the condition?—No.

389. Colonel Robin did not go while you were away?—He could not have gone, because he was with me in Dunedin.

390. Did either of them speak to you about the condition at Berhampore?—Not till I came back.

391. What did they say?—They asked me, and I told them exactly what had happened, and how my orders had been carried out to the letter; how the overcrowding had been only for one day, and that there would be no bad results.

392. I understood you ordered the tents to be put up at Berhampore before the Health Department stepped in at all?—Yes; what else could I do? I wanted to relieve the congestion, and we put up four marquees at Berhampore pending the commandeering of buildings.

393. *Mr. Ferguson.*] You said on two occasions you communicated with Berhampore by doctors in Wellington: was one Dr. Elliott?—Yes. I had rung Dr. Elliott up and asked him if he would go up and see a patient at Berhampore. I think on two occasions I did that.

394. What nursing staff had you there?—I think, a sister and two nurses.

395. *The Chairman.*] Was that what you started with?—I think we started with two.

396. *Mr. Ferguson.*] And who would be in control, the sister or Sergeant Yallop?—Sergeant Yallop did not go up till the 2nd June. The sister would be in charge, and Sergeant Yallop would carry out the nurse's instructions.

397. Who was the other nurse?—I cannot remember who the third nurse was.

398. What are the names of the nurses?—Sister Keith, Nurse Hannah, and I am informed the other was Nurse Farron.

399. Although the number of patients had run up to a hundred you only had one more nurse?—The hundred was all at once. It was never intended to have more.

400. I thought you had marquees put up for the extra twenty. It did not rise from forty to a hundred in one day?—No; but there was no necessity to get any extra nurses at once. We should have done so if there was going to be an extra strain, but that was never contemplated—that could not last.

401. *Mr. Salmond.*] I wish to know, first, exactly what happened when you came back from Dunedin on Sunday, the 6th June: whom did you see about Berhampore?—The Adjutant-General or some one had rung up my house on the Saturday night to say that I was to meet the Minister of Defence at 10 o'clock at the hospital on the Sunday morning. The message was brought to the boat, and it also said that he wanted to see Colonel Robin, who came up on the ship with me.

402. Did you see the Minister?—Yes, at 10 o'clock.

403. Where?—At the Wellington Hospital, with Colonel Robin, Dr. Barclay, Major Elliott, and Dr. Valintine.

404. What were you wanted for?—He asked about the overcrowding at Berhampore. At the time we met they were still under the impression that there were a large number of patients in Berhampore Hospital. It so happened that the message I got said that I was to meet the Minister at the hospital, and I naturally concluded it was at the Berhampore Hospital, and I went to the Berhampore Hospital at 10 o'clock. When the Minister did not come up I went to the Wellington Hospital. Colonel Robin and myself went over the hospital, and found there were not sixty men there. The Minister and Dr. Valintine and others did not know that, and I told them. There were only fifty-eight on the Sunday morning.

405. What happened at that meeting?—The Minister asked me for a statement, and I made the statement verbally that I have written down and produced here. I wrote it on the 8th.

406. The Minister asked you for a report?—Yes, I was asked to put it in writing.

407. And that is the report you read this morning?—Yes. I made a verbal statement at first, with which the Minister was satisfied that it was not so bad as had been made out to him.

408. Were you informed that an inspection had been made of the hospital in your absence?—Yes.

409. By whom?—Major Elliott, I think.

410. Was he in charge during your absence?—He would be, I suppose. I know there was a report sent in, but I never saw it.

411. You do not know who sent it in?—No, I do not know definitely.

412. It was because of that report you were asked to see the Minister: was any change made in the hospital in consequence?—No.

413. You continued in control just as before?—Yes; but with the exception that they were to provide all accommodation.

414. Who are "they"?—The Public Health Department: they took all responsibility from my shoulders.

415. *The Chairman.*] You were in charge of the medical treatment?—Yes.

416. But the accommodation was left to the Health Department?—Yes.

417. *Mr. Salmond.*] When was Colonel Valintine appointed Director of Military Hospitals?—He was practically appointed on the 13th June.

418. He began to exercise his functions as Director of Military Hospitals on the 13th June?—Practically from the 6th June.

419. From that time he was practically in charge?—He took charge in providing buildings.

420. In what way did that affect your position as Director of Medical Services?—Practically not at all.

421. You mean you had the same functions as before?—Minus the camp. The arrangement that is now in existence is practically an arrangement that I myself suggested in 1911.

422. Do I understand rightly that you have no longer charge of the Trentham Camp?—I have nothing to do with Trentham Camp at all.

423. Have you anything to do with any of the hospitals?—No, except indirectly. The arrangement lays down that the Director of Military Hospitals will make all arrangements and provision for the sick in Wellington, also all arrangements for hospital and convalescent homes, sanitation of the camp, charge of the camp hospital, provision for the sick outside Trentham Camp, and arranging accommodation in hospitals and homes for sick and wounded on arrival from abroad.

424. Does not that mean this: that you have no longer any responsibility over the hospitals or sick men?—Absolutely no longer any responsibility.

425. When did that responsibility cease?—Practically, as I say, there was a sort of interregnum period between the 6th and the 20th. They guaranteed to provide accommodation, and we were to do the administration and medical attendance, so that by the 20th June there was a distinct line of demarcation between the two duties of D.S.M. and D.S.H., and it was arranged that the control of convalescents from hospitals be entirely in charge of the D.S.H.

426. I take it that Colonel Valintine's powers have increased since, and you gradually retired accordingly?—Yes. This scheme was a scheme I laid down for the mobilization for war in 1911. The only thing that none of us at that time expected was that there would be a huge standing camp.

427. What has happened to Berhampore since Colonel Valintine took charge?—I do not know. There are still patients there, as far as I know—there were up to a short time ago.

428. In smaller numbers than what there were before?—No, not as before. We had a rush.

429. *The Chairman.*] And is there a medical man there now?—No; there is no medical man resident at Berhampore, and there never has been.

430. Or attending daily?—I do not know whether he attends daily.

431. Have they temperature charts there now?—I do not know.

432. *Mr. Salmond.*] Who is in charge of Berhampore now if there are patients there?—I do not know.

433. Coming back to the beginning, who does the Berhampore Hospital belong to?—To the city.

434. Do you mean the Wellington Hospital Board?—No, the City of Wellington.

435. What buildings are there there?—There is what you might call a central block, and then three or four extra houses.

436. Take the central block?—It has what you might call two wards in it.

437. How many patients is that centre block adapted for?—I should think ten or twelve. The two wards could easily accommodate from twenty to twenty-four men.

438. And adapted for that purpose?—Yes.

439. What are the other buildings?—They are buildings that have been gradually put up round the central block—a sort of cubical spot for holding one or two people.

440. Were they intended for holding patients?—Yes, I should think so—isolation cases.

441. They are not connected with the main block?—They are close to it: one is about 6 ft. away.

442. How many additional patients would those extra buildings hold?—I should think altogether the buildings would comfortably and conveniently hold thirty patients, and in a squeeze at least forty.

443. What sanitary appliances exist there?—Now they have three water-closets.

444. Have they been put up since?—They had three pans there before—the latrine system.

445. When was that change made?—Early in June.

446. After Dr. Valintine came on the scene?—Yes. We had been trying to get a water-closet put in the main building for some weeks, and ultimately the City Engineer rang me up and asked me about it, and in twenty-four hours he had the closets established. The reason of that was that the man on one or two occasions failed to come and remove the pans, and we complained about it.

447. *The Chairman.*] I thought you told us the city was always ready to do anything at once: how long did it go on like that without any attention?—The pan system was quite satisfactory.

448. *Mr. Salmond.*] You told us you tried to get a change made for some time?—I think you misunderstood me. I said I tried to get a closet put in the main building for some weeks from the Public Works Department.

449. Instead of a pan?—No, an additional one; and it was not done for various reasons. Then Mr. Morton asked me about it. He thought it would not be a wise thing to put a closet in the main building. He said he wanted, if possible, to do away with the necessity of having the cart coming to Berhampore altogether, and he said he would put in three closets.

450. That was after you came back from Dunedin?—I really could not say.

451. You said "early in June" before?—Somewhere about that. I could not say exactly when it was.

452. Was any complaint made to you about the sanitary arrangements when you came back from Dunedin?—No. Three pans for 104 people were not nearly enough.

453. And that was the only accommodation there was till the beginning of June?—Yes; but there was only that number there for one day.

454. *The Chairman.*] You had sixty or seventy or eighty there for several days?—Yes, about seventy; but there was quite sufficient accommodation for them, seeing that many of them were convalescent.

455. *Mr. Salmond.*] Did you regard that system as satisfactory up to the beginning of June?—It was the best we could do under the circumstances.

456. Why?—Well, what else could we do?

457. I suggest, what you did in June?—Put in closets. There was not very much difference between the closets and the dry-pan system.

458. I ask you if you were quite satisfied?—Yes, I always prefer the water drainage.

459. Still, you did not think there was any occasion till the beginning of June to make any alteration?—No.

460. Were any improvements made in the buildings at the beginning in order to make them fit for hospital purposes?—They were cleaned out and scrubbed down. There was no equipment in at all—just the shelter.

461. Had they been disused for a considerable time?—Yes, some time.

462. What sort of repair were the buildings in?—Very good—wonderfully good.

463. Are the buildings connected with the main drainage system?—They are now.

464. But not then?—Part of the building was. The houses were straggling. There is a caretaker's cottage down below.

465. But was the main hospital connected with drainage?—I do not think it was.

466. It has been connected since, I think?—I do not know.

467. You say you have water-closets in?—But they are not in the main hospital.

468. Where are they?—Down below.

469. In another building?—Yes.

470. You had a supply of the necessary equipment when the hospital opened?—Yes.

471. Is the equipment satisfactory?—Yes.

472. And always has been?—Yes, always. I told them that whatever they wanted they were to have within reason. Everything possible was done for them in that way in medicines and everything.

473. Did you obtain further equipment from time to time as the numbers grew?—Yes.

474. You have given us the names of three nurses, Sister Keith, Nurse Hannah, and Nurse Farron. Are they all in Wellington?—I believe so.

475. Have those nurses been there all the time?—No; the two first nurses went Home with the hundred nurses.

476. So you originally had two and then you had three?—Yes.

477. How many man had you there as orderlies?—I think we had two, and then later four.

478. Can you give me their names?—I could not now.

479. Their names can be ascertained, I suppose?—Oh, yes. We appointed the wife of the caretaker as cook, and the caretaker himself an orderly.

480. Who was then the person in charge of the hospital—Sister Keith?—Yes, latterly.

481. And before then?—One of the nurses—Sister Edie.

482. There never was a man in charge of the hospital?—No.

483. Why did you appoint Sergeant Yallop?—Well, one of the principal reasons was that there had been trouble about the men's kits, and the camp authorities said that the ambulance people would have to be responsible for the men's kits—that if a kit was lost the ambulance people would have to make it good. I said, "In that case you must send an officer down."

484. No non-commissioned officer was there as orderly?—No. That is why Sergeant Yallop went down to take full military charge.

485. Had he anything to do with the nursing?—No.

486. That was after you returned from Dunedin?—No, before I left.

487. You visited this hospital, you say, three times a week?—Yes.

488. How long did your visits last?—Varying periods—from about twenty minutes to an hour, and longer sometimes.

489. Did you come in from the Hutt?—No; I went from headquarters. I came into headquarters every day since the war began.

490. Would it not have been better to have had some doctor either resident there or some Wellington doctor who was close at hand to take charge of that hospital?—First of all there was no necessity for a resident doctor, and secondly there were no quarters for one—we discussed it, but there was no place; and, thirdly, it was always so close to the hospital, and we could always get medical aid.

491. How far is it from the Wellington Hospital?—I should say, about half a mile, or perhaps a little more.

492. Was medical assistance ever got from the hospital?—No; but the patients were sent to the hospital as soon as they showed the slightest symptoms of going wrong. The patients did remarkably well in Berhampore.

493. You still think it was quite fit and proper that those patients should be there without any doctor to see them except three times a week?—Yes, absolutely, because I do not remember more than half a dozen cases that really wanted looking at. You see, measles is a peculiar condition; the man is very ill when the rash is just coming on; his temperature will go up enormously. I have been through several epidemics in the country, and as soon as the rash goes off the temperature will fall immediately. You will have a man lying very ill at night, and the next morning he will be much better, and in two or three days he will be able to go outside.

494. May not his temperature rise very suddenly afterwards?—Yes, of course. We said that if a man took ill after getting over the rash he was to be sent immediately to the Wellington Hospital, and not wait to see if it is transitory. Out of the 104 patients in the hospital, I wish it to be distinctly understood that at least eighty had practically nothing the matter with them at all.

495. I see one man was transferred from the Berhampore Hospital to Wellington Hospital on the 10th June and died on the 11th?—Yes; that is the man Colley, who took ill quite suddenly.

496. When did you see him last?—I cannot say, but I think it was the day before—the evening before he took suddenly ill. He was admitted to Berhampore Hospital on the 2nd June, kept in bed and treated in the ward, and on the 10th June he was transferred to Wellington Hospital. Up to the 10th June he was doing well. He had a sudden rigor, and it was thought advisable to transfer him to the Wellington Hospital.

497. Who ordered him to the Wellington Hospital?—I think I did.

498. Did you see him after his temperature rose?—No. He was sent away immediately, because those were our orders.

499. I want to know by whose orders he was sent away?—If his temperature started to go up after going down, every man was to be sent away without question, and not wait for anybody's authority.

500. Then I assume the man was sent away by the nurse in charge?—Yes.

The Chairman: Sergeant Yallop will know if there were any temperature charts there.

Sergeant Yallop: No; the temperature was taken in a book every night and kept. All cases in wards the temperatures were taken three or four times a day, and all convalescent patients were taken every night.

501. *Mr. Salmond* (to witness).] You said that before you went down to Dunedin you gave orders that no more patients were to be received at Berhampore?—Yes, that is so.

502. Whom was the order given to?—To the Medical Officer in charge of the camp.

503. In writing?—No; I said he was not to send any more patients to Berhampore.

504. Why?—Because it would not hold any more.

505. It was only a temporary order?—Yes; and if he had any further cases he must send them to Wellington. We treated the cases, and I think that had something to do with the success in the results at Berhampore, because they were good results. Seeing the number of men who went through, and only three cases near or remote could in any way be contributed to Berhampore, was a wonderful result. I adopted Matheson's creosote treatment from the beginning. I have treated all my pneumonia cases with that for the last two or three years.

506. *Mr. Skerrett.*] On your departure for Dunedin did you ask Dr. Elliott to stand by and to visit Berhampore Hospital when requested, or did you ask him to undertake the responsibility of the general supervision of the hospital during your absence at Dunedin?—No, I just asked him to stand by. I did not give him any direct orders.

507. I understand you to say that Dr. Elliott did not undertake the general supervision of the hospital at Berhampore during your absence, but only undertook to visit it should he be required by the sister in charge?—Yes.

508. What was the first date on which you first used Berhampore?—The 15th April.

509. Now, at the time you commenced to use Berhampore, did you have in your mind the possibility of a more or less extensive epidemic than measles?—Not at that time.

510. When did you first during the use of the Berhampore Hospital conceive the extreme probability of an extensive epidemic of measles or sickness?—I thought towards the end of May we would begin to have some more cases, but I always anticipated that in June we would be almost certain to have an increase, and that something would have to be done.

511. I understand you to say that the sister undertook the responsibility of saying when a patient should be removed to Wellington Hospital?—She had power to remove a patient herself if she wished.

512. She took the responsibility herself?—I believe so, but not always. She nearly always asked me.

513. Did she in cases determine for herself whether a patient was fit for removal from Berhampore Hospital to Wellington Hospital: for instance, who determined whether Colley was in a fit condition to be removed?—She would, because any patient is in a fit condition to be removed in a proper ambulance.

514. Did you give her any general directions on which she was to shape her conduct in these matters?—Yes; I told her to use her judgment as a nurse, and if she saw a patient not doing well not to wait till I came, but to at once send the patient to the Wellington Hospital.

515. The rules for her guidance were of a general character?—Yes.

516. Did you have any system of obtaining written reports from her daily as to the condition of those patients who were in the ward?—No, because it was not necessary. There was never a man in there practically for twenty-four hours without being seen.

517. *Mr. Gray.*] When did you first observe a case of serious illness at Berhampore?—Well, I do not think we had what you would call any serious illness at Berhampore.

518. Would the man who was first removed to Wellington Hospital be the first serious case?—Yes.

519. That would be about the 2nd June?—McFarlane was removed on the 2nd June. He was admitted on the 30th May suffering from measles. Kennedy was admitted on the 29th May, and sent to the Wellington Hospital on the 5th June because he was not doing well. They thought he was developing pneumonia. Kennedy, I think, was the man that either Dr. Clay or Dr. Elliott saw.

520. Then we can take it that McFarlane's case was the first serious one?—Yes.

521. Then for two months the patients had been doing remarkably well?—Yes.

522. Then one case was transferred to Wellington Hospital on the day you left for the South, the 2nd June, the second case transferred on the 5th June, during your absence, and the third man transferred on the 10th June?—Yes.

523. During this time you were on duty at the medical headquarters?—Yes, every day.

524. Were you available at any time?—Yes, any time during the day or night.

525. You live at the Hutt?—Yes, and came in when necessary at night.

526. Were you ever summoned at headquarters at daytime to go from the headquarters?—No.

527. You considered from the nature of the disease and the condition of the patients that your visits were quite frequent enough?—Yes, I am quite sure they were. Everything pointed to it. It is what has been done in civil life. As soon as the rash goes off the doctor does not go back, but says, "If the patient does not do well let me know."

528. You did not treat it as a serious disease although it is infectious?—I considered that measles in a camp is a serious condition, and you want to keep them away from the camp; but there have been far worse epidemics in the colony.

529. When the disease is diagnosed and treatment began, can the patient be as well looked after by a qualified nurse as by a medical man?—I think so; they do not need so much nursing.

530. Were the nurses and orderlies at the Berhampore Hospital competent?—The nurses at Berhampore Hospital were as good nurses as I have seen in my life; they were excellent.

531. And were the orderlies competent?—They were very good.

532. Are you able to say that the men in the hospital at Berhampore were properly attended?—Yes, absolutely, and the results prove that.

533. Was any complaint ever made to you on your visits by any patient about want of attention?—No; the only complaint I heard was that somebody stated that the men's linen was washed in the bath. I spoke to the sister about it, and she assured me it was absolutely untrue.

534. Who is the sister who would know?—Sister Edie. She went away. What gave rise to the matter was that they had a big tin tub in the bathroom; but the clothes were never washed in the bath itself, but in the tin tub in the bathroom.

535. How many patients went through Berhampore?—I think about 219 in my time.

536. Having regard to the nature of the disease, you say that a nurse or even an orderly-sergeant would be quite a capable judge of whether a patient should be removed to the Wellington Hospital for better accommodation and for closer treatment?—Yes, if an emergency arose it would be so; but it was hardly likely, because they were almost in direct touch with me any day.

537. Two or three cases did arise?—Yes, and they were removed to be on the safe side.

538. Was there any danger in their being removed in a proper ambulance?—No.

539. Even with a high temperature?—Even with a high temperature.

540. When you went away to Dunedin did you think it necessary that a medical man should be given direct control of that hospital with instructions to visit it every day?—No, I did not, judging by the state of the patients and how many there would be there, especially as Sergeant Yallop was there and knew exactly what to do in an emergency.

541. When was the telephone installed?—I think somewhere about the 10th or 11th June, but I am not quite certain.

542. Do you think any inconvenience arose owing to the absence of the telephone?—Not to the patients, but one man complained. The caretaker was put on as an orderly. He proved very insubordinate, and there was a complaint made about him over the telephone—about his general conduct.

543. Did any inconvenience arise owing to the absence of the telephone?—No, I do not think so.

544. *The Chairman.*] Did you keep a diary of your visits to Berhampore?—Yes, I kept an account of my visits there. I could tell every day I went.

545. You might let us know what days they were?—Yes.

546. I dare say we can get the temperature-book too?—Yes.

547. And any records there are there *re* Colley?—Yes.

548. I want now to go back to the camp question, and I want you to give us the history of the development of the disease there, and what the camp arrangements were?—We finished the Second Reinforcements and got as far as the new appointments. I realized the importance of having a good administrative officer in charge of the camp, and I asked that Major Holmes should be instructed. He came from Samoa to take charge of Trentham Camp. He landed in Wellington before the Second Reinforcements left. He reported on the 10th December, and definitely took charge of the camp about the 26th.

549. He was in supreme local command of the camp?—Yes, absolutely.

550. How long did that last?—Until he went away with the Third Reinforcements. I think he left in February. Anyhow, he was in charge all the time the reinforcements were in camp. He never had less than five medical men with him in the camp. There were always six medical men attached, and sometimes a great many more.

551. *Mr. Ferguson.*] A great many men would be in camp then?—I think at that time the camp was gradually getting up to four thousand men; the camp had been considerably extended.

552. *The Chairman.*] During the time of Major Holmes he would have had three thousand men?—Yes, quite that.

553. *Mr. Ferguson.*] Were the tents for the "Thirds" in the same place as for the "Seconds" and the same tents?—Some of them were. New ground was opened up. The lines were shifted over to the other side of the road. From the beginning of the camp the very latest military methods were used with regard to a standing camp. Major McKillop, who had had a special training, asked me if he might adopt the new Aldershot plan, and I said, "Certainly, I want this done right up to date." He said the tents must be sprayed with formalin at least three times in a fortnight, and that was done.

554. *The Chairman.*] How did you treat them?—We had a spray. A great deal has been made of the fact that the tents were not struck and pitched in other places. It may astonish the Commission to know that that is condemned by all authorities now. It is laid down in the Field Service Regulations of 1909, page 72, and also in the 1914 book on "Manual of Military Hygiene," page 66, which says, "In a standing camp tents will be struck periodically, and the ground underneath well swept and left exposed for some hours at least, the tents being eventually replaced on their former sites."

555. What is the point of putting them back in the same site?—Because if you have a standing camp and you take your tents down from one place and erect them in another place, you are putting them on ground that has been tramped over and walked over, and very probably shifting them from a decent place to a place that has been infected. That is what the Royal Army authorities go upon. The rule has been since to strike tents, allow the ground to get dry, and then put the tents back again.

556. Does that apply to cases where you have tents with a wooden floor or to tents without?—Both.

557. Was the principle followed out of replacing the tents on the same site?—Yes, periodically.

558. What does "periodically" mean?—Well, once a week tents were struck, and everything taken out of the tents every day. The tents were aired every day unless it was wet; but we had hardly any rain. The flies of the tents always had to be opened out, and that was insisted upon, and they were really opened out in the brilliant sun that you get at Trentham.

559. Now, under Major Holmes what was the general health?—Just the same.

560. Was there anything special to note?—No. I will get the records you asked about, but they have only been typed out up to March.

561. Who followed Major Holmes?—Dr. Fyffe, of Wellington, was appointed to the Third Reinforcements. He showed such marvellous administrative ability that Major Holmes advised me strongly not to allow him to go with the Third Reinforcements, but to keep him to take charge of the Fourth Reinforcements Camp. He was second in command to Major Holmes, and I knew from my own inspection that he really was showing wonderful administrative ability.

562. Was he appointed to the Fourth?—Yes.

563. He took charge up till when with the Fourth?—He went away with the Fourth Reinforcements.

564. Now, had the health of the camp begun to alter before he left?—It still continued very good; measles were just beginning.

565. Measles began in November?—Yes, in November—but there were only twelve cases; in December twelve, twenty in January, sixty in March, and eighty-six in April.

566. Up to the time Dr. Fyffe reigned how many cases of measles were there?—I should think about fifty—probably not as many.

567. While he was in charge can you say what the numbers in the camp were?—At least four thousand. There was the Samoan lot too.

568. They were in addition?—Yes, about five hundred.

569. Then during his time were the directions that you told us about separating contacts maintained?—Yes, still continued.

570. Were you personally out at the camp from time to time?—Yes.

571. How often did you visit the camp?—I should say, on an average, three times a week.

572. Would you go out in the morning and stand by there?—Yes, all day. I generally stayed there from 11 till half past 5. I used to periodically lecture the officers and N.C.O.s on modern hygiene and camp life. I gave them one special lecture on measles, and told them what to do to stop measles spreading.

573. Had you cases of men coming into camp and immediately afterwards having to go into hospital?—Yes.

574. From measles?—Some of them from measles. Every reinforcement that came in brought a certain proportion of sickness.

575. They had probably been in camp somewhere else?—No, they were all new; but they came from all over New Zealand, and measles has been fairly prevalent in New Zealand for months now.

576. While these numbers were going up was any additional accommodation provided? You had sent all those who actually had measles either into Wellington or to Berhampore?—Yes.

577. Your segregation camp must have been quite as large as the other camp at this time?—No, not quite, but it was getting pretty big. We were having very nearly five hundred men in the segregation camp. It became so that it was impossible to carry on the segregation camp. The Medical Officers had a consultation and agreed that the segregation was not doing any good at all. Fresh cases were being brought in, and they would have to segregate the whole camp, so it was discontinued.

578. When did that happen?—Some time in May. Each man was more able to contaminate a man who was not his tent-mate at all, because he would be with him on parade.

579. Was there a difficulty in keeping the men in this segregation camp within the camp?—I believe some of them broke bounds at times. Some men were always being punished for breaking bounds.

580. Did they get under the flaps of the tents and go and visit their friends and come back?—No, they did not come back.

581. *Mr. Ferguson.*] None of them got leave to visit town?—No

582. *The Chairman.*] There was no picture-show at the camp, was there?—Yes, I believe there was, but none of the contacts were allowed to visit it. Some used to clear away over the hills.

583. Which was a matter for military punishment if a man broke bounds?—Yes.

584. What time in May was the conference held?—Early in May, I think.

585. Did that mean that the segregation camp was to be broken up, or did you make any additions to it for the future?—We did not make any additions to it.

586. Were those men in camp kept there for the quarantine period?—Yes.

587. But the men outside were carried on as if no measles were arising?—We could not get all the contacts—it was impossible.

588. Was there anything up to the end of May but measles that gave you trouble?—Nothing.

589. And you were relying upon the Wellington Hospital and upon Berhampore to take all those who were attacked?—Yes.

590. I take it that the hospital in course of erection would have been useless for an epidemic of measles—there was no accommodation there for more than a few?—But we have never put them there.

591. The non-erection of that hospital had no bearing whatever upon the treatment of measles?—Absolutely none.

592. That is rather a surgical hospital?—It was a camp hospital, and there had been a camp hospital there from the first day of the camp; and ultimately as the camp increased we had two marquees and about four bell tents as a camp hospital—that would be about twenty-four beds; and our orders were that no man was to be treated in camp if his illness was going to be of long duration. That camp hospital was purely for observation, and as soon as ever a man's case developed he was sent away to the Wellington Hospital.

593. You have had a military camp hospital there all the time?—Yes.

594. But when this building is completed it will take the place of the marquees and tents?—Yes, just the same as the huts take the place of the tents for the men.

595. Did your administration at the camp continue up to the 6th June?—Yes.

596. And then it ended finally on the 20th June?—Practically on the morning of the 13th.

597. After Major Fyffe, who left in April, who was next?—Major McGuire was specially asked to take charge of the Fifth.

598. He was originally in charge of the Auckland Hospital?—Yes. He was practically an ex-Army doctor. There was continuity right through.

599. Major McGuire was there up to the time you left?—No. Then I had orders to send No. 2 Stationary Hospital to the front, I think early in May. Major McGuire was one of the officers chosen.

600. Who were under you up to this 13th June—we have Major McGuire: who was next?—Major McAra, who had been in camp since the previous December. He was going away with the Fourth Reinforcements, but he took ill when the troopship was leaving and was kept behind. He came back some time in May and took charge.

601. Was Dr. McAra there from then till the 12th June in charge when you left?—Yes.

602. You had the appointment of a man to succeed Major McAra?—I was asked in May or early in June if I did not think it would be better to have a permanent P.M.O. in the camp. I said No, but continuity would be better: but if the authorities thought it would be better I would endeavour to get a man, and I got Dr. Morice, of Greymouth.

FRIDAY, 23RD JULY, 1915.

Colonel JAMES ROBERT PURDY further examined. (No. 21.)

1. *The Chairman.*] You wish to refer to some particulars which you promised to supply to us?—I said yesterday that I had discontinued connection with the Berhampore Hospital on the 20th June; it should have been the 12th June. I have also found that on Monday, the 31st May, the week I left for Dunedin, I asked Major Elliott to go and see a case at Berhampore Hospital for me.

2. That was only a particular case?—Yes, and any others. I was unable at the last minute to go myself. I mentioned one particularly, but I wanted him to see the others also.

3. Whose particular case was that?—I have forgotten that now. He rang me up afterwards, and told me that he thought it was overcrowded.

4. What date was that?—The 31st May.

5. In the morning or the afternoon?—In the evening.

6. In the evening of the 31st May he asked you if you were aware of overcrowding there?—Yes.

7. When had you previously visited the hospital?—On the night of the 28th.

8. On the 28th was it overcrowded?—No, you could not call it overcrowded then.

9. *Dr. Martin.*] How many cases were there?—I cannot remember.

10. The returns will show?—I tried to get them last night, but the hospital is shut up now, and the headquarters are trying to get me the book which would give the information. I have also found that Fordham died on the 2nd July, and Pollard on the 2nd July; that was twenty-one days after I had given up charge of the cases. [List put in.]

11. Then what steps did you take after you heard from Dr. Elliott of the overcrowding?—The steps that I mentioned yesterday. I sent down Sergeant Yallop and orderlies, and had marquees set up at Trentham, and stopped any more from going out to Berhampore. I also said that as many patients were convalescent they were to be got out.

12. That was on the 31st May?—No, the 1st June.

13. Then on the day you left there were 104 cases?—I do not think there were 104 on the day I left. There were 104 on the 1st June. The most that were ever in the hospital was 104, and most of them were only in for one day.

14. You say that may have been the 1st June?—Either the 1st or 2nd June. I gave instructions to Sergeant Yallop about the men that were due to go out, and they were sent out, so that by the 6th June the number was reduced to fifty-eight.

15. This [return in hand] is quite different from what we got yesterday?—I mixed it up.

16. But the four marquees were there on the 31st May?—They were there, yes.

17. *The Chairman.*] What you did then was, in order to relieve the pressure, you took the marquees out to the Trentham Camp so that the men might be retained there, and gave instructions that the balance of convalescents who could go out were discharged as soon as possible: those are the steps you took?—Yes.

18. You went out on the 2nd June?—Yes, I went up myself.

19. Was the overcrowding still bad?—It was not so bad on that day, and a good many men were to go out on the next day, the 3rd June.

20. *Mr. Ferguson.*] You say that you gave Sergeant Yallop instructions on the 1st June, but you did not go out until the 2nd June?—I had to go out to the camp. Sergeant Yallop was in camp. I said that I must have a good man for this work, and they told me Sergeant Yallop was available, and I said that he would be suitable.

21. *Dr. Martin.*] Can you give us the daily state at Berhampore?—It is all in the book which I have asked for. I know that it opened with twelve patients.

22. Can we get all this information?—I hope so. Only three of them were acute cases.

23. You say that in the absence of a high death-rate, or any deaths at all, at Berhampore, therefore there were no serious cases there?—In my time there were very few serious cases at Berhampore.

24. But you say that every time a patient's condition became serious he was sent away?—But there were no deaths in the Wellington Hospital from these cases, except those of McFarlane, Kennedy, and Colley—two on the 11th and one on the 16th.

25. Then there were three deaths?—But my report was written on the 8th June.

26. And there were no deaths then?—No.

27. Then do you say now that you look upon Berhampore as having been a satisfactory place?—For measles cases I say it was a perfectly satisfactory place, but you must remember that the double infection came in in June.

28. *The Chairman.*] What do you call the "double infection"?—There is no doubt that the huts were first occupied on the 29th May. The Trentham battalions and the "Sevenths" were mobilized between the 25th and 31st May, and the huts were first occupied on the 29th. They brought in a very virulent form of influenza, and there is no doubt that many of these patients that took ill had got this virulent form of influenza as well as the measles.

29. Would those be sent to Berhampore?—Some of them.

30. *Dr. Martin.*] You admit then that serious cases did go to Trentham?—Yes, especially after I gave up. I had no knowledge of them, though, when I wrote my report on the 8th June. I gave up on the 12th.

31. *The Chairman.*] Did you hear of any cases where a patient was removed just as he was on the point of death?—No.

32. You have not heard of any report to that effect?—Not in my time.

33. But have you heard of such a case at all?—No, sir.

34. Or that a patient died just after admission into the hospital?—No.

35. Or that instead of being taken to the hospital proper the patient was carried direct to the morgue?—No.

36. So that you cannot give any comments on such statements?—No. I was asked yesterday if I had any information as to any patient being refused admission to the Wellington Hospital. There was the case of Sergeant Lyons; they did not think his was a bad-enough case, and they sent him back to Berhampore.

37. Who sent him on?—He was one of the men that were taken under my orders. He had lost his voice, and to anybody but a medical man he would appear to be not very well. I told him that he had nothing wrong with him but loss of voice. He was eating a hearty dinner when I saw him.

38. *Mr. Ferguson.*] What date was that?—Four or five times I saw him—between the 6th and 12th that was. I made a special visit to him because I was interested in his case. He had apparently quite recovered.

39. *The Chairman.*] He went there on the suggestion of the nurse, and the hospital authorities thought he would be better at Berhampore?—Yes, that he would be better at the Berhampore Hospital than in the Wellington Hospital.

40. Then these [quoting from list] are the visits you paid, according to your diary: April 16, 17, 19, 21, 23, 26, 28, 30; May 3, 5, 8, 10, 12, 14, 17, 19, 21, 24, 26, 28. Then you did not go on the 31st?—No; Major Elliott went that day.

41. June 2, 6, 7, 9, 11, 12?—Yes.

42. In the course of your previous evidence you gave us a statement of the various medical men who occupied the position of A.M.O.?—Yes, sir.

43. Now, these were responsible to you?—Yes, and, of course, to the authorities in camp.

44. How often did you go out to camp?—Twice a week, always.

45. But then you were in communication by telephone?—Yes, daily. I went oftener than twice a week, but never less.

46. Had you administrative duties to attend to at headquarters?—Yes, very large duties. I was working from 5 a.m. till 10 p.m. for weeks and weeks together.

47. Would it not have been better if there had been more assistance available?—In what way?

48. With regard to the administration at the camp?—But the camp was well administered. The administrative officers in camp were entirely responsible, just the same as the P.M.O. is now.

49. Could he take any steps he thought fit?—That was his duty.

50. In the matter of getting extra accommodation erected or anything else, or sending men away from camp, would he determine that on his own responsibility?—Yes, he could do that himself. Of course, we tried for a considerable period to get buildings near the site of the camp, but when we saw that the measles were becoming really epidemic, and there was no school or any buildings out there suitable, I tried to get one of the huts that had been finished, although I did not care about putting measles cases into the huts. I discussed this matter with Dr. Frengley, who was partly responsible for putting the huts up, and he did not agree with the idea: he thought it would not do at all.

51. To put the measles cases into the huts?—That is so, and I agreed with him.

52. What date was this?—About the end of May. It was only a casual conversation.

53. Just before the huts were occupied?—Yes. I did not want to put the cases there in that new area if it could be avoided, and I suggested that we might commandeer the racecourse buildings.

54. You were trying to get extra accommodation: did you ever apply to the racecourse authorities?—No.

55. Had the racecourse buildings been offered at that time?—No; we never applied for them.

56. How did you come to get them?—We simply commandeered them on the 13th June.

57. And what about the golf-house?—That was offered later, and Kaiwarra was offered later.

58. Then I suppose from the time you stopped sending cases into Wellington, about the 2nd June, all fresh contacts and patients were accommodated in the marquees?—Yes.

59. At the camp?—From about the 2nd June till about the 6th or 7th June.

60. How did you deal with them from the 6th or 7th till the time you commandeered the racecourse?—We sent some of the bad cases to the Wellington Hospital.

61. Direct?—Yes. In fact, all the time there were always one or two acute cases sent to the Wellington Hospital. We only wanted the very ordinary cases in the marquees.

62. Did you cease sending any more to Berhampore after that?—No; some were sent to Berhampore to relieve the congestion.

63. From the hospital?—No, from the camp to Berhampore; what you might call semi-convalescent cases were sent to Berhampore.

64. When you got the racecourse on the 13th?—Before that we had opened Mr. Izard's home.

65. That is where?—In the Upper Hutt district. He had offered it for convalescents, and when this pressure came along he agreed to let it be used for any purpose. Then Kaiwarra was begun to be got ready that week, and was opened early the next week, about the 14th June. That relieved the congestion everywhere. After that there was a big increase of influenza and measles, and they had to be sent to the big racecourse building. They were originally in the trainers' and jockeys' quarters, and they had to ultimately commandeer the whole of the buildings.

66. You ceased to have any administration over the camp or the sick there when Colonel Valintine took charge?—Yes, on the 13th June.

67. So that you had no administrative duties in regard to the camp after the racecourse buildings were taken over?—No, sir. Consequently I never had anything to do with the huts.

68. With regard to these hutments now, you say that you never had anything to do with them?—No, sir; I was on the original Board which sat, consisting of Majors Holmes, Elliott, and myself, and certain plans of huts were laid before us.

69. By whom?—By the Q.M.G., Major Robinson.

70. When was this?—I am not very clear—either February or March, when they first began to talk about huts. They drew up two specifications to lay before the Minister.

71. The Q.M.G.'s department?—Yes; and they asked me to get the Board together and consider the plans. We turned down the first plan, and the second one we approved with certain modifications. These were sent on to the Minister.

72. Can we get those plans?—I expect so.

73. Where would they be?—In the Q.M.G.'s department. They were not used.

74. No, but we could see from them the ideas originally submitted?—I know that one of the ideas we turned down was that the men be in bunks; one proposal was for a double bunk like a ship.

75. Or shearers' quarters?—Yes; but we were absolutely opposed to them.

76. Opposed to the double bunk?—Yes.

77. Were you opposed to the single bunk?—No.

78. The records will be in existence?—Yes, sir. The next thing I heard was that the authorities had set up another Board, consisting of a medical man, an architect, and an engineer, which was quite a suitable Board, I thought, to go into the plans. I never saw these plans, and know nothing about them.

79. You have had experience of camps: are these hutments constructed according to military recommendations?—Well, not exactly. I have been several times through the huts. The military regulations with regard to hutments are not mandatory, but they suggest that not more than twenty-four men should be placed in each hut. The ideal arrangement is a hut for each man, but, of course, that is out of the question. I presume the Board went into the matter very thoroughly, because the huts are most admirably adapted for the purpose, and the eave ventilation, which I believe was in the original plan, and which we insisted upon, was quite satisfactory—if it was not provided originally we put it in. I am a great believer in eave ventilation.

80. What was recommended?—Eave ventilation was used. With that I quite agreed. That means that you can put a great many more people in the hut than if the ordinary method of ventilation were provided.

81. Do the military regulations provide for them or for ventilators on the ridge?—The military regulations provide for eave ventilation. I will look up the regulation on the subject and let you have it.

82. And please consider this also: if those huts were built in line and there was a gale of wind, would the air from one hut be conveyed through the openings of the next and so pass right along the line?—We recommended that the huts should be built in echelon, our Board consisting of Majors Holmes, Elliott, and myself.

83. The Board consisting of Messrs. Campbell, Morton, and Dr. Frengley did not approve of building them in echelon: is there military authority for building them in echelon?—I do not know, but I will find the book and let you know what it says on the matter.

84. The position of the Commission is this: that we have had really nothing definite placed before us, and so far our inquiries have been in the nature of a search. We have no definite charge brought against any one. Now, there is some medical evidence forthcoming which is a criticism of the camp methods, and we are able to produce that this morning. I think, therefore, it would be better if we did not examine you further until this evidence is heard both by yourself and by the Commission?—Yes; very well. I might say that early in the year a medical criticism was made in a long communication to the *Evening Post*. The *Evening Post* sent to headquarters to find out if it were true before they published it, and the representative of the paper was sent to me. I said, "Well, I am an interested party; do not listen to what I say, but let the paper send a representative to the camp. Everything will be laid open to him; he may search the records, and so on, and satisfy himself." So the editor of the *Evening Post* sent a representative out to the camp, and when that representative presented his report the editor of the *Post* refused to publish the letter. I suggest that the representative of the *Post* should be called.

85. What is his name?—I think it was a Mr. Muir.

86. In what month was this?—I could not say now. It was before March. The same communication was sent to the Premier on the 26th March, 1915. That communication was forwarded by the Premier to the Minister of Defence, who sent it on to General Robin for inquiry. Then I wrote my report to the Minister and also interviewed the Minister, and he was quite satisfied. Then later the same letter was published in the *New Zealand Times*, which followed with leading articles respecting the camp. There were certain photographs exhibited at the time which are commented upon in my letter. The reply to the *Post* was prepared by the *Post* representative himself for the editor. The *Post* was satisfied that the allegations were not correct, and refused to publish the letter.

RONALD SMITH BADGER sworn and examined. (No. 22.)

1. *Mr. Skerrett.*] Where do you reside?—In Christchurch.

2. What are you?—An indent agent.

3. What was the name of your brother who was a member of the Expeditionary Force?—Archibald Lionel Smith Badger.

4. When did he join the Forces?—He joined about the end of April, and left Christchurch about the 28th May.

5. What was his condition of health then?—Splendid. I do not think he has ailed anything since he was a boy. When he was about ten he had a slight illness.

6. Anyhow, he was a sound man?—Thoroughly.

7. There was some slight eye trouble?—Yes, he wore glasses.

8. But otherwise he was a thoroughly strong man?—Yes.

9. When did he die?—On the 4th July, at the camp.

10. Do you know when he went on sick-parade?—Yes, I have a copy of the last letter he wrote to a friend, which shows that he went on sick-parade on Tuesday, the 22nd June, and also on Wednesday, the 23rd. He went into the hospital on the Wednesday evening, from what I can gather.

11. Have you any comment to make about the sick-parade?—Well, sir, at the time he was very unwell: he had a very bad cold on the chest. When he went on sick-parade on the Tuesday there was nothing done, because he went on parade again on the Wednesday, and according to the evidence of a friend who saw him in town on the Monday he ought to have been in bed then.

12. Where was he removed to on the Wednesday?—Apparently to the tea-kiosk.

13. Do you know what his temperature was?—Yes, he says his temperature was 101·4.

14. *Dr. Martin.*] The day he was removed? Can you inform the Commission when that temperature was taken?—Apparently the day he was removed. I will read an extract from his letter. [Letter read as follows: "I am writing this on my knee in bed. I am in hospital; been here since Wednesday evening last. I *was* ill on Tuesday. Went on sick-parade Wednesday evening; also Tuesday morning. Not only is it the flue, but a rotten cold on the chest. My temperature was 101·4, I think, and my pulse about 90. I have sharp shooting pains in the stomach going towards the right hip. What is it a sign of? I know it is a sign of something, but forget what. The first men to be sick were the luckiest; they all had beds. We are on our mattresses on the floor in the tea kiosk on the racecourse. My head is aching so much I can hardly hold it up. We cannot shave here, and can only wash if you are fit to get up and have one, and the place is crowded. Last night I awoke—thought it must be at least 3 or 4 in the morning. I looked at my watch, and it was only 9.25 p.m. The nights go slowly and the days fairly fast. I think I must snooze during the day. I must close this; am getting some one to post for me.—Sincerely, ARCHIE BADGER."]

15. *Mr. Skerrett.*] Do you know whether the tea-kiosk has a concrete floor or not?—Part of it has a concrete floor and part wooden: I do not know which part he was in.

16. Did your brother complain of inattention during his stay in the kiosk?—Well, as far my remarks relative to inattention are concerned, they have been furnished by a friend who was in hospital alongside my brother. At the same time my brother's letter bears them out. He says that they could not shave unless they were well enough to get out of bed to have one. That is not proper attention for a sick man.

17. What is your opinion as to the washing of these men during their stay in the tea-kiosk?—I am informed that they were not washed for three days on end.

Mr. Gray: I do not like to interrupt, but I must submit that this is only hearsay evidence.

The Chairman: We can only regard it as such, but we will admit it and then we can hear the doctor in charge, and the nurses, and other witnesses on the subject.

18. *Mr. Skerrett.*] Do you know whether there were any nurses?—Before answering that question I should like to say that I am prepared to give the Commission the name of the private who was in an adjoining bed to my brother in the tea-kiosk, and from whom I obtained some of my information. It was Private Roy Glen, of the Sixth Reinforcements.

19. And his address?—Sixth Reinforcements, Trentham. He is at present down south on leave.

20. You have made inquiries concerning the treatment of your brother?—Yes, sir.

21. Have you obtained any information as to whether there were nurses or orderlies attending the patients in the tea-kiosk?—Up to the Sunday they were attended to only by inexperienced orderlies—Sunday, the 27th June.

22. There were then no nurses at all in charge of the patients at this kiosk up to the 27th June?—That is so; the first three nurses arrived on that day. About the treatment, after being in bed with high temperatures they were ordered to leave the tea-kiosk and went to the Jockey Club rooms on Friday, the 25th June. They had to turn out on the Saturday and go back again to the tea-kiosk.

23. Your brother was ordered out of bed and walked across to the Jockey Club rooms: how far is that away?—Some little distance away. On the Saturday they were ordered back again.

24. From the Jockey Club rooms they returned to the tea-kiosk: were the beds made during this period?—No, they were not made. Owing to the high temperature of the patients the beds became quite damp.

25. Up to the 27th June, I understand, there were no cots for any of the patients?—That is so.

26. According to your information their beds were placed on the floor?—Yes. You said, "for any of them." From my brother's letter apparently some of the earlier ones had had beds.

27. Then on the 27th June the first three nurses arrived: do you know how many patients were to be attended by these three nurses?—No, I have no information.

28. Have you no information?—No, except there were a large number.

29. Do you know whether or not there were over two hundred?—I cannot swear to it.

30. Have you any information as to a further supply of nurses?—I did not hear of the arrival of any further nurses until the day my brother was buried: some came up from Christchurch.

31. That would be somewhere about——?—The 6th July.

32. Have you any information about the food supplied?—Yes, sir. I am told that the men were fed on porridge and tea in the morning for breakfast, and half-cooked ground rice for dinner and tea.

33. Who was your informant?—The same informant. And while the temperatures were high these men were given two aspirin tablets with each meal to keep down the temperature.

34. Your informant is Private Roy Glen?—Yes; he was in the adjoining bed.

35. Have you any information as to the medical attendance?—Yes, sir; the men were only inspected once a day, after breakfast, and I understand the doctor just passed through: there were so many he could not examine each man critically, and these serious cases like my brother's were not given the attention which they should have had under the circumstances.

36. You have no information as to the number of medical men who were in charge?—I have only heard two names mentioned.

37. Who were they?—Drs. Ferguson and Purdy. I understand my brother was under Dr. Ferguson's charge.

Colonel Purdy: I submit there is an error here, because I was not anywhere near the camp then.

The Chairman (to Colonel Purdy): You left camp on the 13th June.

Colonel Purdy: The last day I was in camp was the 20th June.

The Chairman: That is quite a pardonable interjection at this point. (To witness) Tell us all that you know.

38. *Mr. Skerrett.*] Will you give the Commission all the information you can as to the sufficiency or otherwise of the medical attention and the treatment of the patients during that period?—With regard to the giving of aspirin tablets, my informant's statement was very definite. I showed him some remarks which had appeared in print, and asked him whether any part of them was misstated, and he said it was absolutely correct. He is willing to endorse them. I was told by experienced nurses that aspirin tablets, while they are good for keeping down the temperature, have a very depressing effect on the heart's action and decrease the general vitality. I referred the point to a leading medical man in Christchurch only this week, and he endorsed that opinion. He says that men in such a condition should be regularly sponged four or five times a day, which is more effective. He says that medical testimony is very emphatic against the indiscriminate giving of aspirin tablets except under very close medical supervision, and I understand that a doctor would never give as many as six aspirin tablets a day.

39. These were systematically administered to your brother?—Yes, while the temperature was high, by these orderlies.

40. Do you know whether any provision was made for conveniences for these men?—Very inadequate; the men had to get up out of their sick-beds and go right down the cold room.

41. There were no bed-pans provided?—No.

42. You have told us that your brother was in hospital from the 23rd June: when did you get the first advice of his illness?—Our first advice was when the private I have referred to came down home on sick-leave; he arrived in Christchurch on Thursday, the 24th June.

43. On Thursday, the 1st July?—That is so; I was wrong.

44. You were informed by Private Glen?—Yes; he told us then that my brother had had what he described as a very bad attack of influenza, but he thought he was going to get right again. He (Private Glen) had been discharged from hospital on the Tuesday, and last saw my brother in hospital on the Tuesday.

45. What did you do in consequence of this information?—He said the nurse had told him that if we wired for particulars she would gladly supply them. We immediately wired.

46. To whom did you address your telegram?—To the nurse in charge. But before we got a reply to that telegram we received an official communication saying that my brother was dangerously ill. That was the first intimation we received except for the one from Private Glen.

47. That was received on the same day that you saw Private Glen?—Yes, the 1st July: "Private Badger dangerously ill."

48. What then took place?—We wired to my brother in the north to come down here and see how things were, and my mother left by the boat that night and came up, and was informed by the doctor next morning that he did not think the boy would pull through the previous night.

49. What was the actual position of the patient next morning?—He was unconscious, and had been then for the previous two or three days.

50. On the morning of what day did your mother arrive?—Friday, the 2nd July.

51. He had been unconscious then for two or three days?—From either the Tuesday night or the Wednesday.

52. And he died when?—On the Sunday, 4th July.

53. Was there any difficulty about communications to the patients?—Yes, sir; the patients, I know, were not receiving their correspondence regularly, because when Private Glen got up he found a large number of letters which had not been delivered, and he took it upon himself to deliver them. There were two or three letters for my brother among them. There was a telegram sent by friends at Day's Bay on the Tuesday. I might mention that my brother was to have come out on the Monday, the 28th June; he was to come out of hospital on sick-leave, but he had a relapse upon that day, and on the Tuesday some friends at Day's Bay wired asking him to go over there and they would look after him. But apparently he was not conscious when that wire reached him, or presumably so.

54. What was the certified cause of your brother's death?—Influenza, cerebral hemorrhage.

55. Certified by Dr. Ferguson?—[Death certificate produced.] Yes; the certificate of death states that the last medical attendant was Dr. W. E. Ferguson.

The Chairman: Who gives the information?

Mr. Skerrett: The undertaker.

The Chairman: Will you please see that Dr. Ferguson is apprised of this, Mr. Gray; and he had better be told of the evidence which has been given by this witness.

56. *Mr. Salmond.*] You gave an interview to a reporter of the *Star* on the 5th July, a day after your brother died. You then said that you regarded this as a case of cruelly criminal

negligence. To what were you referring—his treatment in the hospital, or the fact that you were not notified of his illness?—Both.

57. So that you consider that he was treated in the hospital with cruelly criminal negligence?—I do.

58. Did you subsequently write a letter to the *New Zealand Times*?—I did.

59. In which you said this: "Though unfortunately the facts stated are only too true, I should be glad if you would permit me space to state that these strictures referred largely to the earlier stages of my brother's illness. As to the present nursing and medical staffs, they have done all in their power for him, while every facility has been afforded his relatives during his last days, and no expense spared by the authorities"?—The reason of that letter I would like to emphasize. I explained that in a letter I wrote to the Christchurch *Press*, because that was telegraphed to the *Press* office, and these newspapers sought to turn it to account for political purposes.

60. What newspapers sought to turn it to account for political purposes?—I gave that interview to the *Star* reporter in the first place. It was telegraphed up here only to the *New Zealand Times*. Then I thought that it might be taken by the nurses to reflect upon them. I would like to say that they were most kind during the three days my mother was here, and also the medical staff, and the Minister of Public Health gave instructions that no expense was to be spared, so that when those remarks were telegraphed up I thought they would think that we were not thoroughly appreciative of their kindness. That letter appeared in the *Times*, and it was telegraphed to the *Press*, the other political side. They came round and asked me if I had anything further to say. They put in below my letter a statement which made it appear that I had had an interview with the Hon. James Allen and the Hon. Mr. Rhodes, and they turned it round to show that I thought the Hon. James Allen a little "tin god." I wrote the editor of the *Press* a further letter as follows: "Sir,—I had not intended to refer further to this matter, but having been seriously misreported in your issue of this morning, I must ask you to insert this correction in an equally good position. In the first place, the remark you quote, 'I have nothing to withdraw,' referred to the statements made in the original interview in the *Star*, and not to my letter in the *New Zealand Times*, for the simple reason that I made no further complaints in that letter. That letter was inserted in appreciation of the kindness extended to members of my family at Trentham by the present medical and nursing staff, the latter especially. The Minister of Public Health also did all in his power after the camp had come under his control. Your statement that I inserted that letter because the Hon. James Allen had been so exceedingly kind is quite incorrect. True, both the Minister of Defence and the Minister of Public Health received me most courteously, and I was assured that the matters complained about were now being rectified, but I wish it to be distinctly understood that my letter was not inserted with a view of white-washing any one in authority. A Royal Commission has been set up to investigate various charges, and I think judgment should be withheld until the finding of this tribunal proves definitely at whose door the faults may lie.—Yours, &c., Ronald S. Badger, Christchurch, 8th July."

61. *The Chairman.*] The suggestion was that you had gone back on your original charge, whereas your observations were directed to the latter part of the incident and not to the former part?—That is so.

62. *Mr. Salmond.*] So that from the time your mother arrived here there was no reason for complaint as to the treatment?—That is so.

63. Every kindness was shown by the nurses and attention by the doctors?—Yes, sir.

64. Was your brother's accommodation at this time satisfactory?—No, I do not think it was. Presumably it was as good as could be provided out there. We thought he should have been moved before.

65. But while your mother was there no complaint was made as to the treatment by the nurses or doctors in charge?—That is so.

66. It was too late then to remove your brother?—Yes, apparently.

67. And they were doing the best they could?—Yes.

68. Was Dr. Ferguson still in charge?—Yes, I understand so.

69. Did your mother see him?—Yes.

70. All that you know about his treatment before then was what Roy Glen told you?—And from other sources; but still, Roy Glen can endorse everything I have said. Part of it has come from other sources.

71. Can you give the names of any other persons who gave you information as to your brother's treatment?—Yes; there was Private J. H. Bain. I am not sure as to his initials.

72. Of the same reinforcements?—Trentham specials, now at Rangiotu.

73. You say he can give further information?—Yes.

74. Did he see your brother in hospital?—I understand so.

75. Where did you see him?—I have not seen him; I have only communicated with him.

76. By letter?—Yes.

77. Have you got any letter from him?—No; I thought I had, but I have left it at home.

78. Any one else?—No. Others saw him in hospital, but they were not in that particular hospital themselves.

79. Was the information upon which you based this charge obtained chiefly from Private Glen and partially from Private Bain?—That is so.

80. You say that when your mother got here your brother was unconscious, and had been unconscious from the Tuesday or Wednesday?—Yes.

81. You got the official telegram on the Thursday?—Yes.

82. When did Roy Glen last see your brother?—Tuesday morning. He was very dull then.

83. Not unconscious?—No; he just knew him.

84. You say in your interview with the *Star* reporter that the men in hospital are not allowed to communicate with their friends: what is your authority for that?—Well, that is possibly not strictly correct, but it is based upon the fact that Private Glen sent three wires to his people while he was in hospital; he paid for those wires, and not one of them was received. His family reside close to us in Christchurch.

85. *The Chairman.*] That is based on the fact that three telegrams were sent and not received?—They were handed to the orderlies, and his people wondered what was wrong with him. They did not know he was in the hospital.

86. *Mr. Salmond.*] Do you know whether those wires ever arrived?—I know they did not.

87. And they were paid for by him and given to the orderlies?—Yes.

88. *The Chairman.*] Do you know the name of the orderly?—No, sir.

89. Private Glen might be able to tell us?—Yes.

90. *Mr. Salmond.*] You said that two or three letters were found by Private Glen addressed to your brother?—He found a large bundle of letters, and two or three were for my brother.

91. Were these from your family?—I cannot say what letters they were. There was one letter found among his belongings and it was returned unopened after he died.

92. Can you indicate what delay there was in Private Glen getting these letters?—No; I have no dates to go by.

93. But that letter that was returned: does that show any undue delay?—That would not be a guide.

94. You would know when it was dated, and you would know when it should have reached your brother?—We got it after he died; it may have been lying there three or four days.

95. That would be shown by the postmark on the letter?—That would be no guide as to when it was delivered in camp.

96. Probably it arrived near to his death but never delivered: have you got that letter?—Not with me; it was written by my sister.

97. *The Chairman.*] Would you be able to get us that letter, because it would enable us to get something definite?—Yes.

98. If you have the envelope, that could be sent to me?—Yes, and the top part of the letter. It may have been destroyed, but I will find out.

99. *Mr. Salmond.*] Were the authorities asked to explain why they did not communicate with you earlier?—No, sir. I interviewed the Minister of Public Health the afternoon of the funeral, and he assured me that we ought to have been informed at once. My brother took a serious turn on the Monday when he was supposed to be convalescent. He had a sudden collapse on the Monday. I contended that if we were not advised when he went into the hospital, we at least ought to have been told on the Monday, and the Minister agreed.

100. Who is put down on his attestation-paper as his next-of-kin?—I suppose his father.

101. Is his father alive?—Yes, sir.

102. To whom was the telegram sent?—It was sent to the house. I think it was addressed "Badger."

103. Whom was it sent by?—The Camp Commandant.

104. You have spoken of the remarks made by the Minister of Public Health. Did your mother, to your knowledge, complain that she had not been informed earlier? Was any explanation given?—I cannot say that she did. She was too full of other things. Her boy was dying.

105. So far as you know, no explanation was offered at the camp?—No.

106. Was your brother unconscious during the whole time that your mother was there?—Yes. He really regained semi-consciousness part of the time, and intimated that he understood when he was spoken to, but he was partially paralysed.

107. Where did he die?—In the camp.

108. In the tea-kiosk?—No; he had been removed on the Sunday, I think.

109. *The Chairman.*] The racecourse is mentioned?—I think it was in some rooms adjoining the Jockey Club's premises.

110. *Mr. Salmond.*] Have you that letter which your brother wrote to you?—It was not written to me, but to a lady friend. I tried to get the original, but I only have the copy of portion as yet. I am getting the original.

111. Have you seen the original?—No. [Copy handed in.]

112. Will you supply the original of that letter?—Yes, sir, if it is still in existence, as I understand it is.

Mr. Salmond: It is evidence as to the condition of the man, Your Honour, when he was in the hospital on the Friday.

113. *The Chairman.*] It shows that he was getting better when he got the relapse. This is the letter written by your brother on Friday, the 25th June. It says, "I am writing this on my knee in bed. I have been in the hospital since Wednesday afternoon. I was ill on Tuesday." You have given us the substance of the letter already?—Yes, sir.

114. *Mr. Gray.*] I understand that you based upon that letter and Private Glen's statements all the statements made by you?—Yes, but not quite all.

115. I mean with respect to the earlier treatment of your brother in the hospital?—That is so.

116. Have you heard Dr. Purdy's disclaimer that he was not the doctor in charge?—I only mentioned his name because I understand he was in charge of the camp.

117. Why did you mention his name?—I thought he was in charge of the camp.

118. You admit that he was not in charge of the camp in connection with your brother's illness?—Yes.

119. If the camp orderly states that the letters were delivered regularly you are not in a position to contradict that?—Not in a position.

120. If the orderly states that your brother was provided with a bed, you are not prepared to contradict that?—I admit that my brother was provided with a bed on Sunday, the 27th.

121. He was provided with a bed on Sunday?—Yes.

122. On the Sunday following his admission he was provided with a bed, and expected to get out on sick-leave on the Monday?—Yes.

123. And he had a relapse on the Monday?—Yes.

WALTER REYNOLDS sworn and examined. (No. 23.)

1. *Mr. Skerrett.*] You are a bootmaker, residing at 76 Constable Street, Newtown?—Yes.

2. You have volunteered to give some evidence with respect to the quality and character of the boots supplied by the Defence Department to the soldiers?—Yes, sir.

3. How do you come to know about these boots?—I know them by repairing them, and I have seen them being made; but it is not so much of the making that I wish to speak of as of the leather they are made of.

4. Now, just give us your criticism of the material in these boots?—When these boots were first made for the first Expeditionary Force the lining under the front was made from a leather called split russet, but since then they have altered them and put in cowhide. Now, the front of the boot in wet weather, or in mud or grass, has to resist just as much as the sole of the boot, because when going through a paddock, say, it is the front which catches all the damp. This cowhide is simply a tanned chrome. I have a sample here [produced]. These are samples of the chrome that is outside and also of the lining. These leathers are very porous. They were adopted by the Defence Department on account of their softness. When it gets wet and dried again it becomes hard and harsh unless you oil it. I submit a very old leather should be used—that is, a waxed kip. The grain of this leather is on the outside; the grain of the other is on the inside and cannot be worn off. That leather would stand in water from twelve to twenty-four hours without letting the water through. The farm hands in the country would not have the leather which is being used in these boots at any price.

5. They would not have the chrome?—No. My contention is that by having the boot made from this leather, and the damp getting into their feet, it is apt to give the men colds, because this leather is very cold leather at any time. And according to what I hear from the men in camp they have been getting their feet damp and, having only two pairs of socks, they have got into their blankets with their wet socks on, with the result that a great many have got influenza. Now, I have a great friend out there, who takes great precautions. He has always led an indoor life. When he finished his day's work at the camp he always took great care to put on dry socks, and that man is improved by the camp life. He is a far better man than when he started. I think if the leather I recommend were used in the soldier's boots it would keep him dry and warm.

6. *The Chairman.*] Apparently, from the experience of your friend, even with the boot that has been supplied, if proper precautions are taken by the men they are not likely to suffer?—No; he is just as likely to suffer by contracting a cold by having wet feet, without getting into blankets with wet socks on.

7. But certain precautions to be taken by the men against getting their feet damp, or allowing them to remain damp, are always desirable?—Certainly.

8. One precaution would be a glass of hot whisky?—But you could not allow such a thing, because that is greatly against the regulations.

9. The precautions vary considerably, of course, and the men should know that if they are not careful in such matters bad consequences would follow; but you think that if they had this waxed kip in their boots their feet would not be so likely to get wet as they do at present?—That is so. There is no doubt about it, because one is a waterproof leather and the other is not. I should also like to say, in regard to the fitting of these boots, that it is a general rule to have in stock three different fittings.

10. That is, for each size?—Yes, a 3, a 4, a 5, and a 6. Now, these boots are all being made in the broad fitting.

11. Each size has not got the three variations?—No. I saw men in the first Expeditionary Force who had as many as three pairs of socks on to fill the boots out. Whilst they were going over the Constable Street hill during their sojourn at Miramar I tried to do something for them, because they were in such trouble with their boots. Their feet would perhaps be for a medium fit, but they would have this broad boot, and there was too much play in it. I think that the man who is giving out the boots should be an experienced man, and should put a tape round the man's foot: he would then be able to give that man a boot that would fit him, instead of giving him a boot that will fit him like a sack. You cannot expect a man to march well in a boot that does not fit him.

12. I always understood that the boots were specially attended to, knowing how necessary it was for the men's feet to be in good order?—That is so. Again, I think this boot could be made lighter. It has a very thick sole, and I think that is wrong. Say they have to march twenty miles—that boot will get very heavy at the end of that journey. In repairing these boots I found that belly leather is being used in them. It should be shoulder leather, because there is more substance in it.

13. If a boot is made with belly leather in the sole you say it is not a good boot?—No, that is not a good boot. It is generally recognized as good practice to use shoulder.

14. It may cost more?—Yes; but why consider the cost? If I am buying belly at present it costs me 1s. 1d. a pound, and if I buy shoulder it costs about 1s. 3d.

15. My question was asked so that I might be able to appreciate the difference between the two?—Yes. If the shoulder leather is used, with some Stockholm tar, it would be better.

16. *Mr. Skerrett.*] The specification provided for shoulder, but as a matter of fact belly leather is being used?—That may be so. The men are not used to a boot like this.

17. *The Chairman.*] There is an Army boot like this. The only difference, I understand, is that we put more nails in the sole than they do in the Imperial Army boot. We had them exhibited by the camp officials?—There seem to be two patterns of the Army boot—some of them are welted.

18. The contractors simply had to make them according to specification: you have not seen them alongside the Army boot?—The sample of the Army boot I have seen has a dry-ped sole. I was going to submit to you the difference in sole-leather. I find that the sole-leather in this boot is very soft. I know that sole-leather at the present time is very hard to get, but there is such a thing coming into New Zealand as "Canadian bends," and that leather is about as good as there is here.

19. I do not know that we can go into the merits of these different leathers, but the other points that you have given us are, I think, quite valuable?—I think it is important that these leathers should be gone into, because our boys should have the very best. It is not right for them to have bad sole-leather when we can give them better.

20. You think "Canadian bends" might be used where the ordinary sole-leather cannot be got?—They are using a more inferior leather. I have here samples of the various leathers. [Samples put in.] There is one more statement I would like to make, in regard to the attachment of these soles. They are being standard-screwed on—a wire screw is put through the middle of the slip sole. The outside sole is stitched by the machines. That boot would be a far more durable boot if it were standard-screwed right through. I do not know why the stitching is put there at all.

21. It would seem desirable to have a committee of bootmakers to deal with this matter?—I would like to meet them. I have been trying to get an alteration made in this boot ever since last October. I have tried to interest many public men in Wellington. I have tried the Mayor of Wellington, but I never could get any satisfaction, so when I saw the advertisement of this Commission I got into touch with Mr. Skerrett.

Mr. Skerrett: I have called this evidence with a view to inviting this Commission to criticize the details of this boot in order to suggest the following lines of inquiry: (1.) What expert opinion did the Defence Department adopt before determining the character and specification of the service boot? (2.) What expert opinion and advice did they obtain as to the sizes which were to be available, and as to the capacity of the leather employed to resist saturation, and, if so, what tests, if any, were applied? (3.) What was the extent and character of the inspection of the boots delivered by the contractors in pursuance of their contract?

22. *Mr. Gray.*] Do you know who were the manufacturers of the boots which you repaired?—No, I cannot say that—the brand was worn off.

23. How many boots did you say you saw which were, in your opinion, defective?—Take the belly leather, for instance: I suppose I have repaired dozens, and they were all the same.

24. They all had belly leather?—Yes.

25. Do you know that shoulder leather is specified?—That may be so.

26. Do you know that it is so?—I do not know, as a fact.

27. Do you suggest waxed kip should be used instead of tanned chrome?—Yes.

28. Can waxed kip be got in New Zealand now?—I do not see why it should not be. The farm hands have waxed kip for their boots. Besides, if it is not to be obtained now it could have been.

29. You have not heard of any difficulty in getting it?—No, I have never had any difficulty in getting it.

30. You suggest that if the boots were made with waxed kip and with proper sole-leather they would not be so porous as those you have repaired?—That is so.

31. But you admit that the men themselves could take greater precautions if they put on dry pairs of socks?—That is so; but they are only supplied with two pairs of socks by the Defence Department. They are bound down to two pairs of socks.

32. *The Chairman.*] We have been told that that is not so: they get presents of socks in camp?—I have a friend in camp and——

33. Is he in camp?—Yes; I was only talking to him last night, and he said that he had two pairs issued to him, and the others he had he had bought himself.

34. Every man has two pairs given him, but he can have as many more as he likes to buy?—Yes, providing he pays for them himself.

35. Your friend puts on a dry pair?—Yes, he has not taken cold.

36. And what he has done others could have done?—Yes; but he also broke the rule by having a drop of whisky.

37. *Mr. Salmond.*] Your first complaint was that the boots were not waterproof?—That is so.

38. Is not chrome softer than kip?—Yes, to the feel.

39. But more comfortable?—No.

40. So that the chrome is not any more comfortable than the other?—Not a bit.

41. But softer?—To feel when it is new perhaps. Unless they are well greased, when they are continually getting wet and dry, wet and dry, wet and dry, they become very hard—chrome boots.

42. Could not a chrome boot be made perfectly watertight by greasing it?—Yes.

43. Would not the chrome boot be made sufficiently waterproof with greasing?—No, because it is not such good-quality leather. You could wear the grain off the chrome, but not off the kip, because the grain is inside.

44. Even if it is well greased the chrome boot is unsatisfactory?—That is so, in comparison with the kip.

45. Is there any difficulty in getting kip boots?—No.

46. Then, as to the soles of the boots, you object that they were not properly put on?—I think the standard screw should be put right through.

47. Have the soles been coming off?—Yes; it is quite a common thing for the stitches to break, even in a welted boot.

48. Is this an unusual way to make a boot?—I have never seen a boot made in this way before. There are many small manufacturers who could make as good a boot as this, but they could not make this boot, because they have not the machinery.

49. *The Chairman.*] Would it be a cheaper boot?—No.

50. Evidently it is not for cheapness' sake that the stitching has been adopted?—No; I think it is more for deception, because many of these men say they have sewn boots. Many of the soldiers are convinced that it is a sewn boot, and it is not a sewn boot at all.

51. If the boots were made as you suggest, several manufacturers could make them who cannot make these boots?—That is so.

52. If it is made in your way smaller manufacturers could compete?—No, not with a standard screw. The small manufacturer would peg the sole on, as they did for the boots for the South African contingents. Those boots were equal to any used out there. In fact, I have seen men of the First Reinforcements, men who went to South Africa, and they had the kip boots. I read in the *New Zealand Times* that a committee of Palmerston North men which presented the Palmerston boys with boots turned down the chrome boot in favour of the kip boot. All the Palmerston boys were supplied with kip boots. I got that from Mr. Ward, of Messrs. Hannah and Co.'s boot-factory. That was in the *New Zealand Times*. I could send you the copy.

53. You say that the Palmerston North committee turned down the chrome boot in favour of the kip boot?—Yes.

MAGNUS BADGER sworn and examined. (No. 24.)

Witness: I am a sergeant in the Field Ambulance, stationed at Trentham. I joined the Field Ambulance on the 28th June last, going on duty on the morning of the 29th. I had just entered the ward when I heard a man calling out "Badger." I turned round, and he had letters in his hand. I said, "Those are for me," and he laughed. I did not understand why, and he then told me that they were for a patient called Badger. I said, "Where is he?" I went across to where Archibald Badger was lying. I said to him, "Is your name Badger?" He said, "Yes." I said, "Do you come from Christchurch?" and he said "Yes." I said, "Are you a brother of Ronald Badger?" and he said "Yes." Then I spoke to him for a few minutes. At that time he was quite appreciative of the questions I asked him, and his answers were quite coherent.

1. *The Chairman.*] What was the time and the date?—It would be about 8.30 in the morning of the 29th June. I happened to have a knowledge of Ronald Badger.

2. He is not related to you?—No; but strange to say we come from the same stock. Owing to the similarity of the name I took particular care of Archibald Badger. I visited his bed frequently. I did everything that a man could do for another to alleviate any suffering he seemed to have. On the Wednesday he seemed to me to collapse suddenly, and he vomited a large quantity of yellowish fluid. I reported that to the nurse in charge. I personally washed his face and his hands, and cleansed the bed where any matter had been deposited, and saw him made comfortable. I would visit his bedside at least once every two hours. During the period from Tuesday to Thursday morning Dr. Ferguson must have visited his bedside at least seven to eight times. I saw Dr. Ferguson at his bedside at least seven or eight times.

3. That was on the Tuesday?—That was from the Tuesday to the Thursday. I would like to explain, sir, the difficulty regarding correspondence. The correspondence would be addressed to, say, "Archibald Badger, A Company, —— Platoon," and so on. It then was, I understand, the duty of the corporal of that platoon to see that the letters were redirected to wherever that private had gone. As the private in question had been sent to the kiosk hospital it was the duty of the corporal to see that those letters were sent to the kiosk, and have an effort made to find the patient. Subsequently the grandstand was used and the buildings near the gate. It was the practice for an orderly to go round and call out the names for whom there was correspondence, but it was possible for those patients to be asleep and for the man alongside of them not to know their names. Then the corporal would attempt to find the patient in another part of the hospital. The result was that, after a great deal of wandering round on the part of the corporal, somebody would say, "Oh, he is at Kaiwarra." There seemed to be people there who could give information on any subject in the world. At Kaiwarra the letter would be marked "Unknown here." The letter would then go back to his original platoon, and the whole thing would be started over again. The difficulty in connection with the hospital itself was insurmountable owing to this fact, as I may show later: that we would have over a hundred and twenty admissions in a day, and perhaps something like sixty discharges, and it was absolutely impossible to keep a record of those names—the names of those coming in and those going out. It was an impossible task, because the work was too stupendous to permit of any officer to be set apart for that work, and it was not the duty of the hospital officials to do that: the letters should

have been looked after by the platoon-corporal. Regarding the question of telegrams, I would like to point out that the wires at Trentham were very much congested. I myself sent a telegram one day, and it arrived in Wellington the next day. The reason was that when the funk (as I call it) set in throughout New Zealand the telegrams simply poured in. Men in camp walking about hale and hearty were receiving wires from all sorts of relatives, and I understand that occasionally telegrams from the camp had to be bundled up and sent in to Wellington so as to be despatched. It would have been perfectly possible for an orderly to have received money for a telegram and for him to put that money in his pocket or forget about it. He might also have given that money to the telegraph messenger, because the messengers arriving at the kiosk with telegrams were also given telegrams to go back, and it would have been perfectly possible for either the orderly to take the money or the telegraph messenger to take the money, and it would be impossible to trace how the telegram went astray. That is all the evidence I can give at present bearing upon the Badger case, but I would like to be recalled later to give general evidence on the whole subject.

The Chairman: From what you have told us you appear to have a very clear and intelligent grip of the matters, and we will be glad to hear you later.

4. *Mr. Salmond.*] When did Badger become unconscious?—I think it was late Wednesday afternoon. Of course, I cannot have a clear, definite idea of what you may call "unconsciousness."

5. Well, capable of recognizing a relative?—I consider that he would have been able to recognize a relative until late Wednesday afternoon.

6. Do you know anything about a telegram being sent to his relatives on the Thursday?—I remember a telegram that Sister Brandon had. She said to me, "Here is a telegram from Badger's relatives," and I held up my book for her to write the reply on the telegram-form—it was a reply-paid telegram. I did not observe the reply. It was handed to the telegraph messenger. As far as I recollect that would be Thursday morning, but I cannot swear what day it was. I do not know of any telegram being sent to Christchurch: it was not in my official duties.

7. All that you know is that a reply telegram was sent. Was there any system of notifying relatives of the dangerous illness of patients?—Yes, the understanding was that relatives were to be notified.

8. By whom?—By the headquarters office.

9. In Wellington?—No, at Trentham.

10. That is, the Camp Commandant's quarters, not the hospital quarters?—The hospital quarters. There is a clerk in the office who belongs to the Field Ambulance in what is called the record-office, and I understand it was his duty to reply to all inquiries made, and to receive from the nurse in charge any notification of any serious illness, and his duty was to communicate at once with the relatives.

11. Then it was Sister Brandon's duty to notify this clerk if Badger was in such a condition that his relatives ought to have been told?—Yes; but in Badger's case there was, to my mind, a sudden collapse. The man had been getting on all right, and he suddenly collapsed.

12. You saw him first on Tuesday morning: had you any reason to suppose he was seriously ill on Tuesday?—I would not think so. I would not pay much heed.

13. How often did you see him on Tuesday? You said the doctors visited him between Tuesday and Thursday?—Dr. Ferguson at that time was going round the wards twice a day, and Dr. Harrison also went round, and we had visiting doctors of all kinds. Dr. Morice would wander through the wards.

14. But you say Dr. Ferguson saw Badger three times: was that only casually?—He would go to his bedside each time.

15. But did he do the same with all the cases?—No, serious cases. You must remember that the majority of those cases—I would say 85 per cent.—were simply men who had a slight temperature—99 or 100: they would be a couple of days in bed, and then able to get about again. The doctor would take the case of each man to ascertain whether he was convalescent in the morning; then in the afternoon there would be a second visit to the serious cases.

16. Then Badger's was being treated as a serious case?—Yes.

17. Was his temperature taken?—Regularly.

18. What was it on the Tuesday?—I cannot say.

19. *The Chairman.*] There will be the hospital record?—I think there will be.

20. *Mr. Salmond.*] Did the nurses take the temperatures?—That is a point I would like to refer to. On the Tuesday, when I got there, there were about six nurses who took on day duty that day, Tuesday; they were trained nurses, not nursing sisters, who took command of the ward on that day. There were some there on the Monday, but on the Tuesday there were six, to my knowledge; and Badger's case was being looked after.

21. *The Chairman.*] That disagrees with what Mr. Ronald Badger told us—that on the 27th June three nurses arrived, and more on the 6th July?—Badger's case on the Tuesday was in charge of a nurse. My reason for remembering that is that I spoke to the nurse of his case, and stated the similarity of his name to my own.

22. *Mr. Salmond.*] Were you looking after Badger as well as the nurse?—Yes, in this way—that I looked after all the patients on the Tuesday. I had not been allocated a special duty. Afterwards I was appointed an acting non-commissioned officer and given definite duty.

23. On the Tuesday I understand that Badger's was regarded as a serious case?—All cases where there is a relapse are treated as serious cases. The relapse would have taken place late on Monday night.

24. On the Wednesday he had this attack you have referred to?—Yes, the vomiting.

25. Was the doctor sent for?—Yes; the doctor came within twenty minutes. I will explain how I remember that. When the vomit was on the floor it was my intention to have gone and got a bowl to take a sample of that vomit, as to my mind it looked like gastric trouble being present. While I was away one of the orderlies saw this and got his mop and washed it up. Sister Brandon asked if a sample had been kept, and I told her it had been wiped up by another orderly. The doctor called immediately afterwards, and on the Wednesday he went to his bedside several times.

26. Was it never suggested on that day that Badger's relatives should be notified?—I never heard any remark upon that question.

27. You do not remember which day that telegram was written by the nurse?—The telegram in reply to the Christchurch inquiry—no, I cannot remember that. I should say that was the Thursday.

28. It was not your duty to notify serious cases to the clerk so that notification might be given?—No.

29. *The Chairman.*] But you are in charge of all the cases, are you not?—No; my position when I went there was just what might be called that of an ordinary garden variety of orderly. If there were spittoons to be emptied, or if a patient had to be washed, I did it; or brushing the floor, or any work like that I had to do. When I had been there a few days I was picked out as a non-commissioned officer for special duty to receive all patients who came to the kiosk. I want to explain later the importance of this position. Regarding the washing of the men, there were a large number of men in the hospital who were convalescent, or, I might say, semi-convalescent, and those men got up and washed themselves.

30. *Dr. Martin.*] What do you mean by "semi-convalescent"?—Men who were able to get up without injury to themselves—men whose temperature was, say, 99.

31. A man whose temperature was 99 was allowed up to wash himself?—Yes.

32. You allowed that?—Well, we could not very well help it.

33. Did you allow it?—I personally at that time would have allowed it.

34. That is what you call "semi-convalescent"?—Yes, a temperature going down.

35. *Mr. Salmond.*] I want to know whether there was any difference in Badger's treatment before his relatives came and afterwards?—What Badger's treatment was after his relatives came is unknown to me, because he was removed from the kiosk.

36. When was he removed?—I think, on the Thursday afternoon.

37. Which was the other hospital to which he was removed?—There is a main hospital near the entrance into the hospital. We generally took all serious cases down to there, and special nurses were delegated to that work.

38. You were in the kiosk?—Yes.

39. And on the Thursday afternoon or evening he was removed?—Yes, put on a stretcher and taken down to the other hospital.

40. How far was that away?—About 300 yards. I would like to say, regarding the washing, that I am prepared to stand here and say that the charge that a patient was not efficiently washed is absolutely untrue. I am speaking from the day I went there.

41. *The Chairman.*] From the 28th the patients were regularly washed?—That is so; I am only speaking from the 28th.

42. *Mr. Salmond.*] A suggestion has been made that patients were prohibited from communicating with their friends, or rather that they had no opportunity of doing so?—So far from that being true I have gone round and written letters for men myself, and have posted letters to their friends, and I know that in one case a reply was received to such a letter. There was a supply of stationery provided by the Methodists and Salvation Army. Moreover, one day a lieutenant came from headquarters and asked me to announce that if any man wanted a telegram sent to friends that telegram would be sent free of charge. A good many took advantage of that. Every opportunity was given to send telegrams and send and receive letters. Might I also be allowed to say this: I have had a good deal of experience of doctors in military life, and I have never seen two men in my life more devoted to their work than Dr. Harrison and Dr. Ferguson. They were most careful, painstaking men.

43. What experience have you had?—In Scotland I have a brother who is a doctor, and my early training was naturally among medical affairs a good deal.

44. What do you mean by that?—I could not see a frog getting electrified and that sort of thing without being able to absorb a good deal of medical knowledge.

45. *Dr. Martin.*] What experience had you with reference to attendance on the sick?—I was eighteen months in South Africa with the R.A.M.C. I have also the British Psychological Society's medallion.

46. Were you nursing in South Africa?—Yes, with Bethune's column; in the Field Ambulance and also in the base hospital.

47. You were in the nursing section?—Yes.

48. Were there any bed-pans in the kiosk at Trentham?—Yes; I saw a good few when I got there.

49. How many?—Plenty.

50. Was there a method for heating the bed-pans?—No.

51. The bed-pans were handed to the patients cold?—No, sir. The bed-pans were all kept outside. In passing into the ward there was a large boiler, and I gave the orderlies instructions that the bed-pans were to be warmed at that boiler. I know that that was done.

52. Water was taken from the boiler and put into the bed-pan?—No; there is an ordinary vertical boiler, and the steam is conveyed from it to the centre of the kiosk; it then percolates through the pipes. It was simply the practice to open the fire-door and warm the bed-pans before taking them into the ward.

53. Then the bed-pans were heated?—Yes.
54. Upon what date?—From the Wednesday, 30th June.
55. About the feeding of the patients: was the feeding of Badger looked after?—For the first few days I took the same food as the patients, because we were too busy to go away for our meals. On the Tuesday night there was roast beef and roast mutton sent over for the patients. Sister Brandon said to me, "Orderly, will you cut up that meat?" I started to cut up the meat, and after I had been doing so for awhile I pointed out that we could not differentiate between the patients, and so the meat was not delivered to the patients. It was practically impossible to tell which men's temperatures were up and which were down.
56. Why?—At that time we had no cards—no temperature-charts.
57. There was no means of distinguishing the patients with high temperatures from those with lower ones: when was that?—On the 29th.
58. You could not tell the patients' temperatures?—No. That was remedied later; a book was kept for recording each patient's temperature, but it would have been impossible to take that book round and locate the patients for the two diets.
59. You had not marked the beds in any way?—No; that was impossible. But the food was given out in plentiful supplies, and what might be called "low diet."
60. They were not getting half-cooked rice?—I never saw it.
61. Did they get two aspirin tablets with each meal?—Not after Monday, the 28th; what happened before that I do not know. To say that they got two aspirin tablets with each meal after the 28th was ridiculous. I would have noticed them.
62. How long was Badger unconscious?—I could not tell. Might I suggest that there were patients who could not tell what they were getting. We gave patients there chlorate of potash to relieve them of phlegm in the throat.
63. *Mr. Salmond.*] But he would not swallow aspirin?—Yes; a man would not know what he was eating.
64. Did you give tablets on your own responsibility without the doctor's orders?—Tablets of chlorate of potash.
65. *Dr. Martin.*] You did: what strength?—One grain, I think.
66. Many at a time?—Never more than one at a time.
67. You did that without advice?—Yes.
68. Did you give any other tablets without advice?—Yes, I gave cascara.
69. Did you sponge down a patient with a high temperature?—No.
70. Did you do any active nursing yourself?—Yes; I made the beds at first.
71. You told us that you constantly visited the bedside?—Yes.
72. Why did you go up to Badger's bedside at all if you were not doing nursing duties?—Because he was lying close to where I was.
73. What did you do?—I would ask him whether he wanted a drink.
74. Why?—Because you sometimes find men shy at asking for anything. Very often it is the men who are reticent who require most attention.
75. You say there was any amount of nursing assistance?—Yes, there were six nurses.
76. Those were qualified nurses?—Yes.
77. How many patients had you then?—149 or 150.
78. How many nursing orderlies had you in the ward at that time?—Perhaps seven orderlies, and about eight fatigue men—the men who did the washing-out.
79. You constantly visited the bedside up to what date?—Up to the Wednesday night.
80. You went on duty on the 28th and visited Badger's bedside frequently up to the 30th?—Yes.
81. Why did you stop visiting him then?—He was removed on the 30th, and I had other duties allocated to me.
82. From the 30th to the date of his death you know nothing about him?—No; he was taken away.
83. You know nothing about the day after that: where was he taken?—Away from the kiosk to the hospital at the main gate.
84. How was he taken there?—By a stretcher, under the supervision of nurses.
85. Did you see any patients ordered from the kiosk—men who had been lying in bed in the kiosk—ordered up to walk to the Jockey Club's rooms?—No, I never saw any.
86. Did you hear of any?—No, not after I came there. My instructions were very much against it.
87. You say that the largest number of patients in the ward at the kiosk was 150?—I would not be sure.
88. Are you quite definite about your statement that there were six qualified nurses in the kiosk on the day that Badger was removed?—Yes.
89. Qualified nurses?—I feel certain of that.
90. You told the Commission that one hundred and twenty patients would be taken in on one day and sixty would leave?—That is so.
91. And that you kept no record?—Afterwards there was a record kept of every man; the record was not kept by us.
92. I am referring to the kiosk?—It was the duty of Corporal Morton to supply a list of the names.
93. Was this corporal under your orders?—No.
94. What were you referring to when you stated that the names were not taken?—I was showing you the difficulty of locating addressees of letters.
95. Afterwards a careful list was kept of the men who were admitted and those who were sent out?—Yes. The record clerk would know, but we could not tell.

96. You said that men with a temperature of 99 would be allowed up to wash themselves: that is what you called "semi-convalescent"?—Say a man had come in with a cold and his temperature rose to 102 and then gradually dropped down: that man would say to me, "I cannot use the bed-pan any longer. If you will let me up I will put on my overcoat." I would allow that man to get up.

97. *Mr. Salmond.*] A man with a slight cold, you say, would have a temperature of 102?—Yes, and I guarantee that many men walking about Wellington have a temperature above that.

98. Where were you before you went to the hospital on the Monday night: what were you doing?—I only joined the service on the Tuesday.

99. *Mr. Skerrett.*] I understand that you did not join until the morning of Tuesday, the 29th?—No; I reported for duty on the Monday, and started work punctually at 6.30 on Tuesday, the 29th.

100. When was Badger removed to the other hospital?—On Thursday.

101. At the time you joined Badger was in a serious condition?—I would not say that when I first saw him.

102. We are told that he had a relapse on the Monday, and you yourself say that he attracted your attention on the Tuesday as being in a serious condition?—I did not say that. I said that I was attracted to the man by the similarity in our names.

103. Was he able to talk freely with you on the Tuesday?—Yes.

104. What was your observation of his condition: was he bright?—No, far from that.

105. Was he comatose or semi-comatose?—He was languid and tired, and did not seem to want any conversation. He might have appreciated his surroundings.

106. Under any fair and reasonable system of hospital routine ought not Badger's friends to have been informed of his condition on the 29th June: was he then in such a condition that it ought to have been reported to his friends?—No.

107. When do you say it ought to have been reported, according to any ordinary system of hospital routine?—I would have said that it ought to have been reported on the Wednesday night.

108. His condition on Wednesday night was very serious?—I would not say so.

109. What was his condition then?—I do not know.

110. You are called here to give evidence dealing with Badger's case, and you have not examined his temperature at all?—No; I consider that Dr. Ferguson should give that evidence.

111. Do you now say there has been no neglect—I am now referring to the system—that there was no neglect under a rational system of hospital routine in notifying Badger's relatives of his condition?—No. I would like to back that up by saying that if the relatives of every patient in the same condition were to come we would have had the place inundated with people.

112. According to your notion of a rational system of hospital, there was no neglect in Badger's case?—No; I would not say there was any neglect.

113. So that it is according to your ideas of a reasonable hospital system or routine the relatives ought to have been apprised only on the eve of a man's death?—No. If you have in a general hospital a man with a rising temperature, with very quick pulsation, and general distress, it is then for the medical officer to decide whether that is going to continue or what is to be the result of it.

114. I want to call your attention to the fact that a patient who had been next door to this man was able on the 1st July to inform his (Badger's) relatives that he was seriously ill?—That man may have known more than we did.

115. How many times did you wash Badger between the morning of the 29th and his removal to the other hospital?—I went to his bedside frequently.

116. How many times did you personally wash Badger between the 29th and his removal?—I washed him once on the Tuesday and once on the Wednesday.

117. Was it a thorough or complete washing?—Just hands and face and neck. The second occasion was after vomiting.

118. Did you make any examination of him for the purpose of ascertaining whether he required a general wash?—No; that was not our duty.

HARRY ARCHIBALD DE LAUTOUR sworn and examined. (No. 25.)

1. *Mr. Skerrett.*] You reside now at Wellington?—Yes, at Kilbirnie.

2. Will you tell the Commission shortly your experience in medicine and military hygiene?—I am a duly qualified medical practitioner, a member of the Royal College of Surgeons, England, Associate of the King's College, London, and I have had thirty-five years' continuous service in the New Zealand Defences Forces, from 1875 to 1911.

3. Would you mind detailing a little further your experience in connection with camps and military hygiene?—I have been in charge of every camp that has been held in South Canterbury and Otago districts for thirty-three years. Feeling the necessity for knowing my work as a military medical man more, I joined the correspondence class of the Volunteer Ambulance School of Instruction, a class which had been set up to instruct all members of the Auxiliary Forces residing not only in the United Kingdom, but throughout the Empire. In 1897 I proceeded Home and got practical instruction at that school. I went Home on leave for that purpose from the then Acting Minister of Defence of New Zealand, accredited to the Agent-General, and after going through my course of instruction I was attached for further instruction to Aldershot by the War Office, and I was then instructed to present myself for examination by the War Office at the Chelsea Barracks. Having passed my examination, I received the certificate of proficiency

[produced]. I was afterwards appointed one of the examining and instructing Medical Officers for the Auxiliary Forces of London, and I had the distinguished honour of being the only Medical Officer outside the United Kingdom who had acted as Vice-President of the Volunteer Ambulance School of Instruction. On my return to New Zealand I was appointed Principal Medical Officer of the Otago Military District, where I acted for ten years.

4. How many camps had you charge of during the time you were Principal Medical Officer to the medical service in Otago?—Four or five—every camp that was held there. I had charge of the Fourth and Fifth Contingents that went to South Africa, and all Easter camps, which were practically every year.

5. I may take it you regard your qualifications as of such a character as to entitle you to give a responsible opinion upon the methods that ought to be pursued in regulating the hygiene of military encampments?—Yes.

6. What personal connection had you with the Trentham Camp?—I went there in January, 1915—about the second week—to visit one of my sons who was in camp.

7. Was he a soldier?—Yes, in training in the Auckland Mounted Rifles. I went there on a second occasion about a fortnight afterwards. I went there again in May to examine the sample hutment, and I went there this month, about three weeks ago—the Sunday before the camp broke up.

8. Have you taken a special interest, then, in the conditions of the Trentham Camp?—Yes, from the start. I may say that as soon as the war broke out I offered my services to the Minister of Defence in a letter dated the 3rd August.

9. First you had a son in camp, and secondly you had your special knowledge and connection with military encampments and military hygiene?—Yes; and I have had friends and relations connected with the military Forces since the very beginning.

10. Before dealing with the conditions of the Trentham Encampment, what is the general experience of sickness and mortality in standing encampments?—You mean in recent years, or formerly?

11. In recent years?—In recent years, since the experimental manœuvres in Scotland and Hampshire in 1907, the improvements have been most remarkable as regards health not only in camps, but in the garrisons and Army service generally.

12. You refer to the manœuvres in Scotland and Hampshire as marking the beginning of a new epoch in military hygiene?—Yes; it is on the experience of those camps set up by the War Office as experimental camps that all these recent works have been written.

13. Will you state what this Commission was, and give to this Commission some notion of the percentage of sickness and mortality which ought to be expected in a well-conducted encampment?—I can only show, for instance, how it has improved the health of the service. Taking Egypt in 1906, where the number of men constantly non-effective from sickness was 103·72, within twelve or eighteen months it fell to 16·54—that is per thousand of strength. The mortality in the same years fell from 25·10 to 4·21. I can give you the figures for Great Britain stations. Take Burmuda, which was a healthy station, as against Egypt, which was an unhealthy station: in the same time the constantly non-effective from sickness fell from 22·32 to 9·52 per thousand of strength, and the deaths from 4·65 to 0·82. The same thing applies to India and all other stations.

14. Can you give the Commission information as to the percentage of sickness and mortality which ought to be expected, having regard to recent improvements in hygiene, in modern encampments?—They are very difficult to get at, but there are returns which were published in the House of Commons in February of this year by Mr. Tennent which show that among the troops of the Expeditionary Forces fighting at the front there were no cases of dysentery and no deaths, and no cases of pneumonia and no deaths, for the first six months.

15. *Dr. Martin.*] None reported?—None reported. This return was in reply to questions, and Mr. Tennent circulated the return showing the number of deaths among the British Expeditionary Forces from the 1st August, 1914.

16. You say there were no pneumonia deaths reported—it does not say there are no deaths?—There were no deaths reported. He gives the returns of typhoid at the front, and also of scarlet fever and measles and smallpox, so that one would expect that the returns for others would be reported at the same time. I obtained the statement from the *Evening Post* of the 15th April of this year. He gave the number of officially reported deaths from typhoid at 625. It is the return of the Under-Secretary, and was presented by him to the House of Commons. The return shows 196 cases of scarlet fever and four deaths, and 175 cases of measles and two deaths. That is for the whole of the Forces at the front; and he gives those in training in the United Kingdom in the camps. There were no pneumonias and no dysenteries, either cases or deaths reported from the front. The return set out the following cases and deaths in the training-camps in the United Kingdom: Typhoid, 262 cases, 47 deaths; scarlet fever, 1,379 cases, 22 deaths; diphtheria, 783 cases, 6 deaths; measles, 1,045 cases, 65 deaths; dysentery, 215 cases, 1 death; pneumonia, 1,508 cases, 351 deaths; cerebro-spinal meningitis, 62 cases, 26 deaths.

17. *Mr. Gray.*] Over what period?—From the 1st August to the 15th February—practically six months.

18. *The Chairman.*] I understand Dr. Martin says there are later returns showing those are imperfect?—I should quite expect that.

19. *Dr. Martin.*] Because you do not know the number of troops in training?—The only information I have as to the number of troops is that contained in a paper read at the Royal Colonial Institute by Mr. Spencer Wilkinson, a leading authority on the subject, who said that at the time there were at least three if not four millions in training in the United Kingdom.

20. *The Chairman.*] The three millions were not in training from August?—No.

21. It would be an increasing number?—Exactly.

22. *Dr. Martin.*] You say the report states that there were no pneumonia cases in the Expeditionary Forces up to the 17th February?—Yes.

23. Well, there was a large number of deaths from pneumonia in the British Army, and the point is that they have not been reported?—It is quite likely. What I was looking at was that they have got returns of other diseases, and one would expect to get all the returns up to that date. One would know, of course, that in the stress of war the returns would be very imperfect.

24. *The Chairman.*] At all events, we have it that since 1907 the improvements effected in consequence of the experience gained from those two camps you have named have caused a great diminution in the amount of sickness and death?—Yes.

25. *Mr. Skerrett.*] Is there anything you would like to add upon this topic?—Merely in this respect: there is a very interesting report on the Hampshire manœuvres. I do not know exactly how many thousand men there were, but I would assume from fifteen thousand to twenty thousand men in the manœuvres, which lasted six weeks, and the report says that there were practically no cases of preventable diseases whatever. The report reads, "The troops were practically free from preventable diseases. There were two outbreaks of diarrhœa and colic, due to food—in one case large quantities of unripe plums (stewed), and in the other an inferior oil in which fish had been fried. The outbreaks were in two different regiments and at different times; they were confined to those regiments. The onset was sudden and general; early colic was the predominant symptom, and no further cases occurred when the offending food was stopped —*i.e.*, on the next day. There was one case of diphtheria, which occurred at the commencement of the training. The disease was contracted at the main station. The bacillus was grown in my field laboratory. The man was sent to an infectious hospital, contacts were isolated, and no subsequent case occurred."

26. *The Chairman.*] What time of the year was that?—Summer. It took place between the 6th August and the 6th September, 1907.

27. *Mr. Skerrett.*] Do you know of anything at the commencement of the period of undertaking the military encampment why as satisfactory results could not have been produced in New Zealand as in England?—Only the want of a trained Medical Officer.

28. But there is no real reason why with proper organization the same satisfactory results could not be produced here?—New Zealand is a more healthy country and less populated.

29. Is there anything in the climate or in the conditions pertaining to the Trentham Camp before its establishment which would prevent a satisfactory system of hygiene being established?—Nothing to prevent it. It is a very good climate.

30. At the outset, in your opinion, ought there to have been any serious outbreak of preventable disease or any serious epidemic in the encampments at Trentham or elsewhere?—Due to local conditions?

31. Yes?—No.

32. *The Chairman.*] By "local" you mean arising from the conditions of the camp?—The general configuration and climatic conditions.

33. Not arising from the state of the camp?—No.

34. You mean the situation of the camp?—The situation of the camp. Of course, in considering those matters the Medical Officer has to consider and be guided by the military conditions. He has to work with a system. If the military conditions are such that it is very necessary to have the camp in any particular place, then the Medical Officer has to assist the military authorities to the best of his ability, and point out the advantages or disadvantages, if any, and take special precautions. There are many more suitable places than Trentham, but under proper conditions the training should have been conducted at Trentham perfectly well. It is an old river-bed, and, as we learn from Mr. Bates, the water-level is about 15 ft. down, so that it would keep it pretty cool. Wells draw water at 15 ft. Being an old river-bed, that is not always advisable. As to the constitution of the soil, there is about 18 in. of black, sandy, light, porous soil mixed with stones, and beneath that there is an impervious yellow clay of about 18 in., which is not always a healthy subsoil. Below that again there are large stones which go down I do not know how deep, but, at any rate, to the water-level.

35. Is that soil a suitable soil for a camp?—You have to regard that impervious yellow clay as a sort of danger, and have to be guarded against it.

36. *Mr. Skerrett.*] Assuming it was desirable to establish a camp at Trentham, were the conditions of the soil or local conditions calculated to prevent a hygienic camp being established there?—There is nothing to prevent it under proper conditions and regulations.

37. *The Chairman.*] Having regard to the layer of 18 in. of clay?—That would constitute a special source of danger.

38. *Mr. Skerrett.*] They would have to be mindful of that condition?—Yes.

39. Would you under normal conditions and the proper establishment and regulation of a camp have expected to find a number of preventable cases of disease occurring?—It should not occur.

40. I am referring to the Trentham site?—There is nothing in the site to cause preventable diseases.

41. Would you have expected under normal conditions and proper organization of the camp an epidemic?—No; there should not have been, under normal conditions.

42. Could you give the Commissioners an idea of what you would have expected the death-rate to be in a proper camp at Trentham with a population ranging from three thousand to seven thousand?—I should have expected it not to have exceeded the mortality rate of the whole civil population of New Zealand—in fact, less, because they are selected, picked, and specially examined young men.

43. Ought camp life under proper conditions to be unhealthy?—It is the most healthy life possible. Firth, in his book on "Military Hygiene" (page 4), one of the standard works, says, "Nowhere does obedience to the laws of hygiene bear greater reward than in camp, and, conversely, nowhere is their violation visited with greater disaster." It means that camp life under proper hygienic conditions is very healthy.

44. *The Chairman.*] I suppose you would include in hygienic conditions the necessity of the men taking care of themselves to some extent?—They should be taught to do that: that is an essential part. In Great Britain the Army Council order that every man and officer throughout the whole service and auxiliary units should be given lectures in the winter on this subject, in order that when they go into camp in the summer-time they would get special benefit from the special instruction.

45. They mean to add personal hygiene to the camp hygiene?—Exactly. They are taught how to take care of themselves in every way, and the officers in the service have to pass in sanitation before they can earn promotion.

46. *Mr. Skerrett.*] How many encampments do you understand have taken place at Trentham—the number of reinforcements?—There was a succession of five separate Forces. The second, third, fourth, and fifth have left, but there were four reinforcements in the one camp and on the same ground.

47. What was the range of population of the camp?—From what I have been told it ranged from two thousand to seven thousand.

48. When did the seven thousand commence?—I understand, in May or June.

49. Prior to that have you any idea of what the average population of the camp was?—About three thousand.

50. What precautions ought to be taken in laying out a permanent camp such as Trentham was: whom should it be deputed to, what advice should he receive, and what steps should he take?—The Medical Officer under the regulation is always required to report on the conditions of the camp, the soil, and water-supply.

51. *Dr. Martin.*] What Medical Officer?—The Principal Medical Officer. I mean by the "Principal Medical Officer" that the communication would be sent to the Director of Medical Services, who would either examine it himself or direct his Principal Medical Officer to do so and report to him. He would, of course, be guided by the military exigencies and constitution, and choose any particular site as much for their convenience as for their health, trusting to sanitary knowledge and hygiene to keep the troops healthy for military purposes.

52. *Mr. Skerrett.*] Do I understand that a special inspection of the ground should, in your opinion, be made by some responsible Medical Officer for the purpose of determining the condition of the camp?—Yes.

53. And that report put in writing?—It should be in writing certainly, because, as I have said, the Director of Medical Services would get a communication from the Adjutant-General, and he would either act on it personally or direct one of his officers to do so and report to him in writing.

54. Would the inspection by the Medical Officer include conditions such as water-supply, sanitation, and drainage generally?—Yes; and if he was at all doubtful he should include a bacteorological analysis of the soil.

55. Well, what is the next step in the establishment of a camp?—The camp is then laid out by the military authorities in accordance with the regulations, under the advice of the Medical Officer. I might explain that the Medical Officer is not a responsible officer—not an executive officer—he is only an advising officer.

56. *The Chairman.*] Who is the executive officer?—The military authorities.

57. His principal duty is to examine and report?—Yes. I will refer to the Field Service Regulations, Part II, page 92, which says, "(1.) The medical service of the Forces in the field has four distinct functions. It is concerned with the preservation of the health of the troops; with the professional treatment and care of sick and wounded; with the replenishing of medical and surgical equipment; and with the collection and evacuation of sick and wounded from the theatre of operations. All these functions are in a sense of equal importance, because no one of them can be fully carried on without the others. The first and last of these are the concern not only of the medical service, but of staff and regimental officers and men of all units. . . . (3.) The Director of Medical Services is the responsible adviser of the C.-in-C. on all medical and sanitary matters. His representatives are similarly the advisers of the Commanders to whose headquarters they are allotted."

58. You made an examination of Trentham Camp as early as January?—Yes.

59. There would then be about three thousand men in camp?—I should think that would be about it.

60. What comments have you to make upon the general plan of the encampment?—I quite expected to see a very fine camp on regulation conditions—extended, and everything in good working-order.

61. And what did you find?—It was close, cramped, and confined: that is the appearance it gave me. The tents were a great deal too close to one another—far too close; the tent-pegs generally, you may say, were overlapping one another in many cases.

62. Is the spacing between the tents of importance?—Most important.

63. Colonel Purdy said that the recent Manual regarded as negligible the spacing between the tents: what have you to say?—It is laid down distinctly. In the Royal Army Medical Corps Training Manual, issued by command of the Army Council, Chapter 12, page 71, it states, "In a properly arranged camp the intervals [between tents] should always be sufficient to render the shifting of a tent to a new site possible." That means forwards, sidewards, and so forth.

64. That would imply a tent-space between two?—A full space.

65. You would really require two-tents space so that each tent could get a shift?—Yes. [Diagram showing spacing of tents produced and explained.]

66. What is the authority for this?—Blake Knox on "Military Sanitation and Hygiene."

67. *Mr. Skerrett.*] Where did you get the measurements which you have adopted in the diagram as the spacing of the Trentham tents?—I measured them myself when I was out there by stepping across. I then asked my son what the regulations were, and he gave them to me. The streets were 13 ft. from canvas to canvas, tents 9 ft. In one diagram I have allowed for eight men to a tent, which is 648 men to the acre, and that is similar to Trentham Camp.

68. How many do you say there should be?—If it is a regimental camp, 330; and if a brigade camp of infantry, 262—"Military Hygiene" (Firth), page 268.

69. *Mr. Ferguson.*] Can you say there are that many tents to a quarter-acre?—You want to take the number of men to the acre. You must not have more than 330 men according to the regulation for an infantry battalion, a front of 65 yards and a depth of 150. If it is an infantry brigade it may be 262 men. The more the men the more you must scatter them, because of the greater danger in concentrating numbers together. (See Firth on "Military Hygiene," page 268.)

70. *Mr. Skerrett.*] Do I understand you to say you are clear that there are areas of a quarter of an acre which have the number of tents shown in diagram No. 2 [produced]?—That diagram No. 2 represents practically Trentham when I saw it.

71. You say that in January you are convinced there was a population of over six hundred to the acre in tents?—Yes; and that is at the rate of over 648 to the acre.

72. *Mr. Ferguson.*] That is to a single quarter-acre: there may be adjacent quarter-acres?—I see what you mean.

73. *Mr. Skerrett.*] Was there a number of quarter-acre sections which were surrounded by tents and not in any part enclosed by spaces?—I understand there were no enclosed spaces.

74. Is this photograph [produced, and marked "A"] a photograph of the camp of the Third Reinforcements?—Yes.

75. Is this photograph [produced, and marked "B"] a photograph of the Fourth and Fifth Reinforcements?—Yes. That was the condition of them in January. My son was camped with the Auckland Mounted Rifles. When he first went into camp they were camped on one side and sickness arose, and they had to vacate that site. The site to which he was removed had previously been occupied by latrines. The first row of hutments are on the site where my son was camped—that is, the site of the old latrines. The latrines are shown in photograph "A." I met the officer of the day and showed him that photograph, and asked him if they were previously latrines, and he said, "Yes, they had been, but they were only old tin things." That was when I went in May. In connection with the spacing of tents, I produce a photograph taken this year of the New Zealand camp in Egypt, and also a portion of the Australian camp in Egypt.

76. It is suggested that the photographs are misleading, inasmuch as the angle from which the photograph is taken may falsify apparently the spacing of the tents?—I do not think so. I produce a photograph such as one would expect from a properly pitched camp.

The Chairman: Can you tell us, Colonel Purdy, the space at the camp?

Colonel Purdy: I reckon the tent-space between 4 and 5 acres, and the hutments over 12 acres.

The Chairman: You had for your camp 16 or 17 acres at your disposal?

Colonel Purdy: No; the hutment camp was pitched in an entirely different place from the tent camp.

The Chairman: But you had 12 acres which was occupied by tents?

Colonel Purdy: Not occupied at all.

The Chairman: Then you had 16 or 17 acres available for tents?

Colonel Purdy: Much more than that. We had any amount of space—we have over 20 acres.

The Chairman: Was that for occupation purposes and training-ground?

Colonel Purdy: No; we could have at least quite that for occupation purposes if we had wanted to. The whole question has been gone into.

77. *Mr. Skerrett* (to witness).] Do you know of any local condition which required the tent-space and hutment-space in the Trentham Camp to be unduly cramped?—No, there was plenty of room.

78. There is ample room for a proper and efficient camp?—Yes, provided it fitted in with military requirements.

79. *The Chairman.*] A proper camp up to how many men?—There is any amount of room over all that area.

80. Having regard to the requirements for training purposes, what do you say there is ample room for—a proper camp of how many men?—There is ample room for a proper camp of four thousand men, provided the camp is broken up and not concentrated. The whole fault in that camp has been concentration. There must be three or four hundred acres available for the purpose.

81. Have you gone into the question of seven thousand men?—That could be done by breaking them up into small camps and keeping on moving them. I believe seven thousand men could be camped there with great care, and constantly shifting the site of the tents and the whole camp. It is the making of a soldier town that is the trouble. If one only thinks for one moment, seven thousand men represents the population of Petone. Fancy putting the whole of Petone suddenly, within two or three weeks, on to one little spot and concentrating them all together in a small compass of ground! They could not live there very long without getting ill. There is the process of growth with seven thousand men, and every preparation must be made in advance and by degrees.

82. *Mr. Skerrett.*] You see no reason why regular spacing of tents should not have been adopted at Trentham?—No, by having all small camps scattered all over the ground, leaving plenty of room.

83. Colonel Purdy has suggested that the modern practice in standing camps is not to shift the tents: what have you to say with reference to that?—I do not agree that it is correct.

84. *The Chairman.*] Did you see the statement in the Field Army Service Manual, quoted by Colonel Purdy, at page 72?—Yes. Instructions are given in all books recommended by the authorities that tents should be struck if possible every four days, weather permitting. It is a very, very old regulation. If you are in a standing camp you put it back, of course, on the same ground until the period has elapsed in which that camp is permitted to be permanent, and then you shift the whole camp, or shift each tent either every fortnight or three weeks on to the ground in front of it. [Witness explained by reference to diagram of tents.]

85. *Mr. Skerrett.*] Apparently the military authorities at Trentham have acted upon the principle that it was not necessary to remove the tents from their existing site during the whole period of the camp?—Yes, that is so. It is obvious.

86. Is it a right or wrong thing to do?—It is very wrong.

87. I want you to tell the Commission why it is wrong?—Because the ground on which the men had been sleeping is poisoned by the emanations from their breath and their skin.

88. *Mr. Gray.*] That is, floored tents?—There were no floored tents. They were sleeping on the bare ground when I saw them in January.

89. *Mr. Skerrett.*] When did they have the floors?—Quite recently.

90. In the Manual of Elementary Military Hygiene, 1912, page 66, it says, "Tent-flies are to be looped up the first thing every morning, in wet weather on the leeward side only, and bedding exposed to the sun and air whenever possible, as these are the most useful disinfectants. In a standing camp tents will be struck periodically, and the ground underneath well swept and left exposed for some hours at least, the tents being eventually replaced on their former sites. Tents should never be pitched for occupation in the intervals. Tent-doors should generally face away from the prevailing wind; in mounted units they should face the horse-lines"?—That has been the regular constant practice for years and years. It says the tents should never be pitched for occupation in the interval. The tent-door should face away from the prevailing wind. That book is simply an elementary reference to what is laid down in the advanced manual. The language is almost identical.

91. *The Chairman.*] There is nothing there about shifting the site of the tents or shifting the occupied area?—But that is an elementary book.

92. Evidently that does not go far enough for you?—No.

93. *Mr. Skerrett.*] Do you regard it as of importance that the tents of the camp should have been shifted from time to time?—Yes, most important.

94. In your opinion has the neglect of that precaution conduced to the sickness in the camp?—It has, in my opinion.

95. You see there is a very serious difference between Colonel Purdy and the military authorities and yourself upon this point. Colonel Purdy asserts that the recent practice is to leave the tents in standing camps on the same site, merely striking them from time to time. You assert that the recognized and proper hygienic practice is either to shift the individual tents from time to time or to shift the camp: is that so or not?—Yes.

96. It is confidently asserted that you are wrong, and that you are advocating a practice that is out of date—that it is the practice not to shift tents?—It is quite contrary to common-sense and military practice. You might as well ask a man to sleep in the same dirty sheets year in and year out.

97. What is the authority for the military practice?—Surgeon-Major Duncan, on "The Prevention of Disease in Tropical and Sub-tropical Campaigns." It is the work that gained the Parkes' Prize in 1886, and it says (Chapter vii, pages 58 and 60), "Tents, to begin with, are but little pervious to air, and when wet nearly impervious. The organic matter given off from the lungs, as is well known, does not tend to diffuse itself, as do the gases given off from the lungs; hence the mere opening of the doors of the tent does not act so beneficially as regards the organic matter as it does with respect to the carbonic acid. The organic matter tends to attach itself to the walls of the tents and to their contents. . . . Under every precaution organic matters are thrown out in camp, and by intercourse pressed into the soil, and thus gradually the earth becomes infected. And in hot countries, under the heat and rainfall, the process becomes much more acute, especially where the soil itself does not possess any disinfecting-power. Sandy soils, for instance, act prejudicially both by not disinfecting these organic matters and by their drying-power, so that when clouds of sand are raised by the wind these clouds contain in suspension organic matters. It is thus easily seen how both the alimentary and respiratory passages can admit poisonous materials into the system." That is a very sandy soil at Trentham, and in hot weather it conveys the germs from the tents.

98. We were told by Colonel Purdy that the tents were struck at least once in seven or once in ten days. In your opinion was that practice sufficient?—It is not enough if the weather is fine: it should be done at least once every four days. My information is that they were not struck anything like that—more like once a month. I asked the officer of the day specifically about it. I said, "How often have you seen the tents struck?" and he replied, "I think I have seen them struck twice since I have been here." I said, "How long have you been in camp?" and he said, "Two months." I do not know the officer's name, but that was in May: that was when the sample hutments were open for inspection.

99. Is there anything in the history of the use of Trentham which ought to have required the adoption of the recognized principles for changing tents and striking tents? What had the

ground been used for previously?—I said previously that the ground should have been examined bacteriologically, because I understand camps had been pitched on the same ground for years previously. It is only within the last twelve months that the practice of urinating round tents has been forbidden, and that ground has been polluted for many years previously.

100. *The Chairman.*] Would not the atmospheric conditions have disinfected it by this time?—Not necessarily. Some germs are very resistant—typhoid germs are especially.

101. *Mr. Salmond.*] Do you know that this manual I have says that a month or two will absolutely make a camp void of such bacilli—that danger of that sort can be removed in a month or two?—Yes, that is in the case of small camps.

102. The manual says that sites recently occupied by other troops are to be avoided, as possibly the water and soil are polluted, but a month or two will remove all danger of infection from this source?—Yes, that is an expression of opinion of the author of that work.

103. Do you agree with him?—No.

104. *The Chairman.*] Does it not stand to reason? Here camps have been on the same site year after year and we have not heard of anything wrong. What has purged the ground this time?—That is where I should have protected myself by having a bacteriological examination.

105. You are not speaking of personal experience in the matter?—No, I am quoting authorities.

106. Where is your authority in a book counter to what has been just read?—It is one of the first laws laid down in that manual.

Colonel Purdy: May I point out that the ground was never previously occupied by a camp: that can be proved.

The Chairman: Can you say on your oath that this site of the present camp was not occupied by previous camps?

Colonel Purdy: Yes; the largest number of the Rifle Association ever there was 500.

The Chairman: Where did they sleep in camp?

Colonel Purdy: Practically where the Y.M.C.A. is.

107. *The Chairman* (to witness).] What is your book authority against the authority read by the Solicitor-General that two or three months ought to be sufficient?—The first is the old-established practice laid down by Lord Wolseley in his book published in 1886, page 244, called "The Soldier's Pocket-book." It is the result of experience that soldiers and commanders always avoid old camps. He says, "There are rules which must not under any circumstances be neglected if the camp is to be permanent, and, indeed, the extent to which they can be disregarded at any time is to be measured by the exigencies of the moment. If obliged to encamp in a position where you expect to accept battle in a week or a month pitch on ground in advance of the position."

108. *Mr. Salmond.*] Although the camp was used by a few riflemen last year you say that is a reason why it should not be occupied again?—The resistant powers of typhoid and other bacilli are unknown, and some are very resistant.

109. *The Chairman.*] Why not plague?—Because it requires the specific plague-germ. If you sow plague you will reap plague: if you sow measles you will reap measles.

110. *Mr. Salmond.*] You made a very serious statement at the beginning of your evidence when you said that part of the troops were located in tents on the site of the old latrines?—That is evidenced by the photographs.

111. That is a very serious statement?—Yes.

112. Is your only evidence for that the evidence of the photograph?—That is the only evidence I can produce.

113. And you make that statement here on the strength of those photographs?—Yes.

114. Did you make any inquiries?—Yes, I did.

115. From whom?—From the officers there.

116. You said you merely gathered this from the photograph, supplemented by asking an officer what the buildings represented. Did you make any inquiries to verify your statement that part of the troops were camped on the site of the old latrines?—That was common knowledge with the men there.

117. Were you told by the soldiers at Trentham that they were living in tents on the site of the old latrines?—My son pointed out to me where the latrines had been. He was in the second row.

118. Did he tell you he was living in a tent on the site of the old latrines?—No, he was fortunate.

119. Did he tell you some one else was?—Yes.

120. You say your son told you that part of the Trentham troops were living in tents on ground occupied by the old latrines?—Yes.

121. Did he say that they were living on the site of old latrines?—He did not say so—he implied it.

122. Is your son in camp now?—No, he is in the Dardanelles.

123. *The Chairman.*] As far as I can make out these tents would not be pitched on the site of the old latrines [photographs referred to]?—According to the regulation there should have been permanent marks to indicate the site of an abandoned latrine.

124. Whose duty would that be?—The Commandant is responsible for all those things. It is laid down in the regulations that he has to avoid the possibility of ever pitching a tent over a latrine of any kind.

125. *Mr. Salmond.*] When you made that observation of a tent being on the site of an old latrine, did you mean those latrines used in previous years or latrines used during the war?—Latrines used during the war.

126. *The Chairman.*] There are two tents and four separate structures?—Yes.

127. You do not know what they are made of?—No; they look like iron.

128. *Mr. Skerrett.*] Colonel Purdy has informed us that the area occupied by tents amounted to about 4 acres?—Yes.

129. Was that area sufficient, in your opinion, for the accommodation of about three thousand men?—No; 4 acres is insufficient for a permanent camp.

130. You have considered the question of these huts or hutments?—Yes.

131. Do you know the date approximately when the first hutment was constructed?—In May, I think.

132. What have you to say with respect to those hutments?—I consider those hutments are quite wrong and faulty. I saw the sample hutment about the beginning of May.

133. What is the definition of a "hut"?—A hut is a building to contain usually not more than twelve men.

134. And a "hutment"?—Is to contain usually no more than twenty-four men.

135. What have you to say with reference to those hutments?—The hutment scheme as originally proposed I condemned at once, absolutely.

136. *The Chairman.*] Did you see it proposed in the newspaper?—Proposed in a statement by the Minister of Defence, reported in the newspapers.

137. Did you condemn it publicly?—I wrote to the Minister of Defence and to the Premier on the subject. The Minister of Defence has on many previous occasions consulted me on matters of sanitation and military matters. I wrote to him, "The hutment scheme as outlined in the Press for Trentham is simply absurd—quite impracticable and impossible from a health point of view."

138. What was the date of the letter?—That was a letter written to the Hon. the Minister on the 19th March. He was in doubt, and wanted information evidently about hutments. I wrote as follows: "The only difference between a camp of tents and one of hutments is that of the superstructure: the one, being meant to be movable, is light and is of canvas; the other, being intended to be more permanent, is heavy and rigid. A camp of tents is easily moved, but a camp of hutments cannot be. Hence arises the necessity for the very greatest care in selecting the site, planning the arrangements of the various buildings and every detail of the buildings themselves, all of which must be on tried and approved principles. Neglect of this led to much sickness in the American War. Seasoned troops, healthy in tents and bivouacs, were decimated by pneumonia on going into winter quarters of huts. I noticed also that sickness increased among the Canadian Forces at Home recently as soon as they went into hutments (or temporary shelters). In this day's paper (*Dominion*, 19th March) I notice that these temporary shelters are being replaced by buildings of brick, with cement floors. A camp of hutments also occupies a large space of ground. A plan which I have worked out for 4,500 men has a front of 700 yards, and covers 68 acres: but, then, it is at full intervals, with a wide main street, 3 chains; is entirely self-contained, with provision for everything—for headquarters staff, hospital, lecture-hall, large central parade-ground for ceremonial and other parades, Church service, &c., and a good system of drainage leading away from the camp in every direction. Each battalion or half-battalion unit is also self-contained in every detail, with its own kitchens, stores, baths, ablution-benches, clothes-drying and other sanitary arrangements. I am trying to see if I can compress this with safety into an area of 30 or 40 acres; but working single-handed, with the interruptions incidental to a general practice, it takes up much time early and late, but I hope to complete the plans shortly. In conclusion, I can only repeat that my services, assistance, plans, &c., are at your disposal at any time you may do me the honour to ask for them." I had all those plans prepared, but they turned them down, and I never forwarded them on.

139. Have you a plan of a hutment there?—Yes [produced]. Each of those hutments is to hold twenty-four men, and the interval between each building must be not less that the distance of twice the height from the ground to the eaves. [Diagram showing hutment with ridge ventilation, to hold twenty-four men produced.] The regulation intervals between beds and men sleeping is to be not less than 2 ft. In these hutments at Trentham the intervals between the men lying there are about 8 in. or 9 in.—they are too close together. Fifty men would be sleeping within 8 in. of one another. That is laid down in Firth's "Military Hygiene," 1909, at page 115. It is considered very wrong for the men to sleep on the floor, the reason being that the blankets get contaminated with the mud and dust from the boots and other germs on the floor.

140. But they sleep on straw?—The blankets get overlapping the straw.

141. Now, in regard to the ventilation?—Ventilation is a very important matter. The object of ventilation is to remove the air from a room without draught, and it is arrived at scientifically by knowing the amount of carbonic acid in the breath and the standard of purity of the air which is maintained by removing all the air in a room—removing it not more than three times in an hour. That can be done without causing a draught. Firth's "Military Hygiene," at pages 110 and 111, says, "Taking average adults moving about in a room, it is known that ten such persons will produce 6 cubic feet of carbonic acid in the hour over and above that normally present in the air; therefore, if we want to keep the air in that room of such a quality that it will not smell close and stuffy to any one coming in from the outside—that is, be decently ventilated—those ten persons must have 10,000 cubic feet of fresh air hourly, or 1,000 cubic feet each. If each person were in a space of 300 cubic feet this would involve the changing of the air of that space rather more than three times in the hour. Unless the incoming air were warm, this rapidity of change would probably cause a draught and corresponding discomfort. If the space be 600 cubic feet, the air need be changed less than

twice in the hour, which, even if the incoming air be cold, is not inconsistent with comfort, provided it be discharged or brought into the room-space well above the heads of the occupants. This space of 600 cubic feet is precisely what the soldier gets in his barrack-room, and if the air be changed one-and-two-third times hourly a reasonable degree of ventilation is secured." The whole paragraph was not quoted by Dr. Frengley, who referred to the air-inlets at the rate of 1 square inch to 60 ft. Colonel Firth provides a good deal more than that. He says, "The ordinary appliances in barracks for the inlet of fresh air and the discharge of foul air are doors, windows, fireplaces, and louvred ventilators communicating by means of perforated bricks with the outside through the external walls. It is incumbent upon all concerned to see that these are used intelligently and effectually. The fire, when burning, is mainly an outlet for foul air, but most barrack-rooms have what is called a ventilating-grate, by which air is not only extracted by the chimney, but air coming in from outside and passing round the back of the grate is first warmed and then discharged into the room by a grating above the fireplace."

142. There is no fireplace in the hutments out at Trentham?—No; they could be improvised with an Aurora stove and a little piping.

143. And help the ventilation too?—Yes, immensely.

144. *Mr. Skerrett.*] How do you apply your observations as a criticism of these hutments?—They are overventilated.

145. You are of opinion that these hutments are draughty hutments?—Yes.

146. Interfering with the comfort of the men without the commensurate advantage?—Yes. I think Dr. Frengley deserves very great credit for the success of his buildings for the treatment of consumptive cases, but I would submit that there is a great deal of difference in the building of a hospital for the treatment of people suffering from an otherwise incurable disease. When we are ill we do not mind taking nasty medicine: we might not mind excessive doses of fresh air; but there is no occasion for us to be constantly living in an atmosphere of that kind. We can live perfectly well without that, and there is no occasion to provide that excessive amount of air in a hutment. It does not add to the men's comfort. What they require is what they will live comfortably and healthy in and prevent their getting ill.

147. Have you worked out the allowance of floor-space and air-space in those hutments?—The air-space and floor-space is laid down for hutments—50 square feet of floor-space and 500 cubic feet of air-space for hutments. The reason of there being a little less than in barracks is because of the smaller number of men under one roof. In a barracks you have a hundred men, whereas in a hutment you have twenty-four, and in a hut twelve. If scattered about they are more easily ventilated, and they can do with less air-space and less floor-space.

148. What does the actual floor-space in the Trentham hutments work out at?—At about 300 cubic feet of air-space and about 30 ft. of floor-space—just about half of what there ought to be.

149. What have you to say with regard to the lodging of a hundred men in a hutment divided, as you know, by a division?—I think it is quite wrong.

150. Why?—Because all modern barracks provide for breaking the men up into small sections of twelve to twenty-four men in each room or ward. That is for the purposes of discipline and management. It is much easier to isolate a dozen men than to isolate a hundred in case of a very serious illness breaking out, and if there are a hundred men in a hutment like that it is only reasonable to suppose that if overcrowded any disease would spread rapidly through them.

151. *The Chairman.*] Does not the central division practically make it two huts?—No, sir. I understand it is open at the top.

152. The angle gable is open?—Yes.

153. *Dr. Frengley.*] That is in the sample hut, but we decided to close that up?—It would mean putting two huts together without the interval.

154. *The Chairman.*] You have placed the hutments in line and not in echelon?—Those are conveniently shown for a barrack for military reasons. If I were putting hutments up in a place like that I should certainly put them in echelon. The way they are put at Trentham is absolutely wrong. The block system where applied to hospitals or anything else is a bad system.

155. What is the reason of the block system being bad?—It is bad in so many ways: it interferes with the circulation of air between the buildings. The aspect of the hutments at Trentham is also wrong. They are facing east and west, when they should be facing north and south to get the sun down between the intervals more, and to get the sun into the windows. The northerly hutments keep the sun out of the next one, or a great portion of it, and being on the block system they are too close together. The northerly wind on one would blow the contents across into the next one, so that you would not get that amount of fresh air that you otherwise would get if they were in echelon.

SATURDAY, 24TH JULY, 1915.

DAVID ROBERTSON sworn and examined. (No. 26.)

1. *Mr. Skerrett.*] Where do you reside, Mr. Robertson?—Lower Hutt.

2. And what are you?—A school-teacher.

3. At what school?—Petone West.

4. In March last were you concerned with others in raising a subscription for the benefit of the medical side of the Trentham Camp?—Yes, sir.

5. Just tell us what you did?—We raised about £10 by means of a social.

6. For what purpose?—For the purpose of presenting a bed to the Trentham base hospital.

7. You were secretary of the committee?—Yes.

8. What did you do to carry out that end?—Wishing to get a bed as near to military purposes as possible I wrote to the Commandant of the camp, and asked him to give me full particulars of a military bed, if such a thing was in existence. He replied through his secretary stating that as everything in connection with the hospital was being given as gifts to them they preferred to have nothing to say about it.

9. Who wrote this?—It was signed by a lieutenant, and he advised me at the same time to get into touch with Mrs. Luke, the Mayoress of Wellington, who had these matters in hand.

10. Did you communicate with Mrs. Luke?—Yes, and I have her reply here. [Letter put in and perused by Commissioners.]

11. *The Chairman.*] The purport of this letter is that it was suggested that it would be best to hand over the money to the Mayoress so that everything should be of the same character and quality?—Yes.

12. Or else you could devote the money to any other part of the equipment, seeing that they had bought the full supply of beds?—Yes.

13. What did you do in reply to that letter?—We wished to see our Petone bed established at the Trentham Camp, and for that purpose my committee with myself visited Trentham on the following Sunday.

14. You visited camp on the 7th March?—Yes.

15. *Mr. Skerrett.*] Whom did you see at the camp?—First of all I saw a sergeant, and told him for what we had come, and he immediately brought Major Fyffe (Dr. Fyffe) and introduced us to him. I notified the doctor of what our mission was, and told him that we intended to give a bed. "But," I said, "You have not got a hospital"; and he said, "Come and have a look"; and he was most condemnatory of the action of the authorities as regards the hospital at Trentham.

16. *The Chairman.*] What did he show you?—He took us into an open marquee in which there were four beds.

17. *Mr. Skerrett.*] Was there room for more?—No; in fact, there was only room for three.

18. Were they occupied—the four beds?—I remember that at least two were occupied; and he was most condemnatory of the action of the authorities for not having better equipment.

19. *The Chairman.*] Could you tell us what he said and then we can judge?—No, sir; I think those words convey his expression. He said, "I know not where to get supplies, and I know nothing about it. I have sent to Wellington, but cannot get any satisfaction."

20. Supplies of what?—Material for his beds. He did not have a change of sheeting. He had to wait until one man got out of bed.

21. *Mr. Skerrett.*] Did he make any reference to the mattresses?—I saw the mattresses. He drew our attention to them, and the poor quality of them. There was no stuffing. The men appeared really to be lying on wire screens with just a slight covering.

22. The mattresses were unfit for the purpose?—Quite unfit.

23. The sheets—did you see them?—Yes, I saw them. He asked the sergeant to bring specimens of the sheeting. One was simply a bolster which had been cut in two. The other was a mass of patchwork.

24. What was the width of the bolster-sheet?—Roughly speaking, from 18 in. to 2 ft.

25. In width?—Yes.

26. Had the marquee a floor?—No.

27. Just a grass floor?—A dust floor.

28. Was there a substantial amount of dust in the marquee?—Yes, everywhere. The only place where there was not dust was in the dentistry department; there was a wooden floor there.

29. Was there a dispensary attached?—Yes, there was a dispensary, which was covered with dust. Everything in the dispensary ward was covered with dust.

30. Was there any floor to the dispensary?—No, the floor was just dust.

31. Were there a few packing-cases in the ward?—There were a few, on which articles were placed.

32. Did you see any provision made for the performance of operations there—in the marquee?—No, sir.

33. What was the size of the marquee?—I can only describe it by saying that it was just about big enough to hold three beds.

34. Was the dispensary a separate tent?—Yes.

35. A bell tent?—No; an ordinary marquee or canteen tent, they call it.

36. What did you do in consequence of your interview with Major Fyffe?—I suggested that if he would take the responsibility we would hand him direct our £10 for the purpose of buying what he thought was necessary to help to properly equip his hospital, and at the same time I told him that I would write to the papers to create a stir over the existing things at Trentham Hospital.

37. What did Major Fyffe do?—He said, "I shall be only too pleased to accept the £10."

38. He accepted the £10, and I understand he forwarded to you afterwards a list of the materials upon which he expended the money?—Yes. [List put in.] They are nearly all kitchen utensils. There were no kitchen utensils at all at the hospital. It was the custom for the men when taken to the hospital to bring their own utensils.

39. Are you satisfied that at this time this marquee was the only hospital accommodation available in the camp?—Yes, sir, with two other bell tents in use.

40. Being used for patients?—Yes.

41. You say that you wrote a letter to the *Evening Post*, which was published on the 9th March?—Yes.

42. And that they sent a representative to inspect the hospital arrangements, and that representative made a report which was published at the foot of your letter?—Yes.

43. This [produced] is the report which you have been good enough to bring for the information of the Commission?—Yes. [Newspaper letter and report put in.]

44. Subsequently your committee raised further funds?—Yes, to the amount of about £13.

45. And you sent it to the camp to Major Fyffe?—No, to Major McGuire.

46. Who is he?—So far as I know he was Major Fyffe's successor.

47. *The Chairman.*] He was Superintendent of the Auckland Hospital?—I do not know that. After Major Fyffe went away he took our donations. We handed him the money exactly as we had done to Major Fyffe when he was in charge of the hospital.

48. He expended the money on an operating-couch, a chest of drawers, and a lamp?—Yes. The chest of drawers was for keeping surgical instruments in and bandages. The drawers were labelled for that purpose.

49. *Mr. Salmond.*] It was in March that you visited the camp?—The 7th March.

50. I suppose at that time there was no serious disease at Trentham Camp?—Not as far as I know.

51. You know, I suppose, that at that time any serious cases were taken to the Wellington Hospital?—I can only say, from my own experience and that of my committee, the Wellington Hospital ambulance was passing through Petone at least once a day; and that was our purpose in offering these donations, so that the hospital at the camp might be equipped in order to treat the cases out there if necessary.

52. You know that as a matter of fact at that time all the serious cases were taken to the Wellington Hospital?—I do not know it, except what I have seen in the newspapers.

53. Do you suggest that any serious cases were kept in this marquee you have described?—I cannot suggest that. I might say that Major Fyffe told us that many of the cases could have been treated out there.

54. I only wish to understand your complaint?—I am not a complainant in that sense; but having written to the papers and seen the Trentham Camp Hospital, I thought it was my duty to come and justify those statements when the Commission sat.

55. There is no suggestion that you have been wrong is so doing: I only want to ascertain what are the precise nature of your suggestions?—For the purpose of alleviating such suffering as there was to the best of our power.

56. You think there ought to have been some well-equipped hospital at Trentham?—Most certainly.

57. And that the marquees you saw were not up to the mark?—No, they were not up to the mark. They had to be shifted, and when it rained the beds had to be turned round.

58. Do you suggest that any hardships were occasioned to the men by the action of the authorities in regard to these marquees?—It could hardly be called hardships, but according to the doctor's statement the conditions could have been improved.

59. You do not think that the arrangements were sufficient for the treatment of the men who were not brought into Wellington Hospital as serious cases?——

The Chairman: I do not think this witness can give us that information; that is for the medical men to say. He is only speaking of what he saw, and from what Dr. Fyffe told him.

Mr. Gray: I ask that Dr. Purdy, who has a complete answer to what has been said by this witness, should be allowed to make an explanation. I think this should be taken at once.

The Chairman: We shall never get through if we proceed in that manner. If we note your statement that Dr. Purdy informs you that he has a complete answer to what has been said, that will be sufficient for the present.

Mr. Gray: Very well, sir, I am content.

Dr. De Latour further examined. (No. 27.)

The Chairman: We have received from the Public Works Department some particulars about the area of the camp. The area of the original camp was 5 acres, area of hutment camp 31 acres. A telegram has come in this morning from Mr. Seddon, the clerk of works at Trentham, to this effect: Area covered by present hutments about 23 acres. I suppose that means the area actually covered, but the 31 acres would be the area covered when all the hutments are erected.

Mr. Salmond: I understand the plan will be ready on Monday or Tuesday.

1. *Mr. Skerrett.*] Have you further investigated the question of the situation of the latrines, the site of which you said was afterwards occupied by hutments or tents?—Yes; this is a diagrammatic plan illustrating the photographs. [Plan put in and explained by witness to Commissioners.]

2. Have you anything to say about the provision of latrine accommodation generally at the camp?—The latrine arrangements are good if there are a sufficient number of pails. I do not know how many there are, but there ought to be 8 per cent.

3. Are you now referring to the night conveniences or to the permanent conveniences?—The permanent conveniences. In the trenches there should be 8 per cent. [Plan of trench latrines put in.] The trench should be about 1 ft. wide and about 8 in. or 9 in. deep. The sods should be taken off carefully and packed aside, and then the earth is scooped out. Each man covers his own excrement before he leaves the trench. They should have a non-commissioned officer in charge as military police to see that every man covered his own excrement before he left. This trench would only last about twenty-four hours. There should be 8 per cent. of the trenches; each trench 1 yard long. This drawing only shows four of them.

4. *The Chairman.*] Eight for every hundred men?—Yes. This trench would last twenty-four hours. The sods are then carefully replaced, and another one dug, and so it goes on day after day.

5. You would want a large area of ground for that purpose for a camp of, say, seven thousand men?—They would not have them in a camp like that: this is for a temporary camp; and I say this camp should have been broken up into smaller camps. You were asking me about my objection to these latrines. Everything was very good in regard to them, except those oil-cans did not come quite close enough up to the seat. There was too much room for the urine to splash over. The concrete for the floors was excellently suited for the purpose, and could be kept clean. My objection to the system was on account of the absence of latrine-paper, and the absence of earth and scoops for the men to cover their excrement over each time of using.

6. *Mr. Skerrett.*] Is latrine-paper recommended by the regulations?—Yes; all the authorities recommend that strongly, because if it is not provided the men put in half-sheets of newspaper and choke it up. There were tins of chloride of lime in the latrines which the military police used to cover the excrement with, but during the intervals the flies could get at the excrement and then spread themselves over the camp.

7. Is that all you desire to say about the latrines?—Yes.

8. Now I am going back a little. A period arrived when it was clear that the population of the camp would be increased to seven thousand men?—Yes.

9. Do you think that some special effort should have been made, and, if so, what effort, or in what direction, to extend the camp or make provision for the accommodation of these extra men?—Certainly provision should have been made. The huts were being built, but, as I have said, they were not large enough for the number of men put into them.

10. In your opinion, should not a systematic plan have been effected for the accommodation of this extra number of men—apart from latrines altogether—I mean in regard to their accommodation generally. What I am suggesting is this: a camp may be well-enough situated and established for three thousand or four thousand men, but further systematic arrangements might require to be carried out for seven thousand men. In your opinion, when it was known that the population of the camp would be increased to seven thousand men, should a systematized effort have been made to rearrange the camp?—Exactly; certainly.

11. Can you give the Commission any assistance on that point?—The whole camp should have been broken up, and all that tent-site obliterated, and not used again for camp purposes. It had been there too long, and with the seven thousand men coming in the extra number of tents should have been procured and the whole camp spread out or divided up into a number of smaller camps at wide intervals—scattered. The authorities should have gone into the question as to the area of the whole of the ground available for separate camps. Each separate camp should have had its own parade-ground. Taking, say, 200 acres of ground available in the neighbourhood, the different sections should have been spread out, the artillery in one place, and the others each half a mile away in another direction. Then after a month or six weeks these camps could be moved to fresh ground, so that the pollution of the ground would be only small in comparison, and in that way the action of the sun and the air would in a few weeks destroy the pollution which had existed. By this means you could keep the whole big area clean.

12. Apparently nothing of that kind was attempted?—No; the ground has been occupied for so many months that it is supersaturated with the organic matters incidental to camp life.

13. Do they think that the ground available for camping at Trentham is so limited as to preclude the adoption of this means?—No, I do not think so. I do not know what the area of the ground is, but I think sufficient is available for such a purpose as I have described. In fact, there is plenty of ground in that neighbourhood, within a mile or two, for that purpose, leaving the headquarters in the present situation.

14. Does the separation of the camps in the manner you have described or suggested involve any considerable cost in connection with the cooking-places and so on?—It should not. I think that the cooking arrangements, for the purposes of training the Forces, have been altogether in the wrong direction. I mean they have not had opportunities of working their kitchens on the same plan as they will have to adopt at the front. It has been altogether too much like a township, and they have not had the same facilities for training for camp life at the front as they would have had if they had been treated on this other plan.

15. There should be camp kitchens?—Yes; and each should be self-contained, to learn exactly as they will require to do on the Gallipoli Peninsula. They will not find concreted latrines and that sort of thing at the front.

16. You have heard from the last witness the extent of the hospital accommodation in the month of March, 1915?—Yes.

17. Have you any observations to make upon the necessity for the provision of medical accommodation in such a camp?—Yes; that is one of the faults of our New Zealand system—reliance on civil hospitals. I have always protested against that.

18. In your opinion, ought provision for hospital accommodation to have been made at Trentham: if so, when, and to what extent?—It should have been provided from the very start, in proper proportions to the number of men there, and no reliance, except for very special cases, placed upon the civil hospitals. The cases should have been dealt with locally, for the purpose not only of treating the patients themselves—having handy treatment for emergencies of all kinds (accidents frequently happen in camp and should be directly attended to)—but also for the instruction of the Medical Officers who had never been in a camp before. These officers would then know how to accommodate themselves, and it would have been good also for the hospital orderlies and nurses. This would have been a good thing, and it would have been of great benefit to the soldiers themselves, and it could have been worked as it is done all over the world.

19. *The Chairman.*] You mean to say that in camps in England this provision is made?—They have them.

20. Can you say whether they have them in Australia?—I do not know; I do not think so.

21. *Mr. Skerrett.*] Could you give the Commission any guide to the proportion of hospital accommodation for the population in camp?—No, I am not prepared to do that. But something of this kind has been done in South Africa. I have here photographs of a field hospital approved by Sir Frederick Treves. [Photographs put in.] It shows the tents for the hospital, and the nurses, and so forth. There is no occasion for expensive permanent hospital buildings.

22. That, of course, would be for dry summer weather?—All the year round. It is a matter of experience that soldiers recover quicker in bell tents than in buildings such as schools, churches, and so on, which are found not suitable. They recover much quicker in the tents—practically in the open air—in circumstances to which they have been accustomed. They get more fresh air, which is, of course, much purer, and under a properly arranged system which is familiar to all trained Medical Officers.

23. We know the extent of the accommodation in March, after the camp had been in existence for six months. Now I want to refer you to some figures given us by Dr. Purdy. In November there were twelve cases sent to the Wellington Hospital?——

Colonel Purdy: That was only for measles.

The Chairman: We can give you the totals from the return we have.

24. *Mr. Skerrett.*] From November to February the number of cases per month sent to Wellington Hospital ranged from twenty to thirty?—Cases of measles?

25. No; of all kinds of diseases which were developed at Trentham Camp, including measles?—Yes.

26. In your opinion, do those figures justify the provision of a reasonable hospital at the camp?—Yes, sir.

27. Have you any observations to make upon that?—I may say that given proper conditions at a camp there should be very little sickness, but you can expect a good number of accidents: that has been my experience.

28. What I want to point out is that as early as November there were as many as twenty cases sent to Wellington Hospital, and as many or more in the succeeding months: ought that not to have placed the authorities on the *qui vive* as to the necessity for proper hospital accommodation in camp?—Exactly.

29. That is practically 2 per cent.: twenty cases in one month with a camp of about two thousand men?—Yes.

30. Supposing it were found that practically from the early stages of the camp measles were developed to the extent of twelve cases a month in a camp of three thousand or four thousand, would you think that that would influence the responsible military authorities in providing hospital accommodation at the camp?—Yes.

31. In March, apparently, there were eighty cases?—There was an increase because the camp conditions were such as to facilitate a gradual increase of infectious diseases, resulting in the outbreak of an epidemic.

32. Ought the figures of November to March of cases sent to the military hospital have attracted specific significance at the hands of the military authorities?—Certainly.

33. Apparently at some period or other a segregation camp was established, and we know that it was futile to continue it apparently in May. Have you anything to say about that segregation camp?—I should like to know exactly what arrangements were made to keep it properly isolated.

34. *The Chairman.*] What they said was that if a man was found with measles the whole of the men in that tent were put into the segregation camp. Asked as to whether the men were allowed out of range of that segregated spot we were informed No, that it would have been a breach of discipline to have gone out. Asked if they did not visit their comrades at night in the tents it was said it was supposed several had gone out for walks on the hills—that they had left the camp?—What I meant was, their isolation from the other members of the camp in the way of getting food-supplies and letters and communications.

35. *Mr. Skerrett.*] Have you any information as to whether members of the isolated camp went to the cookhouse within the precincts of the camp for the purpose of obtaining food for their tent?—No; my information was the other way—that the food for the isolated and for the sick men was served out as usual to the tent-mates.

36. Where?—In the general camp; and that after they had finished their meal they took his share away to the isolation camp.

37. According to Colonel Purdy the tent-mates and the contact would also be in the isolation camp. Do you mean they came from the isolation camp to get their cooked meals and return with the meals to the isolation camp?—The contacts, of course, would be there.

38. *The Chairman.*] According to the Commandant's evidence, I think the contacts went with the patient into the camp—the number of that tent?—Then, of course, they would be all supplied from there. The question is, who supplied them with the food, and who took the food to them?

39. *Mr. Ferguson.*] You have no personal knowledge?—No.

40. And did anybody tell you as to what was done?—My son told me that for the other hospital tent—not the isolation hospital tent—the food was served out to the men. For instance, several of his tent-mates were from time to time in the camp hospital, and the food was sent out to them, and they had to take it back a distance of perhaps nearly 200 or 300 yards.

41. That was to the ordinary hospital?—Yes.

42. *Mr. Skerrett.*] Do you suggest that the Commission should inquire as to whether the men in the main camp were permitted to carry food from their own camp into the isolation

camp?—Yes. I have no information about that; but the point suggested itself to me to find out whether they got their own food, and how they arranged for their letters and other information. That is one question that is essential in a hospital, because by the time a sick man got his food it was all cold and solid with grease.

43. It is suggested that the segregation camp was broken up chiefly because of the admission of fresh reinforcements into the camp, which reinforcements, it is suggested, produced fresh subjects who were infected. What have you to say with reference to that?—It is quite possible. Of course, very likely, with large bodies of fresh men coming from all parts of New Zealand, individuals amongst them would be quite likely to bring germs of disease with them. All of us carry germs with us whether we are well or ill; but what is more likely to account for the sickness on the arrival of fresh reinforcements is that they come with fresh blood to go into contaminated tents, and they did not have the same resisting-powers. Those men who remained in the camp and were escaping illness were the survival of the fittest—they had got acclimatized or seasoned; but fresh men coming in from houses of pure atmosphere and going into those contaminated tents would be likely to get ill very quickly.

44. *The Chairman.*] And if they went into the tents that had been infected?—As soon as the reinforcements left a certain number of tents the next reinforcements succeeding them went straight into the same tents and on the same ground.

45. *Mr. Ferguson.*] Have you knowledge of that?—There is not the slightest doubt about it; not a single tent has been shifted.

46. The evidence so far is that the tents were shifted, and no fresh men put into the same tents?—The extended fresh tents—the extended camp; but many of them are there now in the same place as they were in originally.

47. *The Chairman.*] The evidence was that they were disinfected with formalin two or three times in a fortnight?—It is very likely. The photograph shows that the tents are occupying the same ground at present that they did originally, but the camp has been extended and fresh tents coming down another way. They occupy the same position as they did months ago. They have extended and gone across the road into another paddock. I mean to say that I know of my own observation that tents in the same positions as I saw them in in January were occupied in May and July.

48. *Mr. Skerrett.*] In April there were no less than eighty-six cases of measles sent to the Wellington Hospital?—Yes.

49. Do you think it would be a proper precaution on the part of the authorities to have at once arranged for the possibility of an increase developing in the epidemic?—Yes.

50. Generally, what steps should have been taken, in your opinion, when it was ascertained that there was a substantial epidemic of measles which might increase?—It was almost like closing the stable-door after the horse was out. Steps should have been taken long before to move the camp and put it on to clean ground; but before shifting it to the clean ground they should have taken steps to fumigate and disinfect in every way possible all the men, their bedding and clothes, which I should have done with sulphur and spraying with formalin.

51. *The Chairman.*] The clean ground might well be in the same neighbourhood?—Two or three hundred yards away. I did not see the occasion of moving out of Trentham altogether at any time.

52. It is clean ground you want to get, not clean air?—It is clean ground, and where you get clean ground you get clean air. That is what I have been referring to in the three or four hundred acres which I consider are available.

53. *Mr. Skerrett.*] Supposing that that precaution did not occur to the military authorities, do you say that it was obvious or not that some adequate provision should have been made for treating the existing and possible future cases of measles?—Of course, they should have asked the advice of the Medical Officers and acted upon that advice.

54. Does it require an extraordinary degree of expert knowledge to know that if you do not provide accommodation for eighty-six cases of measles per month you will have a very great advance in a short time?—It is only common-sense; it does not require expert knowledge.

55. I understand that no provision was made for the treatment and accommodation of measles patients until some time in June: what have you to say about that?—It is very difficult to understand that such a thing really happened.

56. There were 200 cases sent to the hospital in May, and 256 up to the 20th June, besides a number of others, of course, that were dealt with in various improvised hospitals?—Yes.

57. Were the buildings of the Racing Club used by the hospital authorities at all suited or adaptable for the purpose of a hospital for treating measles?—No; I should say they are only useful in cases of emergency.

58. *Mr. Ferguson.*] Have you seen the rooms?—I am not personally acquainted with the rooms, except from outside observation when passing: but being familiar with racecourse buildings, having been one of the trustees for the Oamaru Racing Club for twenty-five years, I know something of the nature of such buildings. I understand they are substantial buildings, but not buildings you would use for a hospital except in cases of emergency.

59. *The Chairman.*] Without having seen these, but from what you know of racecourse buildings, you consider they are not adapted for hospital treatment; but, of course, in an emergency it was proper to use them?—Yes, you must in that case, because you have no choice. Those buildings are really built for occupation by persons who go for amusement for the day, and not for use as a hospital; but when you are in a fix like that you must do the best you can. If I had been in charge myself I should have gone round the buildings and examined them. I have no doubt that was done, but I should have done it before there was any outbreak, in view of the possibility of an outbreak.

60. *Mr. Skerrett.*] Is there anything else you desire to refer to?—I was going to call attention to the incinerators there as scarcely being adapted for the use for which they are there—the destruction of all material.

61. *The Chairman.*] Do they not accord with military requirements?—They are roughly on the principle described in the books, but they do not fulfil the actual purpose.

62. Why?—Because they are too shallow in proportion to their width. You do not get sufficient draught. There have been two or three kinds there, but the only ones I have seen are those wide-open ones with a heap of stones in the centre.

63. Like a Maori oven?—Not quite like that, but on the principle of this diagram [produced]. When the stones get heated they form a draught. The style with the sod is the best. If you cannot get sods it can be made of tins filled with clay. The diagram produced shows all the military incinerators adapted for the different soils.

64. Is there any other topic you wish to refer to?—The clothes-drying tents.

65. *Dr. Martin.*] I understand there was no drying-apparatus in Trentham Camp up to about three weeks ago?—Quite so.

66. Do you think that is right?—It is very wrong. There should have been a clothes-drying tent for every battalion.

67. Do you think when the camp was opened a drying-apparatus should have been arranged?—Marquees should have been provided.

68. With the skeleton apparatus such as you have on the diagram?—Yes. [Diagram of marquees recommended in 1907 manœuvres produced.] A Maori oven acts really better than a brazier, and keeps the heat in. In the report of the 1907 manœuvres I think it says that the wet clothes of a company could be dried in two or three hours.

69. Do you consider the complaint made that the men could not get their clothes dried was perfectly justifiable?—Perfectly justified. It is right that they should get their clothes dried, and should have facilities. In these manœuvres there are suggestions made which I have always adopted in giving lectures and training to the men in Otago and Southland. There is an illustration of a regiment, supposed to be a crack regiment, sent out on fatigue duty repairing roads or something else, being out all day. The Medical Officer said the Colonel ordered them to put their overcoats away on the wagon and to start with very light clothing. They were wet through in a very few minutes, and remained wet through for hours. They came back and got a hot cup of soup and put on dry clothes, and the wet clothes were dried in a couple of hours, and they were ready to go on duty again.

70. And with no ill effects?—No, no ill effects. Then, again, no provision has been made for baths. [Diagram showing baths in circular and other tents.] You can have boilers outside to get hot water if necessary.

71. *Mr. Ferguson.*] Are these the diagrams you have used for the purpose of giving lectures?—Yes.

72. They are not theory merely?—No; they are elaborated from the reports I have.

73. They are condensed in the Royal Army Corps manual?—Yes.

74. Have you any opinion as to the proportion of baths?—I do not know the proportion, but two or three marquees would go a long way. It is necessary they should, because they have bathing-records, and each man has to show he had bathed so-many times.

75. They had shower-baths from the beginning, and in addition they had bi-weekly parades to the river: would that take the place?—That would assist very much.

76. Would it take the place?—Not altogether take the place. I do not know whether the shower-baths are enough in proportion to the men in the place.

77. *Dr. Martin.*] You were not satisfied with the arrangements at the Trentham Hospital, with the exception of the sink, in November up to the present time?—I have no personal knowledge of them. I rather avoided going into the hospital, as there was so much to see outside.

78. Well, for a camp ranging from three thousand to four thousand men, what would you have suggested?—I should suggest something in the nature of a field hospital, just as at the front; but, relying on the assurance that the Wellington Hospital and other hospitals could do everything that was necessary, there has never been any provision made for field hospitals. That is something quite new here, and nothing of that nature has ever been provided.

79. On the 19th February the Medical Officer at the camp reported that he had no equipment for the beds, no sheets, and no pillow-cases. Would you have suggested he should have a field hospital at that time?—Certainly, I should—several marquees. I mean to say that I feel so convinced on the point that had there been proper arrangements from the start there would have been no trouble at all. With strong, healthy, specially picked young men in a healthy situation there should have been practically no sickness whatever, and that is my experience of all my camps after thirty-five years' experience. I have never had any preventable sickness at any of the camps, and never had a single death. Another matter I should like to refer to is the soakage-pits. I should like to get some expert engineering or geological opinion as to what becomes of the polluted water from the soakage-pits. I notice there is a soakage-pit about the centre of the tent camp which has been in use throughout. It takes all the foul water from the ablution-benches, and is covered over with brushwood. It seems at times almost to overflow, but still it escapes. Now, close beside that soakage-pit, which is practically nearly always full, there is another empty pit. It is exactly 20 ft. by measurement from this full pit. This pit is perfectly dry, and it is about 8 ft. or 12 ft. deep. There is some gravelly soil underneath there, but there is not the lateral percolation one would expect. I was wondering where that ablution water went to; and it must go, it seems to me, vertically down till it meets the well-water level. Now, if that is so I should think it is quite likely that the water from those soakage-pits would contaminate the wells in the neighbourhood, and if that is so it is a serious question. Those wells

may be used for cleansing dairy utensils and so forth, and might affect the population in Wellington. When you remember that for a population of seven thousand men the military allowance is 5 gallons of water per man, and that means 35,000 gallons of polluted water going away, which is a big quantity to get rid of.

80. *Mr. Ferguson.*] That military allowance of 5 gallons includes baths and other facilities?—Five to 10 gallons is the minimum—not less than 5 gallons. If they supply more than 10 gallons for soldiers in a camp it is an excessive quantity, and results in the camp being wet about the ablution-benches. The one thing is always to keep a camp dry. In regard to the question of the hutments, I condemned the original scheme of hutments as absurd, impossible, and impracticable because, as it was put in the Press at the time, it was proposed to concentrate the whole 4,500 men into 4½ acres.

81. *The Chairman.*] You say that these hutments are an absolute departure from what is laid down by the military authorities upon the subject?—Yes.

82. And therefore it should lie on those who are responsible for them to justify the departure?—Yes. Four thousand five hundred men at 50 square feet each for sleeping purposes alone will occupy over 5 acres, which is simply for the flooring without any room for intervals or streets. Therefore it is impossible to cram 4,500 men, who occupy 5¼ acres for sleeping-accommodation only, into 4½ acres. At 60 ft. floor-space the sleeping-accommodation alone would be 6½ acres, and you must double that for intervals. That is trying to squeeze 13 acres into 4½, which, of course, is absurd, impossible, and impracticable.

83. Why do you refer to 4½ acres?—That is the statement made in the Press of the original proposals of the Minister of Defence.

84. We have it that the present area occupied by the present hutments is about 23 acres, and when completed and all the huts up, 31 acres?—About half of what it should be.

85. Even now?—Yes, even now. It does not allow for 60 square feet of floor-space, and separate dining-rooms, and proper intervals, and so forth.

86. There is one matter you did not touch upon which Mr. Bates directed out attention to, and that is the question of sleeping on the floor, and of galvanized iron being the outer covering of the building. According to him those two facts, plus the amount of draught let in, would make the hutments very improper habitations?—Yes. I quite agree with everything Mr. Bates said on the subject. The question of hutments is described very nicely by Knox in his work, at page 11: "Hut barracks are used in some stations, being cheap and healthy. In war they are better than tents for winter quarters. When used for a permanency the sides are usually built of brick. Döcker huts, as used by the German Army, have proved satisfactory for our troops in this country. These huts are portable, being built in sections, having a wooden or iron framework, covered with felt, lined with canvas, ventilated by windows, cross-louvres, and ridge ventilators, and, as a rule, they should not accommodate more than twenty-four men. The ground for a hit should be cleared, levelled, and drained, and the huts arranged *en échelon*, each being raised above the ground to a sufficient height to allow a man to crawl under to clean out dead cats, rats, and tins that may collect there, or else this space between the floor-level and the ground should be wired in with strong galvanized open-meshed netting. Warming is best carried out by open grates. As open fireplaces necessitate brick chimney-stacks, sometimes stoves are used in their place in temporary huts to save expense."

87. Can you understand how hutments to accommodate fifty men in this way were approved?—I cannot understand that. I condemned them before they were attempted to be built.

88. I understand that the hutments proposed by Dr. Purdy were not approved?—So I have heard; and I am very pleased to hear that he suggested they should be in echelon.

89. Of course, these were submitted to Dr. Frengley, to an architect, and to an engineer. Do you suggest that it would be necessary, before approving of these, that some one with a knowledge of military requirements should have been present?—That is a special matter that should have been submitted to the Director of Medical Services for his approval, and he should have had control of the plan.

90. Your view is that this was not so much a matter for mechanical approval as a matter to which the experience of military medical authorities should have been brought?—Yes.

MONDAY, 26TH JULY, 1915.

Sergeant MAGNUS BADGER further examined. (No. 28.)

1. *The Chairman.*] What is the point regarding which you first wished to speak?—When I first went on duty I was stationed at the kiosk hospital. What I found there was a very congested state of affairs: men were sleeping on the floors on mattresses.

2. *Dr. Martin.*] What was the date?—The 28th June. Though that was taking place, Sister Brandon, the nurse in charge, said that that would not last twenty-four hours, as every effort was being made in Wellington to secure beds and stretchers, and that they were expected on the following day. The next day a large consignment of stretchers and beds arrived. Colonel Valintine came to me the next day—I think it was the 29th—and said, "Do not allow any military etiquette to stand in the road, but come to me if you have anything to say regarding necessary improvements." I made several suggestions to him there and then. One was that the beds should be numbered. He said, "We shall have that done at once"; but we found it impossible owing to the very large rush of patients the next day—over a hundred—which necessitated beds being placed between other beds. There were as many as a hundred men coming in

on the one day, and the convalescent patients were on the move all the time. Further, the kiosk being situated on the flat, and being approached by muddy roads, and as the result of these men being continually going out and coming in from these muddy roads, it was impossible to keep the place thoroughly clean. The men slept in new blankets, and there were no sheets provided. The men were wearing mostly woollen underclothing, and the result was that the fluff from the blankets invariably adhered to the men's underclothing, and when a man stepped out on to the floor the whole of the surrounding place was a mass of wool, which would be blown about, and as this was going on all day it was absolutely impossible to prevent there being a great deal of this fluff on the floor. Towards the middle of the week I was appointed an acting non-commissioned officer, and the following were my instructions——

3. What was the date on which you were appointed?—Four days after I went there—that would be the Friday.

4. With the rank of sergeant?—Yes, I was informed on that day that I had been recommended to be made a sergeant. Dr. Harrison instructed me that the following were my duties: To take charge of all the orderlies and fatigue-men; I was to receive every patient who came for admission from the lines; I was to take careful notes of the temperatures of the men, and to try, in conjunction with the nurses, to expedite the men being got into bed as speedily as possible, giving preference to men with high temperatures and those who showed any signs of distress. Admissions to the hospital would start from the first thing in the morning, and would continue till well on after dark. My instructions were to ask every man if he had any complaint to make as to his treatment at the lines, or coming up from the lines to the hospital. I was to specially note if any patient were carrying his own swag, and I was to report that immediately to Captain Harrison. I was also to see that those patients who arrived were seated in the most comfortable places. I was also to be responsible for the moral tone of the men who were in the hospital, and especially those who were convalescent. I was to see also that any man walking out or about the hospital who was convalescent should be properly clothed, and that he had his overcoat on. The admissions during that week became so numerous that it was found necessary to open up another ward at the grandstand, and I was given instructions to see that stretchers were put up and mattresses placed upon them, and I assisted, in conjunction with the nurses, to get the place ready for patients. I was also to see that the orderlies washed every patient who was not capable of getting up, and periodically in the morning I would go round the kiosk and ask if any man had not been washed. If a man were overlooked I would order an orderly of that section to at once see that he was washed. The congestion in the admission of patients became so great that it was found impossible to admit them all to beds right away, and a waiting-room was established underneath the grandstand, where patients could go for a little while and wait while beds were being got ready for them. I suggested to Colonel Morice that, as much of the men's troubles consisted in the mental effect upon them, hot tea and beef-tea should be continually provided, as far as possible, for those patients being admitted. That was done, and was very much appreciated by the men who were sent up from the camp. I had great objections to men being forced to walk from the lines to the hospital. One man walked up who had a temperature of 103. I pointed this out to Dr. Harrison, and I understand that representations were made to those in charge of the lines that such a thing was not to occur again. This did not occur again, as any man subsequently found with a temperature as high as that was brought up on a stretcher. I suggested at the time the provision of an ambulance. Every patient who came from the lines had his swag carried for him by one of his mates, and I made very close inquiries into every case to see that no man carried his swag or any of his belongings from the lines to the hospital. Coming back to the matter of the waiting-room, the procedure I was instructed to have carried out was this: as soon as a certain number of beds were got ready I would go over to the waiting-room and ascertain what cases should be dealt with first. I must explain, however, that Dr. Ferguson or Dr. Harrison would go round the ward in the morning and certify a certain number of men as convalescent. As soon as this was done their beds became vacant, and, as I said, I would be instructed to go over to the waiting-room and ascertain what cases should be dealt with at once, judging by the distress of the men or their temperature. This process of elimination went on until every man was in bed. I asked every man whether he had any complaint to make regarding his treatment at the lines or on the way from the lines to the hospital, and I only received a complaint from one man. He complained, and I was so much struck by the man that I took his temperature and pulsation. His temperature was 99 and his pulsation 82, and I noticed that the same man was convalescent in two days. That was the only man who made any complaint. He was suffering from influenza.

5. *The Chairman.*] What was the nature of his complaint?—He complained of being kept waiting in the waiting-room. As soon as the ward in the racecourse was provided as many patients as possible were removed to it, most of whom could be well classified as convalescent, thereby relieving the congestion in the kiosk. As soon as that was done the stretchers which had been extemporized were shut up, and as much space as possible given commensurate with the demand. At the early stages, dating from the 28th, there was a shortage of bed-pans and bottles for the patients, but one must remember that though there was that shortage, yet the supply of patients was increasing at the rate of a hundred per day; still, the demand for both bottles and bed-pans was soon met. I would like here to refer to a question regarding a complaint that men were allowed to get up out of bed with a temperature. A question on this point was put to me the other day by Commissioner Martin. We were faced with one or two difficulties in the kiosk. The beds were close together. A man who was fairly hale and hearty, and eating his meals well, felt a very strong reluctance to inflicting himself per medium of a bed-pan on his mates on either side, and I noticed that many of those men, sooner than call for bed-pans,

seemed to work themselves into a state of constipation, and would wait until night-time and then sneak from their beds. We were faced with a great difficulty in that at night-time it was impossible to tell those men, and it was found better to encourage them to get up in the early hours of the day when the sun was shining.

6. The medical men were aware of what you are telling us?—Yes, there was nothing kept from them in any way. I may say that I have had experience of hospitals very much along similar lines, where there has been congestion, and I say this fearlessly: that the efforts made to cope with the sudden inrush of patients was as ample at Trentham as I have seen anywhere. I would say further, fearlessly, if I saw anything which I thought should be exposed I would expose it at once. It is quite easy for any one who has any idea in his mind of modern hospital management to go out to Trentham and to see the muddy surroundings, and to say that those conditions were not hygienic; but one has to be seised of the actual facts of the case to realize the stupendous task it was to keep the buildings clean, with men walking about all the time. Then one's mind would be disabused of the idea that it was possible to keep those hospital arrangements in as good a condition as is done with the polished floors of modern hospitals. Then, I desire to say that 85 per cent. of the men who were admitted to the hospital simply had colds. My opinion is based upon the observation of those cards that they were measles and influenza cases. It was very difficult also to get convalescent men in the hospital to help one another. On several occasions I have tried to get such men who were perfectly able to do a little light work, and it was wonderful to see that those men would rather do nothing than assist to keep the place clean. That was a noticeable fact, and I am sorry to have to refer to it.

7. What was the reluctance due to—a fear of contagion or something of that sort?—I cannot tell you that. It seemed to me a spirit of laziness indigenous to influenza or something of that kind. It was very hard to get men to do anything. We were face to face with this difficulty: we would get a fatigue party, and we would have attached to the hospital so-many orderlies. These orderlies wore the Red Cross and were classified as orderlies. Their duties consisted in attending to the patients as much as possible with the small amount of knowledge that they had, and they had to take their instructions from the nurses. We also had a supply of what were called "fatigue-men." Those fatigue-men would be men sent from the various companies to do requisite work about the hospital. I might say that my criticism of some of those men is summed up in two lines, which I composed at Trentham: "The orderly by his red cross is clear; the fatigue-man is known every afternoon to disappear." Still, we got good men at times, while others would simply get away to the latrines, and the other men would have to do their work. I would like to say here that I never saw a man come to the hospital with a wet overcoat or wet clothes, except on two occasions, when men came in with wet dungarees, and I made a particular note of that. I was very careful to observe the condition in which men came to the hospital, because there was often a tendency for men to hop into bed with wet things on, and I made it a point to see whether their feet were wet by turning down the bedclothes. Many of us were working eighteen hours a day, and made no complaint, and would do it again if necessary. Whenever there was any suggestion of a necessary improvement made to Dr. Valintine or Dr. Morice there was a speedy remedy provided. The next point is that with a certain number of patients there was a reluctance to come forward with complaints or report themselves sick, even if they had any to make.

8. Was that during your time?—Before my time. I want to make a comparison.

9. You were told about them?—Yes. This is borne out by evidence as much as anything in regard to which evidence has been produced. After a certain time at the kiosk it was found necessary to send certain men to convalescent homes, such as Heretaunga Golf-links, and it was found convenient also to have other men sent to their homes. When it became known in the lines that some men were being sent home on sick-leave that reluctance to report sickness suddenly vanished. Men came along with temperatures of 98 or 99, practically normal. I have also seen men whom it was almost impossible to keep in their beds. A man would say the next day, "I am all right"; and it was plain that there were a great many cases of malingering; but the precautions were being taken in order to take no risks, and men were sent at once to the hospital. I noticed in the papers with regard to my evidence it is stated that I saw no aspirin tablets being given to patients. I did not wish to convey that impression. What I meant to say was that there was no systematic giving of aspirin tablets at every meal. I could not deny that aspirin tablets were given, but the suggestion was put to me that two tablets were regularly given with each meal for the purpose of keeping down the temperature.

10. *Mr. Gray.*] You saw nothing of that?—No, absolutely nothing; and it could not have taken place without my knowing it.

11. *The Chairman.*] And the ward nurse would also know about it?—Yes. When the nurses came to take charge each nurse was allocated a certain section of the hospital, and was given so-many patients under her care. When the Medical Officer had gone round in the morning he would give certain instructions, and she would follow up with a tray containing medicines of various kinds, and atomizers for spraying the throat, and she would do for the patient what was directed by the Medical Officer. I saw that being done every day myself. Regarding the supply of food, for the first ten days I took my food almost wholly at the hospital, taking exactly what the patients took, and I saw no food ill cooked or that was not in a wholesome state. The beef-tea provided was of a nourishing character, as opposed to the ordinary beef-tea. It contained crushed cereals, and seemed to be nourishing. All that I tasted was good and wholesome, and liberal in supply, and I invariably made it my duty to walk round and ask if every man had enough. If any man said he would like more he was supplied with it. There is another point I would like to refer to: I notice in the papers what might be regarded as a reflection on some officer at Trentham. It appears in regard to my references to the record of patients enter-

ing the hospital and discharged. What I meant to say in my evidence was this: that it was impossible for an officer like myself stationed at the kiosk to keep a continuous list of all men admitted and discharged with the idea of following up their letters; but the papers conveyed quite a different meaning, making the public think that there was no actual record kept of the patients who were admitted and discharged from the hospital. I pointed out that these letters should have been followed up by the platoon corporal. I may say that the question of delivery of letters at Trentham was at one time in a very grave condition, amounting almost to a scandal. There were hundreds of letters undelivered, and it was found necessary to establish a post-office in the centre of the racecourse buildings.

12. Was that in your time?—Yes, sir.

13. How long did that continue—that non-delivery of letters?—It continued during the first week I was there.

14. That was with regard to the patients' letters?—Yes. I would like you to remember that at that time we were receiving every day something like a hundred fresh patients. Then there were a certain number of discharges: some we sent to Kaiwarra and some to other places, and the task was stupendous to trace them. Had those letters been kept by the platoon corporal, and not handed over to any one except temporarily, it would have been better. He could have come up and inquired whether Thomson, or Brown, or Smith was in the kiosk, and if the man was not with us the platoon corporal would have been told to try the grandstand and retain the letters; but, as a matter of fact, they were handed over to the record-office, and the result was that the letters became piled up there until some one called for them. The system adopted a little later was a decided improvement. One of the marquees in the centre of the racecourse, opposite the main door where Colonel Morice's office was, was converted into a regular post-office, under Postal officials, and patients could call there for their letters. All the letters were under the sole charge of Postal officials. I pointed out to the Commission the difficulty of getting telegrams away, and that was due largely to the funk which had set in in entailing an enormous number of wires coming from all parts of the Dominion inquiring after the men. The result was that telegrams simply piled up, and it was impossible to get them away. They had to be bundled up together and sent to Wellington per train. I would like to state here that on one occasion I had to go down to the lines one evening, and it struck me then that I would like to make some inquiries as to how this epidemic was being continued. In the course of my inquiries I went into a concert which was being held in the Salvation Army hall. I found hundreds of men there assembled. I stood at the door for about twenty minutes, and watched men coming out and going in. I was surprised to find the number of men who entered that hall with wet boots and no overcoats on, but simply dungaree coats and trousers. I spoke to one or two of the men. I said, "Is there any necessity for you to have those wet boots?" They said, "No." There was no necessity; and while I was inquiring I found Major Stout standing at the back of me. I would like to say this: that I am strongly of opinion that those concerts should have been discontinued, and that it was a mistake to have allowed them to go on in the face of such an epidemic. A great many men were sitting upon extempore scantlings kicking their heels against the walls. At this concert every singer, it appeared, was entitled to an encore, as the result of which there was a great deal of dust floating about. On one or two occasions visitors came through the hospital, and I distinctly remember hearing Colonel Valintine say to Mr. Parr, M.P. for Auckland, and several others, "Go among the men, unguided, unaccompanied by anybody, and make any inquiries you like." Mr. Parr took advantage of that, and I understand that the sum total of the complaints made to him was about a second pair of boots being needed. Mr. Massey had that told to him, and that there were no other complaints to make. The men were given every opportunity to make complaints to visitors as to the administration and anything affecting their treatment in the hospital. I have had considerable experience in living in hutments in South Africa, Australia, and in New Zealand, and there is one thing I would like to suggest to the Commission, and that is that a test be made, at a time which would not be given, of the air in a tent and the air in one of the hutments. I would like to point out in regard to South Africa, where there were hutments, that the difference between the temperature in the daytime and the temperature at night is very great.

15. *Mr. Skerrett.*] This seems to be in the nature of a speech rather than evidence?—I give that as a practical man who has lived in hutments in South Africa, Australia, and New Zealand.

16. *The Chairman.*] That question of air-space in hutments and tents is all laid down in the military book?—But some of the men say that the tents are warmer than the hutments. That is admitted; but is the air in the tents as good as it is in the hutments, and is the living in the hutments as good a training for the men, who will have to spend the next few months in open-air work?

17. We have that point before us?—You know that a simple test for carbonic-acid gas can easily be made of the air in the tents and that in the hutments. I would like to point out that at Trentham there is not that difference of temperature which there was in South Africa between the midday temperature and the night temperature. You could also take two places in New South Wales where the same conditions would not apply. I refer to Sydney and Lithgow. Lithgow is 3,000 ft. above the sea-level, and in the daytime it would be very warm, but at night very cold.

18. We have the same comparison between Rotorua and Wellington: the mornings at Rotorua would be much colder?—In South Africa the hutments were not so successful because of that fact—the altitude. Instead of what may be called radiation, in Trentham there was a tendency for the temperature in the huts to condense the vapour and make it run down the walls.

19. *Mr. Ferguson.*] You have seen that yourself?—I have seen that.

20. Have you slept in a hutment?—Not at Trentham.

21. *The Chairman.*] Did you see condensation on the walls at Trentham?—No; but in several places in New Zealand—in shearers' huts, and so on.

22. *Dr. Martin.*] You say that most of the cases which came into the kiosk were colds?—Yes, 85 per cent. of them.

23. Admitted as simple colds and influenza?—Yes.

24. And you put those cases amongst the measles cases?—Yes.

25. By the doctor's authority?—Yes.

26. You are definite about that?—Yes.

27. A man would come in with his trouble diagnosed as a simple cold or influenza and he would be put amongst the measles patients?—I do not know what you mean by "amongst"; he would be put in the kiosk.

28. You say that the convalescents were put into the grandstand?—Yes.

29. Only the convalescents were put into the grandstand?—Yes, I have seen as many as sixty-seven in one day.

30. They were all convalescents, therefore you would not expect any man to die in the grandstand?—I have seen men sent who were not convalescent.

31. Then not only convalescents were sent?—I said that.

32. Is that correct?—It is correct.

33. From the 28th June for several days only convalescents were sent to the grandstand?—It was found necessary to actually employ the grandstand as a general hospital.

34. You say you found it impossible to look after the fatigue-men at the kiosk?—I found a difficulty in getting the men to do a fair day's work.

35. You could not get the men to do the duties?—Yes.

36. You also say that the sister followed the doctor about with atomizers on a tray?—I said that the sister or nurse would take round medicine on a tray after the doctor had gone.

37. You said "atomizers"?—No, only one atomizer.

38. There was only one atomizer in the ward: how many atomizers did you see in the ward?—About a dozen.

39. Would you be surprised if you were told there was only one?—I saw a good many more than one during my period.

Dr. DE LAUTOUR further examined. (No. 29.)

Witness: There is one explanation I would like to make regarding certain of my answers, such as that with regard to the responsibility for marking the sites of the trench-lines resting upon the Commandant of the camp. It might be construed as a reflection upon the Camp Commandant. I replied generally—in general terms.

1. *The Chairman.*] But somebody must be responsible: who is?—The authorities lay it down that the military authorities are responsible.

2. But that is the Commandant?—Yes; but at the time when the teaching of compulsory sanitation was commenced there was no teaching of sanitation to combatant officers in New Zealand. Therefore he would have to reply upon the advice of his Medical Officers. I would like also to take this opportunity of expressing my pleasure at seeing the extremely clean state of the camp upon the several occasions when I was at Trentham: it reflects great credit upon the Commandant.

3. Captain McCristell was the executive officer who was in charge of the sanitation of the camp?—Yes, sir.

4. And, of course, he would be answerable to the Commandant?—Yes. I wish to say that it was extremely clean, and I always saw sanitary fatigue squads going about.

5. *Mr. Gray.*] You have spoken about your connection with the New Zealand Defence Forces: you resigned from the Defence Forces two or three years ago?—Yes, in 1911.

6. Partly in consequence of the refusal of the authorities to appoint you to Colonel Purdy's position?—Because I was superseded by Colonel Purdy, who was twenty-one years my junior.

7. You have applied several times for his post?—I was next in seniority to the officer who held the position before Colonel Purdy, and I possessed the certificate of proficiency of the War Office, which entitles the bearer to promotion over any officers who do not possess that certificate.

8. May we put it this way: that you considered, by virtue of your seniority and your qualifications, you were entitled to the appointment?—Certainly.

9. And you have claimed that position both by correspondence with the authorities and afterwards with the Press, and in publications?—Yes.

10. You have, I think, published and circulated two pamphlets bearing upon your claim to the appointment?—Three altogether.

11. And you criticized two camps at Karori and Johnsonville, at which Colonel Purdy was Medical Officer in charge?—Yes.

12. In connection with which he had some responsibility?—Yes.

13. You also petitioned Parliament, I think, for compensation for not being appointed?—Yes.

14. And you have addressed many communications to the Press upon the same subject?—No.

15. Several communications?—One only, I think.

16. Now, you consider that your qualifications are superior to Colonel Purdy's?—Certainly.

17. I think, Dr. de Lautour, the regulations provide for the retirement of lieutenant-colonels at the age of fifty-five?—Not when I was in the service.

18. No: then when?—After the appointment of Colonel Purdy was made that was introduced.

19. What was the prior regulation?—The same as applied to all members of the Civil Service—sixty-five.

20. The new regulations provide for retirement at fifty-five?—After Colonel Purdy's appointment, yes.

21. And, in fact, you had passed that age?—No, I am only sixty-five now.

22. You have what is commonly called a grievance in connection with this matter?—Scarcely a grievance, but you can put it that way.

23. Based, as you put it, on the promotion of a junior officer over your head?—Yes. It was in order to qualify with a view to succeeding to the position that I went to the expense of going Home, at my own expense, and spending twelve months at Home.

24. And you were disappointed at not receiving the appointment?—Yes.

25. Twice in January, when you visited your son in camp, did you make a critical inspection of the camp on those occasions?—Yes, on the first occasion I went right round it.

26. Were you accompanied by any one at any time?—No, except when I went to look at the sample hutment—by the officer of the day I was accompanied.

27. Not on the first occasion?—No, only when I went to look at the hutments.

28. That was in May?—Yes.

29. And the last occasion when you visited the camp was in July, when what was termed the "fuss" was made?—I do not think there was much fuss then.

30. Was there not?—Oh, yes.

31. There was a good deal of excitement owing to the sickness?—Yes.

32. Did you upon any occasion call upon the Camp Commandant?—No.

33. Is it not a point of etiquette for an officer visiting the camp to call upon the Commandant?—I was not an officer.

34. That was the reason then—you had resigned your appointment?—I was not an officer.

35. Did you make any report?—No, only after I was compelled to leave the service.

36. Did you not circulate the first two pamphlets about what I have called your grievance while you were still an officer?—Only after I had been refused the inquiry I asked for, and to which I was entitled.

37. You were still an officer when you wrote those pamphlets?—After my application for an inquiry had been declined.

38. Did you make any recommendation or complaint to the Camp Commandant about what you saw at Trentham?—No, I made no complaint.

39. If you were interested in the health of the men did you not think it would be better for you to see him and make suggestions based upon your experience as a Medical Officer?—I preferred to approach the Minister of Defence.

40. You said nothing to the authorities in camp?—No.

41. Now, you have made various suggestions as to what should have been done: you say that a bacteriological examination of the ground should have been made before the camp was pitched?—Yes.

42. Did you see that that was always done in camps of which you were in charge?—No, because the camps of which I have been in charge have been on clean, new ground. I have been over them and rendered it unnecessary to have a bacteriological examination.

43. *The Chairman.*] A bacteriological examination should be made of the ground unless it is virgin ground?—That is so.

44. *Mr. Gray.*] What was the size of the largest camp of which you have had charge?—Four thousand men.

45. For how long were they in camp?—About a week. No—there was the camp of the Fifth Contingent: there were about eight hundred men, and it lasted about six weeks.

46. A small camp for six weeks and Volunteer camps for about a week?—But there were thirty thousand at Aldershot when I was in camp there.

47. Do you suggest that the methods adopted at Aldershot are not the methods that have been followed here?—Certainly.

48. Is Aldershot not a standing camp?—Yes, and spread in every direction.

49. Do you know the area of the camp at Aldershot?—No.

50. *The Chairman.*] They have hutments there?—I never saw any hutments there. They have permanent barracks there. There were about ten thousand Volunteers there from all parts, but they were miles apart—in tents.

51. *Mr. Gray.*] How many years is it since you were at Aldershot?—It was in 1898—seventeen years ago.

52. *The Chairman.*] That was before what would be called the grand manœuvres, upon which modern methods have been based?—Yes; those special manœuvres were held in consequence of the War Office having been asked to hold them for years. The Boer War brought home to the people in authority the necessity for reorganization and alteration in the methods.

53. *Mr. Gray.*] You have given the Commission a number of figures relating to the percentage of deaths. I would like to ask you what is the ordinary death-rate for civil life. You said you would have expected the death-rate in a camp of three or four thousand men to have been less than that in civil life?—I do not know about the death-rate in civil life, but you will get it in the Official Year-book.

54. Do you know what it is?—I do not know what it is all round.

55. But whatever it is, you expected the death-rate in camp would have been less?—Yes; I mean the deaths from pneumonia. In civil life in New Zealand it was 2·87 for 1913, and the deaths from pneumonia in the camp have been a great deal more than that.

56. You spoke of the tents being too close—you said the tent-pegs were overlapping: are you quite sure of that?—Yes.

57. You stated that according to the R.A.M.C. regulations the intervals should always be sufficient to render possible the removal of the tents to a new site?—Yes.

58. Is there any difference between space and intervals?—They are practically the same thing: I should say they are synonymous.

59. You meant "space" when you said "interval"?—Yes.

60. Now, the photographs you have given to the Commission suggest to you that the tents were too close?—Not merely the photographs, but what I saw with my own eyes.

61. But you suggest that the photographs bear out your observations?—Yes.

62. But you said that the photograph is an actual representation of the effect: did you take into consideration the perspective of the picture?—It gives an accurate representation of the positions of the tents.

63. Do you think the camera cannot lie?—They often do.

64. Is not the photograph you have produced giving a misleading idea of the state of affairs?—I do not think so. It gives the same impression as that conveyed to me by my own eyesight.

65. You spoke of the latrines, and said you were told that the camp of the mounted men of the Third Reinforcements was pitched on the site of the latrines used by the Second Reinforcements: did you make any inquiry about that?——

The Chairman: I think he said that part of the hutment area covered an area that had been occupied by latrines.

Mr. Gray: No, sir.

Witness: I said that when the Auckland mounted men went into camp they were put on the original site of the men of the Second Reinforcements. Then sickness broke out amongst the Auckland men, and they were shifted across the road in the direction of what has been pointed out as the direction where the trench latrines were. Near that road there was a wire fence, and between the wire fence and the road I have been informed is the site where trench latrines at one time were used by the previous Forces.

66. *Mr. Gray.*] Did you satisfy yourself that latrine accommodation had been established in that place?—No.

67. *The Chairman.*] Your son told you?—I asked him and he pointed in that direction.

68. *Mr. Gray.*] You said that on one occasion when you went out to the camp you were accompanied by the officer of the day: you do not know the name of that officer?—No, I did not inquire. It was a Monday and a holiday. When I and several other visitors to the camp got there we found we would not be admitted. As there were so many people there, and as it was a holiday, a message was sent to the Commandant, and he waived the point and let us go in. I told them who I was, and that I had come to see the sample hutment.

69. You are unable to say from your own knowledge that any part of the camp has been placed on the site of former latrines?—I do not know of my own knowledge, but I had it pointed out that it was in that direction, and that would be the most natural place for them—at the end of the camp, and at the other end also. So that I was not surprised to be told that the latrines were in that direction.

70. *The Chairman.*] We may assume that they were there according to your impressions?—Yes.

71. *Mr. Gray.*] Do you suggest that the site of those latrines are not marked with permanent marks?—Yes. I have not seen any marks.

72. There are no marks in this place—in the direction which was pointed out to you?—No; in fact, in that direction is where the present hutments are.

73. What spot are you speaking of when you say there are no permanent marks there?—Between the wire fence and the tents.

74. And assuming there had been latrines established there, you say there were no marks?—Of course, there could not have been marks there because it has been roaded and built over.

75. And you still say that of your own knowledge you do not know that latrines had been put there?—I do not know of my own knowledge.

76. *The Chairman.*] It will be easy, Mr. Gray, to disprove it, if the doctor is wrong. If it is desirable to get rid of that point we will call some one who can swear that there were no latrines there?—Yes.

77. *Mr. Gray.*] You drew a parallel between the Trentham Camp and the camp of troops in Egypt, as shown in the photographs. Your suggestion was that our camp should have been more extended. Do you know that the death-rate among the troops in Egypt was greater than that at Trentham?—I should not think that was at all unlikely.

78. You do not know what it is?—Not in the least. The troops sent from here had never been taught how to live when they got to Egypt.

79. How do you know?—Because they would not get these concreted latrines in Egypt. They had not been taught here how to live under proper camp conditions: that was one of my objections.

80. *The Chairman.*] You mean that the men or the officers had not been taught?—Neither the men nor the officers had been taught, nor the medical men. The extended order of the camp as shown in that photograph of the Egypt encampment might have been adopted at Trentham.

81. *Mr. Gray.*] You also say there was plenty of space here at Trentham?—That is so. There was no sanitary necessity for making a military township of it.

82. You quoted Surgeon-Major Duncan as your authority for your contention that the tents should have been frequently shifted: what is the date of that publication?—1886.

83. Thirty years ago, nearly?—Yes.

84. Is he regarded as one of the latest scientific and medical authorities?—The latest authorities are based upon what Surgeon-Major Duncan wrote. His book is the standard work upon which modern works are built.

85. *The Chairman.*] I understand that all modern works are based upon these experimental manœuvres?—Yes.

86. *Mr. Gray.*] So that one ought to refer to the modern book rather than to those that existed before the manœuvres?—Quite so; the experimental camps bore out all Duncan's assertions, and therefore confirmed what he had written.

87. Were not a good deal of the medical directions altered in consequence of what was learned as the experience of the Boer War?—No; the Boer War merely pointed out that things were wrong, and how they were wrong.

88. Did not the experience gained in the Boer War tend largely to correct a great many of Surgeon-Major Duncan's propositions?—No; it confirmed what he had said. The great point was that the mistake they had made was in trusting too much to civilian assistance.

89. You spoke of the hutments: you have had no experience of them?—Not of military hutments, but I have lived in huts many times.

90. I think you only examined the sample hut here?—Yes.

91. There were some alterations carried out in the later huts built?—Yes.

92. You referred to the deaths of the Canadians after they went into hutments: do you know whether their hutments were of the same character as these?—I do not know. I have no idea of what they would be like. But at the time of the great American War, when the troops went into hutments for winter quarters, though they had been practically healthy in camp, they were decimated with pneumonia.

93. Do you suggest that the hutments are altogether wrong?—No; they can be healthy. Those Döcker huts are good, and those built on pivots so as to get the sun all the time.

94. *The Chairman.*] Your model hutment is shown on your diagram?—That was an idea elaborating what has been written of them.

95. *Mr. Gray.*] In regard to these hutments I take it that the Board had the idea of increasing the ventilation as well as the accommodation for the men?—Colonel Firth says, on page 132, "What are known as Döcker huts have been favourably reported on, and much used both in our own and the German Army. They are made of wooden or iron frames, covered with a kind of felt, and lined with canvas. They are very portable, and the fastenings are so arranged that they can be put together in a very short time. These huts are well ventilated by windows, cross-louvres, and ridge ventilators; if so desired, they can be readily warmed. In addition to these there are a variety of other huts differing from each other only in the nature of the material of which they are constructed. In general design and type they are similar. As a rule huts should not be made to accommodate more than twenty-four men."

96. You are unable to speak from your own experience of them?—No.

97. You criticized the incinerators which Colonel Purdy established: do you suggest that they cannot do good work?—It is well known that they cannot.

98. You have had no experience of these incinerators?—I have tried them.

99. These incinerators in this camp?—No.

100. The same sort of incinerator?—Yes, and it is laid down in the experiments that have been made. These incinerators would give you a great deal of ash, and the less ash you have the better, because it shows that there has been more consumption.

101. You have had no experience of these incinerators in this camp?—Not in this camp.

102. And if the Commission is told, as it has been, that these incinerators did good work, you still maintain that they cannot do it?—I do not say that, but that the other incinerators will do better.

103. But if it is stated that these incinerators answered all requirements?—I saw myself how the tins came out of them: they were not consumed.

104. But they would be harmless?—But it would show the degree of combustion.

105. Some tins were not consumed?—The tins that came out of the Trentham incinerators showed that the combustion was not as great as in the incinerators of which I speak. [Sketch showing incinerators put in.]

106. *The Chairman.*] The incinerators in the book for a permanent camp are made with an iron frame?—Yes, sir. Copies of these from my drawings are posted in every orderly-room throughout Otago, supplied by myself. We used our capitation one year for the purpose of providing these copies. In consequence of this there has been very little sickness in any camps in Otago since they have been put up.

107. *Mr. Gray.*] Do you know anything of the training-camp at Colchester?—No.

108. Would you be surprised to hear that the hutments there have been built to accommodate up to sixty men?—I should not be surprised. It depends entirely upon the way in which they are built.

109. And I suppose you could build a hut to accommodate double that number?—Yes.

110. So that there is not much force in your contention that they should not contain more than twenty-four men?—I should like to know the principle upon which these to accommodate sixty men were built.

111. But there is nothing impracticable in a hut to accommodate more than twenty-four men?—They would not be hutments then, but would be more on the lines of barracks, and would probably be divided into sections for, say, twenty-four men, and so on. Colchester is one of the principal military centres of England. I should like to know the context.

112. As to latrines, you objected to the absence of certain conveniences for the men, such as earth and paper?—Yes.

113. Do you say there was none supplied?—I could not see any.

114. How often did you go there?—Every time I was there.

115. On each of your four visits?—Not on my first visit. I cannot tell, myself, but it struck me that there was not enough seats for the number of men.

116. Do you know that the system was adopted of changing the pans every day?—Quite so: it is necessary.

117. And you heard from Lieut.-Colonel Potter that the camp was singularly free from flies?—I saw the flies when I was there.

118. Many?—Quite enough to spread disease.

119. But that might be said of a single fly?—It is always a carrier, and there were plenty there.

120. A good deal of change has come over the views of medical authorities within the last thirty years in regard to fresh air?—I do not know that it has.

121. In your younger days was it not the rule to keep a man in a closed room?—In my younger days, in the early "seventies"—1870–71—we had lectures upon that subject, and on one occasion Professor Partridge, talking about the value of fresh air, said, "I quite agree with Miss Nightingale in regard to the necessity for fresh air, but I do object to being blown out of my bed." That is the way he put it—the difference between sufficient fresh air and a draught.

122. Now, in regard to these hutments, you spoke of the possibility of there being infection communicated from hut to hut, partly as the result of the huts not being built in echelon. Do you suggest that with the winds that blow at Trentham there is any risk of any foul, contaminated air from No. 1 hut being carried through to hut No. 2?—Not only from hut No. 1, but from one end to the other of the huts.

123. Do you suggest that there is any risk of foul air being carried from hut to hut?—Quite easily. The wind from the north would blow through from the hut in the north to that in the south.

124. Do you suggest that the last hut in the row would get any wind at all, and, at any rate, less contaminated air than the others?—The question is not only whether the contamination would be carried from hut to hut, but it would be more, because it would collect.

125. Can you suggest, then, that there would be no breeze between the huts?—They were more like alley-ways and not good intervals, and at the time of my visits these intervals were blocked with tents. The purpose for which they were put there was not maintained, because I saw numbers of tents filling up these intervals.

126. You know that the nor'-wester has very searching properties?—Yes.

127. And that it has the peculiarity, strangers say, of being able to blow from all points of the compass at once?—Yes, round corners, for instance; but you do not get that in the open spaces.

128. Would not that wind blow in about the huts, ensuring all the fresh air any man could want?—A great deal more.

129. You suggest that the last hut of the row would have nothing in it but foul air accumulated from all the other huts?—I do not suggest that at all. A gentle breeze would go through, carrying all the foul air from one hut into another, and bringing in fresh air at the same time.

130. And I understand that there is less risk of infection through the air than through personal contact: is that so?—I think there is a good deal of infection from the lungs by medium of the air.

131. If the men are occupying a small space?—The risk of contact from the skin is less than from the lungs.

132. That is more in the case of persons occupying the same place—I mean through being in a confined and unventilated space?—Of course, there is more risk in the confined space.

133. There is not much risk in a man walking about the streets?—I think there is a good deal of risk. There are germs in the sand and dust that convey influenza and all sorts of things. I am certain that you and I have plenty of germs in our mouths. We all have these germs, but we are not susceptible to them at the time.

134. It is suggested to me by medical men that the treatment of infectious diseases by the barrier, cubicle, and isolation systems have their foundation in the knowledge that few infections, if any, are readily air-borne?—I should like to know what he was meaning by the "isolation system." I say that is contrary to my own experience, and it is contrary to my belief. That is merely an assertion of that individual. The cubicle system is condemned in barracks and hutments. It is adopted here, I understand, in the officers' places.

135. I am informed that it has been carried out under the regulations of the Local Government Board?—That is probably for hospitals, but not for barracks and hutments, as it interferes with the perflation of air. You require more than your 600 ft., because the air is confined.

136. Dr. Frengley tells me that these Local Government Board regulations provide for the treatment of infectious cases under the cubicle system?—Yes, very likely; but I am speaking not in regard to the treatment of disease, but in regard to the prevention of disease. I am looking at it from a health prevention point of view.

137. I gather from you that if the huts had been built upon lines suggested by one of the authorities you have quoted you would have no fault to find with them?—Certainly not.

138. You suppose that the hutments built in the recent English camps would be built upon those lines?—One might imagine that in time of war and in view of the necessity for training men quickly they might have to stretch a point, and the experience that they have had at Home from excessive disease in the hutments is thus explained. The building of these hutments in a hurry, and not on the lines laid down, explains the mortality amongst the troops.

139. *The Chairman.*] You say that Mr. Tennent stated that this was due to the hutments?—No.

140. He speaks of the excessive mortality?—My deduction is that the increase of mortality was due to the building of hutments on the lines suggested by Mr. Gray: that would account for this excessive mortality.

141. There would be no proof?—No.

142. *Mr. Gray.*] Whether they were built according to Knox or in any other way, we have the fact that this disease broke out amongst the Canadians in those huts?—Yes.

143. Do you admit the possibility of this disease breaking out quite regardless of the character of the huts—that is to say, it might have an independent cause?—It was brought in the form of germs.

144. *The Chairman.*] Your point is that the huts reduced the men's resisting-power?—That is so.

145. The germs may be everywhere, and you may be liable when living in those huts to be attacked by them?—Yes.

146. *Mr. Gray.*] You contend that the hutments reduced the resisting-power or vitality of the men?—Yes.

147. Do you know that at Trentham the Second Battalion were infected and the First were not?—Which hutments were they in?

148. The same hutments: the Second Battalion succeeded the First: they all went into the huts?—But which row of huts?

149. Do you say that makes any difference?—Yes, all the difference, because if my information is correct, certain of the hutments are over where the latrines were. Going back to what you said, one lot of troops were in one lot of huts—they would not be all mixed up. Then you stated that one battalion was free from sickness and the other had a good deal of it.

150. You cannot suggest any reason?—No other reason.

151. If there is nothing in your suggestion as to the site of the latrines, do you know of any other reason why one battalion should have any different experience from the other, seeing that they used the same hutments?—I do not know of any.

The Chairman: Is it a fact, Mr. Gray, that one part of the camp occupied by the tents produced far less sickness than that part of the camp occupied by the huts?

Colonel Purdy: There was practically no sickness and no deaths in the tent life of the camp.

The Chairman: That is, in the tents contemporaneous with the huts?

Colonel Purdy: No; the huts were only opened on the 29th May.

The Chairman: But the tents were continued in certain numbers?

Colonel Purdy: Yes, and there was much less sickness.

The Chairman: Is it a fact that there was less sickness from the tents than from the huts when the huts and tents were contemporaneously occupied?

Colonel Purdy: That is so; and there was less sickness in some battalions than in others.

The Chairman: It is quite clear by the increase of sickness after the first fortnight after the huts were opened?

Colonel Purdy: Yes.

Mr. Gray: It is suggested that these new regiments brought the sickness with them.

The Chairman: Yes. Then you infer that it is only a coincidence that the sickness in the camp began to increase a fortnight after the huts began to be occupied?

Mr. Gray: Yes.

The Chairman: You mean that it was the "Trenthams" which brought it there, and not the huts which caused it.

Witness: Though it is stated that there was not sickness before the hutments were thought of, in the early part of the year—in January—we heard a good deal about the necessity for hospitals at Trentham. We were told then that the sickness at Trentham was already costing £50 a week for transport. That shows there was a good deal of sickness in the camp in January.

152. *The Chairman.*] It is the deaths that I was referring to as the result of the epidemic. As you say, the men began to go into the hospital in February, March, and April, and there is no doubt that influenza and measles were prevalent during those months?—I would only suggest that the continued occupation of the same ground caused it to be supersaturated with germs, and made it more fertile for them to grow. It reduced the good germs' power to resist the others. The injurious germs grew stronger and more malignant, and the succeeding cases of measles were more malignant than the earlier ones.

153. *Mr. Gray.*] As to the bacteriological examination of the soil, do the organisms of cerebro-spinal meningitis live in the soil?—They would be shed into the soil, but from what we have heard exposure to cold will destroy them.

154. Would you expect to find them by bacteriological examination of the soil at Trentham?—No.

155. *The Chairman.*] Have you got an authority on the subject of changing the site of the tents to new ground altogether? I do not mean just taking the tent down and putting it up on the other side of other tents, but changing the whole tent area: is there anything in these authorities definite on that point?—Yes; Surgeon-Major Duncan is very definite about the cleanliness of the ground for camps and the treatment of the soil. On page 62 he says, "Whatever be the means, however, whether pebbles, beaten earth, &c., the floor must be scraped and renewed at least once a week. All ashes should be utilized in flooring. Next, to still further dry the earth, each tent must have a drain cut round it, joining the main drain of the street. Lastly, once a week all tents should be struck and aired: this proceeding will, of course, equally air the ground. On the days appointed for striking the tents let the floor be scraped and the past week's flooring removed. Then, after the airing is finished, make the new floor. Once a week is the least that should be allowed: should there be time, every other day is indicated for

striking camp. Now, all the above indications can be carried out in any camp. There are, in addition, two courses to be followed out when occasion and locality permit—first, to move to fresh ground periodically.''

156. That is absolutely incumbent if there is any trouble or disease in the camp?—Yes; and he also says it is necessary '' to pitch the tents as widely apart as possible.'

157. *Mr. Gray.*] Are those standing camps?—Standing camps or any other camps.

Sergeant GEORGE WILLIAM YALLOP sworn and examined. (No. 30.)

1. *Dr. Martin.*] You were in charge of the hospital at Berhampore?—Yes, sir.

2. About what date?—From the 1st to the 18th June.

3. What was the largest number of patients you had there?—A hundred and four.

4. There was no telephone communication at the hospital?—Not at first—not until about the twelfth day I was there.

5. That would be about the 12th June?—About that date.

6. Did the patients suffer any inconvenience through the absence of the telephone?—No, there was no inconvenience caused by the telephone not being there. There was a lot of running about, of course.

7. Was there any difficulty in getting medical men?—No, I had no difficulty in getting any to come up.

8. Had you any urgent cases at Berhampore?—No, none requiring urgent medical attention.

9. You got Dr. Clay up one day: what case was that?—For the case of Colley, I think; but I would not be certain.

10. He was sent to the Wellington Hospital on the 10th June?—Yes.

11. And he died on the 11th?—Yes.

12. Dr. Clay saw Colley?—I would not be certain of that.

13. Did Colley take suddenly ill?—Colley was in the ward all the time.

14. *The Chairman.*] From the 1st June?—As far as I can remember, he was in bed all the time I was there.

15. And were there any nursing sisters to look after him?—Yes.

16. What nurse had charge of his case?—Sister Keith was the senior nurse.

17. Where is she now?—At Heretaunga.

18. *Dr. Martin.*] What time did Dr. Clay see Colley?—About 9 or 9.30 in the morning.

19. Was Dr. Clay a Medical Officer or a private surgeon?—I think he is attached to the Territorials.

20. How did you come to call in Dr. Clay?—I rang up the Health Department and asked for a doctor to be sent out, and he was sent out.

21. Why did you ring up the Health Department: that was at the time Dr. Valintine was in charge, was it?—It was in Colonel Purdy's absence in Dunedin.

Mr. Salmond: Not on the 10th.

22. *Dr. Martin.*] Was Dr. Purdy in charge of the patients when you rang up the Health Department: had he been visiting the patients?—Yes.

23. Had he been there the day before?—I believe he had.

24. Dr. Purdy had been at Berhampore, as far as you remember, on the 9th June?—Yes.

25. Why did you ring up the Health Department?—Seeing that I could not get hold of a town doctor I rang up there for instructions.

26. Why did you not ring up Dr. Purdy?—He would be out at the Hutt.

27. You had not been in the habit of ringing Dr. Purdy up?—I rang him up once or twice.

28. Why did you not ring him up in this instance?—I may not have been able to get him so early in the morning.

29. Did you try?—No.

30. Was this the first time you had rung up the Health Department?—Yes.

31. Whom did you ring up in the Health Department?—Colonel Valintine.

32. What happened then?—He said he would send out a doctor straight away.

33. What doctor had been treating Colley up to this time?—Colonel Purdy had been seeing him.

34. Colonel Purdy was not advised at this time that Colley was taken suddenly ill?—The sister said he ought to be shifted to the Wellington Hospital.

35. Then a doctor had been attending to the patient regularly, the patient suddenly gets very ill, and you do not ring up that doctor and advise him of the fact?—That is so.

36. But you get another doctor in through another Department?—Yes.

37. Then did you report this matter to Colonel Purdy later on?—It was reported to him when he came.

38. *The Chairman.*] He came the next day?—Yes.

39. *Dr. Martin.*] Dr. Purdy was not at Berhampore, as far as you remember, on the 10th?—No.

40. The sister asked you to ring up the Health Department?—She told me that she would like a doctor to see Colley right away.

41. She did not tell you to ring up the Health Department?—That is so.

42. Did you tell Dr. Purdy that later?—I told him that Dr. Clay had been out.

43. *The Chairman.*] What medical men came to inspect the patients during the eighteen days you were there, apart from Dr. Clay and Dr. Purdy?—Major Elliott, Colonel Valintine, Dr. Frengley, and later Captain Harrison paid daily visits.

44. *Dr. Martin.*] Were you there when Fordham and Pollard were placed in the hospital?—No.

45. You had heard that they had been there?—I know now that they had been there; they had been transferred after I left.

46. Was there any straying of patients from Berhampore to private houses out there?—I never heard any complaints about that, but I heard it stated by one or two people.

47. Can you give me the names of those people?—I do not know them.

48. Was that while you were in charge?—Yes. There was no written complaint.

49. *The Chairman.*] It was information rather than a complaint—that men had been escaping from the marquees?—Yes.

50. There was no orderly in each marquee stationed there?—No; there were only three orderlies, and later on five. There were two on night duty.

51. It would be possible for any one to get up and go out without it being known?—Yes, that would be quite possible. The marquees were put right alongside the road.

52. *Dr. Martin.*] Was there no hospital guard?—No.

53. You knew it was a military unit?—Yes.

54. And it is quite usual to have a guard?—I never heard of it.

55. At any rate, there was no guard there?—No.

56. Was there any hospital guard at the gate?—No.

57. *The Chairman.*] Has the camp a yellow flag over it—this place—or anything to indicate infection?—There were no flags at all there.

58. *Dr. Martin.*] Do you know any house where these measles patients went into at Berhampore?—No, I do not know any.

59. You never heard of a patient entering a house there?—No.

60. Can you give us the names of any people who spoke to you about this matter?—No, I knew nobody about there.

61. Do you know of any man who wandered from the hospital there?—No; I never found out who they were.

62. Did you try?—Yes, I did my best.

63. You could get no information?—No.

64. What experience have you had at nursing?—Three years in the New Zealand Medical Corps.

65. How long have you been a sergeant?—I was Sergeant-major in the Samoan Expeditionary Force Medical Corps, and later on sergeant-dispenser in Samoa.

66. *The Chairman.*] You had eight months down there?—Seven months. I came back in charge of the sick men on the "Atua."

67. *Dr. Martin.*] Do you think there was any overcrowding at Berhampore?—Only once, when there were 104 men there.

68. *The Chairman.*] It was reduced immediately?—Yes, the following day it was reduced.

69. By convalescents going out?—Yes.

70. *Dr. Martin.*] You sent on one occasion some patients to the Wellington Hospital, and there was difficulty in admitting them?—One man, Sergeant Lyons, was returned.

71. Can you tell us how that happened?—Major Elliott and Colonel Pilkington, I think it was, told me that they could take five patients to the Wellington Hospital. The sister selected five, but Sergeant Lyons was returned, as they had no room for him: they only kept four.

72. Is it not a fact that a certain number of men were sent to Wellington Hospital and they were refused admission until the Medical Superintendent had communicated with Colonel Purdy?—No; once I rang up for the ambulance to send a man in, and Dr. Barclay would not take him until he got authority from Colonel Purdy. I rang up Colonel Purdy and he arranged it, and the man was sent in the same night.

73. *Mr. Ferguson.*] How many nurses had you there?—Three—really nursing sisters.

74. And what bedding-accommodation had you: had you proper cots, or were the patients on the floor?—In the main building they had iron beds; for a time the rest of the men were on the floor.

75. Was there any undue delay in getting beds?—I requisitioned for them, and also spoke to Major O'Sullivan, and they were sent up a few days afterwards. They had to be made.

76. Had you all the linen and blankets you wanted?—Yes; anything like that we soon got. I was never refused anything.

77. It came promptly?—Yes.

78. Colonel Purdy examined every patient carefully when he visited the hospital?—Yes; he saw every patient in the hospital.

79. *The Chairman.*] Cases of measles were accommodated there?—Yes.

80. Were they on beds?—No, on the ground; they had ruberoid roofing-material under them. That was for about a week, and after that the tents were floored with proper wooden floors.

81. How many were accommodated in the main building?—Twenty-four to thirty.

82. And in each marquee—about the same number?—Eighteen. One marquee had twenty-two one night; that was the overcrowded night.

83. You left Berhampore and went to Kaiwarra?—Yes.

84. And you have been at Kaiwarra ever since?—Yes.

85. And are you satisfied with the conditions there?—Yes; we have had no complaints about it.

86. How do the men get on there?—I have a complete return here. [Return put in.]

87. I see you began on the 18th June with 155 there?—Yes; they were sent from Trentham.

88. And you have gone up to 260?—Yes; that was the highest.

89. In July?—Yes.

90. I see you have brought this return down to the 25th July, and there is a reduction going on?—Yes.

91. It is now, on the 25th July?—One hundred and forty.

92. And there have been no admissions there apparently since the 20th July?—That is so.

93. On the 19th July forty-nine came in: where did they come from?—Trentham. There is a small sheet attached to the return showing where the men were discharged to.

94. I see that out of 371 discharged, seventeen went to the general hospital, two to Berhampore, sixteen to the Upper Hutt, seventy-eight back to Trentham, and 258 to their own homes?—Those who went to their own homes went on sick-leave.

95. And of those who went to the general hospital, did any die?—I never heard of any.

96. Not from Kaiwarra?—Yes, one—Murawai: that was the only one that I can remember who died.

97. *Dr. Martin.*] When was he sent in from Kaiwarra?—I think it was the 22nd June.

98. How long have you been at Kaiwarra?—Since the 18th June.

99. You have measles cases at Kaiwarra?—Yes. Mr. Hornsby, M.P., made a statement in the House that a man had been carried unconscious into Kaiwarra and had remained there for three days. I want to quote this: "*Somebody should be punished.*—Mr. Hornsby (Wairarapa) asked if the Minister would take some steps to secure the punishment of the persons responsible for the lamentable happenings that were being reported to the House. He mentioned the case of a man who had been taken from the Trentham Camp to the Kaiwarra Hospital in an unconscious state, and whose parents had received no notice at all of his serious illness. The man had been unconscious for three days, and had been near to death. The Hon. Mr. Rhodes protested that the member had not had the courtesy to give notice of the question, so that information regarding the case might be secured. Mr. Hornsby: I have only been in possession of the facts for the last hour or two, and I have been out to Kaiwarra to see the man. Mr. Rhodes: An hour or two would have been ample for inquiries to be made. As to punishment, I have to find out if this statement can be substantiated. Mr. Poole: There are hundreds of such cases. We all have letters."

100. Was that during the time you were in charge?—Yes. Mr. Hornsby came to me with a letter to see the patient.

101. Who was the man?—Private G. G. Pearson. Mr. Hornsby had a letter from Mr. Rhodes asking to be allowed to see this man.

102. Do you remember that man coming to the hospital?—He came from the Wellington Hospital and not from Trentham.

103. Was he unconscious when he came?—No, quite well; he came in a motor-car.

104. Was he unconscious in your hospital?—No; he was never in bed in my hospital.

105. Was he up when Mr. Hornsby came?—Yes; that was the day before that question was asked.

106. Did Mr. Hornsby have any conversation with you?—He just asked me to be allowed to see the man.

107. Were you present at any conversation between Mr. Hornsby and the man?—No.

108. *The Chairman.*] There is no foundation whatever for the suggestion made in that extract you have read?—None at all.

109. Where is the man now?—He has gone on sick-leave.

110. Where to?—Wairarapa—Masterton, I believe.

111. What is his name?—G. G. Pearson.

112. Was he a private?—Yes.

113. From Masterton?—Yes.

114. Is that the only case that Mr. Hornsby came to see?—I believe so.

115. Did you ever see him there at any other time?—I cannot remember his being there at any other time.

116. Is there any other matter you have to bring before us?—Mr. Salmond was asking about Private Oliver being at Kaiwarra. I find he was there as an orderly. That was long before I was there. He was sent to Berhampore on the 27th April from Trentham. He was there for a few days, and was about four days in bed suffering from influenza. Then he was sent to Trentham and transferred to the infantry. On about the 7th May he was sent back from Berhampore to Trentham.

117. He was sent back sick?—No. I made inquiries from some of my orderlies at Kaiwarra.

118. Have you any other matter you wish to bring before us?—That is all.

119. You remember that Dr. Purdy left Berhampore to go South on the 2nd June?—Yes, sir.

120. Was there any Medical Officer in charge of the hospital during his absence?—He mentioned that Major Elliott would be out, and Major Elliott called on the following day.

121. What did Colonel Purdy tell you?—I would not be certain, but he said Major Elliott would be out, and that I was to ring him up if anything went wrong.

122. How often did you see Dr. Elliott there during Colonel Purdy's absence?—Twice.

123. Twice between the 2nd and the 6th June?—Yes.

124. *Mr. Salmond.*] Was he specially sent for?—No.

125. Did he come back to the hospital after Colonel Purdy returned?—He came back on the Sunday, when the place was inspected by the Minister of Public Health.

126. And not after that?—No.

127. Did he come with them?—Yes.

128. Was Dr. Clay's visit the only occasion when you had occasion to summon a doctor?—Yes.

129. You have spoken of the number of blankets that were got for the men in the marquees at Berhampore: were there not other buildings where the patients were kept?—Yes, two outbuildings.

130. Were the patients kept in the stables?—Yes.

131. How many?—In the harness-room, and the trap-sheds, and the chaff-room.

132. Not actually in the stables?—No.

133. Were there beds in these rooms?—Not at first; but beds were put in afterwards when I got the stretchers.

134. Was there proper sanitary accommodation in these buildings?—There were no latrines at all, except three water-closets down below.

135. Were bed-pans supplied to the patients?—Bed-pans were in the main wards.

136. What about the other buildings?—The convalescents were in the outbuildings. No man was allowed to be out of bed until his temperature was normal for three days.

137. And do I understand that as long as the patients were in bed proper bed-pans were available?—Yes, sir.

138. *The Chairman.*] Had the harness-room and stable been occupied for any time?—I could not say.

139. It was perfectly clean: had it been occupied by horses recently?—Not as far as I knew.

140. *Mr. Ferguson.*] You went there some time after the hospital was first used?—That is so.

141. It was a good building?—Yes, it was quite sound.

142. Had the caretaker any horse running about the grounds?—There was no caretaker there.

143. *Mr. Gray.*] As far as you could see, was there any objectionable feature about these buildings?—No.

144. They were clean and quite suitable for the purpose for which they were used?—Yes.

145. Were there any complaints which reached your ears, while at Berhampore or since, of any patients being neglected there?—There was the case of Kennedy. His brother came and saw Sister Hannah. He seemed to have the impression that the men were not treated properly, but after Sister Hannah and myself had showed him everything he was quite satisfied.

146. Is that the only occasion when there was a suggestion of complaint?—Yes.

147. Where was Kennedy removed to?—The Wellington Hospital.

148. *The Chairman.*] And after he was dead his brother came to interview you at Berhampore?—Yes.

149. *Mr. Gray.*] Was Kennedy a patient there when you went to Berhampore on the 1st June?—I could not say.

150. Do you remember his case?—Yes.

151. Was there anything exceptional in his treatment at Berhampore?—No; the man was quite well as far as I know. He was shifted with the five cases on the Saturday afternoon.

152. Why?—His temperature was a little over 100—101, I think. The nurse said he would probably do a little better in the Wellington Hospital.

153. He was one of the five selected to fill vacancies in the Wellington Hospital?—Yes.

154. *The Chairman.*] He went by the ambulance, I suppose?—I really forget.

155. He was not walked there?—No. His brother said that he had written to him saying that he had pains. Well, he used to be asked at least half a dozen times a day if there was anything wrong with him.

156. Who was the nurse?—There were three nurses—Sisters Keith, Hannah, and Farrom.

157. *Mr. Gray.*] During your time at Berhampore was there any lack of requirements?—No.

158. And you had no difficulty in getting anything required?—Not at all. I used to get everything straight away.

159. Had you ever any difficulty in getting into touch with Colonel Purdy?—No.

160. Had you ever occasion to ring him up at headquarters—Mount Cook—in the daytime?—No, not that I remember.

161. And he made frequent visits?—Yes. About a week before I left Captain Harrison paid daily visits.

162. Are you not under some misapprehension about the case of Colley? Dr. Purdy tells me that he gave you some instructions about Colley about the 9th June, before he was removed: can you recollect that?—I cannot recollect it at the moment.

163. Can you recollect that Colonel Purdy saw Colley on the 9th, and directed you or the sister in charge to remove the man to the Wellington Hospital if he were doing no better in the morning: can you recollect that?—He may have told the sister, but I do not remember his telling me.

164. You are under the impression that it was done while Dr. Purdy was away?—Yes.

165. What is your civilian occupation?—I am a chemist by profession.

166. You have said that there was no guard kept on the hospital or at the gate?—None at all.

167. It has been suggested that if the patients chose they could get out at night and roam about?—It is quite possible, and it would be impossible to guard against that.

168. Do you know of any actual case of a man going out in that way?—I never saw any man, but it was mentioned amongst the men themselves. I did the best I could to find out, but nobody would tell.

169. And you never actually ascertained the name of any man who had got out—in fact, that a man had got out at all?—No.

170. *The Chairman.*] Was that rumour reported to the doctor by you?—Yes, I did report it.

171. Reported to which doctor?—I think it was Captain Harrison, but I could not be certain.

172. Did you ask for more orderlies in consequence?—Yes.

173. There were only convalescents in the harness-room?—Yes.

174. What was the name of the nurse who ordered Colley's removal?—Sister Keith was in charge.

175. Where is she now?—At Heretaunga.

176. Sister Hannah is where?—At the nurses' residential home in Kensington Street.

177. And Nurse Farrom?—I do not know, but probably Nurse Hannah could tell you where she is.

178. *Mr. Ferguson.*] What have you to say about the food at Berhampore?—It was splendid; I never saw anything better, except at Kaiwarra.

179. Had they their own cooking staff?—We had our own cooks.

180. There could be no ground for complaint?—No.

181. Neither as to quality nor quantity?—That is so; it was all good.

Dr. WILLIAM BERTRAM OCHILTREE FERGUSON sworn and examined. (No. 31.)

1. *The Chairman.*] What is your rank?—Captain in the N.Z.M.C.

2. And your medical qualifications?—M.B., C.M.

3. Have you been connected with Trentham Camp?—Yes.

4. For how long?—Since the 20th May; and have remained there since.

5. What are your duties there?—When I went in I was in the Field Ambulance, and my duties were to do such work as orderly-officer for the day, sanitary officer, and any other duties that cropped up in the way of attending to the people who were ill in the different units.

6. Who was over you then?—The O.C. was Major McAra.

7. And up till a certain point, Dr. Purdy?—Yes; he was under Colonel Purdy.

8. Then, after you ceased to be orderly what else did you do?—That would have really gone on—that was one's training for one's future work abroad, I take it—but with the epidemic and the onrush of disease things were altered, and I was given charge of the hospital for general diseases, to differentiate it from measles. I had charge of the hospital for all general diseases. The measles I had nothing to do with at all.

9. Where was the hospital for general diseases located?—Primarily it was located in three or four marquees; but after the epidemic got in full sway and the disease began to get going we had to go to the racecourse buildings, where we have been since.

10. Was the accommodation for the measles kept separate from the others?—Yes.

11. We heard this morning that all those who were sent on from the camp with influenza were put into the kiosk where the measles cases were: is that so?—No, absolutely not. That is absolutely a misstatement. I could explain it.

12. The witness said that about 85 per cent. of those who came in were suffering from influenza and colds?—Yes.

13. And the result was that the measles cases and colds were mixed in the kiosk?—That is not so. I had complete charge. Cases came into the kiosk diagnosed as influenza. They may have been there anything from four to five days or a week, and some of them would get measles. As soon as the measles developed and the diagnosis was certain they were immediately removed.

14. *Dr. Martin.*] Where were the measles cases put?—In different buildings—some in the jockeys' quarters, and at different places. All I had to do was to remove them out of my place, and I sent them out.

15. There were no measles cases in the kiosk?—Absolutely none.

16. *The Chairman.*] What was the kiosk devoted to in your time?—Ninety per cent. of the cases were influenza.

17. You attended Private Badger?—I did.

18. I do not know whether you saw the statement that was given in evidence here on the subject?—I did.

19. He was in town, apparently, on the 22nd, and went into camp on the 22nd. Can you give us your statement with regard to the condition of things when he went in?—Yes.

20. What date did you begin to occupy the kiosk?—I am afraid I cannot speak as to that from memory. It was before Badger was admitted.

21. Would it be about the middle of June?—Somewhere about the end of the second week in June.

22. Had the kiosk up to that time been fully provided with equipment?—That I must explain. It is impossible to answer that Yes or No. At that time there were people coming in.

23. When you went over to take possession of the kiosk was there any equipment?—No, sir. It was taken in an emergency to meet an emergency.

24. And then you had to put in the equipment as soon as practicable afterwards?—Yes, and to meet the onrush of people through the epidemic.

25. You might shortly state what was done to provide equipment immediately after you got into the building?—Of course, that was not quite in my department. I notified the administrative authorities that there were so-many patients requiring beds. They telephoned or used motor-cars and got the equipment there for us as soon as possible afterwards.

26. Was there anything in the shape of delay in getting what was requisitioned for?—There was no undue delay.

27. As extra men kept coming in you had to get extra equipment?—Yes, extra equipment.

28. And had you got completely equipped for as many as the kiosk would provide for by the 22nd June?—We had always equipment for those in it, but as a big sick-parade turned up we had sometimes to send for things, which necessitated an hour or two's delay. What we

did was to get the men to bring their own bed and bedding, and put them up till the other things arrived.

29. How were the men brought there to attend sick-parade—did they walk?—If it was just a cold with a temperature of perhaps 99, or something of that kind, he was marched up with his non-commissioned officer, and other people would carry his baggage; but if he was at all bad he was brought up on a stretcher.

30. He would come then from the camp marquee?—Yes.

31. Will you tell us the history of Private Badger?—Yes. Of course, you will realize that in an onrush of disease like this it is impossible for me to speak absolutely as to dates.

32. We have it from his brother that he went into the hospital on the 23rd?—Yes, that would probably be when I saw him. At that time his temperature was 101·4. With the exception of his temperature he showed no dangerous symptoms at all. His was a case which I diagnosed as ordinary influenza with a certain amount of feverish symptoms. At that time his temperature would be taken morning and night. The disease ran on in the usual way till the fourth or fifth day—I cannot say definitely which—and his temperature had dropped to normal. Perhaps I ought to tell you the method adopted with those cases. Every patient on admission was put to bed and kept there till his temperature became normal or somewhere about 99, when, if he was considered sufficiently well otherwise, he was allowed to go out on the veranda for an hour in the sun, and after his temperature had remained normal for a couple of days whilst he was going out he was then discharged, and either sent on sick-transfer to his home or sent back to his lines. No man was discharged from the kiosk or from any other place I had charge of who had not a normal temperature for two days—absolutely no person. If a man elected to go back to his lines instead of going on sick-transfer, he was then given three days excuse duty and one day light duty in his own tent to harden him to work. This entailed an examination of all convalescents or semi-convalescents every morning, so that I could see who were ill and who were well enough to be discharged from the kiosk—that is to say, it was an examination of those who were presumably able to go out into the sun and those who were able to return to the lines; but I had to endorse that before it was carried out. Well, when the time came for Badger, and when his temperature showed this improvement, he was then treated as a convalescent.

33. *Dr. Martin.*] What was the matter with Badger?—Influenza.

34. *The Chairman.*] Had the temperature dropped to normal after three or four days?—Yes. I distinctly remember seeing him and seeing he was able to get out of bed and go out. I think he was the first case, or at least one of the first cases, I saw on the morning that I decided he was able to get up and go out. I had a long row of men to go round, and I purposely used to let the men stand easy while I went round the lines in order to test them and see that I did not make a mistake, so I let them stand on their legs a little while. When I got to the end of the lines Sister Brandon came and told me that this man Badger had had a rigor—a shivering fit—and I ordered him to be kept in bed with hot bottles. I saw him several times that day and the next day, and he then seemed to be going backwards. His temperature was rising again, and he showed symptoms of not going along as I should wish. I forgot to mention that when I got a serious case like that I used to remove the patient to a place nearer my own quarters so that I could see him at night. He was therefore stretchered and carried down to the trainers' quarters, where my room was, and put in there.

35. Is that what you call the "gate hospital"?—I have not heard it called by that name. That would apply to it, because it is down by a gate. I had him put there because I could see him easier at night.

36. *Dr. Martin.*] Were other patients down there?—Yes, several.

37. What was the matter with them?—They were people whose temperatures were high. Those that came in obviously ill were put into the gate hospital. This man when he showed symptoms of getting worse was taken to the gate hospital so that I could observe him. As soon as I was satisfied there was any danger I telegraphed to his people. They had to come some distance, and in the meantime Badger had symptoms of cerebral hemorrhage with certain facial paralysis. He was partly unconscious, and never regained consciousness, and was so when his people arrived.

38. You seem quite satisfied that the man suffered no undue hardship—that he got proper medical attention and proper nursing attention?—I am certain that he got proper nursing attention, and that he could not have got a better nurse anywhere in New Zealand. The sister in charge was a most magnificent nurse—one cannot speak too well of her attention. It was she who took him in charge, and drew my attention to him from the start, and did everything that could possibly be done for him.

39. In your opinion there are absolutely no grounds for complaint?—Absolutely none.

40. *The Chairman.*] We have a copy of a letter he wrote to a friend as follows: "I am writing this on my knee in bed. I am in the hospital: been here since Wednesday evening last. I was ill on Tuesday. Went on sick-parade Wednesday evening; also Tuesday morning. Not only is it flue, but a rotten cold on the chest. My temperature was 101·4, I think, and my pulse about 90. I have sharp shooting pains in the stomach going towards the right hip. What is it a sign of? I know it is a sign of something, but forget what. The first men to be sick were the luckiest; they all had beds. We are on our mattresses on the floor in the tea-kiosk on the racecourse. My head is aching so much I can hardly hold it up. We cannot shave here, and can only wash if you are fit to get up and have one, and the place is crowded. Last night I awoke—thought it must be at least 3 or 4 in the morning. I looked at my watch, and it was only 9.25 p.m. The nights go slowly and the days fairly fast. I think I must snooze during the day. I must close this; am getting some one to post for me.—Sincerely, ARCHIE BADGER." What he says there is, "We are all on our mattresses"; was that so?—That was so.

41. On the floor?—On a wooden floor.

42. You had not beds at that time?—No.

43. Do you remember those descriptions he gives in his letter about his head aching and can hardly hold it up, and shooting-pains towards the right hip?—Of course, those would be the usual symptoms of an influenza attack. I would not say specially the shooting-pains towards the right hip. I suppose from his letter some one may have been telling him about appendicitis.

44. *Dr. Martin.*] Or cerebro-spinal meningitis?—Cerebro-spinal meningitis had not been diagnosed then; that was a week before. I might say that those symptoms are not pathomonic of cerebro-spinal meningitis.

45. *The Chairman.*] Then he says the kiosk-floor is a concrete floor?—He was inside. The veranda has a concrete floor; but he was inside, and within the walls are wooden floors.

46. In giving evidence his brother said, "They could not shave unless they were well enough to get out of bed to have one. That is not proper attention for a sick man." What have you to say about that?—I think that is the remark of a grumbler. A sick man does not trouble about shaving. He could not get out to do that.

47. There was no barber?—No; there was no barber to go round about three hundred odd men and shave them.

48. Then the witness is asked, "What is your opinion as to the washing of these men during their stay in the tea-kiosk?" and he replies, "I am informed that they were not washed for three days on end"?—I did not hear any complaints about it; but as far as I could see they appeared to be all right. That probably means that the men who were able to get up were able to get a wash, but the others were sponged by the nurses.

49. Do you remember if there was an occasion on which no sponging or washing was done?—No; I think the sponging and washing were done daily.

50. Is that part of the ordinary routine?—Yes, part of the ordinary routine of a nurse or the orderly. It is the duty of the nurse when there, or of the orderly when the nurse is not there. It would not come under my notice or supervision unless brought to it.

51. If the nurse is there you do not issue instructions that the patient shall be washed?—No.

52. Then the witness was asked, "Have you obtained any information as to whether there were nurses or orderlies attending the patients in the tea-kiosk?" and he replied, "Up to the Sunday they were attended to only by inexperienced orderlies—Sunday 27th June." Is that so?—I cannot speak as to the exact date. Yes, that is correct.

53. He says the orderlies were inexperienced?—I would not say "inexperienced," but they were orderlies who belonged to the ambulance lines.

54. Some had had more experience than others?—Yes; they were a mixed lot, and we had to use them for the purpose.

55. Would those men be men who had received instruction before?—Yes, some of them undoubtedly had received instruction; but it is possible some had not.

56. But those were all the orderlies that were available?—Yes, all that were available.

57. Then the evidence reads, "There were then no nurses at all in charge of the patients at this kiosk up to the 27th June?" (Answer) "That is so"?—Yes, I think that is so.

58. "The first three nurses arrived on that day. About the treatment, after being in beds with high temperatures they were ordered to leave the tea-kiosk, and went to the Jockey Club rooms on Friday, 25th June." Is that so?—Not as regards Badger.

59. "They had to turn out on the Saturday and go back again to the tea-kiosk"?—That was not so with regard to Badger.

60. Was it so with regard to others?—When you are speaking of three hundred men I would not like to say no one did. I do not remember any one who did, but it is just possible one or two men who were convalescent may have been told that there was more accommodation for them at another building. They may have been sent down there, and that may give rise to the story. That I am not prepared to say; but it was not so to any extent.

61. "After being in bed with high temperatures they were ordered to leave the tea-kiosk and went to the Jockey Club rooms on Friday, 25th June"?—Absolutely no men with high temperatures went to any other buildings.

62. You remember some were sent from the tea-kiosk to the Jockey Club rooms?—To the jockeys' quarters. Of course, the explanation is that probably the man who is writing is writing about what he does not understand. Some men who developed measles would be sent with high temperatures to the jockeys' quarters; that is where the measles cases were kept. They were removed immediately the measles developed.

63. Then he says they had to turn out on the Saturday and go back again to the kiosk?—No, that is not the case.

64. Then the evidence reads, "Your brother was ordered out of bed and walked across to the Jockey Club rooms." Was he out of the kiosk from the time he came there?—He was not out of the kiosk at all till he went to the trainers' quarters—the gate hospital.

65. "On the Saturday they were ordered back again"?—He did not go back again.

66. "From the Jockey Club rooms they returned to the tea-kiosk: were the beds made during this period?" (Answer) "No, they were not made. Owing to the high temperature of the patients the beds became quite damp." "Up to the 27th June I understand there were no cots for any of the patients?" (Answer) "That is so"?—That is so.

67. "According to your information their beds were placed on the floor"?—That was so.

68. But was it a fact that their beds were not made?—No; the beds were made.

69. Who would make them?—The nurses and orderlies.

70. But the nurses did not come till the 27th?—Then the orderlies would make them.

71. Were the orderlies there right from the start?—Yes, right from the start.

72. There would be no one in charge of the orderlies?—The highest non-commissioned officer would be in charge of the orderlies to see the duty done.

73. That is a man belonging to the Medical Corps?—To the Field Ambulance.

74. When he said that his brother was ordered out of bed and had to walk across to the Jockey Club rooms, is that so?—No.

75. And on Saturday ordered back again?—That is not so with Badger.

76. The witness referred to the beds not having been made and having got damp, through perspiration I suppose. Do you remember any case of that sort occurring?—No; I presume if a man is having a critical sweat that his bed would get damp, but I had no complaints of that sort.

77. Who would be the man who could tell us if there were any complaints: who had charge of the bedding at that time?—Before the nurses came?

78. Yes?—Sergeant Morton. I am afraid he is away on leave at present.

79. He was in charge of the orderlies from the commencement?—Yes.

80. *Dr. Martin.*] What was Sergeant Badger?—He was really at the gate kiosk to accept the admissions and assist with the discharges.

81. That was after he had been there some few days, I think?—Of course, I do not mean to say that because he was doing one sort of work that he might not do other work and take temperatures, but I do not think Badger took temperatures as a matter of routine. The sister in charge might have said, "Come along and give us a hand with this while you are doing nothing"; but in my presence he did not take temperatures.

82. But he says that on his own responsibility he could tell patients to get out. That was not his duty, you say?—He had never had instructions to do so.

83. *The Chairman.*] He said he gave tabloids and chloride of potash on his own responsibility?—That is a thing I heard of and stopped. Chloride of potash is not a safe drug for any one to give indiscriminately.

84. *Dr. Martin.*] Why was Sergeant Badger given those drugs if Sergeant Morton was in charge?—I could not tell you. I do not think it was given to any extent.

85. He had given cascara too?—It is very probable he gave those things under instructions from the sister in charge. She may have given him tabloids and told him to go round.

86. He says he did it on his own responsibility?—I never heard of it.

87. His evidence was: "Did you give tabloids on your own responsibility without the doctor's orders?" (Answer) "Tabloids of chloride of potash." "What strength?" (Answer) "One grain, I think." "Many at a time?" (Answer) "Never more than one at a time." "You did that without advice?" (Answer) "Yes." "Did you give any other tabloids without advice?" (Answer) "Yes, I gave cascara"?—I think you will find on cross-examination there was some mistake about that. No one had authority to give drugs unless ordered by me.

88. He says definitely he gave drugs on his own responsibility: you are not aware of it?—No person gave them; and I am absolutely certain that from the day Sister Brandon was in charge no one was allowed to give medicines of any kind unless I prescribed them.

89. There has been a charge that patients were getting two tabloids of aspirin three times a day: is that so?—No.

90. Aspirin was not administered as a routine?—Perhaps I should tell you how the thing was managed. Every morning, after doing as I told you—that is, looking at the convalescents and discharging so-many of them or returning them to their beds—I went round the room accompanied by Sergeant Morton and Sister Brandon. Sergeant Morton had charge of the temperature-sheets for day and night, and they were before me, and looking at them I examined each individual patient in the kiosk and prescribed for him. As I passed each patient I would say, "Give this man so-and-so"; and presumably that is what was carried out. I am absolutely certain the sister in charge saw my instructions were carried out. As regards two aspirin tabloids being given three times a day as a routine, that is absolute nonsense.

91. That has been stated?—By whom?

92. By Sergeant Badger?—He is quite mistaken about it.

93. *The Chairman.*] You say it is impossible for that to have happened?—Absolutely.

94. You would not prescribe that?—I would prescribe them where indicated, but not to give them indiscriminately. When going round and feeling the pulse I would say whether to give a man 5 or 10 grains, whichever I should think, but they were not given as a routine.

95. The brother was asked, "Have you any information as to the medical attendance?" and he replied, "Yes, sir; the men were only inspected once a day after breakfast, and I understand the doctor just passed through. There were so many he could not examine each man critically, and these serious case like my brother's were not given the attention which they should have had under the circumstances"?—In the first place, I saw and examined every person in that kiosk who had any abnormal temperature twice a day as a minimum, and always three or four times a day when the temperature was at all high. That meant practically something like eighteen or twenty hours a day, and that was carried out day after day by me personally. Where that man who states that gets his idea from is this: if I noticed a temperature was a decided improvement, and there were some people lying about with normal temperatures, I would probably look at them and pass them by; but every person whom it was shown had a high temperature was examined by me carefully.

96. Have the charts been kept?—They were taken to the record-room, but I cannot find them. This is the only one I could find which I have here, and Badger's name is on it. It shows the beginning of his illness. His temperature here was recorded as 101·4 and pulse 92—a light pulse. This, I think, is in Sergeant Morton's writing.

97. He is away just now?—Yes, on leave. I wish to point out that it is perfectly natural in a case like Badger's that these people should feel aggrieved, and that without any cause. This

boy got influenza, and he was improving and got better from the influenza when he got this other disease. The people naturally imagined that we should have diagnosed the second complaint at the beginning of the influenza attack. Of course, that is impossible. They look on his illness as a whole instead of two separate complaints.

98. Then, there was a question about his people not having been notified?—Of course, the same applies to that. It would have been impossible even if it had been desirable to communicate on behalf of every man suffering from an attack of influenza or catarrh, and his people were not communicated with until I thought the man was in danger. As soon as I was satisfied he was in danger I had them sent for.

99. You would give the instructions?—Yes, probably to headquarters. I forget how, but I know they were sent for immediately.

100. Through the orderly?—No; I would ring up the headquarters and tell them this man was on the danger-line, and ask them to wire his people.

101. You had nothing to do with the wiring?—No.

102. You would simply advise headquarters so that they would communicate?—In some instances I rang up headquarters, and also sent off a telegram myself. I was not supposed to do that, but I did so to make doubly sure. In Badger's case I know his people were communicated with as soon as I knew his case was dangerous.

103. *Dr. Martin.*] You say the orderlies were taken from the Field Ambulance?—Yes.

104. Would they belong to the bearer section or the nursing section?—I could not tell you.

105. It is very important, because the orderlies of the nursing section are trained?—Yes.

106. Were they taken from the nursing section or the bearer section?—They were taken from both. We had to take every man in the Field Ambulance. We also had to get the hospital-ship men, and every person we could get.

107. Were there any inexperienced men?—I could not tell you how much experience they had had. I know we took every available man.

108. Regardless of the fact whether he was fitted or not?—Because we had not any others to take.

109. Were the men who had to look after the nursing in the kiosk experienced men?—That I cannot say. Some of them were, and some were not.

110. How many were?—I cannot tell you.

111. How many orderlies had you?—I cannot tell you. The staffing of the place with orderlies was done by the administrative officer, and not by me. Do you realize that my time was occupied from eighteen to twenty hours a day treating these people, with the assistance given me by the administrative branch?

112. You were overworked?—Certainly I was overworked while the rush was on, but in any case I would not have had the staffing of the hospital had I not been overworked.

113. Were you perfectly satisfied with orderlies there to do the work?—I would not be satisfied with orderlies in the hospital, but I was satisfied we had taken every man available, and we consequently did the best we could under the circumstances.

114. When was the kiosk opened?—On the 13th or 14th June.

115. And the first nurse arrived on the 27th June?—Three nurses arrived.

116. Do you know why the nurses were not brought to the kiosk before that?—No, I do not.

117. Had you asked for any nurses to be sent?—No, I had not.

118. Had you suggested to any senior officer that it would be advisable to get nurses to do the work?—I had no conversation with the senior officers on their working of the case at all.

119. Did the Principal Medical Officer of the hospital?—I cannot tell you just on the spur of the moment who was the Medical Officer at the time. I think Colonel McAra had gone by that time. The fact of the matter is that at that time Colonel Valintine had commandeered the racecourse, and I must point out that we were working through a deluge of rain and wind, and we had to get these wretched men out of the wet into a dry place. The tents were blown down before the storm. We had to get the men into dry quarters, and the essential thing to do was not to begin to discuss the question of whether we should get nurses, but to get the men under cover with some sort of comfort and be attended to. That was what I was doing, and the administrative part of the work belonged to others.

120. Who are the others?—I presume Colonel Valintine; and he would give us the means to work with. I could not get nurses; I had no authority to get them.

121. Did you ask for nurses?—I cannot remember what we discussed. There was not much time for discussion.

122. *The Chairman.*] You do not remember whether you did ask?—I cannot remember.

123. The administration would rest with Dr. Valintine?—Yes.

124. *Dr. Martin.*] Between the 14th and 27th June did you think it was necessary to have nurses there?—Now you mention it, the question was raised. I remember now we discussed it.

125. *The Chairman.*] As far as I understand the cases there were not serious: you sent them out, I think, when they developed anything or their temperatures rose?—This was a clearing hospital.

126. *Mr. Ferguson.*] There were no nurses at Trentham before the 27th?—I could not tell you the date they came in. Sister Brandon and the Samoan nurses were the first nurses who came in.

127. *Dr. Martin.*] You were in charge of the kiosk, and some cases were serious and some were not: did you think, as a doctor, that the orderlies were giving you satisfaction?—Yes. I must point out that the way you are putting it is misleading: there were not any serious cases there when we went into the kiosk.

128. I am taking the period between the 14th and 27th: in that period Badger got ill?—Yes. Badger's was not a very serious case till the end of June. I think his was the first serious

case, and no one realized this other epidemic was amongst us. Orderlies were quite competent to deal with cases of cold and influenza.

129. Who took the temperatures?—Before the nurses came?

130. Between the 14th and 27th June?—The orderlies.

131. What orderly?—Sergeant Morton.

132. Did he take them all?—He did not take them all: he would take some and hand them to me when I went in the morning. If I had any doubt about a case I would take the temperature myself.

133. Had these orderlies had any instruction at all in regard to nursing?—I do not know anything about that.

134. For instance, sponging down a patient—who would do that?—An orderly.

135. Did you find out whether he was a trained man before you asked him to sponge a patient down?—I asked him if he had done sponging down, and he told me he had.

136. Can you give me the name of one of the orderlies?—I cannot, except Sergeant Morton. He was in charge of the orderlies, and he would put on the men and show them how to do it.

137. Sergeant Badger said this morning there was a man with a temperature of 103, and he was marched from the lines to the kiosk: do you remember that case?—No, I do not; but in any case I would have nothing to do with that. The doctor of the lines on the sick-parade would have to do that.

138. But you would receive him?—Yes, I would find that was a man with a temperature of 103.

139. Do you remember any such case?—No, I do not.

140. *Mr. Ferguson.*] Should Sergeant Badger, who received that case, necessarily report it specially as being an extraordinary case, that a man with a temperature of 103 was walked up from the lines—was it his duty to do so?—Yes. Badger received all admissions, and, of course, it was his duty to inform me of anything unusual; but as I was going in and going to the different beds it is quite possible he might leave it until I got to the bedside.

141. *Dr. Martin.*] Did you every ask for any assistance?—Yes, many times.

142. Did you get it?—We did not get it immediately. We wanted other medical men to come in. We asked if the lines would be filled up, but it seemed impossible to get them at that time.

143. Were you overworked at the kiosk?—Well, there was a rush of disease, and we had to work very long hours. I have worked as long hours before in an epidemic.

144. But you were quite able to overtake all the patients?—Yes. If one had been missing serious cases it would be a different matter, but one was simply doing hard bullocking work. Eighty per cent. had very little the matter with them, but still one had to see them to be sure they were not going wrong.

145. You never had any temperature-charts in the kiosk?—No; there were not charts sufficient for three hundred men. We had to use books and loose sheets.

146. *Mr. Ferguson.*] Do the ambulance men have a special training as ambulance men?—Yes.

147. Is that training given by the doctors?—A number of them who came into the camp have never been trained previously. Of course, we had no opportunity of giving them training in the camp.

148. There was no training given to the ambulance men in the camp prior to the outbreak of the epidemic?—There was no training given to the men who were attending on the men ill in the marquee.

149. There was no practical instruction in ambulance duties given to the Ambulance Corps?—I believe there was, but I was not present. It was not part of my duty.

150. *The Chairman.*] What were you attached to?—I was supposed to go with the Sixth. I was to go into camp, I suppose, to get some military training.

151. *Mr. Ferguson.*] I want to know whether those men had had previous training either at Trentham or elsewhere?—That question I could not answer.

152. *Mr. Gray.*] In regard to the equipment of the hospital generally, have you anything to say about the marquee hospital previous to going to the racecourse?—It seems exactly the same thing happened in the marquees as happened in the racecourse.

153. I mean the ordinary camp hospital with which you were associated before the epidemic?—Well, I only had one day. As a matter of fact, Captain Tolhurst was in charge of the hospital. He asked me that day to take it for him. That was the day on which the move was made, and that is how I got into the racecourse business.

154. Have you anything to say about the equipment at the camp hospital when you saw it—any fault to find with it?—None whatever.

155. During the month of May was Colonel Purdy supervising the camp generally?—Yes; he was there the time I was there.

156. Have you any reason to suppose that in the kiosk hospital the temperature of the patients was not regularly and properly taken?—I am absolutely certain it was.

157. And until the nurses came was any inconvenience caused, so far as you know, for want of nurses?—I do not think so.

158. You were satisfied, were you, with the way the orderlies performed their duties?—I was.

159. *The Chairman.*] In regard to latrines, Badger's brother said the men had to get up out of their sick-beds and go right down the cold room. There were no bed-pans provided?—Yes, there certainly was at the beginning of the epidemic a shortage of bed-pans, but that was remedied as soon as possible.

160. And we have it from the sergeant that they used to get up at night even when bed-pans were there?—Yes; it was very difficult to make a lot of those boys think they were ill. A

man with a temperature of under 100 was not going to use a bed-pan if he could get outside, and when there was a number of people there they would dodge out if they possibly could.

161. Apparently during the first week, at any rate, there were no nurses, but simply orderlies, and the full equipment was not there?—Yes, the full equipment was not there.

162. But the position actually was that those were really cases of influenza, and they were not kept there when the temperature did not show some serious indications?—That is so.

163. How many men would the marquee hospital accommodate?—Somewhere about fourteen, I suppose.

164. *Mr. Ferguson.*] You had several marquees?—Yes; when the epidemic commenced we had to put up several. I had nothing to do with the measles cases.

165. *The Chairman.*] Had you anything to do with the men put in what are called horse-boxes?—Yes.

166. First, they were floored with concrete, were they not?—No, I think a hard stone floor. They are infinitely better in a storm than a tent. They are absolutely dry.

167. They were put there as a shelter from the storm?—Yes. It was blowing everything about, and the rain was coming through everywhere. As a matter of fact, I would very much rather prefer to have slept in one of those than in a tent on some of the nights we had at Trentham.

168. They were absolutely warm?—They were quite warm, and one would sleep in there any night.

169. You think it was really no hardship when the men were placed in those boxes?—I took care to ask the occupants of every horse-box how they were satisfied with them, and they said, "This is all right; this is a lot better than the tents." Of course, after being there a day or two they began to ask when they were going into the kiosk; but at first, when they came from the tents, they were glad to get into the dry loose-boxes.

170. How long were they kept there?—Till we could as soon as possible find accommodation elsewhere.

171. Is there anything you would like to add that you have not covered?—No, I do not think there is anything further I want to say.

Dr. HENRY LIONEL HUGHES STEELE sworn and examined. (No. 32.)

1. *The Chairman.*] What are you?—A medical practitioner in Wellington.

2. Have you an Army title?—Yes, Captain in the New Zealand Army Medical Corps.

3. *Dr. Martin.*] I understand you were called to Berhampore Hospital?—Yes.

4. On what date?—The 30th June.

5. You were called to see two patients there?—I was given instructions by the P.M.O. of the Wellington District. Major Elliott rang me up and told me to go out to Berhampore about 9 o'clock one night. He asked me if I would go out to Berhampore and see some bad cases there. I think he said there were two bad ones.

6. You went out, and whom did you see?—I saw the nurse in charge, and asked her to show me the bad cases and she showed me two. Before seeing them I inquired who was looking after them, because I wanted to know something about the case, and she told me, I think, that Captain Harrison was looking after them. I asked if Major Elliott had anything to do with them, and she said, "Yes, he had been out." Then I saw the chart sheets so that I could get some idea of what was wrong. Then I went in and saw the patients myself. I saw two of them: they were both very bad; they were Fordham and Pollard. I think one of them was dying at the time; he was pretty nearly gone when I saw him. I examined one, but I do not remember which one, and I found he had very severe bronchial pneumonia. I did not examine the other one because he was just as bad, and there was no object to be gained in pulling him about.

7. He was on the point of death?—Not on the point of death, but in a very bad way. The breathing was very bad, and the man was in a bad state altogether. There was no object to be gained in examining him. I examined one for my own satisfaction to know what was wrong. Then I gave the nurse instructions for the night about treatment and went away. Major Harrison had given a detailed list of the treatment, and there were certain mixtures to be given on certain occasions, and I told the nurse to go on with the usual treatment he had ordered.

8. Did you order their removal to the Wellington Hospital?—No, I did not. I asked why they were there—that is all.

9. You did not order their removal to the Wellington Hospital?—No; I asked the nurse if they were going to the Wellington Hospital. It was not my business to order their removal; I was only sent up temporarily.

10. *The Chairman.*] You thought they ought not to have been there?—Decidedly.

11. When did they get to the hospital?—I do not think they got there unless they got up next morning.

12. *Dr. Martin.*] Do you know if when they arrived at the Wellington Hospital they were dead?—I did not know that, but I do not think they would have got up there.

13. We have a report that they died in the Wellington Hospital?—Well, I think they should not have taken those men to the Wellington Hospital in the condition they were. They were so far gone there was no object in moving them.

14. *The Chairman.*] Do you know who ordered their removal?—Captain Harrison was looking after the case.

15. *Dr. Martin.*] You would be surprised to learn they were removed?—Yes, at such a late stage. I did not think there was any intention of their being removed. I asked the nurse about them, and she said they were staying on. There was no idea of removing them when I was there.

16. You did not see them after that?—They died next day, I think, according to newspaper report.

17. What were the surroundings of Berhampore at this time?—I would not call it a hospital. It was a kind of whare or shack.

18. *Mr. Ferguson.*] Where were the men?—In the house. I was only in one building.

19. How many beds were in the building?—Eight in one room, I think.

20. *Dr. Martin.*] You called it a whare or shack?—Yes, quite an unfit place for sick men to be in, because you had to get to it across creeks and ravines.

21. *The Chairman.*] You said it was quite unfit—outside and in?—Both.

22. Do you tell me that this hospital which was put up for infectious diseases is a shack?—I did not know that.

23. I may tell you it was put up as a fever hospital?—I did not know that; it looked a small place.

24. Have you ever seen it?—I only saw it at night.

25. Then you ought to know better as a medical man than to come here and tell us that the building was a shack if you had not seen it?—I am sorry; that was my impression. It was at night-time I saw it.

26. I refuse to accept such a statement. I am sorry you did not realize the importance of it?—I withdraw it, sir.

27. Would you like to go out and see it before you give further evidence?—I will say I did not see it because it was at night-time. I will take back that statement.

28. *Dr. Martin.*] Were you satisfied with the surroundings of the patients?—I saw the place only at night.

29. It did not seem overcrowded?—I could not see very well, because there was only an oil-lamp. There were eight men in one room, as far as I remember.

30. *Mr. Gray.*] How long were you in the building?—About twenty minutes to half an hour.

31. And you did nothing but examine one man and tell the nurse to keep on the treatment?—I discussed the treatment with the nurse, and I saw the other man.

32. And thought nothing could be done?—I did not order anything.

THOMAS HARRISON sworn and examined. (No. 33.)

1. *The Chairman.*] What is your Army title?—Captain in the N.Z.M.A.C.

2. What are your medical qualifications?—M.B., Ch.B., New Zealand; M.R.C.S., England; L.R.C.S., London.

3. What association have you had with attendance to the sick in connection with the reinforcements either at Trentham or elsewhere?—I arrived in Trentham on the 1st June, did ordinary routine work as orderly-officer and attending the sick-parades till the 12th June, and on the 12th June I was put in charge of the measles department.

4. The measles hospital was where?—At Berhampore; Victoria Ward, Wellington Hospital; the Isolation Ward, Wellington Hospital; and at Kaiwarra.

5. *Mr. Ferguson.*] Those were not all open on the 12th June, were they?—No; the Wellington Hospital parts and Berhampore were open.

6. And the others subsequently?—Yes; Mr. Izard's house was taken subsequently too.

7. *The Chairman.*] Had you any one under you?—No, sir. I had complete charge of the measles from the 12th June to the 4th July.

8. Where were you living?—At Trentham Camp.

9. Had you to come to town every day to attend?—I attended the measles patients in camp before I left for town, and then I left for town and visited each place and saw each patient each day.

10. You attended to the measles at the camp?—Yes.

11. Did you visit each place each day more than once?—No, once.

12. You got to Berhampore once a day after the 12th June?—Yes.

13. Who was in charge—the nurse?—Sister Keith.

14. Did she remain in charge right on?—Yes, right on. I am not certain if she was there at the start.

15. She is a qualified nurse?—Yes.

16. Was that visit of once a day to Berhampore sufficient?—Yes.

17. Were they suffering from nothing but measles—were there not bronchial affections?—There were measles and, of course, attendant sore throats which one gets with measles in the convalescent stage, and two patients who took seriously ill.

18. Those were not convalescents that were sent to Berhampore?—During my administration they were convalescents.

19. There were sent there as convalescents?—Yes, they were convalescents.

20. Then you say there were two or three serious cases—they developed while there?—Yes, while there.

21. *Mr. Ferguson.*] Were those men seriously ill when you took charge on the 12th June?—No.

22. *The Chairman.*] What did you do with cases of serious illness?—Sent them to the Wellington Hospital, as a rule.

23. There are two cases we have heard of—Fordham and Pollard?—Yes.

24. You have heard the suggestion that they were seriously ill, and the last doctor said they ought not to have been in the hospital. Do you remember the history of them?—I do rather vaguely, but I was not prepared to give evidence to-day.

25. Would you like to have had further time?—No, sir; I will go on. Those men were sent as convalescents to Berhampore with colds and slight bronchial trouble.

26. Could you give the date when they arrived at Berhampore?—I could not tell you the date offhand; it was after I took charge.

27. What history have you got about them?—They had slight colds, which developed into a more acute stage: they developed into bronchial septic pneumonia. I saw them one day when their temperatures were up, and I considered that if they were not better next day I would shift them to the Wellington Hospital.

28. What date would that be?—I could not tell you; two or three days after I saw them first. The next day they were markedly worse, and I considered it would be very dangerous to shift them from the place they were in. I considered the nursing plus the medical instruction to the nurses was absolutely all that one could do in such a condition, and that the nursing they got there was such as they could not have got elsewhere. It was absolutely the best nursing they could get.

29. You mean from the point of view of the nurses' qualifications?—From the attention they received from the nurses, from what I saw on my visits there.

30. How was it that the last doctor who gave evidence went to see them?—I was asked one day on the telephone by some one if I would consult with Dr. Thacker about Pollard and I refused. I was rung up later and asked if I would consult with Dr. Herbert, and I said I would.

31. *Dr. Martin.*] Why did you make an exception to Dr. Thacker?—Dr. Thacker was a politician, and I knew Dr. Herbert was in practice.

32. Did you have a consultation with Dr. Herbert?—Yes.

33. What date?—I could not tell you the date from memory.

34. *The Chairman.*] At Berhampore?—At 4.30 on the day before the patient died. I went to the telephone immediately afterwards and rang up Dr. Elliott, and asked him to see the patients for me that night as I considered it advisable that they be seen again that evening, and I could not see them because I was going to camp. Dr. Elliott wanted to know something about his standing with the Defence Department, and I said that was nothing to do with me—the patients had to be seen—and he said he would send Dr. Steele.

35. *Dr. Martin.*] Did you see the men next day?—I sent Captain McCaw in to see them. He saw them shortly before they died.

36. Who signed the death certificate?—I did.

37. What did you state as the cause of death?—Measles, bronchial pneumonia, septic pneumonia following measles.

38. We have a return from the Commandant's office saying those men died in the Wellington Hospital?—They died in Berhampore Hospital.

39. We have been told Berhampore has had no deaths, but, to your knowledge, it has had two deaths?—Yes, two deaths.

40. *The Chairman.*] Was this a sudden development into septic pneumonia?—In those two cases it was.

41. Did they become comatose before they died?—No; one was a little delirious, but they died the usual death of bronchial pneumonia.

42. *Dr. Martin.*] You were not at Berhampore when Colley was there?—No.

43. *The Chairman.*] Have any other deaths occurred of those who have gone to Berhampore, or those who have gone from Berhampore to Wellington Hospital?—There were more deaths at Wellington Hospital. There was a man named McFarlane who died in Wellington Hospital who, I heard, had been transferred from Berhampore.

44. *Dr. Martin.*] You did not have a man named Stafford under your charge?—Yes, at Victoria Ward.

45. Did he come from Berhampore?—No.

46. And Phillips?—He was not under my care.

47. Bartlett?—Yes.

48. Where did he come from?—He was not in Berhampore.

49. Matheson?—Yes; he was under my care, but I do not know where he came from. He died in the Wellington Hospital.

50. *The Chairman.*] You reported to Major Elliott the condition of these men?—Yes.

51. And how was it Dr. Steele went to see them?—Dr. Elliott had been up previously one night to see a patient who was bad, and I asked him would he go and see those two patients that night. It was merely a conversation over the telephone. He demurred about going himself, and I said I wanted some competent medical man to see them, and he said he would send Captain Steele, and I said "Very well."

52. Could you not have stayed in?—No; I had so many measles cases to see at camp when I got back.

53. You must have been making a long day of it in those days?—Yes.

54. Could you not get any help?—All those in camp were working at their respective duties, and the men could not be obtained.

55. Was it not a large order for you to live at Trentham and take charge of the measles cases there, others at Kaiwarra and Berhampore, Wellington Hospital, and at Mr. Izard's house?—I have done much more in general practice.

56. *Dr. Martin.*] How did you get about?—In a motor-car.

57. *The Chairman.*] You say you had a consultation with Dr. Herbert?—Yes.

58. Is he connected with the military?—I could not tell you.

59. Then how was it you consulted with him?—I was rung up.

60. It was some friend who wanted him?—Perhaps so.

61. Did you consult with Dr. Herbert as to whether the patient should be removed to the hospital?—They were very bad, and could not be removed.

62. What was the character of this place at Berhampore as regards buildings—was it a wooden building?—Yes.

63. Lined?—Yes, with two wards.

64. It was built for a fever hospital?—Yes.

65. Would you call it an old whare or a shack?—I certainly would not.

66. Was it in good repair?—Yes; the approach to it was not the best in the world, but the place itself was all right.

67. Was it adapted, in your opinion, for the purposes of a measles hospital?—Yes, if you could not get better. There are certainly better places, but it served its turn quite well.

68. Had you proper equipment there in the shape of beds and bedding, and so on?—Yes.

69. Berhampore is closed now, is it not?—Yes.

70. Did you continue to attend up till the end?—Yes, till the last week—up till the 4th July I attended.

71. And what generally were the results obtained there—good or not?—Very good.

72. That is the convalescents, in most cases?—They went straight on ahead. One or two cases, of course, naturally went back, but that is the case in all epidemics. There are lapses no matter where you have the patient.

73. In the case of measles with grown-up persons they are more dangerous sometimes than with infants?—Yes; you cannot control grown-ups as you can control infants. They take too many chances.

74. When you saw a case was going to be bad you had it removed to the hospital: is that so?—If I thought he was going to be seriously ill.

75. Did you think those cases were going to be seriously ill?—No; they had a rise of temperature one day, and I expected they would follow the usual rule, but they got rapidly worse during the next twenty-four hours by the time I saw them again.

76. On the first rise of temperature you did not regard it as serious?—No.

77. Is that your experience in an epidemic?—Yes.

78. And in the next twenty-four hours they got seriously ill?—Yes.

79. Had the nurse any orders during your absence?—I gave them no orders about removal of patients—I took complete responsibility.

80. Were you informed about the condition of these men by telephone, or did you discover it when you came in next day?—I do not remember any information reaching me, but the sister told me they were not so well as soon as I arrived next day. They could have been shifted the second day, but I considered it would have been detrimental to their chances if I did shift them.

81. They were in a condition to be shifted, but it was taking a risk?—Yes.

82. *Mr. Gray.*] Would the men have derived any benefit from being shifted to Wellington Hospital?—No.

83. You describe the nursing at Berhampore Hospital as good?—Yes.

84. And attention also good?—Yes.

85. Was there any lack of equipment, or anything to the men's discomfort?—No.

86. You say this building, which served its purpose well, has rather an undignified approach at night?—Yes.

87. But there is another approach by motor-car to the door?—Yes.

88. There would be no crossing of ravines and gullies and that sort of thing?—No.

89. Was there anything in the condition of those men to direct special attention prior to the sister saying they were not doing so well?—None, except the slight rise of temperature.

90. Is there anything exceptional in that?—No.

91. That occurred in many cases?—Many cases.

92. Do you know what regiment those two men came from?—I could not tell you offhand. I believe one came from the 2nd Battalion, Trentham.

93. Was there the greatest amount of disease in that?—Yes, markedly.

94. Did that suggest anything to you?—It suggested that they were either a remarkably puny lot of unresisting men unaccustomed to hardship, or else they brought the special disease with them.

95. *The Chairman.*] When these men were sent from Berhampore who sent them away—they were sent away to the morgue afterwards?—Yes. I could not tell you from memory.

96. Would you order the dead bodies to be sent away?—They died after Captain McCaw saw them; he went on my instructions on the 2nd July.

97. *Mr. Ferguson.*] Do you know what time of the day you saw them—would it be early?—Yes. I sent him from Trentham at half past 8 in the morning.

98. *The Chairman.*] He might then have ordered the removal of the bodies?—Yes.

99. You did not know whether the practice was to send them to the hospital?—I have an idea they went to the Wellington Hospital morgue.

100. At Trentham you had to attend to the measles cases?—Yes.

101. They came to you from the lines, did they?—Yes.

102. And where were the measles cases placed while you were in charge?—In the jockeys' quarters.

103. Anywhere else?—Nowhere else.

104. How did they get on there: did you have any fatal cases?—No.

105. Did they all get right?—Well, I transferred them as their temperatures became normal to Dr. Izard's house and to Kaiwarra, and the serious cases to Wellington Hospital.

106. You had nothing to do with Badger, had you?—I saw him once or twice with Captain Ferguson, but it was merely casual.

107. When going round the wards?—Yes. Captain Ferguson would be going round, and he would ask me if I had anything to do. It was not very often, but I saw him two or three times.

108. Was that after he had got bad?—Yes.

109. *Dr. Martin.*] Can you tell me who was in charge of Trentham on the 11th June—the day before you went?—I do not know. My first interest in measles was on the 12th June.

110. Who had charge the day before you took over?—Captain Simpson was looking after the measles generally in the camp.

111. Where is he?—Gone on the hospital ship.

112. Sister Keith was at Berhampore on the 12th: do you think she would know about these men?—She was there on the 12th, and I think she was there before. There were three nurses when I arrived.

The Chairman: Do you know, Colonel Purdy, who was at the Berhampore Hospital on the 11th June?

Colonel Purdy: I was in charge up to the 12th June.

The Chairman: Were you visiting?

Colonel Purdy: Yes.

The Chairman: What about Captain Simpson?

Colonel Purdy: He was out in the camp.

The Chairman: You saw all the patients in Berhampore up to the 12th June?

Colonel Purdy: Yes; I can tell you about Colley.

113. *Mr. Gray* (to witness).] You went on to the camp on the 1st June?—Yes.

114. And you had to do with the general hospital prior to this outbreak?—Yes.

115. Have you anything to say about the general conditions?—On the 1st June there were five patients in the general hospital in camp, with various complaints. I was not in charge: they were in the marquees. The number of patients up till the 8th June was small, and increased in a most rapid manner and overtaxed our accommodation. It was an unprecedented epidemic.

116. Until you took charge of the measles cases alone you were concerned with the general hospital, were you not?—I was concerned with the general ambulance lines.

117. What do you say about the equipment?—The equipment of the hospital out there was of the best that could be got in a camp hospital, as far as I know.

118. *The Chairman.*] You are speaking of the hospital, apart from the Jockey Club buildings?—The camp hospital—the marquees.

119. *Dr. Martin.*] How many marquees had you?—Two.

120. With beds and mattresses and pillows and blankets?—Yes.

121. *The Chairman.*] You had to attend those who came on sick-parade?—From the 1st to the 12th.

122. Did every one who was sick come to you, or did you go to them: what was the practice?—They paraded at a quarter past 8 in the morning and a quarter past 4 in the afternoon, and sometimes at 7 if we thought they were sufficiently bad. If they were so bad that we did not want them to go back to the tents we sent them to the hospital

123. It is suggested the men were not attended to, but left lying in the tents, because the medical men would not go and see them?—Absolutely wrong.

124. Did you ever go and see a man who was lying in a tent because he could not get up?—I did.

125. If a case was reported like that, would you go to him?—Yes.

126. And would the other medical men go in the same way?—Every one of them.

127. You heard that suggestion made before?—No. The orderly-officer of the day has all those things to attend to. There is a different one each day, and if he was not fit to go and was in bed—say, at 11 o'clock or midnight—another man was put on, and would take his place willingly. There was no hesitation on any one's part in going to see the sick men in the tents.

128. *Mr. Ferguson.*] You say that the camp hospital was excellent?—As far as I know.

129. We understand that you came after Major Fyffe?—I was not there when Major Fyffe was there, but subsequently.

EDWARD YEATES sworn and examined. (No. 34.)

1. *Mr. Skerrett.*] What medical degrees do you hold?—Licentiate and Fellow of the Royal College of Surgeons, Ireland; Licentiate of the College of Physicians, Ireland; and L.M. of the Rotunda of Dublin.

2. What military service or experience have you had?—In 1900 I went in charge of a troopship to Cape Town. I was then in camp at Cape Town, and then transferred to No. 2 Stationary Hospital, and went to Orange River Colony in the same hospital, and then to Johannesburg, Transvaal, with the No. 2 Stationary Hospital. Afterwards I was sent on duty down to Cape Town, and I volunteered to take charge of the smallpox camp which broke out in the quarantine-station. I remained in charge of that until I stamped out the smallpox—for about four months. I was then appointed Captain of the Medical Staff Corps, and I was Chief Medical Officer examining recruits for oversea colonies, and Imperials and local men. From 1901 to 1902 I was also on special plague duty. In 1902 I was appointed Captain in the British South African Police, and had charge practically of the whole of the Forces of the Matabeleland, and P.M.O. for a time. From then until now I had no military experience until I went to Samoa.

3. Will you state generally what medical position you occupied in the military services during your sojourn in South Africa?—I had charge of the camps in East London during my time in the stationary hospital.

4. What was your position in the stationary hospital?—I was Civil surgeon attached to R.A.M.C.

5. And afterwards Captain in the Cape Medical Staff?—Yes.

6. At any time in South Africa were you in charge of a stationary camp or stationary hospital?—Yes, I was in charge of the whole of the Matabeleland South African Police for two years and a half.

7. What experience have you had of military camps?—The British South African Police. The other was all hospital experience. I had charge of certain camps on occasions while on duty in Cape Town.

8. Will you now please proceed in regard to Samoa?—I volunteered for the Expeditionary Forces, and went to Samoa as Captain of the Medical Forces.

9. When did you go to Samoa?—On the 19th September, 1914.

10. When did you return?—I got back to this country on the 9th November.

11. Had you any reason to suppose that your services in Samoa were not completely satisfactory?—No; on the contrary, Major Holmes gave me a report saying that my services had been so admirable that he wanted me back again.

12. Were you sent for from Samoa, or did you apply to be removed or transferred to New Zealand?—Neither one nor the other—I was sent in charge of the sick. Some Medical Officer had to go, and they took me.

13. Will you tell us how you became acquainted with the Trentham Camp?—I got an order from the P.M.O., Auckland, ordering me to report at Trentham Camp on the 28th December.

14. When did you accordingly report?—I did not report until the 29th, as I got into Wellington very late on the night of the 28th.

15. How long were you in Trentham Camp?—I was there until the 27th February, 1915.

16. Were you during the whole of that period engaged in work in Trentham Camp?—Not the whole period: part of the time I was at the Upper Hutt remount camp.

17. For what period of time was that?—Only about ten days.

18. Then, with the exception of ten days, you were from the 29th December until the 14th February engaged in the Trentham Camp?—Yes.

19. In what capacity?—Well, it is hard to say.

20. What was your nominal position?—My nominal position was one of the Medical Officers.

21. Who were the medical staff at Trentham Camp at the time of your reporting there?—Major Holmes and Captain Fyffe.

22. What was Major Holmes?—I was told he was Administrative Medical Officer. There was also Captain McAra.

23. *The Chairman.*] Were you told that officially?—No, unofficially.

24. You did not know who your commanding officers were?—Well, there was no other officer of superior rank than Major Holmes there.

25. *Mr. Skerrett.*] Shortly after your arrival at the camp did you form any opinion as to the character of the camp?—Yes, I did.

26. Will you state it?—It struck me as being improperly laid out, the tents very crowded together, and the general system absolutely undisciplined. I am speaking as regards the medical service. There was no system attached to it, and no regular way of carrying on the work, particularly the sick-parades.

27. How long was Major Holmes in camp as Administrative Medical Officer before you reported at the camp?—One day, I think. I think he arrived on the 28th.

28. How long had McAra and Fyffe been there?—I understand they were there from the 13th December until the day I arrived.

29. Before dealing with the sick-parades, do I understand you complain that there was no system of performing the work attached to the camp?—If there was I never found it out.

30. Can you venture upon any detail illustrating exactly what you mean?—Well, for instance, take the sick-parade: as far as I know no one got any orders about how the sick-parades were to be carried out. There was a large marquee there, and when the sick men came there were three Medical Officers in the marquee to receive all the sick men. There were two orderlies supposed to take down what the sickness was on the sick-report, but it was impossible to conduct a sick-parade with three medical men all talking together and the sick men coming in without any proper sequence. That was altered to a slight extent afterwards.

31. *The Chairman.*] But did you not attend the sick-parades?—Yes; but I afterwards spoke to Major Holmes and told him it was impossible for three medical men in one marquee to have any idea of carrying out a sick-parade.

32. Were you one of the three?—Yes; and I objected to it as being an impossible way to carry out a sick-parade.

33. Will you tell us in what respect it was slightly altered?—With regard to the ambulance. Major Holmes recognized the fact of the ambulance being in the midst of the camp jammed up amongst the officers' quarters in a wrong place, and he ordered its removal, and put it across the road in another situation—that is, the whole ambulance.

34. You include in that the hospital marquee?—Yes, and everything.

35. *Mr. Skerrett.*] That removal was in consequence of orders given by Major Holmes?—Yes.

36. Was the Administrative Medical Officer present as a rule at the sick-parades?—I never saw him but twice, and that was generally towards the end of the sick-parades.

37. Did you observe anything with regard to the method or system of issuing drugs or dressings?—Yes; the drugs and dressings at first were in the same marquee as the sick-parade was conducted in; and the orderlies were not, as a rule, trained—there were one or two trained. The result was that there was great confusion in the issuing of drugs. Shortly afterwards another

marquee was erected for the use of drugs and dressings, and looking after the men generally who were passed out from the sick-parade. In the marquee things were covered with dust owing to the wind. The marquee was unfloored, and it was absolutely impossible to have clean and aseptic dressings. The methods of swabbing out the throats was rather bad, as they were rather short of brushes, and they used to use the same brushes without properly sterilizing them.

38. *Dr. Martin.*] How were they cleaned?—As far as I could see they were dipped into boiling water occasionally.

39. And the same brush used again?—Yes. There was also a great shortage of thermometers; and I might say here it was rather confusing after the system was continued of having medical men in the marquee to see the sick men. Before I left there there were six medical men in the marquee. I have seen a man go in and be examined by one Medical Officer and an order given for a dose of calomel. Not knowing what he had to do, he has walked on, and has been collared by another man and ordered a black draught; and I have seen him go to another and be ordered a dose of salts. I have seen that myself.

40. *Mr. Skerrett.*] Did he take them all?—No, I stopped him.

41. Was the number of men reporting on sick-parades increasing or diminishing during the period you were there?—Increasing.

42. When, in your opinion, was the number of sick men reporting on sick-parades significant to the medical authorities?—It should have been right from the start, when I went there. Very few days after I went there it should have been significant.

43. Did it strike you from the number of sick men reporting on parade or sick that something was wrong in the camp?—Yes.

44. Did the medical men, in your opinion, appear to appreciate the responsibility arising from the number of sick men reporting on parade?—I do not think they appreciated the facts, in this way: that they had not had experience of dealing with military camps at all. I do not think it was any want of professional knowledge, because they were all well-qualified men, but they had not the experience which would tell them, from a certain number of men in the sick-parade in what should be a healthy camp, that there must be something wrong.

45. Did you personally take any steps in connection with the number of men reporting in this manner?—I did, but my suggestions were not accepted.

46. Whom did you make suggestions to?—Major Holmes and Captain Fyffe.

47. In what direction were those suggestions?—That there would shortly be an outbreak in the camp if something was not done to isolate the cases of measles that came in; to take more precautions and prevent them mixing with the other men; and generally to improve the system of teaching the orderlies and give them responsibility.

48. Were any lectures or instructions given to the Ambulance orderly?—That I cannot say; I never heard.

49. As far as you know, were there?—I know nothing about it.

50. *The Chairman.*] Were your suggestions put in writing or only verbal?—At first I wrote some notes, but it was suggested I should not, so I afterwards verbally spoke on several occasions.

51. Have you got copies of what you wrote?—No; I wrote them on camp paper.

52. To whom did you address them?—To the A.M.O.

53. Do you know if they reached any higher authority than the A.M.O.?—I do not know.

54. *Mr. Skerrett.*] I want to give you an opportunity of a general criticism of the condition of the camp, the size, its position and its compression, and so on?—The site of the camp is not an ideal site, but at the same time it could be made absolutely suitable. The camp proper, while I was there, covered about 4½ acres. The tents were continually standing in the one place, and a fresh draft of men would come in and occupy the same tents—the same night or the next morning after the men went out.

55. Can you give the Commission any information as to any systematic striking of tents?—There was none while I was there.

56. Do you mean they were never struck, or no system of regulating their striking?—There should have been a system of regulating the striking, but they were never struck sufficiently. I saw them struck once in two months.

57. That is for airing?—Yes, airing and letting the sun get underneath. That brings me to this: that in the camp men lie on the earth unless they bring sacking for themselves. This sacking was stuffed with straw, which they bought.

58. They had so-much given them?—I did not know that. They had to buy the sacking. Those beds had to be put out and aired every day with the kits; but there was absolutely no room for each bed to have its own plot—they overlapped on account of the compression of the tents—and there was no room without tripping over the ropes.

TUESDAY, 27TH JULY, 1915.

EDWARD YEATES further examined. (No. 35.)

1. *Mr. Skerrett.*] You wish to refer to the sick-parade?—In giving my evidence yesterday about the sick-parade I omitted to make one point clear, as to the signing-up of the sick-reports. These were papers which came from each corps showing the names of the men and other particulars, in which the details as to sickness had to be inserted. With three, four, five, and six Medical Officers in the marquee it was absolutely impossible to differentiate as to who diagnosed the different cases, and, as a rule, one of the Medical Officers would be left to sign up all the sick-reports. The result was that many men who went through might easily have been missed as being infectious cases.

2. *The Chairman.*] How do you mean they would be missed: the complaint would be on the paper?—But no disease; it might be missed in the confusion in the tent, because it was so crowded that it was impossible to make a proper examination of the men.

3. I do not see how that would apply to the signing of the sick-reports?—You would not be able to prove which Medical Officer had examined the particular man, because one officer was left to sign up all the reports.

4. *Dr. Martin.*] Those forms are in triplicate?—Yes.

5. *The Chairman.*] You do not mean to say that the one doctor would put in the treatment and as to what was to be done regarding the man: that would be put in by the Medical Officer who examined the patient?—But there was nothing to show which Medical Officer made the examination.

6. Would there be any ill consequences through that: if a man was directed to go to the hospital he would go there?—But at the same time, supposing anything happened, there would be nothing to show which doctor examined the case.

7. But they would all be responsible?—That is the thing which I do not think was quite right.

8. *Dr. Martin.*] Who would put in the treatment—not the doctor who signed up the reports?—No, the doctor who made the examination: or, rather, it would be put in by the orderly, to whom it would be dictated by the examining doctor.

9. Was it filled in at the time the report was signed up?—No, when the examination was made.

10. Then the signing of the report would not be of great importance?—But I might have to put my name to a diagnosis with which I did not agree.

11. But that is the general practice?

12. *The Chairman.*] I understand that those papers are for dealing with the men: if a man is sent to the hospital his case would be diagnosed there by the doctor in charge?—But some of the men were not sent to the hospital.

13. And you cannot say, at any rate, that anything serious has followed as the result of that practice?—No, I am not saying that, but only speaking of the system, which I think was wrong.

14. *Mr. Ferguson.*] Was it right for the orderlies to write down the nature of the complaint?—Yes, that is perfectly correct.

15. The doctor dictates it to the orderly?—Yes; but I would prefer to have my own sheets to sign. After a few days I refused to sign up in any cases which I had not examined myself.

16. What happened then when you refused?—Nothing happened at all: I simply objected.

17. Did you sign when you were called on to do so?—No; I was not asked more than once.

18. Did you not sign even your own sheets?—I had none of my own: there was no separate examination.

19. How do you mean that there was no separate examination: did all the doctors deal with each case?—No, sir; the men all came in, and would be sent up for examination.

20. At once?—Yes, at once, in the marquee.

21. Then, which would be responsible?—I take it that the man who signed the report would be responsible.

22. But it did not matter who signed, apparently?—I think it did.

23. Were you one of the Medical Officers they came before?—For a while, yes.

24. At any rate, you considered that there was a defect in the system?—Yes; and I think it caused unnecessary confusion.

25. *Dr. Martin.*] But that is the common practice in the Army?—I never saw it on sick-parade.

26. It is carried out at Aldershot?—Five or six medical men in one marquee?

27. Yes, and one man signing for the lot?—I do not agree with it, anyway.

28. *Mr. Skerrett.*] Have you anything to say as to any objection to the sick-parades at Trentham Camp because of the presence of an infectious disease like measles?—Yes, sir; in cases of measles, when they were diagnosed they were immediately ordered to be isolated and the contacts put in the isolation camp. Their beds and kits would be carried over to the isolation camp, but when they got into the isolation camp they were not isolated: that is to say, the men in the isolation camp were so badly guarded that I have many times seen them chatting away with men isolated for other sicknesses; and I know that oftentimes they were not in their tents at all nor on the isolation-ground. I also know that their mates in their own corps very often had to carry over their food for them, and would stand there chatting with them for a considerable time.

29. How often did their mates who were not isolated carry their food to the isolated men?—Personally, I have not seen them do so for more than one meal.

30. Have you any reason to believe that the practice was general or usual?—It was usual while I was there.

31. Have you reason to think it was a common practice?—I think so.

32. *Mr. Ferguson.*] Were there any cooking-appliances at the isolation camp?—There were not at first. I believe there were afterwards.

33. Then food had to be brought to the men?—Yes, that is so.

34. Therefore it was not an isolation camp?—It was not.

35. But this camp was simply for contacts?—For contacts with measles, and also for other troubles: supposing a man were suspected of having any other disease he was put there.

36. If a man had measles he went to the hospital?—I think he did; but I have seen cases of measles in the camp—cases of suppressed measles.

37. *The Chairman.*] Did you report those to anybody?—I spoke to Major Holmes and Captain Fyffe.

38. Unfortunately we have not got them here?—No, sir.

39. Did you write any report?—Not as regards measles.

40. Or as regards the contact camp?—No, sir.

41. *Mr. Skerrett.*] I want to ask you as to the sanitary arrangements of the camp?—Well, I will take the latrines first. In my opinion they were not sufficient. When I went there there were day latrines, but not in sufficient numbers for the Force that was in camp. Also, in connection with the latrines, there was no proper method of disinfecting the pails. There was no dry earth or anything used for throwing in the pails after use. There was a bucket of chloride of lime and some other disinfectant which was thrown on occasionally by the sanitary squad. The result was that these pails were left open and flies were very prevalent in the camp. Also, on the north side of the camp there was a plot of ground occupied by a Mounted Corps, but before you came to that spot there was a place showing signs where had been the old trench latrines. These were not covered up in a proper manner. They were too shallow, and the flies were there in millions daily. There was an attempt made to keep the flies off by scattering chloride of lime.

42. Can you show upon the plan the general situation of this place you are referring to?—[Witness indicated on photograph locality referred to.]

43. We know that no latrine-paper was used: you regard that as necessary?—Yes, and the non-use of it as a menace. Newspaper was used in great abundance, and there is a regulation for using latrine-paper.

44. *The Chairman.*] There was provision for it, then?—Yes; but there is none there so far as I know at present. I objected to that very strongly.

45. *Mr. Ferguson.*] To whom did you object?—To the A.M.O. Dr. Martin will understand my objections.

46. *Mr. Salmond.*] Who was the A.M.O.?—Major Holmes.

47. *Mr. Skerrett.*] You were present when Dr. de Lautour gave his evidence?—I was here most of the time.

48. He referred to a suggestion that the hutments were erected on the sight of the old latrines: what have you to say on that point?—Those hutments are erected on the site of the old latrines to which I have just been referring, and which I can point out on a proper picture or at the camp.

49. Which hutments—there are many hutments?—[Sketch drawn by witness to indicate position, and explained to Commissioners and counsel.]

50. Did you go to the camp on Sunday for the purpose of refreshing your memory?—Yes, sir.

51. And you are giving the result of your observations?—Yes, and from what I knew.

52. In the early part of your evidence you said that the number of sick ought to have been significant to the authorities: what do you think they should have done in consequence of the sickness which prevailed?—I think there ought to have been more care taken in the isolation of the infectious cases.

53. In regard to the provision of hospitals?—There should have been some sort of hospital.

54. There was some sort of hospital there?—But it was very inadequate.

55. A point of time must have arrived when the authorities ought to have recognized that there was a probability, if not an extreme probability, of an epidemic: I want to know what you think they ought to have done?—They ought to have gone round and found out what other places were available for the sick men, or have put up a proper hospital for them.

56. Do I understand you to say that their hospital accommodation was sufficient or insufficient from the start?—It was insufficient from the start even for a camp of a hundred men.

57. Then you describe the hospital arrangements from the start as wholly insufficient?—Absolutely.

58. Have you any suggestion to make with regard either to the periodical shifting of the tents or the periodical shifting of the site of the camp itself?—I think the tents should have been periodically shifted at least every month. Those tents should not have occupied the one site longer than a month.

59. Do you hold that once a month is essential for the shifting of the tents from their existing site to an immediately adjacent site?—Under proper precautions I do.

60. Do you say anything respecting the advisability of shifting the site of the camp—not necessarily the whole camp, but the site of the collection of tents?—It should be gradually shifted, and I think it should have been shifted after three months, to fresh ground.

61. Then you say the same site ought not to be occupied for a longer period than three months?—That is so.

62. Was there any difficulty in shifting, as you suggest, in the case of Trentham Camp?—There was plenty of room.

63. *Mr. Ferguson.*] Then you think that the tents should be shifted every month, and after three removals the whole of them should be bodily shifted to a new site which has never been occupied before?—I think so, in a climate like this.

64. *Mr. Skerrett.*] Now, new drafts of men were coming in periodically?—New drafts of men came in when the reinforcements went out.

65. Have you anything to say about their admission to the camp?—They were brought into camp, and when they arrived some of them had been travelling for probably twenty or twenty-four hours, with the result that these men, who were mostly unaccustomed to rushing about, were very run down by the time they got to camp. There was no medical inspection, as far as I know, of these drafts when they reached camp, and consequently there was no weeding-out of those who should be treated a little easy at first from those who could go straight away with their work.

66. *The Chairman.*] Had not they previously been in camp in the districts from which they came?—No; many of them had never been in camp in their lives.

67. *Mr. Skerrett.*] Were these additions to the camp allowed to occupy the tents which had just been vacated by the reinforcements?—They had no other buildings for them.

68. Do you know of any precaution being taken to fumigate the tents?—I think they were sprayed out with formalin occasionally.

69. But except for that there was no general fumigation of the tents immediately preceding the arrival of the new drafts?—I never saw it.

70. What do you say with regard to the blankets: did the new recruits use the blankets which had been used by the reinforcement which had just left?—I do not think so. I think those men took away their blankets.

71. We have heard there were no drying facilities?—There was absolutely none.

72. Do you think they ought to have been provided?—Certainly.

73. What do you say with reference to the position of the civilian houses or buildings within the camp?—There were stores, barbers' shops, Y.M.C.A. hall, a Presbyterian hall, and other places absolutely in the middle of the camp. I do not think it should have been so.

74. Why?—I think that place in the middle of the camp should be an air-space.

75. Do you consider that those buildings occupied what ought to have been the lungs of the camp?—I do.

76. Have you anything to say about the septic tanks?—I cannot say very much, except that they smelt very badly.

77. That is the worst thing you could say of them?—Yes.

78. I want you to describe as accurately as you can whether that objectionable smell was common or infrequent?—I speak of the septic tanks attached to the latrines. They were covered in with concrete, and it was absolutely impossible to say what was under them; but in the early morning the smell was very intense.

79. *Mr. Ferguson.*] Do you know whether those concrete septic tanks were ventilated?—I should not say so; but I do not know. I never saw a ventilating-pipe.

80. *Mr. Skerrett.*] When did you leave the camp?—I was struck off on the 27th February, 1915.

81. I understand that the official publication was to the effect that your appointment was cancelled at your own request?—So it appeared.

82. Is that the truth?—No; it was not cancelled at my own request, because I never made the request.

83. To what date are you referring?—That only appeared in the *Evening Post* on Friday last.

84. I do not want you to go into details, but I understand that you consider you have been improperly used in being deprived of your position as captain in the medical branch of the service?—I consider that as a soldier who volunteered for the service of his country that my difference with the Defence Department is one which is open to a great deal of question as to the irregularity of what they have done.

85. *The Chairman.*] How did you come to cease duty: under what circumstances did you cease duty on the 27th February?—I received a registered letter from Lieut.-Colonel Potter, Camp Commandant, enclosing copy of a letter from the G.O.C. This is the letter I received on the 27th February: it is dated the 25th February: "I am directed to inform you that in view of the Director of Medical Services' report the Commandant of New Zealand Forces is unable to recommend you for appointment in the reinforcements, and that there will be no other vacancies to which you might be appointed. Your services will not be required in camp from the 27th instant."

86. That was on the report of the Director of Medical Services?—Yes, and I will read his report. It is dated the 6th February, but I did not see it until the 1st March. It is as follows: "I regret that I cannot give a favourable report about Captain Yeates. I have had many opportunities of judging of the capabilities of this officer; I am of the opinion that he is not fitted to be sent on active service."

87. Do you wish to say anything upon that point?—Well, sir, the only thing I wish to say is this: that how Colonel Purdy could judge of my capabilities I do not know, because he could have had no knowledge of them. I never saw him but twice. He never was on foot-parade. He never saw me doing anything. Therefore I cannot imagine how such a man could give an opinion upon my capabilities, nor by what right he could do so, as I hold a very much higher degree than he does.

88. *Mr. Skerrett.*] I understand that you have the highest testimonials as to your past services, particularly in South Africa?—Yes.

89. I do not know whether you would like to indicate from whom you have received these testimonials?—They are all in favour of my work. They are from my Commanding Officers, Colonel Hartley, V.C., C.M.G., Lieut.-Colonel Bodle, C.M.G., Major James, of the Royal Army Medical Corps, and from Colonel Cox, of the Cape Medical Staff Corps, and the Marquis of Tullibardine, O.C. Scottish Horse, and others.

90. All these are eulogistic of your services?—Yes, sir, very favourable.

91. I understand that you wish to qualify an answer you gave to me relating to the position in which you went to Trentham Camp?—I went into the Trentham Camp as an expeditionary officer on expeditionary pay, and drew expeditionary rations. That is what was understood. The intimation made to me when in Auckland was from Colonel Hume, that my wish to go with the reinforcements would have first consideration.

92. I understand that you do not desire to disguise from the Commission the fact that you have been suffering an injustice, but that you feel that this is not the tribunal before which it

should be ventilated?—I consider that I have suffered an injustice which affects every expeditionary officer, and what has been done to me may be done to any other officer. I do not desire to bring this matter further before the Commission, unless His Honour desires.

93. *Mr. Ferguson.*] Are you a Fellow of the Royal College of Surgeons?—A Fellow and a Licentiate.

94. A Fellow of the Royal College of Surgeons, Ireland?—Yes, sir.

95. *Dr. Martin.*] In your opinion were the Ambulance orderlies trained?—No.

96. Did you see any instructions being given to the Ambulance orderlies?—I have no knowledge of any.

97. Were you attached at any time to the Ambulance at Trentham?—No, I do not know that I was.

98. Were you never given any specific duties?—No; I saw my name marked down as Sanitary Officer, and I did that work, but I had not specific orders.

99. Did you hear of any lectures or instructions being given to the orderlies in nursing duties?—Never.

100. *The Chairman.*] Was there any recognized or regular dispenser there?—In my time there were two very good men. The name of one was Edwards, but I cannot remember the name of the other. They were both very good men.

101. Were the dispensary arrangements adequate?—They were very crude.

102. I suppose it was a dispensing-tent?—The dispensing-marquee was also used for dressing.

103. *Dr. Martin.*] What arrangements existed for the reception of the sick in the camp?—When I went into camp there was a marquee right in the middle, near to headquarters, which had a few straw mattresses on the ground and stretchers.

104. How long did those arrangements last?—They only lasted for about three or four weeks, and then they began to get some bedsteads. The arrangements for the reception of the sick were altered a few days afterwards by Major Holmes, who had a marquee put up for the reception of the sick and another for the inspection of the sick.

105. You are quite definite in regard to that charge that throat-brushes were used on one man and then dipped in hot water before being used on another man?—Certainly.

106. What was the trouble with the men's throats at that time?—They had septic sore throats.

107. Do you know why they did that: were they short of brushes?—They said they could not get them; that was the only answer I got.

108. They had tried to get more brushes but could not do so?—That was what they said.

109. You understand that they had applied to the A.D.M.S. for them, and they could not get them?—They told me they had done so.

110. *The Chairman.*] That was the orderlies?—Yes.

111. *Dr. Martin.*] The Medical Officer did not tell you that?—No; the Medical Officer did not say that.

112. *The Chairman.*] But did the other Medical Officers know that this was going on?—Yes, they did. I spoke about it.

113. Did they not interfere or take some steps to stop it?—That I cannot say.

114. Would it not have been better to have refrained from washing the men's throats altogether if you could not have done it with a fresh brush?—Most undoubtedly.

115. Do you not think the Medical Officers would have seen to the matter if they had been fully aware of it?—I do not think I would like to criticize the Medical Officers.

116. *Dr. Martin.*] This is merely a statement of the facts?—Yes, I certainly think they might have done something.

117. *The Chairman.*] What sort of brushes were they using for doing this throat-painting?—Camel-hair brushes.

118. *Dr. Martin.*] You are definite about the statement that men suffering from measles, or contacts, had their mates, who were not infected, coming over to the isolation camp and talking to them?—I have seen them.

119. *Mr. Salmond.*] But were there measles patients in the isolation camp?—No, measles contacts.

120. *The Chairman.*] We understood that there was nothing of the sort, but that some men were reported to have escaped: was it not a breach of discipline for this to take place?—That I am not prepared to say, because the men may not have known better.

121. *Dr. Martin.*] Was there a guard over this isolation camp?—Not for a considerable time.

122. Do you know when the guard was put on?—Some time in February; I am not prepared to swear as to the exact date.

123. *The Chairman.*] It was while you were there?—Yes.

124. We had a letter from a correspondent who said that one of the causes of the illness was that the men would go home to the camp drunk and lie out all night in the open: did you come across any instances of that?—No, sir; I think they were a very sober lot of men.

125. *Mr. Ferguson.*] You said that Edwards was a good dispenser: what rank had he?—He came in as a corporal, I think.

126. Do you know whether he had previous experience?—I know that he was working in the hospital at Samoa for a considerable time before, and he was a very intelligent fellow. The other man, whose name I do not remember, was also a good man.

127. But I suppose it takes more than intelligence to make a dispenser: you must have knowledge?—You must have knowledge, of course, but intelligence helps you.

128. Were they untrained chemists or trained chemists, or men with no knowledge?—Several of the men had no knowledge at all. One or two of them did not know what they were doing.

129. How many of the men were there handling drugs?—I have seen as many as five or six different men.

130. Any man who might want a drug would go and help himself?—It appeared to be so.

131. Was there any one in charge of the drugs?—That I could not swear to. When Edwards went off duty another man was put in charge, but whether he was qualified or not I cannot say.

132. And was the dispensing done day and night or only in certain hours?—At night-time the dispensary was only occupied by the orderly sleeping there.

133. So that there was practically no control over the drugs?—It did not appear to me that there was much control.

134. Was there similar control to that which you have seen in connection with such work?—No; anything of that nature I have had I would not have allowed; I would have had control over it.

135. And that, I presume, is the duty of the Medical Officer in charge—to see that the dispensing is under a competent man to supervise it?—I should say so. If I were Medical Officer in charge I would consider it my duty.

136. *Mr. Salmond.*] You were originally attached to the Samoan Expeditionary Force?—I volunteered for the Expeditionary Force and I was sent to Samoa first.

137. How long were you there?—From the 27th September to the 30th October.

138. Then you returned with some sick men?—Yes, sir.

139. And you did not go back to Samoa: was it at your request that you did not go back to Samoa?—I think, sir, that you had better let me read this letter, which will explain it.

140. Did you ask not to be sent back to Samoa?—I said I would prefer to go to the front.

141. You were sent to Trentham?—Yes.

142. With any official position?—This is a letter which I received on the subject: "Instructions just received by telegram from Wellington that you are not to proceed to Samoa. Your claim to accompany the Expeditionary Force Reinforcements will have first consideration." That is dated the 14th December, and signed by Lieut.-Colonel Hume, Commanding the Auckland District. The next day I got the following letter, dated the 26th December, also from headquarters, Auckland Military District: "In accordance with instructions by telegram received December 25th from Colonel Purdy, Director of Medical Services, you will please report at Trentham Camp on Monday, December 28th, 1914." That is signed "W. H. Parkes, Lieut.-Colonel, G.M.O., Auckland Military District."

143. Have you ever been given an appointment: you were on probation?—No; I went as an expeditionary officer.

144. Did you get any appointment with the Expeditionary Force?—In what way?

145. Were you ever gazetted or in any way recognized as a member of the Expeditionary Force?—Yes. This [soldier's pay-book] shows: "Squadron, battery, or company—Field Ambulance; rank—Captain; name—E. Yeates." That shows that I was an officer on active service.

146. Were you ever gazetted to the Expeditionary Force?—I know nothing officially.

147. Do not you know that you were never a member of the Expeditionary Force?—I do not, sir. If you will allow me to read this it will answer that question: "This is to certify that Captain Yeates was a member of the Samoan Expeditionary Force (N.Z.M.C.) from September 27th, 1914, to October 30th, 1914. He was sent to Samoa by Lieut-Colonel Parkes after Captain McKillop returned to New Zealand.—MATTHEW HOLMES, Major, N.Z.M.C.—13th February, 1915."

148. When you were at Trentham were your relations with the Medical Officers harmonious?—Which Medical Officers?

149. The ones who were there?—I was perfectly friendly with them.

150. With Dr. Fyffe?—I cannot say I was, one way or the other; I saw very little of him. But while I was in camp we were perfectly friendly.

151. With Major Holmes?—I never had a cross word with him.

152. Were you on friendly terms with the authorities?—I did not consider the officers above the men; I considered the men first. It might just as well be said that I was prejudiced when I pointed out the workings of the camp being wrong. Whilst I was there I was not unfriendly with Major Holmes for the simple reason that I left on the 13th February before he left the camp. With regard to Dr. Fyffe I cannot be said to be unfriendly with him, though I did not admire him.

153. And Colonel Purdy?—I have told you, sir, that I have only met him twice.

154. Have you threatened him with a libel action?—My attorney has asked him to withdraw certain things he had said which were absolutely untrue.

155. Have you threatened him with a libel action?—Yes.

156. Have you made grave charges against him in another place?—Do you suggest that I have?

157. Yes?—When?

158. *The Chairman.*] Have you made any charges against him?—I have said things about Colonel Purdy which I have heard and believe.

159. *Mr. Salmond.*] And made charges against him of dishonourable conduct?—To whom, sir?

160. I am asking the question?—Dishonourable conduct, in what way?

161. *The Chairman.*] Have you made charges against him of conduct of which he should not have been guilty?—Yes.

162. *Mr. Salmond.*] Did you consider that you should not have been in a position of subordination to the Medical Officers that were with you at Trentham?—I certainly considered that I, being a senior officer, should not have been subordinate to junior officers who were there on probation.

163. Who was a junior officer?—Captain Fyffe; he came in on probation pay.

164. Did you express that opinion at Trentham?—I told Major Holmes it was an impossible position, but at the same time I did not try to make things uncomfortable.

165. You told your superior officer it was an impossible position?—He agreed with me.

166. And you remained perfectly friendly?—Yes, with Major Holmes.

167. But with Dr. Fyffe?—I was friendly with him.

168. Did you tell him so?—Yes; and I can produce letters to show that I did.

169. You were in camp from the end of December till the 27th February?—Yes.

170. Two months, and then left because you were not appointed to the Expeditionary Force?—No, not because of that. I was an expeditionary officer. I had been appointed on the 17th September.

171. During that time you say that you called the attention of the Medical Officers to the necessity for preventing by better measures the outbreak of an epidemic of measles?—I did, sir.

172. Do you know how many cases of measles occurred in the camp while you were there?—I cannot give the number, but I should say eight or nine in January, and some more in February, but I cannot speak as to the exact numbers. Those were the cases diagnosed as measles.

173. There were eight cases in January?—Yes; but I do not know how many in February.

174. In February there were four cases?—I do not know, sir, but I thought there were more.

175. So that during the time you were there there were twelve cases of measles?——

Dr. Martin: There were a great many more than that according to the list supplied to us. Our return shows seventeen cases admitted to the Wellington Hospital.

Mr. Salmond: Well, this is the official return I have.

Dr. Martin: This is the return from the Wellington Hospital of cases from Trentham Camp.

176. *Mr. Salmond.*] There seems to be some discrepancy between the returns, so that perhaps we had better leave the figures alone. You say that you remonstrated with the Medical Officers as to the precautions taken?—I did.

177. In writing?—No; I wrote once, but no notice was taken of it.

178. To whom?—To Major Holmes, A.M.O. I addressed it to the A.M.O.

179. I think you were persuaded not to write?—I was persuaded afterwards.

180. Who persuaded you?—I was told.

181. Who told you?—Major Holmes and Captain Fyffe.

182. You wrote to Major Holmes as to the insufficiency of the precautions taken, and he advised you not to write again?—He advised me that suggestions would not be well taken. I dropped it then. He did it in a perfectly friendly way.

183. Then your remonstrance was made in writing?—Yes; and I also spoke about it several times.

184. What did you suggest ought to have been done?—That a better guard be put on the isolation camp, and that the men should be properly isolated.

185. In what respect were they not properly isolated?—They were allowed to mingle with other men in the isolation camp—not measles contacts. They were also allowed to meet their mates from the camp, and they could get out through the fence at any time; there was nothing to stop them. You would want a very good guard there.

186. These men were merely contacts?—Yes; but they may have been infectious.

187. I think you objected in your evidence that some men took their food to them?—Yes.

188. How else were they to get their food?—That is a question not for me to answer. I would suggest that there should have been a proper camp kitchen in the isolation camp, and they should have been allowed to cook their food themselves.

189. Do you really suggest that it is dangerous to allow soldiers to take food to contacts?—I leave that to the Medical Officers. Personally I think it is wrong.

190. So that you told Major Holmes that you thought it was dangerous that the soldiers from the camp should take the food up to those in the isolation camp?—From the fact that they were isolated. Why were they isolated if they would not be a danger to their mates?

191. You thought it was dangerous for the soldiers from the camp to take the food to these contacts?—I do not think it was at all a right thing, any more than I would allow a man to go into a smallpox camp.

192. Do you not think there would be a difference between smallpox and measles?—Yes, there are differences of danger; but still the danger remains.

193. That is the sort of remonstrance you made to your superior officers?—Yes.

194. And you also said that this camp—or, rather, the site where the tents are—should have been shifted at least every three months?—Yes, sir.

195. Why?—Because I think that the ground became polluted by reason of the tents being there for a long time, and they had that threatened sickness among the men. It did not come from nowhere. It must have come from the camp or from the tents being left in one position so long, and not only by emanations from the men, but from the food scattered about.

196. Then, may I take it that you thought it dangerous to allow a military encampment to remain for three months in the same position?—It has been proved.

197. Is that the practice in England?—Yes, as far as I know, though I have never had anything to do with camps in England.

198. *The Chairman.*] Was it done at the Cape: was there one there that did remain over three months?—Not except a standing camp, where there were proper barracks.

199. Was there a camp that remained in the same position for seven or eight months?—No, sir; the Maitland Camp was shifted after three months—it was shifted away and back again.

200. Back to the old spot?—Yes, after that spot had been thoroughly cleaned. But the atmosphere there can hardly be compared with the atmosphere in New Zealand. These are different.

201. *Mr. Salmond.*] You said that in a climate like this the camp would have to be shifted every three months?—Yes; it is a moist climate.

202. Are you prepared to state definitely that these huts were erected on the site of the old latrines?—I have pointed out where the huts are, and there were old latrines there.

203. That is your statement?—Yes, and I abide by it.

204. Were they in the same place in your time?—No; I never saw any tents upon the site where there were the old latrines.

205. Did you hear Dr. de Lautaur say that the tents were also on the sites of the old latrines?—No; he said he thought they were in that direction.

206. *The Chairman.*] What I understand was that where this photograph shows certain things there were latrines, and there are huts there now. He asked an officer and his son, and they gave him a general indication that latrines were in that direction?—I may say this: that so far as the latrines go there was nothing to show him that the tents were over latrines, because there were no marks. I may also say this: that the old latrine-sites were not marked, but you could see them and judge them by the flies and smell.

207. In the isolation camp?—Yes; it was away from the Ambulance about a hundred yards or more, and they had the latrine opened, and I objected to it, and it was closed. It was away towards the horse-lines. These old latrines were never marked to show that there had been latrines there: therefore I do not see how any one could say definitely whether the tents were over the old latrines in the camp or not. I am only speaking of the one set of latrines I do know of.

208. *Mr. Salmond.*] Did you regularly attend the sick-parade?—I was on sick-parade every morning I was in camp. As a matter of fact, I was the first one to turn out to the sick-parade.

209. You were the first there?—Yes.

210. Were the arrangements for that parade the same as you have seen elsewhere?—I never saw such arrangements in my life before.

211. In what way did they differ?—In that there was no proper regulation regarding the sick men seeing the Medical Officers. As a rule I saw eighty to a hundred and twenty men. On a wet morning they had to stand in the open. They came in batches of from five to twenty. There were too many Medical Officers there, and only two orderlies to take down the instructions and fill up the sick-reports. There was great confusion, and a man was very liable to be taken by three different medical men, and diagnosed either in the same way or differently.

212. Would it not be his own fault?—No; you cannot expect all the men to have military experience: some of them had never been in a camp before.

213. Do you think the men were exposed to any undue hardships or risks by having to wait outside?—There was hardship in this sense: there were many young fellows, and older men too, who came in with new drafts, and when they came in they did not know what to do. They were tired out, and they turned in in a tent. They never had been accustomed to it, and in the morning they were run down. I can suggest a way in which that hardship could have been obviated.

214. Was there any place where the men could take shelter or rest?—No; they had to stand about outside the marquee.

215. However ill they were?—Yes.

216. And would measles patients be mixed up with the others?—Yes.

217. How long would the sick-parade last?—Well, it lasted from 6.30 in the morning till 8 o'clock.

218. This was summer-time?—Yes. I was there by 5.45 a.m. It lasted as long as there were men to be examined—it all depended on the number of men.

219. You never saw arrangements like that anywhere else: what arrangements did they have in other camps which you have been at?—I have always had a separate tent with one orderly, and perhaps a couple of dressers, and the men would come in in an orderly way, and be examined properly one by one. Some of them I would see again the next day; but under the Trentham arrangements I might see a man one day and the next day he would be examined by another Medical Officer. Thus he might get a remarkable mixture of medicines according to the different idiosyncrasies of the doctors.

220. Have you seen these men having their throats brushed with the same brush?—I have seen it tried, but I have stopped it. I have seen the brush used on one man and taken up and put into another man's throat, and I have objected strongly to the practice. That was part of my duty to go to the dressing-tent and see what was done.

221. It was the orderlies who did that?—Yes, unless it was a very special case of malignant tonsilitis or something of that sort, when the doctor would do it.

222. Do you think that when there is an epidemic of measles or other disease some form of inspection should take place in the tents, and not on the parade?—I think there should be a medical inspection not only of the men in the tents, but there should be an officer present at every parade, and also to examine new drafts coming into the camp, so as to watch each man individually. You should have a preparatory camp apart from the drilling-camp to take in the new troops, and, as it were, nurse them up to a state of camp life before bringing them in.

223. Is not that rather impracticable?—No, sir.

224. *The Chairman.*] Are not these men examined immediately before they come into camp?—No, sir; a man might be examined to-day, and he might not go into camp for five weeks.

225. But I think that at that time they went in quickly after their examination?—I do not know that that was so, but I do know that at that time men came into camp who had been examined a considerable time before.

226. That would suggest that there should be a further examination?—I think that a new draft of men should not be allowed to go into camp, or go to the front, without a medical inspection being made first.

227. *Mr. Salmond.*] Was there any system in existence by which medical men visited sick men in tents?—If a sick man was in a tent the sergeant in charge of that section would come along and tell the Medical Officer that So-and-so was sick in his tent, and I never knew a Medical Officer to refuse to go and visit such a man in his tent.

228. Have you ever seen a man in a tent yourself?—Yes. I have found sick men in their tents when I have been going round as Sanitary Officer. I have not attended to them myself then, but have sent the sergeant to get a Medical Officer to see the man.

229. Then what would happen: would the doctor diagnose it there in the tent or have the man brought up to him?—If he was not able to come up the doctor would go to him if he were lying in his tent. He might have dropped out of drill and gone to his tent. The only thing if he felt ill would be for him to go to his tent and lie down.

230. The impression produced by previous witnesses was that however sick a man was he was taken out of his tent and marched down in the sick-parade?—I cannot say that was true. I have seen one man only who had to march when he was absolutely unfit to do so.

231. *Mr. Gray.*] You served under Major Holmes in Samoa?—Yes.

232. And afterwards at Trentham?—Yes; he was A.M.O. at Trentham.

233. Was he at Trentham before you arrived there?—One day before.

234. Did you regard him as an inferior officer in qualifications and service to you?—If he had not got the fellowship of this college he certainly was inferior in qualification. I do not know whether he had.

235. Then you did not have it in your mind that you were serving under a man less qualified than yourself?—I had no complaint against Major Holmes.

236. But was it in your mind that you were serving under an officer of qualifications inferior to your own?—It never entered my mind.

237. But you had that feeling in regard to Captain Fyffe?—Yes.

238. And Captain McAra?—Captain McAra was one of the nicest little men going: I would have served under him gladly.

239. There was no feeling of jealousy towards him?—No.

240. All these medical men are out of New Zealand at present, and so cannot be heard in their own defence?—I wish they could be.

241. Do you suggest that they were cognizant of these errors of administration as well as yourself?—If they were not they must have been very blind.

242. Take, for instance, the orderlies swabbing the men's throats with brushes which had been used before: would they know that?—They should have, if they saw it done

243. Well, what you saw done they might have seen done?—Yes.

244. Do you suggest that they would have taken no steps to stop that practice?—I make no suggestions.

245. Was there hot water in the dispensary where these men were swabbing the patients' throats?—Sometimes. There was a Primus stove there, but sometimes it could not be kept alight.

246. These brushes were dipped in hot water to disinfect them?—Yes.

247. You say you made no complaint in writing except on one occasion?—That is so.

248. To whom did you make that complaint?—To the A.M.O.

249. Did you always perform your duty in camp?—Every duty I was given.

250. Was a fair share of the duty given to you?—No, it was not.

251. The allotment of duty would be the work of the A.M.O.?—Yes, sir. I was not given any proper duty in which I could use my experience. Mine was simply a routine duty which any first-year student could have carried out.

252. Did you sleep in the camp?—Only for a short time.

253. Why?—Because I was given permission to live on the outskirts of the camp.

254. By the A.M.O.?—Yes, and Lieut.-Colonel Potter.

255. There were no complaints about that?—No.

256. You have read to the Commission the report of the Director of Medical Services referred to in the letter of the G.O.C., dispensing with your services?—Striking me off from Trentham Camp.

257. You have had no appointment since, of course?—I am an expeditionary officer still.

258. You have no appointment: you are not attached to anything?—I have been given absolutely no work.

259. Do you know that Major Holmes made a report regarding you?—I do.

260. Was it favourable or unfavourable?—It was unfavourable and untrue.

261. Were you reported upon by Major Holmes, your superior officer?—But I ask permission to read the report of Major Holmes dated the 30th October.

262. *The Chairman.*] You may deny the truth of that, and we will accept it?—May I be permitted to read the report in my favour?

263. Yes, do?—It is dated the 30th October, in Samoa, and signed by Major Holmes: "From P.M.O., Samoan Expeditionary Force, to P.M.O., Auckland Military District.—With a detachment of thirty-three men classed as temporarily unfit for service in Samoa will go Captain Yeates, N.Z.M.C. Captain Yeates has carried out his work here admirably. It is essential that a Medical Officer be returned to Samoa by the same boat, and I trust that Captain Yeates, if he so desires it, may be sent back here."

264. *Mr. Gray.*] You visited the camp last Sunday?—I did.

265. Whom did you see there?—Captain McCristell.

266. The Camp Quartermaster?—Yes; and I told him that I came out to get evidence for this Commission.

267. You were not allowed to go over the camp?—I walked through the camp first.

268. But you were afterwards requested to leave when you said that you had come to get evidence for this Commission?—I was not requested to leave: I was told I could not go through. I could not have represented that I was sent by His Honour to get evidence for this Commission, because I have not had the pleasure of speaking to His Honour. I would like to be allowed to give my reasons for giving evidence here. It was not done in order to prejudice the case of the camp authorities and medical men, as has been suggested. I take a great interest in the soldiers, and I think that the men who are serving the country should have everything done for them which it is possible to do. Therefore I have gone to great trouble, and got into trouble for doing so. I have got into trouble for giving my views and experience for the sake of the soldiers. In the next place, I want to say that I consider the whole of the headquarters staff a competent staff. They have done everything they could do in that camp. They have all worked willingly, and with good *esprit de corps*. They were overworked, and if they have not kept the camp in a sanitary condition I do not blame them, for they could not do it.

269. *The Chairman.*] It was overcrowded?—I think the whole of the staff were overworked and had too much to attend to with their military duties, and there should have been some one to take charge of the sanitary duties in a proper manner. With regard to the training of the Medical Officers, I think it was an absolute absurdity to call it a training-camp for Medical Officers. I also say to talk about the training of probationary Medical Officers in a camp where there was no training for them is an absolute absurdity. I want to take exception to a word used by Dr. Frengley twice in his evidence. He spoke of "funk." I object to that—it has a nasty German sound. And I object to it if it is applied to the men or the officers: there was no fear among the men or the officers. If he applied it to them he had no right to do so. I would call the condition "panicky" if it is applied to the exodus from the camp.

270. You had been in camp before you came here?—I was a month in Auckland.

271. You had not been practising there?—I was supposed to be on duty; I was an expeditionary officer.

272. Were you practising in New Zealand?—Many years ago. I gave up my home in California to come to New Zealand to offer my services to the Defence Department, and I was sent to the front at Samoa two days after my arrival.

JOHN THOMAS MARRYAT HORNSBY sworn and examined. (No. 36.)

1. *The Chairman.*] You are a member of Parliament?—Yes.

2. You have come to make a statement with regard to the case of a private, regarding whom we had some evidence yesterday?—Yes. I would like to just briefly outline the whole business in connection with this matter, and I have here a copy of a letter which I addressed to the Hon. Mr. Rhodes, Minister of Public Health, in connection with this incident. It clears up the whole question. It was early this month that I discovered the whereabouts of this young man Pearson. For days I was trying to discover him, because I had had an urgent telegraphic communication from his father asking me to tell him of his son's whereabouts. I could not find Pearson anywhere. After some three days I went direct to the Minister of Defence in the House and asked him if he would interest himself in the matter, because I had that day had another telegram from the father telling me that the boy's mother was seriously ill through worrying over him. I handed that telegram to the Hon. James Allen, and in about a couple of hours I had the information I wanted. I immediately telegraphed to the boy's parents and allayed their fears. I made inquiries as to where this lad was, and found he was at Kaiwarra, and at the earliest possible moment I went out to the Kaiwarra Hospital and there saw the boy. The Red Cross officer who was in charge warned me before the boy came downstairs that I was to stand 5 yards from him, and not attempt to shake hands with him. I had a short conversation with Pearson, and he told me of his condition, or what he had learned of it since, because he was unconscious when he was taken from Trentham. I misunderstood him in one particular: I understood him to say he was taken to Kaiwarra from Trentham, whereas he had been taken to the Wellington Hospital. I attended to some wants of the boy, and then when the trouble arose in the House over it I took the earliest opportunity of asking this lad if he would come before this Commission and make a statement. He said he was afraid, and I asked him what he was afraid of, and he made this excuse: he said that there was a good deal of feeling displayed by those in charge when anybody made any complaints which reached the public ear; and he was not singular in that. I may say that several of the men have told me the same thing. They do not want to give evidence because they are afraid of the ulterior consequences. I do not know what they are. In order that I may put myself quite right in this matter I want to read this letter which I addressed to the Hon. Mr. Rhodes on the 20th July. This is a copy:—

"Hon. R. H. Rhodes, Minister of Public Health, House.

"DEAR SIR,—In further reference to the case of the young soldier of whose affairs I spoke in the House, I have now to inform you that the lad is afraid of the consequences to himself and will not give his consent to my handing his name to you. I regret this, not so much on account of the refusal as because of the expression of fear of consequences. Rightly or wrongly the young fellow is possessed of this fear, and I cannot force him to do anything against his will. I have, however, had a further interview with the lad, and now desire to give you the full particulars, correcting one portion of my statement in the House.

"The lad was very ill, and was removed to a loose-box, where he lay without a mattress. Then he was taken to the kiosk, where he lay in blankets on the boarded floor without a mattress. He developed bleeding at the nose, and was seen by a doctor when the orderly (there was no nurse) failed to stop the bleeding. The doctor said, "Put your head back"; and that is all

the lad remembers until he returned to consciousness in the Wellington Hospital (not the Kaiwarra Hospital, as stated by me in the House). He had been conveyed to the Wellington Hospital strapped in a motor-car. As soon as he was fit to be removed he was taken to the Kaiwarra Hospital.

"I prefer to make these facts known to you in the first place, but I should have preferred that the lad should have given his evidence to the Commission. This, however, he is unwilling —or, shall I say, afraid—to do. So far as I am personally concerned, the incident is now closed, but I am still much perturbed about what has happened in the case of this lad, because, as a matter of fact, had death occurred his parents would never have known until they had been asked to take away his dead body.—Yours faithfully,

"J. T. M. HORNSBY."

Now, sir, the one thing which presents itself to my mind, in order to put myself right with the Commission in this matter, is that I must say that in reply to this letter the Hon. Mr. Rhodes wrote to me that he was going to investigate this matter, and only yesterday, six days after the date of this letter, I find a witness giving evidence on this one point. It looks as though I had made a misrepresentation in the House, but I had put the matter right six days before by writing to the Minister.

3. The witness had seen the statement in the public print, and he thought it necessary to protect himself by giving us his version of the matter: that, of course, he was perfectly justified in doing?—I am not blaming the officer, but I am blaming the authorities.

4. But, of course, this Commission is not inquiring into what the Hon. Mr. Rhodes ought to have done in consequence of your letter?—Only this: that I do not want it to go forth to the public that I had not stated what was correct.

5. I do not think any misrepresentation was made by the witness who spoke yesterday?—No.

6. I summed up his evidence, and he replied "Yes." It was not a comment by me, but rather a question summing up his evidence?—Well, that is what I wanted to clear up, because it almost appeared that I had made a statement in the House without foundation.

The Chairman: The only point we are concerned about is as to the truthfulness of the evidence given yesterday, and that is not threatened.

Mr. Salmond: I suggest that the doctor in charge of the kiosk hospital at the time should be asked specifically as to these details in regard to this patient.

Witness: My suggestion is that the boy be summoned before this Commission.

The Chairman: We shall issue a subpœna to him.

Witness: He is on sick-leave at present, at Carterton.

7. *Mr. Salmond.*] Will you say whether this man made any complaint to you about his treatment?—The only complaint was in regard to the non-communication of the facts to his people.

8. About his parents not being notified?—Yes; they could not find any trace of him.

9. How do you know that he was unconscious for three days?—The doctor told him so, or the nurse.

10. The boy told you that he had been told that he had been unconscious for three days?—Well, as a matter of fact he was unconscious, because he knows nothing about what happened from the time he was at Trentham until he found himself in the Wellington Hospital.

11. *Dr. Martin.*] Can you tell me when he was admitted to the Wellington Hospital—about the month?—I suppose it would be about a month ago—in the early part of this month or the latter part of June.

Dr. Martin: Yes; there is the record in our return from the Wellington Hospital: it says that he was admitted on the 28th June and discharged on the 4th July. His case was diagnosed as measles—not serious.

Dr. H. L. H. STEELE further examined. (No. 37.)

Witness: On second thoughts I went out to the Berhampore Hospital, as you thought my impression when giving evidence was rather harsh. I have just returned from there, and I must say I am not very much impressed with the hospital or the arrangements there. I went into the hospital. The part I went into was the main building, which consists of two rooms, with a division between the two, and two sinks. There is a passage-way, which is partly given over to a bath. I do not think those are elaborate arrangements.

1. *Dr. Martin.*] Where was the sink?—At the extremity of each of the wards.

2. *The Chairman.*] But according to the plan the sink is in the porch, and not in the ward?—It is outside the ward.

3. I think we can do very much better from this plan and what other witnesses say: we can judge for ourselves?—Very well, but you reprimanded me yesterday for calling it a whare.

4. You called it a "shack"?—I still maintain it is a whare or shack now that I have seen it in the daylight.

The Chairman: You spoke without a due sense of your responsibility, and we want no further discussion on the subject, Dr. Steele.

WILLIAM CHARLES POLLARD sworn and examined. (No. 38.)

1. *Mr. Salmond.*] You are a plasterer, residing in Christchurch?—Yes, sir.

2. Your brother, John Henry Pollard, jointed the Trentham Regiment?—That is so.

3. And left Christchurch on the 28th May?—That is so.

4. Did you recently get a letter from him stating his experiences?—Yes, I have a letter which he wrote a couple of days after he got into camp.

5. Perhaps you might read to the Commission the portions of the letter to which you wish to draw attention?—This is the first letter my sister received. It is not dated: "Just a few lines to let you know that I am all right, although we are not quite settled yet. We had a fine time up here, but has been raining since yesterday afternoon till dinner-time to-day. We went out for the first time this afternoon. We haven't started to drill yet. They had us carrying stones. Talk about mud! nearly over our boot-tops. Wants stout boots here. Fred and me didn't get together nor any of the other mates: there were six of us that wanted to be as mates. We are all over the place. There were over eighty men sleeping in our hut last [night], packed in like sardines. The hut was only built for fifty."

6. What date was this?—That would be about the 1st or 2nd June. Then he goes on to say, "So you can just guess what it was like. I only dropped across Fred by accident yesterday afternoon." That was one of his mates that he wanted as a mate. "Would you mind getting a couple of Balaclava caps."

7. I want to hear what he says about his health?—He says further on, "I think I told you that we see each other every night. Thanks very much for the pasties: they were very acceptable. The tucker is not too good. The stuff is good enough, only its the way its cooked—I think it is too much of a muchness. I don't know [how] I should get on if it weren't for the canteen. I am afraid 2s. a day is little enough for spending. I very often do down and have a plate of curried oysters, and then have a cup of tea and cakes. . . . I have a cough—in fact, everybody has one. It is just like a sanatorium, with all coughing one up against each other. It doesn't matter what time of night you wake up there is always half a dozen going for it. The draught in these huts is enough to feed a pig. I have emptied three bottles of peppermint cure, and also that bottle I brought with me, besides lemons. I wonder if you mind getting them boots of mine mended and send them up here. I haven't got anything to go to Wellington with."

8. What is the date of that second letter?—Neither of them is dated.

9. Does he say anything in these letters about not having boots?—No.

10. Did you get any letter from him after he went to the hospital?—Yes. This letter is not dated either, but it is post-marked "28th June," and we do not know whether it was written in Kaiwarra Hospital or at Berhampore, but we know it was written in one or the other: "You will be surprised to hear that I am in a measles hospital in Wellington, or just out of it. There is a terrible big crowd here, and they reckon we shall be here for three weeks, so you can just guess what sort of a time I shall have cooped up here. Well, old dear, I have had a bit of a tough time of it this last eight or nine days. I think I told you I had a cold. Well, Wednesday I went on sick-leave. . . .

11. Was that the Wednesday that he got into camp?—No, he was in camp about a fortnight: "That night the officer came over and asked me if he should fetch the doctor, so I said 'No, I didn't think so, as I would be all right in the morning.' Anyway, I went to see the doctor the next morning, and he sent me to the hospital that night. My temperature was 103. I was crook, too, and all they gave me was three cups of milk-and-water—nothing to eat. The next night I was up to 104, and the same the next night. By Christmas, I didn't half-sweat two nights! Anyway, my temperature came down to 98, and then they found I had got the measles."

12. He does not say what time elapsed between the temperatures, but I suppose we could find that from the chart?—"So they sent me down here yesterday. I wasn't fit to travel, and I don't feel too good to-day." It was not right that such a man should have to get up and dress and perhaps walk to the train.

13. I do not think we can assume that?—I think so, because I met a man who saw him.

14. He saw him going into Kaiwarra?—Yes, Private Greatbatch, of the 2nd Battalion of the Trenthams—the same regiment as my brother was in. I met him on the boat on the Sunday morning.

15. Where was he going then?—He was going back to the camp: he had been none on sick-leave.

16. Greatbatch saw your brother at Kaiwarra?—Yes.

17. Then he was referring to the crowd: that would be at Trentham Hospital?—No, at Kaiwarra. I assume that his letter was written at Kaiwarra. He must have had to take his swag, but that can be found out. "I was not too fit to travel, and don't feel too good to-day. Oh, I suppose I will live to get over it, shant I? I am as giddy as a girl of sixteen, and as weak as a robin. Fancy a man catching the blanky measles! There is a terrible big crowd has got [them] though. Well, old , I think you had better come up here and nurse me. I think that is what I want more than anything."

18. Were there any other letters received from him?—No, I do not think so.

19. I believe that you made inquiries about your brother?—I did.

20. When was that?—On the Saturday before he died. I sent a wire to Solomon, asking him to let us know how my brother was. I got a reply. That letter came on the Tuesday, when I got the wire from Dr. Harrison.

21. When you sent that telegram on the 26th June had you any information that he was ill?—I had information that he had a cold.

22. In that letter that you have read already?—No; in a letter I got from another man.

23. Is that why you telegraphed?—Yes.

24. *Dr. Martin.*] Did you get a reply to your wire?—Two days afterwards. This is a letter I got from Solomon: "Just a few lines to let you know that I am getting on all right. I am sorry to say that John is in the hospital with a very bad cold. It is not serious. He will be out again in a few days. I have been visiting him, and he wished me if I would write you a few lines to you just to let you know that he has got a cold. I have had a bad cold myself, but it is all right again now. There is a big crowd here to-day from Wellington."

25. What reply did you get to the telegram?—The reply we got was dated the 28th June, 3.4 p.m.: "John in Berhampore Hospital with pneumonia—not serious."

26. *The Chairman.*] He was in Berhampore then?—He was removed from Kaiwarra to Berhampore.

27. What did you hear next?—We got a telegram: "Your son, J. W. Pollard, dangerously ill at Berhampore Hospital, Wellington." As far as they were concerned we were not supposed to know that he was ill up till then.

28. What was the date of that?—Tuesday, 29th June.

29. *Mr. Ferguson.*] That is signed by——?—"Thos. Harrison, Captain, N.Z.M.C."

30. At what hour was that sent?—2.50 p.m. It says, "From Trentham M.C.," and is numbered 1008.

31. Is that the only communication you received from the authorities?—Yes, sir.

32. *Mr. Salmond.*] Did you not even get a letter announcing his death?—We were here at his death.

33. After he died was any intimation received by you?—We were here when he died. We got a wire from the Hon. Mr. Allen expressing sympathy about four days after he died.

34. On receipt of that telegram you came up to Wellington?—Yes, I caught the boat that night. I was waiting to come on the Saturday night—I had my bag packed up ready. On the Monday we got a wire, "Not serious," so I thought there was no occasion to come.

35. On the Wednesday morning you went to the hospital?—I rang up and asked how he was, and they said he was very, very seriously ill.

36. You rang up Berhampore?—Yes, the telephone was on, but they did not know the number at first at the Exchange.

37. Did you go out and see him?—Yes, as soon as we had breakfast.

38. Where was he—in the main building?—Yes, in the main building, just inside the door.

39. Was he conscious?—Well, he was sometimes conscious and sometimes delirious. He told me he had been having a terrible "scrap" with some Germans outside.

40. He knew you?—Yes; but he was very ill, and we should have been notified before.

41. How long were you with him that day?—The nurse told me we were only to stay a few minutes.

42. *Dr. Martin.*] What nurse was that?—I do not know her name.

43. At what hour were you out there?—Between 9 and 10, I think.

44. *Mr. Salmond.*] Was he comfortable and being properly looked after?—Well, he was in a cot, and he had three blankets on him, and that is all I can say. He had a spittoon on a chair, but apparently everything did not go into it, for there was some phlegm on the wall, alongside the cot.

45. Did the ward look clean?—No; the floor looked as if it had never been scrubbed: it had a dirty appearance.

46. The boards were not white?—They were not clean: it would not be necessary for them to be white to be clean.

47. They would have been made cleaner if they had been washed?—Yes. I saw them going along with a mop here and there, but that is not what I call washing the floor.

48. Had you any other complaints to make about the hospital, apart from the cleanliness?—I did not see any sanitary arrangements.

49. *The Chairman.*] There were bed-pans there, I suppose?—I never saw them.

50. *Mr. Salmond.*] How many minutes were you there?—Half an hour in the morning and over an hour in the afternoon—that is, in the ward.

51. Was there proper attention being given to the men?—No; he was just lying there, with nobody round him. There was a screen alongside of him.

52. There were nurses or orderlies there?—Yes, there were nurses there; but my impression was that he should not have been in such a place as that.

53. You tried to get your own doctor to go there?—Yes, that is so. I asked the nurse the first morning I was there whether she thought I could get another doctor up to see him.

54. Why did you wish that?—Because I did not feel satisfied with the way that he looked.

55. Were you satisfied with the medical attention?—I wanted to know how he had developed into such a serious condition in such a short time—only twenty-four hours after we had been told his case was not serious.

56. You were afraid that he was not being properly attended to?—Yes.

57. Did they object to any other doctor going there?—Yes; the nurse said I could do nothing until I rang up Dr. Harrison. I got Dr. Thacker, and asked him to go up and see my brother, and let me have a report on his case. I got Dr. Thacker first before I got Dr. Harrison on the telephone. When I got Dr. Harrison on the telephone I asked him what was his opinion of my brother, and he said that he was in a very critical condition. I said that if his condition was not too critical to be moved I would like to put him in a private hospital. He said, "We object to have any civilian interference." Those were his words. He said that if they had the relatives of every patient coming interfering it would upset things.

58. He did not object, I suppose, to the patient being removed to a private hospital?—The words he used were that he objected to any civilian interference.

59. He was objecting to any other doctor coming into the hospital?—He said that my brother was not fit to be removed.

60. But when he spoke about the civilian interference he did not mean that he would not tolerate a sick soldier being removed from that hospital?—I have told you what he said—you cannot get anything else out of those words.

61. Did he not give you a reason why your brother should not be removed?—He said my brother was too ill to be removed. I said that I would like Dr. Thacker to see my brother. He did not know then, however, that Dr. Thacker was already out at Berhampore.

62. At Berhampore?—Yes, he went out to Berhampore when I asked him.

63. Was that before or after you had been told that they would not tolerate any civilian interference?—He was there while I was ringing up Dr. Harrison. Dr. Harrison told me he would be there at 2.30 in the afternoon, and would meet me. He came out and shook hands with me. He said, "Your brother is in a very critical state." I did not say anything about Dr. Thacker having been out.

64. I understand that on the Thursday morning you saw the Hon. Mr. Rhodes?—Yes, and I told him that I wanted to get an independent report to see if there was any chance of saving his life at all.

65. And did you tell him what Dr. Harrison had told you?—Yes, I told Mr. Rhodes that I had spoken to Dr. Harrison, and that he objected to any civilian interference. Mr. Rhodes said, "I suppose it is a matter of medical etiquette." He said, "I will see what I can do."

66. Was there any talk about a particular doctor?—Yes, Mr. Ell suggested Dr. Herbert.

67. You suggested Dr. Herbert to Mr. Rhodes?—Yes; and this is the wire he sent me: "Have arranged consultation between Dr. Herbert and Dr. Harrison, but time not yet fixed. Will wire you as soon as I know time." Then he wired me later to say that the time had been fixed for 4.30 that afternoon.

68. You were telling the Commission before the adjournment that you arranged through Mr. Rhodes for a consultation between Dr. Harrison and Dr. Herbert?—Yes.

69. Did that consultation take place?—I got another telegram from Mr. Rhodes, "Try arrange consultation at Berhampore Fever Hospital at 4.30 this afternoon." That was on the Thursday. I was there when the consultation took place.

70. Did they report to you what they thought of the case?—There were two patients there, both dying, and they examined the two of them. I asked the doctor's opinion, and he said he was very sorry to say he did not think he had one chance in a million of recovering. Both doctors said that.

71. What did you do then?—I wired straight home for the father and sister to come up. They arrived on the Friday morning.

72. Were they in time to find the brother alive?—Yes. The nurse rang me up about 5.30 that morning and asked me if I could come out. I told her I had to meet the boat with my father and sister, and did she think he would last till they came, and she said, "You might take the risk." I went down and met the father and sister, and when we got to the hospital he was still alive and conscious. He knew his father and sister and the young lady. He could not talk much, but he recognized them, and he mumbled out "Father." He asked me to get him a drop of beer the day before, and he asked me if I had brought it, and I said No, that the place was shut. My sister was there about ten minutes or a quarter of an hour, and she lifted up the bedclothes and felt his feet and found them cold. She said to the nurse, "Do you know that my brother's feet are cold?" and she said, "No." She said, "They could not have been cold long." She apparently did not know they were cold at all. My sister asked for a hot-water bottle and blankets, and a few minutes afterwards his feet were quite warm again.

73. When did he die?—About ten past 1 o'clock, I think. My sister and the young lady were with him all the time till he died. He died on the Friday. I left about half past 10, as I did not like to see him struggling—he was so bad.

74. Do you wish to say anything about the correspondence with your brother—about the delivery of letters?—Yes. I wrote him a letter on the 22nd June, and my wife posted it on the 23rd in the Sydenham Post-office. That should have reached Trentham in the ordinary course on the 24th. Well, it was returned to us unopened.

75. On the 24th he had gone to Berhampore?—Yes; it is redirected to Kaiwarra and then to Berhampore. Now, he never received that letter. There were three or four letters posted at about the same time, but they were not returned. I asked him if he received my letters, and he said No. We found only four letters in his hand-bag after he died. That is practically eight days that this letter was in Trentham before he died; and in the letter that my wife put in with mine she asked him if there was anything more than a cold to let us know, as we were so anxious about him, but we never got a reply.

76. *The Chairman.*] Is that the envelope you have there?—Yes. [Produced.] That is the envelope returning the letter.

77. *Mr. Salmond.*] From what you saw in the hospital do you consider your brother was being properly looked after and treated by the nurses and doctors well?—Well, I am not an expert in the matter of pneumonia, and perhaps my own opinion and that of experts would not be the same; but in my own opinion I really think he could have been better looked after.

78. You mean he was neglected?—I mean to say he was neglected so far as the doctor was concerned. A doctor visiting a man once a day is not enough in a serious case like that.

79. Do you know he was only visited once a day?—I know Dr. Harrison only visited him once a day, and he was Dr. Harrison's patient.

80. He told you that?—He told me that himself, and the nurse also told me.

81. Was your brother a healthy man when he came up to Wellington?—Yes, he was. He never had a day's sickness in his life. He worked for me for six years and never lost a day through ill health.

82. Was he a vigorous man?—Yes, and bigger than me.

83. How old was he?—Twenty-nine.

84. What was his calling?—A plasterer.

85. Accustomed to the open air?—Yes, used to knocking round the country baching. Hard work would not kill him, anyhow.

86. Is there anything else you want to say about the matter?—Of course, the Commission will find out how they treated him, and why he was taken from Trentham to Kaiwarra.

87. Do I understand that Solomon can give evidence as to how he was treated before he was ill?—He can speak as to how they were treated.

88. *Dr. Martin.*] How many patients were in this room where your brother was?—I never counted them; I did not have time to look. There was a screen, or a towel-horse with a sheet over it, in front of Fordham.

89. Was Fordham next to your brother?—No; they were both under windows opposite to one another. There would be about six patients on each side of the room. They were not very far apart, but there was room for a man to get between the stretchers.

90. Had you any difficulty in getting between your brother's bed and the bed next to it?—No; they had a screen between.

91. Do you think your brother wanted anything he could not get?—No; he did not ask for anything.

92. He did not make any complaint about the nursing?—No, he was too bad; he was dying when we got there. Whatever he developed I think he caught when going from Trentham to Kaiwarra. I think he developed pneumonia after being shifted from Trentham to Kaiwarra. That is what we want to find out. They would not tell us what date he was taken from Trentham to Kaiwarra. When I asked them they could not tell us, and when I asked them what was the matter they said it was bronchial pneumonia, and then said it was septic pneumonia. There is one thing I should like to know, and that is his temperature on the Wednesday before he went to the hospital.

93. You do not know what doctor he saw?—No, we know nothing. He was in too bad a way when we got there.

Dr. HERBERT GOLDSTEIN sworn and examined. (No. 39.)

1. *The Chairman.*] What are your medical degrees?—Bachelor of Medicine and Surgery, London University.

2. What military rank do you hold?—Captain.

3. Have you been connected with the Trentham Camp at all?—No.

4. You have been at the hospital?—Yes; I have been in charge of the military ward at the hospital since the 14th July.

5. Had you no military appointment in connection with the sick before that?—No, sir.

6. We were informed that you could tell us about the scarlet-fever cases: is that so?—Yes, I got the details.

7. There were two cases, I believe, of scarlet fever sent to the Wellington Hospital: is that so?—Yes.

8. And had you anything to do with either of them?—No, not the first two.

9. Is there a case there now?—There was a case on the 19th July.

10. What we have is that Dr. Frengley suggested that information could be obtained from you as you were in charge of the cases?—Only this one on the 19th July.

11. Where did that come from?—He was in the ward on the 26th June. He was in Kaiwarra with measles, and sent to Wellington Hospital because he became ill. There was no real diagnosis made at the time.

12. *Dr. Martin.*] He was really under observation?—Yes.

13. Where was he put in Wellington?—In Victoria Ward.

14. What cases were in the Victoria Ward?—That is really for the complicated cases of measles.

15. I understand he was taken from Kaiwarra, which contained measles, and put into Victoria Ward, which contained measles also?—All those cases in Victoria Ward were measles.

16. *Mr. Ferguson.*] Who was the doctor who sent him from Kaiwarra?—I expect, Dr. Harrison.

17. *Dr. Martin.*] When was the diagnosis of scarlet fever made?—Not till the 19th July. He was quite well for a fortnight in the ward, and suddenly one day his temperature shot up, and he developed scarlet fever on the 19th. The point is that on the 11th July there was another scarlet-fever case there.

18. Where from?—That was from Trentham.

19. He was admitted on the 11th July from Trentham?—He was admitted on the 7th and diagnosed on the 11th.

20. It was sent in from Trentham as measles?—Yes.

21. And was put in amongst the measles patients?—Yes.

22. And on the 11th July the diagnosis was altered to scarlet fever?—Yes.

23. Of course, they were both taken and put in the scarlet-fever wards?—Yes.

24. And the usual contacts were kept under observation?—Yes.

25. *Mr. Salmond.*] He was diagnosed as suffering from scarlet fever on the 11th: did the rash come out then?—I was not there, so I could not say.

26. *Dr. Martin.*] You are quite satisfied everything was in order about that?—Yes.

27. *The Chairman.*] That does occur frequently amongst measles, does it?—Yes.

28. *Mr. Gray.*] What is the period of incubation with scarlet fever?—From two to seven days—usually two.

29. Then there is nothing remarkable in the diagnosis of scarlet fever in those cases not having been made before the dates mentioned?—No.

30. *The Chairman.*] One was admitted on the 27th June and not diagnosed till the 19th July—that is twenty-two days?—Yes.

31. Then he must have got it in the wards?—It was evidence he got it from the man who was in there before.

32. *Mr. Gray.*] Where do you suggest the first man got it?—There was a third man who was with the second man—he was sent direct to the scarlet-fever ward—that this second man had been in contact with.

33. *Mr. Salmond.*] Where was the third man sent from?—From a building in the Wellington Hospital that was used before this ward was used.

34. Was he a soldier?—Yes.

35. *Dr. Martin.*] When was he admitted?—I do not know when he was sent there. He was sent into the scarlet-fever ward on the 7th July.

36. What was his name?—Duncan.

37. What was he sent into the hospital for?—I do not know.

38. He was admitted on the 29th June, and when did you admit him to the scarlet-fever ward?—He was sent from the tin shed on the 7th July. That was before I came down. He is still in the ward.

39. *The Chairman.*] Had he scarlet fever when sent in from the tin shed to the ward?—He was sent direct to the scarlet-fever ward.

40. *Dr. Martin.*] You do not know where he came from before he got to the tin shed?—No, I do not.

41. Was there no other case of scarlet fever?—Except that there was one yesterday.

42. Where did he come from?—From Trentham.

43. What is the name of the man?—Sperring.

44. Have you any particulars about this man?—He had been admitted for influenza into the Trentham Hospital, and discharged five days before admission here.

45. How long had he been ill with influenza at Trentham?—A fortnight.

46. Then he was discharged?—Yes; but he stayed there for four days and came into Wellington. The next day he saw a doctor in the town who said he had measles, and he sent him up to the Victoria Ward where I admitted him. He had a normal temperature while in there till yesterday.

47. How long had he been in Victoria Ward before his case was diagnosed?—Four days in the ward. He was quite normal then and had no temperature, but the evening before yesterday his temperature went up and he had the rash yesterday.

48. Those contacts in Victoria Ward, what happened to them?—They are all staying there for another week or ten days.

49. Has this case been notified to the Trentham Camp?—It has been notified to the Health Department and Colonel Valintine.

50. *The Chairman.*] If you have a scarlet-fever case in the Wellington Hospital do you notify it to the Health authorities?—Yes.

51. *Dr. Martin.*] Are those the only cases of scarlet fever you know of?—All that I have heard of.

52. *Mr. Gray.*] The third case you mentioned was admitted to the tin shed on the 23rd June?—Yes.

53. And was sent direct from there to the scarlet-fever hospital on the 7th July?—Yes.

54. He had been then in the hospital for fifteen days?—Yes.

55. Do you think he brought the infection with him?—I could not say that. The usual period is from two to seven days.

56. This is a case in which the man developed it after fifteen days in the hospital?—Yes.

57. There had been no preceding case in the tin shed in the hospital?—I could not say that; I do not know.

WILLIAM FREDERICK SOLOMON sworn and examined. (No. 40.)

1. *Mr. Salmond.*] You belong to the 1st Battalion of the Trentham Regiment?—Yes.

2. I suppose you are not afraid of being court-martialled or dismissed from the service for giving evidence?—No; I will tell the truth.

3. You came from Christchurch?—Yes; I left Christchurch on the 28th May.

4. When did you get to Trentham?—On the 29th.

5. *Mr. Ferguson.*] Had you been a Territorial before?—No, not in New Zealand. I was in the old Volunteers in England for a while.

6. *The Chairman.*] What was your occupation before going into camp?—I was a general labourer.

7. You had been used to the open air?—Yes, on threshing-mills and railway roads; always in the open air.

8. *Mr. Salmond.*] You got to Trentham at what time of the day?—About half past 2.

9. Did you get your dinner there?—Yes, when we got on the ground.

10. What happened in the afternoon?—After we had dinner we were put on the parade-ground to pick out the bandsmen and different tradesmen, and other things.

11. Did that last during the afternoon?—Yes, most of the afternoon.

12. Did any of your men get their equipment during the afternoon?—No.

13. Then, did you have your tea?—No; we had to go and get sworn in, and then we had tea.

14. When did you get your equipment?—It was close on 11 o'clock when I got mine.
15. Will you explain what happened: were you all marched down to the Quartermaster's?—Yes, down to the store.
16. How many of you?—Hundreds of us; we all went together.
17. What sort of night was it? It was a dirty sort of night—sometimes raining: not a heavy rain, but just enough to make things uncomfortable.
18. When do you suppose you got to the store?—I should say about half past 6 or 7 o'clock.
19. When did you get your equipment?—Close on 11 o'clock when I got mine.
20. What were you doing in the meantime?—Just standing by waiting for my turn to come.
21. Were you the last of them?—No; there were a good few behind me. My mate Pollard was behind me.
22. Do you know when he got his?—He told me it was 12 o'clock when he got his, and he only got part of it.
23. *The Chairman.*] Was he in the same tent as you?—No; we were split up. He fell out as a bandsman, and by that means we got separated.
24. Were you put in a hut or a tent?—In a hut.
25. *Mr. Ferguson.*] What was the number of the hut?—It was No. 38 when I left Trentham, but it had been altered.
26. *Mr. Salmond.*] You were given in your ordinary equipment a pair of boots?—Yes.
27. Did you ever get two pairs?—No.
28. Did you get all the rest of the things you needed that day?—I do not know. I got a big coat, a pair of boots, dungaree suit, shirt and undershirt and pair of underpants, two pairs of socks, a ground waterproof sheet, three blankets, and a hat.
29. Did you get a mattress?—I got one by paying for it.
30. You bought the straw?—No, I bought a palliasse to put the straw in. I got the straw from the store. The quartermaster-sergeant was selling the palliasses as we came along. I paid 2s. for the mattress.
31. Have you got it now?—No; I burnt it at Trentham.
32. Have you got another one?—No; I have heard a lot about it, but I have not got one.
33. Where are you stationed now?—At Rangiotu.
34. What are you sleeping on now?—A bit of straw on the floor, and a waterproof sheet on that, in a tent.
35. You got your equipment about 11 o'clock at night and then you went to the hut?—Yes.
36. How many men slept in the hut with you that night?—Between seventy and eighty men.
37. It was a pretty tight fit?—Yes, it was a tight fit; just like herrings packed away—too tight to be comfortable.
38. On the succeeding nights was there the same number?—Yes. When I left Trentham on the 3rd July to go to Christchurch to my mate's funeral there were close on seventy men there then. Some were away on sick-leave.
39. What was that period?—Five weeks.
40. During that time were there usually seventy men in the hut?—Yes.
41. *The Chairman.*] How did you get at the number: did you count them?—Yes, they counted them. We were told by the sergeant there were seventy men.
42. Well, they have told us here that fifty men was the limit?—They told us they were built for fifty men, but all the time I was there there were close on seventy men. There were several away on sick-leave.
43. Seventy men would not be sleeping there all the time?—Yes.
44. *Mr. Salmond.*] Are you counting those on sick-leave amongst the seventy?—Some would be going away and some coming back.
45. *The Chairman.*] I want to know whether fifty, sixty, or seventy slept there?—Until the sickness broke out there were seventy men sleeping there.
46. You went there on the 29th May?—Yes. To give you an idea, there was not room for the men to sleep, and they had to sleep under the tables.
47. *Mr. Salmond.*] There are four tables in the hut?—Yes.
48. And was it the regular practice for some men to sleep under the tables?—Yes, it was for a time. Of course, some sick men went away for a fortnight and a week, and then those sleeping under the tables would take their places.
49. Was there room at the tables for meals for all the men?—No, not by a long way.
50. How did the extra men get their meals?—They had to sit on the floor, and put their dish on the floor and make the best of it.
51. Are they supposed to sit at the tables for their meals?—I do not know.
52. There are no seats there?—There are forms to sit on, but those men could not sit there because there was not room.
53. *Mr. Ferguson.*] What seating-accommodation was there—room to seat fifty men?—There were four tables.
54. *The Chairman.*] Would each table hold twelve men?—More than that; about fourteen or fifteen. I could not tell to one or two.
55. Did your corporal or sergeant live in the same hut?—Yes; all the corporals, sergeants, and sergeant-major lived in the same hut.
56. Who was the sergeant-major: he is top, is he not?—Yes; Sergeant-major Hartley, of D Company, 15th Platoon.
57. Who was the next man—the sergeant?—There were two sergeants—Sergeants Gear and Blackman.

58. And I suppose there would be several corporals?—No, I think they were short of corporals. There were two corporals: Bisman was one, and the other man has been discharged through bad health.

59. *Mr. Salmond.*] Do you know the name of the Lieutenant?—Yes, Mr. Wilford.

60. *The Chairman.*] Has the Lieutenant to see that you are billeted: has he to see that the huts have sufficient men in them or insufficient men?—I do not know. I never heard him say anything. He comes round to see if the tucker is all right.

61. *Mr. Ferguson.*] Does he come in at night-time?—Yes, he used to come once; but Mr. Wilford has been on sick-leave most of the time I have been at Trentham.

62. *Mr. Salmond.*] What did you find the hut like as far as ventilation and draughts were concerned?—There was plenty of ventilation. The ventilation seemed the wrong way. The draught seemed to be coming up from the floor round the body.

63. Were you cold at nights?—Yes, some nights.

64. Did the other men complain of feeling cold?—Yes.

65. Did you ever see Private Pollard in the camp?—Yes, I saw him.

66. Was he a friend of yours?—Yes; we came up from Christchurch together.

67. What hut was he living in?—I do not know his number; he was in the 2nd Battalion, Trentham Regiment.

68. He did not go into camp the same time as you?—Yes, we came together.

69. Did he say anything to you on any occasion about his equipment and what he had been supplied with?—He told me that all he had the first night was three blankets and a ground-sheet. It got so late they could not stop to issue more equipment, and they were given what they needed that night.

70. Did he say anything about his boots?—Yes; when I saw him a day or two afterwards he told me he had been wearing his private shoes because he had not had any military boots given to him.

71. It was not the next day?—No; I did not see him for two or three days, because we got mixed up. He had not got his boots then, and he told me he had wet feet.

72. You are positive he told you he had not got his boots?—Yes.

73. Did you see he was not wearing them?—Yes; when he told me he had not got his boots I told him I had a pair of boots with me that he could have till he got his military boots. He did not get his military boots for about a week, and was wearing his own shoes.

74. Did he bring the boots back to you?—I went down to his hut and got them.

75. When was that?—About a week after being in camp, or eight days after.

76. Did he complain of having wet feet?—Yes, the first time I saw him; that was why I lent him the boots. You could not do anything else but complain of wet feet in a place like that.

77. Did you know anything about the state of his health when in Trentham?—I only saw him the once. He went into the Trentham Hospital on the Thursday afternoon. I went to the hut on the Thursday night to inquire for him, and they told me he had gone to the hospital.

78. That would be about a week or ten days after you were there?—No; it would be over a fortnight.

79. You went to his hut to see him and was informed he was in the hospital?—That is right. I went to the hospital gate on the Thursday night and the guard told me I could not see him; I would have to wait till Sunday, because there was only one visiting-day a week, and that was Sunday.

80. Did you go on the Sunday?—Yes, and saw him.

81. What hospital was he in?—It was a house.

82. Was it the tea-kiosk?—No, it was the first place as you go in the gate. I should say it was the jockeys' or trainers' quarters.

83. What was the matter with him when you saw him?—He had a very bad cold and a bad throat. I went to the orderly and inquired what part of the hospital he was in, and they told me he was in No. 11 room.

84. Was he in a large ward with other patients?—No, just two men in a small room.

85. Was he comfortable?—Well, so far as I know he did not make any complaints as regards the bed.

86. Was the place clean?—Yes, the place was clean. When I got there I found the door closed and the window closed, and rather a heavy atmosphere, and I opened the window myself when I was there.

87. Were both those men suffering from colds?—Yes, and they were both coughing and spitting. They would lean their heads over and spit on the floor. There was a piece of paper by my friend's side of the bed, but whether that got there by accident or not I could not say.

88. Was he spitting on that?—Yes. The other man was spitting on the floor.

89. *The Chairman.*] Was any nurse or orderly about?—I did not see any nurse.

90. Or any orderly?—I believe an orderly did put his head in the door and say something and go away.

91. *Mr. Salmond.*] Pollard made no complaint to you?—He did not make any complaint to me, but he had not been in the hospital very long then. He would have been there two clear days.

92. I believe that subsequent to that visit you got a telegram from Mr. Pollard asking you to make inquiries about Private Pollard?—That was after I had written to Pollard saying I had seen the brother in the hospital. Then I got a telegram from Mr. Pollard on Saturday, the 26th.

93. What did the telegram say?—Saying that they were very anxious about their brother, and would like to know how he was getting on. When I came back from parade the telegram was waiting between 4 and 5 o'clock, and the guard would not let me into the hospital unless I had a pass. I went back again and waited till 8 o'clock, when he agreed to let me in as a

favour. I went to the orderly-room and told them I had received a wire from Mr. Pollard saying he was anxious to know about his brother, and would like to know how he was getting on, and what reply should I send back. He said, "If you wait I will ring up the hospital." He was then at Kaiwarra. He went in and came back and said, "I am sorry I cannot find out anything about Pollard—Captain Harrison is not here; can you come to-morrow?"

94. That was Saturday, the 26th?—Yes.

95. You were informed he was not at the racecourse then, but at Kaiwarra?—Yes.

96. You were told to come back on the Sunday?—Yes, and I did so. It was then just 12 o'clock.

97. And what happened?—The same thing happened again. He told me he could not let me know as Captain Harrison was not there, and he said, "If you call up to-night I will let you know for certain." I called again at night and the same thing happened again.

98. What was the name of the orderly?—Sergeant Montgomery.

99. *The Chairman.*] Is he in camp now?—Yes; he was in camp on the 10th July when I was there. He is orderly-sergeant at the hospital.

100. That is three times on the Sunday you went there and could not get any information?—Yes.

101. *Mr. Salmond.*] Did he suggest you should go on the Monday?—Yes. Before that I said, "If you cannot tell me where Private Pollard is and what is wrong with him I will wire back to his brother to that effect." He said, "You come back to-morrow after coming off parade and I will let you know for certain."

102. Did he say anything to you about the practice of the military authorities not giving information?—Yes; he said it was not the rule for the military authorities to let any one outside know the condition of any patient. He said it was the rule to let relatives know, but not outsiders.

103. *Mr. Salmond.*] You were an outsider?—I am not any blood relation.

104. You were considered an outsider?—Yes.

105. Did you tell him you were inquiring on behalf of Mr. Pollard?—Yes.

106. You went back on the Monday?—Yes.

107. And did you get any information?—Yes: I got information that he was in the Berhampore Hospital with pneumonia, but not serious.

108. Who told you that?—Sergeant Montgomery.

109. Do you remember whether you were told anything about his being at Kaiwarra or not: you knew he had been removed from the racecourse?—When I went up to inquire for him first they told me he had been shifted from Trentham to Kaiwarra.

110. I presume you informed Mr. Pollard of what you found out?—Yes, I wired to Mr. Pollard, "J. Pollard in Berhampore Hospital with pneumonia—not serious."

111. *Mr. Ferguson.*] What time on the Monday did you wire?—I went straight from the hospital to the post-office. The post-office is open between 12 and 1, and I sent the telegram about 5 to 1.

112. Is that all you know about Pollard's illness?—Yes.

113. I wish you now to tell the Commission about the camp. In the first place, what about the food—was it good?—Yes, fairly good, considering.

114. Enough of it?—Yes; you could get plenty of it.

115. And properly cooked?—Sometimes it would be properly cooked and sometimes not.

116. Did you complain about it?—We all complained about the tea.

117. What was the matter with it?—We reckoned they were putting salts in it. It had a peculiar taste.

118. *The Chairman.*] That was remedied, was it not?—Yes, after we complained about it a few times.

119. *Mr. Salmond.*] Was sufficient accommodation for washing supplied to the troops?—Not to start with.

120. What was wrong?—A scarcity of water.

121. You mean hot or cold?—Cold water for washing the face, and also a scarcity of water for washing the dishes and utensils.

122. But the water-supply was subsequently improved?—Yes, as time went on it was improved; but it was pretty "crook" during the first week. That started from the 29th May. Of course, that is for the Trentham Regiment; I do not know anything about outside that.

123. You are speaking of your personal experience of the Trentham Regiment?—Yes; I am not speaking of the whole camp.

124. Were there occasions on which you could not get clean water to wash yourself?—There were times when two or three men had to wash in the same water.

125. *The Chairman.*] Did the water not run in the pipes?—There was not any to run through the pipes.

126. The main supply was short?—Yes.

127. *Mr. Salmond.*] Were you supplied with any hot water for washing or shaving?—No; we would just sneak a little out of the "dixie" when the man was bringing it up to wash the wishes.

128. What is the "dixie"?—The thing they bring the tea in from the kitchens or cookhouse; and every man dips his mug into the dixie.

129. Do you mean they put their mugs into the dixie from which they drink their tea?—Yes; all the men who came back from the hospital, no matter what they have been suffering from, dip their mugs into the dixie.

130. And if they want another cup of tea?—They go back and dip the mug into the dixie again. They do that at the present time.

131. *The Chairman.*] You might have a tap instead of dipping it out?—Yes.

132. *Mr. Salmond.*] How many men is one dixie of tea supposed to supply tea to?—Twelve.

133. *Dr. Martin.*] Did you not have canteens?—No; we had to use mugs, and each man had to dip his own tea out from the dixie.

134. You can boil and do everything else with a canteen?—I did not have much to do with the canteen.

135. You were not provided with canteens?—No, I never saw any.

136. *Mr. Salmond.*] Were you supplied with any soap?—No, we had to buy our own, and still have to. We had to buy our own tea-towels to wipe the dishes up, and buy pepper and salt. We passed the hat round at Trentham and put in 6d. each for pepper and salt, and tea-towels for drying the dishes after washing them.

137. *Dr. Martin.*] Were they not provided?—No; we still have to provide our own. We put in 6d. each when we want anything.

138. *Mr. Salmond.*] There were no appliances there for drying the clothes or boots?—No.

139. Did you go about at any time with wet clothes?—Yes; we were obliged to when we had only one suit to wear.

140. But you had an overcoat?—Yes, a big coat.

141. Would not that keep your uniform dry?—It would for a certain time, but as the rain came on it would get wet in a certain time.

142. Has that happened to you?—Yes; the overcoat got wet through, but not the whole lot. I have been wet through to the legs.

143. Has your tunic or the upper part of the body been wet through?—No, not wet right through.

144. It did not reach your skin?—No.

145. But it has been too wet to wear comfortably?—Yes, but not what you call wet through.

146. *Mr. Ferguson.*] You do not wear a tunic in camp—you only wear linen?—We were in camp for over a fortnight before we had the uniform.

147. But you had the overcoat?—Yes, the first night we went into camp.

148. *Mr. Salmond.*] If your big coat got thoroughly wet, how were you going to get it dry?—We would have to wait till the dry weather came. When we came back from parade we had orders one day to fold the palliasses and the blankets, and put them on the palliasses, and then fold the big coats and put them on the blankets. I had to fold mine one day when it was very wet, and put it on the blankets.

149. Was that practice continued?—It was continued until we complained about it to the sergeant.

150. Was there any place where you could hang up wet clothes?—If you hung them up on the rafters the water would drop down.

151. There were no lines for the clothes to be stretched and hung up?—No; the only line we had was a small line outside, which we fixed up for ourselves.

152. Were you allowed to hang up wet clothes on the tent-ropes?—We were in huts.

153. Do you know what was the practice in the tents: where were the clothes hung up?—I do not know. I heard they were not allowed to hang them up to the tent-poles, but whether that is right or not I cannot say.

154. What about boots and trousers: did you go about in them wet?—Yes. I was out on parade, and it came on very wet. I got wet through from the knees down, and that afternoon we had a lecture, and I had to sit down in wet dungarees all that afternoon.

155. Could you not have changed the wet trousers for uniform trousers?—We did not have the uniform then. We had been in camp close on three weeks before getting the uniform.

156. So that for three weeks you only had one set?—Yes.

157. Was the rest of the battalion in the same position: how many men had not got their uniforms for three weeks?—None in the 1st Battalion got their uniforms for close on three weeks.

158. *The Chairman.*] They simply had the linen clothes and those they brought with them?—Yes.

159. *Mr. Ferguson.*] You had your private clothes with you?—Yes, in the kit-bags. It was not much use getting them out, because they were wrapped up in a bag, and they would be as bad as the dungarees.

160. *Mr. Salmond.*] Were you prohibited from wearing them?—I do not think they allowed us to wear civilian clothes.

161. *Mr. Ferguson.*] You signed for your clothes as you got them?—Yes, for everything.

162. So that the books or cards would show the date on which the men got their clothes?—Yes. It may not be exactly three weeks, but between a fortnight and three weeks. To give you an idea, when Pollard went into the hospital he had not had his uniform.

163. And never got it?—No.

164. *Mr. Salmond.*] Did you wear wet boots and socks?—Yes, I was obliged to.

165. How many pairs of socks were issued to you?—Two pairs.

166. Were they both wet at the same time?—One pair would be wet, and before you could get that pair dry the other pair would be wet. They would be both wet at the same time.

167. So that you had not a dry pair of socks to wear?—No, you could not dry them, because we had no place.

168. *The Chairman.*] They have marquees and driers now?—Yes. I have not tried it, but I think it would take a long time if you all went with greatcoats. It is a very small affair.

169. *Mr. Salmond.*] Did you ever attend sick-parade when at Trentham?—No.

170. Did you ever see it?—Yes; the last day I was there I saw some men outside the marquee waiting to be admitted.

171. Have you ever stood and watched the sick-parade going on?—No; they did not give you much time to stand up and watch those things. I just saw it the last Saturday I was there. I was on fatigue work and passed down.

172. *Mr. Gray.*] When you got to the camp you were one of a large number of new recruits?—Yes.

173. About 2,200 in all?—About 2,500.

174. Did they all come in the same day?—No, I do not think so. We went in on the 29th, and I think some came in on the Saturday and Monday.

175. And a great many went in on the Saturday you arrived?—Yes.

176. It would necessarily be a matter of considerable time for each man to get his outfit?—Yes.

177. You were all supplied with the same kind of outfit?—Yes, we are all supplied, but did not get the same quantity.

178. But each man had to get a uniform, boots, socks, blankets, hat, and the other things you mentioned?—They issued them up to a certain time.

179. Each man had to be fitted with his coat and trousers?—Yes. They chucked it at you; there was not much fitting. They did not give you much time to fit.

180. *Mr. Ferguson.*] They asked you what size of boots you wore?—Yes.

181. You did not try them on there?—Some tried them on, but they kept worrying you to look sharp.

182. *Mr. Gray.*] Had your friend Pollard a large foot?—No, size 8's; there should not be any difficulty about fitting.

183. Were you surprised at you and your mates being kept so long that night to get your outfit?—Yes, I was more than surprised. I would not have been there had I known they would be so long. I was surprised at the system.

184. Seeing the crowd of you there, do you suggest it was an unreasonable thing for you to be kept waiting that time?—Yes, very unreasonable.

185. How could it have been avoided?—By taking the men in smaller numbers.

186. Would that have helped?—Yes. If they had let the men out for a couple of hours instead of keeping them standing in the mud for all that time it would have been better.

187. You suffered no ill effects?—No.

188. You have enjoyed good health all the time you have been in camp?—Yes.

189. In spite of the wetting you did not catch cold?—I got a bit of a cold.

190. But not enough to send you to the hospital?—No.

191. You told the Commissioners that when you went to Trentham there were seventy in a hut: are you including those who were on sick-leave?—Yes.

192. When any men went away on sick-leave, were their places filled up?—Those men sleeping between the tables and door would take their places.

193. No additional men were put into the hut?—No. The sickness did not break out for the first fortnight.

194. You say the draughts in the hut seemed to come up from the floor?—Yes.

195. Was there any man amongst you who was able to say where the draught came from?—I should say it was coming up and under us.

196. You do not suggest between the flooring-boards?—That is where I should say it came from.

197. There were no complaints, were there, of men not getting blankets to sleep in?—They all got their blankets. Some had no palliasses that night: they had to sleep on the floor.

198. When your friend Pollard became ill and went to the hospital you saw him?—Yes, on the Sunday.

199. And on that occasion he made no complaint about want of treatment?—No, no complaint in regard to treatment.

200. Then subsequently you were informed he had been shifted to Kaiwarra?—Yes.

201. You did not tell his relatives that, did you?—No, not then. I wrote a letter afterwards, but the wire I sent to say he was in Berhampore Mr. Pollard received before he received my letter.

202. And after you had been told he was at Kaiwarra you were informed that he had been sent from Kaiwarra to the Berhampore Hospital?—Yes.

203. You did not see him again?—No.

204. Now, with respect to the camp, who ordered the men to fold their mattresses, blankets, and overcoats away?—Sergeant Blackman, the platoon sergeant. Those were the orders he said he got.

205. Whom did you complain to?—We complained to the same sergeant again, and he reported to some one, and we got orders after two or three days. We did it two or three days before we made the complaint to the sergeant.

206. When you went and made the complaint the matter was remedied?—Yes.

207. Was there any difficulty in making the complaint?—No difficulty—just reporting to the sergeant. What became of it after that I do not know.

208. When there was a scarcity of water, was anything being done to the waterworks?—They were always working about them.

209. Do you know that the water-supply was being extended throughout the camp when your regiment went in?—It may have been, but there was not enough water.

210. But the supply was being extended and pipes being laid?—Yes; they were being laid all the time.

211. There was some interference with the water-supply?—Yes.

212. That only lasted for, I think, two or three days?—Close on a week. The first two or three days it was worse, and then began to improve. When you went for a morning wash there would be four or five men waiting, and it would be a case of who would go first. I have known men who went down to get a wash and found they would not have time to wait, and had to go and get the food without having a wash.

213. At all events, the water-supply was improved, and there was no complaint after that?—It was all right after that.

214. *Mr. Ferguson.*] How often were you compelled to shave?—The rule is to shave every morning.

215. And you had to shave in cold water at the ablution-tubs?—Yes. Some shaved just outside the hut—anywhere where they could fix a looking-glass.

216. *The Chairman.*] Do you say you had to pay for your own pepper and salt?—Yes.

217. We were informed that the men got bread, 1¼ lb.; flour, 1 oz.; meat, 1½ lb.; cheese, 2 oz.; coffee, ½ oz.; butter, salt, and sugar?—I think that included what the cook puts in.

218. He puts the sugar into the tea for you?—Yes.

219. You did not get any of those things?—No, we got nothing of that.

220. You say you had to buy pepper and salt?—Yes, and soap.

221. *Dr. Martin.*] You also had to buy palliasses?—Yes; we paid 2s. each for them to the quartermaster-sergeant—Smith.

222. Did all the men pay for them?—Yes.

223. If a man had not 2s. he would not get a palliasse?—No; he would simply have to lie on the floor, or borrow 2s. from his mate.

224. You could get straw?—Yes.

225. It is not correct to say that mattresses were provided for the Trentham Regiment when they arrived on the 29th?—It is not correct; they were not provided. We could get them by paying for them.

226. There was no difficulty in getting straw?—No.

227. We were told that each man when he arrived received two uniforms—a khaki uniform and a set of denims?—That is not right.

228. *The Chairman.*] Have you ever heard of soldiers sleeping on wet mattresses?—The only time was when we had orders to put wet coats on the blankets, and they complained of that. As to the ground-sheets, when we go out we have to put the ground-sheets on the ground, and then the same sheets we have to use at night-time.

229. What do you use them for at daytime?—To take out on the parade-ground to lie down on them.

230. They would get covered in mud?—Yes. Last Thursday it came on to rain about five minutes after getting on the parade-ground, and when I got off my waterproof sheet there was a pool of water in it, and that same sheet I was supposed to put on the straw. But I ran the risk and put a blanket on it.

231. I thought you put the straw on top of the waterproof sheet?—No; they put the straw down, then the waterproof sheet, and then the blanket on top. In the tents where there are eight men, if you get kicking round straw you will have a mess. Every morning you have to take the waterproof sheet up, and there is not much space.

232. *Dr. Martin.*] When did you get an issue of drawers, extra socks, and the uniform?—That is the second issue of clothing—about a fortnight after getting into camp.

233. You did not get the khaki uniform for about two or three weeks?—No.

234. *Mr. Ferguson.*] In a letter you wrote to Pollard you said that up to the present you had only been carrying boulders, and not been doing any drill?—I think it was his brother who wrote that.

235. Were you employed carrying boulders?—Yes, we were all employed carrying boulders.

236. What did you carry them in?—Some carried them in sacks, and some in pieces of corrugated iron.

237. Is it true that any of them used their blankets to carry them in?—No. I have seen bread carried in oil-sheets that the men have slept on the night before.

238. Carried from where?—From the stores to the hut. I have done that myself.

239. *The Chairman.*] Is not that the fault of the man who chooses that way of carrying the bread?—No, that is the order from the sergeant.

240. To take your waterproof sheet?—Yes. You get up in the morning and the order would be, "So-many men go down to the Quartermaster's store and take so-many oil-sheets and bring back the bread." They were the sheets the men had been sleeping on at night.

241. You do not know what they do when they are in the fighting-line?—No, I have not reached that yet.

242. *Mr. Salmond.*] Is that the general practice of carrying the bread from the store to the hut?—That was when I was there.

243. In all the huts?—That was in the 1st Battalion.

244. *Mr. Ferguson.*] The 2nd Battalion was in huts too?—Yes, all in huts. There is one thing I should like to mention: When I came back from my friend's funeral at Christchurch I went to Trentham on the 12th July. On the 9th July the guards would not let me in that night, and told me I had to go back to Wellington. I went back, and I had a paper from the barracks to sleep in town on the Friday night. On the Saturday they gave me a pass to stay in town again for the day. On the Sunday morning we were marched down to the railway-station by the military police and then put right into the hospital. It was still quarantined at that time. There were people there who could not get out, and people who wanted to see their friends who could not, and we were put in the midst of all that sickness.

245. *The Chairman.*] What was the reason of that?—I do not know where the orders came from.

246. Did the "red-caps" take control of you?—Yes, we were under their control as if we were deserters. I was away on special leave at my friend's funeral.

247. *Dr. Martin.*] You were marched back to the racecourse hospital?—Yes.

248. Where did you sleep that night?—In the hut that some of my mates had gone out of.

249. Did you sleep in any quarters where measles had been?—Yes.

250. How long since they had left that hut?—That was the Sunday I got back. I think they left on the Saturday.

251. *The Chairman.*] Was it one of the regular hutments you were put into?—Yes; one of the hutments that the Trentham Regiment had been sleeping in. We were first marched into the hospital grounds to see the doctor. It seemed strange that there were healthy men they would not let out, and yet they put us in. I was not on sick-leave, and was well enough to join my regiment at Rangiotu.

252. *Mr. Salmond.*] How long were you kept at Trentham?—From the Sunday till the Wednesday.

253. You were not treated as having been absent without leave?—No, they could not do that. In regard to sleeping in the huts, there were men sleeping between the end of the table and the door, and one night it came on to rain and blow, and the sergeant-major came up and said to one man, "Get up, you will be dead before morning." I understand the wet was blowing right on to the blankets under the door. The wind was coming fair on.

254. Is there anything more you can tell us?—The Staff sergeant-major came to our hut one day and gave us instructions on the rifle, and during "smoke-oh" he told us that they had stopped up all the draughty places in their hut, and we told him that if we did we could get C.C.

255. That was to the sergeant-major?—Yes; I think they call him the Staff sergeant.

WEDNESDAY, 28TH JULY, 1915.

VERA KEITH sworn and examined. (No. 41.)

1. *The Chairman.*] You are a nursing sister—a duly qualified nurse?—Yes.

2. You were in charge, I think, of the temporary hospital at Berhampore?—Yes, for part of the time.

3. During what time were you there?—I went there on the 19th May and I left on the 5th July. I was not in charge during the first two weeks.

4. Who was in charge during those two weeks?—Sister Jamieson, who went away with the hospital ship.

5. She was in charge up to the first week in June?—About that time.

6. Who were there besides Sister Jamieson when you went there?—Just the two of us were there till Sister Hannah came.

7. When did she come?—About a week after me.

8. When Sister Jamieson went who took her place?—Sister Farrom.

9. Were there any marquees put up while you were there?—Yes; they were all put up while I was there.

10. How many?—Three large marquees.

11. How many patients were accommodated in the building?—Twenty in the building, part of the time, and then sixteen.

12. The number in the building was reduced to sixteen when the marquees were put up?—Yes.

13. Do you remember about when the marquees were put up?—When we got the rush of patients, just after Sister Jamieson left.

14. Did you keep any temperature-charts?—We had temperature-books.

15. From the outset?—Yes.

16. And so far as you are concerned you kept the temperatures in the book faithfully?—Yes.

17. That is one of the first duties of a nurse, is it not?—Yes.

18. Do you remember two men called Pollard and Fordham being there?—Yes; they were there during the last week I was there. I left a fortnight before the hospital was closed. I was transferred to Trentham.

19. They died before you left?—Yes.

20. Have you got the temperature-book?—No, I left it there when I left the hospital; it belonged to the building.

21. Do you remember those cases coming in?—Yes, perfectly well.

22. What was the condition of Pollard when he came in?—He looked very white, and seemed to have influenza rather badly.

23. Do you remember his temperature, or would you require the book to recall it?—I do not remember. I know he had a temperature all the time he was there. I remember that on the Tuesday it went up to 105.

24. He died on the Friday?—Yes; he was admitted on the Friday and died on the following Friday.

25. He would be admitted on the 25th June: where was he admitted from—Kaiwarra, was it?—I think he came from Kaiwarra, but I am not sure.

26. Were there many patients with high temperatures?—No, only two—Fordham and Pollard. We had only twenty patients then.

27. And these were the only two who during that time developed high temperatures?—Yes.
28. Were you personally nursing Pollard?—Yes. I sponged him at 2 o'clock when his temperature was 105, and at 4 o'clock it was 105·6.
29. That was on the afternoon of the Tuesday?—Yes.
30. Then what was your duty if the man's temperature went up, as regards calling in assistance or anything of that kind?—I received orders to call a doctor every night besides the doctor who came from the camp during the day; and if any patients required medical attention I could call a doctor from the town. All that week we had a doctor every day.
31. When his temperature went up to 105 did you call a doctor?—One came up that afternoon—Dr. Harrison.
32. And he was advised of Pollard's temperature?—Yes, he saw him.
33. That afternoon?—Yes.
34. Did any discussion take place as to his removal to the Wellington Hospital?—I was not on duty then.
35. Was the question of his removal discussed with you?—No, not in regard to Pollard.
36. You knew Pollard well?—Yes, I knew him quite well.
37. Can you tell us from memory, in the absence of the temperature-book, the subsequent history of this case of Pollard? You say that at 4 o'clock on the Tuesday his temperature was 105·6: was that after the doctor had been in and seen him, or before?—It was after Dr. Harrison had been there. Major Elliott came in the evening.
38. And when Major Elliott came in the evening what was his condition?—His temperature had dropped.
39. Pollard and Fordham both had temperature-charts?—Yes.
40. How often were their temperatures taken?—Hourly.
41. Those temperatures were not in the book?—No, those were bad cases.
42. The charts were not requisite in the case of patients without any temperature?—For patients with just a little temperature.
43. Dr. Elliott came in the evening, and what took place then?—He thought Pollard was in a very bad condition.
44. Did he suggest his removal to the hospital?—Yes.
45. Were they in a condition to be removed?—No; I think they could have been very well looked after there, because we had only eight patients in the room they were in.
46. And how many nurses?—Three trained nurses.
47. Was the place clean?—Yes; it was cleaned every morning by the orderlies. There were three orderlies.
48. And was there plenty of bedding and equipment?—Yes, far more than we could use. I had a big storeroom there.
49. And with regard to hot water and requisites of that kind, were you well equipped?—For hot water we had to keep a copper going; there was no hot-water service.
50. But the copper supplied all needs?—Yes.
51. Speaking of the room, from your experience of it was it a room that was fit for the nursing of patients in the condition of these two men?—Yes, as we had come down to only twenty patients. I think it was quite all right to nurse them there.
52. If any one got a temperature when you had a great many patients you sent them to the general hospital at once?—Yes.
53. Having only twenty patients there then you were quite able to cope with the nursing?—Yes; one nurse was on duty the whole time with those two men.
54. And you relieved one another?—Yes.
55. Now, coming back to the history of the case, after Dr. Elliott came in the evening what happened?—He just saw the patients.
56. Did he order any special treatment?—No, he did not alter the treatment. They were having everything that could be given them.
57. Then, on the Wednesday, the day after Pollard had that high temperature, do you remember what happened?—I was not on duty that day.
58. What was his condition on Wednesday night?—Pollard was partly delirious part of the night.
59. Then was any medical man there?—Not during the night.
60. But during the day?—Yes.
61. Was it necessary in consequence of his becoming delirious to call in a doctor specially?—No, not where there are trained nurses; we never do.
62. This was a phase of the illness from which he was suffering?—Yes.
63. The temperature was still high?—Not so high; it was never so high after the Tuesday.
64. Not so high on the Wednesday as on the Tuesday?—That is so, on the Wednesday night.
65. Then, regarding the Thursday—that is, the day before he died—have you any recollection of his condition then?—I was off duty until 5 o'clock on Thursday night.
66. And what was his condition then?—He was very bad then.
67. Worse than before, when you saw him?—Yes.
68. In what way was he worse—temperature higher?—No, it was lower.
69. But little vitality?—Less vitality.
70. Was there any difficulty in keeping him warm?—No, not until just at the last.
71. Now, do you remember his relatives coming?—I was not on duty when they arrived.
72. Do you remember their being there?—Yes.
73. And while there did they make any complaints of any kind to you?—No.
74. Did you hear any one make a complaint?—No; they thanked us for our kindness, and shook hands when they were leaving.

75. Were you there when attention was called to his feet being cold?—I remember that quite well, on the Friday morning.

76. Who discovered his feet were cold?—A sister of Pollard's.

77. What was done then?—Sister Hannah filled the bottle.

78. It seems to have been suggested that that ought not to have occurred?—He was just dying then. It is impossible to keep them warm.

79. At that stage hot water was of no value?—No.

80. They said that his feet got warmer after the bottle was put there?—It is impossible to keep them warm when they are dying. The sister had been up all night, and she told me that his feet were cold and that she had kept them as warm as possible.

81. But if a patient is dying, then you cannot keep the extremities warm?—No.

82. These patients were suffering from a bronchial affection?—Yes.

83. And did they require to spit?—Yes.

84. Were there any spittoons there?—Dozens of them.

85. There is a suggestion that Pollard had to spit into a sheet of paper?—I had even spare spittoons in the storeroom.

86. There were more than you wanted?—Yes. I had to put a sheet of paper on a chair where the spittoon was because very often a patient will miss the spittoon.

87. The paper was placed under the spittoon to spare the chair?—Yes.

88. It has been stated that there was phlegm on the wall?—There might have been; a delirious patient will often expectorate on the wall.

89. And over the bedclothes and anywhere?—Yes.

90. Then the floor is said to have looked as if it had never been scrubbed?—It is mopped out every morning by the orderlies.

91. From your experience as a nurse, was the floor in a proper state of cleanliness for a ward in which these men were being attended to?—It certainly was. I had the beds pulled out every morning into the centre of the floor and swept all round, and the places mopped all round.

92. It is one of the fundamental principles of nursing to keep everything clean?—Yes.

93. Pollard's brother, who gave evidence yesterday, said that he wanted to get another doctor in because he was not satisfied with the place his brother was in, but Captain Harrison said, "We object to have any civilian interference. If every one could come in it would upset the whole organization." The patient, the Medical Officer added, was in too critical a condition to be removed. Pollard's brother also said that a doctor only visited his brother once a day, which was not enough. On the Thursday what doctors came, and what medical attendance did he have?—I do not remember which doctor came, but I know we had a doctor every night.

94. As well as a visit from one during the day?—Yes, all that week.

95. Major Elliott came one night?—He came more than one night.

96. You cannot say who came on the Thursday night?—No.

97. Do you remember if Dr. Steele was there?—I think I remember him, but some of them were strangers to me, and I do not know their names.

98. The position generally seems to be that from the Tuesday, when Pollard's temperature rose, until the Friday he gradually sank, although his temperature went down?—Yes.

99. And if I understand you aright, during that week the ward was not more than three-parts full?—About three-parts full; we had eight patients, and we could have taken ten in there.

100. There were not too many for the three nurses to deal with?—No.

101. The duties of nursing could be easily undertaken by three nurses?—Yes, by three trained nurses. There were only twenty patients then; the others were all convalescent.

102. Only those two cases required special attention?—Yes, and they got it.

103. Do you remember Fordham?—Yes, very well.

104. These two men were near the door?—Yes.

105. When did Fordham come in?—The same day as Pollard—on the Friday.

106. *Dr. Martin.*] At the same time?—I think they came together.

107. *The Chairman.*] And what was his condition when he came?—He just seemed to have influenza.

108. Then, can you recall anything about his temperature?—He did not have a very high temperature.

109. When he came in?—At any time.

110. When did his condition appear to alter?—On the Tuesday night. Major Elliott looked at him, but his temperature was only 100.

111. That was a slight rise, was it?—Yes; but he seemed to be getting really ill then.

112. And was he seen by the two doctors morning and evening that day?—Yes.

113. Then on the Wednesday do you remember what happened?—On the Wednesday he seemed to be worse, and I wired to his relatives.

114. Did you send the message, or did you ask some one to send it?—I was acting for Captain Harrison, and I sent it.

115. In this connection do you remember any telegram being sent with regard to Pollard?—No.

116. You did not send one in regard to Pollard: that might have been sent by another nurse?—No.

117. You do not recollect any telegram being sent to Pollard's relatives?—I did not send any.

118. However, on the Wednesday Fordham seemed worse and you sent a telegram to his relatives: would that be in the morning or the evening?—I sent them in the morning, because I took them myself.

119. Did you ask him for the addresses of his relatives?—Yes, and he gave me three addresses.

120. Did you suggest that they should come?—No; I just asked him the addresses.
121. You did not tell him that you were going to send for his relatives?—That is so.
122. That would be proper, so as to prevent shock?—Yes.
123. Then on the Wednesday he seemed worse: were you present when the doctors saw him?—I would not be there in the daytime.
124. Do you remember whether he was seen on Wednesday night by a doctor?—Yes, the doctor saw all the patients; he was bound to have been seen, just as Pollard was seen.
125. Then on the Thursday—can you tell us the history of the case on that day?—I was off duty on Thursday till 5 o'clock.
126. Well, after 5 o'clock?—He was gradually getting worse all the time.
127. And he was seen by a doctor morning and evening on the Thursday?—Yes.
128. Did he die on the Friday?—Yes, at 10 o'clock on the Friday morning.
129. With regard to the attention that was given to him, could it have been better from a nursing point of view if he had been elsewhere?—No.
130. And were all the requisites and comforts for a man in that condition available in the ward?—Yes; we had everything we wanted.
131. Did you see his relatives when they came?—Yes.
132. Did they make any complaints to you of any kind?—No, they were very grateful. They thought everything possible had been done, and I have had a letter since from them thanking us for our kindness, and saying that they knew everything possible had been done for their brother.
133. Going back to Pollard, do you remember a consultation at which Dr. Herbert was present?—No; I could not have been on duty, because I do not remember.
134. *Dr. Martin.*] Do you remember the case of Colley?—Yes.
135. Can you give me the date when he was admitted to Berhampore?—I do not remember.
136. How long was he there?—About a week.
137. Was he in the main building?—No, in a marquee.
138. How many were in that marquee?—There would be from ten to sixteen there.
139. How many patients were in the Berhampore Hospital at the time—that would be about the 5th June?—He was only in about a week. One day he came to me at 2 o'clock and said he felt very cold. In the morning he had been playing cards. I had him put to bed inside, and his temperature went up to 103, and then between 6 and 7 that night I sent him to the general hospital.
140. *The Chairman.*] Where was he playing cards?—On the table in the ward.
141. Was that warm?—Yes, the wards were warm.
142. Was there a fire?—No; but we never felt the cold there.
143. *Dr. Martin.*] Had he a bed in the marquee?—He had a mattress over a mackintosh; we had not stretchers then.
144. Was that the time when there was overcrowding—104 patients?—About that time.
145. Do you know whether Colley's temperature was taken every morning?—Yes. He had been in about a week, and was regarded as only a light case of measles. I would not be sure of his temperature, but any man who had a temperature was put into the ward.
146. And were these light cases kept under observation?—Yes.
147. Were their temperatures taken every morning?—Yes.
148. And the doctors saw these cases?—Yes.
149. He was sent to the general hospital on the 10th and died the following day. The diagnosis of his case was pneumonia following measles?—I heard the diagnosis was different to that.
150. He reported to you at 2 o'clock in the afternoon that he felt cold and the next day he was dead?—Yes.
151. From pneumonia—that you would not know?—He did not show any symptoms, but his temperature ran up to 103.
152. Could we get his temperatures every day for a week up to this time?—They are in the books that were at Berhampore.
153. Do you remember the case of a man named McFarlane?—Yes.
154. He was admitted to the Wellington Hospital on the 2nd?—Yes.
155. How long had he been at Berhampore before he was sent to the hospital?—I do not know.
156. Did he take suddenly ill?—No; Colley and Phillipps were the only ones who took suddenly ill. I sent about eight to the general hospital.
157. You do not remember much about McFarlane?—No, but I remember sending him.
158. Do you remember Kennedy?—Yes.
159. He was sent to Wellington Hospital on the 5th June: had he been ill long?—He was with us a few days; I could not say how long.
160. You sent cases to the Wellington Hospital on your own responsibility?—Yes; I rang up for the ambulance and sent them over.
161. What was your guide?—A rising temperature.
162. A temperature of 99?—No.
163. One hundred?—No.
164. One hundred and two?—Yes; I would wait until then, because measles get up to 102; and also if the cases seemed to be serious.
165. Or if there were some other bad symptoms?—Yes.
166. Did you suffer any inconvenience for want of a telephone?—Of course, we could have done very well with it; but we sent to the chemist's, which was not far away.

167. There was no continuity of treatment of the patients—they were given treatment by several medical men?—No, only the last week I was there; we always had the same doctor before that.

168. Pollard was seen by Captain McCaw, the night before by Dr. Steele, and by which doctor in the daytime?—Dr. Harrison was there every day.

169. And Major Elliott?—He came on Tuesday night, I remember.

170. These eight beds in the Berhampore Hospital: were they close together?—Fairly close together, but there was plenty of room between them.

171. *Mr. Ferguson.*] In regard to the orderlies, were they trained men?—They were Red Cross men, but I do not know whether they were trained. They had no nursing to do.

172. Were you satisfied with what they did do?—I made them do it. When I had orderlies who did not do the work properly I reported them and had them replaced. There were three men sent back to Trentham.

173. Therefore they were not altogether satisfactory?—Some of them.

174. The sergeant you had was quite satisfactory?—Yes; but he was not under me at all. He came to take charge of the patients outside. The orderlies were under me.

175. Still, anything you asked him to get done he got done for you?—Yes, outside.

176. *Mr. Salmond.*] Did you know what Colley died of?—No.

177. Did you ever have a talk with the doctors about it?—No; just privately with the nurses.

178. And from your experience did you suppose that Colley was suffering from pneumonia?—No, I do not think so. He was a man who was apparently quite well.

179. He was quite well up to the day before he died?—Yes, apparently.

180. Until then you regarded him as a convalescent case of measles?—Yes.

181. Had he any temperature, do you know?—No, he had no temperature, but he was feeling a chill.

182. Were you alarmed at his condition on that day?—He showed no symptoms at all. I watched him all that afternoon, and late in the afternoon his temperature went up to 103, and so I sent him to the hospital that evening.

183. Was he sent to the general hospital before the doctor had seen him?—Yes; those were my orders.

184. But in the other cases of Pollard and Fordham you kept them at Berhampore?—Yes, because we had so few cases then. We were able to look after them.

185. The reason you sent Colley to the hospital was that at that time there were some patients at Berhampore?—Yes.

186. How many were there?—A good number, because they were sleeping in the marquees.

187. If Colley had not been sent to the hospital where would he have slept that night?—In the ward.

188. There would have been room there for him?—Yes.

189. He would not have had to sleep in the marquee?—No.

190. You were alarmed, and you thought you had better send him to the hospital?—Yes.

191. Now, as to Pollard, I understand that he was seen by the doctor twice a day during the last few days: when did you first think his case was serious?—On the Tuesday.

192. He having come in on the Friday?—Yes.

193. Up to Tuesday how often had he been seen by the doctor?—He would be seen by the camp doctor every day. He saw every patient.

194. Up to that time had Pollard been seen by any other doctor?—I cannot remember.

195. His case was not regarded as serious until the Tuesday?—They might have thought it was serious.

196. Would another doctor in addition to Dr. Harrison come as a matter of course to the hospital?—No, not unless he was sent for.

197. Another doctor would not see Pollard unless he had been sent for?—No.

198. Did you send for another doctor to see Pollard?—I rang up Major Elliott on Tuesday night.

199. The hospital was then connected with the telephone?—Yes.

200. *The Chairman.*] It was put on about a fortnight after the hospital opened?—No; but some time before it was closed up.

201. *Mr. Salmond.*] You rang up Major Elliott, and he came and saw Pollard: did he think he was seriously ill?—Yes.

202. He told you so?—Yes.

203. Was there any talk about his removal to the hospital?—I do not know.

204. The next day (Wednesday) did you know whether Captain Harrison was there?—I was not on duty; but another Medical Officer came from the camp. I do not know all their names.

205. Did you know what doctor came the next day—Thursday?—The other nurse would know.

206. You never saw any other doctor but Drs. Elliott and Harrison?—There were also Drs. McCaw, Ferguson, and Steele.

207. There were those five doctors, and he was only ill on the Tuesday, Wednesday, Thursday, and died on the Friday; there should not have been five doctors attending him?—There would be one at night, and another in the daytime.

The Chairman: Dr. Harrison is stationed at Trentham, and he went round the hospitals at Kaiwarra and Berhampore, and arranged that if any patient required special attention during his absence the nurse could ring up for a doctor. Major Elliott could not attend on the Thursday, and so he got Dr. Steele.

208. *Mr. Salmond.*] Are you of opinion that Pollard got proper medical attention during the whole of the time?—Yes.

209. And would it have done him any good to have removed him from the hospital?—No.
210. Do you remember any talk about communicating with his relatives?—No; I had nothing to do with that.
211. You communicated with Fordham's relatives?—Yes, on behalf of Captain Harrison.
212. How did that happen when you did not communicate with Pollard's relatives?—Captain Harrison was leaving us and going to the post-office, and he said he would wire to Pollard's relatives.
213. What day was that?—I think that was the Monday.
214. That telegram was sent on a Tuesday. Captain Harrison spoke to you about communicating with Pollard's relatives, and said he would send the wire?—Yes.
215. And that was the first day there were any dangerous or serious symptoms in Pollard's case?—Yes.
216. In what condition were these patients when they came into your hospital in respect to cleanliness?—They were quite clean, and they had a change of clean underclothing with them.
217. Not as to their clothes as much as regards their bodies: they had been washed and attended to?—Yes.
218. As to Fordham, what was he supposed to be suffering from when he came to you?—He was sent as a measles case.
219. You said he seemed to have influenza?—Yes; many of them had the both at once.
220. And when did you first think that Fordham was seriously ill?—On Wednesday, I think—I am not sure.
221. You sent a message to his relatives the very day you first thought he was seriously ill?—Yes.
222. And no complaint was every made to you regarding the reporting of Fordham's case?—No.
223. He began to be ill on the Tuesday night, and you sent a telegram to his relatives on the Wednesday?—Yes.
224. And his relatives arrived in time to see him alive?—Yes.

WILLIAM LANGSTON NEWNHAM sworn and examined. (No. 42.)

1. *The Chairman.*] What are you, Mr. Newnham?—An Assistant Engineer in the Public Works Department.
2. You have some plans to provide us with?—Yes; I have a large plan showing the whole of the Trentham Military Camp, also several small plans. [Plans put in.] The large plan shows generally the position of the buildings and tents in the camp as the camp appears to-day. The small plans show the position of the tents at different periods.
3. Can you tell us the total area of the camp, apart from the racecourse? How much ground has the Government available as a camp there?—I have no information on that point.
4. *Mr. Ferguson.*] Of the area of flat land?—No; but I can get you that information.
5. *The Chairman.*] Sheet No. 1 is a tracing showing the position in October, 1914, of the latrines and sanitary buildings relating to the Rifle Association?—Yes.
6. These were pulled down in October, and the ground was then used as an artillery parade-ground till about the end of December?—Yes.
7. Then how was it occupied?—Tents were pitched about that position.
8. In December?—Yes.
9. As per plan shown on sheet 3?—Yes; the position of these tents is as near as I can get.
10. This is on the basis of information supplied by the Defence authorities?—Yes.
11. By whom actually?—Captain McCristell.
12. Since December these tents have been cleared away for the huts?—Yes.
13. The first row of hutments after the same hut was put on the site which has been previously spoken of as being occupied by the tents of the Rifle Association sanitary arrangements?—Yes.
14. There were no huts put up on the part marked "Latrines and privies and urinals" on sheet No. 1, but only on the part facing the main road?—Yes, that is so.
15. These privies and urinals were only used once or twice in the year by the Rifle Association?—That is so.
16. There was no pit: buckets were used?—That is so.
17. *Mr. Gray.*] I understand this is the site of the latrines used by the Rifle Association?—That is so.
18. *The Chairman.*] You are only showing us plans which indicate information which you have received?—Yes, sir.
19. Sheet No. 2 shows the position of the tents during October, November, and December?—Yes.
20. That area on which the tents were pitched was quite clear of the latrine spot?—Yes, sir.
21. *Mr. Ferguson.*] I assume we may take it that there was no hesitation or doubt in the mind of Captain McCristell as to this information: you are fairly certain that his information is correct?—Yes.
22. He gave the information as to who occupied those tents?—Yes. The position of the tents was pretty well defined, except where the hutments are now. Of course, there are no traces of them there now.
23. *The Chairman.*] Sheet No. 4 shows the position of the tents during February, March, and part of April; sheet No. 5 shows the position of the tents from April to the date on which the camp broke up in July?—Yes.

ARTHUR EDWARD WHYTE sworn and examined. (No. 43.)

1. *The Chairman.*] What is your position, Mr. Whyte?—I am secretary to the Wellington Racing Club.

2. How did the buildings and grounds of your club come to be occupied for camp purposes at Trentham?—In the first place, when the camp was originally established in October we granted the Defence Department the use of 60 acres of ground for manœuvring or erecting camps.

3. Was that voluntarily?—Yes, without request. We also granted them the use of the centre of the racecourse for parading purposes.

4. *Mr. Ferguson.*] That 60 acres is not included in the Racing Club's buildings?—No; alongside the camp at the back of the racecourse, where the Artillery camp is situated.

5. *The Chairman.*] This ground is separate from the actual course?—Yes; they had another 44 acres granted to them for drilling purposes about a quarter of a mile away; in all they have the use of 100 acres, and the centre of the racecourse additional.

6. Granted for camping and manœuvring?—Yes.

7. And the centre of the course for parading purposes?—Yes.

8. And they took advantage of that offer?—Yes; they have been in occupation of all that space ever since. The buildings were taken over, I think, on the 13th June. Dr. Valintine arrived at the gate with some motor-cars full of sick patients, and was given admission to the trainers' accommodation-house. There was a big storm on at the time, and there was no time to communicate with anybody. The caretaker gave them leave to go in without referring to the committee.

9. Or any authority?—No. I heard about this in the evening, and went out to Trentham on the following day. I saw Dr. Valintine, and suggested to him that he should remove the patients to the tea-kiosk, as it was more suitable. There was lavatory accommodation there, and no occasion for the men to go outside; the men could be removed from the horse-boxes. He took advantage of that offer, and subsequently put the patients in the tea-kiosk. There was sanitary accommodation in the tea-kiosk. There have been some remarks made about the horse-boxes. They are floored with pressed clay. They are done up after each meeting, when the mangers are disinfected and the whole of the boxes are perfectly cleaned.

10. *Mr. Ferguson.*] They have not concrete floors?—No, hard clay, rolled, and perfectly dry.

11. Are there any drains to them?—No; there is no occasion for a drain, because the floor is always lifted after each meeting. Later on the club offered the Health authorities the use of the members' luncheon-room in the grandstand. It is a large sunny room, with several water-closets attached, and a suitable room is adjacent for the nurses. That was also availed of for patients.

12. That was offered?—Yes, and accepted; it would hold about forty beds.

13. What date would that be occupied?—On the 5th July, I think. I saw the Hon. Mr. Rhodes, and offered to attend to the kitchen arrangements for them, because we had made all our arrangements for the race meeting. The staff and labour was engaged for the meeting, but the Defence people did not appear to wish to depart from their usual practice of running their arrangements themselves. They, however, took the whole of our plant—crockery and plate and kitchen utensils. A further room was fitted up by the club as a sitting-room for the men, and fires provided for the purpose of drying their clothes. They are now in occupation there. Some remarks have been made about the drainage and the mud surrounding the camp. It might be of interest to the Commission to know of the method adopted by the Racing Club for draining its property. It is practically the same class of subsoil as at the camp. Our experience is that it is practically dry to 30 ft. below the surface; after that the wells tap a good water-supply. We have provided for our drainage by digging a pit 20 ft. deep by 10 ft. wide. It is loosely bricked without any plaster, with weep-holes left in the bricks, and a concrete roof. A ventilating-pipe is fitted. That pit has proved eminently satisfactory for the last ten years. It has carried away the whole of the sewage of the racecourse from thirty-seven patents and the kitchen drainage.

14. The drainage of a race meeting?—Yes, lasting for three days at a time. I have been down the pit and seen it after a meeting, and it has been quite dry. The ground is absolutely porous, and there is nothing left. The drainage of the racecourse itself has been conducted in a similar manner, with the exception that the soak-pits were filled with stones instead of being left hollow. This has not been so satisfactory. Water has been inclined to bring in silt, and the pit has got clogged, but where the pit is left hollow the soakage is very good.

15. There is sand instead of stones in the pit, and the stones are less satisfactory?—Yes. The surface ground all round there is exceptionally dry.

16. Your knowledge of these matters extends over how many years?—Ten years.

17. And you believe that that ground is absolutely suitable for a camp?—Yes, undoubtedly.

18. *The Chairman.*] It is easily sanitated?—Yes.

Brigadier-General ALFRED WILLIAM ROBIN sworn and examined. (No. 44.)

1. *The Chairman.*] What is your proper title?—I am temporarily commanding the New Zealand Forces, and Quartermaster-General of the Forces.

2. You must help us by volunteering anything that you consider material to our inquiries. We would be glad to have the history of the camp, as it were, from the time you took charge of it at the beginning of the war, stating what reinforcements went in, and so on. When did you first take possession of the ground at Trentham to make a camp there?—The first use of

Trentham as a camp was when the delay occurred in sending away the Main Expeditionary Force—that is, after they had been training at Awapuni. They had to be disembarked from the ships in the harbour, and camping-grounds had to be found for two or three weeks in various parts of Wellington, and the mounted portion went to Trentham.

3. That was the first camping that was done there—the mounted troops while temporarily disembarked from the troopships?—Yes, in connection with the Expeditionary Forces.

4. And who had charge of the camp then?—Colonel Russell, of the Mounted Brigade.

5. He is away now, of course?—Yes.

6. I suppose we may take it that at that time there was no general laying-out of the camp, or would he just go out there and take possession of such ground as he required?—He went out and camped there, and put his horse-lines in the most convenient position to suit the situation, knowing that he would be there only for a limited period.

7. There was no general planning-out of the camp at that time?—No.

8. After this two or three weeks' occupation the ground was cleared of men, I suppose?—Yes.

9. How many men would there be in that Mounted Brigade?—Roughly, from fifteen to eighteen hundred—probably nearer two thousand, because some of the Artillery went out also.

10. Then the next step?—When it was seen that there was a necessity for bringing in reinforcements to maintain the Expeditionary Force it was decided that Trentham was a suitable place to form a permanent or semi-permanent camp.

11. What date would that be about?—October, I think.

12. Then, when that was decided upon, what followed?—They camped there for some time in tents.

13. When that was decided upon were there any steps taken with a view to laying out the camp or testing the suitability of the site as regards, for example, its sanitation and water-supply?—Yes.

14. That is, before it was occupied in October?—Yes.

15. What steps were taken to test the suitability of the site? I presume there was a certain amount of knowledge previously accumulated, of which the military authorities would be in possession—they would know from past experience; but were any special steps taken, for instance, with regard to testing the site for sanitation purposes?—Yes; the usual military precautions that are invariably carried out as regards the water-suppy and the suitability of the ground—where it was best to place the tents, latrines, and other necessities.

16. Who does that work?—That was carried out in conjunction with the Chief of the General Staff and the Quartermaster-General.

17. Who was the Chief of the General Staff then?—Colonel Gibbon.

18. And the Quartermaster-General?—That would be myself.

19. You then took a personal part in the matter?—Yes, through the Q.M.G. (2), Major Robinson.

20. You did not actually personally deal with it?—Not personally.

21. Is Major Robinson away?—No, sir; he is here.

22. At Trentham?—No, at headquarters.

23. As regards the tents and general equipment, that would be passed on to the Stores Department to provide?—Yes; a requisition would be put in for what was required—stores and ordnance—and if it cannot be supplied from stores they would have to obtain them or have them made.

24. As to whether the ground was tested as regards its sanitation capabilities, we would get that from the Q.M.G. (2)?—Yes, I think so.

25. That is one of the material points which the military authorities consider in connection with camps—sanitation?—Yes.

26. Would any member of the medical staff have anything to do with this?—Yes.

27. Who is that?—Directly, the Director of Medical Services and his subordinate officers.

28. That is Colonel Purdy?—Yes.

29. *Mr. Ferguson.*] Was he Director of Medical Services at that time?—Yes, he would be.

30. *The Chairman.*] He then acts with the Chief of the General Staff and the Quartermaster-General, and it is his officers who advise on matters such as sanitation?—Yes, sir.

31. *Mr. Ferguson.*] The general suitability of the site for the camp from a medical point of view?—Yes.

32. Would that be a written or verbal report?—It might be either.

33. *The Chairman.*] They may decide out there on the spot?—The Chief of the General Staff would be there to decide as regards strategical or tactical considerations, the Quartermaster-General is there to represent his department—stores and arrangements—and the D.M.S. and his Medical Officers are there to advise as to the camping-ground from a medical or health point of view; but the Chief of the General Staff has the deciding voice, because he has to decide as to the fighting part of it.

34. Other matters must always be subordinate to that consideration?—The situation arose at Trentham that a great deal of instruction had to be given there, and facilities for training had to take the place of those for fighting.

35. This having been done, when did the men begin to go into camp, do you remember?—They came up almost immediately upon the departure of the Expeditionary Force.

36. And they had to be made up to the number of as many as 2,500?—No, not as many as that for the Second Reinforcements, though probably not far off that number.

37. From 2,000 to 2,500 had to be provided for?—Yes.

38. *Mr. Ferguson.*] Did they occupy the same tents that the previous men had occupied for a fortnight or three weeks?—No, sir.

39. It was all relaid out?—Yes; it was freshly arranged after Colonel Russell's camp.

40. *The Chairman.*] These men were all accommodated in tents?—Yes.

41. And at that time it was summer?—Yes.

42. Were the tents floored then?—No.

43. Is that considered necessary?—No, it has never been considered necessary in New Zealand. I have never had it done.

44. *Mr. Ferguson.*] Personally, you do not consider it necessary?—No.

45. It has not been the usual practice?—No; but I do not say floored tents have never been used, because in some special companies they had their floors, but, generally speaking, for all our manœuvres we have never had floors in the tents.

46. *The Chairman.*] At any rate, in the field there are no boarded floors?—No.

47. Is it material, in the course of training at the camp, to accustom the men to the conditions they may expect at the front?—I would not say as far as that, but I would not accustom them to things they would not have any possibility of getting at the front. I think a happy medium might be chosen.

48. Having regard to the nature of the soil out there and the season of the year at that time, you consider that boarded wooden floors were superfluous?—They were a comfort or convenience to the men more than a necessity. The tents should be perfectly dry if they were trenched round, with the small trenches running into a central drain.

49. According to that view it is an excellent ground upon which to pitch tents for the accommodation of troops?—Yes, sir.

50. Then the men who went into camp in October left in December, I think?—Yes.

51. And when they left was the camp left vacant or were new reinforcements coming in?—New drafts came in.

52. The camp was never vacant?—No.

53. But the new arrivals would be kept distinct from the old hands who were there?—The Third took the place of the Second Reinforcements, and it was decided later to increase the reinforcements by an abnormal percentage and condense them into a few months instead of spreading them over a year. The result was that we had really twice the number coming in on the Second going out.

54. But there were none of the Third in while the Second were there—there would be no overlapping?—The officers and N.C.O.s would be overlapping, but I would not like to say whether it was at that stage that the overlapping commenced.

55. There is some distinction to be made between the First and Second Reinforcements?—The First Reinforcements accompanied the Main Force.

56. So that the Second in the eye of the public would be the First?—Yes.

57. The next would be the February lot—the Thirds?—Yes.

58. For the December and February lots there may have been overlapping?—Yes.

59. Up to December apparently—with the Second—you had no trouble with measles or any form of sickness?—Not to any extent, not very important.

60. I mean there was nothing special in the way of measles?—No.

61. Do you remember upon what date the Firsts left in October?—Somewhere about the 21st, I think.

62. Were there sickness cases connected with the Second which could not go because they were in hospital?—I think that is very likely. There were cases of measles even in the Main Force.

63. The first measles case reported by the Wellington Hospital as having been received there was on 14th October?—Yes.

64. On that day eight measles patients went in, on the 15th five measles patients, and four more up to the 30th: have you any personal recollection of the outbreak of these measles coming to your attention?—Not anything more than was reported in the usual way.

65. That would be for the medical department?—That would be for the Adjutant-General, under whom the medical arrangements were made.

66. I understand there were cases from the "Waimana," one of the ships which conveyed the main body—the measles were not from the camp: do you remember that?—Yes, I remember that measles were supposed to have come from an outside district. There were measles at Awapuni before the troops came down, if I remember aright.

67. Then all the measles which went to the hospital were not from the camp at Trentham?—No; there were measles at Awapuni.

68. In the early part of December, apparently, there was an outbreak of measles, because twelve or thirteen cases went into the hospital at that time: do you remember anything in connection with that outbreak?—No, I could not give you any information about that.

69. Do you know anything more than the fact that there was a certain measles outbreak?—It would be brought before me at the time, and would be dealt with.

Mr. Gray: It was on the 14th November that the first case was brought from the camp to the hospital.

Mr. Salmond: They probably did not come from Trentham at all, because the men were distributed about—some were at Miramar, some at Maranui, and some at the Hutt.

70. *The Chairman.*] Now, following the men who went away in February, another lot went away in April?—Yes.

71. And then another lot has gone since April?—Yes, in June; they go at approximately the middle of each second month.

72. With regard to the health of the men, did you know there was an outbreak of measles, which became very violent? Would that be dealt with by you or by the medical authorities?—Through the Adjutant-General, by the medical authorities.

73. The care of the sick?—Yes. Will it be of any assistance to the Commission if I gave you a statement of the duties of the various officers at general headquarters?

74. I believe it would. We shall be able then to see exactly which officers deal with particular classes of work?—It is the same all the world over. The general headquarters is under the Commandant. His headquarters have three branches: the Chief of the General Staff, the Quartermaster-General, and the Adjutant-General. The Commandant is directly responsible to the Minister for the carrying-out of the policy laid down with regard to the defence of the country and all military arrangements. He looks to the Chief of the General Staff for all matters of training, intelligence, assisting him in the preparation of schemes for defence operations, information from other countries, and generally the military working, efficiency, preparedness, and the training of the troops who take the field. It is the duty of the Adjutant-General to attend to all matters of military law, discipline, casualties, dealing with the sick and wounded on the field, the collection and burial of the dead, the sending of reports regarding them, and medical services. The Quartermaster-General, in conjunction with these two officers—of course, they are always in close co-operation—is responsible for the whole of the equipment, ordnance, the general arrangement of camps, barracks, barrack-construction, transport by land and sea, and the carrying-out of the movement of encampments. In New Zealand we have no construction branch of the service. Then there is a further subdivision of the Quartermaster-General's department. [Statement put in.]

75. For our purposes, at any rate, the Quartermaster-General is the one that is responsible for the laying-out of the camp?—Yes.

76. It is under the Adjutant-General's department that the medical services come?—Yes, sir.

77. I understand that up to May the accommodation in the Trentham Camp was in tents?—Yes, up to about that time.

78. And then in May huts began to be ordered?—Yes, at the end of May.

79. What I want to get now is the history of the hutments—why they came to be put there, and so on?—It began some time before that. It was probably in December that we started talking about them. At that time I was governed not so much by the severity of our winter as by the fact that we would be sending away our tents and equipment with the Forces, so that wherever they landed abroad they would be self-contained. That, of course, depleted us to a great extent of tent equipment, and we could see facing us in the near future a great shortage of tentage. Our idea was to so equip our Forces going to the front that they would be able to house themselves independently even of the Home authorities. As it happened, the idea turned out right, because our men had the tents to pitch where they disembarked. That depleted our stores of tents, because you must remember that, even with the reinforcement work on our hands, we had to keep faith with the training under the Defence Act of the country, and to carry out the camps in the various parts of the Dominion. Then, again, I foresaw the difficulty of keeping men under tents by reason of the wear-and-tear of the tents, and that was really at the bottom of the thought regarding the huts. Knowing that Canada and the Home-country had put some of their men into huts, one did not wonder at it, with their severe winters.

80. So that the notion of the huts began in December owing probably to the shortage of tentage, and you had not in view the inclemency of the winter?—Not so much.

81. And you had to provide oilcloths?—Yes; it is expensive, but we were prepared to pay anything that had to be paid for it.

82. They had to be provided for the men to go away?—Yes.

83. But would it be necessary in connection with the huts?—No, not on boarded floors.

84. So that you would effect a saving there?—Yes.

85. And this idea originated in December; then plans were prepared, I think?—Yes; we had some plans prepared in our own office.

86. The Quartermaster-General's office?—Yes.

87. These were referred by the Minister to a Medical Board appointed?—Yes; the Minister did not feel inclined to allow us to go on until the plans were submitted and approved by the Board.

88. That Board consisted of Drs. Elliott, Holmes, and Purdy?—That is right.

89. There were two plans put forward—alternative plans: you recognize these as the plans [indicated on file]?—Yes.

90. These plans were prepared by whom?—By our own draughtsman.

91. The original plans were produced by the Quartermaster-General's department?—Yes, sir.

92. These plans were submitted by the Minister to the Board consisting of the gentlemen I have named?—Yes.

93. Do you recognize this as their report: "Alternative plan ought not to be considered. The double bunking is very bad from a sanitary point of view. The floor-space, about 23 ft. per man, is not sufficient. The ventilation is insufficient: there are too many men to each hut. The No. 1 proposal is approved of by the Board, except that it is thought the floor-space, about 36 ft. per man, is not quite sufficient. The huts are blocked, and would perhaps be better *en échelon*. The ventilation by the eaves is thoroughly satisfactory and by far the best method. This mode of ventilation should be adopted in the huts for officers also. Louvred vents are most unsatisfactory. With regard to the general sanitation, especially the drainage, the Board is of opinion that Major Morton, of Wellington, should be consulted in the matter. It is thought an absolutely satisfactory drainage scheme could be devised at very slight cost.—J. S. ELLIOTT, Major; MATTHEW HOLMES, Major; JAMES R. PURDY, Colonel"?—Yes.

94. And in consequence the alternative plan was rejected?—Yes.

95. Under this alternative plan, which was rejected, how many men were to go into a hut?—I do not remember.

96. At any rate, your proposal from the outset was to have a hut to accommodate fifty men?—Yes.

97. In deciding to have fifty men in each hut were you following any particular experience or rules in such matters?—No, except that fifty is a fairly divisible number—a company would run to about two hundred and fifty men, and that would give about five huts to a company.

98. Did the question of the ventilation of those huts occur to you?—Yes, it did.

99. And the question of discipline also, I suppose?—Yes.

100. You know the military manuals on the subject: we have had it suggested upon those authorities that the proper number should be about twenty-four to a hut: what do you say about that?—That is so according to the text-books, but I do not know that we followed them so closely. It is a matter where other considerations come in. That may be laid down for an all-round permanent place; but we saw that fifty, with sufficient ventilation, was going to be more economical and more handy for us in every way.

101. Than huts for twenty-four men?—Yes.

102. The question of the cost was gone into, was it not?—Yes.

103. This is Lieut.-Colonel Firth's "Military Hygiene" manual (1908) on the subject: it says, "The ground occupied by a hut should be cleared, levelled, and drained. The hut should be provided with ridge ventilation and projecting eaves to carry off the rain-water from the foundations; it should have the requisite number of windows, and should be raised sufficiently from the ground to allow a free current of air to pass underneath the flooring. In hot climates the roof and sides should be double if these latter are not protected from the sun by verandas. Like permanent barracks, they are best placed *en échelon* to receive the full advantage of the winds. Their ventilation is effected by openings in the ridge, or outlet shafts should be used, passing through the roof and terminating in louvres, with inlets under the eaves. Warming may be effected by the use of stoves or an open grate; the latter is preferable, as it assists in ventilation. At home stations where hutments are in use the floor-space per man is 50 square feet and the cubic space 500 cubic feet; at stations abroad the floor area per man varies between 50 and 70 square feet, and the cubic space between 500 and 850 cubic feet. The construction of huts depends on whether they are used for temporary purposes or whether they are intended to be of a more or less permanent character. In the latter case the sides are built usually of brick. What are known as Döcker huts have been favourably reported on, and much used both in our own and the German Army. They are made of wooden or iron frames, covered with a kind of felt, and lined with canvas. They are very portable, and the fastenings are so arranged that they can be put together in a very short time. These huts are well ventilated by windows, cross-louvres, and ridge ventilators; if so desired, they can be readily warmed. In addition to these there are a variety of other huts, differing from each other only in the nature of the material of which they are constructed. In general design and type they are similar. As a rule huts should not be made to accommodate more than twenty-four men"?—Yes, sir.

104. Were you aware of the general notion that about twenty-four men was about the number that a hut should be made for?—Yes, I was quite well aware of that.

105. Can you say why that was departed from—why it was decided to put fifty men into a hut when twenty-four was looked upon as the regular thing?—It was a fairly divisible number, and discipline could be better maintained, and it was more economical.

106. *Mr. Ferguson.*] In this climate you thought fifty would be suitable?—Yes, particularly as there was ventilation introduced from the eaves of the hut or sides of it. Lieut.-Colonel Firth has been departed from even a few months ago by the military authorities at Home, where thirty men are put into a hut measuring 60 ft. by 20 ft.

107. *The Chairman.*] Very small huts?—Yes.

108. What is the space each man gets in these huts for fifty men, do you remember?—He will have from 25 ft. to 70 ft.

109. *Mr. Ferguson.*] The Home huts provide 40 ft. per man?—Yes, if that is what those measurements I have given work out to—thirty men in a hut 60 ft. by 20 ft.

110. Then we have fifty men in a hut 70 ft. by 22 ft.: what is that per man?

Dr. Frengley: Over 31 ft.

111. *The Chairman.*] Then, according to Colonel Firth, from 50 to 70 square feet is what they allow?—Probably the all-round hut has not that clear ventilation right through that our huts have.

112. Then we have the report of the Board, which was sent in on the 11th January: did that come before you?—Yes.

113. You reported, I think, in favour of the hutments?—Yes, sir.

114. Your report in favour of the hutments was based upon these considerations: comfort during the winter months; at the conclusion of the war it would be necessary to have some place at which to demobilize: from a medical and sanitary point of view huts are more advisable than tents for a long period; saving is effected by facilitating administration; it would save a considerable amount of tentage during rifle meetings and annual training-camps; huts would be available for schools of instruction, or, if not wanted, they could be dismantled and the material sold?—Yes.

115. Dealing with the size of the hutments, Knox, an English authority, says there should be 50 square feet, and in England it is 40 square feet, and we had 31 square feet. After the plans were referred to the Board did that question come under your consideration—the amount of space per man per hut?—Not that I remember; but the amount of air and ventilation was ample in the method of construction.

116. I see you communicated on the 23rd February, 1915, with the Under-Secretary of Public Works as follows: "With reference to the proposal to erect huts for the accommodation of the troops at Trentham Camp, I have to advise you that the Hon. the Minister of Defence has approved of the erection of one hut for officers and one for the men, together with necessary

drainage as per plans herewith, pending final decision as to the suitability, &c. These huts are to be taken as a sample from which tenders are to be subsequently called. Complete plans of the hutments, officers' quarters, cookhouses, guard-room, &c., are available in this Department, and I have to request that you will finally have the necessary specifications, &c., prepared, tenders called, and the work carried out under the supervision of your Department. Of course, it will be understood that specifications, &c., cannot be finally accepted until the sample huts have been erected and tested, and any alterations found necessary provided for. As the work is very urgent, I have to request that you will kindly issue the necessary authority to the District Engineer for, say, £500 to proceed with the erection of the sample huts immediately. The approximate total cost has been estimated at £14,605." Can you say whether it was before or after that that the Dr. Frengley Board reported?—Before that, because the hut that was put up was on the recommendation of that Board. This was to erect the sample hut in order to test it, and not to commit ourselves to the whole affair without having a sample.

117. I see you got the report from the Dr. Frengley Board on the 13th February?—Yes.

118. That Board, of course, came after the Medical Board?—Yes, after it reported.

119. And that order of reference was from the Minister to the Dr. Frengley Board?—Yes.

120. I see this report said they had considered the matter "from the standpoint that what is required is not the provision of buildings of the character and for use as permanent barracks, but rather, as an alternative to tents, structures of a partially permanent character"?—That is so.

121. "We are of opinion that the double bunking system should be avoided if possible, consequently we confine ourselves to the proposal marked No. 1": that was the one without barracks?—Yes.

122. "Site—aspect: We are in accord with the general arrangement of the huts as set out on the plan, but suggest these amendments: (*a*) That the six officers' huts adjacent to the headquarters office be moved nearer to the road from the main entrance, to secure a better fall for the branch drains therefrom; (*b*) that the sites for the officers' huts on the flanks of the camp be finally decided with due regard to military requirements and their adjacency to the drains; (*c*) that each hut be made to accommodate a hundred men." The Defence Department's suggestion was a hundred men?—There was to be a partition to be put in the middle to save the cost of two ends.

123. What they say is: "That each hut be made to accommodate a hundred men, divided into two parts by a strongly built partition, that portion above the wall-plates to be covered with expanded metal for ventilation purposes. This alteration would effect considerable economy, the cost of at least thirty-four end walls being eliminated. Having regard to the aspect of the buildings as shown (which will secure ample direct sun's rays upon the space intervening between the huts), their reduced height (further referred to below), adequate space for the free circulation of air, and the general prevalence of winds, we are of opinion that the light and air available to each hut and its surroundings will be entirely sufficient. The plan shows 20 ft. between the huts, a distance according to our amended proposals of approximately one and a half times the maximum height of the huts, a distance we regard as ample." That approved of it in block and not in echelon?—Yes.

124. Then there was the material and design of the huts. Then, "Walls: We conclude iron must also be used for the following reasons: (*a.*) Economy—Less timber is required for its support in comparison with other materials; time and labour are saved in erection; if properly fixed it can be taken down if so required and reused. (*b.*) Durability—No other material could equally well stand hard usage to which the walls are likely to be subjected. (*c.*) Appearance—Erected with vertical corrugations and according to the amended plan submitted we are of opinion a presentable appearance will be obtained. For the diffusion of the interior light, improvement could be cheaply effected by coating all internal surfaces with a suitable sanitary distemper of greenish-grey colour. This would also render the exposed interior woodwork more sanitary." Then, with regard to the floor: "We have fully considered the possibilities of flooring other than wood on account of the very considerable cost of this item. In view of the fact that these huts are for eating as well as sleeping accommodation, and for other reasons, we have decided that a wooden floor is imperative. Any other floor equally or less expensive would necessitate woodwork upon which to lay the mattress. In recommending a wood floor we have in mind that such woodwork will be provided by the floor itself, and the cost thereof is therefore included in the floor-cost." That is the woodwork on which to lay the mattress, apparently?—Yes.

125. "Again, any less expensive flooring would not sufficiently remove the objection to the likelihood of ground air gaining access to the occupants." Now, there was no woodwork on the floor in order to lay the mattresses on?—The original idea was a ground floor which necessitated little raised platforms that we had for the men to sleep on, and then the question of sanitation as regards the men eating in huts with ground floor cropped up, and it was found that it would be very difficult to keep a hut sanitary with the morsels of food that were bound to fall, and therefore the ground or matrix for flooring was dropped and a proper floor put in, which did away with the necessity of having a piece of floor for the men to sleep on of about 2 ft. 4 in. wide, and enabled the messing to be done in a hut, because the floor could be kept clean by being periodically scrubbed and disinfected, and the hut could be used for sleeping and eating in as well.

126. Then there is the other item, "Ventilation: To quote from an authority, 'The object should be to allow a free flow of air round each individual, consistent with comfort, so as to permit of an adequate dilution of the impurities given off into the air by each man.' We are therefore in entire accord with the proposal to leave a permanently open space right round under the eaves. For the still more thorough flooding of the hut with fresh air we advised (above) ade-

quate louvres under the gables, also that each of the windows in the amended plan be hung at top to open out, and that the area of the door be increased. We hold that if a sufficient supply of fresh air and sufficient movement of the enclosed air be maintained, as easily can be in this climate, the usual requirements as regards cubic capacity and floor-space per man may be considerably modified. We might perhaps better convey our view thus: If the walls of these huts were removed the air-space (cubic capacity) per man would be, practically speaking, an infinity in amount, even though they slept as close together as the mattresses could be placed. By removing a portion of the wall—that is, the permanent opening below the eaves—we consider an air-space amply sufficient for each man is made available. In view of the above we consider 7½ ft. will be sufficient height from the floor to roof at the eaves of the building, with the highest point of the roof at 13½ ft. above the floor-level. By this reduction in the height of the walls a very considerable saving in cost is secured as compared with proposal No. 1." Now, did you simply accept the recommendations which had been made by this Board?—As far as I am concerned I accepted them because I quite agreed with them, and I still agree that the ventilation with eaves hanging over is quite sufficient. I have slept in huts under all conditions.

127. Certain complaints have been made that there was too much ventilation, that there was a draught, and that the men could not keep warm in the huts: did you get any complaints of that kind?—I heard that.

128. Brought to you after the huts began to be occupied?—Not directly, except through the camp authorities, that the huts were draughty. In fact, I have heard more of it through the newspapers than through the men themselves.

129. When that was ascertained were any steps taken by you or under your direction to remedy the matter?—Yes; they closed up certain portions below.

130. Where the corrugations of iron left openings?—Yes; they were closed up, and there was a modification made as regards some lengthening or dropping of a board, or a proposition to put a board a little higher up.

131. So as to reduce the size of the opening?—Yes.

132. Do you know if that was carried out?—I could not say; I think it was carried out.

133. What Department would it be in to see that carried out?—The Public Works would carry it out.

134. On a recommendation from headquarters—from your Department?—Yes, or a direct recommendation from that Board—the one or the other.

135. We have had these huts criticized from various points of view by Mr. Bates and by Dr. de Lautour in particular with respect to the overventilation of the huts. Was any inquiry made into the subject, or anything done beyond what you say as to the stopping-up of those holes and the raising or varying the opening?—Well, nothing further has been done, but it has been steadily discussed as to how to meet those people who do not like the draughts.

136. Well, was any plan evolved apart from moving them out of the huts altogether?—Not at Trentham.

137. The only other alternative was to put them back into tents, was it not?—Yes, I should say if they had to go out of the huts they would have to go into tents; there was no other place for them to go

138. Did you get any report from the medical staff on the subject of hutments when those complaints came up about coldness?—No, not directly.

139. Well, was it their business in any way to see to such a point as that, or whose business was it?—I do not know that it particularly came under the Medical Officers except that they noticed the men were suffering through it.

140. Yes; but here is a complaint you heard of that these huts are too cold: is that to be dealt with by you or by whom?—I would have to deal with it as Quartermaster-General.

141. But if necessary you would get the services of the medical staff?—But this sickness is not confined to those alone who were in the huts. Some time ago the weather was changing and the winter coming on. On one of my visits there, feeling the change in temperature at night, I ordered an extra blanket to be issued to every man in camp, irrespective of huts or tents.

142. Well, after the blanket was issued, did the complaints cease?—No, I suppose they did not.

143. I thought you said that those in charge of the camp mentioned to you that there were complaints about coldness?—On one of my visits the men complained of the draught. We have walked through the huts and tried them in various ways. It seemed a matter of opinion. You go through a hut and you find some men who say it is absolutely splendid and they would not have anything else, and then you will find some men 15 ft. further on who complain of their heads being nearly blown off. There was no general consensus of opinion that they were too cold or too draughty.

144. At any rate, whatever came to your knowledge you did not regard as serious enough to do more than you have told us?—No, sir, I certainly did not.

145. And the question of whether they were too cold or not was not made the subject of any special inquiry?—No, not so far as I am concerned.

146. Nor was it referred to the Medical Board?—No.

147. And you had no representations from the medical staff on the subject of the hutments being too cold?—No.

148. I want you to hear what Dr. de Lautour says with regard to the hutments. He said, "The hutments do not allow for 60 square feet of floor-space, and separate dining-rooms, and proper intervals, and so forth. . . . I condemned them before they were attempted to be built." Did you get any condemnation from Dr. de Lautour?—No.

149. Now, with regard to the tent-space: did you see the tents when they were erected and being used for the purpose of the camp?—Yes.

150. There is another statement he made. He said, "It is considered very wrong for the men to sleep on the floor, the reason being that the blankets get contaminated with the mud and dust from the boots and other germs on the floor. The blankets get overlapping the straw." What is the practice with regard to sleeping on the floor so far as your experience has gone?—In a tent?

151. No, in a hut. Do you generally have a floor to sleep on if you have a hut?—If the hut is boarded you sleep on the floor. If it is ground floor you sleep on a waterproof sheet, which you use the same as you would in a tent.

152. But I am asking you if it is the practice when huts are used to use the floor for beds?—No.

153. There is usually a bunk?—A stretcher.

154. Why were they not got in this case?—Well, I did not think they were necessary from my personal view. You have got a mattress and straw and a waterproof sheet. Stretchers are preferable in a way—they are more comfortable, and raise you off the ground; but, personally, I did not think they were necessary for the time the men were remaining there.

155. You say you saw the tents in position: can you say what is the space between each tent in point of feet or inches?—No. The passages are about 10 ft., sufficient for the right-of-ways between the companies. It is usual that the pegs should be approaching each other at a workable distance. From pole to pole they would be roughly about 24 ft.

156. But the space between each row would be about 10 ft. from the outer side of one to the outer side of the other?—It would run from 8 ft. to 10 ft. The outside pegs are almost meeting.

157. Is that the usual distance to put tents apart?—It is a fair distance. They are very often interlocked, the tent-pegs being over the others.

158. That is where you are pushed for room, but you would not suggest that in the case of a continuous camp?—Oh, no.

159. It was suggested the tents were too close together: what have you to say to that?—I do not think they were. We had to consider also the conserving of space for parade-grounds, and when you have a large number of men the further you spread your camp the more complaints you have of the food reaching the tents cold, and I think the space between the tents was quite suited to the climate and the position.

160. The point was to concentrate the men as much as possible?—Yes.

161. You have had experience elsewhere: have you seen semi-permanent camps where the tents used were as close together as they were at Trentham?—Yes.

162. You have seen that in South Africa, possibly?—We seldom had tents all the year round there; but if you went down to the Territorial training-camps at Aldershot you would find them very close—closer together than they are at Trentham.

163. But they would only be there for a short period?—They occupied the ground and camp-stands for a considerable time, because fresh batches of men are going in.

164. Then it is suggested that the site of the tents was not changed frequently. Is it the practice in camps to change the site of the tents at intervals?—Oh, yes.

165. Do you know whether that was done at Trentham?—No: it would not be done for the early ones because there would not be the space to do it. There was a shift took place in which the ground opposite was occupied as new ground which had not been occupied by tents.

166. What I mean is not shifting the whole camp to new ground, but shifting the tents into the adjoining space which had previously been a passage. Was anything of that sort done at Trentham?—I could not say.

167. At any rate, you did not order anything of that kind to be done?—No.

168. May we also take it that there was no shifting of the area occupied by the tents—of the whole collective body of tents to new ground except on the one occasion?—That is the only shift I remember.

169. Why was that shift made?—Well, I think it was more to separate the unit than as a matter of necessity.

170. Not for sanitary purposes?—It might have been, but I could not say, except I know it was to separate the units.

171. Who would have the ordering of a matter of that sort?—The Camp Commandant.

172. Not you?—No.

173. Is it the practice in military camps where the accommodation is tents to shift the collective body of tents on to new ground from time to time?—Yes.

174. How often do you think the whole area should be shifted in that way?—Well, it would be left purely to the discretion of the officer commanding the camp.

175. It would not come under your supervision?—No. The officer commanding the camp, in conference with his medical and sanitary authorities, would have to decide that. It would be obviously a nuisance to everybody if the camp was to be shifted every second day.

176. But why should nuisance enter into the question if it was the right thing?—Well, if it was not necessary to shift it, one would not think of shifting it at all just because it was laid down that it should be shifted. No general would listen to it if it was not necessary. Shifting seven thousand men is a difficulty.

177. *Mr. Ferguson.*] You might shift a camp from dry ground to muddy ground?—Yes. I would never dream of it, and no Medical Officer would insist on my shifting in wet, dirty, muddy weather to a new site which was just as wet though not so muddy. A tent makes its own safe piece of ground which might have mud outside around it ankle-deep at times. Trentham was an instance, and other camps also; but to merely shift tents because there is mud about outside would be almost suicidal while you have dry ground inside.

178. *The Chairman.*] When you find suggestions laid down in military books on camp sanitation, do you not regard them as the result of experience?—Yes; in the same light as our manuals on training, and tactics of methods of attack and defence, are a guide and not an absolute rule; so are these sanitary regulations and books a guide to those dealing with the circumstances they find.

179. But then, when they are departed from, should not some justification be shown for the departure?—Yes, some reason for doing it.

180. At any rate, so far as you can say with regard to shifting camps to new ground, or shifting tents on to adjoining sites, that is a matter for the Camp Commandant?—Yes, the senior officer on the spot.

181. You take no steps one way or the other on that subject?—No.

182. And issued no instructions?—No. There is a general instruction to all commanders of camps or in the field that he uses his discretion in such things, and if he is in doubt he appeals to headquarters.

183. But is he not to be guided by authorities and by the manuals put forward on the subject?—Yes, he takes those as a guide.

184. Because evidence has been given here to the effect that those tents ought to be shifted frequently, and that the whole camp should be transferred to a new site at intervals of some three months?—Well, I do not disagree with that when it becomes obviously necessary to do it.

185. And I think you further qualified it by saying that if the ground you had to shift to is muddy you would not shift?—It is far better to stop where you are. I would take the whole responsibility of a G.O.C., because I know the difficulty of shifting to another piece of wet ground.

186. In winter it would be shifting from wet ground on to another piece of wet ground?—Yes.

187. Do you know if the men had floors in the tents?—Quite a number had at that time.

188. As the winter came on?—Yes, as the winter came on.

189. Would not that have met the difficulty of the damp ground by shifting the floor?—Yes, it would in a way.

190. The objection to dampness would be prevented if you had wooden floors?—You would be still putting it on damp ground.

191. Well, on the question of opening-up the tents to dry, what is the proper military course to follow?—To roll up the flies.

192. I mean as to opening the tents, whether to dry or not, is there any regulation as to when it should be done?—Every day when the weather permits the flies should be rolled up. If it is a boisterous day the tent is rolled up on the lee side; on good days take the tent altogether off its ground to allow the ground to get aired, and the tent is put back again on the same spot. By that means you increase the life of your camping-ground almost indefinitely.

193. *Mr. Ferguson.*] How often should the striking of the tents be done?—Take it off its pegs and leave the whole space open to the air.

194. *The Chairman.*] The tent itself will just hang to the pole?—No; take it away altogether and spread it out. It is not so much the tent as to air the ground all round about it.

195. *Mr. Ferguson.*] How often should that be done—of course, it depends on the weather?—Yes. It would average about once a week. I think it is laid down somewhere that it should be done once a week or once a fortnight according to the weather-conditions.

196. *The Chairman.*] Now, those various matters with regard to the tents and so on, as well as the sanitation of the camp, all come under the Camp Commandant, do they not?—Yes.

197. And they have to be carried out?—He has a little staff based on a similar scale to the lines of headquarters: he had an Adjutant-General, a Quartermaster-General, and a Medical Officer.

198. Do you think he had an adequate staff out there for the requirements of this camp?—No, sir, he should have had more; but we are all in the same position.

199. Had he an adequate staff there when the camp stood at, say, three thousand?—Yes, he had then.

200. But after the numbers increased the staff was not sufficient, in your opinion?—No.

201. Why was not that remedied?—For the simple reason that we had not a sufficiently qualified staff to put there. I do not mean anything detrimental to the others who were working.

202. You had not the staff to cope with the position?—No; we were absolutely short of staff throughout New Zealand.

203. How long has that been so?—Since the Main Force went away. We had to select qualified officers to go with them and give them those who had knowledge and experience, and then with each reinforcement we had to send others of our staff—the permanent and trained staff.

204. So that the number of qualified men is constantly being reduced?—Exactly.

205. You will reach the point when you cannot send any away?—I hope to get away myself very soon.

206. You will be the last of the Grand Army?—I am told I have to stay here and work this out, but as soon as it reaches the point that I have to go the better.

207. I suppose by reason of this shortage in the staff the members of the staff become overworked?—Yes, they are overworked.

208. And with a short staff I suppose complaints are sure to arise here and there?—No; there are no complaints among the whole of the staff about overwork.

209. But I mean through matters being overlooked or every one not being attended to?—Yes; you would naturally expect all sorts of complaints to arise out of a large camp with many men coming in without a knowledge of how to take care of themselves, which is the main reason of many troublesome grievances. Having a short staff it takes longer to get all instructed and

to make the officers who have command of the men understand their relations and duties to those men. It also takes time to show them how to do things—how to keep themselves clean, and how to keep the environments round the tents clean, and how to go to the proper places to urinate. It is the most difficult matter in the world unless you have staff to shepherd those men until they get on the way to look after themselves.

210. You really get a body of men who are absolutely ignorant as to first principles?—Quite so.

211. And all those men, as part of the camp training, have to be trained even in the duties of cleanliness and health?—Yes, that is so, even to cleanliness with regard to themselves.

212. The instruction in those matters depends on the camp staff?—Yes, and their officers.

213. And if that is inadequate the instruction must take longer to impart?—You must also remember that, as regards the question of cleanliness of a camp, all these reinforcements are running with the very minimum of officers. They are going to a Force that is complete with officers in a way; but, of course, casualties occur, and they just have sufficient officers really to carry them to the front.

214. And they are not fully equipped with officers as it is?—It makes it more arduous on the directing staff and the training staff on account of the shortage of officers that have to go with the reinforcements. It is not a question that we cannot find officers for the reinforcements among the people: the question is that there is no place for them. We cannot send them forward.

215. You cannot send forward more than a certain number of officers?—No, a proportion.

216. So that you cannot really take more than that number you are allowed to send forward?—That is so, or else we upset the Force at the other end.

217. *Dr. Martin.*] Do you not think it would be advisable to get wounded officers out from England to supply the deficiency?—We have asked that, but could not get them. I have also asked for them from India.

218. I know one officer who has had a foot off and another who has had an arm off, and they would be willing to come out, and would be excellent officers?—We have asked. I fancy that in the Army they would have plenty to do there. I will keep that in mind and mention it again.

219. *The Chairman.*] Now, for the permanent staff out there you had simply Colonel Potter and Captain McCristell?—Captain McCristell was Quartermaster.

220. What other members of the staff were there?—Major Adams, who was Adjutant-General to Colonel Potter.

221. Is he permanent there?—Yes. Then, of course, there is the training staff, whose duties are wholly with training and drill, although they give a great deal of assistance in supervision. They are Major McDonald and Captain Purdon, Musketry Instructors; Captain Bradley and Lieutenant Wilson, of the Artillery Training; Captain Cardale, of the Mounted Rifles Training; and Lieutenant Pettie, of the Army Service Corps and Supply.

222. But those men have lent their help to the supervision apart from their duties?—Yes; properly speaking, they have nothing to do but training and lecturing and everything that pertains to the education of the men in the field. Captain McCristell has been assisted by Major Mounsey, a Territorial officer, who has given his time temporarily.

223. Now, I suppose requirements have cropped up from time to time as the camp's history went on showing that you want this and want that?—Yes.

224. Then it would be your duty to apply to the Minister if it involved expenditure?—Yes.

225. Well, have you had any difficulties about your recommendations or requirements being given effect to?—No, sir, any more than one has to explain and give reasons; but there has been no difficulty whatever.

226. You have got what you wanted?—We got what we wanted.

227. Except men, of course, which even an Act of Parliament cannot provide?—Of course, we have spoken about it and discussed it, and I would take them all now.

228. In regard to the question of ambulance training, is that given at the camp?—Yes, that is given wholly by the medical service. We have no instructors in ambulance work apart from the medical service. There are allotted to each Ambulance unit sergeant-majors, but most of them are away with the Expeditionary Force—the qualified men. There are only two qualified Ambulance sergeants left.

229. Is there a difficulty, therefore, in providing for instruction in ambulance-work?—There must be. I do not understand myself how the Medical Officers manage to turn the men out trained as they are without assistance.

230. The Medical Officers, of course, since May last have had an enormous amount of work thrown on them beyond what the ordinary camp requirements demand?—They have had an extraordinary amount of work, because in addition to the Trentham Camp going on they are carrying out the Territorial trainings right throughout the Dominion.

231. Then there would seem to be a pretty severe tax on the Medical Corps in regard to the discharge of their duties?—Yes.

232. Could that be conveniently increased?—I do not think it could. That was one of the reasons that brought together the Department of Public Health and the military medical service to work together to cope with the work.

233. Then, of course, the Medical Officer himself would require to be first instructed if he had not had any special instruction in the Army Service?—That is so.

234. Every doctor is not a born teacher of ambulance-work?—By no means.

235. There is a special line of study on that subject laid down in the regulations?—Of course, there is no military customs, discipline, drills, stretcher-bearer work, and pitching of advanced collecting-stations, which contain the stationary hospital, which may be removed at any time. There is the transport of the stationary hospital, and the Medical Officers really control that like a little army.

236. At any rate, the medical man who goes into camp to train bearers, and so on, in their duties must himself first have military knowledge?—Yes.

237. And you have not got enough of those men?—Well, as far as I know I could not say it was so throughout the Dominion, but I think you will have a difficulty in getting them. The Director of Medical Services could tell you that, but I am of opinion we have not got enough. I may be quite wrong about that.

238. You do not know what available supply there is, but, at any rate, you know you have not got enough?—I know that we have up till the end of the year sufficient of our Medical Corps to go with those reinforcements; but for trained ones, who can in turn instruct the men in the military side of a Medical Officer's duty, I think we must be getting pretty short of them.

239. For instance, we had Dr. Harrison, who gave us an account of his duties, which consisted of coming in from Trentham in the morning and visiting all the hospitals and getting back. Manifestly he could have little time for instruction?—Yes.

240. While the doctors are so occupied with attending to the extraordinary outburst of the epidemic the ambulance training must go by default?—It must, sir. I can see no other alternative for it.

241. Would the instruction they get by acting as orderlies in the hospitals give them the training they require?—Well, for some of them it would, but not for stretcher-bearing and collecting the people.

242. There are technicalities of stretcher-bearing which have to be taught?—Yes. I am on very thin ground here. I do not know much about the medical requirements. There is the whole question of first aid, and the Ambulance men come across men every day. It is not always a doctor who attends to them. The Ambulance men have to be instructed in regard to first aid on the field and in the firing-line.

243. I suppose the hospital does not come under your cognizance at all?—Any more than in the early stages of it some moneys were collected for providing a hospital at Trentham, and reached a stage at which some plans were made which went before the Minister, and then really passed out of my hands.

244. I believe I have suggested the various topics we have been discussing here. I do not know whether there is any point that you would voluntarily like to address yourself to. You have probably seen in the newspapers what the points at issue appear to be?—Yes. I do not know that there is anything that suggests itself to me except that a little while ago an extra visitation of trouble in the way of the measles epidemic took place, and we were blamed for not having thought out anything to meet it. On the contrary, you will find the medical authorities had such a thing thought out. They had made arrangements for hospitals outside Trentham and for procuring other places, and it is pretty hard for us to fight what is evidently a visitation of trouble that came suddenly and unexpectedly on us, and because everything was not arranged in twenty-four hours there has been so much adverse criticism put on to the whole arrangements without the people knowing of the difficulties which existed.

245. Some additional 2,500 men were decided upon some time in February last?—Well, each month there have been new units coming in, and it has been gradually growing, and then the decision to send two battalions came in about the end of May.

246. Well, it has been suggested that they were too many for the camp out there?—It was too many for the plans we had.

247. And the sanitary arrangements had to be enlarged, and so on?—Yes.

248. There was an undue pressure?—There was for a time an undue pressure.

249. More than it could accommodate?—Yes; but not more than we were able to deal with, and that is to keep them in comfort and feed them.

250. But could the position have been met by putting those men elsewhere, having regard to the numbers you had available for training, and so on?—The condition would never have arisen had it not been for the continuous wet weather that came on top of us in addition to the measles trouble, and it was because of the wet weather as much as anything that we had to separate the camp into the three places we have now, together with the epidemic.

251. You think that without continuous wet weather you would have come through without trouble?—I feel quite sure we would.

252. Notwithstanding that you had seven thousand men there?—Yes.

253. *Mr. Gray.*] You know that huts have been used in other countries?—Yes.

254. And you approved of the idea of putting men in huts instead of tents?—Yes.

255. Have you any reason to suppose that the use of huts has been unsatisfactory?—No, I have not.

256. You have had no personal experience of them yourself, I understand?—No, not at Trentham.

257. Have you had any experience of them in South Africa?—There were no huts there except at Maitland. When coming away after being there for two years they had some long rows of tin huts. I would not have been inside them except that we had to be examined for plague. They were long huts—longer than the ones we have at Trentham. Those are the only huts I have had experience of, except the huts and shelter we erected ourselves when we happened to be somewhere where we could beg, borrow, or steal some iron or material to make them of.

258. With regard to the huts at Trentham, was not the idea this: that the men should be accustomed to living in conditions as nearly as possible equal to the open-air conditions plus shelter from the rain and weather?—That is so. I do not think any of us thought, and I certainly had not in my mind at the time, the idea that they were to be made for permanent habitations.

259. Do you see any objection yourself to the men sleeping on the floor?—No, I do not see any objection.

260. *The Chairman.*] Practically a straw mattress?—Yes, you have a mattress.

261. *Mr. Gray.*] You yourself, I suppose, have slept in tents?—Yes, and on the floors; and I have been three nights on a muddy track, and it was considered lucky to have, along with two other officers, a sheet of galvanized iron to put on top of the mud as a mattress.

262. You slept soundly, did you?—Yes.

263. Do you consider from what you have heard that putting fifty men in a hut would be putting too many men in a hut of that description?—My personal opinion is that it is not the huts. I still think they can take fifty men, and have their meals in them too.

264. We have heard something about removing the tents from time to time, and Dr. de Lautour gave some evidence upon the subject. Did he communicate with you at all?—I have not had any communication with Dr. de Lautour for years.

265. You have been to Aldershot?—Yes.

266. And also seen the large military camps in South Africa?—Yes.

267. Was the practice at Aldershot or South Africa to put the tents as close as they were at Trentham?—Quite.

268. *The Chairman.*] How many men in a tent at Aldershot, as a rule?—They ran up to twelve.

269. You had eight at Trentham?—Yes; a military tent for sleeping-accommodation will find accommodation for eighteen. I have slept in a tent with nineteen. An Indian pattern service tent, of which we are shortly to have some, is 16 by 20. It is for sixteen men on service, and for eight men in peace-time and warm weather.

270. That is in a hot climate?—Yes.

271. *Mr. Gray.*] It has been suggested that the proper practice is to shift the whole area of the tents on to new ground. In your experience have you found that the practice was to shift every tent on to a new piece of ground periodically?—No, I have not. When we have small camps they shift them about, but it is generally with a view to operations.

272. You said, I think, that it would be suicidal to shift tents at Trentham from their dry site to other ground in wet weather?—Yes.

273. Then the shifting would be more for dry weather than for winter weather?—Yes; no one would dream of shifting from one place to another in wet weather.

274. Have you seen the diggers' tents in Otago?—Yes.

275. Do they ever shift their tents?—Not unless they were flooded out with the river rising. You have only to consider the railway tents and huts, in which wives and families are brought up.

276. You do not hear of any outbreaks of disease amongst the diggers?—No; they seem to keep that and bring it to Trentham when they come from those places.

277. You spoke as if you were and still are short-handed?—Yes.

278. The best men and the most trained men, I suppose, go with the earliest reinforcements?—We have still got excellent men, the best available men, who have to go in turn of selection.

279. And that involves the process of training others to come on to fill their places?—Yes.

280. Do you think proper allowance has been made by the public for the new conditions?—The public have not given any allowance for those things.

281. You are working under new conditions?—Yes; and I have often been inclined to wonder why there are so many people in New Zealand and so many people in influential positions in Wellington who do not seem to appreciate that we are under a war emergency. They seem to think that everything is going on as it was before. They do not seem to have the slightest idea of the work and energy that is entailed night and day by the manufacturers—not alone those confined to the military and medical work, but all the manufacturers have been touched—the shipping people, the transport people, and every one coming in touch with this emergency have to work night and day.

282. I understand that all persons connected with the war operations, such as supplies, are working at high pressure?—They are.

283. And under a condition of things of which we have had no previous experience?—No, no previous experience whatever, and no fault or blame attachable to any one or any Administration in the past. It catches us at a time when we are what you may call half-way through with the reorganizing and working-out of the military Forces of New Zealand. In order to carry the Defence Forces of this country to the stage it is in—to be able to do what has been done, not with the object of meeting this emergency, but to be able in the event of an emergency arising that we would be able to defend this country, we had really to neglect an important side of army administration or army-making, and that is what is called the ordnance and medical side. We had to devote our energies to bringing trained officers for the actual field training and placing the men in the firing-line and maintaining them in supply. That includes the Army Service Corps. We had trained officers that we brought from Home for that purpose, and all our available votes have been to meet that, and quite rightly so in a way, for the medical service and ordnance service for home defence until we are quite capable of meeting it. Then we had to face an emergency which calls for us to send a division of troops and more—because that is what it amounts to now, as there are something like twenty-five thousand we have here training and those away—to go abroad, and we found the want of the same amount of attention and experienced organization being brought to bear upon those two other sides, and most important sides. By "ordnance" I mean production of armaments and equipment, everything that goes to keep an army on the field, and with that department the arrangements with manufacturing concerns for the supply of all those things. This emergency found us semi-prepared in that respect.

284. *The Chairman.*] Only half-dressed?—Half-dressed on that side of it, but excellent for home defence. Had the enemy come here instead of us going to them we could have coped with them, because we were prepared for home defence; and now we have to step into an army going abroad alongside other armies who have their equipment, medical organization, and ambulances, and everything must as far as possible be interchangeable.

285. *Mr. Gray.*] You had to prepare for an active state of war in another country?—Yes, in another country; and that is forgotten and overlooked.

RUBY HANNA sworn and examined. (No. 45.)

1. *Mr. Salmond.*] You were nursing at Berhampore Hospital?—Yes.

2. Can you say the dates, approximately, that you went to Berhampore and left?—I went there on the 27th May, and left on the 17th July.

3. Do you remember a patient named Pollard being there?—Yes.

4. Do you remember him coming?—Yes.

5. Had you anything to do with him?—Yes.

6. How long was he in the hospital?—I could not say.

7. About a week?—Yes, I think so.

8. Do you remember him dying?—Yes.

9. Do you know what condition he was in when he came to the hospital?—He had a bit of a high temperature.

10. What do you mean by a "high temperature"?—101. It may not have been quite as high as that.

11. Was it a case of measles?—Yes; he came in for measles.

12. Did the rash come out when he was in the hospital?—No, I do not think so.

13. Was he over the rash?—Yes.

14. *The Chairman.*] Have you any records to speak from, or are you speaking from memory?—Just speaking from memory.

15. *Mr. Salmond.*] Was his temperature taken every day?—Yes; twice a day at first.

16. On a chart or in a book?—We only took in convalescents, and any with a high temperature we just booked them; but Pollard was put on a chart afterwards.

17. During the first few days he was there did you regard his case as serious?—No.

18. Did you regard him as a convalescent from measles?—He had a pretty high temperature, but he was kept in bed all the time.

19. In the main ward?—Yes. Any one coming in with a high temperature was not put in the tents.

20. What medical attention did he get for the first few days?—I do not remember what medical man came to him.

21. What sort of attention would a patient of that sort get?—He was sounded thoroughly.

22. Would he be visited once a day regularly by the doctor?—Yes. I do not know whether the doctor visited once a day, but if at any time we were at all alarmed about patients we just had to ring up the doctor.

23. But here was a patient who came in suffering from measles and in bed in the main hospital with a temperature of 101. I want to know whether a patient of that kind would be regularly visited by a doctor once a day?—I do not remember that.

24. You do not remember what sort of visits were paid by the doctor to that hospital?—He may not have been for the first day or two, but latterly they were visited every day by the doctor.

25. What do you mean by "latterly": at the time Pollard was there was the doctor coming every day?—I do not know when Pollard first came in whether the doctor was coming every day; but two or three days afterwards we had the doctor every day.

26. That was because Pollard was getting ill?—It was because his temperature was not going down.

27. *The Chairman.*] Do you remember Dr. Harrison?—Yes.

28. How often did he come in?—When he had medical supervision of the hospital he came every day, and we had permission to ring up for any doctor in Wellington if we could not get Dr. Harrison.

29. *Mr. Salmond.*] Did Dr. Harrison examine every patient in bed?—He did the rounds. Some were quite well, but we kept them in bed on account of it being measles.

30. Do you remember the day when Pollard became much worse?—He gradually got worse; I do not remember the day.

31. Do you remember when you first came to the conclusion he was dangerously ill?—Yes; I think it was about Sunday.

32. You have not got any record in your book of the dates?—No.

33. Do you know on what day he died?—No.

34. As a matter of fact, he died on a Friday. With that in your mind, how soon before that would you come to the conclusion he was dangerously ill—the day before?—More than that. We watched him night and day, and nursed him night and day.

35. For many days?—It was Sunday or Monday we took it in turn going on duty. Before that we left him ordinarily from 10 o'clock.

36. Was that on account of Pollard's illness?—Yes, Pollard and another man.

37. *The Chairman.*] Are you sure it was Monday or Tuesday?—No.

38. *Mr. Ferguson.*] Do you know how you made the changes: did you take the first night?—Yes, and I had the last night.

39. Who came after you?—Sister Faram, and then Sister Keith.

40. *The Chairman.*] His temperature went up, it was said, on the Tuesday?—His temperature went up high.

41. Were you on duty during Tuesday?—Yes; I would go on about 4 o'clock.

42. *Mr. Salmond.*] Do you remember the occasion you were first on night duty—when the change was made, and why?—Yes; it was on acount of Pollard the first night.

43. Did you ever have any conversation with Dr. Harrison about Pollard's dangerous condition?—I do not remember.

44. Or with Nurse Keith?—We may have talked about it.

45. Who told you to sit up all night with Pollard?—We thought it was better for us to sit up than the orderly in charge.

46. You must have had some conversation about his condition?—Yes, I suppose we had. Before that we told the orderlies to call us if they were afraid of anything.

47. For any case?—Yes; the boys used to come in with their noses bleeding and they had to be plugged.

48. Do you remember during that week that other doctors were coming in the evening?—Yes, and they came through the daytime, too.

49. Do you remember the doctors coming to see Pollard?—I was not on duty. I do not know whether it was to see Pollard in particular.

50. Did you ever ring up a doctor to come and see Pollard?—Yes; I think Sister Keith did. I do not know whether it was to come and see Pollard; it was later on in the week, I fancy.

51. Do you remember Dr. Steele coming to see Pollard?—No; I would not know him if he did come.

52. Do you know anything about a telegram having been sent to Pollard's relatives?—I think Sister Keith sent one, and Captain Harrison sent one. He left us saying he would send one to the effect that he was ill.

53. What was the usual course in the hospital about that sort of thing: had you any instructions about informing relatives?—No; we did not have any bad patients in there except those two cases. In the others we always had permission to send them to the Wellington Hospital.

54. Do you think Pollard got proper medical attention, enough visits and enough care?—Yes, I think so.

55. You were quite satisfied?—Yes.

56. And proper nursing?—Yes.

57. And do you think it was a proper place to keep Pollard in, or should he have been sent to the hospital?—I do not know. He got every bit as good treatment as he would have got at the Wellington Hospital.

58. Was it an uncomfortable place for a sick man to be living in?—No. The doctor gave Fordham the option of going to the Wellington Hospital, but he refused. That was on the Thursday, and Fordham said he did not want to go—that he was quite comfortable where he was. He asked me afterwards if he had done wrong.

59. You sometimes did send patients to the Wellington Hospital?—Yes; we sent them on if they got a rise of temperature.

60. *The Chairman.*] That was at the time you had a large number there?—No, all along.

61. *Mr. Salmond.*] If that was so why did you not send Pollard?—I do not know.

62. Or Fordham?—Pollard was very weak from the time he came in, and Fordham would not go. Pollard was never out of his bed.

63. You remember Pollard's relatives coming to the hospital?—Yes.

64. Did they make any complaint?—Yes; the brother wanted to have him removed. He went and saw Captain Harrison, but I do not know what agreement they came to.

65. Did Pollard's brother say in your presence that he wanted him removed?—Yes.

66. Why?—Because, I suppose, he was not satisfied with the place, or did not think he was being well looked after.

67. He did not say he was dissatisfied with the nursing?—He did not say so.

68. It was the place he objected to?—Yes.

69. Do you remember a consultation in which Dr. Herbert was present?—No.

70. You remember Pollard dying?—I was there.

71. Was any complaint made then that he was not properly treated—about his feet being cold?—Yes; his sister said his feet were cold. I rang up the place where his brother was staying, but I could not get connected about half past 4 or 5 in the morning, and when Sister Keith came on I told her of the position, and I rang up again. This time the man said there was a Pollard there. I told the brother that Pollard was very bad, and he said he thought he had better wait as his people were coming up from Christchurch, and he would chance it.

72. And then they arrived that morning?—Yes.

73. Did they complain when they got there that Pollard's feet were cold?—I do not know; I was not attending.

74. Were you the nurse who had looked after Pollard that night?—Yes.

75. Did Nurse Keith tell you afterwards or then that they had complained of his feet being cold?—Yes; she told me afterwards.

76. What did you say?—I do not know that I said anything. When his people arrived he was quite conscious. I saw the motor-car coming, and he made a rally at the thought of his father coming.

77. Was he able to recognize his parents?—Yes; he brightened up and seemed quite cheerful after they arrived.

78. *The Chairman.*] With reference to the question of cold feet, how was it his feet were cold: was it through want of hot water?—No. His feet must have just gone cold.

79. *Mr. Salmond.*] Was he a dying man then?—Yes, he was a dying man.

80. Do the feet of a dying man usually get cold?—Yes, usually first.

81. After Pollard died did the relatives say anything about the way he was treated, either thanking you or finding fault with you?—No.

82. Do you remember a man named Fordham?—Yes.

83. He came into the hospital about the same time as Pollard?—Yes.

84. And died, I think, on the same day?—Yes.

85. Do you remember what condition he was in when he came?—He did not seem very bad when he came in.

86. Was he kept in the same ward as Pollard?—Yes.

87. Had he a temperature?—Yes; but he never ran as high as Pollard did.

88. Did he suddenly get very bad or gradually get worse?—Just gradually got worse.

89. How long do you reckon he was dangerously ill in your hospital before he died?—I do not know when he came.

90. He did not die suddenly: he must have been dangerously ill for some days?—Perhaps two days before he died. The doctor said he could be removed to Wellington Hospital, but he refused to go.

91. Was he very ill then?—Yes, he was ill enough to be moved. We only sent bad cases to the Wellington Hospital.

92. I cannot understand why the offer was made to Fordham and not to Pollard?—It would not have done to take Pollard out of the warm room; his temperature was too high and never came down.

93. Did both those men get pneumonia?—Yes, I think both had pneumonia. I am not quite sure.

94. Do you remember anything being said about communicating with Fordham's relatives?—No.

95. *The Chairman.*] They were communicated with?—Yes; they came there.

96. And they wrote a letter of thanks?—Yes; they have written twice to Sister Keith thanking her for her kindness.

97. *Mr. Salmond.*] No suggestion was ever made of want of treatment?—No.

98. Do you remember the case of a man named Colley: he was in your hospital and was removed to the Wellington Hospital, and died the next day?—Yes.

99. Do you remember how long he was in the Berhampore Hospital before being removed to Wellington Hospital?—I do not know, but the morning of the day he went to Wellington Hospital he was playing cards with the men in the marquee.

100. And was sleeping in the marquee?—Yes, and up and walking about.

101. Convalescent from measles?—Yes.

102. Do you remember his suddenly taking ill?—Yes, about midday.

103. What happened to him then?—He seemed to take a bit of a rigor.

104. Had his temperature risen?—Yes.

105. Was it taken?—Yes; but I do not know what it was.

106. *The Chairman.*] You have not got any records?—No.

107. They were left behind in the building?—Yes, unless they were destroyed.

108. And Colley was taken to the Wellington Hospital the same afternoon?—Yes.

109. What time?—I do not know. It was about 12 o'clock when he took ill, and we brought him into the ward and put him into bed, and it was some time before tea he went to the Wellington Hospital.

110. *Mr. Salmond.*] Do you know what was the matter with Colley?—I did not know then.

111. Do you know now?—I only heard from what was in the papers.

112. You saw him there: would a man take suddenly ill like that and die from pneumonia next day?—We could not tell whether he had pneumonia with just a rise of temperature.

113. A man is perfectly well at 12 o'clock one day and dead at 12 o'clock the next day: is that like a case of pneumonia?—It is not usual.

114. Do you think that hospital was a suitable place for nursing those patients you had?—For convalescents it was quite all right. It was taken for convalescents. We never had sick patients there. They seemed glad to be there.

115. Did they ever grumble about anything?—No, never complained. They were very well satisfied, and had good food and plenty of it.

116. Was there proper equipment?—Yes. If we wanted anything we only had to ring up for it and get whatever we wanted.

117. And all proper sanitary appliances?—Yes.

118. Was it overcrowded?—We had them sleeping in marquees.

119. *The Chairman.*] But it was not throughout like that?—Sometimes we had the convalescent ones out in the marquees.

120. *Mr. Ferguson.*] Were the marquees overcrowded?—Seventeen in a marquee.

121. *Mr. Salmond.*] Is that too many?—I do not know. There was plenty of room; they were big marquees.

122. *The Chairman.*] It varied: there were not seventeen every night?—No.

123. *Mr. Salmond.*] Were any patients kept in places you regarded as unsuitable—for example, harness-rooms, or other rooms such as stables?—No.

124. When the patients came in had they been properly treated: did they come in clean and in proper condition?—Yes, fairly clean, I suppose.

125. Nothing out of the way?—No.
126. *The Chairman.*] Did they get baths there?—Yes; we had two baths.
127. And hot water?—Yes; one boiler in which the water was boiling all day, and the other was in the building.
128. *Mr. Salmond.*] And you had plenty of hot water?—Yes, plenty; the fire was going all day.
129. *The Chairman.*] With regard to the number there, there were, I understand, in addition to the building, three marquees?—Yes.
130. Do you remember an occasion on which you had an unusual number in the marquees and the building?—At the time we had 104.
131. You remember that, do you?—Yes.
132. Did they fill up everything?—Yes.
133. It was more than you could really do with?—No; we had a new marquee erected when they arrived.
134. Did it entirely crowd all the men up when you had that extra one erected?—No, because they were put into the new marquee, and then there were empty places in other marquees.
135. That relieved it?—Yes.
136. Do you remember any other time on which overcrowding occurred?—No.
137. *Mr. Ferguson.*] Were there any men in the stable?—No; there was a little room adjoining the stable that they slept in.
138. How many there altogether?—Five. It was a good-sized room.
139. Were there any men in the coach-house?—No.
140. It was 15 ft. by 15 ft.?—Yes.
141. Were there any men in the isolation ward—the two little rooms 10 ft. by 12 ft. and 8 ft. by 10 ft.?—Yes; we had officers there.
142. *Dr. Martin.*] Did you see Pollard when he arrived?—Yes.
143. You say he was weak?—Yes, very weak.
144. He had a temperature?—Yes.
145. Why did you not follow the usual custom and send him to the Wellington Hospital when he arrived if he had a temperature and was weak?—I do not know.
146. Why was an exception made in his case?—I do not know that any exception was made, unless he was too weak to be moved. He looked a very weak and delicate man.
147. He had a temperature?—Yes.
148. Do you know where he came from?—No.
149. Why was he sent to Berhampore from Kaiwarra?—Several times we took in patients that the Wellington Hospital refused to take after being sent there.
150. Not serious cases?—When they were received they were generally cold, and the temperature would rise next day.
151. What was Pollard's state on the Saturday—the day after his admission: was he still weak and had he a temperature?—Yes; he seemed all right himself—he never complained, and took his food well, but he had a temperature.
152. You kept him in bed?—Yes; we always kept them in bed for nearly a week after they came in.
153. What was his state on the Sunday: had he a temperature then?—Yes, I think so.
154. I understand the sister on her own responsibility sent cases to the Wellington Hospital if they were not going on satisfactorily. If a man was in the Berhampore Hospital on the Friday, Saturday, and Sunday, and had a temperature, and was still weak, can you tell me why it was not considered necessary then to send him to the Wellington Hospital?—I do not know why he was not sent.
155. *The Chairman.*] Who was the head nurse there?—Sister Keith.
156. She told us there were only eight or nine persons at that time in the ward?—Yes; we were not overcrowded then.
157. *Mr. Salmond.*] Were you in the hospital at the time Oliver was there?—No; I do not remember Oliver being there.
158. *Dr. Martin.*] What were the charts for Pollard and Fordham: were they four-hourly charts?—Yes.
159. Those were the only charts kept in the hospital?—Yes.
160. No chart was kept with regard to Colley?—No.
161. *Mr. Gray.*] When Pollard came in he came in from Kaiwarra?—I do not know.
162. How many patients were there in Berhampore that night?—I do not know.
163. You do not know whether few or many?—No.
164. Did you know anything about the state of the Wellington Hospital that time—whether full or not?—No.
165. Now, Berhampore, I understand, was used almost entirely for convalescents?—Yes.
166. Were Pollard, Fordham, and Colley the only three serious cases you had?—No; we had others, but they were sent to Wellington Hospital.
167. Many?—No, not many.
168. But primarily they were convalescents that came in?—Yes.
169. Serious cases were not sent to you?—No.
170. And those three cases you spoke of all developed serious illness while at Berhampore?—Colley did, but the other two were never out of bed.
171. Did you ever have any difficulty in getting hold of a medical man to see the patients?—No; we had written down before 8 o'clock whom to ring up. We rang up the Upper Hutt, and if we could not get Dr. Harrison we could get any medical man.

172. Up to a certain time Colonel Purdy visited the hospital?—Yes.

173. And you had others as well?—Yes.

174. Can you tell us what other doctors came there?—No; I do not know the names of the doctors.

175. You spoke of Captain Harrison: did he come every day?—Yes. If he did not come he sent some one else.

176. And you had occasional visits from other doctors at night?—I may not have been on duty.

177. When you were on duty did you ever know of any occasion on which the services of a doctor were required and could not be got?—No.

178. You have had experience of nursing for some considerable time: do you think any of those men could have been better attended to than at Berhampore?—No, I do not think so; they got all the treatment they could get anywhere.

179. Were the orderlies you had satisfactory men?—Yes.

ERNEST ALBERT VINCENT sworn and examined. (No. 46.)

1. *Mr. Salmond.*] You were formerly a member of the Expeditionary Force?—Yes.

2. When did you join?—I arrived at Trentham on the 19th December.

3. What part of the Force did you belong to?—The Howitzer Battery, Third Reinforcements.

4. Up to that time what had been your occupation?—Previous to going to camp I was driving an auctioneer's delivery-cart.

5. Were you used to open-air life?—Yes.

6. Had you been perfectly well?—Yes.

7. Had you ever suffered from rheumatism?—No, never.

8. When you went into camp on the 19th December where were you put to sleep?—In a tent.

9. What sort of weather was it?—It was all right that night.

10. Were you supplied with the usual equipment?—Yes; we had an issue of blankets and just what we wanted to go on with that night.

11. Did you get them late that night?—We had to wait some considerable time before we got them. It was half past 8 or 9 o'clock before I got mine.

12. You got straw supplied you for bedding?—Yes.

13. And a waterproof sheet?—Yes.

14. How was the straw supplied: was it ready made up into bundles for the men?—Just one bale, issued from the Quartermaster's store to each tent.

15. And eight men divided it up?—Yes.

16. Was the straw satisfactory?—No, it was not; it was damp. The bale had sweated; it had been in a damp place.

17. Did you notice that at the time?—Yes.

18. Did you say anything about it?—No, not then.

19. Did you say anything to your mates about it?—One or two thought it was not quite the thing that night. As soon as we opened it up we spoke about it; we remarked that it was damp. We had to wait some considerable time till we got it, and had some trouble about getting it.

20. You got it about 9 o'clock, and went straight to bed, I suppose?—Yes.

21. Did any bad effects follow from the condition of the straw?—Not that night.

22. Tell me what happened?—It was on the Monday morning it started: I woke up with my right knee slightly stiff. I went on parade, and in the afternoon the sergeant-major came up and asked what was wrong with my foot. I told him that my knee was stiff. He noticed it because I could not take the full pace, and he told me to report to sick-parade that night. I did so, and was given a black pill and four white tabloids.

23. What did you complain of?—I told them the trouble was in the knee.

24. Was anything said about rheumatism?—No. One of the Medical Officers prescribed for me, but I do not know who.

25. I suppose you took the pills and tabloids?—Yes; I took them through the night.

26. And were you all right next day?—No, slightly worse. I reported on sick-parade again on the Tuesday and told the officer there exactly how I felt, where the trouble was, and that my legs were sore in the joints. He examined me then, and I was told there was nothing wrong with me, and that I wanted light exercise.

27. Were you let off work?—Yes; I did not parade.

28. Did he give you any medicine?—No, nothing. I was worse that night, but did not report. On the Wednesday I reported, and was so bad I could only pull my boots on without my socks, and could just hobble to the tent for sick-parade.

29. Did you see some doctor?—I was examined then.

30. Did the same doctor examine you again?—No, the first doctor was different; but on the second and third occasions it was the same doctor. I told him exactly what was the trouble and where the pain was, and he examined me again. He just stood me aside and put one of the medical men on to rub my legs with a little liniment, and that finished it.

31. Did he give you any medicine or any instructions what to do?—No.

32. What happened then?—I had a bad night that night.

33. Were you sleepless?—Yes, I had no sleep. I had to roll all the time; I could not lay in one position long, and the next morning when it was time to get up I could not move my legs. That was on a Thursday.

34. Did you get up?—No; I could not get up.

35. Were you taken to sick-parade?—No. An officer came round, and later on two of the Medical Corps men brought a stretcher into the tent. They had done nothing for me, but were going to make a bed on a stretcher and leave me in the tent. On the Monday night I had bought a bit of scrim at the canteen and made a sort of palliasse, and filled it up with straw. When we were shifted into another tent I got another issue of straw. When the two Medical Corps men came in I asked them what they intended to do, and they said they were going to make me a bed there. I said that was no good to me, and I asked the corporal to go and find Captain Fyffe, and get him to come and have a look at me. Captain Fyffe came and examined me. He only pulled one sock off, and I could not stand the weight of the blankets on my toes. He asked me how long I had been like that, and I told him it had been coming on for four days. He asked the men who brought the stretcher in what they were going to do with me, and they said they were making a bed up. He said, "You will put this man into the hospital until the ambulance comes for him." They said, "We have not room in the hospital"; and he said, "Make room." I was carried to the hospital and left there on the stretcher. There was another man lying in the hospital on a stretcher the same as I was. I was later sent into the Wellington Hospital.

36. How long did you lie in the Trentham Hospital?—Just till the ambulance came—an hour or two.

37. You were taken the same day to the Wellington Hospital?—Yes.

38. How long did you stay there?—Nine weeks.

39. What was the matter with you?—Rheumatic fever.

40. And were you then discharged from the hospital after nine weeks?—Yes. I did not know what to do, but I found out from those who had been discharged from the hospital. I reported at the drill-hall in Buckle Street, and had to go from there to the barracks and get a railway pass, and go back to the drill-hall to get a letter to the Camp Commandant, and then get out to Trentham the best way I could.

41. What were you feeling like then?—I was very weak and could not put my own coat on. I had to go out to Trentham and wait some time till I was medically examined, and then I was given two months' leave. I got to Palmerston next day, and had to call in a doctor and go back to bed.

42. How long were you in bed then?—For about seven or eight days.

43. What happened after that?—When my leave was up I was getting a little better. I was getting about the best way I could, and just a few days before my leave was up the doctor who had been attending me took ill, and I had to go to another doctor to be examined in order to get a report to send to the Camp Commandant. The doctor recommended me for another month's leave, and also said that he recommended me to take a trip to Rotorua later on. I enclosed that with a letter of my own to the Camp Commandant, and told him how I was, that I did not feel fit to travel, and asked them to forward what pay was due to me to Palmerston. I received a reply that no more leave could be sanctioned until I reported at camp, and there was no mention of pay. I came down to Wellington about ten days after that—on the 29th April—and reported at Trentham the following day at the Commandant's office. I must have waited somewhere about three hours when they came out and told me that nothing could be done that day, but to come back next Monday or Tuesday, and that they would send me a wire to where I was staying in Wellington. I went out on the Tuesday by the train leaving town at 9 a.m., and reported in the medical lines about 10.30. I waited there all the morning, and it was rather a cold day. My turn came a good while after dinner-time—about half past 3 in the afternoon. I went before the Medical Board, composed of Dr. Purdy and two other men who were sitting at a table. I was asked a few questions. I was asked if I had ever had rheumatism before I went into camp, and I said No; and Colonel Purdy said I must have been subject to it, and that I must have had rheumatism before going into camp. I was discharged from the Force that night as medically unfit.

44. Was that the end of your military experience?—Yes.

45. Did you have wet feet or wet clothes when in Trentham?—No.

46. Had you good boots?—Yes.

47. And the only hardship you complained of was the improper bedding you were supplied with?—Yes.

48. What is your age?—Twenty-five.

49. Is there anything else you desire to place before the Commission?—No, I do not think so.

50. *Mr. Ferguson.*] You mentioned your pay: did you get that?—I received that when I got to Trentham.

51. *The Chairman.*] I suppose you are sorry at having been discharged from the service?—Yes, I am. I am unable to do any work now.

52. You attribute your trouble to being placed on wet straw?—Yes. It was not the open air, because I had slept in a tent for two years. I left a tent to go there. I always sleep in a tent at home.

53. *Mr. Gray.*] You say when you joined the Force you were perfectly well?—Yes.

54. Did you ever suffer from pains as a youngster?—No.

55. Ever had scarlet fever?—No. I had measles as a child.

56. You do not know anything about the history of your father and mother?—No, only that they were healthy.

57. On the night you went into camp you and your mates had this bale of straw given you?—Yes.

58. Who gave it to you?—The orderly-sergeant.

59. Who was in charge of your tent that night?—No one was appointed in charge. We had only arrived.

60. Did the orderly-sergeant give you the straw?—He brought it along the lines.

61. Did you notice immediately the straw was damp?—Yes, when it was opened.

62. Pretty soon after you got it?—Yes.

63. You made no complaint that night?—We either had to take that or go without.

64. You got it at half past 8: were there others to be supplied?—No, we were the last. There were other men waiting for an issue of blankets.

65. Do you suggest that neither you nor any of your tent-mates were capable of making a protest to somebody that night?—We did not know whom to complain to. We were just put into the tent to sleep that night.

66. Did it occur to any of your mates to go back and say, "You have given us damp straw"?—But the whole bale was not damp.

67. You slept on what you knew to be damp straw?—Yes.

68. You knew at the time it was damp?—Yes.

69. Do you not think it was a foolish thing to do?—No; I had a good waterproof sheet.

70. And you took the risk?—Yes.

71. Did it not occur to you as a foolish thing to do?—No; I did not take much notice of it.

72. Had you ever slept on damp straw before?—Not that I know of.

73. At all events, it is to the damp straw you attribute all your troubles?—Yes.

74. You knew it was damp and you did not make a protest to any one?—No.

75. *The Chairman.*] Did the others not get damp straw too?—The bale was gone in the centre. I waited till I saw we had everything we wanted for the night, and then went to the canteen to get a cup of coffee before going to bed. By the time I came back the others had taken most of the straw and left me the centre.

76. *Mr. Ferguson.*] Did you put the waterproof sheet over the damp straw?—Yes.

77. *Mr. Gray.*] Did you feel any inconvenience during the night?—No; it was on the Monday morning I noticed it. I was slightly off my sheet when I woke up

78. You went into the camp on the Saturday?—Yes.

79. Had the straw not got dry by the Sunday?—No; it had no chance of getting dry.

80. Was it a wet day?—No; but it was left in the tent.

81. *The Chairman.*] Did you not have it changed on the Saturday?—It was on the Monday I got a new lot—when we were shifted to a new tent.

82. *Mr. Gray.*] Was the canteen open on the Sunday?—Yes, I think so.

83. Did you make an attempt on the Sunday to get fresh straw?—Yes; we got half a bale.

84. There was no difficulty in getting fresh straw if you asked for it?—I do not think so.

85. *The Chairman.*] You were sleeping in a tent for two years before you went to camp?—Yes, on and off. I was not out of it very much except when up country.

86. Well, up to the time you joined the Force to go to camp where were you sleeping—in a tent at Palmerston North?—Yes.

87. What had you to sleep on in the tent?—A boarded floor and a stretcher.

88. Did you sleep there on account of your health?—No, in preference to being in the house. I prefer a tent to the house.

89. Did any of the others in your tent suffer in any way that you know of?—No, I do not think so.

90. *Mr. Ferguson.*] Had you been a Territorial before?—Not in the Territorials. I had three years in the Manawatu Mounted Rifles.

91. You are used to camping?—Yes.

92. You knew what you were expected to do?—Yes.

93. You were not a stranger to the life?—No. I had not only been in camp with the Mounted Rifles, but had worked in camp.

94. You knew who the man was in charge of the camp: you knew he was called the Quartermaster, did you not?—Yes. It was hard to find out whom to go to. The orderly-sergeant got us the straw.

95. Do you think it was neglect on the part of the medical department in not examining you quicker? You said you had to stay there from early morning till half past 3 in the cold till the Medical Board could examine you: did you think that was neglect in any way?—Well, all the others had to wait there, and there was no place to sit down or anywhere to get a comfortable seat. When I wanted to sit down I had to get some one who would help me down and help me up again. That was after I had the two months' leave.

96. *Mr. Salmond.*] Were the medical authorities aware at that time what you had been suffering from?—I do not know about the medical authorities, but the Camp Commandant should have known.

97. Why?—Because I had written to him before the two months' leave was up, and my mother wrote to the Camp Commandant wanting to know on whose part the neglect was that she had not been notified. He wrote back that I was admitted to Wellington Hospital with a mild attack of rheumatism.

98. After being sent away from the camp to the Wellington Hospital were your parents notified?—No; it was by accident they found out.

99. How long afterwards?—Thirteen days after I went to the hospital. They found out through an uncle of mine who was in Wellington. I really inquired for him. I could not write myself for a couple of days after my hands were bad.

100. Have you got a copy of that letter you sent to the Camp Commandant?—I have not it with me.

101. Did you make a copy?—I have a copy at home, I think.

102. Did you explain that you had been suffering from rheumatic fever and wanted an extension of leave?—Yes.

103. And the answer you got was that you must report yourself at Trentham?—Yes, to be medically examined; but I was only asked two or three questions, and not examined at all.

104. *Mr. Gray.*] Did you ask any of the nurses at the hospital to write home for you?—No.

105. That could have been done?—I dare say it could. I never thought of it at the time.

THURSDAY, 29TH JULY, 1915.

WILLIAM LANGSTON NEWNHAM further examined. (No. 47.)

1. *The Chairman.*] You were going to give us some information regarding the area of land at the camp?—The total area of Government land is about 1,260 acres.

2. *Mr. Ferguson.*] Including flat lands?—The area of the flat ground is about 400 acres.

3. *The Chairman.*] There is 400 acres of flat and 860 acres of hill land?—Yes.

4. Most of that 400 acres of flat land is usable?—I should say most of it is; a small part of it is swampy, and could not be used. You also wanted some information about the area occupied by the tents. I made measurements in different parts of the camp, and found there were eighty tents to the acre.

5. *Mr. Ferguson.*] That is exclusive of roads?—Yes.

6. That is in the tent area?—Yes. Then there was a question as to the date when the buildings of the Rifle Association were pulled down. I saw Captain McCristell, and he said they were pulled down either late in October or early in November. One of those plans which I put in yesterday shows that the latrines were within the tent area, but he says that no tents were actually pitched on the site of the latrines. He was careful to see to that.

7. *The Chairman.*] We can get that confirmed by Captain McCristell?—Yes.

Public Works Department, Wellington, N.Z., 17th August, 1915.

Memorandum for the Secretary, Trentham Camp Commission, Wellington.

DEAR SIR,—In reply to a request from the Commission for information regarding the privies and urinals marked "A" and "B" respectively on the large plan put in by me, I have to state that those marked "A" were partly erected during the construction of the new hutments. They were never completed or used, and when it was decided to build further hutments they were pulled down. They should have been marked "New latrines" on the plan instead of "Privies" and "Urinals." The privies and urinals marked "B" were those used by the Rifle Association. No hutments are being built on these sites.—Yours faithfully, W. L. NEWNHAM, Assistant Engineer.

DR. HENRY THOMAS JOHN THACKER sworn and examined. (No. 48.)

1. *The Chairman.*] You are a member of Parliament?—Yes.

2. And you desire to give us some evidence?—I intend to do so if I may.

3. Upon what points?—There are many points.

4. Is this from your personal knowledge?—Yes, from what I have seen myself. I want to say, first of all, that I am not a layman as far as this matter is concerned: I am a Surgeon-Captain in the New Zealand Territorials, on the Reserve.

5. You are a medical practitioner?—Yes.

6. And Surgeon-Captain in the Territorials: with any experience in applying your knowledge to military life?—Not on active service.

7. But in camp?—Yes; I have taught ambulance-work. I got my surgeon-captaincy in Christchurch for teaching ambulance-work, and also as a medical student in Edinburgh I went in for ambulance-work. I have always taken an interest in military medicine, which includes medicine and surgery. I first of all want to substantiate statements that I made that I consider that Trentham was not suitable as a site, both geologically and geographically, for this camp. In the first instance, Lord Kitchener advised our authorities that they should have a permanent Territorial camp in New Zealand, where there should be every facility to train an army in all its branches, and the site that he picked was the Waimarino Plains.

8. Whereabouts is that?—In the centre of the North Island.

9. Near Taupo?—Yes; the land there is thoroughly hygienic. But when the war broke out the military authorities went in for local camps; and I want to show that this matter has not been jumped upon the military authorities here.

10. What matter?—This epidemic, or scandal, or muddle that has taken place. They had had previous experience of an outbreak. At the commencement of the war last August there was a camp at Christchurch, at the show-grounds on the Lincoln Road, and it got into a great mess, as Trentham has.

11. Who was in charge?—Colonel Chaffey. An epidemic threatened there of typhoid fever and measles; but when the Colonel was advised of that he struck the camp at twelve hours' notice, root and branch, and shifted it to the Canterbury Park, some five miles away, and the epidemic absolutely subsided, and everything went well.

12. Had they adopted drainage facilities, and so on?—Yes. I may say that Canterbury Show-ground is one of the most up-to-date show-grounds as far as New Zealand is concerned. It has every facility for housing and catering for from forty to fifty thousand people.

13. For housing them?—Yes; you feed them.

14. But not habitation for that number?—No, sir; when you speak of housing a gala crowd you mean taking them in and feeding them. However, in this case the authorities there were well advised and shifted the camp, and that experience should have been taken to heart by the headquarters authorities. They knew the state of Trentham, and that during the winter race meetings there they have tremendous trouble with the mud. They knew that this camp would have to go through wet weather, and they had the whole year to go through. They knew the war was not going to end after a few months, but that it was going to be of some duration.

15. That is rather a large statement to make. I do not know who could have said that. Many people thought it was going to end in a short time, and I do not know that the military authorities knew different?—We have direct evidence of it.

16. You assume that it is possible that they knew?—No; we sent away an Expeditionary Force, and we knew that they were going to send away reinforcements to maintain that Force till the end of the war. They also arranged for mobilizing other reinforcements to be sent away, which has been done. Then we must, at any rate, have a permanent camp for this, and to carry out our territorial scheme we were recommended to have a permanent camp. Knowing that they must go in for a camp to carry them through the winter, and as they had all the dry weather ahead of them, still they did not take sufficient precautions, but set up this camp at Trentham They also knew that there was a shortage of tents, as I can prove by direct evidence.

17. They knew that when?—Last November and December. I was interested in a Scout camp at Banks Peninsula.

18. They knew in November and December that there was a shortage of tents?—Yes; I was interested in a Scout camp at Banks Peninsula, and the Scouts applied to the authorities for a loan of a dozen bell tents, and they could not give them to us because, they said, they had not got them.

19. We have evidence, of course, that they apprehended a shortage of tents, because that was one of the causes of the erection of the huts?—Yes. Now, I want to show that, although they knew all this, instead of taking their heavy materials, such as corrugated iron, concrete, and so on, and commencing to build their hutments during the summer, this was left over and not started until practically the winter months. All those materials should have been on the ground months ago, and the timber could have dried, whereas the hutments were built of wet timber. I saw that myself. Another thing: they knew they would want metal, of which there were practically millions of square yards lying about. They should have got a stone-crusher and crushed it. They needed it for the highway from Wellington, and for the roads out there. They could have made tarred macadam pathways, instead of one having to go up to the knee in mud, as the conditions are this winter.

20. *Mr. Ferguson.*] Have you seen any place where there was up-to-the-knee mud?—Yes, I have been in it. I went back to Canterbury with mud up to within 3 in. of my knee, and showed it to them down there as the conditions which prevailed at Trentham. There was no surface drainage attempted there at all. The first day I went there it was very deep in mud.

21. When was that?—Sunday, the 27th June.

22. Was that the first visit you paid to the camp?—Yes.

23. How did you see the damp timbers?—I saw them the next day.

24. How could you see the damp timbers when the huts were up?—You can tell damp timber if you are an expert. If a man is taught public health decently when he is a medical student he would know: that is part of your medical education. Besides, I have had practical experience myself in timber-mills.

25. You saw there was no surface drainage attempted on the 27th June?—Yes, you could see that perfectly well by the large pools on either side of the main road past the headquarters. Now, sir, the site itself has been in the past a lake. The gorge below shows that it was a lake originally.

26. *The Chairman.*] I do not think your views on this matter accord with those of the geologist whose report we have: are you a geologist?—Yes; I studied geology in my B.A. course at Canterbury College. Of course, I am not a specialist.

27. We have had the place examined geologically, but I do not think the report accords with what you say: however, we will assume it was a lake?—I am not assuming it was a lake. You can see that prehistorically it was a lake—the gorge shows that the hills came down and filled up the basin of the lake. You can see that sort of thing all over the world. There is no doubting the fact that underneath the surface stratum of gravel and sand there is a clay stratum which varies from 3 ft. to 15 ft. from the top. I saw holes——

28. Can you indicate any hole where you saw more than 2 ft. of clay?—I said that there was gravel and sand 3 ft. deep in places, and at other places it goes to 9 ft. and over.

29. Not of clay?—And underneath that there is clay. That being so, when that stratum of gravel and sand got wet, in the summer the damp might disappear by evaporation, but if you go down to 3 ft. it would still be wet, and under this it would remain wet in the winter. In order to satisfy myself I have been at Trentham at all hours of the night since the 28th June. I have been there at 9 o'clock, at 10 o'clock, at 12 o'clock, at 2 o'clock in the morning, and on till 3 o'clock in the morning. When I have been there within the last three weeks at night-time there was a low-lying fog, and some nights it was so cold that the fog froze on the wind-shield on my motor-car into snow or ice. And when I came down through the gorge and got to the Lower Hutt the snow apparently disappeared. The temperature rose from what was practically

freezing-point to 55° or 60°. I tested it with the thermometer. This shows that the men lying on the ground and about the floors of the hutments, through which the draught was pouring, were practically in a semi-freezing atmosphere.

30. *Mr. Ferguson.*] Do I understand you to say that, whilst it was freezing at the site of the camp, when you got through the gorge the temperature rose to 55°?—Yes, from 52° to 56°; and it rose higher still when I got to Wellington.

31. This was at what time in the morning?—Between 2 and 3 in the morning. It was about 56° in Wellington.

32. You observed that on a thermometer?—Yes. Now, if the authorities wished to avoid the mud and the cutting-up of the camp by the cartage of heavy material from the railway-station they should have put a railway-siding in to the camp. They could have done that at a small cost, and thus delivered their heavy goods and their commissariat and the men practically on the spot.

33. Can you give us the date upon which you made these observations?—I have not got them here, but I can get them and give them to you. I can also bring witnesses to prove what I say. Now, what I want particularly to give you are my personal observations and what directed my attention immediately to the gross muddle that was going on at Trentham. As far back as October and November I had returning troopers calling to see me at my residence in Christchurch, and they were then suffering from septic throats.

34. Troopers from Trentham?—Yes, from the camp up here. I may tell you of one case that was not under my personal charge, but was a serious one. It is the case of Frank Rutherford, the son of Andrew Rutherford, of Hurunui. He developed a septic throat and subsequent pneumonia and rheumatic fever. When I came to Wellington my attention was deliberately called to the serious condition of affairs by a trooper whom I met in a barber's shop.

35. When?—On the 24th June, when I came up to Parliament.

36. *The Chairman.*] What was his name?—I have not his authority for giving his name, and I would not like anything in the nature of victimization to take place.

37. We have nothing to say with regard to that; but I should not suppose for a moment that anything of the kind could take place?—Well, I am using this man's name without his authority.

38. You can hand in his name, and it will be treated as confidential unless we decide to call him?—Yes; then I will give you his name, but I know that victimization does occur.

39. You need not discuss that phase here at all?—But it is very important.

40. It is not important to us, and I can have no suggestion that we have any control in regard to victimization; we want the facts. We have announced that any person desiring to give evidence here shall have the same immunities as witnesses have in the Supreme Court. The men can come here with the grossest libels and yet be protected?—Well, this is a letter written by the boy to his mother [produced and put in]. His mother's name is on the envelope.

41. Now, in regard to this man, C.T., you saw him on the 28th?—Yes. He was in the barber's shop and looked very ill. I asked him what was the matter with him, and he said he was supposed to have been suffering from pleurisy. I took his temperature, and it was 101. He said he had had a sore throat. I looked at his throat, and then I gave him a prescription and told him to go somewhere and get into a warm bed.

42. Have you anything further to say about this Blenheim boy?—No; I wanted you to see that that boy was walking about the street with a temperature of 101.

43. Was he on leave?—Yes; he was in the barber's shop in his uniform.

44. Had he been in the hospital?—Yes, in the Trentham Hospital, and had been discharged as convalescent.

[Mr. Skerrett put in full statement regarding case for perusal of Commissioners.]

45. *The Chairman* (after perusing statement).] He only had four days' leave at that time?—I do not know.

46. We are going to get his evidence presented to us?—Yes. I may say that I had not, of course, recognized the seriousness of the whole conditions. I was continually meeting these men, some of whom I knew. It was just by accident that I took his name.

47. Now, in regard to McNeil?—I can thoroughly vouch for him. He was a stalwart and fine man. His private position I knew personally, and he was a man that would not make comments such as he has made there unless they were absolutely true. That letter was brought to me by his father. It was written to his mother. I hand you that letter because it is typical of some twenty or thirty I have had. This one will show you the real condition of things. I think that Dr. Martin will see that that boy in his lay way describes his condition beautifully. [Letter put in.] Now, sir, I want to tell you my personal experience of Monday, the 28th June. I went to Trentham and passed quite readily on to the racecourse through the gate into the ground. It was quite an easy access. I tell you that because on the next occasion when I went I was held up in all directions. I was accompanied by Mr. L. M. Ready, and we passed into the grounds of the tea-kiosk. On going in we met four stretcher-bearers, and I asked them what they had been doing. One of these stretcher-bearers looked terribly ill. He said they had been carrying a man in out of one of the tents. I said, "What was the matter with him?" He sad, "We do not know, but he is unconscious." I said, "What did you do with him?" He said they had taken him into the tea-kiosk and put him on a stretcher. Then I asked the stretcher-bearer who looked ill what had been the matter with him, and he said he had a sore throat. He said, "I ought to be in bed myself." I said, "I think so"; and on looking at his throat you could see it had recently been very badly ulcerated, and his tonsils. Not only that, but he had swollen lymphatic glands on the outside. We then passed on in.

48. Do you know his name?—No, I do not know the name of the stretcher-bearer.

49. He may have been a member of a fatigue party?—He was an ambulance man or a fatigue man. We found that there was no system whatever there. We went into the tea-kiosk, and there we saw a crowd of men about 220 or 230 in number.

50. In the tea-kiosk?—Yes; they were in the central compartment and all round the outside.

51. In the veranda also?—Yes; some of them were on stretchers, but most of them were lying on the floor. They were in their own clothes, and they had a blanket or two over them. I felt some of their clothes, and they were semi-damp. Quite a number of them had sore throats.

52. This was the influenza epidemic?—Yes; this was what the experts of the Defence Department called influenza and colds. Two-thirds of the men had sore throats.

53. Did you examine them?—Yes, I examined them, and looked at them.

54. That is, two-thirds of the 230: you must have examined 150?—No; I examined one here and there. It is not essential to look at a man's throat to know if he has a sore throat. It would have taken me a long time to examine them all.

55. So two-thirds is simply an estimate?—Yes, it is my estimate.

56. How many did you examine?—About nine, in different parts of the kiosk. Others were vomiting. I saw the vomit beside the beds of some of them.

57. *Dr. Martin.*] You are sure of that?—Yes, and quite a number were retching. I should say they were nearly all coughing. I went thoroughly round through the whole lot of them. Some of them were deaf, and they told me they had had their ears syringed. Quite a number of them had had wax in their ears. Some of them had boils about their ears. To show the crude conditions under which the doctor was attending them, I may say that Dr. Harrison was attending to one man, and he had with him a tin pannikin with Jeyes' fluid in it, and he also had some cotton-wool.

58. Septic throats?—No, I did not see any treatment of them. That man had a boil behind his ear. The doctor was carrying his disinfectant about in a pannikin. There was no sign there of water-bottles.

59. *Mr. Ferguson.*] They would be in the bed, would they not?—I would not say there was no sign of them unless I felt in the beds. You do not go by what you see: you go by what you feel. I saw no signs either of bed-slippers or lavatory accommodation. There were no sheets and no pillow-slips. The whole position was chaos to my mind as a medical man.

60. *Dr. Martin.*] How long had the kiosk been occupied then?—I could not say, but they had been there some days. All the surrounding places were occupied. At that time they had started to try and separate the cases.

61. *The Chairman.*] Can you tell me the date upon which the kiosk was taken over?——

Mr. Skerrett: Either the 22nd or 23rd June.

Dr. Martin: They had been there five days then.

Witness: Dr. Harrison and Dr. Ferguson were there. Well, then I paid special attention to the man who had been carried in by the stretcher-bearers unconscious. I found him. I was attracted to him by Dr. Ferguson roaring at him, and asking him if had any pain, who he was, and where he had come from. The doctor was yelling that out in a super-voice. When he had finished I went up to the man and found that he was semi-conscious. The higher brain was narcotized, but when I asked him to put his tongue out he did so. When I asked him if he had a headache he shook his head, indicating that he was too narcotized. I took his temperature with my own thermometer, and it was 103·6. As I stated to the gentleman who was with me, I concluded that that man had either typhoid fever, pneumonia, or cerebro-spinal meningitis. I did not give that as cerebro-spinal meningitis to the editor of the paper when I had the interview with him, for fear of alarming the people. I said, "acute infectious nervous affection." The patient died the next day.

62. *The Chairman.*] He died on the 29th?—Yes, it would be the 29th, Tuesday. The doctors could not apprehend that he was as ill as I thought he was. Evidently he was one of the first fatal cases of cerebro-spinal meningitis. Until then there had been no direct technical process of diagnosis gone through. When I said in the House that they were cases of septic throats I was howled down by the Minister of Defence and his colleagues, and was unallowed to make a statement. Those throats should have had swabs taken of them, and the diagnosis made that was subsequently made.

63. Swabbed and cultivated?—Yes. When you make a swab you take a smear of the throat, put it in an antiseptic tube, send it to the bacteriologist, and he cultivates it.

64. *Mr. Ferguson.*] Had they the appliances there to do that?—I did not inquire from them.

65. They had not done it then, at any rate?—No, because they thought it was colds and influenza.

66. Do you know that they had not done it then?—The direct evidence is the statement made in the House by the Minister of Defence: he told me that they were suffering from colds and influenza. I said they were septic throats, and that the patients were dying of septic pneumonia. I want to say here, so that the public will know, that cerebro-spinal meningitis has been prevalent in England in the camps, and that the medical journals describing the treatment and symptoms and technique of the treatment have been in the hands of the medical practitioners in New Zealand for some months, and had the medical department at the camp been up to date the condition of the patients would have been recognized at least two months before it was.

67. Does that mean that it was there two months before?—Yes, in November or December.

68. Do you instance that by Rutherford's case?—Yes, and other cases of troopers who came to me in my consulting-room at Christchurch.

69. *The Chairman.*] The case of Frank Rutherford occurred in October, 1914, you say?—Yes, October, 1914. He was not one of my patients, but I can get a detailed history of his case if necessary.

70. From your position as a doctor, you think that the sore throats in October and November were sufficient to draw the attention of the medical men to the matter, and to put them on their guard, and take steps to carefully diagnose those cases?—Certainly. We have a swab for every throat that looks at all suspicious. And not only that, but when they saw those throats they should have given the men injections of diphtheritic anti-toxin stock serum. It is the recognized treatment in medical practice for a throat like that. I want to say that the course of cerebro-spinal meningitis is this: you first get a catarrhal condition of the throat and nose; you then get a septic throat with temperature, and then the advent of meningitis. The patient's system devitalizes from the septic throat, and he acquires the infectious condition known as epidemic cerebro-spinal meningitis.

71. That was the case of the man in the kiosk?—Yes. I want to say that the Defence Department sent to Dunedin for their bacteriologist. I believe previous to that they had brought in Dr. Hector, of the Hutt.

72. Dr. Champtaloup is an officer of the Defence Department?—No; he is a specialist in Dunedin. The Defence Department brought him up to diagnose the organism, which the Defence Minister in the House has said was that of cerebro-spinal meningitis. Now, to continue about the men in the kiosk: I did not see any evidence of suitable feeding for the men there. There had arrived the day before three nurses: they were sister nurses. All the previous nursing had been done by fatigue-men and practically amateur orderlies.

73. *Dr. Martin.*] Was that up to the 28th June?—Yes. These men, of course, did their best; but by what they were doing when I was there I should say they knew nothing whatever about their work. A number of men were occupied sweeping up the dirt on the floor of the kiosk that had been brought in by the soldiers. There was a big wave of it between where the men were lying on the floor.

74. A wave of dust?—A wave of dirt: they were sweeping this up.

75. The nurses arrived on the 27th?—Yes, either the 26th or the 27th—the day before I was there. I was so impressed with the lack of nurses that I thought it was necessary that some good working nurses should go out straight away, which was done. The transit for the cases from Trentham to Kaiwarra—that is, for the measles and more serious cases that had incipient pneumonia—was in open motor-cars. I know that that was a fact, because Dr. Harrison showed me the measles cases (as he called them), which were lying in the jockeys' and trainers' quarters by the horse-stalls. They were waiting for the motor-cars to come to take them away. That was 11 o'clock, and they had been there some time, and they were going to get away about 1 o'clock.

76. *The Chairman.*] Dr. Ferguson said in his evidence that it was about the end of the second week in June that the kiosk was first occupied?——

Mr. Skerrett: Your Honour, Dr. Valintine says that he is certain that the kiosk was not opened until the 23rd June.

Mr. Ferguson: According to my notes of Mr. Whyte's—that is, the secretary of the Racing Club—evidence he said that the caretaker admitted them to the trainers' quarters on the Sunday, and on the Monday he (Mr. Whyte) went out, and while there suggested to Dr. Valintine that they should remove the patients to the kiosk. That would be Sunday, the 13th, and Dr. Valintine apparently moved the men on Monday, the 14th June.

77. *The Chairman.*] Then the kiosk was occupied fourteen days before Dr. Thacker saw the men in it. In your opinion, Dr. Thacker, they could have got a nursing staff together?—Not only that, but they could have done all sorts of things. It is not for me to say what they could have done. I know what I would have done, and Dr. Martin will tell you what he would have done.

Mr. Skerrett: Dr. Valintine says that he unofficially commandeered the jockies' and trainers' quarters on Sunday, the 13th June, but that he did not take possession of the tea-kiosk until the 23rd June, and that there were no patients in the kiosk before the 23rd June.

Witness: Of course, what they wanted there was really not expert qualified nurses, but good practical women, such as they have there now. When I went back to Christchurch (I made the suggestion here in Wellington) there was a scheme arranged for getting volunteer sisters to undertake the work, and in twenty-four hours there were over two hundred women ready to take in hand the work. Some of them have come up since, and they are doing good work, caring for the men, washing them, and attending to them. While there I stated that men fifty years ago in the backblocks would have had just as good treatment. The two doctors that were there were worked off their legs.

78. *The Chairman.*] You were on the matter of the transit by open motor-cars?—Yes, I wanted to explain that the measles cases—eight or ten of them the day I was there—were in the jockeys' quarters—that is, in the place where the jockeys dress themselves. They were packed in bunks there. Evidently these bunks had been put up there for the jockeys to sleep there. The men were fully dressed and fully exposed, and they had the measles on them. These men were then brought in by motor-cars to Kaiwarra, and if they were very serious cases they were taken to Berhampore or the Victoria Hospital. The male chronic ward at this hospital had been cleared; this is a ward for old men that need nursing attention. These men had been removed outside, and when I visited the hospital they were getting ready to clean out the old ladies' ward.

79. *Mr. Ferguson.*] The old ladies' ward was cleaned out first?—Well, then the old men's ward was being cleaned out and made ready when I was there. They did not interest me as much as the soldiers.

80. *The Chairman.*] As to the medical attendance in the kiosk, do you consider that two Medical Officers were sufficient?—It was impossible to do the work with only two. It was specialists' throat-work, nasal irritations, and throat-swabbings. I told them they wanted from three to five more men.

81. Whom did you tell?—I told Dr. Ferguson and Dr. Harrison.

82. I want to know if you told Dr. Ferguson and Dr. Harrison of the observations you made as to the condition of the cases?—Yes, I told them.

83. The observations that you have given in your evidence here to-day?—Yes, sir.

84. You told them of what you had seen?—Yes; and that I would do everything I could to help them when I went into the city. I may tell you, too, that Dr. Harrison told me that at that time he had to visit and give medical attention at Mr. Izard's house, Mrs. Bethune's house, Kaiwarra and Berhampore Hospitals, and I believe he also attended the Victoria Hospital. That was all in his day's work. He had to skip in in his motor-car, fly round these five institutions, and visit between three and four hundred men, besides doing his local work at Trentham. There is one thing I omitted to say: that in the last American war in the Philippines and in Cuba, when the men had to be camped on marshy or wet ground they used hammocks in the tents, and had our authorities adopted that suggestion—I made the suggestion to the Minister of Defence in the House, and he made some remark about the men being given the moon. You can take the suggestion that these hammocks should have been used here; they could have been used, and the ladies could have made them quite easily. Then the men would have been able to put their clothes in them, and not on the wet ground. Then, on the Tuesday morning, 29th June, I visited the Victoria Hospital—the top ward—and it was filled with cases of measles and septic-pneumonia cases. Dr. Barclay showed me the charts of the individual cases. There were four serious cases in that ward that day that afterwards died, and he assured me that they were cases of septic pneumonia of both lungs—double septic pneumonia. And, of course, these men in a dying condition were in the same ward as the men who were convalescent from measles, which was not a right condition of affairs. That ward was undernursed. In civil life in a private hospital such pneumonia cases would have three nurses during the twenty-four hours; while up there one nurse seemed to be attending to three cases at the same time.

85. Who was in charge?—Dr. Barclay. He was afterwards made Colonel Barclay to make him fit in with the military etiquette of the circumstances. I believe at that time the ordinary honorary staff did not attend to these men.

86. *Dr. Martin.*] They were responsible all the same?—I believe they understood that they were not wanted to attend to these military patients.

87. *Mr. Ferguson.*] How do you know?—I was told by one of the visiting doctors.

88. *Mr. Gray.*] Perhaps Dr. Thacker will say who it was?—No, not unless it is necessary; I do not wish to. There was, I may say, one point of interest about these two cases, and that was the terrible asphyxiated condition of their bodies generally. It was almost an asphyxiation that would be comparable to that of the soldiers who were asphyxiated by the gas used by the Germans. They were quite purple and blue.

89. *The Chairman.*] These cases of septic pneumonia in the hospital?—Yes; the doctor was administering oxygen to them. I visited the Berhampore Hospital the same day. I understand that is the infectious-diseases hospital or quarantine hospital.

90. *Dr. Martin.*] Your charge against the Victoria Hospital is that the septic-pneumonia cases were treated in the same ward as the measles cases?—Yes.

91. And there was not sufficient nurses?—That is so.

92. There was no charge against the medical men?—No; they had not the assistance necessary.

93. *The Chairman.*] Do you say that the medical staff was responsible because the local staff could not interfere?—These civilian doctors—surgeons and physicians—go on to the hospital staff as honorary visiting men.

94. I quite understand: it was the honorary visiting staff?—The hospital staff was deficient too; there is no doubt about that. I reckon that that ward could have occupied the full attention of one doctor all the time. The Berhampore Hospital is situated in a gully; I believe it is called the Berhampore district. You would describe it as being semi-detached. The different cooking-houses and lavatories were detached from the other part. Approaching it from the main road you have to go down a steep gravel pathway, with wooden railings. Evidently the place had been very slippery and muddy, for they had sanded and gravelled the path, and there were recently erected steps and bridges over the gully. On the side I went down there had been erected marquees, in which, I was told, with the main building, they had 104 patients when they had a stress of patients.

95. One hundred and four was the maximum number we have had given to us?—The sister in charge, Sister Hanna, gave me these facts. Some of the convalescent boys—measles cases—who were sufficiently recovered were doing the fatigue-work—the orderly work. I had a thorough look over the place. The marquees were erected on a steep incline, and I was told by some of the men that when they were asleep they would all roll down to the doorway of the tent. When a man goes to sleep his muscles relax, and in the morning they used to find themselves at the door of the tent.

96. They had floors?—No. To steady themselves and prevent themselves from rolling down they terraced the floor of the marquees. Now, I investigated the sanitary arrangements—that is, the lavatories. Down in the gully there were two water-closets without any board tops on them. The water was working all right, but they had evidently been recently cleaned out, and only recently come into use. Prior to that the sanitary arrangements were conducted by the nightsoil-men, and they told me that they had to use petrol-tins to store it prior to the men taking it away. The cooking is done in the kitchen, which is at the back of this lavatory, and the water was brought up from the bottom of the gully.

97. *Mr. Ferguson.*] Where was the cooking done?—Down the steps in a house there.

98. In the washhouse?—They called it the cookhouse when I was there.

99. Can you pick it out on the plan?—[Witness indicated building on plan.]

100. The latrines are detached from that?—The water had all to be carried up from down below. Sister Hanna told me that that was one of the greatest inconveniences and troubles. There was no telephone, which was, to my mind, a dire necessity. I believe there was no telephone when Colonel Purdy took that place.

101. Was there any water laid on in the main building?—Not when I was there. I saw the men carrying it up. That was on the 29th June.

102. But there were sinks in the main building: the original plan shows the water-supply—½ in. to the main building?—The sister told me that that was a great inconvenience. I would like to say that my whole procedure in this matter has been from a humanitarian point of view.

103. *The Chairman.*] We were dealing with the question of the telephone at Berhampore?—Yes. There has been a gross lack of telephone communication throughout the whole business—to the tea-kiosk, and to the hospitals in general, and at the camp. There has been a great lack of method in replying to the inquiries of relatives and friends in regard to sick men at all the places. I have had innumerable telegrams asking me to get information as to their well-being, and I have had to do that through the Minister by getting him to wire. Then again, at the tea-kiosk last Saturday Dr. Crawford told me it was a terrible strain on his valuable time running to and fro to the telephone-box, because while there they would be unhitched and they would be there for twenty minutes or half an hour, and the same thing would happen at this end.

104. They want an orderly to attend to the telephone?—Yes. Direct telephone communication to the doctor could have been put through to the tea-kiosk where he is doing his work, and also into other parts. It only means a system of one telephone with a system of plugs. The doctor could put his plug in and get connected right through. To come back to Berhampore: the place was a cold, bleak, dreary place—no place to put sick men in at all, and no place to have a hospital of any kind. I might say that the measles men who were recovering were doing ordinary work. The semi-sick men were attending on those laid up, and that has been a general thing right throughout the whole business. On Saturday when I was at the camp a great many men who were on sick-leave complained that they were put to do nurse-orderly work and fatigue-work amongst the sick men. That is an absolutely wrong thing: those men should be put as far away from the sick men as possible. In the general ward at Berhampore were mostly men who were in bed. There were two sick men, Pollard and Fordham, whom I was directly interested in, especially Pollard. Fordham had septic pneumonia. They were both lying in stretcher beds right under the windows. There was no attempt made at warming the atmosphere, and a man with septic trouble in his chest or anything like that should have warm air. These cases, which are called septic pneumonia, are really bronchial pneumonia, and in all cases of bronchitis an up-to-date treatment is to have tents over the bed and have medicated steam blowing in all the time to warm the atmosphere. There was nothing of that sort done either there or at the Victoria Ward. I suppose they did not have the means.

105. *Mr. Ferguson.*] They would have the means at the Wellington Hospital?—No; they were overrun with sickness. This was an epidemic.

106. *Dr. Martin.*] You say there should have been tents over them?—Yes; canopies over the sick.

107. That is open to question?—That is a medical opinion—it is my opinion.

108. That is your opinion, but other men do not do it?—I think in this cold place it would have been a good addition in Berhampore. There is another thing, that all the lavatory excretions from the patients had to be carried down to the two water-closets that were not in working-order when I was there. Also, there were stalls in stables: I did not see them being used, but there were stable-stalls at Berhampore in which there had been four patients.

109. *Mr. Ferguson.*] Are you sure of that? The nurse we had before the Commission said there were none in the stables; they were in the men's room attached to the stable, but none in the stable or coach-house?—I did not see the men there, but that is the statement made to me by the same authority. I think that is all, sir, I have to say about Trentham.

110. *The Chairman.*] With regard to Fordham and Pollard, they were admitted on the Friday and you saw them on the Tuesday?—Yes. They were excessively ill when I saw them. I saw their charts. They both died, I think.

111. The temperature on the Tuesday had gone up to 105?—That was after I had been there; it was about 102¾ when I was there in the morning. I took it from the chart which the nurse showed me. I saw they were both going to die. Fordham was more ill than Pollard. I was there really to see Pollard at the behest of his brother. His brother had also asked Captain Harrison to have me in consultation, but I told the brother that I could not go there professionally unless I had the right from Dr. Harrison, who was the doctor in charge.

112. I think Dr. Herbert went?—Yes. I do not see why there was any reason I should not have gone, because these people had been patients of mine in Christchurch, and they had come to me as their medical man. After I saw Pollard I told his brother I did not think there was very much hope for him.

113. *Mr. Ferguson.*] You saw Nurse Hanna there?—Yes.

114. Did she strike you as a capable woman?—I think she was a very fine, capable woman, but I do not think she had the assistance she should have had. She told me that the sick convalescent men had done all they could for her.

115. *The Chairman.*] It was said there were only about eight or nine in that ward, with three nurses, who took it in turns to watch right through the twenty-four hours?—Yes, apparently. There were 104 patients one time.

116. They could not have attended properly to all those?—She was the only nurse I saw there; there were no others when I was there.

117. There were two others?—Then they must have been sleeping when I was there. In connection with Pollard's case, of course, you have followed it right through.

118. We have not found out how he got there?—He went from Kaiwarra.

119. We have not had it definitely when he left Kaiwarra. We have got his history from the time he went in there, but we do not know what his condition was by any chart when he left Kaiwarra?—I understood he was developing pneumonia when he left Kaiwarra.

120. *Dr. Martin.*] Under those circumstances he should have entered Wellington Hospital at once?—Yes.

121. We do not know the state he was in when he was sent from Kaiwarra?—Yes.

122. *The Chairman.*] It was stated by the nurse that Fordham's temperature had gone down to normal when he was sent to Berhampore, and then it went up?—I believe it was subnormal.

123. It was. At any rate, it went up then to 103, I think?—Of course, a subnormal temperature in a case like that is worse than an abnormally high temperature. We look upon such a case as being more critical than if above normal.

124. Pollard was admitted with a temperature, and that was all we can get?—I thought the brother had all the details. He had great difficulties to contend with. There were letters not delivered and not found, and some returned unanswered. Berhampore, I considered, was a very bad makeshift of a place; it was no place at all for the purpose it was used for. I would like to say that within almost 200 yards of the Berhampore Hospital there is a beautiful new school, and if the authorities had had any initiative at all they could have commandeered that school. They could have run up electric wires, put in radiators, and made it a comfortable place in a very few hours. Again, at Lower Hutt there is a beautiful school that could have been used for the measles cases. They could have put electric current in in no time, and made it a beautiful place, with proper cookers, in twenty-four hours. There has been no enterprise so far as initiative is concerned. They had tried to do with as little as they could, and I am going to try and demonstrate that. For example, with regard to the boots: when I was at the tea-kiosk on the Monday the men were putting on thoroughly wet boots. They told me they had only one pair of boots, and that the second pair had not been given to them. They were also putting on clothes that I would not call thoroughly dry. The boots had been soaked with water and were not properly dry. You could see they were not dry.

125. *Dr. Martin.*] Who were putting them on?—The convalescents who were getting up. The men did not complain; they were not peevish—they were making the best of it—and they understood everything was being done for them when it was not.

126. *Mr. Ferguson.*] Do you know what regiment the men belonged to who had only one pair of boots?—I think they were the Sixth and the "Trents." Of course, had I known that this evidence was going to be necessary there were innumerable cases I could have taken notes of where these men have come to me when I have been travelling backwards and forwards to Christchurch.

127. *The Chairman.*] There was no question of a Commission then?—No. Now, there are some cases I wish you to take a note of. There called at my house in Christchurch about the 26th or 27th June three men. My lady housekeeper took them into the hall, where she saw one was smothered with measles, and she got Dr. Inglis, of Christchurch, who ordered him straight into the hospital. The others were suspected, and they developed measles afterwards.

128. Where did those men come from?—They were released on sick-leave the day before they called at my house in Christchurch.

129. You do not know their names?—No, but they could be found out. One man went into Christchurch Hospital.

130. Do you know if they had been under treatment at Trentham?—I could not say that. There was another man named Frank Madden, of 30 Station Road, Lower Riccarton, Christchurch. He was the man whom I cited to the House. He went down and developed a huge purpuric rash. Dr. Ardagh, of Christchurch, could tell you all about him. He had lymphangitis, pneumonia, and a very septic mouth and throat; and I forgot to say this morning that those men who had septic throats also had lymphangitis. This man Madden disseminated the measles to his brothers and sisters. Those who had attended him could not diagnose it—the doctors in Christchurch diagnosed it as measles—they did not know what he had.

131. Was this man Madden taken to the Christchurch Hospital?—No; he was attended to in his own house. The other members of the family have developed measles since. The mother thought it was scarlatina at first. They were quarantined by the Government Health Officer.

132. *Mr. Ferguson.*] Has the Health Department got that information?—The Christchurch Health Department is bound to have it. Then there was another man who called at my house last week, and the housekeeper sent him to Dr. Marks, of Christchurch. I do not know the soldier's name. He was also put into the Christchurch Hospital. He was sent away from Trentham as a convalescent.

133. *Dr. Martin.*] Where did the last one come from?—From the Trentham Camp. They all said they came from Trentham, but I do not know whether from the hospital there or from the tea-kiosk. The men at Trentham were also put under the grandstand—the place that was designated a "dungeon" the other day in the House.

134. *Mr. Gray.*] Who designated it that?—I did. There were only two small windows in the place, and when I went out on the Saturday the whole place had been cleaned out. They had taken all the men out the day before, and the place was being thoroughly washed out by the orderlies, and they told me they had been disinfecting it with formalin candles and formalin sprays, which was, of course, the correct thing to do. I understand that the men have now been shifted upstairs to the top of the grandstand. Now, another thing is that several of the nurses at Trentham have taken measles and septic throats.

135. How many?—Well, I should say there would be about six or eight that I saw. I individually visited those when I was there last Saturday. Of course, the different style of

cases were separated from one another, but it took quite a lot of the nurses' attention that were not invalided to look after their sister nurses. The nurses were in bed absolutely ill: there is no doubt about that. I think that points to the virulence of the trouble. It is very seldom you get nurses attacked so that they cannot look after themselves. Now, sir, I want to make just a few remarks on the whole position. In regard to the food, the men have complained personally to me—the men who have reported sick and otherwise——

136. *The Chairman.*] Does this apply generally to the men who have been sick all the time?—Yes, to the invalids. They say the food that was given to the sick men was very indifferently cooked. I have questioned the men particularly on this subject. I questioned them on Saturday in and about the buildings on the racecourse, and they said they scarcely ever saw vegetables. They got stews, and they said that if about the fourth man discovers a bit of carrot or a bit of turnip in it it is about all he can see. That is not because of the scarcity of vegetables, because in a city there are tons of vegetables to be had. These men want green vegetables.

137. We had evidence that these men got vegetables three times a week?—The sick men and soldiers generally should have vegetables. It is all very well to talk about war-time, but these men were training to fight the biggest battle that has ever occurred in the world, and we should have the best food we can get to feed them.

138. There is nothing in the scale, but the evidence we had was that they got vegetables supplied from Taita?—Yes; it is a matter of necessity.

139. *Mr. Ferguson.*] They had special contrivances to cook them in?—I do not think there are enough cookers. The sick men told me that they got half-boiled sago and half-boiled rice. When I was out there three weeks ago I saw the sick men in and about the tea-kiosk eating big crude lumps of bread with a little bit of jam on it. I think they call that morning tea or lunch. That is no good for a sick man; he needs plenty of soups and hot milk.

140. You did not see any soups or milk foods?—No. I suggested that in my interview in the paper, and I believe there was a great improvement after that. These men want soups and jellies to get them back on to their proper food. Then again, there is almost a total absence of bathing facilities. There should have been at least five or six hundred shower-baths in the camp generally, if not more. If they could not have been warm they ought to have been tepid, so that the men could wash themselves. Now, I know of a man who came in from Trentham to get a bath. I took him in because I wanted to see the experiment. You could almost see the dirt on his face. I took him into a hotel and gave him a bath, and it surprised me to see the amount of dirt in the water after he had finished. If they could steal some hot water from the gympie, or poach some in a small bowl, it is all they could do. There was also an insufficiency of soap, there being practically no soap at all.

141. *Mr. Salmond.*] It was not supplied to them?—They did not have any soap, and they complained that there was a dearth of soap.

142. Do you know that soap was not supplied to them free?—I do not know anything about that.

143. What do you mean when you say there was an insufficiency of soap?—I mean the men could not obtain soap.

144. They could not buy it at the canteen when they wanted it?—That is what they told me. Now, there is a question of vital importance, and that is that we have sent to the front a large quantity of motor-ambulances, while there has not been one in connection with the work of the camp. When this disturbance began these sick men with measles were taken at late hours of the evening in open motor-cars to Kaiwarra and the different hospitals, and the Defence Department could very easily have secured two or three. They only had to ask for them and the people would have given them. We see motor-cars being given and raffled in connection with the patriotic funds, and it would have been an easy matter to have taken the bodies off the cars and fixed them up so that the men could be carried in comfort.

145. *Dr. Martin.*] The men were brought into town from Trentham in open taxis?—Yes, in open taxis. The men were waiting in the jockeys' quarters to be taken in.

146. Were any men in a serious condition brought in in that way?—I could not say that, because I did not see them. These men were smothered in measle-rash, and you know, doctor, that we do not allow a measle patient with a rash out of bed. These men were in their ordinary attire waiting to be transferred to town or Kaiwarra. I tried to get two or three of the men together to come and give evidence, but they said they could not do it. They said that the greatest luxury of their lives was to get off for two or three hours to Wellington—not to have a meal, but to get a bath and get cleaned.

147. *Mr. Ferguson.*] Did the officers tell you that?—The officers and non-commissioned officers.

148. And Medical Officers?—I had very little to do with the Medical Officers. Another thing, sir, which is a great omission is that the authorities should have had in the City of Wellington a consulting or waiting room where the doctors of Wellington would voluntarily have gone and put in an hour or two during the day, and where these soldiers could have called and got such things as tonics and have been prescribed for.

149. *The Chairman.*] To attend to any one on leave?—Yes. While I was in Mr. Fletcher's chemist shop the other morning four soldiers came in; they did not know what they wanted: some of them had healing sore throats, some husky voices, and they looked depressed and miserable. I spoke to one of them, and as they came along I could hear them saying that they knew I was a doctor. They all practically had the same thing—a good tonic to pick them up and put them back on their food. I am sure the Wellington doctors would do that; they only need to be asked. The whole thing, to my mind, comes to this: that there has been antagonism between the military section of the doctors in Wellington and the civil doctors; there has been a rupture

or non-recognition of the British Medical Association and military men. The so-called military men we have here are really, after all, civilian doctors.

150. *Mr. Ferguson.*] I suppose they belong to the British Medical Association?—I do not think so.

151. Do they leave the association as soon as they put on khaki?—Sometimes a doctor in a public position thinks he would have a freer hand if he did not belong to the association—not that he would be ostracized from the association, but that it is better for him to be independent. Our association, which it is known is a community of doctors for the welfare of themselves and for the welfare of the community, try to get everything up to date and to be up to date. We have an executive which is picked by the different branches of our association throughout New Zealand. That executive is stationed in Wellington, so that any big question is immediately brought under their attention, and they can be consulted at a moment's notice. They have not been consulted.

152. *The Chairman.*] Well, this matter of having a sort of depot that any soldier on leave might go into and consult a doctor, and perhaps be attended to without having to go to the camp or the hospital, might well, in your opinion, be established at once?—Certainly, sir.

153. It could be opened to-morrow morning at some chemist's shop without any delay?—Yes; and I will state this: that, if necessary, I will give one hour every morning myself—from 9 to 10 each morning—because I think these men just want a little direction. I know men can escape from the camp in an infectious condition. They may have measles, which may not be apparent one hour, but the next they would be caught at the depot and prevented from going throughout the country.

154. Of course, the Health authorities are here, and I dare say your suggestion has been heard by them?—Another matter I wish to refer to is the cases that have been sent away from Trentham. I have in my mind one man—I cannot give his exact name, but I think it is C. Turner. That man was passed by the doctors in Christchurch and went into camp here. The change of diet and change of surroundings made him slightly constipated, and he was dismissed as being medically unfit. He went back to Christchurch again and got into his normal health. He enlisted again and was passed by the doctors, and when he reported to the camp he was without ceremony thrown out. He returned to Christchurch, and I overhauled him myself. I found him physically fit. He told me why he had been dismissed—on account of chronic constipation, which was not a fact. I then wired to Camp Commandant Potter, and he wrote back to me to the effect that the man had been dismissed because of chronic constipation.

155. He has not been taken back?—No. He is quite a good man, a splendid rifle shot, a tip-top Volunteer or soldier, and simply for the want of a little medical attention he was thrown back twice. He feels very wronged about it, and I think rightly so

156. *Mr. Ferguson.*] Have you looked into the matter of a dispensary at the camp?—No, sir.

157. You have not gone into the chemist's side at all?—No, I have not. Of course, I have heard remarks from the men. The letter you have read will tell you how the men are treated. That man said he got a mixture of Epsom salts, cascara, and some liquorice-powder.

158. He must have been the man who had prescriptions given to him by three doctors?—He said that was what he got in his mixture, and he suggested to his mother that he supposed if a man had a broken leg he would get the same thing. As I said before, a great deal of trouble and anxiety has been unnecessarily caused by the friends and relations of the men not being able to get any direct information as to their condition, and I have a letter here written by a man, whose name I cannot give, which I will read, in which he gives the circumstances. The letter reads,—

"Christchurch, 12th July, 1915.

"The Officer in Charge, the Defence Department.

"DEAR SIR,—On the 14th June a Mr. Leslie Walton left Christchurch to join the Seventh Reinforcements at Trentham, and on the 28th June I sent him a wire to the effect that his mother was ill and sinking, and to come at once. The following day, having received no reply, I wired him 'urgent' that his mother had passed away. Shortly after a reply was received from him that he could not come as he had been ordered to the hospital and was writing. [That was the 29th June.] Up to the present I have been unable to get any further information regarding him [that is the 12th July], and under the circumstances I would ask you to investigate the matter and reply as soon as possible. I might mention that Mr. Walton is my cousin. The letter he spoke of in the wire has not yet been received, and I am entirely at a loss to understand the reason why no advice of his illness or the nature of it has been received by his parents.—Yours faithfully, ————."

159. Did you investigate it and get any satisfaction?—I got no satisfaction. I have not written to him personally.

160. Has the whereabouts of the boy been found?—I do not know that yet either.

161. We can only ask the Defence Department or the medical department?—He promised that he would wire me if he did not get satisfaction. That was last Monday afternoon, the 19th, when I got that communication. He said that if I did not hear from him within the next day or two it would be all right, so I presume it has been.

162. *Mr. Gray.*] You have not heard from him?—No; I have not heard from him in the meantime. Now, sir, I wish to make one concluding remark, and that is that I think the whole thing has been a matter of starvation by the authorities. They have cringed at a few pounds. I think from £5,000 to £10,000 would have made all the difference between a state of perfection almost and the huge muddle we have been through; £2,000 would have established a base hospital, the equipment for which was given by the ladies of Wellington, and the money for the hospital was subscribed by the doctors throughout New Zealand.

163. That was only for equipment?—No.

164. *The Chairman.*] According to the evidence we had, the money collected was not to be for the hospital, but for the equipment of the hospital?—No; it was to be at the disposal of the Defence Department to do what it liked with. I can tell you because Dr. Parkes, the last president of the association, told us in Christchurch in February that the Department had guaranteed to put up an up-to-date hospital at Trentham, and the money subscribed by the medical profession would be paid over and subsidized by the Department. All funds for such purposes are subsidized by the Government to the extent of 24s. to the pound, and Mrs. Luke found the total equipment for this hospital, but it was never used.

165. That is not the evidence we had before us here?—In that case you heard the wrong version.

166. We have got it from the president of the British Medical Association Council?—In any case, supposing it were not, it is only a question of £2,000 or £3,000, and it is a stipulated Army regulation that there shall be a hospital at every camp that will supply accommodation for at least twenty-five men per thousand. That is in ordinary circumstances.

167. *Mr. Ferguson.*] Where did you get that from?—Out of the military camp text-books. That is an Army regulation.

168. That would not have meant an epidemic?—No; an ordinary base hospital for ordinary sickness, colds, &c.—twenty-five per thousand.

169. Are you aware that the hospital now being built there is not on that scale?—That is the minimum; but instead of that the Defence authorities here assured the public there was sufficient accommodation in the Wellington Hospital to take all the cases that would be required to be taken. The result is that the hospital is surfeited with ordinary cases, and to prove they could not take them they had to take the old people out of the wards to get the ordinary accommodation. The whole of the discord has been caused by there not being any suitable base-hospital accommodation at this camp.

170. It is not a base hospital but a camp hospital?—But if you are going to have a proper system you are bound to have a base hospital.

171. Was the money subscribed for a base hospital or a camp hospital?—It was subscribed for the Defence Department to use at their will; but it is indispensable to have a base hospital, because you cannot train nurse orderlies or regimental stretcher-bearers unless you have a base hospital. That has been amply exemplified at Gallipoli in the first attack at Gaba Tepe, where the officers and men were shot down because the men got out of the trenches to rescue the officers. If there had been proper orderlies or stretcher-bearers they would have put braziers on their arms and taken the men into shelter until the Ambulance men came and took them to the hospital.

172. Then you say the first Ambulance men were not properly trained?—No; they could not have been properly trained.

173. They might be properly trained without a hospital: you imply they were not properly trained?—No; they could not be trained without having facilities. You cannot make a man a carpenter without tools. Another thing is this: that there are in New Zealand at least two thousand men who are under stature, and as good men as you can find in the country, who are anxious to serve. If the Defence authorities did the proper thing they would take the bantams and make nurse orderlies of them and stretcher-bearers. There are dozens of them who are keen to get away, and they would be just as good stretcher-bearers as those who are bigger.

174. Have you seen the hospital being built at Trentham?—I was not allowed to see it. I was held up. I thought as a member of Parliament I would be allowed to go anywhere, and I would not ask for a pass.

175. *The Chairman.*] We have taken the trouble to get one wherever we have gone?—I would not subject myself to the indignity of asking for one.

176. The gatekeeper does not know every one who goes there?—But I had my railway parliamentary pass. Well, sir, I think I have told you all I wish to.

177. *Mr. Gray.*] You first seem to have heard of the complaints of sickness as far back as October or November: is that so?—Yes.

178. Did you get some communication from the camp authorities?—No.

179. Have you at any time, except in the way described, communicated with the camp authorities?—No.

180. And not made any suggestions to the Director of Medical Services?—No.

181. Or to the Minister of Defence?—Yes.

182. Except in Parliament?—Yes, and out of Parliament.

183. What communications have you addressed to the Minister of Defence?—I have not addressed any direct communications; I have not written direct

184. I asked you what communications you have addressed to the Minister of Defence?—None.

185. Or spoken to him?—No; I do not think I have spoken to him in my life except in the House.

186. Have you ever addressed any communications to the medical authorities in connection with the camp?—No; I was frightened to.

187. You have had experience of Territorial camps?—Not active experience.

188. Only theoretical?—I have always visited them as a spectator.

189. As a citizen?—No, as a highly qualified expert.

190. You have not been there in any official capacity?—Yes, as Surgeon-Captain on the Reserve.

191. Have you attended in an official capacity?—No, I have not

192. You say there were sore throats as far back as October and November in Christchurch, and you told the Commissioners what the authorities should have done in the way of treating the

throats in regard to bacteriological examination and giving serum. Did you in those cases do it?—No; I do so in my private practice.

193. You have told the Commission that the transit of convalescents from Trentham to Kaiwarra was by open motor-cars?—Yes.

194. Did you see open motor-cars employed in carrying those men?—I was told the cars were there for them, and I was told the men came in in open motor-cars.

195. You were told that?—Yes, by the men who came to Christchurch.

196. You have been told probably many things, and most of your evidence is based on what has been told to you?—No; the bulk of my evidence is on my own sight.

197. Then you did not see any motor-cars used for carrying the men?—I saw two open motor-cars that I was told were going to carry the men in.

198. But you did not see the men in them?—No.

199. In respect to Berhampore, you think it is not a suitable site for a hospital: is that so?—What sort of hospital do you mean?

200. The hospital it was used for?—What sort of hospital was it used for?

201. I do not know?—I should have thought you ought to know by now.

202. You said you thought it was not suitable for a hospital?—Yes, for any kind of hospital.

203. And you said that within two or three hundred yards there is a beautiful new school?—Yes, so there is.

204. Have you had any experience of commandeering buildings in a hurry for a sudden emergency for hospital purposes?—I could not say at a moment's notice. I do not remember just now. I would not have to do that, because I generally look a few hours ahead of me.

205. But those things take time, do they not?—No. Dr. Martin told us of a case where he went, I think, into the Town of Bethune.

206. He is not a witness?—I want to prove that things can be done in a few hours.

207. *The Chairman.*] The school authorities might object to the school being occupied by measles cases?—That does not matter. It is a question of life and death, even if they had to burn the school down afterwards.

208. *Mr. Gray.*] Are you aware that the building was used for a fever hospital before?—I have heard so.

209. With excellent results?—I did not hear the results.

210. You did not hear the results were fatal?—I do not go in for fatal results myself; that is not my cure.

211. Did you hear that the results of using the Berhampore Hospital were satisfactory?—I have not inquired into its past history. You told me it was used for a hospital.

212. You spoke of some men who called to see you on the 26th and 27th June and saw your housekeeper downstairs, and she diagnosed one case apparently as measles?—She suspected it, and she was quite correct, because it was corroborated by the doctor.

213. Did you see any of those men yourself?—No; but Dr. Inglis, of Christchurch, sent them to the hospital.

214. You spoke of the case of Madden, of Lower Riccarton?—Yes.

215. Who you believed was disseminating measles amongst his brothers and sisters. Have you personal knowledge of the fact?—Yes; I consulted Dr. Ardagh on the subject.

216. Did you see Madden or any of his family?—Yes; I have seen one of his family.

217. Suffering from measles?—No, because he is in Wellington.

218. The Christchurch doctors, you say, did not know what was the matter with the man?—They did not know at first.

219. How long had he been in Christchurch before he developed measles?—What they diagnosed as measles finally.

220. How long had he been in Christchurch before his case was diagnosed as measles?—He had it almost immediately he got there; he went home sick.

221. That is what you heard?—That is what I was told by Dr. Ardagh.

222. Was he home on sick-leave?—Yes.

223. You do not know what he had been treated for at Trentham?—I could not say.

224. You say that some six or eight nurses at Trentham had taken measles?—No, I did not. Your hearing must be very bad. No, I said——

225. *The Chairman.*] You said six or eight with septic throats and two or three with measles?—Yes, measles and septic throats together.

226. *Mr. Gray.*] Do you now say that six or eight nurses did not take measles?—No; you are picking that out for yourself. There was one case isolated. The measles cases were different from the others.

227. *The Chairman.*] You said that several nurses at Trentham had taken measles and septic throats, and they were in bed?—Yes; there were two cases of measles, I think.

228. *Mr. Gray.*] You had complaints made by men about the cooking of the food and the absence of vegetables?—Yes.

229. Have you made any communications upon that subject to the camp authorities?—No; I think it is their own duty to look after that.

230. The same thing applies both to the absence of soap and the absence of ambulance facilities?—I mentioned that to Dr. Harrison and Dr. Ferguson the first day—about the lack of warm water to wash with.

231. You say they should have five or six hundred shower-baths?—I say they are wanted throughout the whole camp.

232. Well, with the exception of the insufficiency of water for washing, you have not made any complaints to the camp authorities about those other matters?—It is not my duty to do so.

233. You have not made any complaints to the camp authorities about the insufficiency of supplies?—I spoke to Dr. Morice about the insufficiency of supplies.

234. When was that?—The day I was held up on the road. I think that was the Thursday, about the 30th June—soon after Dr. Morice went up there.

235. That was the first medical man or person connected with the camp to whom you made a suggestion?—I could not get into the camp, so could not make suggestions. The first time I went out I got complaints from sick men. The next time I was prohibited from going into the camp.

236. You say you had nothing to do with the Medical Officers?—The only Medical Officers I have spoken to are Dr. Harrison, Dr. Ferguson, Dr. Crawford, and Dr. Morice.

237. You said you had not anything to do with the Medical Officers?—I had very little conversation with them. I saw Dr. Valintine going through the camp on two occasions, I think —riding through—and I saluted him on each occasion. The only other time I met him was in the House the other day going through the "tube." He was going at such a high speed he did not recognize me.

238. You have not had any serious discussion with the medical men connected with the camp or with the Defence authorities in regard to the medical requirements at the camp?—The four doctors are the only ones I have spoken to.

239. In a casual way?—Not in a casual way; I gave my advice in an expert way to Drs. Harrison, Ferguson, Morice, and Crawford.

240. You suggest there should have been a place in Wellington where doctors could see the men who come to town from time to time?—Yes, certainly.

241. Are you aware whether any man in Wellington, through the British Medical Association or otherwise, has made any such offer?—I could not say.

242. Do you know that some men have been in the habit of attending the drill-hall in Wellington to see medical men?—I did not know that.

243. With respect to the case of Leslie Walton, you had a letter from some gentleman dated the 12th July?—I had no letter from him: it is his own letter, lent to me.

244. You had some communication with him?—No, I had none.

245. In giving you the letter I suppose he said something—you had it handed to you?—No, I asked him for the loan of it.

246. You received from some gentleman a copy of a letter dated the 12th July which he wrote to the Defence Department in Wellington. Did you make any investigation into the complaint?—I had no need to.

247. Have you made any investigation into the complaint?—Yes.

248. With what result?—I got no result.

249. What investigation did you make?—I cannot tell you that—that is private.

250. You come here making a complaint about want of communication?—That is the complaint there.

251. I asked you if you made any investigation, and you will not say if you complained to the Defence Department directly?—Yes; but I could not give the name.

252. Have you made any investigation into this man's complaint?—No.

253. You suggest the authorities have been too economical?—Not too economical; they have been parsimonious, frugal, mean, penurious.

254. Two thousand pounds would establish a base hospital?—No; £2,000 would put up the hospital suggested in the first instance. According to Mr. Allen it would cost £3,800 to put up a base hospital.

255. What do you suggest would establish a base hospital?—£5,000 to £10,000.

256. Do you suggest no figure for the establishment of a base hospital?—No, I could not.

257. When did you first suspect cerebro-spinal meningitis at the camp?—The first day I saw that patient, on the Monday, 28th June.

258. That was from your observation?—Yes, from the case I saw brought in there.

259. On the 28th June you first suspected cerebro-spinal meningitis in the camp?—Yes; in fact, I named it, but I did not name it publicly because I did not think it was my duty to do so. I named it to the gentleman who was with me.

260. Was he a medical man?—No. I am not sure I did not say something about it to Dr. Harrison.

261. Well, were you sure of it or only suspected it?—Now, do you think that is a fair question to ask me?

262. Yes?—Well, I do not think so. You cannot be certain of a thing.

263. Did you suspect it or were you sure of it?—I told you I suspected it.

264. Your suspicion, I suppose, was confirmed at a later date?—It has been absolutely confirmed.

265. Did it not occur to you that you ought to have communicated your suspicion to the authorities?—I did communicate it to Dr. Harrison the same day on the spot. I did not say "cerebro-spinal meningitis," but I said "some infective nervous condition." I did not dictate it to him. I said, "Doctor, this looks like some acute nervous condition." I would not be sure whether that was to Dr. Harrison or Dr. Ferguson. They were standing beside me when I made the suggestions, and I said it looked a question of diagnosis between typhoid fever, pneumonia, and some acute nervous condition.

266. Would that be sufficient to suggest to a medical man that cerebro-spinal meningitis was possible?—No. The only way that you suspect cerebro-spinal meningitis is through the throat.

267. You did suspect it then?—I suspected it—you must always suspect it.

268. Should not you have passed your suspicion on to the medical men so that it could have been investigated?—It was being investigated. I think Dr. Valintine had summoned a specialist.

269. Was Dr. Champtaloup in Wellington?—He had been summoned from Dunedin.

270. You have kept to yourself until you gave it to the Press, or spoke in the House, or came here your conclusions upon various matters, and did not think it your duty to communicate them to the authorities?—I would have communicated directly to the House. I asked to be allowed to make a statement.

271. First say whether you did or did not communicate your conclusions to the authorities?—To the Minister of Defence, yes.

272. In the House?—Yes.

273. Let us leave out all the interviews with the Press, the statements in the House, and the evidence here: you have not communicated the result of your investigations to the authorities?—No; it depends on what you call the authorities.

Dr. FRANCIS WALLACE MACKENZIE sworn and examined. (No. 49.)

1. *Mr. Skerrett.*] You are a medical practitioner?—Yes.

2. Have you a military title?—Yes—Major.

3. What are your civil medical qualifications?—B.M., M.S., University of Edinburgh.

4. How long have you been in practice in Wellington?—Twenty-eight years.

5. Will you state your experience either on service or in connection with encampments in New Zealand or elsewhere?—I joined the Volunteer Force as Surgeon-Captain in 1890, and I attended every camp that was held in the Wellington Provincial District from that time until the Boer War took place.

6. And what is your experience elsewhere?—Then I went to Trentham.

7. How long were you in camp at Trentham?—Well, I used to be there sometimes with the contingents, and I was altogether in camp at Trentham for about three or four months.

8. What years were you there?—1901 and 1902.

9. *The Chairman.*] That was the time when the South African contingents were being sent away?—Yes.

10. *Mr. Skerrett.*] Were you in an official or military capacity in that contingent?—Captain of the Bearer Corps.

11. Will you tell me the maximum number of men in the camp?—There were not many. I do not think we ever had more than five or six hundred men.

12. And the situation of the encampment was approximately the same situation as the present?—Yes.

13. Will you please tell me your experience elsewhere than in New Zealand?—I went to South Africa during the Boer War, and I was stationed at Newcastle, in Natal, after Newcastle was taken by the British. We had about eleven thousand troops there.

14. Were they under canvas?—Yes, all of them.

15. In what medical capacity were you engaged in connection with the camp?—When I went there first of all I was Surgeon-Major of one of the New Zealand contingents camped there. Then afterwards I was appointed Assistant to the P.M.O., who was an old man, and my duties were to go round the different camps and see that everything was carried out efficiently.

16. Would you describe the Newcastle Camp as a standing camp?—Yes, in the ordinary sense of the word it was a standing camp.

17. Its occupation was intended to be more or less of a permanent nature?—Yes.

18. One spread over months?—Yes.

19. Now, had you in that encampment to deal with any infectious disease or any great amount of sickness?—We had to deal with infectious diseases.

20. Describe the general condition that you had to cope with?—We had an outbreak of measles, scarlet fever, and a little enteric, but not much. We soon stopped it.

21. Was the outbreak of measles or scarlet fever relatively large?—The measles came on badly. We had the first time about a dozen cases reported, and two days afterwards perhaps twenty more came in, and then I got to work and dealt with it. As soon as ever I saw the first cases appear I began to prepare for isolation. I formed an isolation camp, and got tents for isolation hospitals. The first cases were sent in to the Newcastle Hospital, about four or five miles away, and the patients had to go in mule ambulance-wagons. They were the worst cases we had. The rest of the cases we treated ourselves in tents with floors. We made stretchers for them out of wire netting and timber, and mattresses out of straw, and they did well in the camp. We had scarlet fever in the camp too, and we treated the patients in the same way.

22. You know there has been a considerable epidemic of measles and other complaints at the Trentham Camp, and I want you to state to what you generally attribute the cause of the continuation of that outbreak?—Well, I believe the cause of the outbreak was some case of measles introduced from outside, or else infection got by a soldier from outside. It must have been introduced into the camp first of all. The reason it went on, I believe, was because sufficient steps were not taken to check its progress. By the reports you will notice that in the earlier stages there were few cases—perhaps ten or a dozen—and the next month twenty cases, and so on, and this epidemic was creeping on steadily. It was thought at the time in the camp by the Medical Officers that those cases were being introduced new from outside, but I do not think that was at all likely. These men had been examined shortly before by medical men and certified as fit, and it was not likely they would pick up measles that would all come from outside. I believe there were fresh infections going on in the camp. A great deal has been said here about

the British Army books. Now, I saw a little about the British Army when in Africa, and I am perfectly convinced that their rules and regulations, and especially their method of carrying them out, want altering absolutely. I do not believe the officers here are any more to blame than the officers are to blame for what goes on in England. There is no preparation beforehand for what is almost sure to happen in stationary camps. The men are crowded together, as many as 640 and 650 to the acre, and we know that crowding men in large numbers in a small space in itself predisposes to illness, and then no provision is made for dealing with those epidemics on the spot. My experience has been that transporting measles cases over a distance is very unfavourable to the case. The only cases of pneumonia that we had in Newcastle following measles occurred in the base hospital, where they had been sent some miles.

23. Do you think that provision should have been made at the outset of the establishment of the Trentham Camp for hospital accommodation in case of sickness?—Some hospital accommodation, not a great deal.

24. *The Chairman.*] That is, not for an epidemic?—No.

25. But for ordinary camp maladies?—Yes, what they used to call a "field hospital" in the old days. They call it a "base hospital" now in France. You can call it what you like, the name does not matter.

26. *Mr. Skerrett.*] Are you prepared to express an opinion as to the measure of hospital accommodation which should have been provided in this standing camp without any reference to the outbreak of an epidemic—any ratio?—The number of beds provided per man in a hospital in a standing camp would depend upon the distance you would be removed from the principal base hospital.

27. You suggest, I understand, that the ratio to population of a standing camp would depend upon local conditions?—Yes.

28. And you would not like to say definitely what it ought to be?—No.

29. You have already said, and we know, that from November to March there was an increasing quantity of sickness in the camp, increasing month by month, and including infectious diseases and measles: what do you think should have been done, and by whom, in that connection?—Well, I believe it is the duty of the Quartermaster-General to attend to those things.

30. What should he do?—He should have instructed the Principal Medical Officer to take steps to control the epidemic.

31. In what manner to control the epidemic?—By quarantine regulations and isolation of the cases.

32. The great complaint made about the medical side at Trentham is that they saw the epidemic coming on and they made no adequate provision for the proper treatment of the cases?—I do not think there was really anybody to do the work at Trentham. As far as I can find out one gentleman was appointed at a salary of £150 a year, and then he had to earn his own living in other ways.

33. *The Chairman.*] You are speaking of the Administrative Officer?—Yes. He did not have enough to live on, and had to do something else. He had to be down here examining soldiers, and I do not think he could be called upon to stop this epidemic. I do not know whether the Quartermaster-General called upon him to do so or not. It seems to me it is not the fault of any particular individual, but the fault of the way that these things are always managed, that we began without any organization. We put men into positions who are not capable of filling them efficiently, and we did not pay them enough money to enable them to live. The saving of a few pounds has been effected at the risk of the men.

34. *Mr. Skerrett.*] You are speaking in a general way, and referring entirely to the general military operations?—Yes; I do not want to cast any reflection on anybody in connection with this camp, because I do not think anybody is responsible: it is the result of a general muddle. You must look at the characteristics of the people you are dealing with in order to find out how the things happened.

35. Have you got anything to say about the desirability during the time Trentham was occupied by an encampment of shifting the camp-site by degrees and from time to time?—Well, opinions differ to some extent, but the Japanese, who are the greatest medical authorities in military matters, shift camps often. They shift the site of the tents often. They will take a tent up and move it to the next site opposite or beside, and the next one a tent-distance away to use a fresh piece of ground, and then move it back again after a fortnight or three weeks.

36. What is your opinion about that?—Well, if the weather is suitable and dry it is a good plan to do it—after the weather has been dry for two or three days.

37. But in bad weather?—I would take the tent up, burn the straw and sweep the site, and put the tent back again, with fresh straw. By that means you pretty well kill all the little chaps in the straw that get into the men's clothes. That could be done always when fresh drafts came in. Either the tents should be shifted and fresh straw put in, or the tent lifted and the site cleaned and fresh straw put in.

38. That relates to the shifting of the individual tents to a new place: do you think the further precaution is necessary—namely, of shifting all sections of the tents to entirely new situations from time to time?—Yes, that ought always to be done.

39. Tell the Commission what you think about that?—I do not think a body of men should occupy one set camp—I mean one site on the same spot or a number of acres, say, an area for an indefinite time.

40. What do you mean by "indefinite time"?—I think at least once in every three months it would be a good plan to shift camp. We used to shift once in every six weeks in South Africa.

41. *The Chairman.*] Was that because the Boers drove you off?—No; we were in a stationary camp. We shifted camp for various reasons; sometimes we had horses, and we used to burn the

horse-dung, and the smoke used to blow all over the tents and drive us out. Another reason was because we got an enormous quantity of lice, which lived in the ground, and seemed to come up through the straw. They nearly ate us up, and we had to shift. Another reason why we went away was because of the epidemic of measles which broke out.

42. It was not in pursuance of any fixed plan, but because of the circumstances arising?—Yes.

43. *Mr. Skerrett.*] Do you say that to your knowledge it is the regular practice of military hygiene that sections of standing camps should be shifted?—Yes.

44. From one spot to another about every three months?—It is a practice. It was in my time, and it is the great Japanese practice now.

45. I think you heard the general character of the opinions as to sick-parades at Trentham?—Yes.

46. Have you any observation to make upon that system?—Yes. I came to the conclusion when I was wiping out the troubles in Newcastle that sick-parades for getting out the people suffering from infectious diseases were a mistake. What we did there was to make the men parade in the tents. An orderly went round and told them the doctor was coming, and each man passed the flap of the tent and exhibited himself, and the doctor saw his throat and chest, and felt his pulse and took the temperature if necessary, at the flap of the tent. In that way you not only find out the man who is suffering from the disease, but at the same time you are enabled to catch all his companions in the tent and put them in isolation camps. By parading the men you parade all the other seven men who have been mixed up with the man who got the measles or whatever it is, and they are mixed up with their companions for a considerable time before they are isolated, and also during parade.

47. *The Chairman.*] How would that work: if you went round visiting every tent with a view to isolating the companions of every man found ill you would have to keep every man in the tent till the doctor came?—Every man was examined at 8 o'clock in his tent.

48. And no man allowed out of the tent?—Yes; but they had to be back in the tent.

49. *Mr. Skerrett.*] How many medical men did you employ for this medical inspection?—Four for 1,000 men—one for every 250 men. They were nearly all contingents, and every contingent of 500 men had two Medical Officers.

50. Have you anything to say as to the sufficiency of medical men at the Trentham Camp?—I do not know anything about it.

51. Is there any other observation you desire to make?—Yes. I believe it is absolutely a mistake to allow soldiers to go into hotels and drink. If it is good for the men to have liquor it ought to be supplied to them by the State.

The Chairman: That is rather outside our commission.

52. *Mr. Skerrett.*] Is there any matter relevant to the camp or the treatment of the soldiers in the camp there that you desire to refer to?—I think I have told you everything. I mentioned to you the question of the transport of measles cases, and I think that is a mistake.

53. It was very inadvisable and risky to move measles cases?—Yes, to move them far from the place where they occur.

54. *Mr. Gray.*] How long were you in South Africa?—I was there twice—altogether about eleven months. I was about six months in Newcastle.

55. During your residence at Newcastle I think you shifted camp three times?—I did not shift it. The camp where the measles broke out was shifted.

56. Three times?—I was not in camp all the time at Newcastle. I was in the Newcastle General Hospital for a while.

57. At the time you were in camp I am speaking of?—The time I was in camp it was shifted three times.

58. And each of those times it was for a special reason?—Yes, it was.

59. The burning of horse-dung, the outbreak of scarlet fever, and lice?—Yes.

60. It was not for any other reason as far as you know that the camp was shifted?—Those are the reasons. As a rule it was shifted every three months, but they were shifted more than that on account of those conditions.

61. *The Chairman.*] Have you any books with you on the subject?—I have not got any here. I have some at my house.

62. Can you show me any passage in a book which says that old camps should be shifted every three months?—That was the rule in Newcastle. You depend upon the locality you are in as to what you do. Some camps are perfectly healthy for years and years. You can sleep on the ground in one site sometimes and be quite healthy. When you sleep on the ground it becomes infected if you do not clean it, but if you are above ground you do not need to clean it.

63. *Mr. Gray.*] In your opinion some hospital accommodation should have been provided at the outset?—I have no doubt there was.

64. You do not suggest there was not at Trentham?—I expect there was hospital accommodation provided. There should have been. I do not say they should provide enormous accommodation for an epidemic when there was not one.

65. Supposing there was an epidemic of measles and the camp hospital would not accommodate more than a few cases, what would you do?—I would put up more hospitals, put down floors, and hospital tents on top. It is perfectly simple.

66. You do not think the new cases in this camp came from the outside?—Not many of them.

67. You have not had to cope with any large outbreak of measles or other complaints in any of the camps you have been in?—I did have to cope with a considerable outbreak of measles at Newcastle.

68. I thought you said there were not many—first twelve and then twenty cases?—We had sixty-seven cases altogether.

69. But not like they had at Trentham?—They began the same as at Trentham, but we stopped them before they got so bad.

70. You have not had to improvise a hospital to meet a sudden emergency?—No; I would not have to improvise, because I would organize before having to improvise.

JAMES HARTLEY sworn and examined. (No. 50.)

1. *Mr. Salmond.*] What detachment do you belong to?—To the 1st Battalion.

2. And you are now at Rangiotu?—Yes.

3. When you were at Trentham were you living in huts?—Yes.

4. From the time you first went there?—No. I was first in a tent and then in a hut.

5. Do you remember the number of the hut you were in?—I think No. 38, but I am not certain.

6. Do you know a man named Private Solomon?—Yes.

7. Were you in the same hut as he was?—Yes.

8. Can you say how many men used to sleep in that hut?—I think seventy-two at first.

9. *The Chairman.*] That would be in both sides of the partition?—No, in the one compartment.

10. That was from the time you began to occupy it?—Yes.

11. *Mr. Salmond.*] And how many afterwards?—They dwindled down to about fifty.

12. How long did the number take to reduce?—From the time the main body first came into camp—about six weeks.

13. How long do you suppose there would be seventy men in the hut?—About the first fortnight, perhaps.

14. Was that too many?—Oh, yes.

15. Were you crowded and uncomfortable?—Yes.

16. Did you see men sleeping under the tables?—Yes.

17. It was gradually reduced to fifty: was that because of any complaint?—No; it was on account of the men being sick and going on leave.

18. What was the cause of that crowding?—There was not sufficient accommodation for us.

19. Were the huts finished?—One hut was finished, but it was occupied by the workmen of the Public Works Department.

20. Do you remember how many huts were being made at the time?—There were two undergoing construction from the top end, where we were.

21. *Mr. Ferguson.*] How many huts were finished when you were there?—I could not tell you.

22. They were all occupied, were they?—Yes, as soon as they were finished they were occupied.

23. *Mr. Salmond.*] Which did you prefer, huts or tents?—Tents, because we seemed to enjoy better health in the tents.

24. Were you not well?—No.

25. Were you quite well in the tents?—Yes; I have been greatly improving since I have been in a tent after leaving Trentham.

26. Were you well when in the tents at Trentham?—For the first fortnight, and then I had a bad cold.

27. How long were you in tents altogether?—About a month.

28. Did you feel the huts were cold and draughty?—Yes, they were cold and draughty.

29. Did the men generally complain about that?—Yes, they did complain.

30. Were they altered in any way?—No.

31. Was there room in the hut you were in for all the men to have meals on the table?—No.

32. What happened?—They ate their food off the floor.

33. Do you remember how the bread was brought to the huts?—In blankets, I believe.

34. Do you remember ever seeing bread brought from the store to the hut?—I think I do remember it being brought in a blanket, and I made a remark about it—that it was not very nice to bring it in the blankets the men had been sleeping on. I am not certain.

35. *Mr. Ferguson.*] Have you seen it brought in the ground-sheets?—Yes.

36. *Mr. Salmond.*] Did you see that being done?—Yes.

37. Was it done regularly?—I could not tell you. I very seldom saw the bread brought.

38. Whose business was it to bring the bread?—The quartermaster-sergeant and a fatigue party.

39. Would two men go for the bread?—More than that: one for each twelve men.

40. And did they fasten the bread up in the sheet or blanket and make a bag of it?—No, not to my knowledge.

41. How were they carrying it?—Just slung in the ground-sheet; they would get hold of the corners together.

42. Can you describe how the men got tea: had they teapots or anything like that?—They had camp-kettles.

43. How did each man who wanted a cup of tea get it?—He dipped his pannikin into the tea-kettle.

44. Had you any complaint to make of the quantity or quality of the food you got?—Very rarely. We made complaints of its not being properly cooked on several occasions.

45. You had very rarely to make complaints?—Yes.

46. Do you consider that your clothes and boots were proper and sufficient?—No; they were not sufficient.

47. What was the matter?—We could do with another set of denims, so that one could be washed.

48. You had one suit of denims?—Yes.

49. And one uniform?—Yes.

50. Did you get them immediately you went to camp?—We got the denims the first day, and the khaki about a fortnight afterwards.

51. Did you get two pairs of boots as soon as you got to camp?—No. I got the second pair a few days before I left Trentham.

52. How long had you been in camp by that time?—About two months.

53. Have you any remarks to make about the management of the camp or any complaint or suggestion to make for its improvement?—No.

54. You are satisfied?—Yes.

55. Did you serve in the Imperial Army?—Yes, for twelve years. I left just after the Boer War.

56. *The Chairman.*] And have you slept in huts before?—Yes, in the musketry camps in Ireland.

57. What kind of huts were they?—Wooden huts and concrete huts.

58. *Mr. Ferguson.*] Have you ever lived in a galvanized-iron hut?—Not before this.

59. *The Chairman.*] How many men were in the wooden and concrete huts?—Just a section of twenty men.

60. *Mr. Ferguson.*] Do you think twenty men enough to be put in a hut?—Of course, they are a different size. The ones at Home hold twenty men.

61. From the point of view of discipline that is enough, is it?—Yes.

62. What is your objection to these galvanized-iron huts?—I had no objection.

63. But you said they were cold?—Yes; but a man must expect to be cold when on service.

64. Are they colder than the timber huts?—Yes. The concrete huts are also warmer.

65. What about ventilation in the huts at Trentham: is there enough?—Plenty of ventilation.

66. Too much ventilation?—I thought so.

67. How were the huts in Ireland ventilated?—Just in the ordinary way, with windows.

68. And in the roof?—No.

69. What part of Ireland were you in?—At Curragh.

70. Did you have fireplaces in the huts?—No, a stove in the centre.

71. Were you in huts in South Africa?—No.

72. You prefer living in tents to huts?—Yes.

73. Were they more comfortable?—Yes, not so draughty, and you felt warmer.

74. *Mr. Gray.*] Except for the cold you got during the first fortnight, did you enjoy good health in the camp?—Yes.

75. *Mr. Ferguson.*] A large number of men went from hut No. 38 ill: did you find any unpleasant smell in the hut in any way?—Not in the hut, but coming through the windows.

76. Was that reported to anybody?—The first time I had experience of it was the morning I was leaving—the night previous to leaving.

77. That would be the only occasion?—Yes, to my knowledge. An unpleasant smell came into the hut through the window, and I went outside to find out what it was.

78. *Mr. Salmond.*] Was it near enough to the latrines to account for it?—No. The night latrine-tins were just outside. They had been removed, but the ground was smelling from that cause.

79. *Mr. Ferguson.*] Were the huts at Curragh farther apart that those at Trentham?—Yes, much.

80. And perhaps a little higher?—Yes. Those at Trentham were rather low. In fact, as I stood up I got the draught on my neck from the eaves.

81. *Mr. Gray.*] How long were you in the camp?—Two months—from the 28th April till the break up at the end of June.

82. Did you only notice the unpleasant smell on the one occasion?—Yes, the night before we left.

83. You had been in the hut how long?—About a month.

84. I suppose you find in all camps there are some complaints?—Oh, yes; there are complaints everywhere.

85. Have you any complaint to make about this camp?—No; I have no complaint.

86. *Mr. Ferguson.*] You say the men complained?—They have complained about colds, and that they did not feel well.

87. They thought that was because of the hut?—No; they did not say so to me.

88. *Mr. Gray.*] A good many of the men who were in tents got colds?—Yes; but I think the huts would give the men colds quicker than the tents.

89. You did not complain of the cold in the hut?—No, I did not; I felt quite all right.

90. I suppose you expect to get a certain amount of hardship on active service?—That is so; yes.

91. *Mr. Salmond.*] How does the food and general treatment of this camp compare with that in the British Army?—It is much better here as regards food.

CHARLES GAIR sworn and examined. (No. 51.)

1. *The Chairman.*] What are you?—Sergeant in the D Company, 1st Battalion.

2. What hut did you occupy at Trentham?—I think No. 38, the same as Solomon.

3. What were the conditions of the hut as regards comfort, warmth, room for turning about, and accommodation for eating?—The huts were very crowded for sleeping and eating.

4. Can you say how many men were in the hut when you speak of its being very crowded?—There were over seventy at one time. As the sick went out the number gradually went down, and also on account of the men going on sick-leave. Perhaps two or three were transferred, but not many.

5. You occupied it up to the time you left?—Yes.

6. How many would have been in from the time you left?—I could not say exactly.

7. Was it a warm place?—I had just come back from Samoa, and I felt it very cold.

8. Did you take any means to stop the air coming through into the hut?—For my part I plugged up between the corrugated iron and the wooden portion to stop the draught at my head.

9. That was done afterwards?—I do not remember it being done. It may have been, but it was not at the time I went in. I plugged it myself.

10. Had you had any experience of the tents in Trentham before?—I think about nine days.

11. How did you get on in the tents?—I went into the camp with a cold when I came back from Samoa, and I got rid of it in a tent.

12. Did you get a cold again afterwards?—I had a cold again in the huts, and I was not able to use my voice for two or three days, and it affected my throat. My voice got all right about a week before we left.

13. Had you to do with the bringing-in of the bread?—No, the quartermaster-sergeant.

14. Have you seen the bread brought in?—Yes, occasionally.

15. How was it carried in?—Generally two men would carry it on a ground-sheet.

16. On a ground-sheet which had been used the previous night for sleeping on?—Yes; it would have been used.

17. In contact with the straw?—Generally our men got a palliasse, and it would be in contact with the palliasse.

18. Would the sheet be over the palliasse or underneath?—They can do as they please.

19. Some might put it under the straw and some over the straw?—Yes.

20. Was attention called to this way of carrying the bread by anybody?—I have heard our company sergeant-major say something about it to the quartermaster-sergeant about carrying the bread in a blanket. I never saw that.

21. That would be by your own men, would it not?—Yes.

22. Have you had experience of camp life before?—I had eight months in Samoa.

23. How did they carry the bread there?—I could not say.

24. When you joined did you get your boots?—When going to Samoa we got two pairs of boots issued to us. When I came into camp here I had one pair of boots I was wearing. I got those about November last year. I went into camp with those and the old uniform I had. I had a set of denims and some underclothing issued to me, but no boots. I got a pair of boots issued to me just about a week before leaving Trentham.

25. How is it you did not get two pairs of boots?—They would not issue any from Samoa. They said there was only one issue. I pointed out that they were issued in November last. I had had six months' wear out of my boots, and the new men who came in only had four weeks'. The sole of one of my boots came off. I complained to Lieutenant Cowles, and he told me to go to the quartermaster-sergeant. I went to Captain Simeon, and he put me off, and I really never got the boots at all. I struck him at a time when he was busy, and he put me off, and a sergeant has not much time in a camp to look after himself.

26. You really want more officers?—The N.C.O.s are not all appointed yet.

27. They are running short-handed?—Yes.

28. *Dr. Martin.*] Had the men to sleep under the tables in the hutments?—There were two or three in our huts who slept under the tables.

29. For want of room elsewhere?—Yes.

30. There was no room on the tables for all the men to have their meals?—Yes; at least a dozen for the start had to sit on their bunks or on the floor.

31. *Mr. Ferguson.*] Which of your officers would know they were sleeping under the tables and eating off the floor?—I think all the officers knew there was not enough accommodation.

32. *Dr. Martin.*] There was a scarcity of hot water for washing the dishes?—Yes.

33. We have had it said that two or three men would have to wash in the same water on account of the scarcity?—I believe at the start there was a scarcity, but I never had any difficulty in getting water myself. As far as washing the body was concerned, I used to get leave and go into town and have a bath.

34. Was it discussed amongst the men that the water was scarce?—They were told if they had any grievance they ought to complain, but I had no complaint. When the Public Works men were attending to the water and it was turned off there was a scarcity: that was the only time.

35. Did you get baths there?—We used to go down to the river twice a week. There were shower-baths in camp.

36. Any water in them?—Now and again there was. I went along about five times and they were dry every time.

37. *Mr. Ferguson.*] Have you ever found any unpleasant smell about the hutments you were living in?—There was generally a smell in the mud.

38. Was that due to the night-pans?—No, all round. The mud got generally tramped in, and there was a smell from that all over the camp.

39. *The Chairman.*] Did you suffer from having wet blankets or wet coats?—I had a wet overcoat at times in the hut.

40. Had you any means of drying them?—There was supposed to be, but I never made use of it. I could not find where it was. I have seen in the papers that there was supposed to be a marquee there, but no one knew about it.

41. What do you mean by that?—I read in the newspapers that Colonel Potter said there were marquees for drying.

42. But you do not remember them in your time?—No. There was one time, for about four or five days, we were told that nothing at all was to go on to the shelves, and when the men came in with their wet overcoats they would have to go on the ground-sheets, and later on the order came that we could hang them on the rafters.

43. Why were you not allowed to put them on the shelves?—I could not say.

44. *Dr. Martin.*] Was it wet weather at that time?—Yes. They put the blankets on the palliasse, and then the oil-sheet, and then the wet clothing.

45. Was there any complaint?—There were a few complaints about putting the wet overcoats on the blankets.

46. Did they complain to you as sergeant?—No, not to me, but in my hearing.

47. You do not know why the order was given?—No. We made the complaint to the company commander and he carried the complaint on, and in a few days we had orders that we could hang them on the rafters in the ceiling.

48. *Mr. Salmond.*] Was it at Trentham that the sole of your boot came off?—Yes, at Trentham—the outer sole.

49. How long did you go with the sole off?—About a fortnight.

50. Did you ever on any occasion except the one you have mentioned ask for another pair of boots?—I spoke to the company quartermaster-sergeant. First I spoke to the company commander, and he said the quartermaster-sergeant was to take me round and get me a pair; but I could never get the quartermaster-sergeant free when I was free, and he never got me a pair.

51. Who was it you first spoke to?—Lieutenant Cowles.

52. Who is the quartermaster-sergeant?—Smith.

53. What did Captain Simeon have to do with it?—I spoke to him about it. He said it was too trivial, and I never got the boots.

54. How did you manage to get them in the end?—There was a second issue, which was really my first issue. I was in the hut when they came round, and I got a pair that fitted. In our hut there were a lot of men who could not put on the boots. Some of the boots were inspected by the doctor, who condemned them. The back of the boot shaped out instead of into the foot, and the doctor condemned them all. Some men signed for them on the second issue.

55. Did you get two pairs of boots at the time you mentioned before leaving?—No; I have had one pair since coming from Samoa.

56. And when you arrived here that pair of boots was six months' old?—Yes.

57. In regard to the bread, it was carried for a squad of twelve men?—The arrangement was that six men carried it for the whole hut, but the huts were overcrowded. Six men carried it for a platoon.

58. Were you going about Trentham with wet feet?—I was for a couple of days, and then I wore private boots. They were not so thick, and would only last a day. I got a friend of mine at the cookhouse to dry my boots for me.

59. *Mr. Ferguson.*] In regard to the sole of your boot coming off, did you examine the under-sole and see how it was secured? We have heard that the under-sole was screwed with brass screws, and the upper sole stitched on?—I could not say; I did not notice it. We had the same style that we had when we went to Samoa; it was O'Brien's first issue. They took practically three pairs of boots for every man, and I got two pairs at the start. I had plenty of boots in Samoa; but when I came back I had one pair of good boots which I took to Trentham, but by that time they were beginning to wear.

60. And what you have seen of the boots issued lately, they are not nearly so good as the boots issued to the troops who went to Samoa?—They would cripple any troops, some of them.

61. Badly cut?—Yes.

62. *Mr. Gray.*] Do you know where the ill-fitting boots came from?—I do not. I think some of them were a "Standard" make.

63. Where would they be made?—I could find out.

64. Where were the boots issued the sole of one of which came off?—Those were the ones brought back from Samoa.

65. When you went to Captain Simeon about it he turned you down because he was busy?—Yes; and I could not see him again.

66. It was an accident that you did not have an opportunity of seeing him again?—Yes, on account of his duties and my duties not coinciding.

67. You did not suppose there would have been any difficulty of getting a new pair of boots if you had had the opportunity of speaking to him?—I think I could have got the boots; it was just bad luck.

68. In regard to the hut being very crowded, did that continue until the time you left the hut?—We still had over the number in the hut: we had over fifty. I could not say how many were on sick-leave, but we had over our number.

69. Do you know what the state of the huts on either side of you was?—On one side the Public Works carpenters had possession.

70. And on the other side?—I do not think they had as many as we had.

71. Other huts were being built at the time?—In our lines the huts were complete before we came away. The Public Works men had a full hutment and half of our hutment, and that portion they had should have been used by our battalion.

72. Then there was not room at the camp?—As the Public Works built new huts in another line they would put more men into them, and not shift the Public Works men out to let us take our hut.

73. The Public Works men continued to occupy what should have been your hutment till your departure?—Yes.

74. You are now at Rangiotu?—Yes.

75. Do you like it better?—Yes.

76. In your hut you stopped up the place where the draught came in?—Yes.

77. Is it better?—Yes; but it is not quite effective.

78. Did you tell others that?—Yes.

79. Did they follow your example?—I could not say. They could have got some paper and stuffed it in.

80. In regard to putting wet clothes on top of the blankets, as soon as the men complained to the company commander the complaint was remedied?—Yes; it was only for a few days.

81. *The Chairman.*] What kind of sickness was it that the men from your hut suffered from?—I could not say. Some went out with measles—about half a dozen; some would come in with influenza: just general complaints.

82. *Mr. Ferguson.*] Did any of the men from your hut die?—I have not heard of any.

ARTHUR ROSS BLACKMAN sworn and examined. (No. 52.)

1. *The Chairman.*] You are a sergeant?—Yes, in No. 15 platoon.

2. You occupied hut No. 38 at Trentham?—Yes, from the time the men came into camp till we shifted our camp to Rangiotu.

3. Were you in that hut all the time?—No; for the first week I was in hut No. 34. I had been in a tent the previous month.

4. Which did you prefer?—The tent.

5. Was your health better in the tent than in the hut?—I felt very much better in the tent; but I did not have to report sick in the hut.

6. How many men were in hut No. 38?—We started with seventy-two; five were discharged as being unfit, and when we left for Rangiotu there were twelve or thirteen in the hospital.

7. Then when you had fifty-four were you inconvenienced?—Yes. The number allowed was supposed to be fifty. The men were continually going and coming, and the numbers would go up and down. They would go to the hospital and come back again. Only those who went to the hospital went out of the hut.

8. We are told that there was not enough room for sleeping-accommodation or for eating at the tables?—That is so. The tables provided for forty-eight men—twelve at each table, and we had four tables.

9. As regards cold and heat, how did you find the huts for sleeping in?—It was according to the weather. In cold weather they were very cold, and in close weather they got stuffy. You would notice it when going in late that they were very stuffy, so I had the windows propped well open. You would notice it going in out of the open air.

10. You did not close up the open spaces round the eaves, did you?—No; they were kept clear all the time.

11. As regards the bread, was it usually carried in a waterproof sheet?—I did not have anything to do with that, but I overheard the remark.

12. Had you ever seen it?—No.

13. As regards the quantity of water available for washing and baths, what was the condition?—One day I heard of complaints: that was the day they were putting in a bigger main: the water was short that morning.

14. Are the complaints to be made to you?—They are made to me first, then to the platoon commander.

15. Do you remember the occasion on which you had to keep your wet clothes off the shelves and put them on the oil-sheets?—Yes.

16. Do you know the cause of that?—The reason was for tidiness in the huts. With so many men in the huts they had to bring about a system. The shelves were for certain things, and the order came that the overcoats were to be placed on the bunks. A complaint was made and it was passed on, and I advised the men to put the oil-sheet down and the overcoat on top. After the complaint we were allowed to hang them on the rafters.

17. In regard to boots, what is your experience?—I had one pair on going into camp, and the next pair was issued just before we left.

18. You went into camp when?—On the 29th April.

19. You were supposed to get a second pair within a fortnight?—I believe that is so. I never heard anything to that effect. We got the second pair a few days before we left—on the 9th July.

20. *Mr. Ferguson.*] You propped open the windows as you thought there was not enough ventilation?—Not for the number of men there. I thought it would be better to have a draught through the huts. I asked the men if they had any objection, and they said they preferred it.

21. Really it would be better to have more eaves for ventilation?—It would be better to have a big one than a lot of little ones.
22. A large open space?—Yes.
23. *The Chairman.*] That was on still nights?—I did not take any notice of the nights. We had huts on each side.
24. *Mr. Ferguson.*] Had you ever been in camp before?—Only in the Territorial camps in tents.
25. *Mr. Gray.*] Did you enjoy good health in camp?—Yes, with the exception I did not feel quite so well in the huts.
26. But you never reported sick?—No.
27. And was never treated?—No.
28. Have you anything to complain of about the camp?—No.

FRIDAY, 30TH JULY, 1915.

CHARLES DORIZAC sworn and examined. (No. 53.)

1. *The Chairman.*] What is your position?—Temporary Staff Sergeant-major.
2. Where are you located at present?—Upper Hutt.
3. What place?—Izard's.
4. Do you belong to the Ambulance?—I am attached to the Ambulance, but I belong to the New Zealand Staff.
5. What is Mr. Izard's house used for?—It is a convalescent home.
6. How long have you been there?—Six weeks.
7. You have been there since it started?—Yes; on the 12th June it was opened.
8. What has been your duty there?—I have taken charge of the place, looking after the convalescents.
9. And what class of convalescents do you take?—Measles convalescents.
10. From where?—From any place—Trentham, the Victoria Hospital, Berhampore, and Kaiwarra.
11. You take then in the final stages of recovery?—Yes.
12. Have you had to send any back to the hospital for treatment?—I have had to send three back to the Trentham Racecourse.
13. Who were they?—St. George, Captain Greenish, and Private Mangin.
14. What became of them?—They went to Trentham Racecourse.
15. To the hospital there?—Yes.
16. What became of them: did they recover?—St. George has practically recovered, Captain Greenish has recovered, and Private Mangin is in the convalescent stage now.
17. Have you had all the assistance you have wanted out there?—Yes, sir.
18. Have there been any difficulties to contend with?—No, sir, absolutely none.
19. Were you attached to Trentham Camp before?—Yes; I was attached to Trentham Camp from the 19th October to the 12th June.
20. As a member of the Staff?—Yes, sir, attached to the hospital.
21. What were your duties there?—Supplying equipment and looking after the men generally.
22. Had you anything to do with the training of the members of the Ambulance Corps?—They were trained by the Medical Officers.
23. You say that you had to do with the supply of equipment: had you anything to do with the issue of stores?—Only with regard to the Ambulance.
24. Were you attached to the Ambulance at Trentham?—Yes, sir.
25. You had to issue the stores for the Ambulance?—I had to draw them.
26. Was there a sufficient supply?—Well, there was; before the men went away they got their full equipment.
27. For each reinforcement?—The Ambulance men for each reinforcement.
28. What sort of training did they get?—That all depended upon the men we handled. In the Second Reinforcements we had seventy-eight men in camp, and they got training in hospital-work and drill.
29. How many doctors had you there then?—For the Second Reinforcements, six.
30. You mean the lot that went away in December?—Yes, sir.
31. There were six doctors there then, and there was instruction given generally every afternoon?—Yes, by the Medical Officers.
32. And with regard to subsequent reinforcements?—In the Third Major Holmes instructed, with other Medical Officers, and there was also drill.
33. Were there as many doctors for that reinforcement?—I cannot remember how many.
34. Were there half a dozen?—More than that.
35. Then, in regard to the later reinforcements?—For the Fourth we were very short of orderlies. There was not a great number of men. They did other work and received lectures.
36. There was not enough to do the bearer drill?—No; there was no recruiting for the Ambulance.
37. Was there not a sufficient supply of Ambulance men for the number of fighting men that went?—Not in the proportion that had gone before.

38. Is there a standard proportion?—Yes, there would be. But we sent such a lot away with the Second—seventy-eight men.

39. What is the proportion you sent?—I do not know. It is laid down, but I think it has been altered in this war.

40. Then, regarding the Fourth?—We only had enough orderlies to do actual duties.

41. And you could not give ambulance training?—Not stretcher-work.

42. Then, as regards the Fifth?—They were in the same position, although they received lectures from the doctors, and also did actual orderly-work in the hospital and in the dressing-station.

43. But the hospital-work had greatly increased then?—To a great extent it had. There was a lot of influenza and measles, though measles did not get bad till the Fifth.

44. There was a greater call for hospital attendants when we reached the Fifth Reinforcement than before?—Yes.

45. Then you come to the Sixth?—They were in with the Fifth.

46. You say there were not more than enough to do the ordinary work?—No.

47. So that with the Fifth and Sixth the position was that the men were not in sufficient numbers, and the call upon them for hospital-work was such that they did not receive the full instruction?—In nursing-work but not in stretcher-work.

48. *Dr. Martin.*] What date was that—the Fifth and Sixth?—Two months ago, or perhaps only six weeks ago. I left camp immediately they went away.

49. *The Chairman.*] Had you to attend to the sick-parade?—Yes, sir.

50. Every morning?—Yes, sir.

51. What were your duties in connection with that?—Calling them in.

52. From the various tents?—No; they were marched over by the orderly-corporal.

53. You were there too?—To check them coming in, except after the sick-parade was altered to 8.15.

54. Was that in the winter?—Yes; I was not there a great deal then, because I had other duties to attend to, and one of the corporals used to call them in.

55. Up to the time that you ceased to attend regularly what was the procedure when the men came up to the tent?—They would go before the doctor.

56. In the first place, I take it, there was the hospital marquee?—An examining-marquee.

57. And who would be in there?—The Medical Officers and two clerks.

58. What was the course of procedure?—They go to the Medical Officer, and he writes their treatment on a slip of paper and tells the clerk the diagnosis of the disease, and also what duty they are to have. Then they take the slip of paper into the dispensary.

59. And get anything that is required: it is a prescription?—Yes, or a dressing.

60. *Dr. Martin.*] The prescription is written in the prescription-book, not on the form?—No; it is on the paper.

61. Do you have a prescription-book?—No.

62. *The Chairman.*] There was no record kept, except that the piece of paper would be retained by the dispensers?—Yes.

63. *Dr. Martin.*] There is a special Army book for prescriptions: did you use that?—No.

64. Where was the dispensing done: was it in the examining-tent?—No.

65. It was a separate tent?—After the Second Reinforcements.

66. Who was the dispenser: any one attached to the regiment who happened to be a chemist?—Yes, sir.

67. No permanent dispenser?—No; as a rule, we had four or five dispensers always.

68. Men who had volunteered?—Yes; when a chemist volunteers he generally volunteers for his own special business.

69. You had this tent for a dispensary: what were the arrangements—had you all sorts of chemists' preparations and requirements there?—Any drug we required we got. We always kept a good stock of everything. When we were short of anything it was only a matter of making out a requisition and getting it replaced.

70. Were you always, then, well supplied with dispensers' requirements?—Yes, sir.

71. Do you remember any difficulty at any time with the dispensary?—In what way, sir?

72. The want of attendants, or confusion?—No, sir.

73. Do you remember a dispenser coming there to give help and going away within a couple of hours after?—A soldier?

74. That was at the racecourse: were you connected with the racecourse in any way?—No.

75. Only on the camp side?—Yes.

76. With respect to the men coming up to the sick-parade, was there any place for them to wait?—Only the examining-marquee, which was empty except for the doctors there. If it was wet they used to get inside the marquee as much as possible.

77. But if there was not room?—Well, I never saw it so; only once or twice there was not room. There might have been a few men left outside once or twice, but as a rule the men would not come in.

78. They preferred to stay in the rain. You say there was no difficulty in their coming into the waiting-tent if it were raining outside?—No, with the reinforcements; but with the "Trents" they only had the operating-tent.

79. What happened with the "Trents": had they any examining-tent?—The operating-tent was used for an examining-tent: it was not used for operations.

80. Was that tent smaller than the ordinary examining-tent?—Much smaller.

81. And there was no accommodation, then, for any considerable number?—They used to turn up in considerable numbers.

82. And what if it were wet?—They had their own regimental Medical Officers, and that was their business.

83. You had not to look after the sick-parades of those men?—No; they would act as a regiment.

84. They had their own doctors?—Yes; but they used to use our dispensary and our dressing-station.

85. You had nothing to do with the "Trents" as regards the Ambulance except the issue of Ambulance material and stores?—Yes, drugs.

86. Was there no waiting-tent for the "Trents" that you saw?—No, sir.

87. And if it were wet and they had to wait, it would be in the rain?—They would come into our office sometimes. A man would not wait out in the rain if there were a tent handy.

88. As regards the course taken with respect to a man who might feel unable to come to the sick-parade?—Their orderly-corporal would report the matter to myself or somebody else in our lines, and we would immediately send a stretcher for him.

89. He was not forced to walk?—Not if he were not fit to walk.

90. Who would judge whether he was not fit to walk?—The stretcher-party and the N.C.O. sent with them. I never saw a man walk for whom a stretcher-party went over.

91. You remember the establishment of the isolation camp?—Yes, sir, for the Second Reinforcements.

92. And it continued after them?—Yes, sir.

93. And the Third and Fourth, until it was abandoned in May?—Yes.

94. Was that kept guarded?—By a policeman.

95. One policeman: what is one against so many?—We had one policeman up till the time I handed over to Captain Boon. I could not tell you the exact date. But if men wanted to get out they would get out if there were twenty policemen there.

96. There was no enclosure?—They would get out of the "bird-cage" with a guard on it.

97. Your arrangements were rather primitive: were there cases of men getting out and mingling amongst the men in the camp?—No, sir; they did not go into the camp—not that we have any knowledge of. What they could have done, and what has been done, is that they broke camp and got to Trentham Hotel, because we found whisky there.

98. Is there a hotel there?—Two miles away.

99. *Mr. Ferguson.*] But the whisky might have been brought in by other men who broke into the isolation camp?—Well, there were two men who got whisky from the hotel. As regards men coming from the camp, they would not go into the segregation camp, because they would get kept there for a fortnight.

100. *Dr. Martin.*] You say that some isolated men got out to the Trentham Hotel?—Yes, because we found whisky in the tents.

101. Was there any case of drunkenness?—No; but there was one case of a man who was not drunk when we found him, but he had evidently been drunk.

102. Had that man the measles?—No; he was a contact.

103. Did he develop the measles later?—No, sir. That is why the isolation camp was shifted—why it was done away with; because we were getting no cases from contacts in the segregation camp. We never got a case of measles from the segregation camp, but we were getting cases from the lines.

104. *Mr. Ferguson.*] The segregation camp was the healthiest one to be in?—Yes, absolutely.

105. *The Chairman.*] This was all tents?—Yes.

106. Do you know the huts there?—Yes, sir.

107. Have you been in them at all at night?—Not at night, sir.

108. You cannot speak from your personal experience of them?—No.

109. Have you slept in huts elsewhere?—Never in huts—always in tents.

110. We had Captain Yeates before us, and when giving evidence in regard to the examination of men on sick-parade he said that "with three, four, five, and six Medical Officers in a marquee it was absolutely impossible to differentiate as to who diagnosed the different cases, and, as a rule, one of the Medical Officers would be left to sign up all sick-reports. The result was that many men who went through might easily have been missed as being infectious cases." We have it that this is a practice in force elsewhere—for one medical man to sign up all the sick-reports. Do you know of any confusion arising in that way, or of men being missed who were infectious cases?—No, sir; the only chance of confusion would be in giving the diagnosis to the clerk for him to write down. If that was done—I do not know that it was—the mistake might have taken place in regard to those cases examined by Captain Yeates, because he would not write his own prescriptions, but would tell the clerk to write them.

111. He did not write his own but dictated his prescriptions to the clerk, and hence confusion might possibly have arisen?—Yes.

112. You said that it was impossible for the examination-tent to be crowded?—I would see that the doctors did not get too crowded.

113. What happened in that respect: did you frequently find it too crowded?—No, because we used to regulate them coming in.

114. You were at the door?—Yes, sir.

115. Dr. Yeates said in his evidence that the doctor dictated the prescriptions or treatment to the orderly: did the other doctors dictate to the orderly?—No; they wrote their prescriptions.

116. With regard to the dispensary, was there any one in constant charge of it?—Yes, a dispenser.

117. Whose duty was it to see that it was kept clean and free from dust?—The dispenser's.

118. Did you ever have complaints of the conditions in which it was kept?—No, except that after sick-parade it might be all upside down because of their being very busy.

119. He says, with regard to the method or system of issuing drugs or dressings, "The drugs and dressings at first were in the same marquee as the sick-parade was conducted in, and the orderlies were not as a rule trained"?—That was so in connection with the Second Reinforcements, but afterwards there was no necessity because there was an empty marquee. As regards the statement that the orderlies were not trained, some of them were raw men when they came in first.

120. There were one or two men trained?—One or two St. John men.

121. The men had joined to be trained?—Yes, sir.

122. "Shortly afterwards another marquee was erected for the use of drugs and dressings and looking after men generally who were passed out from the sick-parade"?—Yes.

123. "In the marquee they were covered with dust owing to the wind"?—Yes; the bottles were bound to be covered.

124. "The marquee was unfloored, and it was absolutely impossible to have clean and aseptic dressings"?—We had no cases of sepsis.

125. "The method of swabbing out the throats was rather bad, as they were rather short of brushes, and they used to use the same brushes without properly sterilizing them": did you have any complaint in regard to that?—No, certainly not. If any doctor thought it was not right he could have had it altered. They used an ordinary camel-hair paint-brush for painting the throat. We generally had a dozen of them. They were dipped into a bottle with lysol and water. If any doctor saw the men doing what was not right it was his place to stop it and tell the orderlies themselves.

126. You did not use the same throat-brush twice?—Yes, we had to. Sometimes there were thirty or forty sore throats there at once.

127. *Dr. Martin.*] You said that you sterilized the brushes by placing them in lysol and water: how much lysol was there, and what was the strength of the mixture?—A teaspoonful of lysol to half a pint of water. The throat-brush would be rinsed, and then put into lysol and water, and then rinsed out again.

128. That was done under the eyes of the doctors?—Yes, sir; there was generally a doctor in the dressing-station to see that the orderlies were doing their work properly.

129. *The Chairman.*] Dr. Yeates was asked how the brushes were cleaned, and he said, "As far as I could see they were dipped into boiling water occasionally": what do you say to that?—The orderlies had strict instructions not to use a throat-brush twice in succession on different men without its being washed.

130. *Dr. Martin.*] How often did you use the throat-brushes?—About a dozen times, but it was washed every time. A brush would not last very long.

131. *The Chairman.*] In reply to another question Dr. Yeates said, "I have seen a man go in and be examined by one Medical Officer and an order given for a dose of calomel. Not knowing what he had to do he has walked on, and has been collared by another medical man and ordered a black draught, and I have seen him go to another and be ordered a dose of salts"?—I do not know how that could have happened, because when a man is examined he is given the prescription, and if he went to another Medical Officer that officer would see the paper in his hand.

132. *Dr. Martin.*] Your method in regard to the sterilizing of the brushes was that you put them into lysol and water—a teaspoonful to half a pint?—Yes. We had plenty of brushes.

133. *Mr. Skerrett.*] There ought to be some documentary evidence to show how many brushes were supplied?—It ought to be in the equipment-book.

134. *The Chairman.*] There is an equipment-book, kept by whom?—By the dispenser for requisitioning for stuff. I do not know what happened to it since they shifted from down below.

135. If further brushes were wanted whose business would it be to see that they were obtained?—The dispenser's.

136. Would that fall within your duty? Could you tell when brushes were wanted?—Not unless I went and looked, or if I required a brush for one of the doctors. I might find out we were running short, and ordered them; but there were always plenty of camel-hair brushes that could easily have been made by altering the handle.

137. *Dr. Martin.*] It was not the practice to burn the brush immediately after use?—No, sir.

138. How long were they kept in this lysol and water?—A brush that was used on a sick-parade that morning might be used up on that parade.

139. If that brush is dipped in lysol and water, how long would it be kept there?—It might be five minutes or it might be longer.

140. *Mr. Ferguson.*] It might be a minute?—But there would be more than one.

141. *Dr. Martin.*] But there were no instructions to burn the camel-hair brushes immediately after use?—No, sir; but if the doctor had required that to be done he could have said so, and Captain Yeates generally went into the dressing-station to watch things.

142. *The Chairman.*] Was Captain Yeates there when this method of using the brushes was in force?—Yes.

143. Was he there by himself in the dressing-station?—Yes, sir.

144. Did he make any complaint about this matter of the brushes, to your knowledge?—He never spoke to me about it.

145. *Mr. Ferguson.*] There was a shortage of thermometers, I understand?—You might get a few thermometers, and the orderlies might break them in a day. They were never reported as being short until they were short, but we could always get thermometers when we required them.

146. How are these thermometers used—in the mouth?—Yes.

147. *Dr. Martin.*] How were they sterilized?—With lysol and iodine.

148. In the same lysol-pot as the brushes?—No, sir. Sometimes they were sterilized in hot water, and that would account for the shortage, perhaps.

149. I think Captain Yeates was there from the 28th December till the 27th February—two months—at the time of the Second Reinforcements?—No; from the Third till the Fourth.

150. In answer to a question as to whether any lectures were given to the Ambulance orderlies he said, "That I cannot say—I never heard; I know nothing about it"?—He was never there except for the morning sick-parade.

151. But, as a fact, to the Third Reinforcements lectures and instruction were given to the Ambulance men?—Yes, by the Medical Officer, in the afternoon.

152. *Mr. Ferguson.*] Was he never there at the afternoon sick-parade?—So seldom that you could count the number of times on the fingers of one hand. He was living in quarters and not in camp most of the time, and he used to say, "I am going to my quarters; if I am wanted send for me."

153. His quarters were away from the camp?—Yes, about a mile.

154. *The Chairman.*] Had you anything to do with the airing and striking of the tents?—No, except for camp orders.

155. Seeing that they were carried out?—Yes.

156. What was the practice with regard to the airing and striking of the tents?—They were supposed to be struck every fine Sunday morning.

157. And how did you air them?—The curtains were left up every morning unless it was wet.

158. What about the beds: were they dragged out into the sun?—Yes, every morning in the summer-time, early, before breakfast, and in the winter-time after breakfast, if the ground was dry.

159. Captain Yeates says, "There should have been a system of regulating the striking of the tents, but they were never struck. I saw them struck once in two months." Is that correct?—No, I should say not.

160. *Mr. Ferguson.*] Your impression is that he did not see them because he was not there?—He was generally at home.

161. *The Chairman.*] He says, "In the camp the men lie on the earth unless they bought sacking for themselves." That was the palliasse?—Yes.

162. He further says, "Those beds had to be put out and aired every day with the kits, but there was absolutely no room for each bed to have its own plot"?—There was room in the front of the tents.

163. "They overlapped," he says, "on account of the compression of the tents and because there was no room without tripping over the ropes?—I never walked over a bed and never tripped over a rope; but if you do sanitary rounds on a horse you must expect to trip over something.

164. *Mr Ferguson.*] Did Captain Yeates do his sanitary round on a horse?—Yes.

165. Was he the only doctor who went round on a horse?—Yes, sir.

166. *The Chairman.*] Now, with regard to the isolation camp, you say you never knew one man to go to the hospital from the isolation camp?—I have known cases, but very few, and towards the end there were none going to the hospital from there.

167. In the case of measles when they were diagnosed they were immediately isolated and the contacts put in the isolation camp?—Yes.

168. Then Dr. Yeates said in regard to these contacts, "Their beds and kits would be carried over to the isolation camp, but when they got into the isolation camp they were not isolated—that is to say, that the men in the isolation camp were so badly guarded that I have many times seen them chatting away with men isolated for other sicknesses. And I know that oftentimes they were not in their tents at all nor on the isolation-ground"?—They might have been away at drill. They were sent away to drill on a section by themselves.

169. "I also know that their mates in their own corps very often had to carry over their food for them, and would stand there chatting with them for a considerable time"?—No; they might stand chatting to them, but they would be 15 yards away from them.

170. How was the food brought over?—With the Second Reinforcements the company was liable for the isolation-camp's rations, and the mess orderlies would provide them from the company's rations. When the Third Reinforcements were there Major Holmes did not think this a satisfactory method, and he said to me that we would have to draw the rations ourselves for the isolation camp. That meant that they would be struck off their own unit and attached to our unit for rations. Therefore we provided mess orderlies and drew their rations from the regimental cookhouse.

171. So that there was no actual contact between those who took the food and the contacts?—No. I got a 20-gallon boiler and a couple of railway-irons to heat the water.

172. You provided hot water?—Yes, in their own ground.

173. That saved some journeying?—Yes.

174. Then Dr. Yeates was asked, "How often did their mates who were not isolated carry their food to the isolated men?" and he replied, "Personally I have not seen them do so for more than one meal." He was asked also, "Have you any reason to believe that the practice was general or usual?" Then he replied, "It was usual while I was there." You say that this new scheme of Major Holmes's prevented any contact?—It prevented contact. There were no contacts with the outside, because the men who took the food over put it down and went away. They were in charge of an orderly-corporal.

175. Then Captain Yeates was asked, "This camp was simply for contacts?" and he replied, "For contacts with measles, and also for other troubles. Supposing a man were suspected of having any other disease he was put there." The next question was, "If a man had measles he went to the hospital?" and Captain Yeates's reply was, "I think he did, but I have seen cases of measles in the camp—cases of suppressed measles." The next question was, "Did you report those to anybody?" and the answer was, "I spoke to Major Holmes and Captain Fyffe."

He was further asked, "Unfortunately we have not got them here?" and he replied, "No." Had you anything to do with the sanitary arrangement?—Only in connection with the Second Reinforcements. I put in the first latrines that were put in.

176. In dealing with the latrine accommodation between December and February, Captain Yeates said, "When I went there there were day latrines, but not in sufficient number for the Force that was in camp. Also, in connection with the latrines there was no proper method of disinfecting the pails. There was no dry earth or anything used for throwing in the pails after use. There was a bucket of chloride of lime and some other disinfectant, which was thrown on by a sanitary squad. The result was that these pails were left open, and flies were very prevalent in the camp. Also, on the north side of the camp there was a plot of ground occupied by a mounted corps, but before you came to that spot there was a place showing signs where had been the old trench latrines. These were not covered up in a proper manner. They were too shallow, and the flies were there in millions daily. There was an attempt made to keep the flies off by scattering chloride of lime." Do you know anything about that?—No, sir; the trench laid down in the manual is only a foot deep, and that trench was 18 in.

177. What about the flies?—They were bad at the start, but got better later on. We sprayed kerosene to a great extent. But I never noticed any trouble from the old latrines.

178. No smell?—No, sir.

179. How were they disposed of when they were done with?—They were filled in.

180. With what?—Earth.

181. And marked in any way?—No. Where the latrines were there is a long line. They were put in 3 ft. long, 1 ft. wide, and 18 in. deep, and there is 2 ft. 9 in. between them—that is, the first day's trenches; and the second day's trenches are placed in between these other two. After every man has been there he takes a scoop of dry earth and throws it over the excreta.

182. Do you know of any time when there was no dry earth provided?—For the straddle trenches it is always there, but for the pan system they did away with the earth.

183. *Mr. Ferguson.*] They wilfully did away with the dry earth?—Yes, and used kerosene.

184. By whose authority was that done?—I could not say.

185. What reinforcements?—The Third. There were no pan-closets with the Second.

186. What about latrine-paper: was that provided?—No.

187. The ordinary newspaper was used?—Yes.

188. The men would not use the earth?—No.

189. *The Chairman.*] Do you know whether the old latrines were there in connection with the Rifle Association meetings?—I know where two of them were, but they were never used in our time.

190. Will you take a look at the plan here and point out the spot? [Witness indicates spot.]

191. They were not sunk into the ground as a pit-closet?—No; they were pan-closets, with wooden floors.

192. When the pans were removed there would be nothing left. They were somewhat about where the hutments are now?—Yes, somewhere about there.

193. You had nothing to do with the hospital side—you were only connected with the camp side?—I was attached to the hospital, but not at the racecourse. I went to Izard's, but four days before that I was on duty on the ship with Major McAra.

194. Can you tell us anything about the hospital on the racecourse site?—No, sir; but I advised them to keep the records of every man.

195. Whom did you advise?—The sergeant who took my place. I advised him not to lose the trace of a man.

196. Coming back to the camp and the tents, was there any fumigation of the tents?—Yes, after the reinforcements left.

197. How was it done?—With a formalin spray.

198. With regard to the drying facilities, were there any there during your stay in the camp?—No, sir.

199. None?—No.

200. Have you ever seen drying facilities in the camp?—No, only marquees.

201. You had no marquees erected?—No.

202. Do you know why that was?—Well, I think if they did erect them the men would not make use of them a great deal on account of the risk of losing their kit and having them taken by other men. Each man is personally responsible for his own kit.

203. Could not he hang up his coat there with safety and leave it?—Not very well, because if a man went in to take his coat he might take two coats.

204. Would not there be a guard?—You would have to arrange it after the system of a cloak-room, and label every man's things.

205. You do not think the men would use it?—Some men would, perhaps. But you must remember that if a man loses any of his kit he is liable to pay for it when they have kit-inspection.

206. Do you remember any septic tanks there?—No; I do not know how they have the urinals fixed or the latrines they have at present.

207. But from December to February?—No; I do not know whether they are soakage-pits or septic tanks.

208. *Dr. Martin.*] You were there in February?—Yes.

209. Did you see the hospital arrangements and the marquees?—Yes, sir.

210. How many in the marquees where the men were taken?—Seven.

211. Had they mattresses?—Yes.

212. Pillows?—Yes.

213. Pillow-cases?—There were pillow-cases, yes.

214. This was in February?—Yes, sir, in Major Holmes's time.

215. There were pillow-cases and sheets: what were the arrangements in the marquee like inside—were they satisfactory?—One lot of mattresses which we got went to pieces very quickly: they were kapok mattresses.

216. What was wrong with them?—They were very thin.

217. Was it very dusty?—There was a fair amount of dust everywhere. There was no floor.

218. It was very dusty inside the marquee?—When it was blowing hard.

219. Had you all the equipment you wanted—bed-pans?—Yes, bed-pans, urinal-bottles, and all. There were six beds in three bell tents.

220. This is the report of the Medical Officer in charge at that time, 19th February: "At present we have nothing but a marquee containing some six or seven beds, which we frequently have to supplement with ordinary bell tents. As a rule it is blowing strongly from the north-west, and consequently to prevent the marquee and tents from being blown down we have to keep the side curtains pegged down, with the result that the ventilation of the tents is execrable. If a bed-pan, for instance, has been used, the tent is unendurable for twenty minutes afterwards. There is no equipment for the beds—no sheets, no pillow-cases, nothing but mattresses and blankets"?—Who was the Medical Officer who wrote that report?

221. Dr. Fyffe. You told me that there were sheets?—Yes.

222. Dr. Fyffe says there was nothing but mattresses and blankets, and that everything was covered with dust, and as to doing any surgery under such conditions it would be suicidal?—We did no surgery there except minor surgery. There were beds and sheets and pillow-cases. They were there for the Thirds and the Fourths. We had them, but we were short of them, and when they were away at the wash we might not be able to replace them all the time.

223. About the training of the Field Ambulance men, was the bearer section trained?—Not to any extent after the Thirds. If we could get twelve men together we took them out. They were going with the reinforcements, and they were supposed to be trained on the ship in every branch of the service, because we did not know which branch they would be going into.

224. There have been a good many charges about the training?—The Second Reinforcements received all their training.

225. Can you tell me the training that the bearer section got?—For the Seconds they got stretcher-work, squad drill, advanced dressing-station work under Sergeant-major Blackman. With the Thirds, just before the Seconds got away, Sergeant-major Blackman was sick, and they went on under Sergeant Johnston. They were taken for stretcher-work by another sergeant. They went through all the stretcher-work. When the Fourths were there we had not sufficient men to form one stretcher-party.

226. Then, for the Fourth Reinforcements the bearers were not fully trained?—That is so.

227. Up to that the bearers were fully trained?—Yes, sir.

228. In connection with the Fourth and Fifth there was no training of the bearers?—Only in stretcher drill.

229. Go back to the tent section: was the tent section of the Third and Fourth trained?—By lectures from the doctors, and by having to do work under the ward masters.

230. Were they trained in pitching the operating-tent?—Yes.

231. Had they panniers?—No, sir.

232. What would they have to do actually: the operating-table would be in the middle, and the panniers——?—No; we never had panniers.

233. Were these men trained in the work they would get at Gallipoli Peninsula?—No.

234. Not in opening up their panniers at all?—No; we had none. We had two, but they were not complete.

235. Is it safe to say that none of the tent sections were fully trained?—That is so.

236. In any of the reinforcements?—That is so.

237. In any of the tent sections were there complete panniers?—No.

238. Were those that you had medical or surgical panniers?—One was medical, one was surgical.

239. Were they trained in putting up acetylene-lamps?—No, sir; they had no acetylene-lamps. We had hurricane-lamps and two small acetylene-lamps.

240. Were the men trained to work the acetylene-lamp in the operating-room? It is a rather difficult lamp to manage?—No, sir. You see, there were only twelve or sixteen men going away.

241. The tent sections were not trained in how to light the operating-tent?—No, sir. Of course, the understanding was that these reinforcements were to receive lectures on board ship while on their way to the front.

242. Did you say that the Sixth Reinforcements got instruction in nursing?—They all got instruction in nursing from the Medical Officers and actually from doing the work in the hospitals.

243. Were they trained in taking temperatures?—Yes.

244. And in sponging patients?—Yes.

245. Do you think the training and nursing was good?—Yes.

246. Where were they trained in first aid?—At the lectures.

247. And the lectures were carried out up to what date?—They were carried out practically right up to the time when I left.

248. They got instruction in first aid up to the 12th June?—Yes, sir.

249. Was it so regular latterly, when the pressure became so great?—The pressure was not so great on the medical service when I left.

250. Were any men trained in looking after the water-carts?—No, sir.

251. Had you a water-cart out there?—No, sir; but at one time we had a double filter-water-cart with the Field Engineers, and I took most of the men over and showed them it.

252. As a matter of routine, were they trained in regard to water-carts?—No, sir.
253. There was no instruction given in how to look after the water-cart?—No, sir.
254. Except with the Fourth Reinforcements?—That is so.
255. How about the Field Ambulance that went to the front?—With the Main Party?
256. Were there any men trained in boiling and sterilizing instruments?—Yes, sir.
257. Give me their ranks—sergeants or corporals?—They went away as corporals afterwards; they were dispensers.
258. The dispensers?—They used to get instructions from the doctors in it. We had No. 2 Stationary Hospital with us for some time, and all the men used to go and receive lectures.
259. We are told that none of the regiments had stretcher-bearers: have you seen any stretcher-bearers with the regiments that went away?—Yes, with the Main Body.
260. Were they attached to the R.A.M.C. for training?—I think they must have been, because they wore the badges.
261. But they were regimental men: they would not wear badges at all?—I am going by seeing them in the Main Party, walking at the back with their stretchers.
262. You have seen them with their stretchers?—Yes, marching through the town.
263. We have a charge that no stretcher-parties went?—They went with the Main Body. They paraded at the back of their units.
264. Now, going back to Trentham, did you see men seriously ill sent in from Trentham in open taxis?—No, sir.
265. What is the latest hour you have seen men sent to Wellington Hospital?—With the measles, about 5.30 p.m.
266. There were no cases sent in about 11 or 12 o'clock at night?—No, sir.
267. Were there any sent early in the morning?—Only one man, sent in by special train; he met with a railway accident.
268. Were there any cases of men having to stand for hours in the rain on sick-parade?—No, sir.
269. When it was raining they were always put under cover?—Yes, except for the Second Reinforcements, when Major McKillop complained, and we started to use the other tent.
270. Were there any ambulance-wagons at Trentham?—No, sir. We had the Wellington Hospital ambulance out when we required it; but we have rung up for it at 8 o'clock in the morning and did not get it till 5 o'clock at night. We have sent in men strapped in a motor-car, but the measles cases were sent in closed cars.
271. You had to ring up the Wellington Hospital?—Yes.
272. *Mr. Ferguson.*] These men who were dispensers: were they privates?—Yes, and sometimes corporals. Yallop was a sergeant. Every man dispensing was a chemist, but after the "Trents" went away we were reduced to Yallop and Hutchinson, and the next day Major Fyffe got Dickson and O'Kane.
273. Would these men get special pay?—No, sir.
274. They got the ordinary pay of their rank?—Yes.
275. Is that the ordinary Imperial standard, or what?—It is the colonial standard. I was a dispenser in Africa, and got only 6s. a day, ordinary pay.
276. *Dr. Martin.*] Is it true that certain men—chemists—practically declined to do dispensing-work because they did not get special pay?—None with the reinforcements.
277. But with the Main Body?—I could not say.
278. It did not come under your notice that men who were unqualified chemists were doing the work because qualified men practically declined to do it without special pay?—Not that I know of.
279. You have no doubt that it was under the control of properly qualified men?—They had not all passed.
280. They had had sufficient training for the purpose, though they had not all passed the Pharmaceutical Society's tests?—Yes, sir.
281. You had all the appliances necessary for dispensing?—Yes, sir.
282. Plenty of distilled water?—Yes.
283. Hot water?—Yes, sir.
284. How did you get your hot water?—From the cookhouse, or with the Primus stove which we had.
285. *Mr. Gray.*] How long were you in the South African War?—Eight months.
286. What was your position there?—I was wardmaster on the troopship—coming and going—and dispenser attached to the R.A.M.C. there.
287. Are you a chemist by profession?—Yes, but not qualified.
288. But you have had experience?—Eight years.
289. As a chemist?—Yes.
290. At Trentham Camp you were permanent sergeant-major?—Yes.
291. In charge of the Ambulance work?—Yes, sir.
292. And you saw all the reinforcements through?—Yes, up to the Fifth.
293. When did you leave Trentham?—12th June.
294. When was Mr. Izard's house open?—About that date.
295. With regard to the equipment of the hospitals, did you hear any complaints that supplies could not be got?—No, sir.
296. Whose duty was it to make requisitions?—It was supposed to be written out and brought to me, and I would get the officer commanding to sign.
297. Who would write it out?—The sergeants in charge of the ward or the dispenser.
298. The dispenser for drugs, and the sergeant in charge of the ward for hospital equipment?—Yes.

299. Then what happened?—It would be posted to the Defence Stores, or wherever it had to go.

300. Did you ever hear of any difficulty in getting your requisitions supplied?—Well, as regards sheets and pillow-slips there was a certain amount of difficulty: we did not get sufficient.

301. Whose fault would that be?—I do not know whose fault it would be. Everything in that line came from the patriotic societies.

302. And did you depend upon them for supplies?—Only for those sorts of things. They said they would provide them.

303. Then, you did not send requisitions for sheets and that sort of thing to the authorities?—No, sir.

304. Did you hear that Petone residents had sent Captain Fyffe subscriptions amounting to £10 for the purchase of hospital requirements?—Yes, sir.

305. And domestic utensils were purchased with that money?—Yes.

306. Why was it necessary to buy frying-pans and things like that for the hospital?—I do not know. I did not purchase them.

307. Did you ever know that there was a difficulty in getting these domestic utensils for the hospitals?—Well, I think if you go out there to the hospital you will find that a lot of that material which was purchased with that money is still packed in cases there.

308. Why was it necessary for the Petone subscriptions to be expended on the purchase of these domestic utensils by one of the Medical Officers?—I could not say, sir. The most useful things that we got with the Petone money were the sputum-mugs.

309. Were there no sputum-mugs in the hospital before these were purchased?—No, sir; we used to use tins.

310. Had it ever been suggested that sputum-mugs were required and should have been got?—Not by the Medical Officers.

311. With respect to the sick-parade, you had a hospital marquee in part of the camp where they were held?—Yes, sir.

312. And to that tent all men were brought who were able to come?—Yes.

313. Had the Trentham Regiments to parade in their own lines?—No, sir.

314. You did not hear of them doing so later?—No.

315. You say it was dusty in the hospital marquee: could that have been avoided in the summer-time?—I do not think so, even with wooden floors.

316. The dust would get in?—Yes.

317. The winds were very high?—Yes.

318. And the ground was quite dry?—Yes.

319. With respect to the training of the bearer section of the Ambulance men, were you short of men after the Third Reinforcements?—Very short; we had no men at all to train. There was no recruiting for the Ambulance section.

320. But did these men who were not trained in some of the work, regarding which Dr. Martin examined you, receive training in other work?—They received training in the nursing section, and also lectures on first aid.

321. I think you said there were no regimental stretcher-bearers?—With the reinforcements. I think there were with the Main Body.

322. What about the Trentham Regiments?—I could not say, because I do not think they are fully trained.

323. Had you anything to do with the Berhampore Hospital?—Yes, sir.

324. What had you to do with that?—Sending patients there.

325. Did you ever accompany patients there?—Yes.

326. How were they taken?—In closed motor-cars.

327. You did not always go with the patients?—No, not always; but I sent the patients away always.

328. To your knowledge, was a patient ever sent away in an open vehicle?—No, sir.

329. And when you were at Berhampore Hospital were the men properly received and taken in there?—Yes, sir.

330. Had you anything to do with the work there?—No, only starting it with orderlies.

331. Did you put in competent men?—Well, not actually trained men, because there were three nurses there to do the nursing. We sent hospital men who were doing fatigue-work, scrubbing floors, and cleaning the place up, and one was assistant to the cook.

332. They were not required to do trained nursing work?—No, sir.

333. They were good enough for the work they had to do?—Yes, absolutely.

334. Were your assistants at the camp competent men?—Yes, sir. The N.C.O.s were appointed by the Medical Officers, and it was their place to see that the work was done satisfactorily.

335. Did you see any signs of incompetency?—Well, these men went away as N.C.O.s, but they were not as fully trained as the men with the Main Body. They were either dispensers or attached to bearer companies outside.

336. You did not see very much of Dr. Yeates except on the morning sick-parade?—That is so.

337. Where was he during the daytime?—At his quarters.

338. And at night?—At his quarters.

339. Did you not see him going about the camp either in the daytime or at night-time?—Very rarely he was there the whole day.

340. With respect to these throat-brushes, if there was a shortage whose business was it to requisition for more?—The dispenser's, to let me know he was short, and the doctors' place to stop them from being used too often.

341. Do you know whether, besides throat-brushes, anything else was used in infectious cases, for the throat-swabs or forceps, for instance?—No, I never saw them used. Every one of these cases yielded to glycerine and tannic acid.

342. *The Chairman.*] What was done with the swabs?—There were no swabs taken. That would be the doctors' place to take the swabs.

343. Do you know of any case of a man being neglected for want of medical attention?—No, sir.

344. Or did you ever hear a complaint of that character?—No, sir. As regards the sick-parade, when the Thirds first came into camp there was a man in the lines there who would not come over on the sick-parade. I had him carried over, and when the doctor saw him there was nothing the matter with him at all.

345. *Mr. Gray.*] He was malingering?—Yes, sir.

346. *Mr. Skerrett.*] Do you suggest that the purchases made by Major Fyffe were unnecessary—I mean those made with the money subscribed by the Petone residents?—I do not say they were actually unnecessary, but they have not been used much.

347. What proportion of them were in use?—The pannikins; we got plenty of them.

348. Do you really suggest that in the main Major Fyffe expended that £10 in the purchase of unnecessary articles?—Yes. Sergeant Edwards spent it.

349. But under Major Fyffe's directions?—Sergeant Edwards drew up a list of what was required.

350. But Major Fyffe was responsible?—Yes.

351. It is rather curious, is it not, that Major Fyffe's successor, Captain McGuire, made purchases with money also contributed by Petone residents?—That is so.

352. Were his purchases unnecessary?—No.

353. They were useful purchases?—Yes.

354. Why should not you have obtained them in the usual way by requisition?—Most of the money was spent on filters.

355. Any shortage in equipment was due to the fault of the Medical Officers?—Yes, sir. If they had approached Colonel Purdy they would have got it.

356. Would you explain how it was that in March Major Fyffe took the representatives of the Petone residents who raised the subscriptions into the hospital and showed them the indifferent mattresses and sheets, and so on: how do you account for that?—The first lot sent to us were good sheets and pillow-slips. In the second lot there was a bundle wrapped up and marked on the outside "Sheets." When it was undone it was found that the inside paper was marked "Old linen." It contained a bolster-cover and also a patchwork thing. I honestly believe that these were sent out as old linen, and were not intended to be used as sheets.

357. Those were the sheets which, according to Mr. Robertson, were in actual use?—They were brought by Sergeant Edwards and shown to Mr. Robertson.

358. Then Major Fyffe was wrong in showing them to Mr. Robertson as being sheets in actual use?—No. I think it was a mistake on the part of the Patriotic Society. The word "sheets" was, I think, put on the parcel by mistake.

359. I understand that you were about nine months in camp?—Yes, sir.

360. Can you now, on reflection, think of any objection to the adequacy of the medical or ambulance arrangements?—There were lots of things which the doctors should have got, I think, but if I had started to order these things they would have considered it interference.

361. Can you give me any answer to my question: can you, on reflection, think of any substantial alteration that ought fairly to have been made as regards accommodation, better equipment, or better arrangements?—We might have had a wooden building erected.

362. Is that all?—That is all.

363. I want to get this from you: do you say that the arrangements made for coping with the sickness in the camp during the period you were there were adequate?—For ordinary sickness, I think so; but for other sickness I cannot say.

364. You will not express any opinion?—I do not think I am in a position to do so. I would like to make one or two remarks about other things. In regard to the evidence which has been given here respecting the carrying of bread in blankets, there is a definite camp order that this is not to be done, and any breach of a camp order should be punished by the O.C.

365. *The Chairman.*] What means are there for carrying bread?—They could get scrim—there is any amount of it.

366. Is it there for that purpose?—It was always used by the Third and Fourth Reinforcements. I saw bread being carried in blankets when the Seconds were in camp, and I said to Major McKillop that it ought not to be done, and Colonel Potter had it put in camp orders—no bedclothes were to be used for that purpose.

367. We were told that it was carried in sheets and blankets?—That was a breach of camp orders.

368. That being the case, then how were they to carry it?—If a man could not carry it in a blanket he should find some other way.

369. Are there such things as contrivances for carrying bread—light barrows or tins?—There were hand-barrows there, but they were only used between the Quartermaster's camp and the different units.

370. *Mr. Gray.*] Did other men use scrim?—Yes, sir. Then I want to say that we never had any trouble in getting beds, or blankets, or mattresses if we required them for the hospital. When we sent in a requisition it would be got. If I handed it to Captain McCristell he would put it through.

371. *The Chairman.*] You are not saying whether they were wanted or not, but you had no trouble as regards the supply of the articles if they were requisitioned for?—That is so. We put up a record by getting beds, mattresses, and pillows within fourteen hours.

372. Going back to February, was that the condition of things then?—The same condition of things has ruled right through. The same men have had control of things. Major Holmes had no trouble in getting those things.

373. Did not he get them from the patriotic societies?—He came to town and got them. I do not know whether he troubled about requisitioning for them.

374. *Mr. Ferguson.*] You told us that these sheets came in parcels?—Those old sheets—yes, sir.

375. And presumably new sheets?—They came at New Year.

376. They would not come from the patriotic societies?——

377. *Dr. Martin.*] Major Fyffe says there were none there in February?—At the New Year Major Holmes got pillow-slips and pillows.

378. *Mr. Skerrett.*] Have you heard a general grumbling among the men in consequence of what they thought was inadequate attention at the sick-parades?—Yes, sir.

379. Were those complaints isolated or were they pretty general?—Isolated complaints. You would hear this: "I do not think much of him; he gave me a couple of pills." Most of the complaints were like that.

380. My question to you is: was it not a fact that there was general grumbling—not isolated complaints—about what they thought was inadequate care and attention at the sick-parades?—Not general complaints. The doctors did all they possibly could.

Corporal J. T. BISMAN sworn and examined. (No. 54.)

1. *The Chairman.*] You are now at——?—Rangiotu.

2. And how long were you at Trentham?—I came into Trentham on the 28th April, and was there until they moved the camp of our regiment to Rangiotu—a couple of months.

3. Where were you located at Trentham?—I was in a tent for a month, and in hutments for another month.

4. What hut?—No. 38.

5. Have you been in hospital at all?—I reported sick about a fortnight after I went to Trentham. When I first came in they did not have any boots the right size for me. I got wet feet and caught a cold. I got over that all right, and I was all right until I was in the huts. I had another turn of influenza, but I never reported sick. Since then I have been all right.

6. What was the state of comfort in the tents as compared with that in the huts?—The tents are far more comfortable and warmer than the huts. I would rather live in a tent than in a hut.

7. What was the population of the huts?—The one we were in was overcrowded.

8. How many were in it?—There were over seventy for a fortnight.

9. You have heard the descriptions applied to them by Sergeants Blackman and Gear?—Yes.

10. Do you confirm that?—Yes.

11. Do you know whether the other huts were filled?—Well, there was none with less than fifty in it; that was the huts which were completely finished. I believe there was more than the one overcrowded, but I could not say for certain; I am pretty sure.

12. We have heard of the bread being carried to the huts in blankets: did you ever carry it?—No.

13. How was it carried?—I never saw it carried, but I know it was carried in oil-sheets.

14. Did you know of the order for using scrim?—No, sir.

15. Or that you could get scrim?—I never heard of it.

16. Do you know of any tents that used scrim for carrying the bread?—No, sir.

17. Did you ever see any used?—No. Up at Rangiotu they have a "carrier"; it is a sort of frame made with scrim or board.

18. So that a man at each corner could work it?—Two men, one at each end.

19. So that the bread is not handled?—It is not handled there.

20. As to the huts, did you sleep near the door?—No, up near the end in the corner, away from the door. I did not notice the draught myself, but there was a general complaint on the ground from every one in the hut.

21. You were somewhat out of it?—Yes.

22. You confirm what has been said as to the air being fusty?—Yes, sir.

23. You were saying that you did not get your boots?—It was nine days or a fortnight before I got my first issue of boots.

24. And they did not fit you?—Yes, they did, the first issue; but the second issue did not.

25. When did they get them?—Just before leaving Trentham. I tried to break them in, but it was impossible.

26. That is, the strange shape?—Yes; just one piece of leather round.

27. Do you know how they were marked?—"Standard," I think.

28. Were the first boots branded "Standard"?—I do not think so. It is a different make.

29. The authorities know of it?—Yes. I have been in camp thirteen weeks, and I have still only the one pair. I had my own pair of boots, but if I got wet-footed I have no others. My first pair of boots are good ones.

30. *Mr. Gray.*] You were sick once or twice?—I was sick twice. I only reported once and saw the doctor once.

31. There was no lack of attention to your complaint?—As regards the sick-parade?

32. When you reported sick?—Well, I did not seem quite satisfied. I had a cold and I got one pill, which I thought hardly satisfactory to cure a cold, but I got better.

33. You thought you were not getting enough?—Yes.
34. You did not complain again?—No.
35. Did you make any complaint, or did you hear of anybody in your hut complaining of the overcrowding?—It was a general complaint. The O.C. himself knew it was overcrowded.
36. Who was the O.C.?—Lieutenant Cowles.
37. You do not know whether the complaint got past him?—I think it would.
38. Where is Lieutenant Cowles?—Up at Rangiotu. They were not ready for us.
39. There was a shortage of accommodation: were you amongst the "Trents"?—Yes.
40. 1st or 2nd Battalion?—1st.
41. And there was no other accommodation?—No.
42. There were a lot of handy men in camp?—In what way?
43. Men of all trades. Do you know why some of the men could not have made a bread-carrier?—If they had known about it, and there was wood to do it.
44. They could have done it?—Yes.
45. I think you said that you yourself never saw how the bread was carried?—No, I never saw it carried.
46. *Mr. Skerrett.*] Do you know what was the general feeling in the minds of the men as to attention given to them on the sick-parade?—The general notion, as far as I know, was that it was satisfactory except for one thing. When I was battalion orderly-corporal, a fortnight before leaving Trentham, it was my duty to be down there. One morning it was raining, and had been raining for a couple of days before, and very foggy. The sick-parade was at 8.15 a.m. The men had to be paraded at 8 o'clock, and it was 10 o'clock before they were through. They were standing there all the time, eighty of them, for one doctor to go through.
47. *The Chairman.*] And were these men standing in the open?—They were in the open, yes.
48. Was there no place where they could have had shelter?—No, sir.
49. No marquee alongside?—No.
50. You were in charge of them?—No; each corporal had his own men.
51. Who was the medical man attending that morning?—Dr. Bogle.
52. *Mr. Ferguson.*] Who was the sergeant-major there?—There was no sergeant-major there.
53. Who would be the officer receiving them?—They would come in their order; the orderly-corporal would receive them in the tent.

Colonel Purdy: I would like to remark about the statement just made regarding eighty men being examined by one doctor. This corporal belongs to the 1st Battalion of the Trentham Regiment. According to regulations each battalion had a Medical Officer, a regimental officer. There were two Medical Officers, one attached to No. 1 Battalion, and one attached to No. 2 Battalion. When the Trenthams first came into camp I asked Colonel Fulton if he would prefer to have his Medical Officers trained with his regiment, and he said he would, and the two Medical Officers were appointed to his regiment. The personnel and everything was arranged so that the whole of the interior economy of those regiments was complete. They could have got as much help as they required.

Dr. Martin: This was an ordinary regimental sick-parade?

Colonel Purdy: Yes, sir.

EDWIN ARTHUR BARTLETT sworn and examined. (No. 55.)

1. *Mr. Skerrett.*] Where do you reside?—Palmerston North.
2. When did you join the Third Reinforcements?—On the 14th December, 1914.
3. On the 24th January, 1915, you were taken ill?—Yes.
4. What was your complaint?—Appendicitis.
5. Where you then at Trentham?—Yes.
6. And what happened to you?—I was taken into the hospital.
7. Where?—To Wellington Hospital; and on the 26th January I was operated upon. I was discharged from the hospital on the 8th February.
8. Practically thirteen or fourteen days after the operation?—Yes.
9. Where did you go then?—Through to my friends at Cambridge.
10. Were you given leave of absence?—Yes, for three weeks. When two weeks were up I was not feeling too well, and I saw Dr. Thompson at Hawera, and he got another week's leave for me, which gave me a month altogether. Then I returned to Trentham. The next day I was not feeling too well, and I went to see the doctor, and he put me on the Medical Board.
11. Of whom did the Medical Board consist?—Captain Fyffe, Colonel Purdy, and another doctor.
12. Were you examined by them?—Yes, by Captain Fyffe.
13. What took place?—He found out I was ruptured.
14. *Dr. Martin.*] On which side?—On the left side; and I was immediately discharged.
15. *Mr. Skerrett.*] Had you any funds at that time?—No, only what I had to draw.
16. Up to that very day?—That is so.
17. There was no leave granted to you?—No leave-money, no.
18. But directly you were ascertained to be suffering from rupture your pay ceased?—Yes. I could not do anything. I have no parents and no home, and I have had to live on the charity of my friends.
19. Did you attribute anything of your present condition to your premature discharge from the Wellington Hospital, or to any other circumstances?—I was discharged too soon from the Wellington Hospital, and being weak it caused the rupture. When I went into camp first I was medically fit—as fit as any man who went there.

20. *Mr. Gray.*] When you were operated on it was on the right side?—Yes, sir.

21. What did you do when you were discharged—what did you do in the country?—Nothing at all.

22. No riding about?—No.

23. Who was the doctor who attended you in the Wellington Hospital?—Dr. Hislop.

The Chairman: I do not quite see how this matter comes within the scope of our Commission. If there is blame, it is in regard to the discharge of this man too soon from the Wellington Hospital. The other claim appears to be one for pay on discharge. Of course, in civil life there would be one month's pay due in lieu of notice.

24. *Dr. Martin.*] Are you going to get your rupture fixed up and join the Army again?—I cannot afford it.

25. But it cannot cost you anything at all if you go to the public hospital?—But it would be six months before I would be accepted.

26. *The Chairman.*] What were you before?—A carpenter by trade; there is a lot of heavy lifting in that.

The Chairman: I am afraid we have no means of doing anything practical for you, but now that your case has been brought before the public some provision may be made for you.

CHARLES SMITH sworn and examined. (No. 56.)

1. *Mr. Skerrett.*] You reside in Christchurch?—Yes, sir.

2. And you are a mail-room clerk, employed in the post-office in Christchurch?—Yes.

3. You desire to bring under the notice of the Commission a complaint concerning your brother, Ernest Smith?—Yes.

4. When did your brother go into camp at Trentham?—On the 12th June.

5. With what reinforcements?—The Seventh.

6. Was he quite well up to the 17th June, so far as you know?—As far as I know, sir, yes.

7. I think he wrote home to say he was all right on that day?—Yes, the 17th June.

8. When did you next hear from him?—He wrote to me on the 20th June, and said he had a slight cold, which, however, he reckoned would be easily settled.

9. When did you next hear of him or from him?—We did not hear anything from him at all, only through a friend of his who came down.

10. What was his name?—Brunton.

11. He came to Christchurch on Saturday, the 3rd July?—Yes.

12. He called at your mother's residence in Linwood?—Yes.

13. What information did he give your mother?—He said that her son was in the Wellington Hospital suffering from influenza, and looked rather bad.

14. And when did you yourself hear that news?—On the Sunday evening, the 4th, when I called at my mother's place; and on the Monday morning, the 5th, about 11.30, I wired to the Wellington Hospital asking for full particulars of my brother's illness. I sent a reply-paid wire, and in the afternoon, about 3 o'clock or 3.30, I received a wire from Dr. Barclay saying, "Left hospital yesterday."

15. You received that on Monday, the 5th July?—Yes.

16. Did Dr. Barclay's telegram convey to your mind that your brother had been discharged cured?—Yes, that is what we thought.

17. Have you a copy of your telegram and Dr. Barclay's reply?—I have not my own, but I have Dr. Barclay's wire. [Telegram put in.]

18. Then, on Wednesday, the 7th July, you received from the Camp Commandant at Trentham a telegram saying, "T736, Private C. Smith, dangerously ill Trentham Racecourse Hospital, sudden attack.—Camp Commandant"?—Yes.

19. Did your mother, your three sisters, and yourself come up on Wednesday night's boat?—Yes.

20. Arriving at Trentham at about 10.45 on the following morning?—Yes, sir.

21. Your brother died at 12.45 the same day, Thursday?—Yes.

22. Did you see your brother?—Yes, I saw him.

23. At the hospital?—Yes.

24. What was his condition?—He was unconscious.

25. When you arrived?—Yes.

26. Did he regain consciousness?—I think only for a moment, when he heard his mother speaking to him.

27. While you were at Trentham did telegrams arrive at your mother's house in Christchurch?—Yes, sir.

28. Relating to your brother?—Yes.

29. There were two of them—on the 8th?—Yes. The first one read, "T744, Private C. Smith, in Racecourse Hospital, Trentham, condition serious; advise relative come at once.—Camp Commandant"; and the second, "Private C. Smith's condition very much worse; advise come immediately.—Captain Crawford."

30. At what time were they despatched?—One was handed in at 9 o'clock and the other at 9.15 on the morning of the 8th. [Telegrams put in.]

31. Can you give the Commission any information as to whether your brother was in the Wellington Hospital, or what happened to him afterwards?—That is what I have been trying to find out; I have not had a chance yet.

32. I think it has been stated, has it not, that your brother was removed to the Kaiwarra Hospital on the 16th June: where did that come from?—That is a mistake. Mr. Russell made that statement in the House on the 9th July.

33. You think that is wrong?—I think that must be wrong.

34. Apparently he must have been in the Trentham Camp on the 20th?—Yes.

35. Do you know whether any other persons received a letter from him?—Yes; there is a Mr. Marshall, of Timaru, received a letter from him.

36. What date?—About the same date as mine, the 20th.

37. And there was a letter received by a young lady in Dunedin, whom your brother was corresponding with: what was the late of that letter?—The 3rd July. She said that it had been posted then, and she received it on the 8th July.

38. Have you the envelope?—No.

39. Where was it written from?—The Wellington Hospital.

40. Was any information given to you as to the cause of your brother's death?—I could not get very much satisfaction. One doctor said it was malignant measles, and another one told my mother it was pneumonia.

41. Who was the doctor attending him at the last?—Captain Harrison, I think.

42. Captain Crawford sent the telegram?—Yes.

43. What do you think were the movements of your brother: was he discharged from the Wellington Hospital?—I think so, and taken to the Trentham Military Hospital. I do not know how he came to be discharged, because he could not have been in a fit state.

44. One would not have imagined that he would have been discharged. There is a difference between a removal and a discharge. A discharge would be the discharge of a man cured, but a removal infers a transfer to, probably, another hospital for convalescents, to enable him to fully recover. Can you get no information about it?—No. He was in the Wellington Hospital for a few days, because this friend of his, Mr. Brunton, called at my mother's place and told her.

45. Do you know when he left the Wellington Hospital?—He left there on the Sunday; but his movements from then on till he died we cannot find out. I want to say also that my mother says that her boy was lying in bed when she saw him with a dress-jacket on, and no underclothes.

46. *The Chairman.*] She has heard that?—She saw him; and in that same room, which was very small—about 5 ft. by 10 ft.—there was another trooper very ill whilst my brother was dying. It seemed rather too much of a crowd there.

47. *Mr. Ferguson.*] The room must have been bigger than 5 ft. by 10 ft.?—It was a very small room. I think they were dressing-rooms, just as you go in at the gate. The stretcher of this other young fellow was at the end of my brother's stretcher.

WILLIAM JOHN LUKE sworn and examined. (No. 57.)

1. *Mr. Skerrett.*] Where is your residence?—My home is in Dannevirke.

2. What are you by occupation?—A carrier.

3. You have not expressed any desire to be called as a witness before the Commission?—No, sir.

4. You have been called in response to a subpœna which was issued upon information supplied to me?—Yes.

5. You are, I think, a member of the Sixth Reinforcements?—Yes.

6. When did you go into camp?—About the 20th April, the Tuesday after the Fourth Reinforcements left.

7. I think you got a cold and influenza some time towards the end of June?—Yes; I think about the 22nd June.

8. Were you sent to the hospital?—Yes, at the racecourse.

9. Where were you put?—In a loose-box.

10. How long were you there?—About twenty-four hours.

11. What did you sleep on in the loose-box?—On a palliasse laid on the floor.

12. From there where were you removed to?—To the tea-kiosk.

13. Was that pretty full?—Yes; there were a good number there. I could not say how many; it was pretty full up.

14. What do you say about your treatment in the hospital?—I had nothing much to complain of. I objected to the way they gave the men medicine and took the temperatures.

15. Tell us in detail what your experience was in regard to giving medicines?—One of the orderlies used to bring a cup or a tin pannikin.

16. *The Chairman.*] Was it glazed?—No, just an ordinary tin pannikin, I think. I would not be quite certain. Two men used to come round. One used to have a pannikin with water in it, in which he used to dip the spoon after giving each man a dose of medicine, but the other fellow never dipped the spoon in anything.

17. It passed from one to another?—Yes, without dipping it in anything.

18. *Mr. Skerrett.*] There was no sterilizing or cleansing of the spoon between the administration of the medicine to one patient and the administration of the medicine to another patient?—No, nothing of that kind.

19. How about taking the temperature?—The same thing applied. One had a cup or something, in which he dipped the thermometer, and the other went from one to another the same as with the medicine.

20. The orderly in each case who made some attempt at cleansing and sterilizing, with what material did he do it: was it hot water?—I had no idea.

21. How often were you examined while in the hospital?—Twice every day.

22. I understand you have no complaint to make about your actual treatment in the hospital?—Nothing as regards the doctor's treatment.

23. *The Chairman.*] It is the attendance that is at fault?—Yes.

24. *Mr. Ferguson.*] This was before the nurses were there?—Yes, some time before.

25. *Mr. Skerrett.*] How about the food?—I did not take much interest in that. I tasted it once or twice, and did not like the look of it all along. It would not compare favourably with what we got in our lines.

26. Do you know how many patients there were in the tea-kiosk when you were admitted?—When I was admitted I heard it remarked that there were a hundred and twenty there.

27. How many attendants were there?—There were only two constant attendants. There were some others who gave help in the meantime.

28. Is there anything you would like to say about either the camp treatment or the medical treatment?—I have no complaint to make as regards the camp treatment. I was treated pretty well in camp, as far as I know.

29. *The Chairman.*] On the day you were taken to the tea-kiosk, where had you been before that?—In a loose-box.

30. But before you were put into the loose-box?—In my own lines.

31. In a hut or tent?—In a tent.

32. Was it a very bad day?—Yes, it was rather bad—a drizzling rain sometimes.

33. Were any of the others except yourself cleared out of the tents that day?—Not to my knowledge.

34. *Mr. Ferguson.*] You went on sick-parade, did you?—Yes, I went in the morning and again in the afternoon, and they sent me to the hospital in the afternoon.

35. Were you standing out in the rain waiting to be seen?—It was not drizzling rain in the morning: the rain only came on on my way to the hospital. There was no rain at sick-parade.

36. *The Chairman.*] You had no experience of the huts?—I had none at that time. I have had some this last week or so.

37. How have you found them as compared with the tents?—I would sooner be in a tent, but the huts are all right.

38. Can you get warm in them?—Yes, I could keep fairly warm.

39. *Mr. Ferguson.*] Why would you rather be in a tent than a hut?—It is more like home life in the tents.

40. *The Chairman.*] There are only eight in a tent?—Yes.

41. And how many in the hut you are in?—Just about thirty.

42. There are openings along the eaves of the hut, are there not?—Yes.

43. Have they been closed up at all?—No; they are still there.

44. Is there any means of shutting them or closing them provided?—Not that I know of—I do not think there is.

45. *Mr. Ferguson.*] Do you object to them?—No.

46. You found no draught in them?—No; I have found no inconvenience so far.

47. Do you generally keep the windows open at night?—Some of them, but not all.

48. The hut is not unduly draughty?—I do not think so. I do not feel any inconvenience myself.

49. *The Chairman.*] Do you find it stuffy in the morning after a still night?—I cannot say I do.

50. *Mr. Gray.*] You have no complaint to make with regard to the huts?—No.

51. Nor any complaint with regard to the conduct of the camp or the food?—No.

52. Or the way in which the officers looked after you?—None whatever.

53. How long were you in the hospital?—From the Tuesday night till the Saturday. I left the tea-kiosk about 11 o'clock and got my discharge about half past 5.

54. You were there for a full four days?—Yes.

55. There was a big rush of patients?—The rush was only just beginning.

56. I think you said there were a hundred odd in the kiosk?—A hundred and twenty odd, I was told.

57. You got over your sickness?—Yes.

58. Do you know the names of the orderlies or the doctors who were attending you?—I only know the name of one doctor—that is, Captain Ferguson.

WILLIAM HAROLD POWELL sworn and examined. (No. 58.)

1. *Mr. Skerrett.*] Where is your home?—At present I am living at Oriental Bay.

2. But before enlisting?—At Pongaroa, near Pahiatua.

3. What are you by calling?—A dentist.

4. When did you join the camp at Trentham?—On the 26th June, this year.

5. What reinforcement did you join?—I was not attached to anything at the time.

6. *The Chairman.*] You joined as a professional man?—I went on the Medical Corps.

7. *Mr. Skerrett.*] How long were you in camp before you contracted an illness?—I suppose about four days.

8. Where were you quartered—in a tent or a hut?—The first night I was in a tent, and henceforth I was down in a loose-box.

9. *The Chairman.*] Not because you were ill, but because they were comfortable quarters?—It was supposed to be nearer our work at the tea-kiosk.

10. You were not put there by way of punishment?—Not that I am aware of.

11. *Mr. Skerrett.*] What have you got to say about the loose-boxes?—Well, not a very great deal about the loose-boxes themselves. Of course, we settled down and got fairly comfortable in them. There were only four men to each loose-box. I cannot complain, or say there was any disagreeable odour or anything of the sort, but one of my main objections to sleeping in the loose-box was that there was a horse there handy—just across in the opposite loose-box.

12. Actually stabled there?—Yes, for several days.

13. *The Chairman.*] It belonged to some one in the camp, I suppose?—I could not say.

14. *Mr. Ferguson.*] How many feet away would that be from some of the men?—I suppose about 6 ft. from some of the men at the end of the loose-box.

15. The men were in the adjacent box?—Yes.

16. *Mr. Skerrett.*] And how far would it be from you?—I suppose 15 ft. or 16 ft.

17. Were there any men ill with influenza anywhere adjacent to the place where the horse was stabled?—Yes, there were four or five men suffering from influenza, I understand, in the box adjacent to the animal, and they were supplied with food by their mates about the place. They seemed to have an objection to going into the hospital, and were dodging it.

18. *Dr. Martin.*] Had they reported ill to the Medical Officer?—I could not say.

19. *Mr. Skerrett.*] I think while you were living in the loose-box you were acting as orderly in the tea-kiosk, were you not?—Yes.

20. What have you to say with regard to the organization or equipment of the tea-kiosk at that time?—When I went on duty first in the tea-kiosk, and practically all the time, there was a shortage of thermometers. On one or two occasions it was impossible to obtain any sterilizing agent whatever. Of course, to my mind the taking of the temperatures was most unsatisfactory.

21. *The Chairman.*] In what way—in the manner of taking them, or the result?—I was with a man the first night who did not know how to do it. There was no instruction given at all. A man was put on, and they would trust to luck that he knew how to take temperatures.

22. *Dr. Martin.*] What was that orderly's name?—I do not remember his name.

23. The orderly used to take the temperature but had had no training?—Yes. He asked me how the thing was done, and the upshot of the thing was that I did the lot myself. Then, as the admissions to the hospital gradually increased they gradually got beds, or stretchers and mattresses, and I had great difficulty in getting about at all among the men at night because the beds were absolutely jammed tightly one against the other. It was a matter of crawling over the sick men really to get at them at all.

24. *The Chairman.*] What doctors were then in attendance—Drs. Ferguson and Harrison?—Yes, they were both there.

25. Who was in charge?—Major Stout was in charge of the hospital at that time, I think.

26. *Mr. Skerrett.*] Then, may I take it that during the time you were orderly in the tea-kiosk hospital there was a shortage of thermometers, and there was no sterilizing agent?—On one or two occasions I could not obtain any sterilizing agent.

27. And on those occasions I suppose you were compelled to use the same thermometer on a great many patients without cleansing?—The only thing I could do was to take a piece of rag and make some pretence at cleansing.

28. *Dr. Martin.*] Did you take the mouth-temperature?—Yes.

29. *Mr. Skerrett.*] What was the lighting of the hospital at this time?—Well, somebody might have a lantern, and towards the end when the nurses arrived the nurse would take a stable-lamp. There was only one I saw, and I would have to get a candle and wedge it into a cup and wander round with that.

30. May I ask whether in your judgment there was any reasonable organization in the hospital?—Well, I am not a medical man, but as far as I could see to my mind there appeared to be a fair lack of organization in the conduct of the place.

31. *The Chairman.*] Are you speaking only of the kiosk?—Yes, only of the kiosk.

32. *Mr. Ferguson.*] That is up to the time the nurses came and afterwards?—Yes; they were just beginning to settle down a little bit when I was taken ill.

33. Have you the date?—I went into the hospital on the 3rd July, and I was pottering about for two or three days previously.

34. *The Chairman.*] You only had four days in the kiosk and the loose-box?—I was working until Saturday, the 3rd July.

35. *Mr. Skerrett.*] What arrangements were made for the ablutions of your portion of the Force?—When I went into camp I inquired where the ablutions were to be performed, and I was directed to a lavatory at the end of the trainers' quarters.

36. *The Chairman.*] Those are the ablutions within the racecourse area and not the camp proper?—Yes. I was told that that was set apart for the orderlies' use. I made a practice, with one or two others, of going there for washing until I discovered, I think, three patients in there, one being pretty bad with measles at the time, and the other two were contacts.

37. *Mr. Skerrett.*] I think before you became incapacitated there were as many as three hundred in the hospital?—Yes, close on that on some occasions.

38. Apparently after you had been about a week in the camp you contracted influenza, and were admitted into the hospital yourself in the tea-kiosk on the 3rd July?—Yes.

39. Tell me what your experience was there?—I was taken over on the Saturday into the kiosk and there was nothing much to do except to wait for the turning of the tide.

40. What time were you admitted on the Saturday ?—On the Saturday evening.

41. What time on the Monday did you get away ?—I got away from the camp at 3 o'clock on the Monday.

42. Tell us what took place ?—On the Monday morning I was told I was well enough to get up, and I lined up with about a hundred others. We went through a rapid examination by one of the medical men, who gave us leave varying from ten to twenty days. I myself believe that I was not in a fit condition to be discharged from the hospital. And in view of after-events I think I was pretty correct.

43. *The Chairman.*] Are you on leave now ?—Yes, sir.

44. *Mr. Skerrett.*] Can you tell me what your temperature was on the Monday or Sunday night ?—On the Sunday night I was a shade over 100, I think.

45. What time ?—I think that would be the Monday morning about 3 or 4 o'clock. We used to have to start about 4 o'clock.

46. That is the day you left ?—Yes.

47. Do you know whether your temperature exceeded 100 ?—It was one or two pionts over 100.

48. What leave of absence were you given when you were discharged from the hospital ?—Ten days.

49. Tell me what your experiences were subsequent to leaving the camp at 3 o'clock in the afternoon ?—I intended to catch the next steamer to Marlborough on Tuesday evening at 5 o'clock. I came out of camp into town on the Monday evening, and I felt pretty bad.

50. Did you come in by train ?—Yes. I felt pretty bad, and I went to bed in a hotel in town. On the Tuesday morning I was no better, and I decided to get up and go to bed round at my mother's place, in Roxburgh Street, which I did. I went to bed on the Tuesday, and on the Wednesday morning I called in Dr. Steele, as I was no better, and he attended me for several days.

51. What was his diagnosis of your trouble ?—He told me the other day, when I asked him to express an opinion, that both my lungs were chock-full of pneumonia.

52. *Mr. Gray.*] When did he say that ?—Three or four days ago.

53. *Dr. Martin.*] How long were you in bed ?—About twelve days, and then I was confined to my room for close on a week after that.

54. *The Chairman.*] You have almost just got up ?—Yes, about a week.

55. Were you twelve days in bed with pneumonia ?—I do not know whether he actually meant I had pneumonia.

56. *Mr. Gray.*] "Chock-full," you said ?—That is how he described it—that both my lungs were chock-full of pneumonia. Whether he meant I had warded it off I do not know.

57. Do you think that your case was an isolated case, or do you think that pressure existed upon the doctors in charge of the tea-kiosk to prematurely discharge patients ?—I took it this way: that if a hundred men came along from the camp to be admitted to the hospital, room had to be found for them, and I took it that an equal number of the best would have to be discharged, because there seemed to me to be no room at that time to receive the number of patients that were ordered into the hospital.

58. *The Chairman.*] You drew the inference that there were premature discharges to make room for the patients that were worse ?—Yes. We were told to go home and get better.

59. Did you get any medical attendance between the Saturday and Monday ?—No. I wanted a laxative, but when I saw how the laxative was to be administered I said I did not want it.

60. Did the doctor come round to see you ?—No, I saw no doctors while there.

61. *Dr. Martin.*] Was your chest examined when in the hospital ?—No, no examination.

62. *The Chairman.*] When you applied for the laxative did you send for the doctor or speak to the orderly ?—Oh, no; they were bringing it round and inquiring of the men who wanted it. I wanted it, but I thought I would sooner go without.

63. Was it given out of one common spoon ?—Yes. There were measles patients two or three yards from me, and I did not like the idea of taking it after the measles patients without any sterilizing.

64. *Dr. Martin.*] Were there measles cases in the kiosk ?—Yes; I saw patients there with measles myself.

65. You are quite satisfied about that ?—Yes, quite.

66. You were admitted for a cold ?—Yes.

67. And you are quite definite that there were measles cases there ?—Yes, I am quite positive there were measles cases within four or five beds of me; and when I was on duty I saw measles cases at night, and two cases were removed.

68. They were amongst the influenza cases ?—Yes.

69. Were they removed next morning ? I could not say when they were removed, because I did not go on till midnight, but they were gone when I went on next.

70. But no measles cases were sent into the kiosk ?—No; they developed them in the kiosk.

71. And they were removed as soon as the diagnosis was made ?—Yes.

72. *Mr. Skerrett.*] Can you give the Commission any information as to the sufficiency of the conveniences attached to the kiosk ?—Attached to the hospital, to the best of my knowledge and belief, there was one water-closet. The sum total of the conveniences I saw were all attached to the building or connected with the building.

73. Were there any bed-pans ?—Oh, yes; but I was looking at it as a stationary arrangement: there were a few bed-pans.

74. What was the condition of the one water-closet, as a rule ?—Whenever I saw it it was in a filthy condition. It was littered over with the overflow. Evidently the pipe had got blocked, and it was in the habit of overflowing.

75. Have you seen patients putting on their overcoats, and so on, in order to use the conveniences at the exterior of the building ?—Yes, I saw a man one morning. I had just passed him and he got up. I turned round and saw him with his overcoat on. That man had a temperature of about 103·6.

76. *Dr. Martin.*] What was his name ?—I could not remember his name. There were close on three hundred men in the place.

77. Was this while you were an orderly ?—Yes. He was wandering away across the lawn with a temperature of 103.

78. *Mr. Gray.*] Did you stop him ?—Yes. Of course, that was his own fault.

79. *The Chairman.*] Was there no one at the door or entrance to keep the people in where this man escaped from ?—No ; he was on the veranda, and he got up and walked across the lawn.

80. *Dr. Martin.*] Was he on the lawn when you stopped him ?—No ; he was making for it.

81. He was not across the lawn ?—No.

82. That was his fault for getting up ?—Absolutely. That was the case with the majority of the men.

83. *Mr. Ferguson.*] You know men did go ?—I have seen men going across, but not that particular case.

84. *The Chairman.*] Any man with a temperature of the magnitude of 103·6 ?—No ; men with temperatures of 100 and 101 have gone across.

85. *Dr. Martin.*] Did you stop those men ?—Well, when I saw them I did ; but most of them I saw when I was there myself as a patient. The man next to me, with a temperature of 101, got up and went out about 3 o'clock in the morning into the fog.

86. *Mr. Skerrett.*] Have you had any personal experience of the isolation hospital—were you in its vicinity and able to observe its operations ?—The isolation hospital I know nothing of.

87. *Mr. Gray.*] I understand you were in camp for four days before you were transferred to the kiosk ?—No ; I was four days before I got sick, and I pottered on till the 3rd, and then was sent to the hospital.

88. On the fourth day you got your illness ?—Yes.

89. And three days you spent in the loose-box ?—More than that.

90. You had been three days in the loose-box before you got ill ?—Yes.

91. You found no complaint with the loose-box itself—it was comfortable, was it not ?—Yes.

92. And watertight ?—Yes.

93. What was the weather like at this time ?—Bad.

94. And a great many people were going into the hospital with various complaints ?—Yes.

95. There was a rush on at this time ?—Yes.

96. And both the medical men and the orderlies were being overworked ?—Yes.

97. How long did you act as orderly in the tea-kiosk ?—For five or six days, I suppose. From the 27th June to the 3rd July.

98. But you got ill after the first four days ?—Yes, but I was still working.

99. Had you reported yourself sick ?—Not until the Friday—the 2nd July.

100. You had been working some days feeling ill but did not report sick ?—No.

101. You say there was a shortage of thermometers : did you complain to any one about that ?—Yes ; I complained to the corporal in the hospital.

102. Do you know whether the complaint was passed on ?—I could not say.

103. How long was the shortage apparent ?—Well, there was a shortage till I left.

104. How long would that be—a week ?—Six days.

105. You do not know what was done to remedy the matter ?—No. I kept on reporting the matter on occasion after occasion until I got tired of it.

106. You were apparently only three or four days effective ?—I was working in the kiosk for six days, and during that six days I could not get sufficient thermometers.

107. You came to town on sick-leave with a temperature of 100, and had to go to bed next day ?—Yes.

108. What were you doing about town ?—I was lying about most of the Tuesday morning in the Duke of Edinburgh Hotel.

109. What were you doing on the Monday night ?—On the Monday night I was with a friend till about 10 o'clock.

110. At the hotel ?—No, he was staying at the Trocadero.

111. You had been out in the evening visiting a friend ?—Yes, I stopped with him at the Trocadero when I went up, and then went on that evening straight up to the Duke of Edinburgh, where I stopped the night.

112. The next morning you say you spent lounging about the hotel and then went home to bed ?—Yes.

113. Was Dr. Steele called in on the Tuesday ?—On the Wednesday morning.

114. And how long did he attend you ?—About twelve days while I was laid up. I do not know how many visits he made, but he was attending me for twelve days, and I have seen him since at his residence.

115. Is it since you have been able to leave the house that he told you your lungs were chock-full of pneumonia ?—He told my brother.

116. When did he tell you ?—He told me since I left the house.

117. *The Chairman.*] That they were chock-full or are chock-full ?—They were when he first saw me.

118. *Mr. Gray.*] Can you tell me when he made that statement ?—Not definitely—it is three or four days ago.

119. During the present week ?—Yes.

120. Speaking of the sanitary conveniences, you say you saw the water-closet pipe blocked ?—No, it was apparently in the habit of getting blocked at certain times; and, I should say, because of the mess on the floor, that it was in the habit of overflowing, although I never saw it overflowing.

121. Were you on duty at the time or a patient ?—I was on duty.

122. Did you make any complaint to any one about it ?—Yes, I told the corporal in charge of the hospital about it, and he could see it himself.

123. Was that fixed up all right ?—No, it went on for several days, and then I went to bed, and saw no more about it.

124. With respect to the men who you say went outside: that was their own affair, I suppose ?—Yes, absolutely. There was nothing to stop them. The only complaint they made was that there were not sufficient conveniences to go round to prevent them getting up.

125. There were a great many patients, were there not ?—Yes, two hundred and seventy or three hundred at times.

126. You were given ten days' sick-leave to go home and get well, I understand ?—Yes.

127. Why did you elect to go to a hotel ?—Because I could not get home. I understood at camp I was discharged, and I could not get a boat till Tuesday night.

128. Your home is not in Wellington ?—No; my people are staying here.

129. You went to bed eventually at your mother's house ?—Where she is staying.

130. When you spoke of home, you meant out of Wellington ?—Yes.

131. Could you not have gone to where your mother was staying in the first instance ?—Well, I do not know that I could, exactly. There were difficulties about my getting a room at the house at the time.

132. *Mr. Ferguson.*] You said you were on night duty ?—Yes.

133. Were you on night duty all the time ?—Yes, with one exception, when I took afternoon duty.

134. How many hours were you on for ?—Just six hours and a half—from midnight till half past 6 in the morning.

135. And the only light you had was a stable-lantern and one candle ?—I had one candle; and any one else who wanted a light would have to improvise some candle-holder.

136. There was no general light for the whole place ?—No.

HAROLD LOCKWOOD sworn and examined. (No. 59.)

1. *Mr. Skerrett.*] Where do you reside ?—At Island Bay.

2. What are you ?—A builder and contractor.

3. How long have you been in the building trade ?—Very nearly thirty years.

4. Do you know Trentham well ?—Yes.

5. Have you built houses there ?—Yes.

6. Were you employed as a carpenter in the erection of the hutments at Trentham Camp ?—Yes.

7. How long were you there ?—Just upon five weeks.

8. Have you had previous experience elsewhere than in New Zealand in the erection of huts ?—Yes.

9. Where ?—In South Africa during the Boer War.

10. How many huts did you erect in South Africa ?—I erected seven in Simon's Town and fourteen on Cape Point Common at Capetown for the Imperial Royal Engineers.

11. Can you tell me the holding-capacity of the huts you erected for the Imperial Army in South Africa—how many men they were designed to accommodate ?—It is some years ago, but very nearly the same number at these here ought to hold—about fifty men.

12. Can you remember their general dimensions ?—Yes, they were about 60 ft. by 30 ft., and the height 10 ft. in the clear, inside.

13. Gable-roofed ?—Yes.

14. Were they constructed of wood ?—Wood and iron.

15. Were they lined ?—No.

16. Was the iron painted or unpainted ?—Unpainted.

17. Do you consider yourself qualified to express an opinion about the Trentham hutments ?—I do, certainly.

18. What is your opinion about them ?—No doubt they are all right in the way of a building, but I do not think they are suitable for what they are intended. They could have been arranged far better in the way of height and ventilation, and the position they are placed in.

19. Their relative positions to one another ?—Yes.

20. In regard to the ventilation, first, what have you to say about that ?—I do not think there was any need for that second lot of ventilation on the walls.

21. *The Chairman.*] You mean the openings along the eaves ?—Where the rafters come down on the wall of the building, that makes 4 in. of space. That was quite sufficient without putting the second ventilation of 6 in. underneath that again. Practically they get 10 in. of ventilation all round.

22. On four sides ?—No, two sides.

23. *Mr. Skerrett.*] Was that in your opinion excessive ?—Yes.

24. You have lived in one ?—Yes. There are 4 in. on the top where the rafter comes down, and underneath there is 6 in., which makes a total of 10 in.

25. You are satisfied it is 10 in. ?—I would not be certain.

26. We had evidence it was 4 in. ?—No, that is not right. I would not like to be too sure of an inch. At any rate, there is between 8 in. and 10 in. of ventilation.

27. *The Chairman.*] How did they ventilate the hutments you built at Simon's Town and Cape Town?—There was louvre ventilation in the gables at both ends.

28. Were the sides of the buildings in South Africa of galvanized iron?—Yes, sir.

29. What sort of floors—tongued and grooved?—The construction was different altogether. The huts I put up were not built on piles at all. The climate there, of course, is different from what it is here. The ground was simply levelled off, and the frame stood right on the ground. The bottom plate rested on the ground: it was not nailed or fastened in any way. Then, instead of the flooring being put in solid throughout, it was put in in sections—in 10 ft. squares. The flooring was nailed on to the joists, and was put in in sections and fitted together. That was done, I think, for cleanliness, because the floor used to be lifted out after the men had slept, and taken outside and scrubbed and dried, and then put back into the hut.

30. Like lifting the hatches off a ship?—Yes.

31. *Mr. Ferguson.*] What sized flooring-boards had you to make these sections of?—It would be just the ordinary flooring—6 in. by $\frac{7}{8}$ in., tongued and grooved.

32. What sized doors?—Double doors—sliding doors. I think the opening was over 12 ft. It was very wide, to let in plenty of air.

33. These sections must have been very heavy. It would need a number of men to shift a 10 ft. section?—Four men would do it; a section is quite light.

34. It would be like a large mortar-board?—Exactly; the same as you see used for concreting.

35. *Mr. Skerrett.*] Did you have any actual experience of the draughtiness of these huts at Trentham?—Yes.

36. Just tell the Commission what it was?—I slept there for four weeks—over four weeks.

37. *The Chairman.*] Which—was it No. 38?—I could not tell you the number. I slept in the end one. It perhaps got a little more wind than some of the others.

38. *Mr. Skerrett.*] What was your experience?—We could not burn a candle at all some nights. There were three hanging lamps in this hut that we were sleeping in, and on windy nights the wind got at the light and the glass became so smoky that we could not see. A candle would burn, but it would burn away so quickly that it was nearly useless. When the draught is as bad as that I think it is too much to sleep in.

39. What was the nature of the timber of which the huts were built: was it seasoned or unseasoned?—As green as possible.

40. You are satisfied about that?—Yes, absolutely.

41. Does that apply to the flooring?—Some of the first of the flooring, I suppose, when they had a choice, was fairly dry; but after that a lot of it was not.

42. What was the nature of the construction of the roof at Trentham?—I think the construction was very bad.

43. *Mr. Ferguson.*] How was it bad?—From a builder's point of view it is a very weak roof. For one thing, there is a collar-tie high up: instead of having a proper tie-beam they have a collar-tie higher up.

44. *Mr. Skerrett.*] I understand that your complaint as to the roof relates really to the stability of its construction?—Quite so.

45. Have you heard of anything which suggests that the roof of the hutments proved, in point of fact, to be unsuitable or insufficient?—They have not had time to show.

46. What do you say about the wall-height?—It is far too low.

47. What are they?—7 ft. high on the outside. Then the ventilation part brings it up to about 7 ft. 10 in.

48. You think that too low?—Yes.

49. *The Chairman.*] What were the South African hutments in height?—The walls were 10 ft.

50. *Mr. Skerrett.*] We know that the Trentham Regiment came into camp on Saturday, the 29th May?—Yes.

51. Were you there then?—Yes, I was working on the Saturday afternoon when they came in.

52. How many huts had been completed then?—Three rows—forty-two; but they were not finished.

53. Forty-two hutments were partly erected?—I think one line had only thirteen: that would make forty-one.

54. Had the majority of these forty-one hutments their windows in?—Yes, the majority. There were about seven that had not, on that Saturday.

55. Did you have the frames and sashes on the job?—Yes.

56. But they had not been fitted?—No. There were, I think, two thousand men came in on the Saturday afternoon.

57. *Mr. Ferguson.*] We had it that there were sixteen hundred came in on the first day?—There were a number put into huts that had no windows at all. These frames and sashes had been on the job, to my knowledge, for over a week, and why they were not fitted in I do not know.

58. *Mr. Skerrett.*] In your opinion, are these hutments too close together, or is there any objection to their position relative to one another?—I think they would have been all right if they had been put further apart. There is a tremendous lot of roof-space, and in wet weather the water pours down there in between the huts: it never was dry. It was all wet ground, and the water never got away. There was no drainage at all.

59. *Mr. Ferguson.*] There was not enough space for it to filter away?—No.

60. *The Chairman.*] Have these huts gutters round them?—No.

61. The rain simply streams on to the ground?—It just goes on to the ground on each side in the narrow space. If it went the other way there, where there is plenty of room, it would not matter so much; but with the way they have them arranged, with this small alleyway between, the roof-water simply runs into the narrow space.

62. *Mr. Ferguson.*] What distance is there between the huts?—I have never measured: I suppose it is one and a half times the height.

63. About 10 ft. 6 in.?—Yes, more than that. I should say, about 12 ft.

Dr. Frengley: It is 20 ft., sir. The height up to the ridge is 13 ft. 6 in. One and a half times that would be 20 ft.

Witness: It would not leave 20 ft. clear in between the iron, because the roof-iron projects over the walls about 18 in. on each side: that would take off 3 ft.

64. *Mr. Skerrett.*] You know these huts are built double—that is to say, there is a partition dividing the hut into two?—Yes.

65. What have you to say with regard to that?—I do not think it is a very good plan. I think it would have been far better if they had been single, with the ventilation in the gables, instead of through an open space at both sides.

66. I gather from what you have said that you would have ventilated these huts by louvres in the gables?—Yes, sir; that would have taken up all the bad air.

67. About conveniences: where did you carpenters wash?—Just outside the shed. We had a temporary place, and paraffin-tins. I think there were about a dozen paraffin-tins cut in half.

68. How many of you were there?—There were about a hundred and twenty men engaged on the work.

69. When the troops arrived, what happened to your washing-places?—At our end of the encampment they had no place to wash, and the result was that I suppose over a thousand men were rushing for our tins to wash in of a morning. Not only that, but these tins were used at night by the carpenters very often. I have seen it myself. Most men want to keep themselves clean, and they washed their bodies in the dark, and in the morning they were used by the men for washing their faces in. Then when the troops came up they rushed for these tins and used them for washing. This was only for a few days. Then after that they came out after breakfast-time and washed their plates and cups in the same tins, without hot water. It was not very sweet. I have seen these tins being used at night-time by the men for washing their feet. For three or four days it was very nasty with two or three hundred men scrambling for these tins to wash their plates and things in.

70. Were any urinals arranged for the men that you saw?—At our end we had a urinal erected just for Public Works men. I suppose it would accommodate about four men. After the 29th, when these men came in, they used it, just the same as they did the tins. There were hundreds of them trying to scramble in early in the morning. When they got up it was dark, and they all had to scramble out to get to physical drill, and they all made a rush for this. I have seen hundreds of them round there when they were rushing out in the morning.

71. You cannot say from your personal observation as to whether more than fifty men were put into each compartment?—There must have been a lot more than that. There were three tables, and they are supposed to take, I believe, fifty men. There used to be a lot more sitting about on the floor. I have heard the men who have come into our hut at night-time speak about being overcrowded. I have heard of as many as seventy men being put into the huts. I do not say that that lasted for long.

72. I suppose a very large quantity of timber was required for the erection of these hutments?—Yes.

73. Do you know where the Government purchased it from?—I have no idea.

74. You do not know whether they put up a special mill for the purpose of getting it?—That I could not say. They had a small saw on the job—a saw for cutting collar ties and so on.

75. How was this timber delivered on the ground: did they have a railway-siding?—No. I do not know why they did not. I think it would have been the making of the place if they had put a siding in first of all—right into the camp. It would have saved everything—sickness too, I believe. It would have prevented the mud; they could have brought in ballast from Belmont. They have even a crusher a few miles down the line; they have every facility for bringing in train-loads of ballast. They could have put that down first of all. Then they could have brought in the timber and put on the clean ballast, and it would have been a different job altogether.

76. *Mr. Gray.*] You were some five weeks there?—Yes.

77. You left before the huts were finished—they are not finished yet: why did you leave?—Because I was told to go.

78. Who told you?—The foreman.

79. What is his name?—Wilton.

80. What reason did he give for discharging you?—None at all. I know the reason why.

81. But he did not give any reason to you?—No.

82. He discharged you?—Yes.

83. When was that?—I think, on the 15th or 16th June.

84. Who was in charge of the construction of the huts?—There were two men out there.

85. Was Mr. Louch?—No. I do not know him personally. Mr. Seddon was the overseer there.

86. Whose duty was it to pass the timber?—That I could not say.

87. Do you not know?—Pass it in what way?

88. To approve of it—to see it was suitable?—That I could not say.

89. You say very distinctly that the timber was as green as possible?—Yes, not seasoned at all.

90. All the carpenters and those who had to do with the erection of the huts could see that themselves, I suppose?—Yes. You very seldom do put seasoned timber in——

91. But this was as green as possible?—Damp.

92. What do you think is the size of these buildings?—142 ft. long, I think, by something like 22 ft. span.

93. The draught, in your opinion, was excessive?—Yes.

94. You prefer the louvre ventilation at the ends ?—Yes

95. Is that not draughty ?—No, not in my experience. I have had a good deal to do with wood and iron—fourteen years in South Africa in batteries and things at the mines. We have always used the louvre ventilation at the mines.

96. Were you at Trentham when the sample hut was built ?—No.

97. Do you know the hut which was built first ?—I was under the impression that the first hut that was built was the one the carpenters are using.

98. Has not that louvre ventilation ?—No.

99. Is there no hut there with louvre ventilation under the gables ?—Not where the soldiers are.

100. How long did you sleep in a hut ?—All the time I was there.

101. The whole five weeks ?—I used to come into town on the Saturday nights and go back on the Sunday nights.

102. Where did you find the draught came from ?—From two places—above and below.

103. What is the draught from below due to ?—Wrong construction of the hut. They put in what they call a plinth, and I think it is a great drawback. For one thing it catches all the water and makes the floors damp. With the corrugations running down the walls you have the iron on the plinth. It catches the water all the while, which runs in beneath.

104. Does it stop the draught ?—No.

105. How would you stop the draught ?—The plinth will stop the draught from coming up under the iron, but it does not stop it from getting underneath the floor.

106. It stops it from coming up the iron ?—Yes.

107. Where do you say the draught comes ?—In between the wall-plate and the flooring. Instead of the flooring running over the wall-plate, as it should do, and right up against the iron, they have built the floor to butt against the wall-plate, and when the flooring dries out a little it will leave a space all along where you will be able to see daylight.

108. That could easily be stopped, I suppose—that small opening at the end of the boards, I suppose, could easily be stopped by a piece of moulding, or packed paper, or something like that ?—You could pack it with paper, yes.

109. A number of men who came in at the end of May were put into hutments that had no windows, you say ?—Yes.

110. Were there frames provided for those windows ?—The frames and the sashes came up separately. The sashes were not fitted. The frames came up ready-made, and the sashes came up separately, and the sashes had to be fitted and hinged on the job. Why that was not done somewhere else I do not know.

111. How long had the sashes been on the ground ?—There were enough sashes to finish the huts that the men went into. I had to cover them up.

112. How long had they been on the ground ?—There were enough sashes and frames there to have done the other huts.

113. It would be the fault of the foreman, I suppose, that they were not put in ?—Yes.

114. What is the foreman's name—Seddon ?—Seddon was the foreman. I suppose the two of them were equally to blame.

115. Give us the name of the other ?—Wilton. You may think I am speaking against him, but I have a right to explain why I say this.

The Chairman: The object in getting the name is that if they think it necessary this man may be given an opportunity of explaining.

Witness: There is no reason that I can think of at all why those sashes and frames should not have been all ready and put into those huts. Besides that, the timber was brought on to the ground by carts, instead of being placed near the mill, where it ought to have been put. It was often unloaded two or three hundred yards away, and then it would have to be brought back to the mill to be cut.

116. *Mr. Gray.*] Why do you not think the double hut is a good plan ?—It is too long.

117. Too long for what ?—With the alleyways between the huts you never get a chance of drying the ground at all.

118. What difference does it make whether the hut is 50 ft. or 100 ft. long ?—If they are broken up more you get more air and wind.

119. That is the only objection ?—Yes, I suppose so—except that you could not get the louvres to act as well in a hut with such a length as in a small one.

AYLMER BLACLIN sworn and examined. (No. 60.)

1. *Mr. Skerrett.*] You are a sergeant-major in the New Zealand Medical Corps ?—No, not at present.

2. You were ?—Yes.

3. Where are you at present—attached to headquarters ?—Yes.

4. Would you mind stating very briefly your military experience ?—Seven years in the Royal Army Medical Corps.

5. In what capacity ?—I joined as a private, and became a sergeant. Before I joined the Army I was in the Navy five years and a half—the Medical Branch of the Navy.

6. So you really had twelve and a half years' experience in the Imperial service on the medical side ?—Yes.

7. I think you came to New Zealand as a civilian ?—Yes.

8. And volunteered for service on the outbreak of the war, and you were sent to Samoa as a private in the New Zealand Medical Corps ?—Quite so.

9. When were you promoted to sergeant ?—Immediately I landed in Samoa. My promotion was antedated to the time I joined first. I took over subordinate charge of the hospital in Samoa.

10. You returned from Samoa in October, I think ?—Yes, about the 14th October.

11. And received your discharge from that date ?—Yes.

12. When did you rejoin ?—On the 28th or 29th October. I received a telegram from Major McKillop asking me if I would rejoin the service as a sergeant-major and take over the training of the Medical Corps at Trentham, which I did.

13. And I think you rejoined at once as sergeant-major ?—Yes.

14. You were at Trentham from the 28th October until when ?—The 1st February, 1915.

15. And you were then transferred to the Wellington Military District headquarters ?—Yes.

16. I do not understand that you have come here to make any complaint: you have come here at my request ?—Yes.

17. *The Chairman.*] You are not a voluntary witness ?—No.

Mr. Skerrett: I have called this witness merely in case he should be able to give us information, and to prevent it being said that if he were not called there was an attempt to keep any information he could give from the Commission. Will you tell us briefly the nature of your duties at Trentham ?—I was responsible for the discipline and the military training of the New Zealand Medical Corps whilst I was there—from the end of October until the 1st February.

18. We will speak throughout your evidence only of that period ?—I have been there since with the No. 1 Stationary Hospital, and in the hospital ship.

19. What was done on sick-parade ?—The men were marched to the marquee—the inspection marquee—by the non-commissioned officers of the various regiments, who brought with them the sick-report. They were handed over to Sergeant-major Dorizac or myself. Sometimes we were both there, sometimes only one. We passed the sick-reports inside, retaining a copy ourselves, and we used to shout out the names and march the men in front of the Medical Officers, who would examine the men and turn round to the clerk sitting at the table and give the diagnosis and instructions for the disposal of the men—whether they were to be returned to duty, or light duty, or sent to hospital. Then they would be passed on to the orderlies in attendance to receive their treatment.

20. Did the examining Medical Officer dictate his diagnosis or treatment, or did he write it ?—He just turned round and dictated it to the clerk. The clerk wrote it.

21. *The Chairman.*] Is that the usual practice ?—Yes.

22. *Mr. Skerrett.*] Were you the senior non-commissioned officer ?—Not at that time. Sergeant-major Dorizac was, but he was only responsible for supplies.

23. It was suggested by Sergeant-major Dorizac that the examining Medical Officer at sick-parade, as a rule, wrote out either the diagnosis or the treatment—or the prescription, if I may be allowed to call it that—and did not merely dictate the one or the other to the clerk ?—That is wrong. If there was a prescription to write they wrote it; but that was a thing that very seldom happened. They had generally got there what was wanted. One Medical Officer would say, "Give that man a dose of salts, or a tablet." The clerks did the writing.

24. *The Chairman.*] He dictated to the clerk what was to be done—told the clerk ?—Yes.

25. And the clerk would then write it down ?—Yes.

26. *Mr. Skerrett.*] I understand it was only when there was some more or less complicated prescription that the Medical Officer would himself write it ?—Yes.

27. And that was in very exceptional cases ?—Yes.

28. How many marquees were there for the examination of those who attended sick-parade ?—At first there was only one, where they were examined and where they were treated.

29. One marquee ?—Yes; and we had a couple of beds—three beds, as a matter of fact. That was in October and early November.

30. Was there great congestion there: tell me in your own words ?—Anybody can understand that if you have three beds at the end of the marquee, and a table in the centre with a couple of clerks, and three or four orderlies waiting with drugs and dressings, and in front of the table three or four Medical Officers, there must be congestion. It could not be otherwise.

31. By what process of selection was a man assigned to any particular doctor ?—When a man came in I just looked round and saw what Medical Officer was disengaged, and pushed the man over to him. The Medical Officer saw the man and had a look at him, and beckoned to an orderly and said, "Give this man such-and-such." That would be the last the Medical Officer would see.

32. Was the system of having a sick-parade in the presence of three Medical Officers together conducive to a satisfactory examination of those claiming to be sick ?—That is rather a difficult question to answer. It rests with the Medical Officer. I know one or two Medical Officers grumbled now and then at the congested state of things, and if a man was really in want of a thorough examination he was told to wait until the others were finished, and he would be taken by himself and put on the table and examined. That system was all right for a cursory examination.

33. *The Chairman.*] A man perhaps would not be so willing to unburden his mind in such a large concourse ?—Everything was conducted as privately as possible. If a man wished to make a remark to a Medical Officer, and would not like anybody else to overhear what he was saying, it might be possible for him to go a little further along to one end of the tent. The marquee itself was only open for about a quarter of the distance along the front. The rest of the marquee had a curtain all round. The Medical Officer could take his patient to one end.

34. *Mr. Skerrett.*] During your experience in the Imperial service was it the practice for three medical men to hold one sick-parade ?—No, I have never seen more than one Medical Officer to a tent.

35. Would it not have been a reasonable way of organizing the sick-parades to divide up the patients and assign a definite number to each individual doctor ?—I think so. That is what I should have done. One Medical Officer to one tent, I think, is quite sufficient.

36. Have you known of a patient being diagnosed or treated by three doctors ?—No. I have on two or three occasions stopped a man from going to speak to another doctor.

37. *Mr. Ferguson.*] A man who wanted to get a double dose ?—I do not know whether the man wanted it. Perhaps the Medical Officer who was disengaged came up and spoke to the man. But as to a man getting three separate prescriptions from three different doctors—it is absurd.

38. *Mr. Skerrett.*] Who were the doctors that were usually present at the sick-parade ?—The Medical Officers of the corps. There were six, and they used to take it in turns.

39. Colonel Purdy would not be present ?—No.

40. *The Chairman.*] Do you remember Dr. Yeates ?—Yes.

41. Was he there in your time ?—Yes.

42. Did he take his turn with the others ?—Yes.

43. *Mr. Skerrett.*] It has been suggested that although Captain Yeates attended the morning sick-parades he rarely attended the afternoon sick-parades, and was rarely in camp during the afternoon ?—That is so, sir.

44. You believe that to be true ?—Yes.

45. Did Captain Yeates give any lectures ?—No, not as far as I know. The other Medical Officers used to give lectures in the afternoon. In the morning they had drill.

46. You will understand that I am not inviting you to express any opinion unless you choose to do so. Have you anything to say as to the adequacy of the hospital arrangements at the camp ?——

The Chairman: This will be on the camp side: it has nothing to do with the racecourse.

47. *Mr. Skerrett.*] No; the hospital arrangements for the Trentham camp during the time you had any actual knowledge of it ?—I consider they were quite adequate. I never found anything wrong at all.

48. How many beds were provided up to February ?—When I first went there we had three beds at the end of the marquee. Then we got another marquee, and we had seven beds—all for mild cases. Other cases went in to the Wellington Hospital.

49. We have had it that there was only accommodation in the hospital for some ten or eleven patients in February. How about mattresses and sheets in February ?—Major Holmes, when he came, arranged with Mrs. Luke—so he told me—and I know that bales of sheets, pillow-slips, pyjamas, and suchlike came out. I opened them in his presence.

50. When would that be ?—At the end of January.

51. *The Chairman.*] Would this be an accurate picture at the 19th February: "There is no equipment for the beds—no sheets, no pillow-cases—nothing but mattresses and blankets" ?—No, sir.

52. Not correct ?—No, sir.

53. *Mr. Skerrett.*] That is written, I understand, by one of the Medical Officers ?—Yes, I heard that this morning when I was here. I do not know how he came to write it.

54. You think he must have been mistaken ?—Undoubtedly. I left on the 1st February, and before I left Major Holmes had brought those things out. On the particular day when Dr. Fyffe wrote that it may have been so: they may have been in the wash: but they were in existence.

55. *Mr. Ferguson.*] Were not enough sent out to provide for the wash: you spoke of bales ?—Yes.

56. There were ample to enable you to send to the wash—provided the things came back ?—Yes.

57. *Mr. Skerrett.*] Is there anything you would like to add at all as to the camp or its arrangement or the treatment of the soldiers ?——

58. *The Chairman.*] Do you know anything of the dispensary ?—Yes, sir.

59. Was that under your charge in any way ?—Yes, sir; I was responsible for everything excepting supplies.

60. You had to see that the dispensers did their duty ?—Yes.

61. How were things kept in the dispensary-tent ?—They were kept fairly clean.

62. It has been said they were constantly covered with dust ?—I do not believe that—not covered with dust to an extent that would attract any one's attention.

63. During your time were the supplies to the dispensary adequate ?—Yes, quite. We got everything we wanted. We had only to ask and it was granted.

64. With regard to the men who came to the sick-parades, where would they shelter if it were raining ?—There was nowhere for them to shelter.

65. What did they do—remain in the rain ?—I suppose so. As far as I remember we did not have any rain. It was beautiful weather then—November, December, and January.

66. During that period you had not to contend with wet and mud ?—No.

67. *Mr. Gray.*] Was there much sickness during your time ?—No, I do not think you could say there was much.

68. Having regard to your former experience in camps, would you say that the sickness was not of the ordinary or not ?—No, I should say not,

69. *Mr. Skerrett.*] There were measles ?—Yes, but only a few cases. I remember the first case of measles. I do not think there were more than twenty altogether during January, December, or November.

70. *Mr. Gray.*] The total was not large ?—No.

71. The amount of sickness was not abnormal ?—I do not think it was.

72. Can you remember whether there were many cases of sore throat reported ?—No, I do not think there were.

73. Would it be correct to say that as many as eighty and a hundred reported in a day ?—No; it is absurd.

74. Before the 1st February ?—We never had as many men as that on sick-parade even.

75. It would be incorrect to say that there were eighty and a hundred in a day between December and February ?—Yes, absurd.

76. It is suggested that Dr. Thacker said that the trouble began in October—men reported with sore throats. What was the kind of sore throat that was reported, if any ?—I do not know exactly how to describe what sort of sore throat it was. A man came in and said he had a sore throat. Sometimes he would have a rash, and it might be measles.

77. Apart from measles, were there many cases of sore throat ?—Sore throat and ordinary colds.

78. Is that ordinary camp sore throat ?—Yes, ordinary sore throat.

79. Not serious ?—No, certainly not.

80. In your time was there a scarcity of brushes for brushing the throats ?—I never saw any used. They usually prescribed some sort of tablets.

WILLIAM MORRIS sworn and examined. (No. 61.)

1. *Mr. Skerrett.*] Where is your home ?—Auckland.

2. And what is your civil occupation ?—I was in the Auckland City Fire Brigade.

3. What is your military rating ?—I am company sergeant-major, New Zealand Medical Corps.

4. *The Chairman.*] You have been at Trentham since December ?—The 2nd December.

5. Have you been brought here on subpœna, much against your will ?—I have not had a subpœna served on me.

6. But you have been brought here ?—Yes. I was away on leave, and got a letter from Mr. Skerrett, and I came in immediately to-day.

7. *Mr. Skerrett.*] When did you join the camp ?—On the 2nd December.

8. In what capacity ?—I joined as a non-commissioned officer. My rating was sergeant when I got here.

9. Have you been in the camp ever since ?—Yes, except when away on leave twice.

10. Would you mind telling me your absences ?—Four days when my mother died.

11. Any other absence ?—Recently I have been away from the camp twenty days.

12. In what month was it ?—This month.

13. Then, with the exception of absences of four days and twenty days, you have been all the time on duty in the camp ?—Yes, sir.

14. Generally, what were your duties at Trentham ?—I used to do all the nursing under the sergeant-majors—Blacklin and Dorizac. I had charge of the hospital and used to do all the nursing.

15. You had charge of the military hospital at the camp ?—Yes.

16. Were your services ever transferred to any of the racecourse or other hospitals ?—I came to the racecourse from the other marquee.

17. You were shifted from the camp hospital to the racecourse hospital: at what period ?—At the time we first came out from the camp.

18. *The Chairman.*] When the racecourse was taken over, you mean ?—Yes.

19. *Mr. Skerrett.*] The first day the racecourse hospital was taken over you joined it ?—Yes.

20. Did you join the racecourse hospital before the kiosk was taken—when they had the trainers' quarters and the jockeys' rooms ?—They came up on the Sunday, and I came on the Tuesday.

21. It is suggested that the first thing that was done with respect to the racecourse was to take over the trainers' and jockeys' quarters as a hospital: is that right ?—I was not there. Colonel Purdy saw me that day and told me to stay in bed.

22. How long were you in bed ?—From Saturday until Tuesday. They shifted on the Sunday. I came on the Tuesday.

23. What Tuesday ?—That was the Tuesday following the Sunday they took the racecourse over.

24. *The Chairman.*] The 15th June. You then went on duty at the racecourse hospital on about the 15th June ?—Yes.

25. *Mr. Skerrett.*] The kiosk was not opened at that time ?—No.

26. How long after that was it when the kiosk was opened ?—That I could not say from memory.

27. *The Chairman.*] Do you know the difference between the jockeys' quarters and the trainers' quarters ?—I know the trainers' quarters.

28. Were they taken before you got up there on the Tuesday ?—Yes.

29. Do you know where the jockeys' quarters are—where they sleep ?—I do not know where they sleep.

30. *Mr. Skerrett.*] Going back to the period while you were attached to the hospital in camp—the camp hospital, not the racecourse hospital—that is, from December to about the middle of June, a period of about six months—during that period, in your opinion, were the sick-parades properly conducted ?—Yes, sir; I can safely say they were.

31. Did you hear the evidence of the last witness about the sick-parades ?—Yes. He was our sergeant-major.

32. Do you agree with his evidence generally ?—Yes, sir, as far as I can call it to memory.

33. He said there were three Medical Officers attending in the one marquee upon all those who attended sick-parade ?—Yes, Drs. Fyffe, Widdowson, and McAra, and one other.

34. There were at times four ?—Yes, but Dr. Fyffe did not attend sick-parade, being the senior officer. He did before he was promoted: when he was a captain he used to attend all parades.

35. Do you agree with Sergeant-major Blacklin that it would have been better to have divided those who attended the sick-parades and assigned each section to one medical man ?—It would have been better, but at that time we did not have half the number. Sometimes we would get through the sick-parade in twenty minutes. I used to do some of the clerking. When I was a sergeant I had charge of the orderly-room. We had no bother and no complaints.

36. *The Chairman.*] There was no pressure at all then ?—No, none whatever. If any serious cases came in, or any other cases that wanted to see a Medical Officer, we used to take them straight along to see the Medical Officer—at any time of the day.

37. *Mr. Skerrett.*] Was any record kept of the number of men attending sick-parade from day to day ?—Yes, as far as I can remember.

38. *The Chairman.*] That would be at the camp ?—Yes.

39. *Mr. Skerrett.*] That would show the number of men attending sick-parade, their diagnosis, and their treatment ?—Yes. There were long sheets, and they used to tell us what was the matter, and we would write it down.

40. So there ought to be a record which would give to the Commission information as to the number of men from time to time attending sick-parade ?—When I was in the orderly-room I had a record.

41. That was up to about the 15th June ?—Yes.

42. We know there were measles from almost the very beginning: is that so ?—That is correct.

43. When did the symptoms of sore throat, or septic sore throat, first appear ?—That I could not say—about its being septic.

44. As to sore throat, when did they first appear ?—We may have had one case on sick-parade in a day.

45. But the time must have arrived when your experience of sick-parade showed that the number of men was increasing ?—The number was increasing every day as the men came into camp.

46. Was there any parade at which it occurred to you that the numbers attending sick-parade, and the character of their complaint, was significant of trouble brewing ?—No, it came on us all of a sudden.

47. *The Chairman.*] The men attending sick-parade—were they out of proportion to the numbers you would naturally expect ?—Not until the Trenthams came into camp.

48. *Mr. Skerrett.*] When did they come in—on the 29th May ?—Yes. The number started to increase day by day, and we had had sixty cases like it in the hospital, and they had all been practically Trenthams.

49. So you date the significant increase of patients at sick-parade as shortly following the arrival of the Trenthams ?—Yes.

50. *Mr. Ferguson.*] We had it that the Trenthams had their own sick-parade. You want to make it clear that the general sick-parade increased as well as the Trenthams' ?——

51. *Mr. Skerrett.*] Mr. Ferguson points out that the Trenthams had their own sick-parade, because they were regarded as a regiment and as self-contained ?—We had those cases in the hospital.

52. But Mr. Ferguson desires to know if there was, after the admission of the Trenthams to camp, an increase in the number of men parading at your sick-parade ?—That I could not say. I know that the Trenthams had the greater part of the illness.

53. During your period—from December to June—there must have been occasions on which the men required to have their throats treated ?—Yes.

54. By being painted ?—They were. I did not see it. I was not in the dispensary.

55. Have you any personal experience of the manner in which throats were painted ?—I was never in the dispensary during sick-parade.

56. So you do not know what brushes they had ?—No.

57. How they were sterilized, if at all ?—No.

58. How often they were changed, or any information about that ?—Nothing at all.

59. Can you give the Commission any information as to the manner in which the dispensary was conducted ?—No, I was never in the dispensary unless I went in with an order from a doctor.

60. *The Chairman.*] You were under the last two witnesses ?—I was under Sergeant-major Dorizac and Sergeant-major Blacklin.

61. *Mr. Skerrett.*] Which doctors gave lectures to the men ?—Captain Widdowson gave lectures. The others I did not know much about, because I was in the hospital at the time. They used to give lectures, but I do not remember their names.

62. When you went, on about the 15th June, to the hospital at the racecourse, in what capacity did you go ?—I was a quartermaster-sergeant then.

63. What were your duties at that hospital ?—To look after the equipment of the men as quartermaster.

64. And the equipment of the staff ?—Yes.

65. *The Chairman.*] And of the hospital ?—It was not my duty, but I used to do that.

66. *Mr. Skerrett.*] What department or section of the racecourse hospital were you concerned with ?—I was concerned with all of it.

67. When you went there, where was the hospital situated ?—In the jockeys' building. That was the first place.

68. Is that where the weighing-room is ?—No, that is on this side.

69. That is adjacent to the gate, is it not ?—Yes.

70. *The Chairman.*] It has been called the gate hospital ?—I have heard it called the trainers' quarters.

71. *Mr. Skerrett.*] Were not some other quarters besides the trainers' quarters also started as a hospital at about the same time ?—No, only the trainers' quarters.

72. *The Chairman.*] The kiosk was opened a few days later ?—Yes.
73. What had you to do with the kiosk ?—Nothing whatever, sir.
74. At no time ?—No.
75. *Mr. Skerrett.*] How many men were in hospital when you took charge ?—That I do not know.
76. You can give no idea ?—No.
77. *The Chairman.*] Then you had to provide the food, had you, for the men who were lying in the hospital ?—That was done from the cookhouse. I used to write out the requisition and send it down to the Army Service Corps, and they would send the food up.
78. When you say you had to look after the men, you mean the men who were there sick ?—The orderlies.
79. Had you to see that they were provided with lamps and thermometers—whatever might be necessary ?—I used to get the requisition signed by the officer and send it into town.
80. *Mr. Skerrett.*] What had you to do with the provision of hospital equipment ?—I had nothing to do with that. The officer used to make the requisition out and send it in.
81. *The Chairman.*] And then you had to see that the equipment was got ?—Yes.
82. *Mr. Skerrett.*] You had no initiative, then, in the provision of lamps or thermometers or anything of that kind ? No.
83. You simply acted as administrative officer upon the requisition of the Medical Officer ?—Yes. I used to get the requisition and see that it was carried out.
84. Who drew up the requisition ?—As a rule, the officer.
85. Are you able to give the Commission any useful information about the administration or management of the hospital in the trainers', or trainers' and jockeys', quarters, as the case may be ?—No. I used to take my orders from the Medical Officer.
86. You were not concerned in the treatment of the men or their nursing ?—I was doing some nursing till the sisters came out.
87. *The Chairman.*] Where were you nursing ?—All through. I used to go round with the Medical Officer.
88. When he went his rounds ?—Yes.
89. *Dr. Martin.*] Round the kiosk ?—No. I went round the kiosk once. I had been doing some work outside, and I went round with the Captain. I did not go round, though, to see the patients.
90. *Mr. Skerrett.*] You really can give very little information as to the actual working of the racecourse hospital ?—No.
91. *Mr. Ferguson.*] With regard to the question about these men being quartered in the horse-boxes and the horses being adjacent: where were you yourself quartered ?—In one of the rooms there.
92. Some of the orderlies were quartered in the horse-boxes ?—For a while.
93. And some of the horses were also quartered there ?—None were quartered there while I was there.
94. Were those quarters quite suitable for the orderlies ?—Yes.
95. Comfortable ?—Yes.
96. You have no cause for complaint ?—No, I have no cause from the orderlies themselves.
97. *Mr. Gray.*] Did any officer use a horse ?—No, sir. Dr. Valintine was the only officer who had a horse.
98. Do you know of any case when an officer would ride up on a horse and leave it for a short time in a loose-box ?—No.
99. Have you done nursing at the military hospital ?—Yes.
100. What was the equipment of the hospital like ?—There were plenty of blankets; we had sheets, pillow-slips, pillows.
101. *The Chairman.*] At what date ?—It would be just about Christmas-time.
102. *Mr. Gray.*] Did that continue ?—Yes, only we went to the racecourse.
103. You did not go to the racecourse until June ?—No.
104. Up to the time you went to the racecourse was there any shortage of sheets, blankets, pillow-slips, mattresses, or other bed equipment ?—No, not for the marquees.
105. *Mr. Ferguson.*] Were there any sheets at all before Major Holmes got them out ?——
106. *Mr. Gray.*] Do you remember Major Holmes getting some sheets out ?—Yes.
107. When ?—As soon as he came back from Samoa.
108. That was in December, was it not ?—Somewhere about then.
109. Were those sheets there before he came ?—No.
110. They were procured when he came in December—Yes.
111. And there was no shortage after that ?—No.
112. Apart from bed equipment, was there anything required at the hospital which it ought to have had ?—No, not for the kind of patient we were treating there.
113. The serious cases—the measles cases—were sent away ?—The serious cases were sent to Wellington Hospital.
114. Do you remember a supply of kitchen utensils and some other things being got in the month of March ?—There was £10 made out to Major Fyffe.
115. You remember that ?—Yes.
116. Who made out the list of things that were bought with that £10 ?—Sergeant Edwards. He went away with No. 1 Stationary Hospital.
117. In that list were comprised some kitchen utensils ?—That is so.
118. Could they not be got in the camp ?—I do not know.
119. Or from the store ?—I have not the slightest idea.
120. Did you ever hear any complaints made in the hospital, or in connection with the hospital, that these things could not be got ?—No.

121. *Mr. Ferguson.*] Did you ever talk it over amongst yourselves that the money had been spent on these things ?—The £10 had nothing to do with me.

122. *The Chairman.*] You know what was bought with that £10 ?—I saw the list. I could not recollect exactly what it was.

123. Do you remember if the things that were on that list were in camp ?—I saw some cases.

124. Had you things like those in camp ?—Not at that time.

125. There was a shortage, then ?—They seemed to be extra, because they were not used for some time after.

126. *Mr. Gray.*] What were not used ?—Pots—saucepans.

127. *Mr. Ferguson.*] There was no place to use them ?—No ; we only had the two small stoves.

GORDON GRAHAM PEARSON sworn and examined. (No. 62.)

1. *The Chairman.*] You are a private, are you not ?—Yes, sir.

2. Where did you live before you joined ?—At Carterton, Wairarapa.

3. When did you join ?—I came down with the Trentham Regiment on the 29th May, and on the following Friday was transferred to the Sixth Reinforcements.

4. You fell ill, unfortunately, did you not ?—Yes.

5. What date was that ?—I could not say. It seemed to me to be about three weeks after I went there. I was reported sick on a Wednesday.

6. What happened when you were taken ill on the Wednesday : you went to sick-parade, I suppose ?—Yes. It was a rather raw sort of day, but there was no rain. I think it was about 9 o'clock when I got off.

7. You went at about a quarter past 8, and got away at about 9 ?—Yes.

8. What medical man saw you in the tent ?—I do not know the name of any except Dr. Harrison.

9. You think it was Dr. Harrison ?—No, it was not he. It was a tall man with a dark moustache.

Dr. Purdy : It would be Dr. Stout.

10. *The Chairman.*] After you had seen the doctor, what was done with you ?—He wrote out a slip. He told me to give it to the clerk. It had my temperature on it, and underneath "Admit" —evidently to admit me to the hospital. The clerk or orderly there told me to get my blankets and go to the hospital. I went out of the tent and to my corporal. He said, "Go over to the lines and wait till I come, and I will carry your blankets." I only took my blankets—nothing else—because I did not know what I was going to. I reported over there to the orderly, and after waiting in the shed for a while—I do not know how long—I was put in one of the loose-boxes. I had no oil-sheet or pillows, and I had to put one blanket on the floor of the loose-box.

11. Could you not ask the orderly to get you your things ?—The man just told me to go into number such-and-such.

12. And you just went in ?—Yes. I did not know but that there were beds in there. I suppose that would be about 10 o'clock.

13. In the morning ?—Yes. A little after 10. I went to sleep, and they woke me up and gave me my dinner ; and that night they took me over to the tea-kiosk.

14. You did not spend the night in the loose-box ?—No, I was just there for the day.

15. Did any one come to see you during the time you were there, except to give you dinner ? But you say you went to sleep ?—Yes. I was not feeling too well, and I went off to sleep again after dinner. They woke us up and told us to get up again, and they took our blankets and so on in a car round by the road to the tea-kiosk. I suppose it would be about 5 or half-past 5 in the afternoon when we were taken across there to the tea-kiosk.

16. How long were you there ?—I was there from the Wednesday night to the Saturday morning.

17. Then on the Saturday what happened ?—I complained to the doctor of not feeling at all well, and he examined me and told the orderly who was with him that I was to be carried out.

18. *Mr. Gray.*] Which doctor was this ?—I could not say. He was an oldish man.

19. *The Chairman.*] Clean-shaven ?—Yes. Then they took me over to a little place with four bunks in it. There was a mattress on the bunk and I had my blankets with me. I felt a lot better then. My temperature was pretty high—up to 103—while I was lying in the tea-kiosk. The orderly there looked after me pretty well. He sent over to my tent and got my kit brought over.

20. You were made nice and comfortable there ?—Yes, there.

21. But not in the kiosk ?—No, I was just the reverse there, because I had only the blankets. I saw only one bed inside the tea-kiosk, but I believe there were one or two out on the verandas.

22. You were on the floor in the tea-kiosk ?—Yes—in fact, in all but this one.

23. You were there before the nurses came ?—Yes. That evening my nose started to bleed. It had bled previously in the tea-kiosk, but not very much, and I managed to stop it ; but this time I could not. I called the orderly, and he did his best, but he could not stop it. That was the last I remembered till the Tuesday morning.

24. What is your next recollection ?—The next was coming to at a place which I did not know.

25. It was really Kaiwarra, was it not ?—No ; Wellington Hospital.

26. Then you were some time in the Wellington Hospital, were you not ?—I came out on the Sunday following the Tuesday. On the 4th of this month I was taken to Kaiwarra—on the Sunday.

27. You went to Kaiwarra : and how long were you there ?—I was discharged from there on the 16th.

28. Do you remember being visited while you were there ?—I was visited by Mr. Hornsby.

29. Just tell us what happened when he visited you: can you recollect?—The sergeant called out my name in the ward. I was lying on the bed, dressed, and I went to the sergeant, and he said there was a visitor wanted to see me downstairs. I went downstairs and found it was Mr. Hornsby. He said that my people had not been able to get word of me since I had been taken ill. I had written on the Tuesday night before I was taken ill.

30. When you were taken ill: that would be before you went into the loose-box?—Yes. That was the last they had heard of me.

31. You yourself had not written?—No. They had become anxious and asked Mr. Hornsby if he could do anything to find me out—which he did. While he was there he asked me how I had got on, and I told him that I did not remember anything for three days, and, by the remarks the doctor passed to the nurse, that I was pneumonical, because he sounded me.

32. Who was it?—I could not say exactly which doctor it was.

33. At Kaiwarra?—No, at Wellington Hospital. He sounded me, and that night I had a plaster put on my left side, at the back.

34. But you got better?—Yes.

35. You did not have pneumonia, really?—No; almost, I suppose.

36. I see they put you down at the Wellington Hospital as having had measles only?—Yes. I do not remember having measles when I was in the trainers' quarters or in the bunk; but when I came to myself you could not see a white spot on me: I was covered.

37. You came into the Wellington Hospital on a Monday, then?—I could not say when they brought me in.

38. They say you came to on the 28th June: that was a Monday. You do not know how long you were in the Wellington Hospital before you recovered consciousness?—All I can say is that it was Saturday evening when I lost consciousness.

39. That would be from the Saturday to the Monday?—It was till the Tuesday.

40. Then you must have come to on the 29th?—I did not know what date it was until I asked a man lying next to me.

41. You were not taken from Trentham to Kaiwarra: you were taken from Trentham to Wellington Hospital?—Yes. When I told Mr. Hornsby he evidently misunderstood me and thought I said I had been taken from Trentham to Kaiwarra, because I saw in the paper of the next day that he had said that.

42. Did you tell him that you had been unconscious for three days?—Yes.

43. That was a mere guess on your part, was it not?—No, sir.

44. The Wellington Hospital record it as the 28th, not the 29th, as you have it. Saturday was the 26th. That is the date that it is said you went into Wellington Hospital?—It was on the Saturday that I went into Wellington Hospital.

45. However, that clears the matter up as regards Mr. Hornsby. He made a mistake as to the place?—Yes.

46. But it is a fact that your parents did not hear?—That is the main thing.

47. They did not hear until you got to Kaiwarra?—That is so.

48. And were found by Mr. Hornsby?—That is so.

49. You yourself had not written?—When I went into the hospital I had not a penny with me, and I did not know any one from whom I could borrow to buy writing-material.

50. Do they not provide writing-material?—Yes, but this was when I was taken ill. I went out of camp on a Wednesday: that was our pay-day.

51. Had you no writing-material at Kaiwarra?—No.

52. Up to the time you left?—About four days before I got out of Kaiwarra I met a friend and he gave me two letter-cards.

53. There was nothing provided for you?—Nothing provided: you had to provide your own. My writing-material had been left in the box where we keep our odds and ends in the tent.

54. *Dr. Martin.*] Did you ask the nurse at Wellington Hospital to send word?—No.

55. You know that is usually done by a patient?—I did not like to ask the nurse, as I had nothing to pay with.

56. Did you make any effort to send word to your people?—As soon as I could get material I sent word; but I had no money to pay for it and did not know any one there.

57. You had not money to pay for a stamp?—No, not a penny on me.

58. *Mr. Gray.*] What is your complaint?—I have no complaint to make.

59. You have no complaint to make against the camp authorities, or the hospital authorities, or doctors, or nurses, or orderlies: is that so?—I have no complaint.

60. You told Dr. Martin that you did not ask the nurse at Wellington Hospital to write a letter for you to your people. Had you asked anybody at the kiosk hospital or elsewhere to send word for you?—At the kiosk I got a reply-paid telegram from my people.

61. Did you send a reply?—Yes. I told them I was in hospital but thought I was getting on all right.

62. Then when you were ill subsequently in another hospital you did not ask anybody to write or send word for you?—No; I did not like the idea of asking strangers.

63. So the net result is that you have no personal complaint to make about anybody?—That is so.

64. And you are not responsible for the advertisement about your name?—No. The whole trouble arose through my not having the money to buy any writing-material.

[At this stage the Chairman read communications which had been received from the Rev. D. C. Bates, regarding the ventilation of the hutments at Trentham, and from Mr. P. G. Morgan, Director of Geological Surveys, with reference to Trentham as a site for a camp. See appendix.]

SATURDAY, 31ST JULY, 1915.

JOHN CONNOR sworn and examined. (No. 63.)

1. *The Chairman.*] What are you ?—A private in the "A" Company, 2nd Battalion, Trentham Regiment.

2. When did you come in ?—On the 29th May.

3. And you have been here ever since ?—Except when I was in the hospital.

4. What were you before you came into camp ?—I was in the Railways.

5. What is the history since you have been in camp ?—I came into camp on the 29th May, arriving about 4 o'clock in the afternoon.

6. Was it a wet or fine day ?—It had been raining very heavily, and was very muddy. Towards the night the weather cleared and it commenced to freeze. After being sorted out I was placed first of all in the 1st Battalion, and we were brought into camp to get our kits from the Camp Quartermaster. From what I could see they did not seem to be prepared for us. We marched round once and the Major asked us where we were from. Several different names were called out—such as Manawatu, Wanganui, Palmerston, and so forth and then we were told to march back somewhere else. After having tea we went round to get our kits. I waited somewhere in the vicinity of three hours, and the officers drummed into us thoroughly to be sure to get this and that—two shirts, two singlets, two pairs of underpants, one pair of boots, two pairs of socks, and other items which I forget.

7. You had that drummed into you before you went to get the things ?—Yes.

8. You knew what you ought to receive ?—Yes, and on getting round there there was evidently insufficient underclothing. We were only supplied with one set. I do not know whether it was regular to give two for the start or not, but about three weeks afterwards we got the second set from our company quartermaster. In getting our clothes the Quartermaster could see us pretty well pushed, and I did not have much time to examine mine. I believe if I had stopped I would have been fired out. Every one was waiting, and several complained that they had missed this and missed that. We could not very well expect anything else in the confusion.

9. How was the place lit—with a hurricane-lamp ?—I did not notice. I managed to scramble all my things together.

10. About 11 o'clock you got your things ?—Yes. I was one of the last of our body to get my clothes, and then I found my hut and went into it.

11. What number ?—I could not tell you.

12. The point is that the Quartermaster and his staff did not seem to prepare for you on arrival, and you think there was an undue length of time occupied in giving out the supplies ?—Yes.

13. You personally did not suffer any inconvenience—you got what you ought to have got ?—Except my second issue of underclothing. I do not know whether we were to get it then. Evidently there was a shortage that night, and they only supplied the one. I also bought a palliasse for 2s.

14. You were given straw ?—Yes.

15. *Mr. Ferguson.*] From whom did you buy the scrim for the palliasse ?—I could not say whom it was bought from.

16. Was it in the same building you paid the money for it ?—Yes in the same building; it appeared to be near the Camp Quartermaster's stores.

17. Was that at the canteen ?—I do not know whether it was the canteen then. The place was strange to me.

18. *The Chairman.*] You bought it where everybody else bought it ?—Yes.

19. Was it from a man in uniform that you bought it ?—I could not say; I did not notice. Then for a week we did nothing but fatigue work—laying down roads. The weather was happily fine, and gave us a good start, and the place dried up very well. We were able to get on laying down the roads, and consequently when it did rain again it was not so bad.

20. The week's work had made an improvement ?—Yes. In our hutment we were overcrowded, but not while I was in the 1st Battalion.

21. How many had you in it ?—I could not say exactly, but I do not think there were more than fifty; but that was only in one.

22. You mean others had more than fifty ?—Yes.

23. You know that of your own knowledge ?—Yes. When I went over to the 2nd Battalion the whole platoon was there, and that is seventy-odd men. That was hut No. 69.

24. When you speak of hut 69, you know they are divided into two: you mean one division was occupied by seventy men ?—Yes; each division is numbered.

25. Each end has got a different number ?—Yes.

26. You were in one division with seventy men ?—In the first place I was not overcrowded, but after being separated from my mates I put in to be transferred to the 2nd Battalion. I was shifted over there, and it was very much overcrowded; and in many of the huts I noticed they were not finished—there were no doors and no windows.

27. And were they occupied ?—Yes. I shifted into hut No. 69, and they had just had the doors and windows put in when I shifted over. That was about a fortnight after. The shelves were not put up then; but that did not matter, because, as far as I could see, we were never allowed to put anything on them.

28. What were they put there for ?—I do not know. When we got the web equipment we were able to put them on.

29. You put boots and all sorts of things on them now ?—But that was not the case then. I had my brass-polish, and I was never allowed to put that on. I had to hide it at the back of my palliasse.

30. What was the reason of not occupying the shelves ?—I do not know of any reason.

31. There must have been some reason ?—I know we were not even able to put our wet great-coats on the shelves; we had to put them on our beds.

32. That was only for a short time until the order was altered ?—Yes. On going over to the 2nd Battalion I found the place overcrowded. If you went in at night after being on leave you were liable to fall over some one who was sleeping under the tables, and so forth. You had to be very careful how you went in, because if you fell over any one he usually was not very polite. The fatigue work, in my opinion, was excessive for a soldier—that is, the roadmaking and ditch-digging. Of course, I have heard it is part of the training, and it may be.

33. You have to do a lot of trenching when you get further afield ?—Yes, that is understood.

34. You must learn to handle a shovel ?—Yes. On one occasion I had to be one of a dozen to finish a ditch. It had been raining the night before, and the place was full of mud and water. The men grumbled, and so did I. We all decided that we went there to be soldiers, and not navvies generally. The non-commissioned officer heard us grumbling, and started to talk about the Army Act and its attendant horrors. We made the best of it. Of course, our boots were wet; and after finishing that job it was raining slightly, and we were sent over to finish a ditch further over. I found I was getting very warm, and the mud in the first place seemed to me to have a peculiar smell, and it was then I first noticed I was taken ill.

35. What part of the camp was that ?—It was just over on the outside line of the huts. There has been a row or two erected since then. I know the ditch we were digging in drained into one of the big soak-pits at the bottom. Then the warrant officer ordered us to tackle a soak-pit on top of a gravel-pit, and when we arrived we found about a foot of water in it. We thought it was a gravel-bed, but evidently it did not drain too well. We had only one pair of boots, and none of us were very keen on hopping into it and making a start, so we got buckets and started to bail the water out. The Major and Captain and another officer came along. The Major passed the remark to the Captain, "Well, how are these boys going to get on—they have only one pair of boots, you know?" The Captain grunted, and that was all the satisfaction we got. We waited some time and no developments occurred, so we thought we had better make a start. The bailing did not seem to remedy the matter, so one member hopped down and started loosening the gravel, and after a while we managed to get the water to drain. It was a good day, and we were able to carry on with the work, but on that occasion I thought we did not get much satisfaction from the officers who happened to be there. I have heard several men who had made their living by working in ditches and draining swamps remark that it was mud-fever that laid the men up. Whether that was so or not I do not know.

36. Did you drain swamps here ?—No.

37. It was digging in the soil we see about here ?—Yes. On such days as we were sent out to dig it was raining slightly, and we had to take off our overcoats.

38. Were you put to dig every day or only for so-many hours ?—Usually for a period of hours.

39. How many hours a day did you dig ?—Six hours' digging, possibly. It may last for that, or possibly only three; it would depend upon the job. We would go on in the morning at 9 and finish at 12, and then from half past 12 and finish at 4. We would be the whole day digging.

40. How many days a week would you do that ?—Perhaps you may be only on fatigue for a week at that or only two days, and then the next day drill. It may be that the job would only last a couple of hours.

41. It was irregular ?—Yes.

42. Did you at any time while in camp do six hours per day in any one continuous week ?—Lasting a week ?

43. Yes ?—No.

44. Did you do three hours per day for three days ?—I could not exactly recall.

45. Well, on an average, would that be anywhere near it ?—I do not know about navvying and so on, but I know as regards carrying stones it lasted for a week.

46. What was that for ?—Roadmaking.

47. *Mr. Ferguson.*] How did you carry the stones ?—There were plenty of lime-sacks about, and with a couple of pieces of wood at the ends they made very fair carriers. One was not worked hard, exactly.

48. You have not seen blankets used for stone-carrying ?—No.

49. *The Chairman.*] But it was not the class of work you went out to do ?—No. Every one complained about it. Also, in some of the hutments there were no doors and windows.

50. I think you said you were ill ?—Yes.

51. When were you taken ill ?—About a month ago. I took ill about the 1st July.

52. Where were you sent to ?—I went on sick-parade and had my temperature taken by the Medical Officer, who looked at my chest. He remarked that I had measles—whether mild or not I do not know; but my temperature was very high, and I was ordered into the hospital.

53. *Dr. Martin.*] Where did you go ?—To the Trentham racecourse.

54. *The Chairman.*] In the kiosk ?—No; in the trainers' quarters. The next day they considered my temperature was pretty high, so I was sent into the Wellington Hospital in a motor-car.

55. Was it a closed motor-car ?—Yes. There were two others in the same car, and they were sent to Kaiwarra. I got very good treatment in the hospital. I went there on a Sunday, and the following Sunday I was discharged, having been sent in with measles, which I do not believe I had, because I could not see any. I was then sent to the Kaiwarra Hospital, and, as far as the convalescents were concerned, the place, in my opinion, was well managed. I found no fault with it. We were well fed. After twelve days there I was sent away on sick-leave for ten days.

56. You left Kaiwarra for your home ?—Yes, and returned last Monday. After having reported I expected to be able to go and join my regiment, but I was sent into the hospital as an orderly, and consequently many besides myself were very much dissatisfied with that.

57. Does not that provide you with light work till you are able to do heavier work ?—Well, as far as I am concerned, I feel fit. I do not know if we are put in there and classed as fit, but I considered I was fit.

58. If you came back and were put at once on regular camp duties you might break down ?—I hardly think so, because, as far as the Sixth men were concerned, many of them came in with us, and they were promptly ordered to rejoin their units.

59. We have had a man who reported himself and was then discharged as being unfit altogether. You would not welcome the alternative of being discharged altogether ?—No, of course not.

60. Would it not be better in that case to take it gradually ?—If I was back with my regiment at the present time I would be taking on drill as they are. As it is I will go back practically ignorant of what they have been learning. Of the two months I have been in camp I have had about a fortnight's drill in that time.

61. You have been one month away ?—Yes, in the hospital; but as far as the hospital is concerned, there is just as much fatigue work there as I would get in camp—in fact, we are not orderlies, we are fatigue-men.

62. Are there any other measles men who have returned who have been sent over there as orderlies ?—Yes, thirty-one of us were sent in, and many of them returned from measles on Tuesday last. They are working there amongst the measles patients.

63. You are supposed to be immune after having an attack ?—There are other diseases as well in the kiosk, where the cerebro-spinal meningitis patients are. I did not know they were allowed in, but we are near enough to them. As regards the sick men lying in the hutments, from the beginning of the regiment coming in there was a good deal of sickness, but a lot of it was attributable to the change of food. After some time there were sick men lying in the huts excused from duty. I have seen them myself and spoken to them.

64. There was no definite opinion as to what the illness was ?—No. One considered that he had the "flu," and I heard them complaining about the time they had to wait on sick-parade. The time I reported I had to wait half an hour. It was a fine night, and although there was a good deal of mud about we managed to put in the time all right, but a wait of half an hour was considered a very short period.

65. Have you any other matter you wish to mention ?—No.

66. *Dr. Martin.*] You objected to the work you had to do at the beginning—digging ditches ?—No, I never objected to roadmaking—it was all for our own comfort; but in the opinion of many of us, and myself in particular, we considered there was too much of it. We were not learning enough, and we came here to learn.

67. *The Chairman.*] To handle a rifle and to march ?—Yes.

68. That does not make up the total of a soldier's equipment, does it—you have to be as good a digger as a shooter, apparently ?—Yes.

69. *Dr. Martin.*] Who do you think should have done this work ?—In my opinion the roads should have been laid down for us when we came into camp. Of course, if it comes to a question of digging, why not put us on digging trenches and get lectures in regard to it ?

70. Your complaint is that you should not have been digging ditches ?—In my opinion there was too much fatigue for the time we were in camp.

71. *Mr. Skerrett.*] What is your civilian occupation ?—A Railway man, in the locomotive department.

72. An engineer ?—No, a cleaner.

73. *Mr. Gray.*] One of your complaints is that you had too much fatigue duty when you came into camp, and the other because you were put on as an orderly at the hospital after being discharged as a convalescent ?—Yes, I complained about that. It is pretty unanimous amongst the lot of us that we were fired in there. Many of them consider that if they had known they were going there they would have said they were not too well.

74. You say you did not get enough training as a soldier ?—Yes.

75. Those are your only grievances ?—Yes, to get the training, but not to kill Turks with a mop.

LAURENCE GOING sworn and examined. (No. 64.)

1. *The Chairman.*] What are you ?—A mounted trooper.

2. When did you come into camp ?—I arrived here on Sunday the 18th April.

3. What were you before ?—A farmer.

4. On arrival on the 18th April what happened to you ?—I got here on the Sunday morning. We got an issue of clothes—one pair of boots, trousers, denims, and so on. We went into tents, and we were there about two months, and everything went on all right. We were then shifted into the huts, and most of us thought the huts were a big improvement on the tents. On the 5th June I attended sick-parade and then went over to the camp hospital. There would be about eighty men waiting there, and we had to wait for an hour.

5. Was it raining ?—No, it was fine that morning, but we had to stand about for an hour. I saw the doctor and he told me I had measles. I walked across to the hut and got my blankets, and then went back, and the orderly took me to a marquee. There would be about fifteen measles patients in there. It had only just been pitched on wet ground the day before. I got a bundle of straw and made a bed on it and laid down. I had a waterproof sheet with me, and there was a bale of straw in the tent tied up with wire. I managed to get it undone, although I was feeling very ill. I laid down there for about three days. The straw was getting damper and damper every day.

6. Who was attending to you ?—Two orderlies were going round to the marquees. There were four marquees, and about eighty-odd men had measles when I was there. I do not know whether there were two orderlies to each marquee or two to the lot, but they came very seldom.

7. Did you complain to them ?—We were always complaining about the food. Sometimes we got one piece of bread and butter for a meal and sometimes two, and beef-tea to drink.

8. Did you ever see any medical man come round ?—I never saw them. It was said they would sometimes come round to the tents and look in, but the Red Cross men took the temperatures each day.

9. *Dr. Martin.*] Did you not see a doctor there ?—No, I was eight or nine days in the marquee; no doctor attended me, and I did not see a doctor there; but they may have looked in while I was asleep. Towards the end of the nine days I used to get up and go out and stretch myself, as I was getting better, and I would see the doctors then walking about.

10. *The Chairman.*] After the three days when you found the straw getting damper, what happened to you ?—I still kept on with the same straw, but I got a bit more one day.

11. And did you get better ?—Yes, I got better; but there were a lot who got worse.

Colonel Purdy: On the 5th June there would be about twenty doctors in the camp.

Dr. Martin: Who would be in charge ?

Colonel Purdy: Major McAra was in charge of the camp, and the hospital-ship doctors were in camp at that time also. I know there were nineteen doctors in camp on the 18th June. The camp doctors were Major McAra, Captain Simpson, Captain Stout, and then there were Captain Vogel and Captain Brown.

12. *Dr. Martin* (to witness).] Who was the doctor in charge ?—I do not know.

13. *The Chairman.*] What were the names of the orderlies ?—Sergeant Neil did a lot of work and did very well, but did not have enough orderlies. He did all he could.

14. Where is Sergeant Neil now ?—I do not know. I have not seen him since I left the camp. He would be most likely up in the hospital.

15. After you were there three days, what happened ?—I was three days in bed, and then I got up and was sitting about the marquee.

16. Then you were six days longer there, during which time you were able to get up and loll about ?—Yes. The spots were still out on Saturday the 5th. The following Saturday night a storm came on and we were all lying in bed when the marquee came down on top of us—the rope gave way. We all got up and went out and put it up again.

17. All the measles patients ?—Yes, we could not find any orderlies.

18. How many of you were in the tent then ?—About fifteen.

19. There were no orderlies who slept in the camp ?—No. I think there were no orderlies who looked after us who slept in the tent.

20. Saturday, the 5th June, is the day you went in ?—Yes.

21. And it was the following Saturday, the 12th, that the marquee came down ?—Yes.

22. What is your experience after that ?—The same thing happened again next morning—it blew down again on the Sunday morning.

23. Were there any orderlies to help put it up ?—One orderly to help us.

24. Did the measles patients turn out to put it up ?—Yes, all who could.

25. Then, what next ?—On the Saturday night the water came right through and wet all the straw, and was lying in pools in the tent. There were no trenches dug round the marquee I was in, and the water ran right through and wet all the straw.

26. Were you all lying on the ground at that time ?—Yes.

27. Then did you have any further trouble that day ?—No, that afternoon we were all taken to the trainers' quarters and loose-boxes. I went into one of the loose-boxes.

28. *Mr. Ferguson.*] Had you any straw there ?—We had mattresses and stretchers there, and the food was a bit better there. We sometimes got a plate of custard or some cornflour, but the meal-hours were very irregular. Sometimes it would be 10 o'clock before we would get any breakfast.

29. *Dr. Martin.*] Why was that ?—There were not enough orderlies.

30. *The Chairman.*] How long were you there ?—I was there till about the 18th, I think. I would not be sure. On that date there was a special train-load of a hundred and fifty of us went to Kaiwarra.

31. And how long were you there ?—I was there for about five days. I got sick-leave then for four days, and nine days' extended leave.

32. When your leave was up what happened—did you come back here ?—I was on my way back when I got a telegram to say that my brother was dangerously ill here. I came back with my father and mother to the Victoria Hospital, and my brother was very bad with pneumonia. He came into camp, leaving Auckland on the 28th May, and getting here about the 30th. He got here about 10 in the morning of a wet day, and was standing about till dark at night waiting for their issue of clothes. Some of them waited till 11 o'clock, but he got his about dark. He went into a hut without any doors or windows, and there were seventy or eighty men there. He was all right, but had a bit of a cold after a few days—I suppose for a fortnight when he was drilling and doing fatigue work. On the 18th June he was feeling sick in the morning. He was asleep when the sick-parade was called out. The measles were coming on then. The sick-parade was called early in the morning, and he was not up and did not attend, so that when parade came after breakfast he was ordered out. He went on parade and felt ill. He asked Sergeant Green to let him off parade as he was not feeling well, but the sergeant would not let him off but kept him on all day, which was wet. He got wet through, and wet feet, and next morning he was brought into the hospital. That was the 18th. He was left standing there in the cold and rain for about half an hour, so I got out of bed and brought him in and gave him my bed. His temperature

was pretty high then—102 point something. I gave him my bed and blankets and he went to sleep almost immediately. About half an hour afterwards an orderly came and woke him up and took him away, I think, into the trainers' quarters.

33. Walked him in ?—Yes. He disappeared, and he told me next time I saw him that they took him into the trainers' quarters.

34. *Dr. Martin.*] Was his temperature 102 when he got into your bed ?—Yes, 102 point something.

35. You know that ?—He told me that the orderly told him his temperature was 102·4 in the morning.

36. You say he had to march from the tent to the trainers' quarters ?—I do not know about marching. I think he went in a motor-car, but he had to walk to the loose-box where I was. I left for Kaiwarra that morning. He stayed the night of the 18th in the trainers' quarters, and the next morning he was brought to Kaiwarra in a motor-car with celluloid windows that were broken open and with holes all through them. When he came into Kaiwarra he was pretty bad. He told me he was very cold and shivering coming down. His temperature was higher that day than the day before. He said it was very cold coming down, and that the wind was howling through the car. It was a showery day he came to Kaiwarra. He had to climb the stairs and then he laid down, and I gave him two of my blankets. Just about three hours afterwards they came round and told him he had to go to Wellington, and he was taken to the Wellington Hospital.

37. *Mr. Ferguson.*] Do you know how he went ?—I do not know whether it was in the hospital ambulance or in an ordinary taxicab. After he got to the hospital he was treated as well as anybody could be wished to be treated. He was in the measles ward at the hospital for about a week. He began to get worse, so they shifted him into a ward higher up with the worst cases, and he died there on the 7th July.

38. *Dr. Martin.*] What was the cause of death ?—Pneumonia following on measles.

39. *Mr. Ferguson.*] What was your brother's christian name ?—Charles Joseph Going.

40. *The Chairman.*] Have you any further matter to mention ?—No, I think that is all. I could give you the names of some of the men with me when the tent blew down and those who were well enough to get out and fix it up. They were Trooper Glass, A Squadron, Sixth Reinforcements, Tauherenikau; Trooper W. T. Watts, A Squadron; Trooper A. Summer, A Squadron; Private (now Corporal) Green, N.M.A.C.; Private Friedrich, 6th Infantry cookhouse; Trumpeter Simpson, Sixth Reinforcements; and Private Gillespie, A Company, Sixth Reinforcements.

41. They were all more or less measles patients ?—Yes, they were all measles patients.

42. *Mr. Gray.*] How long had the other inmates been in that tent that blew down ?—Some of them came in the day I went, and some a few days before, and I think two or three came afterwards.

43. Were there any of them convalescent ?—Most of us were convalescent then. They said we were convalescent. We still had spots, but we were getting up. They shifted us from the worst cases. I spent the first three days in the marquee among what they called the worst cases.

44. When you went to the loose-box there was a great rush, was there not ?—Yes.

45. And not enough orderlies to cope with the work ?—No. The same two orderlies would go round with two dishes of bread and butter, and after going round all the loose-boxes they would have to go back for the beef-tea or ordinary tea, whatever it was.

46. They were overworked ?—Yes.

47. I think you said the men who went into the hutments thought it was a big improvement ?—Yes, most of us did, and I myself now think it is better than the tent.

48. Are you more comfortable ?—Yes, we had tables to sit down to, and more room than in the tents.

49. *The Chairman.*] Did you suffer inconvenience from colds there ?—It is colder in the hut, I believe, than in the tent—the iron seems to make it colder.

50. *Mr. Gray.*] Do you recollect seeing Colonel Purdy at the marquee that was blown down ?—On the Sunday morning Dr. Valintine and several others came round, and when they saw how things were they had us shifted.

51. That is the day the racecourse was commandeered ?—Yes.

LAWRENCE GOING further examined.

52. *The Chairman.*] You wish to add something, I understand ?—Yes, in regard to the man sent with me. He is away now.

53. Who is that ?—I think his name was Private Gillespie. He was in the marquee on the racecourse, and then went to Kaiwarra at the same time as myself. When he was in Kaiwarra he was pretty ill—he was amongst the worst cases. One day the orderlies were late in coming round, and he was hungry and called out for something to eat. The orderly who was supposed to be doing this work told him that if he was well enough to call out for his food he should get up and go and get it at the table where the others were. He wanted something to eat, so he got up and went to the table, and was not there long before he fell. He could not stand up. The next thing he knew was that he was in the Wellington Hospital. That is all I know about it.

54. What became of him after that ?—The last I saw of him was on the 7th July. He was just out of the hospital for the first time—in front of the hospital-door.

55. Where is he now ?—I think he is away on leave. He was getting better then.

56. Was it Sergeant Yallop who was in charge of Kaiwarra ?—I do not know the sergeant's name. It would be about the 23rd June he was at Kaiwarra.

Dr. James Garfield Crawford sworn and examined. (No. 65.)

1. *The Chairman.*] You are a medical practitioner ?—Yes.
2. And Captain at the Trentham Camp now ?—Yes.
3. There was a case, of Ernest Smith, which came before the Commission yesterday and of which we wish some information: do you remember him ?—Yes, I remember him.
4. When did he first come under your notice ?—He came under my notice when there was an urgent message received on the 7th July to go to the kiosk ward to see a patient who had taken seriously ill at about 1.30 p.m. I was there at the time, and I went along to the ward, although it was not my ward.
5. What was the matter with him ?—I found him there in a state of collapse. He had a hæmorrhagic rash over his body. He was removed to the special meningitis ward at 2 p.m., and, although I had really nothing to do with the treatment of the case, I followed up his case, and I have some notes to say that he gradually got worse.
6. *Dr. Martin.*] Who was treating him ?—He was under the care of Captain Ferguson.
7. In the meningitis ward ?—Yes, alongside the trainers' quarters.
8. You put him in the meningitis ward: was that because he showed symptoms ?—Yes.
9. What happened after that ?—I followed up his case. He gradually got worse and showed no signs of recovery. Double bronchial pneumonia set in on the morning of the 8th, and he died shortly after 12 o'clock on the 8th.
10. You sent a telegram ?—Yes, I had a telegram sent to his relatives on the afternoon of the 7th.
11. Was he ever sent to the Wellington Hospital ?—I could not say. I never knew the patient till the 7th. I just came into camp on the 4th July.
12. You were not treating him ?—No, I was not responsible for his treatment.
13. Who signed the death certificate ?—I think Captain Ferguson. I am not sure.
14. What was the cause of death ?—I could not say. I do not know what he signed as the cause of death.
15. He was admitted as a meningitis case ?—He was admitted to the observation ward, which was the meningitis ward. I saw the parents on the morning of the 8th.
16. Who treated him at the kiosk ?—Captain Ferguson. He was in the kiosk when I first saw him.
17. *Mr. Ferguson.*] It is said that the mother found when he was in bed in the trainers' quarters that he was not properly dressed—that he only had a dress-jacket on and nothing else ?—He was properly dressed.
18. *Dr. Martin.*] Were there any other meningitis cases at the trainers' quarters ?—The definite diagnosis of meningitis had not been made at that time. All the cases were under observation, and it was because he had developed this rash that I had him removed from the kiosk to the observation ward.

Sidney Weldon sworn and examined. (No. 66.)

1. *The Chairman.*] What are you ?—A private.
2. What were you before you came into camp ?—A bushman.
3. When did you come in ?—On the 19th April.
4. Have you been sick at all ?—Yes, I have been pretty bad with influenza.
5. When did you get ill ?—About a week after I arrived.
6. Did you go into the hospital ?—I attended sick-parade. I attended it once, but it was no use attending it again.
7. Did you get better ?—No, I got worse.
8. Did you go to the hospital ?—No, it was no use: they did not want sick men there. I reported once, and the treatment I received was no use to any one.
9. Did you get better ?—Yes, I got better eventually.
10. What was the treatment you received ?—I attended at sick-parade with about a hundred and fifty other men. We were told off in groups of twenty, and the doctor said, "What is the matter with you ?" and we told him to the best of our ability that we had a bit of a cold, and so forth. There was no pulse felt, and no examination, and no temperature taken or tongues seen. He wrote something on a piece of paper and said, "Take that into the next marquee." I received something from the dispenser. The doctor wrote out the prescription in Latin.
11. *Mr. Ferguson.*] Did he write out the prescription himself ?—Yes, I think so. He gave me the prescription in the marquee, and I had to give it to the dispenser.
12. *The Chairman.*] And you got some medicine ?—Yes.
13. Did you take it ?—Yes; it was a liquid and a pill.
14. Did you attend parades every day after that ?—Yes, I attended parades and did all my work, and never lost a second of drill. I was bad for six weeks.
15. And never reported yourself again ?—No; I was satisfied.
16. *Dr. Martin.*] Were you able to take your food all that time ?—No; sometimes I went without, and sometimes I did not sleep. I was coughing and retching, and not only disturbed myself but was disturbing others.
17. *Mr. Ferguson.*] Are you in the Sixth ?—Yes.
18. Have you been in tents all the time ?—Up till a week and a day ago. I have been in a hut for eight nights.
19. Have you something to say about the ventilation ?—Yes; it is no good, and never will be the way it is; it is too draughty.

20. What is your idea of what it should be ?—My idea is to divert the draught into a different channel—that is, instead of having the draught running about parallel with the table—it is striking down on the table and on the men in bed, which is injurious to health—my idea is to force the draught into the ceiling so that it will be above the men altogether. If you were in a hut for an afternoon you would know it next day.

21. Are you well now ?—I could be better, but I am well enough to go on with my duty.

22. You do not think you are bad enough to report ?—No.

23. How long have you been like this ?—I have been ill more or less for the last three months.

24. You ought to get a thorough overhaul ?—I was examined after going into camp, and I got an overhaul after coming back from eight days' leave. I came back about a week ago, and was overhauled then by one of the doctors.

25. Who was the doctor who saw you when on sick-parade ?—I could not tell you; he was a young fellow.

26. How many doctors were there at the time ?—Only the one, as far as I could see.

27. And about a hundred and fifty men to attend to ?—Yes, all waiting their turn.

28. *The Chairman.*] You wanted to say something about the drying-appliances ?—Yes. The present system of washing out the huts is all right, but they cannot be dried with the implements we have. On a day like this they would dry, because it has been lovely weather; but supposing we had a damp week, the huts would never get dry.

29. You have not been in them more than a week ?—No.

30. What experience have you had ?—I was cleaning them out for those on fatigue duty.

31. What do you say is the best way of dealing with them ?—I think the authorities ought to apply to some ship-chandler and get a couple of squeegees. They would not be very expensive, and would do a lot of good.

LEO FRIEDRICH sworn and examined. (No. 67.)

1. *The Chairman.*] You are employed in the Infantry cookhouse ?—Yes.

2. Since when ?—About a month after coming out to camp. I have been here about three months now. I was here about a month before the Fifth went away.

3. Were you laid up while in camp ?—Yes, I had measles, and I was put in the marquee at the hospital.

4. When did you get measles ?—I could not give the dates. It was about July, and the first night the tent blew down at one end: the whole end came in. That would be about 8 o'clock, and it was pouring with rain, cold, and blowing. We did not feel it very much, but we had to help those at the other end to come out of the wet.

5. Had you to go outside to fix up the tent ?—No.

6. You simply had to push it up from the inside ?—Yes. We were not allowed to go outside at all.

7. *Mr. Ferguson.*] Were there any orderlies there ?—At night it blew down once, and again in the morning. There were orderlies there the first time it was blown down. Those who were strong enough got up and gave a hand.

8. In the morning there were no orderlies ?—No, no orderlies. The tent was down for about an hour in the morning before any one came. We were calling out, but no one came for a while.

9. Was it right down ?—No, just at one end—the other end was all right. The flaps blew in and the rain came in before the tent came down, and our mattresses and blankets got wet.

10. What happened later on that day ?—We were all shifted into another marquee, and that afternoon we were shifted to Kaiwarra.

11. Did you have new blankets given you ?—At Kaiwarra we had blankets and beds.

12. You did not take the wet blankets with you ?—Yes, we took them but did not use them.

13. You were simply one day in the tent ?—Yes.

14. Was there any trench dug round the tent ?—I did not notice, but I do not think so, because there was a big pool of water inside the marquee.

15. How were you treated at Kaiwarra ?—We had the best treatment there after Dr. Valintine came, but before that we only got bread-and-butter and a little bovril for nearly every meal.

16. *The Chairman.*] You mean that Dr. Valintine came to see you ?—Yes, we got good treatment then. In the marquee we got bread-and-butter and bovril: those were the orders.

17. As you got stronger the food got better ?—Yes.

18. *Mr. Ferguson.*] You had mattresses ?—Yes, we had mattresses and beds, and we had our own mattress besides—that is, in the marquee.

19. *Dr. Martin.*] You were not lying on straw ?—Some were lying on straw, and those who got in first grabbed the mattresses.

20. *Mr. Ferguson.*] It is true some men were lying on straw without any mattresses ?—I do not think so: I did not see them. I was sitting up nearly the whole time reading. On the first night the tent blew down all the men at our end got an awful wetting. There was one man pretty bad, and the next morning he was taken out. I do not know what his name was, but when he came in he was bad.

21. *Dr. Martin.*] How many were in the marquee when you arrived ?—There must have been thirteen, and eight more came later: about twenty altogether.

22. Did you see a doctor when you were there ?—I do not know what his name was.

23. Were you there when Trooper Going was there ?—I do not know. There were only two or three there I knew.

24. *Mr. Ferguson.*] Did the doctor come every day ?—Yes, about every day.

25. *The Chairman.*] You were only there one day?—We were shifted into the marquee. I must have been there more than one day.

26. Do you say that each day you were there a doctor came?—Yes, I think so.

27. *Dr. Martin.*] You told me some men were on straw and some on mattresses, and now you say there were not?—I did not see any on straw.

28. You said something about grabbing the mattresses?—Some had two mattresses and some one. Those who came in first took the mattresses there, and some had their own.

29. The mattresses would be of straw?—Yes.

30. Was Trumpeter Simpson there for some time?—I could not say. Private Davidson and Private Dorset were there, and I believe I heard of Private Gillespie.

31. *Mr. Skerrett.*] Do you know of any one who was in the tent when it was blown down who is in camp to-day?—Private Davidson, of B Company, Sixth Reinforcements; and Private Dorset.

32. Do you remember on the night that part of the tent was blown down whether any orderly was sleeping in the tent?—I do not think so. There might have been at the other end. I am a very sound sleeper myself, and when the tent blew in they began to shout out, and that woke me.

33. Was there any orderly directing the reinstatement of the tent the night it was blown down?—Yes, I think there was. He was a hospital man.

34. Do you remember the same part of the tent blew down on the Sunday morning?—Yes.

35. I understood you to say that the tent was down for about an hour before you were able to attract attention?—Yes; that was on the Sunday morning.

36. Was there any orderly there then?—I do not think so.

37. Was it before or after breakfast it blew down?—It was before breakfast—it was dark.

38. *The Chairman.*] We were told it was in the evening, at 8 o'clock about, when it blew down first?—Yes. And it was dark when it blew down the second time.

39. Then it must have been before 7 o'clock?—Yes.

Sergeant ALEXANDER GEORGE BUCHANAN sworn and examined. (No. 68.)

1. *The Chairman.*] When did you come into camp?—On the 15th March this year.

2. As a private?—We came before the men, for a month on probation.

3. What were you before you came into camp?—I was a cadet in the Government Insurance at Timaru.

4. Did you go and live in tents when you came?—Yes. When we came we were put into that one hut that was erected as a trial. We were there till the men came.

5. What happened then?—We all moved over to the tents.

6. Did you move back again from the tents to the huts?—When the heavy rain came within the last fortnight we did.

7. Which do you prefer—tents or huts?—I much prefer the tents myself, because there are only eight in a tent and fifty in a hut.

8. It is not quite so sociable?—No.

9. And as regards comfort?—The huts are better in wet weather, and the tents better in dry weather.

10. Did you manage to keep warm in the sample hut?—The huts were always very cold when it was frosty. You noticed it more than you did in the tents. The tents are not cold like the huts are.

11. Did you see moisture on the sides of the iron inside the huts?—No.

12. Did you see the eaves open?—Yes, and there was a ventilator right through the hut above the partition. I think the other huts have the ventilator differently.

13. Have you been ill at all?—Yes, I have had measles. I got them about six weeks ago or a little more.

14. I suppose you reported on sick-parade?—I came home from route march on the Saturday night and felt hot, and I found I had measles, and reported straight away and was sent to a marquee in the camp.

15. How long were you ill?—I was in the hospital five days, and then went home on sick-leave to Timaru.

16. They did not quarantine you?—I only had measles for one day, as far as I could see. I was not ill; I was lying in bed for the one day.

17. *Dr. Martin.*] Were you examined by a doctor?—When we went in. The doctor used to come round every morning, and those that looked worse he would take the temperatures of. The others he would ask how they were, and would go away again. The day I went in would be about seven days before the Fifth went, and they went on the 12th June.

18. You were not in the marquee that was blown down?—No.

19. *The Chairman.*] While you were in the marquee was it dry?—Yes, it was dry. If there had been very heavy rain it would not have been dry. There was nothing to keep the wet out. There was no trench round our marquee.

Private GEORGE DELL sworn and examined. (No. 69.)

1. *The Chairman.*] When did you come into camp?—On the 18th April.

2. What were you before?—A general labourer.

3. What happened to you when you got to camp?—We were served with our kit.

4. Did you get two pairs of boots?—No, not until we had been in camp for about nine weeks.

5. Did you get your other things ?—Yes, we got a change of underclothing the day we went in, and another change a week later.

6. Where did you live—in a hut or a tent ?—In a tent. I have been in a hut since Sunday night.

7. You went through the winter in tents ?—Yes.

8. Which do you like best ?—Personally I prefer the tents. They seem more sociable, and you seem colder in the huts and want more blankets.

9. How many blankets have you ?—Three.

10. You could put your coat over yourself if it is dry ?—Yes.

11. Do you find the huts draughty at all ?—No, I cannot say they are very draughty. They are very fresh in the morning.

12. Do you find them stuffy at all ?—No, not stuffy.

13. Have you been ill ?—I was before the doctor twice—once with a cold and once with a slight attack of influenza.

14. You have not been laid up in the hospital ?—No, I have not.

15. Have you been suffering from any grievance at all while you have been in camp ?—Not that I know of.

16. *Mr. Ferguson.*] Is the food all right ?—It is not bad: it is as good as could be expected. Sometimes it is not up to the mark. The only thing I objected to was having to wait for two hours for the doctor in a slight drizzle.

17. Was that the morning of the sick-parade ?—Yes; I went over at 8 o'clock, and it was just after 10 o'clock when I got back.

18. There was no place to shelter in ?—There was one marquee with the side open with twenty men inside, and there was no room for more.

19. When was this ?—About a month ago.

20. *Mr. Skerrett.*] You passed all the winter in a tent ?—Yes, up till last Sunday.

21. Can you tell me what the routine was as to airing the tents—by lifting the flaps up ?—Yes; when the flaps were dry we rolled them as far back as they could go.

22. Did you do that as a practice on every fine day ?—Yes, when the tent was dry.

23. What did you do with the blankets and your belongings ?—When it was dry outside we brought them outside on the oil-sheet. If it was wet we rolled them up and put them on our beds.

24. What was the practice as to striking tents ?—We have not struck any tents since being here. We shifted them twice before being on leave and brought them back at night.

25. You did not strike the tents at all and replace them in the same site ?—Yes, on the same site on two occasions.

26. You struck the tents and removed the canvas ?—Yes, we took the tent about 2 chains away and put it up roughly, and shifted the floor of the tent and changed it for the day.

27. Was it a wooden floor ?—Yes.

28. And brought it back and put it in the same place ?—Yes.

29. *The Chairman.*] Do you at times let go all the ropes so that the canvas flaps against the poles ?—No, I have not seen that done. In the morning we used to undo about half a dozen pegs and roll the flaps as far back as we could roll them.

30. The strainers were not let go ?—No. That left about one-third of the floor uncovered towards the sun.

31. You were with what company ?—With the C Company, Sixth Reinforcements.

32. Were you all in tents from April right on ?—Yes, from the 18th April. They shifted into huts while I was on leave last week.

33. Did many of the men in C Company get ill ?—One got measles in our tent about seven or eight weeks ago, and one took ill about a fortnight ago.

34. Were you better or worse than any other company ?—I do not think we were any worse or any better than any other company.

35. *Mr. Skerrett.*] I understand you to say that twice your tent was struck, temporarily put on a new site, the floor removed, and then replaced on the same site the same day ?—Yes.

36. Was that only done twice during the time of your stay in the tents ?—Yes, I think it was twice. It may have been three times.

37. Was there any practice of striking the tent once a week or once in ten days ?—Not as far as the C Company was concerned.

38. Did the practice of your company as to striking tents differ from the practice generally throughout the camp ?—I do not think so.

39. Except on the three occasions, was your tent ever struck and then removed for the day or for the week to the adjoining site ?—No, never. About half the tents of C Company were removed once to the lines that B Company had left. B Company had left about a week.

40. So that there was an opportunity for the sites of B Company's tents to be aerated ?—Yes.

41. Then their sites were occupied by part of the C Company's tents ?—Yes.

42. Were you satisfied with the attention you got on sick-parade ?—Yes, I was satisfied except for the waiting outside.

43. It has been stated that there was a great deal of grumbling among the men as to the casual examination and attention given to them by the doctors on sick-parade: what have you to say about that ?—The first time I went along I had influenza, and the doctor gave me a thorough examination. The second time I had a slight cold and he practically did not examine me: he looked at my eyes and gave me a prescription.

44. Did you hear of any general grumbling by the men?—Yes, I heard some grumbling.
45. Are you able to say whether there was or was not a general complaint?—I am not able to say whether there was or was not.
46. *Mr. Gray.*] I suppose there are some men who will grumble under any circumstances?—I suppose there are.
47. Do you say there are some in this camp?—I do not know that I can say so.

MICHAEL ELLISON sworn and examined. (No. 70.)

1. *The Chairman.*] What are you?—A corporal.
2. When did you come here?—On the 18th April.
3. What were you before?—A station hand.
4. When you came what was your experience: what had you to do?—First to go and get served out with gear.
5. Did you get it?—Yes.
6. Had you to wait long?—Not very long. There was a big mob came in, but it did not take long to run through them. We were all strange.
7. You went to live in tents?—Yes, till we got back from leave on Sunday, when we went into huts.
8. Which do you prefer?—The tent every time.
9. Why?—There is more sociability, they are much warmer, and you can keep your stuff together better, and it is not so noisy.
10. What was the state of your health?—Pretty good till I got measles.
11. When did you get them?—On the 9th June.
12. And what happened?—I reported at 10 o'clock when I was bayonet-fighting, and then the spots all came out. I went to the marquee and saw the doctor, and he said I had measles. I had to wait till a quarter to 2 and then we were sent to another marquee along the lines, and they gave us some beef-tea and some dry rations. We were there till a quarter to 4, and then went to the Wellington Hospital.
13. When did you go there?—The same day.
14. Was your temperature taken?—Yes; the orderly took it.
15. What was your temperature?—It was 98. I was never ill. It only went up to 99.
16. Had you a cough?—I had a bit of a cough.
17. How long were you in the Wellington Hospital?—For a week.
18. Did you get bad there?—No, never any more than I am now.
19. You left at the end of a week—about the 16th June?—Yes, and then went to Berhampore, and remained there about four days. After that I went to Mr. Izard's house at Upper Hutt, and was there about nine days. I then had nine days' sick-leave and then came back to camp, and was back about three weeks when I went on extended leave.
20. You went to Berhampore?—Yes.
21. The convalescents were supposed to be there?—There were some there who were ill. I do not think they were all convalescents.
22. Where were you put when you got to Berhampore?—I was in a marquee on the hillside one night. I went down to the place that we called the "morgue," opposite the stables. It was a single room, and there were six men in it one night, and then it gradually dwindled down to four.
23. Were you looked after there?—Yes; it suited me all right. I was well enough, and we had good tucker.
24. *Dr. Martin.*] Were there any baths there?—Yes; but you had to carry the hot water from the copper.
25. How did you fare at Mr. Izard's house?—Very well. It was a nice place to stay at.
26. Were you seen daily by a doctor at Berhampore?—There was a doctor went there when I was there. He missed one day, I think. I did not see him one day. I was all right, and he used to go to those in the ward.
27. The temperatures were taken every day?—Yes, by the nurse. We had to go to the ward twice a day to have the temperatures taken. The nurse told the doctor which men were bad, and she made them go to bed if the temperatures were up.
28. The doctor may have been there that day and you did not see him?—Yes.
29. Did many men go away from Berhampore down town?—There were about three of them went away in the daytime, and the "red caps" caught them.
30. Those would be the men in the marquees who got away?—Yes.
31. *Mr. Ferguson.*] Was much liquor brought into Berhampore?—I never saw any or heard of any being brought in.
32. *Mr. Skerrett.*] Did you hear Private Dell's evidence as to the routine of dealing with the tents in C Company?—Yes.
33. Is that evidence substantially correct?—Yes; that is what we did.
34. How many times do you think your tent was shifted from its site and replaced?—Only just when the weather was bad—about three times during the period we were there. We let the bottoms get a chance to dry.
35. I understand his evidence was that the regular practice on every fine day was to lift up the flaps of the tent so as to ventilate the tent?—That is correct.
36. And to air their blankets and belongings?—When the weather was fine we used to lay the blankets out in the sun. That is what we do to-day.

37. Then he said that on three occasions during his dwelling in the tents they were removed to another site and carelessly put up?—Yes, with a guide-rope—just enough to hold them.

38. The floor of the tent being cleaned and aired, and then in the evening the tent was replaced?—Yes. That was done three times, but it may have been done more.

39. What is your impression?—I think it may have been done three times, but I do not remember any more.

40. Could you tell me whether that was the general routine in other lines of the camp?—I think so: that is what they did. The other companies did their own and then came and helped us. We were shooting on the range, and the companies we were marking for came and helped us with our tents.

41. *Mr. Gray.*] Was this lifting of the flaps of the tents sufficient to air them?—We rolled up the curtains as well.

42. Would the tent be thoroughly aired and ventilated?—Yes, absolutely.

43. There has been a good deal of wind and rain at the camp?—Yes.

44. You could not have shifted the tents during wet weather?—No; we had no floor in ours.

45. Was the ground in your tent always dry?—Yes, until the heavy rain came. It got a bit wet then. We dug a hole and stopped the water where it was coming in.

46. And was the floor all right after that?—Yes.

47. *Mr. Ferguson.*] How are the blankets aired by the men in the huts?—I hang mine outside the window in the sun; others hang theirs on the door and eaves of the huts.

48. So that the blankets in the huts do not get as well aired as the blankets in the tents?—Not so well as in dry weather.

49. *Mr. Gray.*] You could sling them over the eaves in the huts?—I have not seen them slung over the eaves to dry; it is very high up.

FREDERICK WILLIAM OWENS sworn and examined. (No. 71.)

1. *The Chairman.*] When did you come into camp?—On the 20th April.

2. What were you before you come?—A telegraph linesman.

3. Did you get all your kit?—Yes, all my first issue.

4. Were you delayed with the second?—We got the second issue of underclothing a week afterwards, and the boots ten weeks afterwards.

5. Did you live in tents like the last man?—Yes.

6. Have you lived in huts?—Since Tuesday week.

7. Do you prefer the tents?—Yes; they are warmer, not so draughty, and more sociable.

8. Have you been fortunate enough to have good health?—I only had the usual colds. I have not had to go into the hospital.

9. Is there anything that has struck you as being a grievance affecting other members of the camp that you think we ought to hear?—The only thing I have had to complain about is waiting so long in the wet for the mess orders.

10. That is when you go to get your food?—Yes. They keep you lined up waiting for half an hour or twenty minutes till they serve it out, no matter whether it is raining or not.

11. How could that be obviated?—They could serve it out quicker.

12. You have to attend at a particular hour?—Yes. They blame you if you are two or three minutes late. They keep you waiting nine times out of ten.

13. *Mr. Ferguson.*] It is better to have the food well cooked than partly cooked?—Well, it is not necessary to have us lined up so early.

DAVID ALLAN DORSET sworn and examined. (No. 72.)

1. *Mr. Skerrett.*] What are you?—A private in B Company, Sixth Reinforcements.

2. What was your civil occupation before you joined?—I was working as a sawmill hand and labourer. I came into camp on the 20th April.

3. You have heard the evidence of the other men with reference to the receipt of their equipment on their arrival: was your experience substantially the same as theirs?—Yes. We got all our gear excepting the extra pair of boots, and we got those about eight or nine weeks afterwards.

4. When did you get ill?—On the 10th June.

5. Where were you then?—In a tent.

6. Did you report on sick-parade?—Yes. I went across to the doctor and he told me to go to the hospital, and I went to a tent.

7. What doctor was it you saw?—I do not know.

8. Do you know what your temperature was?—No, but it was taken.

9. What did the doctor tell you you were going to the hospital for?—For measles.

10. You went to a marquee?—Yes; to the marquee there was some trouble about being blown down. There were four men in it when I went in, and next morning a lot more came and made the number up to about twenty.

11. You were there for four days before the tent was blown down: it was blown down on the Saturday night?—Yes; I think it was the 11th I went in, and the marquee was blown down on the 12th.

12. Do you remember whether any orderly slept in the tent at night?—No, I could not say.

13. What happened when the tent was blown down on the Saturday night?—It started to blow in about 8 o'clock at night. We sent out for the orderlies, and they came in and fixed it up. There was an orderly there then.

14. Was more than one orderly fixing up the tent?—Yes.

15. Did the patients help to fix up the tent?—I think one went outside to help fix it up, but I do not think any of the others did; they assisted inside.

16. It has been said that when the tent was blown in on the Saturday night there was no orderly there: is that correct?—No.

17. One witness said that the men in the tent had to go outside and get wet in the endeavour to set up the tent again: is that correct?—No, not to my knowledge. It was only one end of the tent that blew down.

18. Which end was that?—It would be the left-hand end, nearest the railway-line. In the middle of the night all the flaps of the tent were open, and we had a little rain come underneath.

19. It is suggested that during the night the patients got a very bad wetting?—I do not think it is true.

20. Did the tent blow down again on the Sunday morning?—The wind got up a bit and very nearly upset the tent; but before it went they told us to get up, and they shifted the convalescent patients and put them into another marquee, and we got the help of the orderlies to shift our stuff along.

21. What was then done?—That was really all that was done. They then gave us our breakfast.

22. Which side of the tent came down?—The same side as before.

23. One witness said that when the tent came down they were about an hour calling out before any assistance came to put the tent right to get them out of it: what do you say about that?—I think it is untrue.

24. Can you tell me whether there was a trench round the marquee?—I do not think there was.

25. *Mr. Gray.*] It was blowing hard both on the Saturday night and Sunday morning?—Yes.

26. Did you suffer and inconvenience that might have been avoided?—No. I think it was just act of Providence that it did come in that way: I do not think it was any fault of the orderlies.

27. You did not think it was necessary to make any complaint and do not complain now?—No.

28. *Mr. Skerrett.*] Did you go to the hospital?—Yes.

29. Were you treated all right?—Yes; treated splendidly at Kaiwarra.

FRANCIS DAVIDSON sworn and examined. (No. 73.)

1. *Mr. Skerrett.*] What are you?—A private in B Company of the Sixth Reinforcements.

2. What was your occupation before enlisting?—I was learning dairy-farming.

3. When did you join at Trentham?—On the 20th April.

4. You have heard the evidence of the last two witnesses as to the circumstances attending their reporting at the camp and getting their equipment?—Yes.

5. Is their evidence substantially correct?—Yes.

6. You do not wish to add anything on that point?—No.

7. I understand you got ill?—Yes, on the 11th June, with measles. I went on sick-parade on the evening of the 11th June. The doctor examined me and took my temperature, which was 99. He told me I would have to go into the marquee the same as the last witness. On the Saturday evening it was very wet and windy, and the end of the tent blew in, and some of us got a bit wet.

8. How did you fix it?—The orderlies fixed it up.

9. Was there an orderly sleeping in the tent or in attendance at once?—I could not say.

10. There was no undue delay on the part of the orderly?—No. It did not take long to fix it up.

11. It was suggested that some patients had to go outside and help fix up the tent: was that so?—No, I do not think so; I did not see any.

12. Was there more than one orderly fixing up the tent?—Yes, three or four.

13. You did not suffer any inconvenience by getting the beds wet?—No. My bed happened to be by the side blown in, and I moved it.

14. It was still sufficiently dry to use?—Yes. The following morning the orderly told us to collect our gear and go into another marquee.

15. *The Chairman.*] When it blew down how did you get rescued?—The end of it came down.

16. Were you calling out for assistance?—The orderlies were there in a very few minutes after the blowing-down occurred. Within five minutes I should say we were ordered to move out.

17. *Mr. Skerrett.*] One witness said the tent was down for an hour before the call for assistance was answered?—I was at the end it blew down, and from the time it blew down till I was in the other marquee was not more than five minutes.

18. *Mr. Ferguson.*] Did the other men in that marquee have mattresses?—Yes.

19. None sleeping on loose straw?—No; there were mattresses to spare in the marquee.

20. *Mr. Skerrett.*] Was there a trench cut round the marquee?—No.

21. Is there any matter of interest to your camp-mates that you think the Commission ought to hear?—I do not think so.

22. *The Chairman.*] You yourself have nothing to complain of?—Nothing to complain of at all.

23. Can you tell us of any grievances that you consider others are suffering from?—No, sir.

MONDAY, 2ND AUGUST, 1915.

GEORGE ROBB sworn and examined. (No. 74.)

1. *Mr. Skerrett.*] You are a member of the firm of Robb and Page, architects, carrying on business in Wellington?—Yes.

2. I think you have prepared a statement of your evidence?—Yes. I have had seventeen years' experience as an architect, gained in New Zealand, South Africa, and Europe. Have studied principles of town-planning and principles governing the planning of sanatoria and hospitals both at Home and in the colonies. I have had experience of galvanized-iron huts, &c., in New Zealand, Natal, Zululand, and Transvaal, both lined and unlined, military types and others. I have slept in lined and unlined iron huts of all types. I have designed sleeping-huts for Natives and coolies, employees engaged at some of the sugar-mills and tea-plantations in Natal, and I have also seen the huts used by the troops at "Tin Town," Ladysmith; those used at the military camp at Maritzburg; in the Native compounds on the Rand; the outpost huts of the Natal Police; huts at Zululand; bush huts in New Zealand, and the canvas huts used at the Boer concentration camp at Maritzburg; and from my experience and observations of iron huts I can say that the use of iron is not economical, because it intensifies the temperature of the atmosphere, and to render the huts comfortable and healthy it is necessary to line them with some material which is a non-conductor of heat or cold, such as wood, asbestos, or canvas. Unlined, unwarmed iron huts, even if well ventilated, are very uncomfortable in sunny weather, and, in my opinion, dangerous and unhealthy in cold; and when the ventilation is defective the huts become as ovens in hot weather and as refrigerators in cold. In huts constructed of wood or canvas the temperature of the air inside is more in equilibrium with that outside, owing to the comparatively small degree of conductivity of those materials. When it is remembered that the various degrees of conductivity, according to Kaye and Laby, for iron, zinc, wood, and canvas, or cotton of the same thickness are represented by the respective coefficients ·150, ·260, ·0005, and ·00055, which approximately means that iron has about 300, zinc 500, and wood ·9 times the conductivity of cotton or canvas, it will be seen that iron galvanized with zinc will intensify the various temperatures of the atmosphere; and in the case of cold or frosty weather the bare iron walls of an unwarmed closed-in hut would radiate chilled waves of air, which would have a harmful and unhealthy effect upon any animal life within. Galvanized iron must have at least as much conductivity as iron, and probably as much as zinc. The radiation of galvanized iron is about 30 per cent. Breathing chilled air undoubtedly gives rise to respiratory troubles. It would be impossible to maintain the internal air of an unwarmed and unlined iron hut at the same temperature as the external air, owing to the radiation caused by the iron. The huts erected for the Boer refugees in Maritzburg were of canvas and wood, as the result of the experience gained in "Tin Town," Ladysmith, when many cases of chest troubles were caused by the chilling effects from the use of bare iron walls. The temporary War Office hospitals in England are lined and ceiled with asbestos sheets. I believe the huts for the troops are constructed of wood or iron in much the same manner as the hospitals. Bushmen and navvies in New Zealand will not sleep in unlined, unwarmed iron huts; they prefer the canvas or wood hut or tent. Of the hundreds employed at the rail-head north of Gisborne none will use bare iron for sleeping-huts, though they use iron huts for cooking and storage purposes. The military huts at Ladysmith were of various sizes, unlined and lined; wood floors on piles; ventilators high up, no special outlets; unwarmed; the floor-space per man was that allowed by the Army Council Regulations—*i.e.*, 60 square feet. They were abandoned as unhealthy. The Boer refugee concentration-camp huts at Maritzburg were constructed of canvas on wood frames, wooden floor on piles, iron lean-to roof with felt under. The huts were laid out in groups consisting of four rows on a sloping site, with a northerly aspect. The space between the rows was about 30 ft. between the huts. Between each group the space was about 200 ft., down the centre of which stood the latrines or privies. These and the mess-rooms, stores &c., were of bare iron on wood framing. Each hut was about 30 ft. by 12 ft. by 9 ft., in two compartments, and accommodated not more than four people in each. No fireplaces, ample windows and door, and four ventilators high up. Some huts had screens or verandas in front. Some of the huts used by the Indians at the sugar-mills are of iron, lined with canvas or wood, well ventilated, with wooden floors and ample light, with 60 square feet of floor-space allowed per head. The hutments at the military camp at Maritzburg were constructed in accordance with the Army Council Regulations, and were lined and ceiled with wood, and had efficient ventilation. The compounds on the Rand, Transvaal, are sometimes lined, but all are artificially warmed during the cold weather. The ventilation also is good. The floors are sometimes of wood, in other cases I have seen ant-heap floors. The Natal Mounted Police hutments are lined and warmed when necessary. The police on outpost duty prefer the shelter of bushmen's caves or the small patrol-tents to the risk of sleeping in unlined iron huts in cold or frosty weather. By request I visited the Trentham Camp on Friday, the 23rd July, 1915. There had been heavy rain for several days previously. The approach road to the camp was inches deep in mud. The camp is on a fairly level site. The condition of the ground was very bad—pools of water and mud everywhere, even under some of the buildings. There was an absence of any effective surface drainage. In some cases the spaces between the hutments and around the Headquarters Staff were crudely metalled with boulders of various sizes, apparently dumped down on unprepared ground. Some of the soak-pits were partly filled with water and silt; evidently they were not dug sufficiently deep to allow the water to get away. The tents and headquarters, &c., are on the east side, and there is some congestion and disorder evident in their disposition. Some of the tents are within 3 ft. or 4 ft. of each other, and in some cases the guy-ropes overlap. Some have boarded floors. The hutments, the hospital, and some other

buildings are placed on the west side. The hutments are arranged in square blocks, with ample space between the blocks, but only 18 ft. between the huts. A block of eight rows of huts occupies 43,000 square feet, including spaces between the huts, which gives about 53 square feet per head, calculated on the basis of fifty men in each hut. Each hut is about 140 ft. by 22 ft. by 9 ft. to collar-tie, pitched roof with gabled ends, wood frame and flooring, galvanized corrugated iron sides unlined, iron roof with patent felt under on wire netting and battens spaced 2 ft. apart. The floor-level on piles is about 18 in. above the ground-level. The huts are divided crosswise by a wooden partition. Entrance is at each end by double doors, 6 ft. by 7 ft. The eaves project about 21 in. The lighting is by nine windows in each side, with top-hung sashes opening at the bottom. Window-frames are in pairs, each pair about 7 ft. by 2 ft. 9 in. The sill is about 3 ft. 6 in. above floor. There is an opening at eaves-level on each side extending the full length of the building (140 ft.), between the top and intermediate plate and roof battens, in all about 8 in. deep. Dining-tables and forms are placed down the centre of the huts, and four food-cupboards are fixed at the entrance. At the window-sill level there is a 12-in.-wide shelf. In some of the huts the men have erected rough bunks. The hospital stands alone on the west side, and is built of timber weatherboards, iron roof, with lath-and-plaster finish inside. The operating-theatre is small, and has no top light.

3. *Dr. Martin.*] Did you see any arrangement for heating the operating-room?—Not when I visited it. The ward runs approximately north and south, and has accommodation for eighteen beds. A veranda is placed at the end and on the west side. The site for the camp is too flat. A gentle slope with a northerly aspect is preferable, to ensure drainage.

4. *The Chairman.*] Did you see such a site out there as you mentioned: is that gentle slope available at Trentham?—I did not see any such site. The soil and subsoil may be porous in their natural state, but the continual traffic must consolidate the soil and prevent the surface water soaking away. Fine sand and earthy matter in the subsoil may become clogged with solid matter from the drains and become like the Campagna near Rome. The presence of mud and water on the surface, unless drained away, is bound to create damp and unhealthy conditions. A system of surface drainage of roads and paths should be undertaken at once. With the amount of drainage that goes away from that camp I would like to know where it goes to. It may go down on to a hard strata and come up again on to the ground. With regard to the hutments, these are erected too close together to allow of free circulation of air and ventilation, and they are wrongly placed with the major axies running approximately west-north-west and east-south-east instead of north and south, which would allow the sun to shine into the huts on both sides and to warm and purify the air between them. The huts should also have been placed in echelon, with a space of at least 40 ft. between the rows. The hospital ward is rightly placed in relation to the sun. Notter and Firth in their book describe the Döcker huts: "In the German Army the Döcker huts are largely used, and are said to answer well. They have recently been favourably reported on in this country. They are made of wooden or iron frames, covered with a special kind of felt lined with canvas. . . . These huts are portable, and are well ventilated by windows, cross-louvres, and ridge ventilation, and can be easily warmed if desired." Notter and Firth recommend, with regard to barracks and hut barracks, that "The selection of the site is of first importance. Fall of ground from building in one direction at least; axes of buildings to run north and south to permit the sun's rays to fall on both sides; free circulation of air around buildings. Aspect should never be sacrificed to prospect. Water from buildings should be rapidly removed to prevent dampness. Sick men especially are very susceptible to impure air. Division of men among numerous detached buildings, arranged in lines, and placed so as not to impede the free movement of air around other buildings and the incidence of the sun's rays. Wooden huts to have 50 to 75 square feet of floor-space and from 500 to 850 cubic feet of air-space per head. To be ventilated in eaves and ridges and with outlet shafts. Warming will assist ventilation." In the planning of the huts a unit spacing should have been used. Apparently the spacing was determined by the widths of the iron sheets, and not by the requirements or the purpose of the building. The huts should have been planned to accommodate fewer men, to avoid the serious risks mentioned in section 42 of the Army Council Regulations concerning military hygiene (section 42, Chapter ix, page 18). The crowding of fifty-odd men into a building small enough for twenty-five, contrary to all the recommendations of the Army Council and other authorities, and the general principles governing the planning of these places, is indefensible, especially when it endangers the health and even the lives of the flower of our men. In this and other matters it is a pity that the "blessed agencies of prevention" were not more used. The huts, we are told, were erected primarily to afford more comfort than the tents afford; the evidence, therefore, that comfort was not particularly studied falls to the ground. To accommodate fifty men in each hut means that the spacing is less than 3 ft. centre to centre—almost direct personal contact. 60 square feet of floor-space and 600 cubic feet of air-space per head is ample when the ventilation is efficient, and it should be so arranged as to give as much air-space where it is most needed—*i.e.*, at the sides of the building. Huts with, say, 6 ft. bed-spacing would require to be about 20 ft. wide. The floor-space is more important than the air-space, provided the ventilation is satisfactory. In the "Manual of Elementary Military Hygiene, 1912" (section 42, page 48), it states, "Disease increases from overcrowding. Whether the infection is spread through the air, by personal contact, by water, by food, from latrines, or by insects, the more people there are in a particular area—for example, in a barrack-room, billet, or tent—the larger will be the number that come within the range of possible infection, and the more concentrated will be the dose. For instance, if fifty men live in one barrack-room and one of them is suffering from consumption, any of the remaining forty-nine are liable to catch the disease; but if the number is halved only twenty-four will be exposed to infection. The same

is true of infection spread in other ways. The effect which faultily designed and faultily constructed barracks may have in propagating disease becomes at once apparent." It is essential that the bodies should be as far apart as possible when the men are asleep, so that the breath of one man does not get to that of the next. Apparently there was not sufficient means of drying clothes. I went into the Artillery hut, and there were there some blankets and clothes that were very damp indeed. There had been some rain, but I think some drying arrangement should have been provided. That was on the 23rd July. Some of the men did not know that there were any drying arrangements. One man's clothes were very wet indeed; he had been sick, and was going on leave, and he did not know of any place where he could dry his clothes. I understand now that there are some marquees for that purpose. Special drying-places should be provided. When I visited the camp I found the blankets and clothes in the huts damp and cold owing to the lack of means for drying and warming them. This can hardly conduce to healthy conditions, and must seriously impair the resistance to disease or infection of those who use them. "Sanitation in War," by Major P. S. Lelean, R.A.M.C., 1915, Asst. Prof. of Hygiene, R.A.M.Coll.: "Disease-prevention is the essence of effective sanitation. Wet clothing: The fouling of clothing is important, because decomposition of the organic matter which it contains liberates organic vapour, which, although freed from moisture and CO_2, is still lethal to mice in 45 min. This produce therefore must be noxious to large mammals. When the clothing has been loaded with organic matter by frequent saturations with sweat it is desirable that a change should be provided for night use, and fouling of the air of rooms should be avoided by drying the day-wear elsewhere. This is seldom practicable on active service, but can readily be arranged during training. Provision should be made for drying damp clothing in separate drying-sheds apart from the rooms in which the men live and sleep. Some system of warming which would both warm and dry the huts and clothes (except those wet with sweat or weather, which should be dried separately), and assist the ventilation, would promote and maintain the general health of men. To expose them to dangerous and weakening conditions is not the way to prepare them for the hardships of a campaign. Sleeping on the floor of the huts is neither very comfortable nor healthy. Damp would arise from the wet ground underneath, and the colder air, being the heavier, descends to the floor. Further, any dust would be swept on to the sleepers' faces. It would have been more hygienic to have provided separate mess-rooms between each hut, and where the food-cupboards would also have been placed. "The desirability of keeping a special room set apart for meals is now well recognized, and provided when possible." The ventilation of the huts is faulty except in stormy weather, when they would become too draughty. The principle of eaves ventilation is sound enough when there are outlets in the highest point of the roof or when the ceiling-level is not much above the inlets. The Army Council recommend eaves or ridge ventilation, but the former applies to buildings ceiled at the plate-level or with outlets in the ridge. A system of ventilation which could have been altered according to the weather should have been adopted in preference to the rather crude method now in use. To be efficient the ventilation should be automatic and constant. Fresh-air inlets of sufficient diameter to admit 3,000 cubic feet per hour per head at or near the breathing-line are required, as well as outlets of at least the same diameter placed in the highest point of the ceiling or roof. As the huts are at present arranged it is very difficult to get an adequate supply of fresh air in calm or mild weather, owing to the overhang of the eaves, the sashes being top-hung and opening outwards, the too-close proximity of the other huts, and the open roof, with its exposed collar-ties, &c., which prevent proper perflation. There is not a constant or sufficient inlet of fresh or outlet of foul air. In calm or mild weather the air must stagnate inside the huts. The exhaled breath of the men ascends to the open roof-space, where it is chilled and descends again to be rebreathed.

5. *Mr. Ferguson.*] You think there should be ridge ventilation?—Undoubtedly. A test made by Mr. Bates for me of the in and out flow of air in the eaves ventilators, and also in the centre of the hut, with a delicate anemometer, resulted in no movement being recorded in the hut, and a very slight intermittent movement at the eaves on the windward and leeward sides, although there was a breeze blowing outside. This proved that the ventilation was not constant, and that the closeness of the adjoining huts affected the currents of air. Mr. Bates has made other observations which will, I think, bear out my contention that these huts are not sufficiently ventilated at all times. The amount of CO_2 found in the air of the huts after occupation also bears out this statement. It is the excessive presence of CO_2 and diminished amount of oxygen which renders air vitiated by respiration so hurtful. The now well-known fact of the great prevalence of phthisis in most of the European armies can scarcely be accounted for in any other way than by supposing the vitiated atmosphere of the barrack-room to have been chiefly at fault, and, as if to clinch the argument, there has been of late years a most decided decline of consumption on certain stations where the only circumstance which has notably changed in the time has been the condition of the air. "Impure air: There is an enormous increase of bactria in crowded and ill-ventilated rooms." "Cerebro-spinal meningitis: 40 per cent. of the contacts are said to become temporary carriers by a naso-pharyngeal infection which persists for about thirty days" (Lelean on "Sanitation in War"). "Tuberculosis: Habitual breathing of air rendered impure by overcrowding and defective ventilation may act in two ways—indirectly by weakening the resistance of the tissues, and by increasing the chances of infection. Overcrowding and defective ventilation are not convertible terms, but we scarcely meet them apart. Persons breathing air vitiated by respiration become pale, lose their appetite, and decline in muscular strength and spirits. The aeration and nutrition of the blood are interfered with, and the general tone of the system falls below par. Of special diseases pulmonary affections are more common" (Notter and Firth). Colds and influenza are rarely contracted in fresh air. They do, however, frequently follow the breathing of impure air of overcrowded and

ill-ventilated rooms." "OC_2: 0·3 to 0·4 per 1,000 parts in air. 0·2 per 1,000 parts is the limit of admissible impurity. 1·1 per 1,000 CO_2 in air of a room after occupation shows that only 857 cubic feet of air entered during occupation. 1·0 per 1,000, that 1,000 cubic feet of air entered during occupation. In repose a soldier would evolve 0·7 CO_2 per 1,000. 3,000 cubic feet of fresh air should be provided per hour for each occupant of a hut. CO_2 is the chief measure of air-vitiation: not because it exists in such an amount as to influence health, but because it appears to exist in a constant ratio with the other offensive and possibly more dangerous impurities. We may accept the CO_2 present in any given air-sample as the best and most reliable index of air-pollution." "Warmth concerns the positive mental asset of physical comfort and the negative effect of cold in lowering physiological resistance. Every effort should be made to keep the men warm. The trouble involved in making simple arrangements for the men's comforts is amply repaid by the increased efficiency which results" (Major Lelean, in "Sanitation in War"). Next to the overcrowding of the huts and the defective ventilation, the gravest fault in their design is the use or iron on the walls without inside lining. Timber, canvas, or asbestos sheets on wood frames would have been cheaper than iron at the present prices, and, possessing less conductivity than iron, would have preserved a more equable temperature in the huts. In South Africa iron was used extensively owing to the other materials, except canvas, being unobtainable or too expensive, but it was recognized that it was unsatisfactory. Bare iron huts are dangerous, cruel, and unhealthy, because the iron intensifies the temperature of the outside atmosphere. The draughts complained of in the huts were frequently the cold waves radiated from the iron on to the men's bodies, and, owing to the position in which they lay, on to the most vulnerable parts—*i.e.*, the head and chest. I can speak from personal experience of the chilling and devitalizing results of sleeping in an unlined, unwarmed, bare iron hut during cold and frosty weather, and the coldest part of the night usually coincides with the time when the vitality of the body is at its lowest.

6. *Dr. Martin.*] What time?—From 2 to 4 o'clock in the morning. The huts should be lined and ceiled across at the level of the collar-tie, and outlets provided for the escape of foul air. It is doubtful whether the ventilation can be improved while the huts lie so close together unless mechanical means be employed. It would facilitate the admission of fresh air if some of the sashes were hung at the side and opening outwards to catch any current of air that may pass down between the huts, and if ridge ventilators were installed to catch the currents of air passing over the tops of huts and so draw out the impure air inside. At present they are hung by the side and opening at the bottom, and owing to the closeness of the huts and the formation of the eaves a light current of air that might pass down between is not carried into the huts at all. The sashes should be opening outwards on the same principle as the hoppers used on the steamers in the Red Sea: there they put out a hopper and a fresh breeze is drawn into the cabins. Plenty of fresh air can get into the huts in windy weather, but they are too close together to admit fresh air in calm weather.

7. *The Chairman.*] Does that complete the statement you desired to make?—Yes, sir.

8. *Mr. Ferguson.*] Would you elaborate the point that you made about putting a ceiling at the level of the collar-tie? Why do you think the huts should be ceiled at the level of the collar-tie?—It would help the passage of air through the huts. That is my view of what is required if you wish to have perfect ventilation.

9. It really shows that when you make anything less than a house you get into the region of danger? They would almost become permanent huts with ceilings and so on, would they not?—It is essential for the health of the occupants. It would be money well spent.

10. *The Chairman.*] You have made an exceedingly valuable contribution to the evidence on this subject. I think we are greatly indebted to you for the trouble you have taken?—Thank you, your Honour. I think that the principles governing the treatment of consumptives might very well have been applied in this camp.

11. That is what we understood was the principle that was applied—that as a consumptive seems to do best in a place having a constant flow of air, such a place would do well there?—I think it would have been better to have simply built consumptive shelters. Those huts would be death-traps to consumptives. There is no sunshine, no proper ventilation. They are of the wrong type altogether for consumptives. They are wrong, I consider, for healthy men. Of course, the overcrowding was the greatest fault. It does not matter how well-ventilated the rooms were, the fact that the men were lying so close together must have increased the risk.

12. *Mr. Ferguson.*] We are faced with this difficulty in connection with that: the expert who designed the consumptive shelters—or the great bulk of them—was one of the Board which designed these hutments, and designed them on the result of his experience of consumptive shelters: he told us in evidence that it was in consequence of his experience that he so designed these sheds?—Do I understand from that that there are consumptive shelters of that type in New Zealand?

13. I do not know that?—I should hope not, sir. There is no authority who would not condemn that type of hut.

14. *Mr. Gray.*] You realize that the men are not living in these huts: they have their meals and sleep there, but are out all day?—That is the important point. If they were working in those huts they would be healthier.

15. Without questioning your sincerity in the matter, may I ask who requested you to make an examination of these hutments at the camp?—I got permission from the Commission.

The Chairman: We understood that Mr. Robb was going to do so.

Mr. Ferguson: I think we understood that Mr. Robb had had experience in South Africa of military hutments, and that he would like to give us the result of that experience, and we approached him.

The Chairman: Yes; and we issued an order that he might have free opportunity to inspect them.

Mr. Gray: I only asked because I notice that in his statement Mr. Robb said he made his examination by request.

Witness: Yes, by request. The invitation did not come in that form—that I was requested to go out there—but a permit was given to me to visit the camp and examine the hutments.

Mr. Gray: Dr. Frengley would like the opportunity of asking Mr. Robb one or two questions.

The Chairman: No doubt. It might be desirable for him, before he does that, to consider Mr. Robb's report. We can take that to-morrow, probably.

ALICE FARAM sworn and examined. (No. 75.)

1. *The Chairman.*] You are a duly qualified nurse?—Yes, sir.
2. You were at Berhampore in attendance upon the military there?—Yes.
3. From what date were you there?—From the 2nd June until the 17th July.
4. You were under Sister Keith?—We were all sisters there.
5. That is the proper term—"sister"?—Yes.
6. You were under Sister Keith?—Yes.
7. She was in charge of you?—Yes.
8. Were your's day or night duties?—We did divided duties, really. There was one always on duty.
9. When you went there on the 2nd June, that was about the date it was opened, was it not?—No; it was opened some time before that—I do not know how long. Sister Jamieson was there before I was. I succeeded her.
10. How long had it been opened?—About three weeks, I think.

Dr. Purdy: It was opened on the 14th April.

Mr. Ferguson: At first there were no nurses at all, I think.

Dr. Purdy: Yes; two nurses from the first.

11. *The Chairman.*] You went there on the 2nd June: how many patients had you there then?—I think about eighty; between sixty and eighty.
12. Then you had marquees up at that time?—Yes.
13. Were you overworked, or had you sufficient help there?—I consider we had sufficient help.
14. Do you remember two men, Pollard and Fordham, who were there?—Yes, sir.
15. Were you attending either of them?—Yes, sir, all the time.
16. Were you in attendance on them at night?—Yes. We did night duty alternately.
17. Did you keep temperature-charts?—Yes, for those two.
18. What became of those charts?—Sister Hanna and I were at the hospital after all the patients had been discharged, and were destroying the various things in the wards. We were about to destroy the books and temperature-charts when we decided that it would be best to ring up the Defence Department and inquire there whether they wanted these things sent back. We did so, and we were asked to send back any books or papers that had not been near the wards; but they thought it was not safe to send back anything that had been in the wards. Those charts had been in the wards all the time.
19. And so you destroyed them?—Yes.
20. Consequently there is no record now to show the temperatures there?—But I remember the cases quite well and the rise of temperature.
21. Then, what was the history, we will say, of Pollard? When Pollard came, do you remember his coming?—Yes, sir.
22. He came on the same day as Fordham, did he not?—Yes.
23. What was Pollard's state when he came in?—I remember that he was very pale and was expectorating rather much thick phlegm. He had a temperature of 101·8.
24. When he arrived?—Yes. He also had a cough.
25. At what time of the day did he come?—I think it was the latter part of the afternoon.
26. Do you remember which doctor was in charge there then?—Dr. Harrison was attending; sometimes Dr. Ferguson, I think, but principally Dr. Harrison.
27. How did he attend?—A doctor came every day, either Dr. Harrison or a doctor from the camp; and while those men were ill either Dr. Elliott, Dr. Steele, or Dr. Herbert saw them. They were seen twice a day.
28. Do you remember any question of removing them to the Wellington Hospital arising?—I was not on duty when the doctor called that afternoon, but when I went on duty in the evening Fordham told me the suggestion had been made that he should go to the Wellington Hospital, and he had told the doctor that he was quite comfortable and happy at Berhampore.
29. Pollard said nothing on that subject to you, did he?—No.
30. Could either Pollard or Fordham have got better nursing: were there better facilities for a sick person in their condition at Wellington Hospital than at Berhampore?—I do not think so, because we were able to get all the requisites for those cases. And I remember that Fordham added that he was quite satisfied he could not get more attention than he was receiving at Berhampore. This was when the suggestion was made that he should go to Wellington Hospital.
31. Was the place properly warm?—Yes; but there was no heating-apparatus there. We, however, ventilated the wards.

32. Were you able to keep these men warm?—Oh, yes.

33. With regard to Pollard, do you remember his temperature going up?—Yes. He came in on the Friday, and on the following Tuesday his temperature rose.

34. How did he proceed after that?—I think he gradually got worse. He became delirious on the Wednesday night.

35. You remember his relatives coming?—Yes.

36. Did you see them?—Yes.

37. Were you present when Dr. Herbert had a conference there?—Yes.

38. Was the question of removal discussed then?—I never heard it discussed.

39. Did you hear what the result of the conference was?—No. The treatment was to be continued.

40. With regard to Fordham, what was his condition when he came in?—He was also pale. He had a slight cough, and was expectorating phlegm; but he did not impress me as being so ill as Pollard, and his temperature was not so high.

41. Then he developed a temperature later?—Yes, about the same time as Pollard. It may have been a little later—the next day.

42. Did you see the men in the marquees?—Yes.

43. Had you to attend to them in any way?—They were usually up. Those men had not temperatures. Their temperature was taken every morning—that is, the convalescents; but the temperature of the others was taken night and morning.

44. The temperature of those in the building was taken twice a day?—Yes, and those in the marquees too—the men who came up to the building.

45. Had they any difficulty about sleeping? It is suggested that the marquees were erected on an incline, so that the men, when asleep, would roll to one side of the tent?—When I went there the marquees were just being floored, and stretchers were sent soon afterwards. I think that happened before my time.

46. If there was such a rolling-down it would be before your time?—Yes.

47. Because floors were there about your time?—Soon afterwards.

48. Now, as to the cooking: it is suggested that that was done in the kitchen just at the back of a lavatory. We have a plan here: perhaps you would be able to point out these places to us?—[Witness explained where the kitchen and lavatory were.]

49. The kitchen was in the nurses' cottage?—Yes.

50. And the only lavatory it would be near would be the lavatory belonging to the nurses' cottage?—But that was away from the cottage, right next to the washhouse—some distance from the kitchen, I think.

51. Then it is not correct to say that cooking was done in the kitchen just at the back of a lavatory?—No.

52. Where did you get your water from for use there?—There was a cold-water supply in the main building.

53. *Mr. Ferguson.*] It is not true that all your water had to be carried up?—Decidedly not.

54. *The Chairman.*] Was there a telephone there in your time?—Yes, sir. When I went there first there was not, but it was installed soon afterwards.

55. *Mr. Ferguson.*] With regard to the hot-water supply, was that efficient?—The water was heated in the washhouse, which is away from the main building.

56. That had to be carried up, of course?—Yes.

57. *The Chairman.*] "All the water had to be carried up to the main building. It seemed to come from down in the gully, and had to be carried upstairs." Is that so?—No.

58. It was simply brought up from the lower story?—The hot water was brought up from the lower story. There was a califont in the room off the wards, which was often used. There water was heated—in the bathroom next to the wards—in the main building.

59. *Mr. Ferguson.*] How was the califont heated?—With wood.

60. Were the orderlies that you had capable, efficient men, or inefficient?—Efficient, with few exceptions.

61. *The Chairman.*] Were they qualified?—I had one man in the marquee who learned more in three weeks than the nurses in Wellington Hospital would learn in four years; but they never had any nursing to do.

62. They carried out all you wanted them to do?—Yes, sir.

63. It says here, "Down in the gully there were two water-closets without any board tops on them": do you remember such?—There were patent lavatories there.

64. They were water-closets?—Yes.

65. The water was working all right?—Yes.

66. Were they all right when you were there?—Yes. We made an inspection every day with an orderly.

67. Of the sanitary condition of things?—Yes.

68. Do you remember any inconvenience arising from the sink? There were sinks in the main building?—Yes, but I do not remember anything happening.

69. He says, "The sister told me it was a great inconvenience": do you remember that?—No; I was not on duty.

70. *Mr. Ferguson.*] That was when Dr. Thacker went up?—Yes. Sister Hanna escorted Dr. Thacker.

71. *The Chairman.*] Were the men who were convalescent attending to those who were sick?—Those who were very convalescent carried the patients' meals into the wards. The majority of the men seemed to like being mess-orderlies.

72. It was only those on the point of being discharged who would be so employed?—Yes, those very convalescent.

73. *Dr. Martin.*] You remember Pollard?—Yes.
74. He was admitted on a Friday?—Yes.
75. With a temperature of 101·8?—Yes.
76. And he looked ill?—Yes.
77. What was this state on the Saturday?—His temperature was about the same. It varied from 101·8 and went down to 101, I remember, but it never exceeded 102. He still continued to expectorate thick phlegm.
78. He still looked ill?—Yes.
79. What was his state on the Sunday?—About the same.
80. Still looking ill?—Yes.
81. What was his state on the Monday?—His temperature was a little higher on the Monday —102·2.
82. On the Tuesday he became really ill?—Yes.
83. It had been the rule in Berhampore that if a patient was at all ill the sister used her discretion as to whether to send the patient to the Wellington Hospital?—Yes; the sister sent more than one to the Wellington Hospital.
84. That was the custom up to the time Pollard arrived?—Yes; but I think the majority of the cases were sent by a doctor. I think, however, that Sister Keith had the power.
85. Why was Pollard not sent?—I never heard any mention of his being sent.
86. Do you know why he was not sent? He was obviously ill on the Friday, the Saturday, the Sunday, and the Monday before he became very bad. Why was he not sent?—I do not know why.
87. You do not know why an exception was made in his case?—No. I think he remained in about the same condition from the time he came in until his temperature rose.
88. You say that a pneumonia patient could be treated as well at Berhampore as at Wellington Hospital?—As regards nursing-requisites.
89. I am asking with respect to treatment for pneumonia. Could a pneumonia patient obtain as good treatment at Berhampore as at Wellington Hospital, in your opinion?—No doubt Wellington Hospital is more an ideal place for a pneumonia patient.
90. You do not think a patient could obtain as good treatment at Berhampore as at Wellington Hospital?—I feel that as regards treatment everything was done for him.
91. That is not the question. Do you think Berhampore is as good a place as Wellington Hospital for treating a man with pneumonia?—No doubt Wellington Hospital would have been a better place for them.
92. It would be a better place to treat pneumonia?—Yes.
93. You do not know why Pollard was not sent to Wellington?—No, I never heard it mentioned.
94. Did Dr. Elliott make any complaint when he went out on the 5th June?—I never heard that he did. I was not on duty when he called.
95. You say Fordham was asked if he would like to go to the Wellington Hospital?—Yes.
96. Is it a usual thing to ask a patient if he would like to be transferred?—He told me it was suggested.
97. But is it usual in a hospital, in your experience?—No; the doctor usually decides whether a patient is to be removed or not.
98. But Fordham was asked his opinion, and he said he would prefer to remain?—When I went on duty Fordham told me the suggestion had been made that he should go to the Wellington Hospital. I was not on duty at the time it was mentioned. I am repeating Fordham's words.
99. How about the water-supply at Berhampore: did you get plenty of hot water?—Yes.
100. Had the water to be carried up from the gully?—No; the hot water was carried up from the copper. As I said before, there was a cold-water supply in the main building.
101. "Water had to be carried up from below"?—The hot water was carried up from below.
102. "There was no water in the main building on the 29th June": is that a fact?—Not that I am aware of. I was not on duty when Dr. Thacker went round.
103. *The Chairman.*] But the water would be there whether you were on duty or not?—Yes. I never heard there had been a deficiency of water.
104. *Mr. Gray.*] Was it laid on on the 29th June?—Yes. On the 2nd June there was a water-supply.
105. *The Chairman.*] And you got it by turning taps?—Yes.
106. *Dr. Martin.*] What was the date on which you were told to destroy these temperature-charts?—After all the patients had left. I left on the 17th July.
107. Were you told to destroy the temperature-charts on the 17th July?—Any papers that were in the wards. They did not think it safe to send down to the Defence Department any papers that had been in the wards; but any clean books, &c., which had been kept away from the wards were sent back to the Defence Stores.
108. Were the books containing temperatures sent to the Defence Stores?—No; they were burnt, because they had been in the wards.
109. Pollard's and Fordham's charts were burnt?—Yes. They had been in the wards.
110. *Mr. Ferguson.*] Who gave that instruction: who was it rang up the Defence Department?—I rang up. Sister Hanna was really in charge, and I suggested that we should ring up and ask when we were about to destroy them.
111. Do you know whom you got on to at the Defence Department?—I am not sure whether it was Major O'Sullivan's office or Sergeant-major Gentry's.

112. *Dr. Martin.*] Did the sergeant-major give instructions?—We asked about these papers being sent back, and whoever answered the telephone said he did not think so.

113. *The Chairman.*] It was not the medical department that you consulted as to what you should do?—No, because we had been asked to send everything back to the Defence Department.

114. Who asked that—from whom did those instructions come?—We rang up Sergeant-major Gentry and asked about the clean linen and everything at the hospital—asked what we should do; and he told us to send it all back to the Defence Department, and a cart was sent for it. Then we decided about the charts and books that were in the ward, and were about to destroy them when I suggested that we should ring up and ask whether we should do so.

115. You rang up the Defence Stores, and not the Health Department?—That is so.

116. Did the Stores give you the answer at once, or did they consult some one?—They answered at once.

117. And you think it was Major O'Sullivan?—Either his office or Sergeant-major Gentry's. It was Sergeant-major Gentry's, I feel almost sure, because he had said we were to send everything back from the hospital except those things that had been in the wards.

118. You rang up specially about these cards and books?—Really about books. We did not mention temperature-charts; I said there were paper and books in the wards.

119. *Mr. Ferguson.*] One witness has stated that the floor of the main ward, where Fordham and Pollard were, was not clean: I suppose that is incorrect?—The wards were cleaned every morning, and swept during the afternoon and again in the evening.

120. They were quite sufficiently clean in your opinion?—Yes.

121. One witness said it was mopped out with a dry mop, and not washed?—The orderlies used them, usually.

122. *The Chairman.*] He also said that the paper on the wall was torn, and it was expectorated upon?—Yes; but that was about the time that Pollard was dying, I think.

123. It was Pollard's brother, I think, who told us this?—Yes.

124. *Mr. Ferguson.*] Was there paper on the wall?—Yes, I think so.

125. One witness said there was no wall-paper?—I feel sure there was.

126. *Mr. Gray.*] I understand that of all the patients who came there there were only these two deaths—those of Pollard and Fordham?—Yes.

127. Except those two, were all the men who came in convalescents?—Practically convalescents.

128. How did the hospital answer its purpose?—I consider that all the patients did well there.

129. Except these two?—Except these two.

130. Were there any complaints made in your hearing or to your knowledge of want of attention or care?—No, sir—the contrary.

131. And did these men—these very convalescent patients who were employed as mess-orderlies—take to their work willingly?—Yes. I remember that on one occasion ten men appeared and told me they were going to be mess-orderlies, and I said I thought three would be sufficient.

132. They volunteerd, and were cheerful and willing to help?—Yes, quite.

133. Was there any lack of appliances in or about the hospital, or anything that you wanted?—No; we were always able to get things that we required.

134. Without delay?—Yes.

135. Were you able to consult any medical man if his services were required?—When I first went there there was no telephone, but soon afterwards one was installed. I never had occasion to ring up a doctor, but Sister Keith rang, and I do not think she had any difficulty in getting one.

136. Did you ever hear of there being a difficulty in getting the attendance of any medical man?—No.

137. With regard to the destruction of these temperature-charts, I understand it was your own idea, or Sister Keith's?—Sister Keith was not there.

138. Your idea?—And Sister Hanna's.

139. It was your idea and Sister Hanna's that these documents should be destroyed?—For the simple reason that we were under the impression that paper carried infection.

140. It was with the idea of avoiding the risk of infection that you decided to destroy these papers?—Yes.

141. But you first of all consulted the Defence Stores authorities?—Yes. I remember now that the cart was there to convey the various things from the hospital, and I rang up first to inquire about these charts. I did not mention charts. I mentioned books that had been in the wards, and asked if I should send them back.

142. Your first idea was to destroy them?—Yes. On second thoughts we decided that we ought to make inquiries first. We were both under the impression that paper carried infection.

143. That was the only reason for the destruction of them?—We were asked not to send anything back to the Defence Stores that had been in the wards where the infection was.

144. So that infection might not be carried?—Yes.

145. Do you remember a patient named Colley?—Yes.

146. Were you there when he was admitted?—Yes.

147. What was his trouble?—He seemed well—a convalescent patient, in fact; he had no temperature until one day I believe he complained to Sister Keith, who was then on duty, that he was not feeling well, and she said he was to go to bed in the ward. That evening when I came on duty I took the temperatures and discovered that his temperature was 103·6. I told Sister Keith, and she at once had him moved to Wellington Hospital. He was removed in a very short time.

148. Was he seen by a doctor before he was removed?—I am not sure. He had been playing cards that day.

149. Was he up and dressed?—Yes. He had no temperature—in the afternoon, I mean.

150. Where was he treated, in the ward or in the marquee?—He was sleeping in a marquee, and was up during the day.

151. He was put to bed in the ward, was he not?—Yes. When he complained to Sister Keith that he was not feeling well she told him he was to go to bed in the ward. She took his temperature, and I think it was subnormal. I remember she told me when I came on duty about Colley, and I took his temperature soon afterwards and found it was 103·6.

152. He was treated in the ward, after he became ill, until he was sent to the Wellington Hospital?—Yes.

153. *Mr. Skerrett.*] With regard to Colley, his father states that the son was taken seriously ill on the 10th June: is that right?—I do not remember the day.

154. That was a Thursday?—I remember quite well his getting ill suddenly, and being very surprised.

155. The father says that he became seriously ill at 2 o'clock in the afternoon of the 10th June?—Yes. It must have been that time I was off duty.

156. And he was admitted to the Wellington Hospital about 9 o'clock on the evening of the same day?—Yes. I took his temperature at about 6 o'clock, and it was then 103·6, and Sister Keith at once rang up.

157. Was Colley seen by any medical man between 2 o'clock in the afternoon of the 10th June and his removal to the Wellington Hospital?—I do not remember.

158. It is rather an important question?—Sister Keith, being on duty then, would know. I was much surprised when I came on duty and took his temperature and found it so high.

159. You cannot say?—I am almost sure Sister Keith rang up the Wellington Hospital and asked for him to be removed there. I do not think he was seen by a doctor.

160. The father says that the nurse at the Wellington Hospital told him that the only things Colley had on when removed to the hospital were his pyjamas and his top coat. Is that correct?—I do not think so.

161. How would he be attired?—Sister Keith arranged for his removal.

162. You do not know?—No.

163. The father suggests that directly it was ascertained that his son's temperature was high—namely, about 2 o'clock in the afternoon—it was the duty of the sisters to call in a medical man: what do you say to that?—As I said before, I was not on duty in the afternoon.

164. But could you answer me generally? Do you know what his temperature was at 2 o'clock?—I understood from Sister Keith that he had no temperature. I think she said it was subnormal. I know she said he had no temperature.

165. Assuming that his temperature was subnormal at 2 o'clock, generally speaking—I do not want to blame anybody—would it not be the duty of the sister in charge to see that he was seen at once by a medical man?—Yes; but I am not sure whether he was seen or not. Being off duty I do not remember.

166. *Mr. Ferguson.*] At what time in the day did the Wellington doctors come to the hospital? You told us that Dr. Harrison, or Dr. Ferguson, or some one from the camp came generally in the daytime?—Usually between 1 and 2 o'clock—sometimes earlier.

167. The camp doctors generally came in between 1 and 2 o'clock?—Yes.

168. You also told us that Dr. Elliott, Dr. Herbert, and Dr. Steele came in to see these men, Fordham and Pollard?—Yes.

169. At what time of the day did they come in?—Always at night, except Dr. Herbert. He came at 4 o'clock one afternoon, with Captain Harrison.

170. With the exception of Dr. Herbert coming at 4 o'clock, do you ever remember a Wellington doctor—not a camp doctor—coming to the hospital except in the evening?—No; they always came between 1 and 2.

171. I am not speaking of the camp doctors, but of the Wellington doctors?—Dr. Elliott came one morning, and Sister Keith escorted him round the wards, at about 9 o'clock. It may have been earlier.

172. *The Chairman.*] Do you know where Sister Keith is now?—At Heretaunga golf-house.

173. *Mr. Ferguson.*] On that occasion, when Dr. Elliott came at about 9 o'clock, was he taking anybody else's place? Did the camp doctors come the same day?—I believe it was arranged that a doctor should call every night—one of the doctors from Wellington—to see those men.

174. That was done?—Yes.

175. *The Chairman.*] Who gave instructions that the Berhampore Hospital was to be closed: who would give those instructions?—The doctor visiting the hospital.

176. Do you know when he gave the instructions that it was to be closed?—The last patients were due to go out on the Wednesday.

177. The day before you destroyed the papers?—Oh, no. There were no patients there. It was when we were clearing up afterwards.

178. I want to know when the last patient went out. Wednesday would be the 14th: that would be three days before?—Yes; we stayed afterwards.

179. Two or three days or longer?—We stayed there until the 17th. It would be the Saturday.

180. All patients, then, left on the 14th?—Yes.

181. Were you then told the hospital was to be closed?—Yes.

182. Who told you that?—I believe Captain Farris was attending them. He brought the message from Captain Harrison, I believe.

183. Were you present and heard the message?—No. Sister Hanna was in charge, but she told me there were no more patients coming into the hospital, and we were asked to attend to the things afterwards—the laundry, and so forth—to see that everything was sent back clean and disinfected.

184. Who asked you that?—We were asked from the Defence Stores to see that everything was sent back there except anything that had been in the wards. They thought that if such things were sent back they would carry infection.

185. *Mr. Ferguson.*] When were the last patients received there—when did the last new lot come in?—Some came from Kaiwarra, I think, some days before. I am not sure about that. They usually stayed eighteen days. All those patients had been in eighteen days.

PERCY GATES MORGAN recalled and further examined on former oath. (No. 76.)

1. *The Chairman.*] You have presented us now with a report?—Yes, sir.

2. Which you depose to as containing your opinion upon the matter?—Yes.

3. Did you consider the question where the drainage got away to?—Yes. The drainage goes through the gravels and ultimately reaches the Hutt River and Wellington Harbour. Much of it would ultimately reach the Hutt River about the gorge.

4. *Mr. Ferguson.*] The springs which come out of the bank over the Heretaunga links are presumably drainage from that gravel area?—I shall need to look at the map to see where the links are. [Witness does so.]

5. Immediately over the links there is a steep cliff—a terrace on which the golf-house and a large number of houses are built, and from that cliff there are, I believe, springs?—The camp drainage would not go there—it will all go towards the south-west, down the valley and towards the gorge. The golf-links are north-west from the camp.

6. *The Chairman.*] Is the subsoil there of such a character that solids from drainage and so on would tend to prevent percolation in time? I think it was suggested by Mr. Robb, who was here this morning, that that would be the result. I do not know whether I have caught exactly the expression that he used, but I think that was his idea.

Mr. Ferguson: His idea, I think, was that the solid materials would gradually close these gravels and prevent drainage, and the result would be that the air would come up again and pollute the camp. I did not follow his argument.

Witness: I suppose the organic material from the drainage would accumulate in the subsoil and tend to choke it.

7. *Mr. Ferguson.*] Is there not enough aeration in that subsoil to aerate the organic matters and cause the necessary chemical changes?—There is a considerable degree of aeration which would tend to destroy those organic matters, but I do not know at what rate—probably not so fast as they would accumulate.

8. *The Chairman.*] Would the evil of accumulation of organic matter be overcome by a drainage system?—I cannot speak with expert knowledge on this point; but, of course, a good drainage system would tend to overcome the evil.

9. Would prevent the effusion of the organic matter?—Yes.

10. *Mr. Ferguson.*] You have seen the soak-pits, and you know the present system of dealing with the matter—allowing as little solid to get in as possible: do you not think that for all practical purposes it is a sanitary arrangement, or have you any objection to it?—I think that for a permanent camp it is objectionable, but not for a temporary camp.

11. *The Chairman.*] By a "permanent camp" do you mean one that would be always there, or one that would last about a year?—If the camp were to last a year I think it would be better to have some other system. If it were to last only six months I should say it would not be objectionable.

12. Mr. Aston is making some tests, is he not?—Yes; he is making soil and subsoil analyses now, I understand. They will take him a few days.

13. Do you know the Waimarino Plains?—Only from passing over by train. I have never been on the plains.

14. Have you examined the Canterbury showground at all, geologically?—I do not think I have been on it.

15. *Mr. Ferguson.*] Do you know of a site, within a reasonable distance of Wellington, that is more suitable geologically than the Trentham site, having all conditions in view?—A few days ago I inspected a site near Featherston, where I would say the surface drainage is better than at Trentham. At the same time, so far as I could see, the surface and subsoil drainage at Trentham is good. I have no doubt there are still better spots.

16. *The Chairman.*] It must not be allowed to go on, if it is to be in any way a permanent camp, without some drainage provision being made, so as to prevent effusion?—Certainly not. I am sure that the soil and subsoil in the course of years would become contaminated.

17. *Mr. Gray.*] Are you able to say whether anything but fluids go into the soil?—No; I did not inspect the drainage system closely. I suppose a certain amount of solid matter from the kitchen drainage goes in.

18. If only fluids went in would there be any harm resulting from the present method of draining?—I am not sure, but I think it would be a long time before harm could result to the camp.

19. It is stated there is a danger of infecting the soil and the water-supply to dairy-farmers?—It would depend upon the amount of drainage, I think, as to how far that would take place. With a small amount of drainage there would be no danger.

20. I do not think there are any dairy-farms in the locality, but would there be any risk of anything within a mile of the camp being infected?——

21. *The Chairman.*] That would be in the direction of the fall?—In the south-west direction, towards the gorge. I think farms a mile away would be quite safe. Medical men should be able to speak more authoritatively on that point.

22. *Mr. Gray.*] You do not profess to be an authority on sanitation: you are a geologist?—That is so.

23. Supposing the method of getting rid of the camp water intercepts all solid matter, you think there is no risk?—In my opinion there is no risk at a distance of more than half a mile from the camp. I refer to well-water.

24. There would be no risk?—I think that with a good system of sanitation—good septic tanks and so on—there ought to be no risk.

25. *Mr. Gray.*] I refer to the present system. Supposing that no solids are allowed to go into the soak-pits but only fluids, I think you have already said there is no present danger?——

26. *The Chairman.*] It is not only what may be called bad stuff that may get down, but it is any organic matter which closes up the openings and so prevents drainage?—As long as there was no epidemic in the camp I should think there would be no danger. If there was typhoid fever I would get nervous and would avoid the well-water.

27. There is nothing you wish to add to that report of yours, is there, that we have not asked you about?—No, there is nothing that I wish to add.

28. *Mr. Ferguson.*] Have you a plan of the district?—This plan was supplied to me by the Defence Department [produced]; and there is also this map which I got from the Defence Department [produced]. I will leave them if you desire them.

The Chairman: Thank you; they will be useful.

CHARLES WILLIAM HENDERSON sworn and examined. (No. 77.)

1. *Mr. Skerrett.*] What are you?—A private in the A Company of the 1st Battalion, Trentham Regiment.

2. What are you in civil life?—An engine-driver.

3. Residing, I think you said, near Christchurch?—Just outside Christchurch.

4. When did you enlist?—I arrived in camp on the 29th May.

5. Did you get your equipment at once?—No; the equipment was not there to get.

6. Just tell us what took place when you came to camp?—We were taken out on to the parade-ground, and were kept there for several hours, being drafted into different lots. Most of us had no overcoats on, and a few slight showers of rain fell. We did not get very wet, but other divisions which followed got wet to the skin. It came on to rain very heavily, and we were taken in and had tea. We came out afterwards and were sworn in. From 8 o'clock I had to wait till 11 in the mud, and it was freezing hard. I had to stand outside the Quartermaster's tent. Some of them waited till 12 o'clock, and some till 2 in the morning.

7. *The Chairman.*] How do you know that?—They told me. I saw the men standing behind me there.

8. At 2 o'clock in the morning?—At 11 o'clock that night. There were several hundreds of them there then.

9. *Mr. Skerrett.*] What equipment did you get?—We were given a suit of dungaree clothes, a pair of boots, an overcoat, a cap, a shirt, a pair of under-pants, an under-shirt, and a jersey. Some of the men had to wait about a week before they got a pair of boots.

10. *Mr. Ferguson.*] Did you get blankets?—Yes, three blankets.

11. *Mr. Skerrett.*] When did you get your change of under-linen?—I got mine in a month's time. I had a top shirt in five weeks' time. I have not got an extra pair of boots yet.

12. Have you made any application to your immediately superior officer for the extra pair of boots?—Yes. We were told to go round to the Quartermaster's office one night and get our extra boots, but when we got there the boots were not there. There were a few pairs, but my size was not there. So I left my size-number, and I am supposed to get them when I go back to the camp. I might have got them sooner if we had stayed at Trentham, but shifting has upset things.

13. *The Chairman.*] You have not an unusual-sized foot?—No; mine was a very common size, and that is why it had run out.

14. Have you been ill?—Yes; I took ill almost immediately I went into camp, and went into hospital in ten days' time.

15. *Mr. Skerrett.*] Which hospital?—First of all I went into the tent—the camp hospital.

16. On what day did you go into the camp hospital?—I think it was the 7th June. It was on a Wednesday.

17. Was that the Wednesday after you came into camp?—No, the second Wednesday.

18. You came into camp——?—On the 29th May.

19. And you went into the camp hospital on the second Wednesday after that?—Yes.

20. *The Chairman.*] That would be the 9th June?—Yes.

21. How long were you in the camp hospital?—From the Wednesday till the Sunday afternoon.

22. What were you suffering from?—I had influenza.

23. Not complicated by measles or anything of that kind?—No.

24. Have you anything to say about your treatment in the camp hospital?—There was an insufficiency of beds.

25. In the marquee?—Yes. There were not enough beds for us, nor were there enough mattresses. I was put on an ambulance stretcher, and I brought my own mattress up from the hut and laid it on that. There were plenty of blankets, but the tents were crowded; there were twice as many men placed in them as they were originally intended for.

26. *Mr. Skerrett.*] How many men were there in your marquee between the Wednesday and the Sunday—what was the greatest number?—The morning I went in there I think there were only six or seven, but on the Sunday there were either eleven or twelve men. The epidemic was gradually getting worse, and large numbers were then admitted.

27. *The Chairman.*] You remained there till the Sunday?—Yes.

28. You were removed on the Sunday?—Yes.

29. *Mr. Skerrett.*] Were you in the marquee which was blown down?—No. That was the measles marquee.

30. Where were you shifted to on the Sunday?—Down to the jockeys' and trainers' quarters on the Trentham Racecourse.

31. That removal was in order to provide room?—Yes.

32. Did you have any temperature at this time?—One night it was 102.

33. While you were in the marquee?—Yes. I think it was on the Friday night.

34. What was it on the Sunday?—It nearly always ran about 100.

35. How did you get down from the hospital to the trainers' quarters?—We got up and dressed and put our swags together, and we went out on to the road to a motor-car, and the motor-car took us down.

36. How long were you in the trainers' quarters hospital?—About ten or eleven days, till the Wednesday week.

37. Till the second Wednesday after the Sunday?—Yes.

38. What was your treatment there?—It depended chiefly on the orderlies. On some nights you would get a good orderly and you would have everything you wanted; you could get a drink when you wanted it. But on some nights you would have to get up and get it yourself. I used to get up even in the marquee; it was sometimes impossible to get a drink, and I used to get up and go out and have a drink. In the hospital, if ever my bed wanted making I used to get up and make it myself—that is, in the trainers' quarters.

39. What was the food like?—Sometimes we got milk foods, but one day—I forget now whether it was a Sunday or a Monday—we were given only bread-and-butter for dinner; and it was impossible for a man with a throat like I had to swallow it.

40. Did you have only bread-and-butter for dinner that day?—That was all—just one piece.

41. No drink?—We got a drink of milk-and-water afterwards.

42. How often were you seen by a doctor during your stay in the trainers' hospital?—The doctor came round once a day—sometimes twice if there was any occasion. The doctor was all the time walking up and down the passage to his quarters, and he would come in and see.

43. *The Chairman.*] He was within call?—Always within call.

44. *Mr. Skerrett.*] You do not suggest any lack of attention by the doctors?—No; they did all they could.

45. Is there anything you want to say about the trainers' quarters hospital?—No. The hospital was comfortable enough. We had good mattresses and good beds, and plenty of blankets, and if we got a good orderly we had every attention. Some of the orderlies would not bother; they just used to let you go.

46. In the camp hospital did an orderly sleep in the marquee at night?—No; there was hardly room to get in at all.

47. Was he present during the night—was there one orderly always on duty during the night?—He was in a marquee quite close to us—within call; but then you would have to shout yourself hoarse to get him to come, and then very likely he would not be able to get you any water.

48. Why was that?—One night the men in our tent wanted a drink, and he said there was no water there to give them.

49. Were you discharged from the trainers' quarters hospital on the Wednesday?—Yes.

50. The second Wednesday following the Sunday?—Yes.

51. What happened to you then?—I was granted four days' leave, but the doctor would not allow me to go to the South Island, so I went to friends at Levin. While I was up there I did not feel equal to duty, so I saw a doctor at Levin. I sent in his certificate and applied for two days' extra leave, and that was granted. I came back, and was all right for about a week; then I got another cold, owing to the impure air at Trentham at that time, and when we were shifted to Palmerston I was taken ill with measles.

52. That was the shift the other day?—Yes.

53. On what date was the general shift? You went on a Sunday, I think?—No, on a Friday night. It was three weeks ago on Saturday.

54. You contracted measles and were sent to the hospital at Palmerston?—Yes.

55. You have nothing to complain of your treatment there?—No.

56. Is there anything more you want to say?—Yes. When the Trentham Regiment was called in there was no place for heating water with which to wash dishes. There were no hand-lavatories for a man to wash his hands. We had to go a considerable distance to wash.

57. *The Chairman.*] Were you in the huts?—Yes. The latrines were not finished, and a fortnight after we were there the entire Trentham Regiment was compelled to use the mounted men's latrines, which were constructed for the use of a thousand men, I think. For that fortnight they were being used by about three thousand five hundred men. Many of the huts had no windows in them.

58. *Mr. Skerrett.*] No window-frames?—No.

59. How many men were there in your hut?—Fifty-one when I was there, but after about three weeks, when the influenza became very severe, they were all in the hospital except eighteen.

60. *The Chairman.*] What was the number of your hut?—No. 42.

61. *Mr. Skerrett.*] Sickness seems to have been very prevalent throughout the camp. I suppose the figures would be more reliable. Can you give any idea of the percentage of men who escaped sickness in the camp?—There were only two or three in our hut who did not have to go on sick-parade: there may have been three. There may perhaps have been nine or ten who did not go into the hospital.

62. But they were all more or less sick?—Yes.

63. Except two or three?—Yes.

64. How did you get on in these hutments so far as comfort was concerned?—They were badly ventilated. There never seemed to be a great deal of fresh air in there, and there was mud being tramped in by everybody, and it was impossible to keep your clothes at all dry.

65. *The Chairman.*] You have had no experience of tents?—I have had a slight experience of tents.

66. At camp, I mean?—No.

67. *Mr. Skerrett.*] Where are you quartered now?—My regiment is at Rangiotu, but I have not been there yet. I was sent down yesterday straight from the hospital.

68. Is there anything else you would like to say?—Yes. With regard to the sick-parade, it has been stated that there were marquees there for the men to wait in if it was raining. The marquees were not there when I was there. We used to go to sick-parade, and there were a good number of the men who were practically too ill to stand, and they used to sit down. The doctor used to come out and tell them they should have more sense than to sit down on the damp ground while they were ill. But the men were too ill to stand. The marquees which are being used for the sick men to stand in are two old hospital marquees. It was practically impossible for the men to stand in them while they were being used as hospitals. There were a good many cases which should have gone to the hospital, but there was no room for them. One man in hut 44 went on sick-parade and was ordered to the hospital, but the hospital was unable to admit him. He lay in the hut that day, and was unable to eat anything. Next morning he had to go on sick-parade again, and was ordered to the hospital; but again there was no room, and he had to go back. This went on for five days, when he was unable to walk, and then he was carried to the hospital.

69. What is the name of that man?—Private R. A. Penk, A Company, 1st Battalion.

70. What hut was he in?—No. 44.

71. Do you know what month it was in?——

72. *The Chairman.*] Was it before you were ill, or not?—After my first illness. It would be some time in June.

73. *Mr. Skerrett.*] Where is Penk now?—At Rangiotu now. He left the Palmerston Hospital with me and has gone to Rangiotu. When the Seventh Reinforcements were brought into camp they were taken out on to the parade-ground and classified into different groups, in this way: farriers were ordered to fall out in a certain place, and cooks in another, and men who had been in the Imperial Army in another place. It was pouring with rain, and these men were kept standing out for four hours while being classified. It was not necessary to keep them standing out there to classify them, because in our own case we were classified again on the Monday morning, so that one classification would have done. These men would thus have been saved from getting wet through. Nearly all of them were without overcoats on that occasion—in fact, they were told there was no necessity to bring anything at all with them—they would be supplied immediately they got to Trentham.

74. Is there anything else?—I do not think so.

75. *Mr. Gray.*] When you went into camp a very large number of men went in at the same time?—Yes.

76. And there was necessarily some delay at the store in fitting out the men?—Yes.

77. You would not suggest that that could be helped?—The men could have been taken straight after dinner and had their kits dealt out to them, and put into the huts as soon as possible.

78. But they had to be fitted, had they not?—No.

79. Some sort of fitting with the uniform?—No.

80. Is not the size taken?—You go into the Quartermaster's store and they ask you your size. You state what it is, and your dungaree suit is handed out to you there and then; and you just fit your boots on, and it is all over in a few minutes.

81. That would take time with several hundred men?—Yes.

82. Did not a number of men in your battalion come into camp ill?—I do not think so. There may have been one or two men with a bit of a cough.

83. Did you hear of any cases of illness in your battalion occurring within a few days after going into camp?—There may have been men with colds. There were some men, of course, who became bad very soon, while some did not take ill for weeks.

84. Were there not some early cases of influenza and measles in your battalion?—I do not think there were any early cases of measles. I am not sure there were not.

85. When you went into the camp hospital on the 9th June the epidemic was just beginning, was it not?—Yes.

86. And all hospitals were beginning to be crowded?—Yes.

87. Could the medical staff, do you think, have done any better than they did under the circumstances?—No: the doctors did all they could. It was chiefly the fault of the orderlies that we had to suffer.

88. How many times did this inattention on the part of the orderly occur in the camp hospital—in the marquee?—It only occurred on that one night when that particular orderly was on duty.

89. At other times your wants were attended to?—Yes.

90. Do you know the name of that orderly?—No.

91. On the whole your treatment in the marquee hospital and at the racecourse hospital was satisfactory?—Yes.

92. You have nothing to complain of excepting want of attention once or twice on the part of the orderlies?—Yes.

93. You went to Levin after your illness and came back and got another cold?—Yes.

94. You put that down to the impure air of Trentham?—Yes.

95. How long were you in camp before you were sent to Palmerston?—I was there nearly a fortnight.

96. Were you in a fresh hut?—No, the same hut.

JAMES SCOTT MACLAURIN sworn and examined. (No. 78.)

1. *The Chairman.*] What are you?—Government Analyst.

2. We have your report here on the analysis you made of the air-samples given to you, dated the 29th July, 1915, and this you now confirm, do you not?—Yes.

3. Can you tell us the inference that we should draw from the statement of the excess carbon dioxide that was found?—That is simply a measure of the ventilation, I take it.

4. Would these figures that you give regarding carbon dioxide indicate good ventilation?—Some of them would; some are not very good. Most of them are fairly good. As you will see, the tent is the best of them all. None of the others is quite so good.

5. The figures indicate a fair amount of ventilation?—Yes. Some of them are not good.

6. No. 4 is not good, I suppose?—Number 8 more particularly. That shows 0·7 excess.

7. *Mr. Ferguson.*] How about No. 13?—That is not Trentham: that is one of the barracks quoted—Anglesey. That is an old barracks, I understand.

8. *The Chairman.*] That would be very bad?—Yes, compared with the new barracks quoted in the book, as Gosport and Chelsea. They show 0·21 and 0·25 excess. Some of the Trentham figures are as good as that. The first two are, and the fifth and the ninth, and, of course, the tent is still better. All the others are rather worse than the figures for those two new barracks. But none of them is so bad as the Anglesey barracks, for which the figure given is 1·01.

9. *Mr. Ferguson.*] Apparently 50 per cent. are equal to those new barracks and 50 per cent. are worse?—Yes.

10. *Mr. Gray.*] Would you say that any of the Trentham figures are bad?—I should say that some of them are not good, if one could not call them bad.

FREDERICK CHARLES GENTRY sworn and examined. (No. 79.)

1. *The Chairman.*] What are you?—Supply Officer.

2. Have you had anything to do with Berhampore Hospital?—Only in the way of the delivery of foodstuffs and cartage to and fro.

3. Did you give any directions as to having the stuff sent away?—No, no directions.

4. Did you convey any instructions to the nurses?—Only to get ready the things that had to be returned.

5. On what date?—About a fortnight or three weeks ago.

6. What did you ask them to do?—To let me know what there was to return, and we would collect it.

7. Was there any question as to stuff that might be infected, or anything?—Yes, sir.

8. What was that?—Some books in two book-cases—reading-matter.

9. What was said about that?—We told them that we did not want to carry anything away that might carry germs.

10. What nurse was it you told?—I do not know; it was on the telephone.

11. And did you speak of anything else besides books?—To see that everything was disinfected that we brought away.

12. What was to be done with the books that were not brought away?—I do not know. We left them there.

13. Were they to be left there or to be destroyed? Did you go out to the place?—Yes, sir.

14. What did you find there?—Practically everything was there.

15. Do you know of charts upon which they record the temperatures of patients?—Yes, sir.

16. Did you see any of those there?—No, sir.

17. Did you have your attention called to them in any way?—No, sir.

18. Did you have any discussion about charts or nurses' books when you were in communication with the nurse?—No, sir.

19. No word at all about them?—None whatever.

20. *Mr. Ferguson.*] Do you know of anybody else in your office or in the Stores Department having any conversation on the subject with the nurse?—No, sir.

21. *The Chairman.*] Whom did you get your instructions from?—From the nurses.

22. But the instructions you gave to the nurse?—That I did on my own authority.

23. You told her to get everything ready?—Yes, when I knew it was to be closed.

24. Who told you?—The nurses themselves.
25. No superior officer?—No, sir.
26. Then the position is that the nurse rang you up and told you that the place was going to be closed, and you told her to get everything ready that was to go away, and that everything should be disinfected which was going to be brought away?—Yes, sir.
27. And that two cases of books that were there were not to be brought away?—No, sir.
28. That was on the suggestion of the nurses?—I do not know whether it was on the suggestion of the nurses.
29. These were the books that were supposed to have been read by the patients?—Exactly.
30. And so you thought that they ought not to be brought away?—Yes, sir, because of getting into other hands.
31. Did you arrange for the destruction of them in any way?—No, sir: I left them there.
32. Who has got them now?—They should still be at the hospital.
33. Were they nailed-up cases?—Nailed on to the wall.
34. Were you told to lock up the place?—No, sir.
35. Who is supposed to do that?—There were no keys there that I could find.
36. Now it is as open as possible: you have not the keys?—No, sir.
37. *Mr. Ferguson.*] Who is in charge now?—I could not tell you that.
38. Who would answer the telephone in the Defence Stores besides yourself when the nurse rang up?—Any one might answer.
39. *Dr. Martin.*] Did you ever have to ring up Berhampore before the 12th June?—No, sir.
40. *The Chairman.*] Had you any communication with Berhampore at any time?—Daily.
41. How did you get them before there was a telephone there?—We used to deliver goods every morning and take messages.
42. There was no means of telephoning?—No, sir.
43. Does the telephone go into a particular room at the Defence quarters from Berhampore?—It is a public telephone, connected with the Exchange, by which we can ring up anywhere.
44. You have some one to attend to the telephone, I suppose, who calls the person wanted?—No, sir, I have not a telephone attendant. We all answer it.
45. Anybody in your room may go?—Exactly.
46. How many are there?—Four in the office.
47. Would any one of you except yourself have the right to tell the nurses what to do?—No one.
48. You are responsible for them?—Absolutely, sir.
49. If it is stated, as I understand it is, that you gave orders for the books and charts to be burned——?—Books, but not charts—not burned—but we did not want to take anything away with germs that might spread disease. The charts were never mentioned to me.
50. *Mr. Ferguson.*] "The books in the ward" would convey a different thing to you from what it would convey to the nurse?—Temperature-charts were never mentioned.
51. *Mr. Gray.*] I understood you to say that you told the nurse not to bring away anything that had been in the ward?—No; there were two small cases of reading-books.
52. You knew of them?—Yes.
53. But you did not mention them specially to the nurse?—Only that I did not want to bring them away.
54. Because they had been in the ward?—Yes, sir.
55. Your idea was not to bring away anything that might spread infection?—That is so.
56. And although temperature-charts were not specially mentioned to you, you yourself spoke of the books that were in the ward?—That were in the ward.
57. Do you know which nurse you spoke to?—No; but I believe it was Sister Faram.
58. *The Chairman.*] How do you know there were two cases of books there?—I had been there so often.
59. In the ward?—Yes, sir.
60. While the patients were there?—Yes, sir.
61. Did you see temperature-charts there in the ward?—I never saw any.
62. Did you see any books for keeping temperatures in?—I have never seen one there.
63. *Mr. Ferguson.*] Did your department supply the charts?—No, sir.
64. Who would supply the charts?—I should think they would be supplied by the medical department.
65. But do not the medical department take the stores from the Defence Stores?—We deliver the stores.
66. Have you ever had a requisition for charts?—Not that I remember.
67. For note-books?—Yes, sir.
68. But not charts?—Not that I can call to mind.
69. So that as far as you know there have been no charts provided by your department?—Not that I am aware of.

HENRY H. ALLDARE BOTHAMLEY sworn and examined. (No. 80.)

1. *The Chairman.*] What are you?—A private in the Sixth Reinforcements, B Company.
2. *Mr. Skerrett.*] I understand that you come here under a subpœna?—Yes, sir.
3. You have not volunteered any evidence?—No, sir.
4. You were served with a subpœna, and you are here to answer any questions?—Yes, sir.
5. Now, when did you join the reinforcements and go into camp?—About two months ago.
6. I understand that you contracted an illness, did you not?—Yes, sir.

7. Do you remember when you went on sick-parade first?—I could not give you the exact date—about three days after they had the big gale out there, when the tents were blown down.

8. That would be about the 12th or 13th June: was it Saturday or Sunday?—It was Monday afternoon, about 4 o'clock.

9. That would be the 14th: that is your recollection of going into hospital?—Yes.

10. What hospital?—The loose-boxes.

11. The racecourse hospital?—Yes, sir.

12. *The Chairman.*] From the sick-parade you went to the loose-boxes?—Yes, sir.

13. *Mr. Skerrett.*] What were you suffering from?—A high temperature and sore throat. I was inoculated on the Sunday, the day before.

14. With the serum for what?—Typhoid, I think.

15. You were inoculated on the Sunday?—Yes.

16. And you took bad on the Monday?—Yes, sir.

17. *The Chairman.*] Were you all inoculated for typhoid who went into camp?—I think they were all inoculated twice, but this was my first time.

18. *Mr. Skerrett.*] You went into hospital on the Monday?—Yes, sir.

19. What time?—About 4 o'clock in the afternoon.

20. Do you know what your temperature was?—It was 104.

21. How did you go from the camp to the hospital?—I went to the hospital, and they gave me a slip of paper, and I returned to my lines and got my bed, and a couple of other fellows helped me to carry it to the hospital.

22. And you walked with a temperature of 104?—Yes, sir.

23. Your mates helped you?—Yes, sir.

24. Where was your temperature taken—on the sick-parade?—Yes, sir.

25. And you were told it was 104?—Yes; I had the slip of paper that the doctor made out.

26. *The Chairman.*] Which doctor?—Dr. Tolhurst.

27. *Mr. Skerrett.*] Was anything said to you about providing some means for taking you over?—Yes; they asked me if I was fit, and I said, "Quite fit."

28. You meant you could stand on your legs?—Yes.

29. *The Chairman.*] Was it a wet day or a dry day?—A dry day.

30. *Mr. Skerrett.*] How did you get on in the hospital?—I did not like it much. They put me into a loose-box with three others. Two had beds, and two of us were lying on the ground.

31. Two of the patients had ordinary stretchers?—Yes.

32. And you and another patient were lying on the floor—on what?—A waterproof sheet and palliasse.

33. What was the floor?—The bare ground.

34. Beaten clay?—Yes, sir.

35. What attention did you have?—The doctor saw me two hours after I went in.

36. What was your temperature then?—104; it remained at that for about two days.

37. When were you next seen by the doctor?—Next morning about 10 o'clock.

38. And the next time?—About 6 o'clock at night.

39. Was your temperature taken each time?—Yes.

40. And the following day, the second day?—At the same hours. Then Dr. Valintine came along and he bustled us out into the kiosk.

41. *The Chairman.*] You left on the Wednesday?—Yes, sir. We were taken away in motor-cars from the loose-box to the kiosk.

42. *Mr. Skerrett.*] I want you to confine your attention to the loose-boxes: what food did you get during your stay there?—A light diet.

43. Was it all right?—Yes, sir.

44. What sort of attention did you get?—Once I asked an orderly for a convenience, and he told me to go to the hot place. Another time when I asked an orderly to shut the door because it was raining, he said, "We can't shut the door; we are going on parade." It was raining, and the rain was beating on a fellow named Linder.

45. What company did he belong to?—C Company, Sixth Reinforcements.

46. Where is he now?—At Trentham.

47. No, I do not think he is?—I think he is.

48. What is his Christian name?—I could not say.

49. When you got into the kiosk how often were you seen by the doctor?—Twice a day.

50. And were you satisfied that you received proper medical attention?—Yes, sir.

51. And the nursing—what was that like?—The orderlies did not seem to know much about the game.

52. How often did the nurses see you—I do not mean the orderlies, but the professional nurses?—They were not there at all while I was there in the hospital. I was discharged on the Friday night.

53. There were no female nurses in the hospital at all?—No, sir.

54. You were handed over to male orderlies?—Yes, sir.

55. You did not get a cough?—I had a bad cough all the time.

56. Had you a bad cough before you were inoculated?—No, not really bad; but in the loose-boxes it was rather draughty. Dr. Valintine discharged me on the Friday and sent me into town.

57. You did not contract measles?—I have since.

58. You were discharged on the Friday: what was your temperature on the day of your discharge?—Quite normal.

59. And had you any reason to complain of your discharge?—No.

60. How long were you granted sick-leave?—Seven days.

61. And will your illness from measles be of any assistance to the Commission?—No, sir, because I had them at home.

62. During your seven days' sick-leave?—No; I went back to camp after seven days, and then I got nine days' extended leave. After I had been on extended leave for four days I got the measles.

63. Were you in tents all the time?—Yes, with a boarded floor.

64. You have had no experience of hutments?—No, sir.

65. *Mr. Gray.*] I understand that the only thing you complain of is the conduct of the orderly who refused to shut the door when it was raining: is that all?—That is so.

66. Otherwise you have no complaint to make about your treatment either in the hospital or anywhere else?—I thought it was pretty bad at the time, but since I have read in the newspapers of what has happened to others I think perhaps my experience is too trivial to mention.

DANIEL CROSS BATES further examined. (No. 81.)

1. *The Chairman.*] We received your report, Mr. Bates, and read it, and would like to know whether you desire to make any additions or comments upon it?—In my supplementary report I made reference to the number of men in each hut, but I heard that formerly there were as many as seventy-five men in a hut, or half of each edifice.

2. *Mr. Gray.*] How many men were in the tents you examined?—Three men in the tent.

3. Who were they?—They belonged to the Quartermaster's staff. No. 10 specimen of air came from there. One matter that I might mention is this: while I was at the lines Colonel Gibbon came up, and I asked him if the hut we were looking at was the sample hut. He said "Yes, and it is very strange that we have had no sickness from that hut." I afterwards reflected upon that, and it proved that my contention was correct—that the want of ventilation in the other huts was the main cause of the sickness. That hut is open to the prevailing winds, and while it was the sample hut it would be open on both sides so that the air would have free current. It also had a certain amount of roof ventilation which the other huts did not possess.

4. I do not think it was occupied by so many people?—There was only a small number while I was there.

5. But does it not stand in line with the other huts?—It stands the first of the line, and consequently gets whatever air there is going. A strange fact also is that the hut which has the worse air in it had four or five men absent sick, and the air was worse in the roof there; it was air which had swept over the other huts. Between the hutments there was no air moving at all. The air sweeps right over the top, but the one near the farther end of the line had the worst air in it.

6. I understand that even in still weather the air travels at about one mile and a half an hour?—But the illness comes in calm weather particularly. I will just read an extract from Dexter on "Weather Influences" with regard to calm conditions (page 192): "Wind: If anything of an unexpected nature has been conclusively shown by this whole study of meteorological influences it is the peculiar effect of calms. These effects are summarized in a later chapter, but Figure 36, together with the attendance curve upon Figure 8, shows beyond a doubt that atmospheric movements of less than a hundred miles for the twenty-four hours—virtual calms—are attended by quite unexpected health-conditions. For instance, the number of absentees at the public schools, normally about 9 per cent., jumps to 27 per cent., an excess of 300 per cent., reckoned in terms of expectancy, over the average for all velocities. For the same condition, too, the sick-list at police headquarters is a long one; the hospital patients are too sick to get out in large numbers, and mortality is high, a combination of circumstances which can hardly be accidental when we consider the number of data considered. That this unusual prevalence of ill health and death for a weather-state which carries with it none of the painful and uncomfortable qualities of extreme cold or heat or wind is due to a lack of ventilation on a large scale there is no doubt in my mind."

7. *The Chairman.*] That is an admirable testimony for Wellington: it shows that the absence of calm here is to its benefit?—Yes; but a point that is not recognized is that we average less wind and get many calms in winter-time, and it is the calm and frosty weather as well as calm and muggy weather which causes these huts to be so dangerous. If you were to take out the figures for the cases of sickness as they occurred I would be able to correlate them with the dangerous conditions that arise from time to time in the huts. I maintain that in calm and frosty weather the huts are extremely dangerous for want of ventilation, and through the cooling of the atmosphere.

8. We got that also from Mr. Robb?—Yes, sir.

The Chairman here read a letter from Messrs. Dustin and Co., canteen-proprietors at Trentham Camp, dealing with Dr. Thacker's reference to the shortage of soap at the camp. They denied that there was a shortage of soap, and stated that their sales of toilet-soap averaged from three hundred to four hundred cakes per day. Further, they had never had less than one week's supply on hand.

Major O'Sullivan further examined. (No. 82.)

1. *The Chairman.*] Had you anything to do with Berhampore Hospital?—Yes, sir.

2. What?—I cannot give you the dates, but one evening at about five minutes to 5 I got a telephone message from Colonel Purdy stating that there were ten or fifteen sick men to be brought in from Trentham the following morning about 10 o'clock, and would I try and arrange to get Berhampore Hospital cleaned up. As the men were coming in at 10 o'clock on the following morning, and we would need to provide blankets and other necessaries, such as knives and forks, and so on, I got into touch with the Vacuum Cleaning Company, and got them to send the men up to the hospital at 7 o'clock p.m.

3. You had it cleaned?—I sent the Vacuum Cleaning Company's men to Berhampore.

4. *Mr. Ferguson.*] Where did you get the key?—There was a caretaker out there, I understand. I may say that the Vacuum Cleaning Company complained that it would be a difficult job to get the work done that night.

5. Did you supply the requisite?—Yes.

6. *The Chairman.*] And, after that, had you anything to do with the breaking-up of the hospital there?—No, sir.

7. Who would look after that?—I think the brigade supply men—the N.C.O. in charge of the brigade supply department.

8. Who would that be?—Sergeant Gentry.

9. He would bring it in?—Yes.

10. Did you give Sergeant Gentry any orders on the subject?—No, sir.

11. Who would give Sergeant Gentry orders in the ordinary course?—I presume he got them at Berhampore.

12. Would he bring in the things without an order from the persons in authority at headquarters?—I do not know who gave him the orders.

13. Did you supply anything in the nature of books or temperature-charts?—Not that I know of.

14. Did you get any?—No, sir.

15. Did you supply any note-books for the temperatures to be recorded in?—Not that I know of.

16. Do you keep any such things for supply to the military hospitals?—We do not keep them in store; only on one occasion we sent up to the Wellington Hospital for some, but I do not remember which hospital it was for.

17. You can give us no information as to what became of any temperature-charts which were used at Berhampore?—No, sir.

18. *Mr. Ferguson.*] None of your officers came to you and asked what was to be done with the temperature-charts and books at Berhampore?—No, sir; I suppose the nurse would look after that, or the Medical Officer in charge.

19. If the nurses say they rang up your department and received instructions to burn them, who would be the right officer to give that instruction?—I did not give such instruction.

20. Sergeant Gentry says he knows nothing at all of them: he says that no such message or inquiry came to him—that is, as regards temperature-charts?—Certainly, it is not likely that any officer of ours would give instructions to burn temperature-charts.

21. Or books?—No, sir. The only thing I am sorry for is that they did not destroy the blankets and other things.

22. *The Chairman.*] Who was to see that the place was locked up when it was closed?—I have no idea.

23. Every door is open at present?—It has nothing to do with me.

24. *Mr. Ferguson.*] Who would have to do with it?—The medical department under the Adjutant-General.

Tuesday, 3rd August, 1915.

Dr. James Sands Elliott sworn and examined. (No. 83.)

1. *The Chairman.*] You are a medical practitioner practising in Wellington?—Yes.

2. You hold an office in the military service?—Yes, I am a major and Principal Medical Officer.

3. You are also President of the Wellington Branch of the British Medical Association?—Yes, and Acting Chairman of the New Zealand Branch.

4. At the request of the Commission you and certain other medical gentlemen visited the Trentham Camp?—Yes.

5. Who were the others who went with you?—Drs. Christie, Mason, Gibbs, Giesen, Herbert, and Pattie.

6. They are members of the medical council?—Yes.

7. On what dates did you visit the camp?—On the 19th and 31st July.

8. I understand you are here this morning as representing your colleagues and yourself to give us the result of your visits?—Yes. We drew up a short report, which is as follows: "(1.) We are not satisfied with the accommodation at Trentham for the infectious cases. (2.) We consider that there is need for a change in the methods of medical administration and supervision. (3.) There is urgent need for a proper system of—(*a*) Hospital records; (*b*) up-to-date steam sterilizer (Washington Lyon suggested); (*c*) increased medical equipment; (*d*) increased

help to medical staff; (*e*) pack storehouse for equipment; (*f*) proper hospital clothing for lying-down cases; (*g*) a change in the present system of wet sterilization with formalin, which is bad, useless, and inadequate; (*h*) we are of opinion that all details of nursing and equipment require organization. (4.) We are concerned that at the present time men are being sent out on sick-leave who may possibly be a menace to the health of the community. (5.) We consider that it is absolutely necessary to appoint a bacteriologist to be in constant touch with the Medical Officers of military hospitals, and who will be able to offer his services and help at all times. (6.) This committee considers that the authorities acted rightly in making the Trentham racecourse buildings a temporary expedient for the accommodation of the sick, but consider that more suitable quarters are more urgently required for the treatment of these very dangerous cases. (7.) We are strongly of opinion that a separate hospital staff is required in every large camp in addition to the regimental and ambulance Medical Officers. (8.) We consider that all the present cases of cerebro-spinal meningitis, in view of the inadequate accommodation for present cases at Trentham, should be removed, and, in view of the probable extension of the epidemic, we strongly recommend that a properly equipped central fever hospital should be at once arranged for. (9.) As this is a matter of urgency, our time to-day has been fully occupied in inspecting the arrangements at Trentham Hospital and forming conclusions thereon. Time does not permit of allowing us to offer definite suggestions as to the exact site for accommodating these patients in or near Wellington, but we shall be pleased to co-operate with the authorities in selecting a suitable site or sites. (10.) We consider that a fully equipped hospital train should be arranged for the conveyance of sick men from any camp to any recognized hospital centre receiving from that camp. (11.) Motor-ambulances are urgently required both at camp and at the receiving-end." We wish to make it clear that these suggestions are not intended in any sense as a reflection on the capability or industry of the Medical Officers at the camp, who were obliged to work exceedingly hard, and did their utmost to cope with the situation.

9. You understood, I think, that those matters of immediate urgency were at once communicated to the Government?—Yes.

10. And you are aware also, I think, that on the following day Dr. Batchelor was appointed consulting surgeon?—Yes.

11. Now, you visited the camp again?—Yes, last Saturday, 31st July, and found a very considerable improvement in many respects. In regard to the first question, we found on our second visit that the accommodation at Trentham for infectious cases is satisfactory at the present time and under the present conditions; but there is no provision for subsequent epidemics. Provision should be made for such. With regard to the necessity for a change in the methods of medical administration and supervision, we found on the second occasion that a marked improvement in this respect had been effected. With regard to hospital records, a marked improvement in this respect had also been effected. An up-to-date steam sterilizer has not been provided as recommended, and we are still emphatically of the opinion that it is required. As to the increased medical equipment, this seems to have been much improved. With regard to increased help to medical staff, this is sufficient at the present time under the present conditions. As to the pack-store, the soldiers' equipment is still being taken into the hospital wards with them.

12. And is it still necessary to have a pack-store?—Yes.

13. What do you call a "pack-store"?—It is a store to put the kits in so that they are not carried into the wards and put alongside the sick men, because they may become infected. With regard to proper hospital clothing for lying-down cases, this has not been provided, and it is still required.

14. Well, what is the proper hospital clothing—what does that mean?—These men in the hospital are lying in their ordinary military clothing which they wear every day.

15. You do not mean their coats and trousers?—They have their coats on the beds in some cases as a covering, and they have their shirts on. Some convalescent patients have their uniform trousers on and also uniform shirts. We think they ought to have pyjamas—what we call "hospital clothing."

16. You mean a special clothing as in England?—No; I am coming to that. That applies more particularly to convalescent patients who are up and about, in order to distinguish them from the soldiers who are not sick. I am referring to the clothing when they are in bed. With regard to wet-formalin sterilization, this system has been improved, but it is not even now satisfactory. We understand that Captain Smith has been appointed Bacteriologist. With reference to the question of more suitable quarters being required, we would refer to our recommendation in general terms as to provision for future epidemics. As to a separate hospital staff, we understand that this has been given effect to. With regard to a properly equipped infectious-diseases hospital, we adhere to our previous recommendation. With reference to the selection of a suitable site, our offer is still open. We adhere to our recommendations as regards a hospital train and motor-ambulances, and we make the additional recommendation that convalescent hospital patients ought to have a distinctive dress, otherwise they are indistinguishable from other soldiers.

17. *Dr. Martin.*] The result of your examination is this: you are perfectly satisfied with the way the patients have been treated, but you are not satisfied with the equipment and the hospital buildings?—We are satisfied that there has been a very considerable improvement indeed, and there are only some details left that we think are still capable of improvement.

18. But you still think the authorities require to make some arrangements in regard to scarlet-fever and diphtheria cases?—Yes.

19. Supposing scarlet fever breaks out in the summer, do you think the arrangements in hand are sufficient to meet it?—No. The committee also recommends that there should be an infectious-diseases hospital or hospitals ready for use in order to accommodate the various epidemics of disease that may arise.

20. *The Chairman.*] Would the hospital which is at present being built be suitable for that purpose so far as size is concerned?—No, quite inadequate.

21. It was not intended for the purpose of meeting an epidemic?—I believe there are only four infectious-diseases beds in it.

22. *Dr. Martin.*] Do you think, while the troops are in Trentham, that the racecourse buildings should be employed for infectious diseases?—We had a very favourable opinion of the kiosk on the racecourse for hospital patients, but did not view with favour the other buildings.

23. You do not think the racecourse buildings would be sufficient to meet an epidemic of scarlet fever or diphtheria during the summer?—No.

24. In your report you say, "We are concerned that at the present time men are being sent out on sick-leave who may possibly be a menace to the health of the community." Do you suggest a longer period of quarantine?—I think there should be stricter supervision. I have here a telegram which I will show to the Chairman with reference to that. [Telegram handed in.]

25. What time do you suggest for cerebro-spinal meningitis?—I think it depends on the bacteriological examination of the throats, or throats of typical men suffering.

26. You think the throat should be examined and pronounced clear before the men are allowed out of quarantine?—Yes; I think the men with bad throats should be kept on light duty and by themselves, and not released until there is presumptive evidence from a bacteriological examination that they have reached the stage when they may not cause any further trouble to others.

27. What about contacts—those who come in contact with cerebro-spinal meningitis cases—do you suggest they should be examined too?—Yes.

28. Before they are allowed to go out?—Yes.

29. *The Chairman.*] You refer to a fully equipped hospital train: do you mean one on which an operation could take place?—No; for infectious cases. I understand there is a hospital train of a suitable kind belonging to the Government at the present time. It may be usefully suggested that that could be used, or a similar one, for infectious cases.

30. That is what "a fully equipped train" refers to?—It has reference to infectious cases.

31. *Dr. Martin.*] It is to convey patients from Trentham to the fever hospital?—Yes. Not necessarily from Trentham; they may come from Palmerston or other places.

32. In regard to motor-ambulances, do you know if any have been out there since the camp was opened?—I believe they were used when they could be got, but I understand taxicabs were mainly used. That is only hearsay.

33. You suggest there should be a motor-ambulance attached to the medical department?—When I was there on Saturday I noticed that a railway-siding had been put in, and that rather obviates the necessity for a motor-ambulance at that end. They would require it at the other end—at the Wellington end.

34. *The Chairman.*] There is no distance between the hospital at Trentham and the railway end?—No, practically alongside.

35. *Dr. Martin.*] Your report says, "We are strongly of opinion that a separate hospital staff is required in every large camp in addition to the regimental and ambulance Medical Officers." What do you mean by that?—The regimental and ambulance doctors draft out the sick men from their own units in the first place, and cannot do the hospital-work, and there ought to be a separate hospital staff so as to get continuity of treatment in the hospital.

36. *Mr. Ferguson.*] You lay great stress on continuity?—Yes.

37. You do not approve of one doctor going round one day and one the next day?—No.

38. And then calling in the third or fourth or fifth doctor?—No.

39. *The Chairman.*] Of course, when the next reinforcements go I suppose the doctors who are now in camp will go with them?—No; I think they are carried forward in the camp. They should always have some men who have been there for some time and had experience in that particular hospital. The hospital should not be left to new Medical Officers coming in with new drafts. The officers of the old drafts remained over for at least one succeeding draft.

40. *Mr. Ferguson.*] Is that not the practice generally?—I do not know.

41. We were told that Major Fyffe remained over?—I think it would be a good thing to have at least one or two permanent men there who do not leave at all.

42. Does the same remark apply to Ambulance men and orderlies?—Yes; you must have orderlies working in the hospital for some reasonable time before they know much about their duties. It is the only way of training them.

43. *Dr. Martin.*] The suggestion is that a separate hospital staff is required in addition to the ambulance requirements?—Yes.

44. That is a permanent separate staff?—We do not say civilian doctors. Civilian doctors could help as a permanent honorary staff or as a paid staff. It would be a great advantage.

45. *Dr. Ferguson.*] Have you looked at all into the question of training the Ambulance staff?—Yes.

46. What is your opinion about the training they are getting—the staff that is going away?—The orderlies who went away with the First and Second Stationary Hospitals had practically no training, because there was no hospital to train them in.

47. Have they had any training since?—I cannot see that they can be adequately trained unless there is a proper military hospital to train them in.

48. *The Chairman.*] They could get a certain amount of training owing to the fact that they had so much to do in connection with the sickness?—Yes, but the training they would get would not be on orthodox lines when there was a crisis and a pressure of work.

49. *Dr. Martin.*] Did you visit the Trentham Camp Hospital?—Yes, for the first time last Sunday.

50. Have you anything to say about it?—I think it is not quite the kind of hospital that is required for the camp. It is too elaborate, and there is not sufficient accommodation in it to make it of very much service. With the exception of the operating-room it is more a hospital for civil work in a township rather than in a camp.

51. *Mr. Ferguson.*] Do you think the operating-room is suitable for the work at the camp?—I do not think it is so.

52. In what way is it deficient?—It might be better lit.

53. By day and by night?—Yes. In addition, I do not see sufficient facilities for sterilization.

54. It is not finished yet: that may be provided?—That is so.

55. And for warming?—In its present state there were no means of warming it observable.

56. Are the four isolation wards satisfactory as far as they go?—Yes, as far as they go, for four cases.

57. Are four observation wards sufficient in a hospital of that kind?—They are in a hospital of that size. They are quite inadequate for the camp, but adequate for the accommodation for the particular hospital.

58. *Dr. Martin.*] Not adequate for a camp of three thousand men?—Nothing like it.

59. Is that hospital large enough for a camp of three thousand men?—Not nearly large enough.

60. *The Chairman.*] What we understood was that it was more for temporary treatment prior to the removal of the cases to the Wellington Hospital?—Yes; the policy was to utilize the Wellington Hospital as much as possible, but, unfortunately, the Wellington Hospital has not been large enough to be of adequate service in that way.

61. It was not intended, I understand, so much for a permanent hospital, but for the treatment of wounds or accidents that required treatment at the moment. Do you think it would be sufficient for that?—I do not think so, sir.

62. *Mr. Ferguson.*] Well, large enough, provided that the Wellington Hospital has enough beds to take in the cases. Ought not the expenditure of public funds to be for the enlargement of the Wellington Hospital rather than for the construction of a hospital at Trentham?—That would be one solution of the difficulty.

63. Is not that the right policy?—I do not think so. I think there ought to be more hospital beds provided at Trentham of a cheaper kind than those in this particular hospital.

64. In what way do you mean cheaper—under canvas?—Well, I had experience of a military hospital in the South African War. We had excellent cheap hospitals there of the hutment type. You get sufficient comfort in them and a much larger number of beds at the same cost as would provide the elaborate hospital you have at Trentham.

65. *The Chairman.*] Are the South African conditions in winter on the same level as the conditions here?—It was often freezing at night in that place. It was very high above sea-level—excessively hot in the daytime and excessively cold at night.

66. *Mr. Ferguson.*] Let us analyse that. The drainage and sanitary arrangements would have to be the same for a cheap hospital as for the present one: you could not economize in the sanitary arrangements?—No.

67. There would have to be the same provision?—Yes.

68. The building would have to be floored?—Yes.

69. You would have to have the same windows and roof. Where would the saving be, except that you might use timber for the internal walls instead of plaster?—I think there would be a great amount of economy. I have here a photo in a book dealing with South Africa of the sort of buildings I referred to lined with canvas, and with wooden floors. [Book handed in.]

70. Roofed with iron and walls of iron?—Yes.

71. There are no verandas on which the patients can go out?—No.

72. How many patients would each hut hold?—As far as I know, sixteen. And would cost about one-third or one-fourth of the price.

73. *The Chairman.*] Each hospital seems to be lined with canvas?—Yes.

74. And between the iron and the canvas there is considerable air-space?—Yes.

75. *Mr. Ferguson.*] Was it a hospital of this class that the medical men had in their minds when they agitated for a hospital at Trentham?—The medical men in Wellington did not agitate for a hospital in Trentham. They were asked by the Defence Department to take it up. They had no definite hospital in their minds. They thought in general terms and left the details to the authorities.

76. The medical men did subscribe largely to the hospital?—Yes.

77. *The Chairman.*] That was not devoted especially to the building, but might have been availed of for equipment or anything else?—It very soon became clearly defined that the money was for equipment and for additions to what the Government were said to be providing.

78. The medical authorities outside the Government Departments were not consulted with regard to the plans, I understand?—Yes, that is so.

79. *Mr. Ferguson.*] You say some provision should be made for an infectious-diseases hospital at the camp. What is the idea of the medical men?—The idea of the medical men was that if a suitable building could be got in or near Wellington that that ought to be arranged for; if not, it would require a certain amount of building to be done.

80. Which buildings have you in your mind that are not occupied except those on the racecourse?—Well, in our report we say that we have not gone into that matter: that is for future consideration. Buildings have been used near Wellington for infectious cases—the big building at Kaiwarra was used; and other buildings have been used for non-infectious cases—for instance, the Oriental Bay kiosk.

81. The Kaiwarra building could be used, because it was on the off season of the wool trade; but it could not be used in the summer?—I know it is a difficult matter to get suitable buildings; it would take serious consideration and investigation. I am not prepared to suggest any suitable buildings.

82. *The Chairman.*] That would be a matter for the authorities when they had to look round for buildings?—It would be a more acute difficulty at the time of a crisis.

83. Would you have an infectious-diseases hospital within the area of the camp-site, or at a distance from it?—At a distance from it.

84. Some other district, probably?—The advantage of being near Wellington would be that if there was a serious epidemic help could be got from the Wellington medical practitioners; but a suitable site would be somewhere outside the camp area—in the Hutt Valley or in the vicinity of Trentham.

85. *Mr. Ferguson.*] I presume you do not want it to be too far away—you do not want to isolate the men until you are satisfied?—Yes; there may be some house and grounds that could be obtained on the other side of the camp—in the outskirts of the Trentham Township.

86. *The Chairman.*] Have you and the other medical gentlemen examined or considered the question of the hutments?—I looked at some of the hutments with one other medical man, but we did not go as a body to examine them. I went with Dr. Gibbs.

87. Are you in a position to express an opinion?—I think so. I ought to say that I was one of a Board set up to consider the question of the hutments, and we made certain recommendations.

88. Before the huts were erected?—Yes, on the 12th January, before any huts were erected.

89. *Mr. Ferguson.*] Who were the members of that Board?—Colonel Purdy, Major Holmes, and myself. There were two plans then—there were two plans submitted to us. That report was as follows: "Alternative plan ought not to be considered. The double-bunking is very bad from a sanitary point of view. The floor-space, about 23 ft. per man, is not sufficient; the ventilation is insufficient; there are too many men to each hut. The No. 1 proposal is approved by the Board, except that it is thought the floor-space, about 36 ft. per man, is not quite sufficient. The huts are blocked, and would perhaps be better in echelon. The ventilation by the eaves is thoroughly satisfactory and by far the best method. This mode of ventilation should be adopted in the huts for officers also. Louvred vents are most unsatisfactory. With regard to the general sanitation, especially the drainage, the Board is of opinion that Major Morton, of Wellington, should be consulted in the matter. It is thought an absolutely satisfactory drainage scheme could be devised at very slight cost.—J. S. ELLIOTT, Major; MATTHEW HOLMES, Major; JAMES R. PURDY, Colonel.—12th January, 1915."

90. The first plan you condemned?—Yes.

91. Have you any reason now to modify the views contained in that report after what you may have subsequently learned and after what you have seen?—No; I think if those proposals had been acted upon the hutments would have been much better than those we have at the present time.

92. In what way were they deviated from?—They were made bigger than what we thought—to take more men—and the height of the walls was reduced. Further, the men were made to sleep on the floor instead of in bunks or stretchers, and the cubic space and superficial area was lessened.

93. *The Chairman.*] And you suggested they should be in echelon?—Yes.

94. But that was not done?—No. I suggested very strongly that the huts should be lined with canvas if wood or asbestos were not available, but I was informed that the huts could not be lined.

95. *Mr. Ferguson.*] Who informed you of that?—Colonel Purdy.

96. That did not appear in the report—that you recommended lining?—No; that was why it did not appear in the report, I think.

97. Were you consulted later on when the plans were approved by another Board?—No. We heard no more about them after making our report.

98. So that your Board is in no way responsible for the present huts—you throw off all responsibility?—Quite.

99. *The Chairman.*] Except in so far as it may be supported by this report?—Yes.

100. *Dr. Martin.*] You are Principal Medical Officer of the military district?—I am now, but I was not at the time that Board existed.

101. Who was Principal Medical Officer then?—Colonel McGavin.

102. *The Chairman.*] Were you in charge of Berhampore Hospital?—I do not think I was in charge at any time. When Colonel Purdy went south for a few days he asked me if I would do any work for him that was required when he was away, and I said I would. It is quite possible he thought Berhampore Hospital was included in those directions. It was open to that construction.

103. *Mr. Ferguson.*] Did he in any way notify you of the work you were to do at the time he left—had you any communication as to what it was?—No.

104. *The Chairman.*] They were supposed to be convalescents, were they not?—After the 5th June they were supposed to be convalescents.

105. Taking into consideration the fact that some place had to be suddenly commandeered, what is your opinion of the place as regards its suitability for the men who were to be there?—I do not think the place was suitable; but it may have been the only place that was available at the time.

106. *Mr. Ferguson.*] Is it not a fact that the Wellington Hospital authorities used it some years ago as a measles hospital?—I had charge of it with Dr. Ewart in 1903, but we had con-

valescent scarlet-fever patients then, and found it very unsuitable. We could not control the patients there; they got loose on several occasions.

107. *The Chairman.*] You want a guard if possible?—Yes. There was great trouble with the nursing. The nurses could not get about properly at night, and it was inconvenient.

108. Various equipment such as hot water and cold water and sanitary appliances were there, were they not?—Yes, cold water; but the sanitary appliances were inadequate to begin with, but at the instigation of Colonel Purdy they were very greatly improved.

109. That was on the occasion they were taken recently?—Yes, this present time.

110. Do you know if temperature-charts were kept?—I saw a temperature-chart for one patient, but I was only in the hospital about three times altogether. I just went there in a case of emergency. I visited there on the 31st May for the first time, and then on the 5th, 6th, 8th, and 28th June.

111. Were the nurses there when you paid your visit?—Yes.

112. How did you regard the nursing?—I thought the nurses did splendidly under great difficulties.

113. *Dr. Martin.*] What were the chief difficulties?—The Berhampore Hospital was not an up-to-date infectious-diseases hospital—that was the main difficulty. I understand it was improvised for plague cases a long time ago, or built in a hurry for plague cases.

114. *The Chairman.*] In fact, it would seem, apart altogether from the camp, that some sort of proper infectious-diseases hospital ought to be constructed somewhere?—I think so.

115. *Mr. Ferguson.*] Have you not an infectious-diseases hospital apart from that which was built recently?—Yes, there is an excellent infectious-diseases hospital, but I am really not competent to give an opinion about it. It may be only for the requirements of the civil population.

116. It is a complete infectious-diseases hospital?—Yes, a first-class hospital.

117. With separate isolation wards, and so on?—Yes.

118. *The Chairman.*] Was that in existence when this outbreak occurred?—Well, measles are never sent to that hospital; it is for scarlet-fever and diphtheria cases.

119. Would it not have done for measles?—Not with scarlet-fever cases there.

120. Measles cases are sent to the Wellington Hospital?—Yes

121. *Mr. Ferguson.*] In your opinion the provision in Wellington for infectious diseases may be enough for the civil population, but would not be sufficient for a camp of three thousand five hundred or more men at Trentham with the risk of an outbreak occurring?—Yes, that is so; and with the troops returning to New Zealand there is likely to be a great deal of sickness and infection after the war has terminated.

122. And that has to be provided for?—Yes.

123. *The Chairman.*] Has that been the experience with bodies of troops returning?—Yes, notably with the South African War when the troops returned here.

124. *Mr. Salmond.*] How many patients do you suggest that an infectious-diseases hospital should provide for: what is your idea?—The principal idea as to size is to have something so that we shall not be taken unawares in the early stages of an epidemic, and the size depends on how many men are to be in Trentham. We have not sufficient data to be able to estimate the exact size of the hospital required.

125. I understand your council has recommended the establishment of a separate fever hospital, and I want to get an idea of the size of the hospital so recommended?—I should think that accommodation for a hundred cases of various kinds would be suitable, so that the one disease could be kept separate from the others. I think that would be a great thing as a preliminary step.

126. Is that the kind of hospital that the Board had in mind when they made that report?—Yes; but they did not specify the number.

127. Well, what did they mean when they recommended a fever hospital?—They recommended a fever hospital so as to have some provision for future epidemics. We did not suppose that this epidemic was to be the last that would occur, and we explained that we neither had the time nor opportunity to select sites or go any further in the matter. It is a big job to answer those questions, and I cannot do so offhand.

128. Surely if this Board recommended a fever hospital they could give some idea of the hospital to be erected?—I do not think so.

129. How many infectious cases are there now arising from the camp?—I do not know. There were twenty-seven on Saturday exclusive of the cases in Wellington City.

130. I am talking of the whole list from Trentham: were there not some hundreds at one time?—Yes.

131. Do you recommend a fever hospital to accommodate them?—What I say is this: that if you have hospital accommodation of a proper kind you will not have anything like the same number of cases that you will have if you have no proper hospital accommodation. Providing fifty beds even lessens your epidemic effectually.

132. *The Chairman.*] I suppose immediate enlargements, if an epidemic grew, may be made in the way of marquees surrounding the central hospital?—Yes; the requirement of any hospital selected is that it should be capable of temporary extension either by marquees or other buildings.

133. The central building being for administration?—Yes.

134. *Mr. Salmond.*] You suggest a hospital for a hundred patients: is that to include measles as well as scarlet-fever cases?—It depends on what cases you have. If you have measles and scarlet fever and nothing else you might include them, but you may have to have some quarters for diphtheria and typhoid fever.

135. So that you would require to have four different departments in this infectious-diseases hospital?—We say "hospital or hospitals."

136. What does the Board recommend—one or four?—The Board would like to know how many soldiers are going to be in or near Wellington, and a great many other things, before they are going into arithmetic.

137. *Mr. Ferguson.*] But you have transports arriving carrying twelve hundred men, and you might have an outbreak of disease, and a number of those men would have to be handled, and if they are not put into the hospital how would you provide for them?—What is clear to us is that there ought to be some hospital arrangements made for infectious cases right away, and to meet that by providing that the hospital should be capable of extension according to the exigencies of the epidemic. I do not think we can get nearer the number.

138. You think the sanitary arrangements and the building should be built in advance for the sick people, and to provide covering for patients afterwards?—Yes; we are anxious not to err on the side of not having sufficient accommodation. We would prefer to make the error of having too much accommodation.

139. The drainage, water-supply for hot- and cold-water baths, and administration should be provided on a big scale, so that it could be extended to the various wards: is that your idea?—Yes; to do what is done in England and Australia. I understand that has been done in other places.

140. *Mr. Salmond.*] How many infectious cases does the Wellington Infectious-diseases Hospital take?—I do not know.

141. Do you know even approximately?—I would not like to say.

Dr. Valintine: It takes thirty-eight to forty.

Witness: You would need more accommodation for infectious cases for a camp than for an equal number of the civil community. You have aggregation in a camp.

142. *Mr. Salmond* (to witness).] But you are not going to put measles and scarlet-fever cases in the same hospital?—They may be in the same hospital if there is adequate separation between the two wards.

143. And diphtheria?—That might be done provided there is proper isolation.

144. How much would it cost to put up the hospital you suggest?—I do not know.

145. Do you know how much the Infectious-diseases Hospital cost in Wellington to provide for forty-eight beds?—I would not mind how much it cost if it was a necessity.

146. Then the recommendation is made regardless of cost?—Yes.

147. Do you know how long it would take to erect?—I do not know that. You could get that information better from a builder. Anything I might say would not be of value on that point.

148. *Mr. Ferguson.*] I suppose the longer it takes the more reason why it should be started at once?—Quite so.

149. *Mr. Salmond.*] Do you anticipate any serious likelihood of there being a large epidemic of scarlet fever at Trentham?—It is quite possible.

150. Everything is possible, but is there a reasonable possibility?—There is a reasonable possibility of a serious epidemic. We have cases of scarlet fever in Wellington at the present time, and the soldiers are coming into Wellington, and it is quite possible to have an epidemic of scarlet fever at any time at Trentham.

151. *Mr. Ferguson.*] Or in any other camp?—Yes.

152. *Mr. Salmond.*] You said that the kiosk at Trentham was quite a satisfactory place?—Yes.

153. How many patients does the kiosk hold?—We were informed there were twenty-one cases there on Saturday.

154. How many would it hold?—I should think for that particular disease that was not an excessive number for the kiosk. It might have taken a few more.

155. Do you not think that a more reasonable plan if an epidemic did break out would be to acquire existing buildings, such as the kiosk and other buildings, even now, in anticipation of a problematical outbreak, than to spend large sums of money in building a hospital?—We are not suggesting that large sums of money should be expended in building a hospital. We suggest that buildings should be taken, and if there is an absolute failure to get any suitable building, then building should be undertaken.

156. You do not suggest any building to go on?—No, not unless it is impossible to get other buildings.

157. Do you suggest other buildings should be taken now?—I think they ought to be arranged for. I do not think they should be taken, but arranged for so that they could be got on short notice.

158. Then, it would meet the wishes of your Board if it were shown to be practicable to acquire buildings when it became necessary?—Yes, and that there would be no delay when wanted. We do not think that merely holding on to the racecourse is sufficient for providing accommodation for the future infectious cases.

159. Have you seen the Kaiwarra Hospital?—Yes.

160. Is that not satisfactory?—It seemed very satisfactory for the purpose for which it was used.

161. Could it not be adapted as a very satisfactory hospital for infectious cases?—It would be hard to isolate the various wards that would be made there.

162. I am not assuming you are going to mix up the germs: take measles cases, for instance?—It would do better than anything else I have seen for measles—in fact, convalescent measles were there and did very well.

163. Have you any serious doubt that we could in an emergency acquire, and acquire rapidly, enough suitable buildings to use as temporary infectious-diseases hospitals?—Yes, I have a doubt.

164. Do you think it has not been done?—I think that, judging by our previous experiences here, I am justified in having that doubt that there may be similar trouble to what we have had before.

165. Has that serious epidemic of many hundreds of cases not been adequately met by sufficient buildings?—No.

166. Even now?—Oh, yes, it is all right now—we say that in our report; but it had not been sufficiently met.

167. But has it been met now?—Yes.

168. Then you do not at present recommend any further extension of hospital accommodation?——

The Chairman: He does not suggest that.

169. *Mr. Ferguson.*] I understand you to suggest, doctor, that it is met at the present moment, but was not three or four week ago?—Yes; the report is very clear.

170. *The Chairman.*] And some better provision for the future has to be made?—Yes.

171. *Mr. Salmond.*] You said that between your two visits there was considerable improvement in the medical administration?—Yes.

172. In what way was the improvement effected: what were the defects you refer to?—Well, the defects are very technical. I will give them to you if you like.

173. I do not want to go into technical matter, but you can state in a general way what the defects were to which you relate. Was the medical attention inadequate?—No; the medical men there and the numbers that were there did all that any men could possibly do. They could not do enough, and the general conditions were so bad that there were many things they ought to have done and which they could not do.

174. *The Chairman.*] I suppose such matters are always relative: that, given a first-class hospital with everything there, you could do the very best work?—Do very much better.

175. And given moderate equipment you could not do so well?—Yes.

176. It is a relative matter?—Yes. There were certain kinds of cases that could not get the proper kind of treatment that they might have had under better conditions.

177. *Mr. Salmond.*] Will you explain how the conditions were altered: was further equipment sent in?—Yes, further equipment was sent in; there was a smaller camp to cater for owing to the troops having been sent out: therefore the sickness declined. That is one reason. The medical men had less to do because there were fewer patients, and the treatment was more efficient.

178. I take it, then, that the improvement was due partly to the increased equipment and partly to the smaller number of patients, and the doctors could attend to them better?—Yes.

179. And it relieved the pressure?—Yes.

180. With respect to your position at Berhampore, I would like to be quite clear as to what the arrangement was between you and Colonel Purdy when he went south: did he say anything to you about the Berhampore Hospital?—No, not then. As a matter of fact, I was not going to the Berhampore Hospital when he was away, but I was asked to go by one of the Headquarters Staff. That is why I went during his absence.

181. You did not visit there during his absence, did you?—That was the only visit, on the 5th June. He returned on the 6th.

182. Was that by special request?—Yes.

183. From whom?—The Adjutant-General.

184. Until the Adjutant-General spoke to you about Berhampore Hospital you had not gone during Dr. Purdy's absence?—That is so.

185. And nothing that Colonel Purdy had said to you when he went away led you to believe you were in charge of Berhampore?—I most assuredly was not in charge of Berhampore. If they had sent for me to go up I should have gone.

186. But you did not consider yourself under any duty to go there?—I said I would not have gone there during his absence unless I had been asked to go there by the Adjutant-General.

187. Do you suggest that the existing new hospital at Trentham should be increased in size?—I do not think it ought to be increased in size on the lines of the present hospital. I do not think that the type of the hospital that there is now is the proper thing to extend in the camp. There ought to be more bed accommodation put there. The number of constantly sick in the British Army is twenty-five per thousand, and if you have seven thousand troops, on that basis there would be 175 constantly sick.

188. In view of the existence of the Wellington Hospital it is surely not necessary to provide that amount of accommodation at Trentham?—I think the relying on the Wellington Hospital for treating the sick from Trentham has been the cause of a very great deal of confusion, and I consider it a very bad principle. The Wellington Hospital simply cannot cater for anything except urgent cases from any camp near-by, and, in addition, to expect the Wellington Hospital to accommodate the sick and wounded returning from the war is impossible.

189. *Mr. Gray.*] I understand that the conclusions of the Board are in the nature of recommendations for future improvements?—Yes.

190. They are not intended in any way as a reflection upon the authorities or the medical men for what has taken place in the past?—On the contrary, we pay a tribute to the medical men for what they have been able to do.

191. I gather that your committee thinks the medical men at the camp have done all that could reasonably be expected of them with the existing conditions?—Quite.

192. In regard to the hutments, do you suggest there is much difference between the hutments adopted and the hutments that your Board recommended?—Yes; there are many serious differences.

193. You say the height was lowered?—Yes, so I understand.

194. Do you know it was?—The lowering of the height increased the draughts in the hut.

195. Do you know that the Army Council say that their hutments average 10 ft. high?—But how many men do they have in them?

196. In your report did you recommend that the men should sleep in bunks?—In the plans we approved of there were bunks provided, and I certainly understood there were going to be bunks. I was very much surprised to find none were going to be provided.

197. You recommended bunks?—Or stretchers.

198. Had you any experience of hutments in South Africa?—Yes.

199. Were they lined?—Yes, with canvas.

200. All of them or only the hospitals?—All of them. I would prefer to be in a tent or marquee with a wooden floor to being in an unlined hut.

201. Have you tried it?—Yes, frequently.

202. You have had no experience of an unlined iron hut?—No.

203. With regard to the hospital at Trentham, you say the operating-room might be better lit and that at present there are no means of warming it. Are you aware that it is intended to light it and warm it with electricity?—That is at night.

204. You could warm it at daytime?—I am quite prepared to hear that; but in the ceiling of the operating-room there is only a space of 3 ft. 6 in. between the operating-room ceiling and the roof.

205. Do you think the lighting in the daytime would be insufficient?—Yes.

206. That could be altered?—Yes, by putting in a skylight.

207. The net result of your view of the hospital is that you want a larger hospital at the camp with less dependence upon the city hospital?—Yes. You want larger hospital accommodation. I do not know that it needs to be in the one building.

208. But at the camp?—Yes.

209. *The Chairman.*] I did not understand it was to be at the camp, but the site to be near Wellington and the camp?—That is for infectious cases; but we are referring now to non-infectious cases.

210. *Mr. Gray.*] Do you not think a small emergency hospital is sufficient for the camp?—I do not think it is sufficient for a standing camp of that magnitude.

211. It is unfortunate perhaps that you medical gentlemen did not criticize the plan when you had the opportunity?—I do not agree with that.

212. Do you not think your advice would have been helpful?—I think it would have been very helpful, but seeing you have asked the question I do not hesitate to say that that available competent advice should have been taken with regard to this hospital.

213. I do not understand why you gentlemen did not offer when the plan was sent to you?—I answered that before. The onus of getting the plans adequately inspected and getting proper expert advice and sufficient advice about it was not on me.

214. I am not suggesting that?—I thought you did suggest that.

215. When you went to Berhampore on the 5th June whom did you go to see?—I did not go to see any one in particular; I went there to inspect the hospital.

216. Why would you not have gone but for the request of the Adjutant-General?—Because I was not the Medical Officer of the Berhampore Hospital.

217. But was there one there in Dr. Purdy's absence?—No. I would have gone if there had been any sickness and they had rung me up; but that is a different thing to taking charge of a hospital.

218. But the occasion did not arise till you were asked by the Adjutant-General?—No.

219. *Mr. Ferguson.*] You have seen the space between the hutments?—Yes.

220. Did you consider in your plan the space round the hutments?—Yes; we considered that very seriously, and that is why we recommended they should be in echelon so as to allow the air and sun to get round them, not as they are at present.

221. Then you think the space between the huts is insufficient?—Yes.

222. And have you anything to say about the aspect of the huts so as to get the full amount of sun?—I think the huts are put so closely together and on so restricted an area that the huts shut out the sun, and light, and air getting to one another.

223. You say you condemned them from that point of view?—Yes.

224. What alteration would you recommend?—It is hard to know what to do when all have been built and established there. I think fewer men ought to be put in them, and some of the huts taken out.

225. Some men taken out and put in others?—Yes.

226. *Mr. Skerrett.*] In answer to Mr. Gray you said the medical men did all that could be expected of them under the conditions in which they were placed?—Yes.

227. I want to make it quite clear if you said anything to express approval of the general system of medical treatment provided for the camp?—No, because we were restricted in this way, I think: that we could not express approval of that because it had been deteriorated by the unsuitability of the surroundings and conditions.

228. I understand that your attention and the attention of the Board was directed to provision for the future?—Yes.

229. You were not concerned with any criticism of the past except so far as it affected provision for the future?—That was the main idea.

230. Do you wish the public and the Commission to understand that you approved of the medical and hospital provision at the camp in the past as having been sufficient?—No.

231. From what you have said I gather that you are of opinion that adequate hospital provision should have been made from the very start of the camp?—Yes.

232. Whether adequate provision has been made or not is a matter which the Commission has to determine. At a period probably in the month of March and April it became clear that there was the probability of some serious epidemic: do you think that some provision should at once have been made to cope with or provide for that probability?—Yes; I think there ought to have been some plan ready then. Of course, I do not know whether there was or not.

233. I am not asking that. Do you think some provision ought to have been made—that the camp authorities ought to have looked ahead and provided for a possible epidemic?—Yes.

234. I understand you to say that, so far from the present hospital accommodation being sufficient for the future, you think, first, that provision should be made for an infectious-diseases hospital capable of temporary enlargement from time to time?—Yes.

235. Secondly, you are also of opinion that provision should be made in the camp at Trentham itself for increased accommodation by way of a general hospital?—Yes.

236. I understand you condemn the type of the present hospital now in course of construction?—Yes.

237. You do that for two reasons—first, you say the accommodation is so small as to be practically negligible in a camp of that kind?—Yes.

238. And, secondly, you say it contains no provision, as I understand, for temporary enlargement in case it should be required?—Yes, as the building stands; and I would not like to see that type of building perpetuated for the camp. I would like something cheaper. I think you would get quite enough comfort for less money and more accommodation.

239. *Mr. Ferguson.*] Is it not a very good nucleus? You have the administration, equipment, and operating-room—you have a very good nucleus there?—Yes; I think that is a very good view. It is a very good nucleus, and it would do for that purpose, but I think any addition should not be on the same expensive scale.

240. *Mr. Skerrett.*] Have you anything to say about the site: is the site such as lends itself to development?—I think so.

241. Then you think the hospital will be useful as a nucleus, providing means for general administration, and that it is capable of development if required?—Yes.

242. Did you see Stanley Colley among your patients on the 5th June?—On the 5th June I saw no patients. On the 6th June I went out with Colonel Purdy and Colonel Robin, and did not see patients then either. I saw patients on the 31st May, and also on the 8th June.

243. Did you see Colley?—I do not remember. On the 28th June I paid two visits. I had to see a man named Pollard.

244. You have not got Colley's name on your list?—No.

245. *Mr. Gray.*] Do you think that the arrangements for the treatment of the sick in the camp were good having regard to the fact that there was no complete hospital?—I cannot speak from personal observation.

246. There was a camp hospital?—I do not know anything about the camp hospital.

247. If the records show that up to the second week in June only seven deaths had occurred, would you say that was a good record?—Yes, I would; that is a very good record—a splendid record.

Dr. JAMES SANDS ELLIOTT further examined.

248. *The Chairman.*] In regard to the question of providing hospital clothing for lying-down cases which you report is not provided, it is suggested that it has been provided long since by the ladies of Wellington, and that they have a supply there: did you see any in use?—I would not like to be certain with regard to cerebro-spinal meningitis cases, but on our first visit there were cases that had been in for several days who were not provided with hospital clothing, and on the 31st July the patients in the grandstand, which is called the influenza ward, had not the proper hospital clothing. I did not understand that they went in one day and came out the following day. Some of them seemed to me to be too ill for that.

249. It was because you did not see the clothing in use that you assumed no provision had been made for it?—We did not raise the question as to whether the clothing was in the precincts of the camp at the store. The question we raised was that the patients were not using it.

Dr. FERDINAND BATCHELOR sworn and examined. (No. 84.)

1. *The Chairman.*] You are a medical practitioner holding the rank of Colonel?—Yes.

2. You have had experience in Egypt in connection with hospitals?—Yes.

3. I think for about a fortnight you have been consulting surgeon at Trentham?—Yes, attending there daily.

4. What date were you appointed?—On Tuesday, the 20th July.

5. Could you express an opinion upon the suitability of the hospital arrangements at Trentham for what it has had to meet since you have had connection with it?—I think, seeing the number of cases, the buildings available were remarkably suitable, and provided excellent accommodation. I think they were exceptionally fortunate in having such a number of buildings that could be used for the purposes required and for the forms of disease they had.

6. As regards the equipment and material, such as beds, instruments, and all the necessaries that are requisite for running a hospital of that sort, have you found them sufficient?—For a temporary hospital of that kind I should say it was very well equipped.

7. You have probably heard the criticisms that were passed upon it by the last witness, Dr. Elliott?—Yes.

8. Apart from the present buildings, which, of course, belong to the Racing Club and may or may not be made available for the purpose, are you of opinion that some provision should be made for the possibility of future epidemics?—I do not know if you can retain the racecourse buildings.

9. Supposing you could retain those buildings, would you consider there would then be sufficient provision made to meet the case of future epidemics?—That would depend upon the number of men you have in camp there.

10. Take it with a camp of, say, 3,500 men?—I should think you have reasonable provision there for a camp of 3,500.

11. Would it be possible to enlarge the accommodation there in the event of an onrush by means of marquees?—Quite possible.

12. In the winter-time would that be a desirable kind of hospital to have out there in view of the high winds that sometimes prevail there?—Of course, it would not be an ideal hospital such as you would have in town, but I do not think it would be any worse than the majority of the temporary military hospitals. I should doubt if huts would be any better than the present conditions.

13. Assuming that the racecourse buildings are not available, then do you consider that provision ought to be made on the chance of an epidemic breaking out again?—Yes, undoubtedly I do.

14. Assuming the racecourse buildings are not available, do you think that provision should be made for meeting the cases of sick who return by the steamers? It is suggested that when the Boer War ended a number of persons came back in a sick condition and had to be treated for a considerable time afterwards?—Yes. I do not suppose you would have to put them out at Trentham.

15. There should be some provision somewhere?—Yes, undoubtedly.

16. Either in the shape of the existing buildings, or that new buildings should be put up to provide for the contingency of a large number of sick being returned suddenly at the end of the war?—Some provision ought to be made for the sick, undoubtedly.

17. *Mr. Ferguson.*] The men returning by transport would be taken into the camp before being dismissed?—If they were ill they would not be taken into camp.

18. Possibly not the wounded, but possibly the ordinary sick would be. Supposing they arrived with an influenza attack running through the whole vessel, how would those men be dealt with?—Some provision would have to be made for them. They could make temporary provision for them, I suppose.

19. Practically they would be sent to the camp, would they not?—Well, if you had your existing camp there you could not put a number of men arriving in that condition with the others. You would have to make separate provision, I should say.

20. *The Chairman.*] You have seen the hospital in process of erection out there?—I have not examined it, and cannot express an opinion upon it.

21. With regard to the present medical administration and supervision, the original report of the Medical Board set up was that there should be a change, and the second report is that there is now a marked improvement in this respect. Have you anything to say on that point?—No; I think the arrangement at present existing, and especially in the cerebro-spinal meningitis cases, is an excellent one. It is no doubt desirable that the medical staff should have some continuity; there should not be constant changes. With Captain Crawford in charge there and with the assistant I think the patients get the best attention, and he keeps an interest in his cases.

22. Is there sufficient medical staff there to cope with the position?—Ample, I should say.

23. Do you think there has been during the time you have known the camp?—There has been during my connection with the camp. There have always been sufficient medical men.

24. You have nurses out there, have you?—Yes, an ample supply.

25. And what about the orderlies: are they trained, or of varying capacities?—I should say of varying capacities. I do not think you have a thoroughly trained staff of orderlies there. They will learn, I suppose, as they go along.

26. Will those men go away with the next reinforcements?—I do not know what the arrangements are.

27. Would it be as well to have them kept on so that they may improve and be available in their improved state for the local conditions?—Yes; I should think it is very undesirable to have constant changes there unless you get trained men to put in their place.

28. The report says that an up-to-date sterilizer has not been provided as recommended: what have you to say about that?—An up-to-date steam sterilizer is undoubtedly very advisable, but it is very expensive, and I do not know whether it would be possible to meet the requirements for sterilizing such a number of articles as beds and bedding, and it is very slow. I think the sterilizing is quite sufficiently met by the formalin process they have for carrying it out at present.

29. *Dr. Martin.*] Too expensive?—Yes; a large efficient one would be expensive.

30. And effective?—Yes, it is very effective; but it is very difficult to deal with the amount of material that has to pass through it. Evidently everything is sterilized now for influenza, measles, and cerebro-spinal meningitis.

31. *The Chairman.*] You do sterilize?—They are disinfected.

32. *Mr. Ferguson.*] Is there any means of utilizing the apparatus in the Wellington Hospital by sending the things in and returning them?—I do not know what they have got there, but I doubt whether they could deal with the large quantities that have to be dealt with. We had a very good sterilizer in Dunedin, and a very large one.

33. Would it not be cheaper to destroy all the blankets and clothes and everything that required sterilizing?—No; I think it would be rather extravagant and unnecessary.

34. *Dr. Martin.*] What is the cost of a sterilizer?—I do not know.

Dr. Valintine: £250.

Witness: That is cheaper than the one in Dunedin. It would not cope with the quantity of material we have to put through.

35. *The Chairman* (to witness).] With regard to the increased medical equipment, is there an insufficiency of that, in your opinion, at the present time?—There are a lot of little improvements that could be made as you go along, but I do not think there is anything very serious. They are gradually improving. It is suggested there should be lockers for the men's clothes. That is very desirable. It is also suggested there should be further clothing for the men. I think that is on the way now; but all those things are not essential.

36. But in respect of vital matters—the equipment that is necessary for curing the men, have you got all that there?—Yes, I should say we have. I should say we are very fairly equipped.

37. As to the pack-store—you have heard what was said about that, the soldiers' equipment being taken into the wards?—There is a great deal of difficulty about that. A great many patients are admitted for twenty-four or forty-eight hours, and it is possible a man may be a very short time in bed. He may be in bed one day and up the next, and to take his clothes away and store them means a great amount of work.

38. *Mr. Ferguson.*] I suppose you would fumigate them if you took them away?—Yes.

39. *The Chairman.*] If a patient comes in and throws his clothes off and gets into bed and gets up next day, are the clothes he puts on fumigated before he leaves?—I do not think so, unless there is some suspicious case alongside of him. Under ordinary circumstances, no.

Dr. Valintine: There has been a pack-store there from the beginning. Some clothes are not put in the pack-store, but as soon as it is known that a man is going to be in bed for some time his kit is taken and disinfected as opportunity offers by the disinfecting officer. Some kits have not been stored for the reason Colonel Batchelor has stated.

40. *The Chairman.*] Then, as to proper hospital lying-down clothing for patients, what have you to say about that?—It is very desirable, but not essential.

41. Would the absence of it retard recoveries?—No, I do not think so. In a hospital of this kind you do not expect to find the conveniences you would expect in a town hospital.

42. *Mr. Ferguson.*] It is an emergency hospital?—Yes.

43. *The Chairman.*] But you have serious cases there—pneumonia is always serious?—Yes.

44. And cerebro-spinal meningitis is serious?—They are provided for separately; there is special provision for them.

45. But the general hospital accommodation is devoted to cases of influenza and measles?—The largest number of cases are the influenzal; there is the ward they call the "influenza ward," in which colds, coughs, sore throats, &c., are put.

46. They are not regarded as serious cases?—No; but other cases are treated much on the same lines as ordinary hospital patients.

47. But you have not got proper hospital clothing?—Pyjamas, and so on. I think a number were ordered in on Saturday, and they are on their way now. I think there is full equipment in serious cases. I think they have everything they want in the way of clothing; but in mild cases, where the patients possibly are in for a day or two, I do not think provision is made for them, nor do I think it is necessary.

48. Is there a bacteriologist available there for the medical staff?—I believe there is.

49. But his services have not been required by you since you have been there?—I have been in the habit of sending to Mr. Hurley, the Government Bacteriologist.

50. In regard to the separate hospital staff, that has been given effect to?—Yes.

The Chairman: Is Dr. Sydney Smith there, do you know, Dr. Valintine?

Dr. Valintine: Yes; he is Sanitary Officer for the camp, and makes special swabs for the throats, and so forth, when required.

51. *The Chairman* (to witness).] The Board states that they adhere to their recommendation that all the present cases of cerebro-spinal meningitis should be removed. Are you treating cases of cerebro-spinal meningitis out there?—Yes, we are.

52. Have you special accommodation for those cases?—Yes, the tea-kiosk is used entirely for them.

53. Do you consider they can be well and properly treated there?—I do. I think it would be very hard to get an equally suitable place.

54. As to the hospital train, do you think there should be a hospital train for infectious cases?—If you have to take cases away, certainly it is desirable to have a carriage, at any rate, set apart.

55. Since you have been consulting surgeon have you made any recommendations?—Nothing of a very serious nature—little odds and ends I have mentioned now and again; and everything has always been carried out that I have suggested.

56. In your opinion, are the men there receiving the best medical and nursing attention at the present time?—I think they are receiving quite as good medical attention as they ever receive in a camp hospital of this kind—in a military camp hospital.

57. But if the buildings were specially adapted for hospital purposes would the medical service be more effective out there, do you think?—I doubt it. I think for a temporary hospital the buildings you have there would be quite as efficient as either marquees or hutments, which you would have to erect.

58. Have you anything that you can add that will assist us in making a recommendation on the subject of hospital arrangements out there or elsewhere?—No. I think with regard to the hospital arrangements that if the racecourse buildings can be retained they may be further improved.

59. It would require some adaptations?—Yes, some improvements might be made. On the other hand, if you cannot retain them I think the suggestion of building hutments in connection with the cottage hospital you have there at present would probably be a practical solution of the difficulty.

60. Would it not be too near the camp for infectious cases, supposing you had an epidemic of scarlet fever?—You could not have that there; they would have to be elsewhere.

61. And diphtheria too, I suppose?—Yes, I think it would be safer.

62. But if there was another outbreak of measles, then that could be dealt with there?—I do not know. If you had not the racecourse buildings I do not know whether they would be efficiently dealt with.

63. As regards the climate out there during your experience the last fortnight, as a site for a camp, can you give us any information on the subject?—Well, in most places you get bad weather, and you must get wet weather and mud in all camps. Camp life at certain times of the year must necessarily be uncomfortable; you get mud and dirt about. It is not a luxurious life.

64. You have seen the camps in Egypt?—Yes.

65. How do the camps out there compare with this camp at Trentham?—They are under different conditions. You have to deal in one part of the year with an excessive heat and sandstorms, which make it very uncomfortable for living in, besides the tendency towards illness. Here we have been suffering from cold and wet.

66. The conditions are not the same, and you cannot compare them?—No; but I saw the camp at Epsom, in Auckland, and I should say that on the whole the camp here is on a more desirable site of the two.

67. Why?—At Epsom the soil is clay and is very wet.

68. Wetter than the soil at Trentham would be?—Of course, we had such exceptionally bad weather at first at Trentham; but I think if Epsom had been under the same conditions it would have been worse still.

69. Were you at Trentham before leaving for Egypt?—No, I was at Epsom, in Auckland. As a camp-site I should say Trentham is not by any means a bad site.

70. Have you seen any of the British camps on the Salisbury Plain?—No.

71. *Mr. Gray.*] Take the record of this camp from the time it was instituted in October of last year until nearly the middle of June of this year. According to the medical returns there were seven deaths in that period: how does that strike you as a record in a camp of 3,500 men—seven deaths?—I should say that is a remarkably good record as far as the death-rate is concerned.

72. Reference has been made to the provision for a separate medical nursing staff for the dangerous cases: was there a separate staff in existence when you went into camp?—Yes, when I went there.

73. Do you know when it was first appointed?—No.

74. Something was said about providing clothing for patients?—Yes.

75. Are you not aware that there is clothing there in store provided by the patriotic guild under the auspices of the Mayoress?—Yes.

76. And was there when you were in camp?—Yes. What I wanted to infer was that it was unnecessary in the influenza ward to make provision for clothing for a man who was in for a day or two.

77. In point of fact there is suitable hospital clothing in the shape of pyjamas?—Yes, any amount of it.

78. Is it used?—Yes; but not in influenza temporary cases.

79. Is it used in the more permanent cases?—Yes, in the cerebro-spinal meningitis ward, for instance.

80. Then the suggestion of the medical men, I take it, must be limited?—No; I think it really referred to some clothing that they had to wear when walking about.

81. That is another thing—that is, to distinguish them from the soldiers who are well. This is a question of pyjamas and bed-linen?—I think they are supplied.

82. Proper hospital clothing for lying-down cases?—I believe they have them at the present time.

83. That has not been provided, as the doctors found last Saturday?—I am not aware of it.

84. *The Chairman.*] Have you seen the hutments at the camp?—I have not examined them. I kept away from them on purpose.

85. *Mr. Ferguson.*] In regard to the grandstand on the racecourse, that may be fitted up by placing platforms on the levels of the seats so as to form a number of chairs in case of a large epidemic, and could be made suitable?—Yes, I think so. It has been done in some cases. They have taken the backs out, and a number of influenza patients are sleeping in the open air.

86. *Dr. Martin.*] Do you think it suitable for measles patients with a temperature?—No, I would not like to put them there at this time of the year at any rate, but influenza cases could do very well there.

87. *Mr. Skerrett.*] Are you of opinion that some provision for medical treatment at the camp ought to have been made from the beginning?—Yes.

88. Could you tell me what provision ought to have been made for a camp of, say, three thousand men likely to be in camp for a period of, say, four months—what number of beds ought to be provided in the hospital?—That is rather a difficult question to put to me: you could get it from the military books. It would depend upon whether you proposed treating all your men there or sending them to another hospital.

89. Supposing you intended to treat all cases of infectious diseases and others there?—If you wanted to make every provision you would have to have a hospital of 150 beds, or something like it.

90. You heard Dr. Elliott's criticism?—Yes.

91. His criticism is that the great mistake in the medical treatment at the camp was the reliance on the civil hospital in Wellington for practically all cases of illness other than mere temporary illness. What have you to say with regard to that?—I myself think that in a camp of that kind for ordinary illness I should prefer having a small temporary hospital. You do not need a very large one, and I should prefer them going to Wellington Hospital for serious cases.

92. Not only serious cases, but practically every case except temporary cases requiring treatment. All cases of measles went to the Wellington Hospital, and any other cases where the sickness was not purely temporary. Do you think that was the right system to run in the Trentham Camp—to make provision only for slight illnesses, and to rely upon the Wellington Hospital at this distance away for the treatment of practically all the other cases?—Well, of course, if you make provision at the camp for all your hospital cases it means a tremendous outlay.

93. I do not mean that. What is your opinion of a system which entails all sicknesses except temporary cases being sent away to the civil hospital?—I have not thought the matter out, but my rough idea was that for a camp of three thousand men I would have provided a small temporary hospital and depended upon the Wellington Hospital or an infectious-diseases hospital.

94. What would you call a small temporary hospital in a camp of three thousand men?—I should think a hospital of thirty beds.

95. *Mr. Ferguson.*] Which would include infectious and isolation wards, or not to deal with any infectious cases?—I should have a portion set apart for infectious cases with the idea of removing them as soon as possible.

96. Dr. Elliott has said that in his judgment some provision should be at once made for an infectious-diseases hospital. I understand you agree with that?—Yes, but I think you have provision for infectious cases.

97. If they can retain the Wellington racecourse buildings you think that is sufficient?—Yes, I think it is.

98. If, however, the Wellington racecourse buildings cannot be retained, then you are in concurrence, I understand, with Dr. Elliott's suggestion and the suggestion of the Board?—Yes.

99. Is it not a fact that the general hospitals and hospitals will also be required for the wounded and sick who come back from the war?—They are certain to be treated in great numbers.

100. And provision ought to be made for them?—Yes, provision must be made for them.

101. Of course, you do not know what has been done in that direction?—No.

102. Do you agree with Dr. Elliott that there is a real necessity, which may have been provided for, of looking forward to the accommodation of large numbers of wounded and sick men returning from the front?—Yes, a fair number of men will undoubtedly be coming and going into the hospital with fresh shipments.

103. *Mr. Gray.*] The provision for the sick and wounded that may return from the front has nothing to do with the provision at the camp?—No.

Nurse VERA KEITH further examined. (No. 85.)

1. *The Chairman.*] You were at the Berhampore Hospital from the opening, I think?—No; the two other nurses were there for some time before I went.

2. You were in charge?—Yes, from the 19th May.

3. From the time you were in charge did you keep temperature-charts?—We kept temperature-books, not charts.

4. In the case of Fordham and Pollard in particular did you get any temperature-charts?—Yes, we got separate charts for them.

5. What became of the charts?—I left a fortnight before the hospital was closed.

6. Were they there then?—Yes.

7. You were not there when the question of destroying any articles came up?—No.

8. Who was in charge then?—Nurse Faram and Nurse Hanna. Nurse Hanna was responsible.

9. Do you know where she is now?—No; but you can get her address from the Nurses' Club.

10. Do you remember Colley?—Yes, quite well.

11. Do you know what time he got ill?—About 2 o'clock in the afternoon he came and complained of feeling cold. We tried to take his temperature, but the thermometer would not register—it was below subnormal. I had extra bottles put to his feet, gave him a hot drink, and watched him that afternoon.

12. You did not summon a doctor?—No, sir, it was not necessary.

13. Was it not necessary in a case like that sent to the Wellington Hospital?—No, not unless they developed some symptoms. By night he may have been warm and all right.

14. Did you not think his non-record of temperature sufficiently serious to demand the attention of a doctor?—No.

15. What time did the doctor see him?—He was not seen by a doctor at all. His temperature went up to 103 just before, and I sent him to the Wellington Hospital. That was some time between 6 and 7 o'clock in the evening. He went up in the ambulance.

16. *Mr. Skerrett.*] When Colley complained and you found his temperature subnormal, was not that a significant symptom?—It was, so I put him to bed and made him comfortable.

17. When did you take his temperature again?—I was supposed to go off duty at 3 o'clock, but I waited about to watch him, and then Sister Faram took charge.

18. When his temperature was 103·4 ought you not have rang up some doctor?—The arrangement was at that time that if a patient showed any bad symptoms you were to send him to the Wellington Hospital, not to wait to call in a doctor, because Dr. Purdy lived at the Hutt.

19. Had you no doctor in town?—No, not at that time. There was a daily examination by the doctor in the morning, and sometimes Dr. Purdy came in the afternoon. Later on Dr. Harrison took charge, and he came once a day.

20. *The Chairman.*] There was a change afterwards, when a doctor could be rung up?—Yes.

21. *Mr. Skerrett.*] Can you not well understand the father complaining, with the son showing the symptoms you have just indicated and the son to be sent to the hospital without having been seen by a medical man?—That was the arrangement.

22. I may inform you that the nurse at the hospital had told the father that when Colley arrived at the hospital he had only pyjamas and a top coat on?—He was sent in an ambulance, and he would have three grey blankets sent with him, besides those in the ambulance.

23. How was he dressed?—I could not tell you now.

24. Is it possible that he only had his pyjamas and a top coat on?—He had his camp underclothes on. No trooper ever took them off except to change them.

25. *The Chairman.*] He was not sent to the hospital without proper clothes?—I always put three grey blankets on the patients, and then there were the ambulance blankets on top. I did that with every patient I sent.

26. *Mr. Ferguson.*] He had his own camp underclothing underneath his pyjamas?—Yes.

27. Did all wear pyjamas?—Very few did.

28. Colley might not have had pyjamas?—He might not.

29. You did not supply pyjamas?—We had some. I put new pyjamas on a good many I sent to the Wellington Hospital, but I do not remember putting any on Colley.

ERNEST EDWARD MUIR sworn and examined. (No. 86.)

1. *The Chairman.*] You are on the staff of the *Evening Post*?—On the reporting staff of the *Evening Post*.

2. In consequence of a letter which had been sent to the *Post* by a correspondent you visited the camp at Trentham some time ago?—Yes, sir; but it was hardly a letter from a correspondent.

3. It was a communication?—Yes, sir.

4. In which the management of the camp was attacked?—Yes, sir.

5. And in consequence of that you paid a visit to Trentham?—Yes, sir.

6. And as the result of your observations it was thought not fit to publish the letter?—That is not so.

7. We were told it was?—No; the actual position was that the communication was made by Dr. De Lautour. I had an interview with Dr. De Lautour lasting some two hours, and I arranged that Dr. De Lautour should make certain investigations to ascertain his facts, and that I also would make investigations to ascertain the facts, and that Dr. De Lautour should see me later. I made my investigations, but I do not know what Dr. De Lautour did. My recollection, however, is that either Dr. De Lautour came in one morning when I was very busy, or sent a message when I was out, and left word for me to the effect that with regard to certain plans he had submitted that he had a fresh suggestion to make, and since then I have not seen anything of Dr. De Lautour. The next thing that I saw was the letters published in the *New Zealand Times*.

8. You made certain observations upon the camp: you went out for that purpose?—Yes, sir.

9. Can you give us the result of your observations then as to how things stood?—Yes, sir. In the first place, perhaps I might give you the allegations that were made. They were contained in letters which were written by Dr. De Lautour to the Prime Minister and to the Minister of Defence. Dr. De Lautour either brought in or sent in copies of those letters to the *Evening Post*, and Mr. Fanning, of the editorial staff, referred them to me. I do the military work for the paper, and Mr. Fanning wrote to Dr. De Lautour telling him that I would deal with the matter. I then wrote to Dr. De Lautour and arranged an interview. In the meantime the communications were handed to me, and I went through them. The actual charges, as I remember them, were with regard to the hutments, that they were being erected upon a very restricted area, and were being overcrowded. The second allegation was regarding latrines—that the hutments and tents were being erected over the site of old latrines. The third allegation was regarding the number of deaths that had occurred in camp. Another allegation was in respect to the overcrowding of the tents, and also about the non-removal of the tents. Those are the general allegations as I remember them. Dr. De Lautour also submitted plans of his own for hutments.

10. You went out to look into this question for yourself?—Yes, sir.

11. What result did you arrive at? What did you see?—I first went to headquarters and saw Colonel Purdy, and he told me that I had better make investigations at Trentham. I went out to Trentham—that would be about the 8th April. I then saw Colonel Potter, Colonel Purdy, and Major Adams. I stated the allegations to them, and they replied to them. Colonel Purdy gave me a statement regarding the number of deaths that had occurred in camp up to that date, and which might be accredited to the camp. I have looked it up since I saw my name mentioned, and I found the list of deaths then handed to me, together with an estimate of the number of men in camp up till then. [Document put in.] I do not know whether it is in Colonel Purdy's handwriting.

12. But he knew you got it?—Yes, and that was in reply to Dr. De Lautour's allegation that there had been thirteen deaths. The reply is in effect that there had been only one death in camp up till then, for which the camp could be attributed as being responsible, as against Dr. De Lautour's allegation of thirteen. There are some shorthand notes of my own here that I took down while they were making the estimate as to the number of men. They were given by Sergeant-major Luckham in response to Colonel Potter's directions. The effect is that there had been 13,401 men in camp between the 21st October, 1914, and the 8th July, 1915, and that there was only one death actually occurring up to that date directly attributable to the camp, from septic pneumonia. There is another note that I have regarding the drainage. Dr. De Lautour complained about the drainage. I was then informed that the drainage scheme had been planned by Mr. Morton.

13. Then, with regard to the hutments and as to their being erected over latrines, did you go into that question out there?—Yes.

14. Did they show you where the latrines were and where the huts and tents were?—Yes.

15. And you were satisfied that they were not erected over latrines?—According to what they showed me I was quite satisfied that no hutment and no tent had been erected over the site of any latrine.

16. We have a diagram by a surveyor showing where they were, and that bears out the information you got?—Yes, sir.

17. But, of course, you are not able to speak with expert knowledge as to whether there was overcrowding or as to whether the tents ought to be removed?—I was informed in reply to that that the tents were regulation tents for sixteen men, and that there were only eight men in them. Under those circumstances I could not see that there was overcrowding. Then Dr. De Lautour submitted several photographs alleging overcrowding. This is one of them [produced]. I took those photographs out to the camp and told the authorities that I wanted the matter explained. The explanation was that this particular photograph was taken from the grandstand, that the tents as shown in the centre appeared to have fair spaces in between, while the other tents at the side, taken at a different angle, appeared to be rather close together, whereas they are actually the same distance apart. There was one other matter, and that was regarding the overcrowding in the hutments. Dr. De Lautour made his statement on the published announcement that these hutments were to be erected on an area of 4½ acres. I investigated the matter at the camp, and I could not get any definite statement as to the actual area. I came back to town, and then I specially went to the Public Works Engineer, who at that time had the plans of the hutments before him. I saw Mr. Louch and got him to work out for me the actual hutment area. The hutment area was published on the 13th April, several days afterwards, as 12 acres—that was the total space that would be covered by the new and the two sample hutments—instead of 4½ acres as stated by Dr. De Lautour.

18. There are somewhere about 13 acres now?—Yes, further hutments have been authorized since.

19. Of course, you are not able to speak as an expert upon the subject?—No, sir.

20. *Mr. Skerrett.*] I understand that what you did at the camp was to ascertain the views of the officials upon Dr. De Lautour's allegations?—Yes, and also the facts as far as I could.

21. And, in particular, whether the allegation that some tents were erected on the site of disused latrines was correct?—Yes.

22. There were only two huts built?—Yes, two.

23. You say that Dr. De Lautour in his letter to the Minister attributed to the camp the number of deaths as thirteen: are you not mistaken in that?—No, I did not say that—that occurred in the actual interview. Dr. De Lautour at the same time submitted a death-list, giving the dates of the deaths and the names of the men.

24. Because I find no reference to it in his letter to the Minister?—That may be so.

25. It was not in the letter to the Minister that the statement was made as to the number of deaths, but it was to you?—Yes.

26. Are you quite sure that you are not misunderstanding him with reference to the thirteen deaths?—No, he gave me the list.

27. Does not that refer to other camps?—It did include other camps for the Main Expeditionary Force, but as he gave it to me the information referred to the reinforcements at Trentham.

28. Rightly or wrongly you understood him to refer to the men quartered in the Trentham Camp?—Yes; I pointed that out to him—that that could not be so, because I myself knew that some of these deaths had not occurred during the Trentham Camp for the reinforcements.

29. Did not Colonel Potter make any statement to you as to the practice of shifting tents?—I think he did.

30. What was that?—He gave me to understand that tents were shifted from time to time—not to new sites.

31. When I speak of shifting tents I speak of the removal of the tents from the existing site to some other site closely adjacent or to some other portion of the camp?—Closely adjacent or immediately adjacent?

32. So that the tent is shifted so that it will occupy a site either immediately adjacent or some distance from its previous site?—In between the space occupied by the tents.

33. What did Colonel Potter say about that?—I cannot say definitely what he stated. The interview was over two months ago, but that was my impression.

34. What was your impression that Colonel Potter said was the practice?—That the tents were removed from time to time to the sites immediately adjacent, the term meaning the space in between the different tents.

35. Did he say what was the period? You say "from time to time"?—He said "from time to time"—no period.

36. I think you must have misunderstood Colonel Potter: if you look at the site of the tents there is no room between them?

The Chairman: There is between 7 ft. and 9 ft. between the rows.

Mr. Skerrett: Would that be enough room? That tent would accommodate two men with their heels to the pole and their heads to the outside. From my visual inspection of the ground there would be about from 7 ft. to 9 ft. between the tents, and I think that would not allow for their periodical removal to the immediately adjacent sites.

The Chairman: I do not think it would.

37. *Mr. Skerrett* (to witness).] Can you rely upon your recollection upon the conversation about this matter?—That is my impression.

38. You would not invite the Commission to rely upon it? You see it is not fair to Colonel Potter to say something as regards his statement which is not absolutely accurate?——

39. *Mr. Gray.*] In speaking of the shifting of the tents, do you think the word "shifting" was used or "striking"?—I could not say.

40. Not merely struck by being opened up and aired?—What do you mean by that?

41. The striking of a tent is the removal of the tent temporarily to a spot adjacent and then the putting it back to the site after the ground has been swept?—I could not say that. I can say that from my own observation in camp from time to time I have seen the flaps of the tents thrown completely up and the ground underneath exposed. Whether the tent was actually removed or not I cannot say.

42. You cannot say that Colonel Potter stated that the tent was actually removed to a new site, or that the tent was struck in the way I have described, temporarily while the site was cleaned?—I could not say.

43. From what you learned at the camp and elsewhere from Mr. Louch, did you feel satisfied in accepting Dr. De Lautour's statements?—On the investigations that I made I could not say that Dr. De Lautour's charges were well founded, and I waited for Dr. De Lautour to come and see me again, and he never turned up.

HERBERT EDWARD PILKINGTON sworn and examined. (No. 87.)

1. *The Chairman.*] You hold the rank of Colonel?—Lieut.-Colonel.

2. I understand that you are the head of the department to which Colonel Purdy belongs—the medical service?—The medical services are classified under my branch. I am a branch of the Headquarters Staff.

3. And the medical service?—They come under my branch.

4. Are you a medical man yourself?—No, sir.

5. Have you had military experience?—Yes, sir; nineteen years.

6. In New Zealand or where?—New Zealand. I started in New Zealand, and I have had a course of training in England in the Artillery.

7. You have been to South Africa?—Yes, sir.

8. Do you remember the opening of the Berhampore Hospital?—Yes, sir, but I do not remember the date.

9. But you remember the occasion of it?—Yes, sir.

10. Did you receive a requisition for a telephone for that hospital?—No, sir.

11. You had none?—Not that I recollect.

12. It may not be suggested that you refused such an application?—No, sir.

13. Would it be for you to refuse it?—No, not for me to refuse it. I would recommend or otherwise.

The Chairman (to Colonel Purdy): Do you suggest, Colonel Purdy, that the telephone was refused by Lieut.-Colonel Pilkington?

Colonel Purdy: No, sir.

14. *The Chairman* (to witness).] You visited Berhampore with the General on one occasion, I think?—With Major Elliott, but not with the General.

15. Was not General Robin with you?—No, sir; he went the following day.

16. Why did you visit there?—Well, the Chief of the General Staff asked me to visit it with Major Elliott and ascertain the condition of things generally there, as he had received complaints as regards overcrowding.

17. Do you remember the date when you went out?—Yes, sir. Colonel Purdy went away on the evening of the 2nd June—that was the Wednesday—and we went out at midday on the 5th June, Saturday.

18. To see whether it was overcrowded in particular?—Yes, sir.

19. What did you find when you got there?—I found that the numbers in the hospital were as stated by Dr. Elliott—ninety-two, if I remember rightly.

20. Were there marquees there then?—Yes, sir.

21. How many: do you recollect?—I am not certain. I remember there were two for certain, and there may have been three.

22. One on the hill and one at the entrance?—Yes; I do not know whether there was not another one.

23. Did you see that one on the side of the hill?—Yes, sir.

24. Had the site been terraced out then?—Yes; and there was a drain round the top end of it.

25. To keep water from running all over the floor. Do you usually pitch a tent on the side of a hill?—Not usually, but I have done it when there was nowhere else to pitch it.

26. Do you think that those terraces there would be any inconvenience?—It was occupied at the time, and I questioned the men, and they seemed to be fairly comfortable.

27. Well, in consequence of your visit, was anything done?—Yes, sir. There were ninety-two when I went there. After that we got into communication with the general hospital, and they arranged to take five.

28. Were they cases not so well as the others?—I do not say that, but they had room for five, and I arranged for these to be sent from Berhampore to relieve it somewhat. I found that Colonel Purdy had made arrangements for twenty-odd to be evacuated that day back to Trentham, and another batch on Sunday. I am not sure whether they went, but arrangements were being made for them to go.

29. In addition to this arrangement with the general hospital to take five cases was there any other step taken?—Yes, sir; the Chief of the General Staff had an interview with the Minister of Defence, and they came to some arrangement with the Health Department, and it passed out of my hands then.

30. The matters passed into the hands of the Public Health Department?—Yes, sir.

31. But you formed the conclusion from what you saw at Berhampore that there was overcrowding which must be speedily relieved?—Of course, mine was only a layman's opinion.

32. Did you consider that there was necessity to relieve the pressure, and act accordingly?—Yes; ninety-two seemed too many, because I was guided by what Colonel Purdy had told me previously—that he had arranged that there should not be more than fifty or sixty.

33. Did you find out how so many had come to get there?—On this day?

34. Yes?—No, sir, I did not find out then, except that there was apparently a rush of patients during those two or three days.

35. Without any one going out?—And Colonel Purdy was away.

36. So that there was no one at this end to call "Stop" apparently?—I did not say that, sir. I believe the Colonel had arranged with the nurses and the senior medical orderly to clear it out. I do not know what that arrangement was actually.

37. You say that in consequence of the interview between the Chief of the General Staff and the Defence Minister the Public Health Department assumed control?—That is what I understood.

38. You were not consulted upon that matter?—No, sir. The hospitals did not come under my control, nor the camp.

39. And you came into the matter by being requested to go with Dr. Elliott and look at it?—Yes.

40. Was it you who selected Dr. Elliott to go, or the Chief of the General Staff?—Dr. Elliott was in my room at the time. I had asked him to give me a return of the number of patients in the hospital on the Friday, the day before. From what I remember he rang me up and gave me the numbers, and informed me that there were too many at Berhampore. The Chief of the General Staff had asked me to obtain these numbers, and I said I would ask Dr. Elliott to come up to my office, as I understood he was acting for Colonel Purdy. When he came up I asked the C.G.S. to come in and see him.

41. Did he repeat then what he had said to you—about the place being overcrowded?—We had a discussion about it.

42. Then you arranged to go and see it?—Yes, I went with Dr. Elliott right away.

43. Well, then, can you or can you not tell us why the change was made to the Public Health Department—why the control of this hospital was taken out of the hands of the military authorities: do you know? Were you told?—No; I was not present when the arrangement was made.

44. All we know is that it was done on the Sunday?—Saturday evening or Sunday. I was talking with the C.G.S. and he told me he was making this arrangement, probably to get more accommodation.

45. The C.G.S.—that is, Colonel Gibbon?—Yes, sir.

46. You have only had to do with the Trentham Camp since?—Yes, sir.

47. You have had nothing to do with the others?—No.

48. So that from that time you have had no connection with the administration of the camp or the outlying hospitals?—Nor prior to that. You see, my duties are to obtain the personnel for the camp; send them into the camp to be trained. When they go into camp I have done with them.

49. Going back to the telephone, my attention is called to this: that the telephone was put into Berhampore Hospital early in June. One witness stated that they wanted a telephone earlier, but they could not get it. You did not prevent it from being obtained?—No, sir; I put it in when I came back that day. I took the responsibility for putting it in.

50. *Mr. Ferguson.*] As a result of what you saw there?—Yes, sir; the question had not come before me until then.

51. *The Chairman.*] If a telephone had to be obtained, what is the regular course: would the application go through you?—No, sir; the requisition would be put in to the Director of Stores, Quartermaster-General's Branch. They might refer it to me or not. If they were doubtful about it they might ask whether I considered it necessary, and I would say "Yes," and then they would put it in.

52. At any rate, you made no arrangement one way or the other on the subject of the telephone?—No, sir, not before my visit.

53. *Mr. Ferguson.*] When Colonel Purdy left Wellington for the South, who would be his natural successor—who would be the person to take up the responsibility of his office?—He could depute any officer really, but the P.M.O. would be the most likely for him to arrange with.

54. But the P.M.O. would not know unless he was specifically instructed by Colonel Purdy?—He would arrange with the P.M.O.

55. And the P.M.O., if he were asked in any way by Colonel Purdy to attend to his work during his absence, would take his definite instructions that he was to do the whole of his work?—I would take it so.

56. *The Chairman.*] Have you any interference with anything of that sort?—No, sir. I asked Colonel Purdy before he left who was going to do his work for him, and he said he had arranged with Major Elliott.

57. Do you think there was any possibility of a mistake having arisen? There should not be a mistake. If the P.M.O. were asked by Colonel Purdy to look after things you think that he would know that he would have to undertake it as a matter of course?—He would naturally expect to have to take over the work.

58. A doctor goes away, and before doing so he rings up Dr. Elliott and says, "Elliott, there's a good chap, look after my practice." You take that as sufficient instruction to take over the whole of his work?—Yes, sir; I take it that Colonel Purdy would ask Major Elliott to act for him while he was away.

59. Therefore if anything went wrong in his absence Dr. Elliott is the one who would be responsible?—That depends. If he were carrying out the policy of the officer he was acting for he would not be held responsible; but if he initiated something new without consulting the officer he was relieving then he would be responsible.

60. *Dr. Martin.*] The Commission is in some doubt about the relations of the various departments. The medical services are under the military authorities, the Adjutant-General. But now we have the Director of Military Hospitals, a new appointment, which does not exist in the Army?—That is so.

61. What is the status of the Director of Military Hospitals as regards the military? Who controls the Director of Military Hospitals?—The G.O.C.

62. Colonel Valintine, if he has to make any requests or any suggestions, they must go through the G.O.C. of the district?—Yes, the General Officer Commanding the Forces.

63. Would it go through you?—No, sir, not D.M.H. matters.

64. You lose all touch with the medical service now?—Well, not the Territorial medical services. I still get the Medical Officers for the camp. I am the channel for the New Zealand Medical Corps.

65. They go through Colonel Purdy still?—Yes, sir.

66. Then the only office you recognize is the D.M.S.?—Yes, sir, the only one I deal with. The D.M.H. was instituted for the camp medical services.

67. *The Chairman.*] For the camp and the relief outlying hospitals?—Yes, sir.

68. *Dr. Martin.*] Well, the D.M.H., Colonel Valintine, would have nothing to do with the treatment of the sick in the Trentham Camp?—No.

69. Who would be the future chief of the doctors in the Trentham Camp?—The G.O.C. arranged this.

70. *The Chairman.*] We must know. If Colonel Valintine does not know, nobody will know?—General Robin arranged that.

71. You could not order Colonel Valintine about?—Well, I appeal to him for these hospital cases.

72. *Dr. Martin.*] Will he report through you to the G.O.C.?—Not through me.

73. *Mr. Ferguson.*] Then you are superseded for the time being?—Yes, sir.

74. Yet you are in charge of the medical arrangements in Trentham Camp?—No.

75. The D.M.S. has charge of the medical arrangements at Trentham Camp?—No.

76. The whole of the medical arrangements at Trentham Camp are taken out of the hands of the military authorities and passed on to the Health Department?—When they go into camp they leave the D.M.S.

77. *Dr. Martin.*] Is Colonel Purdy responsible for the equipment of the Ambulance and medical units going out with the reinforcements?—I think so.

78. Will that department be still under you?—I would like to see the table of duties again.

79. *The Chairman.*] If you had the duties you would have remembered them by usage by this time?—Yes; but the D.M.S. was responsible up till the change.

80. *Mr. Ferguson.*] If the D.M.S. requires anything out of the ordinary he would come to you?—Yes, sir.

81. If he wanted to commandeer a hospital he would come to you?—Yes, sir.

82. As soon as he foresaw the matter he would come to you, and it is your duty to carry out his wishes?—Or refer them to my superior officer.

83. *The Chairman.*] If Colonel Valintine wishes to commandeer a building he does not refer to you now?—No.

84. *Dr. Martin.*] Supposing it is a matter of discipline, supposing one of the Medical Officers is incompetent, who would deal with that officer?—The Camp Commandant.

86. But professionally incompetent, I mean?—The D.M.S.

86. Will the D.M.S. report to you?—Yes, sir.

87. Then I understand that Colonel Valintine has nothing to do with the medical men going out with the reinforcements?—I think he is represented by the P.M.O. out there.

88. I do not refer to the racecourse hospital. We have come to a position of divided authority, and the Commission does not know where it stands?—I do not think this is in accordance with the ordinary peace arrangements.

89. Nor with the military arrangements anywhere?—There is bound to be a little overlapping.

90. *Mr. Ferguson.*] It may not be overlapping—the ground may not be covered?—That is so, perhaps.

91. I want to find out whether any recommendation, or requisition, or request by Colonel Purdy has been refused by you or the Commander-in-Chief?—Not that I know of, sir.

92. Therefore we may take it that Colonel Purdy is responsible for anything which may have occurred, even for not taking prompt action with regard to sickness in camp?—I cannot remember anything. I look to him as an expert. If he makes a recommendation I consider it an expert recommendation.

93. *Dr. Martin.*] You cannot throw any light upon the matter of the divided economy. We want to know whether the D.M.S. is in control of the Medical Officers of the reinforcements, and is their future professional chief, or whether they come under the Director of Military Hospitals?—I would like to refer to the table about that.

94. *Mr. Ferguson.*] Are the camp Medical Officers under you?—No; they are not under me when they go into camp.

Dr. Valintine: If I read this I think it will make this point quite clear: "The Director of Military Hospitals to undertake the following duties: (1) The inspection and sanitation of military camps; (2) the inspection and sanitation of military hospitals; (3) the establishment and equipment of military hospitals and convalescents' homes; (4) the transference of patients from one hospital to another." Those are my duties. As regards the D.M.S., he undertakes to fulfil duties relating to—(1) The examination of recruits, and organization relating thereto; (2) the inspection of transports as to their sanitation and equipment of medical and other necessaries; (3) the control of all ambulances other than those in the immediate use of the hospitals; (4) all matters relating to medical establishment other than those relating to hospitals; (5) attendance as a member of the Pensions Board." That defines it clearly. There has been no conflict of authority. I go direct to the G.O.C.

95. *Mr. Salmond* (to witness).] Was there any conversation between the C.G.S., yourself, and Dr. Elliott as to what happened in connection with your visit to Berhampore Hospital after you inspected it?—No.

96. Did you report to the C.G.S.?—Yes.

97. In writing?—No, over the telephone.

98. You had no personal knowledge of how the matter came before the Minister or to the Health Department?—That is so.

99. *Mr. Skerrett.*] But prior to the present arrangement, or the appointment of Colonel Valintine, who was Colonel Purdy's immediate superior officer, to whom he would write reports and make communications?—The Adjutant-General.

100. To yourself?—Yes.

101. Was it any part of the duties of the Director of Military Services from time to time to make regular reports as to the sickness in the camp, and as to the condition of the hospitals and medical equipment generally?—He made reports, I know.

102. Was it his duty to do so?—Yes.

103. Did he do so?—Occasionally, yes.

104. Was there no system of sending in reports at definite times?—No, not at definite times.

105. Was there no system by which conferences were occasionally held between you, or some of your subordinate officers, as to the sickness in the camp, as to how the camp was getting on generally, and as to preventive measures?—Yes, they were occasionally discussed.

106. Was there a regular system when meetings would be held from time to time between you, or some officer selected by you, to discuss matters for the well-being of the camp?—I do not know of any particular conferences, except with the G.O.C.

107. There was no arrangement for periodical conferences between the D.M.S. and you or any of your officers as to the well-being of the camp?—It was his duty to advise them if anything required attention.

108. Did the G.O.C. ever summon a conference of officers to consider the medical condition of the camp up to the time of the appointment of Colonel Valintine?—Not what you might call a conference.

109. A conversation, we will say?—Yes.

110. When?—On several occasions the G.O.C. has sent for the D.M.S. to come to his room, and I have gone with him to discuss camp matters or the health of the troops generally.

111. How many such conversations were there?—I could not say.

112. More than one?—Yes, several.

113. Can you remember the topic of the discussions at any of those conferences?—No, I cannot remember.

114. Not a particular topic?—No.

115. Do you remember any serious discussion as to the sufficiency of the hospital arrangements at the camp prior to the appointment of Colonel Valintine?—I remember one, where the question was discussed as to the extra accommodation for measles cases.

116. At what period was that?—I cannot tell you the period, but it was before this change of affairs.

117. Before you went out to Berhampore?—Yes, sir.

118. What was said at that conference?—I think it was before we got Berhampore. It was in regard to the question of obtaining more accommodation, and Dr. Purdy was instructed to make every effort to get more accommodation at Lower Hutt, or Trentham, or anywhere he could.

119. Cannot you give me the date of this conversation?—No.

120. Were these instructions ever put into writing?—No.

121. Is there any report upon the file showing what the Director of Medical Services did as the result of this conversation?—I think so, but I cannot say for certain; but I know he got Berhampore.

122. Do you know whether any report was made by the Director of Medical Services as to what he did?—Yes, I think there is.

123. You know that towards the end of May, at any rate, there was a serious prospect of an epidemic in the camp: that is certain, is it not?—Yes, measles.

124. What was done to arrive at the best thing to be done to meet those cases?—Colonel Purdy obtained Berhampore.

125. What was done by those high in authority, by those in command, or by you, or by anybody else to determine what was to be done to meet the chances of the epidemic: was there any meeting called for any serious discussion of the matter?—It was left to Colonel Purdy to make the best arrangements, the matter being in his hands.

126. Were you and the General in command right in leaving it entirely to Colonel Purdy: was it not your duty to see that something was done when your attention was attracted by the outbreak?—We were assured by the D.M.S. that everything was being done.

127. I may take it, therefore, that the Director of Medical Services is responsible if there should be a deficiency of accommodation: is that so?—He said there was nothing to fear—everything was provided.

128. He made no reflection and asked for no assistance that was refused: is that so?—Yes, sir.

129. Did not a time arrive when the General in command and you became more than anxious about the position of the sick in the camp?—I cannot call any particular time to mind.

130. You say, apparently, that if you did become more anxious it would be after you made the inspection of Berhampore, at the instance of Colonel Gibbon, with Major Elliott?—Yes, sir.

131. *Mr. Ferguson.*] Who fixes the salaries of the Medical Officers: is that done in your department, or is it done according to scale?—Do you mean just now?

132. We will take it in time of peace first, and then in time of war?—The Q.M.G.

133. *The Chairman.*] It is according to regulations?—Yes, in time of peace.

134. And in time of war?—A scale is drawn up and a recommendation made to the Minister of Defence.

135. *Mr. Ferguson.*] When the present D.M.S. was appointed it was evidently on peace duty?—Yes, sir.

136. And the scale of pay is suitable for the position and duty he had to carry out in time of peace?—Yes, sir.

137. And in time of war, whose duty was it to recommend that either the officer should give his whole time to these services or that it should be made worth his while: was it allowed to drift on without any steps being taken, or was the matter considered?—That I cannot say.

138. It did not come before you?—No; it was a Q.M.G. matter.

139. Could the D.M.S. recommend it, or would you recommend it?—It is rather a peculiar position, because he does not come under the Expeditionary Forces.

140. He is under you, therefore it is your duty to see that his department is properly staffed, including himself, in every way: is that so?—Yes.

141. Supposing through the exigencies of the work he required four assistants, how would he get them: would he requisition you for them?—Yes.

142. Did he do so?—No, not until recently, when he got an extra clerk in his office.

143. He had to ask for it?—Yes, sir. I do not know that he had to ask for it, but we talked it over.

144. I want to know whether your department met the emergency in respect to the medical department in the same way in which it was necessary to meet it in regard to other departments?—I discussed the question of pay with the D.M.S. on several occasions.

145. I am only using that as a principle: was the medical department properly organized at the beginning of the war, or has it been allowed to drift?—As for the New Zealand Medical Corps, it was not up to the same standard as the Infantry, the Mounted Rifles, and the field forces.

146. The medical force has not been recast as all the other branches are?—They received more attention than the Medical Corps. The Medical Corps has been rather neglected or in the background since the inception of the scheme in 1911.

147. *Dr. Martin.*] Was Colonel Purdy given an office after the beginning of the war?—Just after the beginning of the war.

148. He had clerks?—Yes, he had the use of clerks.

149. *The Chairman.*] He had accommodation in the Defence Office?—Yes.

150. *Dr. Martin.*] He had an office, telephone, and clerks?—Yes; he used really my office.

151. Had not he an office of his own?—Sometimes he had an office of his own, but he found it better to come along to my office. There was no restriction as regards clerks, or telephone, or accommodation.

Mr. Salmond: I would like to say that I do not wish the Commission to be under the impression that Colonel Purdy's total remuneration was £150 a year. That was his salary or retaining fee.

The Chairman: It was only taken as an illustration of his department having been starved in the past.

Mr. Salmond: I take it that it is being taken that the department is being starved at the present time.

The Chairman: It was stated to us: we did not get it as the result of direct inquiries.

152. *Mr. Gray.*] This is a headquarters camp at Trentham?—Yes, sir.

153. Have you inspected it at any time?—It comes under the C.G.S. He represents the headquarters.

154. You paid occasional visits?—Occasionally.
155. Did you visit it in company with Colonel Purdy more than once?—Yes, sir.
156. And if anything were required in the matters of the hospitals, or accommodation, or treatment he would discuss it with you?—Yes.
157. Was that done from time to time?—Yes, sir.
158. You have had discussions about these matters?—Yes, sir.

Captain YEATES further examined. (No. 88.)

Witness: I want to say that in looking over my evidence it seemed to me that it might be held to throw some blame on Major Holmes and Captain Fyffe, and as these gentlemen are not here I want to dispel any idea of the sort. Anything that was not done at the camp which should have been done was not their fault. I want also to dispel any idea that there was any unfriendly feeling between Major Holmes, Captain Fyffe, and myself. In a letter written to the Adjutant-General on the 8th February I distinctly stated that I wished Major Holmes to be a witness, as he was friendly.

1. *The Chairman.*] We take it that you were on perfectly friendly terms with these officers?—Yes. Afterwards I did not know them officially or socially. With regard to Sergeant-major Dorizac's evidence, he said that I rode on sanitary duty round the camp. Well, sir, the General Officer Commanding could not do such a thing as ride round the tent-lines. It is against regulations. He would have to have a circus-horse to do it if he attempted the task.
2. Did you have a horse?—I was on my horse every day coming and going to and from camp.
3. I do not think he suggested that you rode a horse between the tent-lines?—Yes, he said that; because he said that was the reason I complained there was so little room between the tents I could not go through the lines without the tent-ropes getting in one's way. As regards the writing of prescriptions, there was no place to write them, there being no table in the marquee, except an old packing-case. As to my not being in camp after the early morning parade, that is not true. I have been in camp every hour of the day, but my duties were self-imposed; and on many occasions I have brought medicine from town for officers and men which could not be obtained in camp. I paid for them out of my own pocket. To say that I did not attend to my duties is absolutely untrue. I have been up till 11 and 12 o'clock at night in camp. What I did take exception to was that I was not given sufficient work in that camp to do. I was given no special duty. I was absolutely put on one side. With regard to the letter written by Colonel Purdy regarding me, I wish in open Court to give him the opportunity of withdrawing his statements about me so that I may go to the front. I cannot do so while that is not withdrawn. I again repeat I give him the opportunity of withdrawing it.

WILLIAM COLLEY sworn and examined. (No. 89.)

1. *Mr. Skerrett.*] What are you and where do you reside, Mr. Colley?—I am principal light-keeper at Nelson, and a carpenter by trade.
2. You had a son, Stanley Colley, who died at the Wellington Hospital on the 11th June at 10.15 at night. How old was the boy?—Twenty-seven.
3. What was he by occupation?—A plumber and sanitary engineer. He held honours from the Trade Guild, London.
4. He was a member of the Sixth Reinforcements?—Yes.
5. What have you to say in regard to the constitution of the boy?—We considered him the strongest of the family. In fact, the whole family has not spent more than 5s. for really medicinal purposes. He had an accident on two occasions. He was knocked down in a lift on one occasion and he had a doctor attending him then, and on another occasion when he was a youngster he got a piece of wood into his heel, but those were only trivial matters.
6. These accidents left no permanent effects, and he was a strong boy?—That is so.
7. You had a letter dated the 6th June from your son written from the Berhampore Hospital?—Yes; I have it here [produced].

The Chairman [perusing letter]: He reports that he is laid up at Berhampore Hospital, and had been there then four days. He was pretty well all right again, and expected to be back in camp in a few days. He says the camp is in a pretty bad state—mud up to your neck all the time—wet socks and boots; no hope of getting them dry.

8. *Mr. Skerrett.*] We know that your son took a turn for the worse on the 10th June?—Yes, sir.
9. When were you informed of his illness?—I was informed on the 10th by telegram. The telegram is here [produced].
10. When did that arrive in Nelson?—It was sent at 7.12 p.m. from Trentham on the 10th June.
11. When did he die?—At 10.15 on the 11th.
12. What was the cause of death?—[Copy of death certificate produced.]
13. *The Chairman.*] This certificate is for the Government Life Insurance. According to it he died at 4 p.m. on the 11th June?—No; that was the time the doctor last saw him.

14. That would be the doctor at the Wellington Hospital?—Yes, sir..

15. You received this telegram about four minutes past 7?—Yes, sir, just before I was relieved at 8 o'clock. I was on duty, and they rang me up and gave me that message.

16. What did you do upon receipt of that telegram?—I entered into negotiations to get a temporary keeper to take my place, and came away next morning.

17. Early next morning?—Yes, by the Union Steamship Company's boat.

18. When did you get to Wellington?—About 10 o'clock, by the "Pateena," at night. I was met by an orderly, who asked me to arrange for the funeral.

19. *Mr. Skerrett.*] I think you interviewed the nurse at the Berhampore Hospital?—Yes.

20. Did you know her name?—It was the sister who gave evidence here this morning—Sister Keith.

21. What did she tell you about the boy?—I asked her what was the matter with the boy, and generally what had been done by him for the last few hours. She told me that he was playing cards in the morning, and he felt ill, and she put him to bed, and took his temperature. I asked her if she sent for a doctor, and she said "No." Then she said she took his temperature at 7 o'clock and it was 103·4. And I asked her whether she sent for a doctor then and she said "No." Then I said, "Then a doctor did not see him?" and she said "No." I asked her if she had any reason why she did not send for a doctor. I thought she might have had some orders from the doctor in charge. But she told me that she did not think he was as bad as that.

22. What she did was to send him to the hospital as soon as he had a temperature?—Yes; then she rang up for the ambulance and sent him to the hospital.

23. Did you discover what time he reached the Wellington Hospital?—Yes, sir; 9 o'clock. I saw the doctor at the Wellington Hospital, and in relation to my not being informed sooner I said, "You sent information in regard to Kennedy: how is it that you did not send information to me until it was nearly hopeless for me to get here in time?" He said, "Well, I rang up the Trentham people, but I could not get a direct reply. We never can get any persons we want out there. I am disgusted with them." I saw Colonel Potter and I asked him how it was I did not hear sooner, and he said, "Well, we sent it as soon as we could." I said that it was strange that when that boy was sent into the Wellington Hospital there was no record sent with him—the name of the boy, the next-of-kin, and very likely there would have been the diet on the chart.

24. *The Chairman.*] No card was sent with him?—That is so, and that is why the doctor in the Wellington Hospital had to communicate with Trentham—to get to know who his next-of-kin was. They knew his own name, but the boy was delirious and could not account for himself.

25. *Mr. Skerrett.*] Can you give the Commission any information as to how the boy was dressed when he was removed to the Wellington Hospital?—I heard from the nurse in the Wellington Hospital—the nurse who was on duty at 9 o'clock the night he was admitted—that he had only his pyjamas and top coat on. I was also inquiring about what is put down as blankets. They gave me a list of things in his kit. There were five blankets, three belonging to the military authorities and two belonging to the boy himself. There was his own and one that his brother gave him: they were really rugs. The Wellington Hospital authorities could not give me any account of anything but his pyjamas and his top coat.

26. *The Chairman.*] You heard the nurse's evidence this morning?—Yes.

27. And she said that he had on three blankets and two ambulance blankets when he went to the Wellington Hospital?—Yes.

28. *Mr. Skerrett.*] You wished to say something about the appearance of the boy's body?—It looked to me as if he were not really better of the measles then. There was a roughness of the face just like a person who is suffering from the measles, and there were two black spots just like where the measles come out.

29. What cheek was it on?—His left cheek.

30. What was the size of these spots?—Three-sixteenths of an inch: a little oval—not complete circles.

31. That gave you some suspicion that the medical diagnosis was wrong?—It gave me a suspicion that it must have been a rather severe case instead of a light case.

Colonel Purdy: I think that Mr. Colley might like to hear something of his boy's case. He came down to the hospital on the 2nd June. I returned on the 6th. I saw him at least three times. I saw him on the night of the 9th, when he was quite convalescent. He was playing cards in the ward on the 10th. Then he complained that he was feeling very cold, and the nurse put him to bed. Then he suddenly developed a temperature, and without waiting to call in a doctor she sent him, as was usual, straight away to the Wellington Hospital, which was close at hand. This was a more satisfactory course to adopt. But, unfortunately, he died the next night. I made a search of all the cases—Kennedy's, Colley's, McFarlane's, and two other cases—in which the patients had died in the hospital last week, and the house surgeon who was present when Colley died told me that it was a case of acute meningitis; of that there was not the slightest doubt. I have not seen the death certificate. Drs. Myers and Hazlette were in charge. I think they are both at Rangiotu now. Might I suggest that it is a very common thing in pneumonia cases for a man to take ill one day and die the next. I know of a case of one of my old friends, a Mr. Reid, who was well one day and died the next from pneumonia. Mr. Colley's son had measles; there is no doubt about that, and it is equally certain that he was practically convalescent in Berhampore Hospital. Everything was done for this boy, and it was very much better for the nurse to send him straight away to the hospital without waiting for an hour or two to see a doctor. I thought it was best for Mr. Colley to hear this.

GEORGE MCNEELY sworn and examined. (No. 90.)

1. *Mr. Skerrett.*] What company do you belong to?—B Company, 1st Battalion, Trentham Regiment.

2. Where did you reside before you enlisted?—I have been working up north of Gisborne.

3. What are you in civil life?—A telegraphist.

4. Were you in the camp hospital?—No.

5. Were you laid up with the measles?—I presume it was influenza; I had no spots.

6. Where were you put when you were laid up?—I was just in the hutments.

7. And then you went on sick-parade, and from there where did you go?—Just into the hutments. I got off parade one whole day.

8. And what then?—I was on parade the day after I went on sick-parade.

9. Did you go into the hospital again?—No, not at all.

10. You have only had one day's sickness?—Yes; I was not in the hospital at all. I was in the hut the only day I was sick.

11. You wrote a letter dated the 29th June from the Trentham military camp?—Somewhere about that date.

12. This is your letter, signed "George" [put in]?—Yes.

13. In this letter you make a complaint as to your treatment: will you tell the Commission what happened?—One day I felt very sick and not fit to go on parade, so I went on sick-parade and afterwards up to the dispensary tent, and they gave me something which tasted like liquorice-powder.

14. How did you feel?—Very hot.

15. How about your throat?—My throat was sore, too, and I could not speak at all.

16. Did you have long to wait at the tent before you were examined?—Ten minutes or a quarter of an hour.

17. Inside the tent?—Outside.

18. Was it fine or wet?—Wet.

19. When you went in what took place?—The doctor asked me how I felt, and he wrote me out something.

20. What did you say?—I told him I felt very hot. I could just speak, and that was all.

21. Did you tell the doctor that your throat was sore?—I told him as best I could.

22. You were very hoarse?—Yes; and he wrote something on a piece of paper and I got a gargle.

23. Did he take your temperature?—No.

24. Is that the only question the doctor put to you? Did he ask you where you slept or anything of that kind?—No.

25. How did you feel next day?—I felt considerably better.

26. Did you go on parade?—I went on sick-parade next morning, and I got another gargle.

27. Did you attend the parade again?—I am not exactly sure.

28. I think you said in this letter that you had drunk three or four bottles of Fluenzol and taken eucalyptus jujubes: you also say that you gave Lane's Emulsion a try, and that it brought you back again to good health: you looked after yourself?—Yes.

29. *The Chairman.*] You were better the next day after the gargle: what cured you—the gargle? You do not mention that you got a gargle from the medical authorities?—No.

30. You got a mixture first, and then you had the gargle as well?—I had the mixture first and the gargle afterwards.

31. And you were much better?—The day after I could not speak I felt better.

32. *Mr. Skerrett.*] You thought you were not sufficiently carefully examined by the doctor?—The point I did not like was having to stay outside the marquee before we could get in. After we had been there about ten minutes the orderly asked whether any one wanted to see the doctor urgently.

33. *The Chairman.*] Urgent cases would come first: did you put in an urgent application?—No, I just took my turn. We went in three at a time.

34. Were there three doctors inside?—I think so, but I am not sure.

35. *Mr. Skerrett.*] Do I understand that they were only taking the urgent cases on this parade?—No; the orderly came out of the tent and asked whether there were any men in the party who wanted to see the doctor urgently.

36. Such men would be taken first?—Yes. That would be ten minutes after we first came to the tent. The serious cases ought to have been taken in at once without having to wait outside.

37. Is there any other complaint you would like to bring before the Commission?—About the mess orderlies having to stay out in the wet weather when they go for the food, and again when you have finished your meals.

38. How do you think that could be remedied?—It would be better if they put more than one tap on the tank, so that we could get the water more quickly, instead of keeping the men outside in a line.

39. But the water would have to be got, rain or no rain?—Yes.

40. And you would have to go out into the rain to get it; but you think that the time spent in the rain could be minimized?—Yes, that could be done by putting more taps on to the tank. Then there was no place for drying clothes.

41. Are you at Trentham now?—No, at Rangiotu.

42. Have they any marquees there for drying the clothes?—Yes.

43. Are they successful?—Yes, sir. If you get your coat wet during the day you can leave it at night and get it dry in the morning, but at Trentham you had to hang it on the rafters.

44. Did you find the huts draughty?—Terribly draughty.

45. Did you find them warm?—They are all right on a hot day, but on a cold day or a frosty night they are very cold.

46. *The Chairman.*] You are in tents now?—Yes.

47. Which do you like the best?—The tents are much warmer.

48. Of course, the weather has been warmer lately?—It is pretty bad still up there.

RONALD NOAH PENK sworn and examined. (No. 91.)

1. *Mr. Skerrett.*] What company do you belong to?—A Company, 1st Battalion, Trentham Regiment.

2. Where did you live before enlisting?—Thames.

3. What are you?—A cabinetmaker.

4. You joined at Trentham on what date?—We came down to Trentham on the 28th May.

5. You were in hut 44?—Yes, sir.

6. You got ill there?—Yes, sir.

7. Do you remember the date?—I could not tell you exactly, but I think it was about a fortnight after we went into camp.

8. Were you on sick-parade?—Yes, sir.

9. In the morning or the afternoon?—The morning.

10. Will you tell the Commission what happened?—They call the sick-parade, and your names are put down in alphabetical order. The parade is called at 8 o'clock in the morning. You are marched up to the doctor's tent, and you have to wait up there for your turn. I have had to wait till it was a quarter to 10 o'clock—considerably over an hour.

11. And was it raining on this morning?—Yes, one of the mornings. I have seen a man man drop down on a cold morning. One of them fainted.

12. Did you see cases of men reclining on the wet ground?—Yes; they have sat down or leaned up against a post.

13. Do you think there were cases of hardship by reason of this method being adopted on the sick-parade?—It would be a hardship on some of them.

14. It was stated by Henderson that you were ordered to the hospital?—Yes, sir.

15. Did you go?—Yes, sir, and we were refused admittance.

16. What hospital?—The Trentham racecourse hospital.

17. The kiosk or the trainers' quarters?—The trainers' quarters.

18. What was your temperature?—I think it was between 100 and 101.

19. What was your trouble?—Influenza.

20. Did you walk down?—Yes, sir.

21. What sort of a day was it, do you remember?—It was a pretty fair day.

22. You did not carry your kit?—Yes.

23. What did you do when you were refused admittance?—I came back and reported sick the next morning, and I told the doctor that I had been refused admittance to the hospital.

24. Where did you stay that night?—In the hut.

25. When did you report that you were refused admittance to the hospital? Would you not report to the corporal?—I could not say that I did so on that occasion.

26. You did not report it, so far as you can remember, until the next morning?—I told the doctor that they had refused me admittance, and he gave me two days' excused duty and one day light duty.

27. What was your temperature that morning?—I do not know; they did not tell me.

28. What did you do?—I came back to the hut and had my two days off, but I could not go on light duty.

29. Did you keep to your hut, in bed?—I was lying about. I would have to go to bed sometimes before tea: I could not keep up.

30. Were you able to eat during those two days?—Only a little fruit.

31. I suppose some of your mates looked after you?—Yes.

32. Did you do any light duty after the two days?—No, I was not able.

33. How long were you in the hutment before you actually went into the hospital?—Close on a week.

34. How did you ultimately get into the hospital?—I went up to the doctor and told him I was feeling weak, and he wrote out a ticket admitting me to the hospital, and I went down to the hospital.

35. But we were told that you were unable to walk, and that you were carried to the hospital?—That was to the kiosk. I was not carried to the hospital.

36. How long were you bad before the doctor got you into the hospital?—Five days. I was in the jockeys' quarters first for two days, and then they took our temperatures, and we were shifted on the Saturday afternoon to the kiosk. Then they told us if we wanted beds we would have to carry our own beds over to the kiosk.

37. You were told to do so?—Yes. They said that if we wanted beds we would have to carry them over.

38. How were you treated in the hospital?—I could not say much for our treatment while we were in the jockeys' quarters, but when on the Sunday, in the kiosk, the nurses came we were treated very well.

39. You do not make any complaint about your treatment in the hospital?—Only that we ought to have been put in sooner, and that sometimes you would not get a wash before breakfast.

40. Was this before the nurses came?—Yes.

41. Was your temperature taken morning and evening in the kiosk?—Yes, sir.
42. What was your highest temperature?—About 102, in the jockeys' quarters. There were three beds in a room only 10 ft. by 10 ft.
43. Henderson said there were a great many sick in hut No. 44?—Yes, sir.
44. Nearly all?—There might have been two or three men who did not have very bad colds, but that was all.
45. What do you think of the huts as to draught and as to the cold?—They are no good at all—that is my opinion.
46. Why?—There is always a draught in them for one thing, and they are never warm: you never get them warm.
47. They are really uncomfortable?—Yes, sir.
48. Even after you got the stretchers?—We never had stretchers. We had straw palliasses on the floor.
49. Was that all right?—It was fairly comfortable, but I prefer the tent myself.
50. Is there any other complaint you would like to bring forward?—That complaint about the boots.
51. You did not get your boots at all?—Yes, I got them about three days before we left Trentham.
52. And you were there about seven weeks?—Yes, sir.
53. Was yours an ordinary size?—Yes.
54. There would be no trouble in fitting you?—No, not at all. There is also a complaint that the urine-tins were always put between the hutments at night, and they always smelt, even when they were empty.
55. *The Chairman.*] Would it be the disinfectant which smelt?—No, sir.
56. What would you suggest?—I suggest that the men should go to the urinals.
57. But the men would not go over there?—Yes, they would. Even to go out to the tins you had to put your boots on.
58. But you were nearer in your hut to the urinals than many of the men were?—It is only a matter of a walk for a minute and a half.
59. I do not think, knowing human nature as I do, that they would go even that far. That is why you were provided with the tins?—Well, that is what all the men near us suggested. They were going to ask that that should be done.
60. What do you have up at Rangiotu?—I have been there only two or three days. I have been in Palmerston North Hospital.
61. Were you sick again?—Yes.
62. Are you all right now?—Yes; I had a day's drill yesterday, and got through all right. The treatment in the Palmerston North Hospital was first class.
63. How many days were you there?—Twenty days altogether.
64. *Mr. Skerrett.*] Who was it told you when you went to the kiosk that there was no room?—The sergeant-major in charge.
65. Sergeant Magnus Badger?—I could not say.
66. You did not go and report to any one that you were not allowed to go into the kiosk?—I reported it to the regimental doctor the next morning.
67. Who was the doctor?—Dr. Bogle.
68. Where is he now?—At Rangiotu Camp.
69. *Mr. Gray.*] We were told by Private Henderson that you went up to the hospital every day for five days?—No, not to the hospital, but only to the doctor.
70. You were not sent back to the hospital for five days?—No, only once.
71. It is not correct that you were not able to walk and had to be carried?—No; but I was five days when I could not get down to the canteen to get food for myself.

FRANCES MABEL WARREN sworn and examined. (No. 92.)

1. *The Chairman.*] You are a nurse, and you were nursing at the Wellington Hospital last June and July?—Yes.
2. *Mr. Skerrett.*] Do you remember a patient named Stanley Colley being admitted to the hospital from Berhampore?—Yes.
3. Was he placed in your charge?—Yes.
4. Did you receive him on arrival?—Yes.
5. Do you remember how the patient was attired upon his arrival?—I cannot remember what he had on.
6. His father says you told him when he called at the hospital that his son arrived from the Berhampore Hospital clad only in his pyjamas and overcoat. Can you recollect what he was clothed in?—No, I cannot. I think he had pyjamas and an overcoat on. I could not say he had anything else on; it is so long ago.
7. *The Chairman.*] How was he brought to the hospital—in the ambulance?—Yes.
8. Would that have any covering in it in the shape of blankets or anything like that?—I did not see the ambulance.
9. What time was it that he came to the hospital?—It was in the evening, about 9 o'clock.
10. The nurse at Berhampore says he was sent away from there between 6 and 7 o'clock: at what time did you go on duty?—8 o'clock at night.
11. Had you gone on duty at 8 o'clock that night?—Yes.
12. So it must have been after 8 o'clock when he came?—Yes, it was.
13. You think it was about 9 o'clock when Colley arrived?—Yes.

WEDNESDAY, 4TH AUGUST, 1915.

FRANK SEYMOUR LINDER sworn and examined. (No. 93.)

1. *Mr. Skerrett.*] Where are you residing now?—In Auckland.

2. What are you by occupation?—A plumber.

3. What contingent did you join?—The Fifth Reinforcements, as a private; and I was afterwards transferred to the Sixth.

4. When did you join at the Trentham Camp?—On the 1st May.

5. And up to what period did you remain in camp?—Until yesterday morning.

6. I think you have now severed your connection with the Force?—Not entirely; I have to get my discharge yet.

7. Were you in the hospital at the same time as Bothamley?—Yes.

8. Do you remember when you went into the racecourse hospital?—I cannot remember the date. It was a Saturday morning, about six or seven weeks ago, just before Colonel Valintine took charge.

9. Did you attend sick-parade?—Yes, on the Saturday morning that I was transferred to the hospital.

10. Had you attended sick-parade previously?—Yes.

11. On how many occasions?—I could not say. I had a sore foot for a while.

12. Have you got any complaint to make about the attention given to you at the sick-parade you attended?—Not at the sick-parade, but at the hospital.

13. When you were sent to the hospital on the Saturday do you know what your temperature was?—I believe 102.

14. Did you walk to the hospital?—Yes.

15. Who carried your gear?—The orderly-corporal of the company.

16. What time of the evening did you get to the hospital?—In the morning, between half past 9 and 10.

17. Where were you placed?—In the loose-box.

18. How many patients was it occupied by?—Only one when I got there, but three came in in the evening.

19. You were in the same box as Bothamley?—Yes.

20. Did you know him before?—No.

21. How many were there that night?—There were four there that night, but one was removed.

22. How long were you in the loose-box?—Until we were shifted to the tea-kiosk—three or four days, I think.

23. Will you state shortly to the Commission your complaint as to treatment?—I went in on the Saturday morning just after the doctor had been round, but I did not receive any medicine until the Sunday at midday.

24. You were not examined by any doctor?—Only so far as my temperature was concerned on the Saturday.

25. But you were not examined by any medical man while you were in the loose-box—not until midday on Sunday?—The doctor came round earlier, and I got the medicine later.

26. Who was the doctor?—I could not say—I do not know his name.

27. What time would the doctor see you on the Sunday?—Between half past 9 and 10 o'clock.

28. Did he take your temperature?—No; the orderlies took it that morning.

29. There were no nurses there at the time?—No, no nurses.

30. How about the attention of the orderlies?—There did not seem to be sufficient orderlies to give us the proper attention we should have.

31. Can you give any illustration of the want of attention?—Yes; one evening I called for an orderly for about half an hour, and then eventually one came, when he said they could not attend us for another quarter of an hour, as they were on parade at the time in connection with their extended leave.

32. How about the food?—The food was all right; there was nothing to complain of about that.

33. *The Chairman.*] I suppose the food had to be accommodated to what you were suffering from?—Yes, a light diet.

34. *Mr. Skerrett.*] Is there any other complaint you wish to bring before the Commission?—On the Monday no medical man came round at all: if he did I did not see him.

35. Do you know from conversation with your mates in the loose-box whether a doctor had examined them on the Monday?—No; I am perfectly sure he did not, because he never came into the box on the Monday.

36. Have you any other complaint to make?—Well, the orderlies seemed to be overworked. One morning our temperatures all got mixed up. They generally took the temperatures fairly early, but on this particular morning the orderly was half-asleep; he told me he had been on duty for thirteen or fourteen hours, and the result was that we had each other's temperature.

37. *The Chairman.*] How long were you laid up?—Altogether eight days.

38. *Mr. Skerrett.*] You were three or four days in the loose-box, and then shifted to the tea-kiosk?—Yes.

39. Were there nurses in the tea-kiosk then?—No, not at that time. I think they came just after we left.

40. *Mr. Ferguson.*] Were you lying on the floor?—No; I was lucky enough to have a bed.

41. *Mr. Skerrett.*] While you were in there were there many lying on the floor?—There were two beds in the box I was in, and the other two were sleeping on the floor.

42. When you went into the tea-kiosk did you get a cot there?—No, I was on the floor.
43. Were they all on the floor when you went there?—Yes.
44. *Mr. Ferguson.*] Were you inside the kiosk or on the veranda?—I was inside.
45. Were there not some beds there then?—I think they brought them afterwards.
46. It was a wooden floor?—Yes, and it was far preferable to the loose-box.
47. How long were you in the loose-box before they brought the beds in?—I could not say exactly.
48. Have you any complaint to make of your treatment in the tea-kiosk?—None whatever, except as regards the way the medicine was administered. The syrup was given to those in the ward without washing the spoon once. That was the case with some of the orderlies. Some would take the trouble to rinse it; it looked better, in a way.
49. *Mr. Salmond.*] You have been discharged from the Force?—Yes, on account of a bad knee.
50. What was the matter with you in the hospital—measles or influenza?—Influenza.
51. *Mr. Gray.*] You do not suggest that your walk from the sick-parade to the hospital did you any harm?—No, I do not think so.
52. Was it a fine day?—Yes.
53. And your gear was carried for you?—Yes.
54. Yours was looked upon as a light case?—Yes, I suppose so. It was a light case.
55. And you do not appear to-day to have suffered any ill effects?—Oh, no.
56. You feel as well as ever you did?—Yes.
57. There was a great rush of patients at that time, was there not?—Yes.
58. Are you not mistaken in saying there were no beds in the kiosk when you went in, because Dr. Valintine assures me that some beds were taken to the kiosk before it was used?—Well, they must have been at the other side of the kiosk.
59. You do not know the name of the orderly who declined to attend to you on the ground that he was too busy?—No; in fact, I did not see him.
60. Nor do you know the name of the doctor?—No.
61. *Mr. Ferguson.*] Did you attend the sick-parade in the rain?—Yes.
62. *The Chairman.*] Had you seen sick-parades before, or have you seen them since?—I had seen them before.
63. Did you notice what length of time the men had to stand there?—Altogether to see the doctor and get medicine I think I was there about an hour and a half myself, but that was another morning.
64. You attended sick-parades on other occasions?—Yes.
65. Were those fine or wet mornings?—Some were fine and some were wet.
66. *Mr. Salmond.*] Was there no place in which you could take shelter when it was raining?—No, there was not at first.
67. Was there afterwards?—I do not know. I had not been there much after they altered things.
68. But when you first went into the camp there was none?—No.
69. *Mr. Ferguson.*] Were you in the huts at all?—Just lately. I was away on extended leave when they shifted into the huts. I went in last Wednesday night.
70. How do you like the huts as compared to the tents?—I prefer the tents. They seem to be warmer for one thing, and they are not draughty as the huts are.
71. You get your meals on tables in the huts instead of squatting on the ground in the tents?—Yes, there was that consideration.
72. Are there not some other advantages?—I prefer the tents myself, and feel sure all of those in the Sixth Reinforcements prefer the tents.
73. *The Chairman.*] One reason is that it is more social in the tents where you have only eight men?—Yes, it is more private.

Dr. Thomas Harcourt Ambrose Valintine sworn and examined. (No. 94.)

1. *Mr. Salmond.*] You are and have been for some years Inspector-General of Hospitals?—Yes.
2. And are now, in addition, Director of Military Hospitals?—Yes.
3. When were you appointed to that position?—I took over the duties on the 23rd June.
4. When did you first have any connection with military hospitals?—I might explain that I was employed in two capacities—first of all in an unofficial capacity from the 5th June to the 23rd June, and in an official capacity from the 23rd June onwards.
5. Will you explain what happened on the 5th June to bring you into contact with the military hospitals?—On the 5th June, at ten minutes to 1 o'clock, I had a telephone message from the Minister of Defence asking me to visit the Berhampore Hospital and submit a report thereon as soon as possible.
6. Did you go by yourself?—Yes, I went up straight away; I was there about a quarter to 2.
7. Did you prepare a written report?—Yes, and the Minister had it by 8 o'clock that night: that was the Saturday.
8. Do you remember how many patients you found at Berhampore and how they were distributed?—There were eighty-seven patients distributed in the building. Two wards contained ten each.
9. How many patients were those wards normally suited for?—They were able to accommodate four, allowing, if I remember right, 2,000 cubic feet for each patient. I do not suggest by that that the wards were only fit to accommodate four.

10. How many were they fit to accommodate?—Six.

11. *Mr. Ferguson.*] With the window-spaces and the spaces for the beds, was it so constructed for four patients?—That was allowing 2,000 cubic feet for each of the patients, and to lie between the windows.

12. *Mr. Salmond.*] There was also patients in the marquees. Will you explain what the facts were?—There were three marquees. One of them contained fifteen and the other contained nine patients. I cannot remember exactly what the other marquee contained, but the report is there. The patients were also distributed in various sheds and buildings, and that is also shown in the report. The report states that one marquee contained fifteen patients, another sixteen, and the third nine.

13. Those were marquees of the same size?—Yes, 28 ft. by 18 ft.

14. How many patients was each marquee suitable for?—I understood from the sergeant in charge that they were supposed to accommodate twelve sick patients.

15. What other patients did you find in various portions of the premises?—In a shed, 21 ft. by 12 ft., were nine patients: that is the shed on the hill for the nurses. In another shed, 8 ft. by 4 ft., were two patients: that was a little partition at the back of the stable. I am not absolutely sure there were two patients at a time, but Sergeant Yallop, who was in charge, told me that two patients were sleeping there. A good many patients were walking about the grounds. In the stable, 12 ft. by 6 ft., one patient; in the coachhouse, 15 ft. by 9 ft., three patients; in the "morgue," 15 ft. by 12 ft., seven patients; in the bathroom, 6 ft. by 10 ft., two patients. The "morgue" is the men's room; it was called the "morgue" by the sergeant.

16. Are there two bathrooms?—Yes, two; and there were two patients in the other bathroom. I took the names from the sergeant in charge.

17. *The Chairman.*] What you refer to is really the dressing-room next to the bathroom, and not the bathroom itself?—Yes.

18. *Mr. Salmond.*] There was a total in the hospital when you visited it of eighty-seven patients?—Yes.

19. Did you consider it overcrowded?—Yes.

20. To what extent, approximately?—Well, I considered that that place should not accommodate more than forty or fifty at the outside—that is, with the marquees. I am quite aware of the sudden inrush of patients, and no one is more sympathetic than I am with regard to anything that has to be done with patients under conditions of a rush. I could not say that I could under the circumstances have done any better.

21. You think, provided other accommodation could be obtained, the number for which that hospital was suitable was forty or fifty?—Yes.

22. What was the condition of the wards and marquees?—The condition of the wards and marquees, considering the large number of men tramping in and out with the muddy condition of the grounds outside, was good, and considering also that there were only three nurses, one sergeant in charge, three hospital orderlies, a chef, and a cook's assistant.

23. In your report what did you recommend to do in regard to those facts?—To empty Berhampore as soon as possible in order to relieve the congestion there.

24. To empty it altogether, or simply to relieve the congestion?—To relieve the congestion. I immediately suggested to the Minister to relieve the pressure, and how to do it. After leaving Berhampore I explained the matter to the Medical Superintendent of the Wellington Hospital. I arranged with him for the Victoria Ward, containing some forty-four beds, to be set apart for military purposes.

25. What was that ward used for then?—Chronic and incurable cases of men and women.

26. What arrangement was proposed for disposing of those incurable cases?—I went along to the Chairman of the Aged and Needy Institution, and I acquired that building for the female patients in the Victoria Ward.

27. What was to be done with the male patients from the Aged Needy Home?—In the meantime they were to be left alone until suitable accommodation could be found. Subsequently Mr. Blundell's house in Talavera Terrace was acquired for that purpose.

28. You made provision then for clearing out the inhabitants of the Aged and Needy Home?—No; I made no arrangements for that. I went over to the home and decided that it was possible to take the women into the home without turning out any of the ordinary patients of that institution.

29. Did you have any difficulty in making that arrangement with the hospital authorities for the use of Victoria Ward for forty-four beds?—None whatever. The Medical Superintendent, Dr. Barclay, met me in every possible way, and next day I notified the Chairman of the Hospital Committee, Mr. Smith, and then in company with the Minister of Defence we interviewed Mr. Baldwin, the Chairman of the Board, at the Hutt, who very cordially agreed to the suggestion. By that means beds were made available for sixty patients, for in addition the Tin Ward was acquired, which will accommodate sixteen patients.

30. How soon did that additional accommodation become available?—We had everything ready to move the women on the Sunday, but they were not moved until the Monday after. I visited Berhampore on the Saturday.

31. What about the men?—The men have not been moved yet, but Mr. Blundell's house has been acquired for the purpose and is ready, and they can be moved at any time. The Medical Superintendent, subsequent to our agreement on the Monday, asked that the men be left for a while, and offered as an alternative the Tin Ward, containing sixteen beds.

32. And the Victoria Ward has not yet been used?—Not the whole of it.

33. There are two parts: how many beds did you get in the part available?—Twenty-two, and sixteen in Tin Ward, and the other part we can take at any time for twenty-two more.

34. *The Chairman.*] That would not have brought Berhampore down to the number you thought it ought to have held?—No; but on the following Monday, with the approval of Mr. Izard, who kindly offered his house for the use of the sick and wounded from the seat of war, I obtained his house at the Upper Hutt; also the Kaiwarra Hospital.

35. *Mr. Salmond.*] How many would that hold?—Fifty. That was on the same Monday.

36. *The Chairman.*] When were the men taken from Berhampore to reduce the number down?—They were taken within the course of the next few days.

37. And no additions made to Berhampore?—No, none whatever. Of course, that was done unofficially.

38. We had it that on the 2nd June there were 104 patients in Berhampore?—Yes, I understood that was so.

39. If with eighty-seven patients it was in that condition, where would the 104 have been kept?—They would take some putting away.

40. It must have been a case of packing at night?—It must have been very difficult.

41. *Mr. Ferguson.*] There was a circular tent there as well?—Yes; that was for the orderlies.

42. *The Chairman.*] Do you consider that if the number rose to 104 that that condition ought to have been noticed?—Well, as I have said, I have had a lot of experience of the difficulties of dealing with a great inrush of patients, and it is very easy to say what should be done, but it is not always easy to do it.

43. Of course, it is easy to be wise after the event, but would there not be some one at Berhampore to receive those that were sent in?—Yes.

44. And would not that person who was there in charge of Berhampore be able to say at once, "We can take no more"?—Yes.

45. Then, in your opinion, that point should have arisen when it had reached forty?—Yes; I should have tried to get other accommodation.

46. Can you tell us when it began to reach about forty?—No; I have no knowledge whatever of the Berhampore Hospital until I came to it on the 5th June.

47. *Mr. Ferguson.*] Who is responsible for the records which would give the daily toll in Berhampore?—The military authorities.

48. The Adjutant-General?—The Adjutant-General would be able to supply that. I am only recently a military man—I do not know—I think it would be in his office. The Director of Military Services, I believe, could give you all that information.

49. *Mr. Salmond.*] The Director of Medical Services was in charge of Berhampore Hospital at that time, and always had been?—Yes.

50. *The Chairman.*] May we take it that the number in the next four days was brought down to the proper level?—Yes, by means of the Victoria Ward, by means of Mr. Izard's generosity, and by means of the generosity of Messrs. Pearce, of Levin and Co.

51. Was the number reduced to what, in your opinion, was a proper level within the next three or four days after you found out the position?—Yes, certainly.

52. Was it allowed to rise above that level afterwards?—Not to my knowledge.

53. Then, with the number that was accommodated at Berhampore after that you think there was sufficient accommodation?—Yes.

54. Do you think the tents there were a drawback?—No, not at all.

55. Did you observe one tent that was on the side of the hill on ground which had to be terraced?—Yes, I saw that.

56. Do you think it was a good place?—Well, the configuration of the ground does not lend itself to tents being put up perfectly, but under the circumstances the best thing was done.

57. The place is rather sunless, is it not?—Yes.

58. And has a very bad approach?—Yes, very.

59. Seeing that the configuration of the ground does not lend itself to extension, and considering the sunless and the dull character of the place, would not those be reasons for rejecting it as a proper place for sending convalescents?—I have had a good deal of experience of Berhampore one way and another in the last ten years, and it is not a place I have ever liked to send patients to. There are always difficulties in regard to administration, and it is a rather difficult place to get at, while it is not a very cheerful-looking locality.

60. At any rate, a better place might be chosen for convalescents?—Yes, undoubtedly, better places could be got; but it is difficult to get them in an emergency.

61. It is suggested that the new school close by was available?—Yes. I do not know if it was available or not; but, at any rate, considerable delay would have arisen with regard to getting it ready for patients. Naturally, if I had been in the position of those in authority at that time, I should have chosen in an emergency the Berhampore Hospital, instead of getting a place like the school which may have taken a week or ten days to get ready. I have had some experience in the case of buildings which can be easily adapted, but it takes longer than you think to get them ready.

62. There would be no cooking arrangements at the school?—No, and no sanitary arrangements on the scale that would be required, and no hot water.

63. *Mr. Ferguson.*] Surely the sanitary arrangements attached to the school would be ample?—Yes; but the Berhampore Hospital, with the sanitary arrangements, out of date as they are, was immediately at hand; the other was not.

64. *The Chairman.*] Would not this have occurred: that Berhampore, being ready on the instant to take people in, might have been used only as a stop-gap until some better place was obtained?—Yes, that is so. I should have done exactly as the Director of Medical Services did. Of the two I should have taken that one which was immediately available.

65. In view of the state of the epidemic, its daily increase, and with Berhampore fit only to receive forty patients, should there not have been some further building fixed upon at that stage to allow for the increase?—Well, as Your Honour said, it is very easy to be wise after the event.

66. But is not that an event which the medical men should foresee: they are trained to be wise in view of the future, to some extent, are they are?—I should like to have known of a sort of back door to Berhampore, undoubtedly.

67. Here is a placed fixed upon, and quite rightly, to begin with, to allow immediate relief, but no provision beyond that made?—No; I had to get the building .

68. *Mr. Salmond.*] Berhampore Hospital has been since closed, I understand, on your advice and instructions?—Yes, on the 13th July last.

69. Why was that done?—Because I had sufficient other buildings which I thought more satisfactory than Berhampore.

70. After being asked by the Minister of Defence to inspect Berhampore and make a report to him, did you have an interview with him and get any instruction as to what was to be done?—I had several interviews with the Minister of Defence, and he signified his extreme anxiety to unload Berhampore as soon as possible. Consequently, Mr. Izard's house was acquired for the purpose.

71. What position did you occupy?—I was still unofficial. I had no official rank and no instructions.

72. You were simply the Health Department advising the Minister of Defence?—Yes.

73. Were you in communication with the Director of Medical Services in connection with the matter?—No.

74. You were not acting in co-operation with him?—I did not have anything to do officially with the Director of Medical Services.

75. Who is responsible, then, for the Berhampore Hospital?—The Director of Medical Services. I did not come into it till the 23rd June, when I came in officially.

76. *The Chairman.*] But the patients at Berhampore were taken away without consultation with the Director of Medical Services?—I beg your pardon: I had a consultation with him on the Sunday when they were removed.

77. *Mr. Salmond.*] It was with the co-operation with the Director of Medical Services that the patients were removed?—Yes, through co-operation.

78. *Dr. Martin.*] Who carried out the treatment?—The Medical Officers and the Director of Medical Services.

79. *The Chairman.*] The medical treatment was not interfered with in any way?—No.

80. You did not intervene with the medical treatment?—No, not at all.

81. You had nothing to do with the numbers that were sent into Berhampore after it was reduced?—No.

82. Do you know whether patients were still sent into Berhampore?—Patients were sent there, but they were sent to two other institutions also.

83. Have you a statement of the highest number there between the 5th and 23rd June?—No.

84. *Mr. Salmond.*] Then up to the 23rd June the Director of Medical Services was in charge of Berhampore Hospital so far as medical treatment was concerned?—Yes.

85. On the 23rd June you were appointed Director of Military Hospitals, and from that time until now you have had control of the whole of the hospitals and medical treatment?—Yes.

The Chairman: Possibly Dr. Purdy would be able to give us the daily state at Berhampore?

Dr. Purdy: Yes. Of course, the records were burnt in the fire, but we can get it from the camp. There is a report of mine in existence up to the end of the first six weeks showing the number of men and the result.

86. *Mr. Salmond* (to witness).] When did you first visit Trentham Camp?—I visited Trentham in an unofficial capacity on the 13th June.

87. Was that at the request of any one?—Yes, the request of the Minister of Defence.

88. What was your instructions?—I had no definite instructions. He just said he would like me to visit the camp and let him know how things were getting on.

89. Did you make a report to him in writing?—Yes; I sent a copy of the report to the Minister, and also a copy to the Director of Medical Services.

90. What did you do when you got to the camp on the 13th?—I inspected the hospital arrangements.

91. What did they consist of?—Some marquees.

92. Do you remember how many patients there were in those marquees?—I was given to understand there were some forty measles patients and some sixty other patients, chiefly with influenza.

93. Did you go into the marquees?—Yes.

94. Were they overcrowded?—There were a good many in them—more than you would put there except under pressure. The measles were separate from the influenza cases, I think. There were two measles tents—one for convalescents and one for acute cases.

95. And then sixty convalescents would be crowded into one marquee?—No, there were other marquees: it is possible there were five marquees.

96. *Dr. Purdy.*] There were nine altogether?—I saw the tents. The weather was very bad at the time. One tent had been blown down, and it seemed to me that the most important thing was not to count the patients, but to get them into better accommodation.

97. *Mr. Salmond.*] I want to know how many marquees you saw?—I am only conscious of having seen three where the measles patients were.

98. Did you go into the marquees?—Yes.

99. Were they in an overcrowded state?—They certainly struck me as being overcrowded.

100. More overcrowded than they ought to be except in a case of emergency?—Yes; they would not have been overcrowded like that except in a case of emergency.

101. Were the men on the floor in the marquee—on the ground?—Yes, on the floor.

102. What sort of attention were they getting in the way of nurses or orderlies?—They were getting the best attention that orderlies could give them, I have no doubt. There were no nurses.

103. *The Chairman.*] Do you mean those particular orderlies, or trained orderlies?—Those particular orderlies.

104. We cannot understand anything from that. Do you have so-many orderlies per cent. or anything like that in hospitals in measles cases?—I have only recently had any experience of orderlies' work, and I am not in a position to say what percentage should be allowed. I can tell you about nurses.

105. Can you express any opinion as to whether there were sufficient orderlies?—No, I cannot.

106. Nor as to their qualifications?—No, I cannot give any opinion. I saw three measles marquees up in the lines and two down at the Ambulance lines. There may have been more, but I did not go round them.

107. *Dr. Martin.*] There were one hundred patients ill?—I was told there were forty measles and some sixty other patients, but when they materialized and we removed them we found there were 140 patients.

108. *Mr. Ferguson.*] Who told you that?—The Medical Officer in charge.

109. Who is that?—The Director of Medical Services was there, also Captains Stout, Harrison, Simpson, and Ferguson.

110. *Mr. Salmond.*] Did you see those officers and have any conversation with them at the camp?—Yes.

111. What conclusion did you come to as to the action to be taken?—I asked them if they were satisfied with the conditions. They said No. I asked them further whether they were of opinion that it would be better to get the patients into housings of a more permanent nature. They said Yes. We then went up to the racecourse.

112. Who suggested the racecourse?—I did.

113. Did they agree?—Yes. We went there and inspected the buildings, and also the jockeys' and trainers' quarters.

114. What happened after that?—Before I left 140 men were housed.

115. Did you decide there and then to shift the men to the racecourse buildings?—Yes.

116. You had power at this time?—No, I had no power at all. I had asked the president of the racing club unofficially some days before whether the racecourse buildings could be given for military purposes, because I saw the Defence Department was in a quandary.

117. Did you get his permission?—No, not then.

118. You commandeered the racecourse buildings?—That is so.

119. Were the men removed at once?—Yes, at once—the same day. I saw 140 men under shelter that night before I left—the measles and influenza cases and any other diseases. I do not know anything about the medical side of the question.

120. *Mr. Ferguson.*] You did not examine the men?—No. I have no responsibility that way at all. They said they had forty measles cases, and we got certain quarters.

121. *Mr. Salmond.*] Where did you put the measles patients?—In the jockeys' quarters. I understood there were some forty cases of measles, and in company with the Director of Medical Services and his officers we went over to the jockeys' quarters, and there were bunks there for forty-eight. We thought they would accommodate all the measles cases, but when the measles cases materialized there were more, and we had to put the surplus into the loose-boxes adjoining.

122. How many more were there?—I am not sure—about a dozen. I would not like to be sure, but I believe there were sixty-three cases.

123. Do you know how many bunks there were?—Forty-eight bunks.

124. Did they have their own bedding at the time?—They brought it with them, but I had to commandeer some racecourse bedding—mattresses, pillows, and beds.

125. Were the men taken up by orderlies?—No; they were transported in closed motor-cars. It was a horrible day, and raining.

126. You do not know how many patients you left in Trentham after those strenuous operations?—There were no patients left in the camp.

127. You evacuated the whole camp of sick men in one afternoon?—Yes.

128. Where were the influenza patients put?—In the trainers' quarters. They were, roughly, sixty. I did not go round and count them. The only thing to do was to get them out of the way as quickly as possible. I am sure there were 140 accommodated that night.

129. *Mr. Ferguson.*] Will you describe the trainers' quarters?—There is a kitchen and a place adjoining in which the cook would live. Then there are two fairly large rooms which are used for dining purposes. Then there are a number of small rooms, I think about 10 ft. by 12 ft., and two other rooms, about 16 ft. by 12 ft., with fireplaces.

130. Those last two rooms were used by the medical staff?—Yes.

131. Not for hospital purposes, except as an adjunct?—No; all other rooms were used for hospital purposes.

132. *The Chairman.*] We may take it that the removal into the buildings was not because the men ought not to have been housed in marquees, but because of the frightful weather that came on?—That was it, yes.

133. *Mr. Ferguson.*] If the weather had been clear again would it have been a proper step to put them in marquees again?—No, not in my opinion.

134. Then it is only one step further to decide as to whether they should have been in marquees previous to that Sunday?—I have had many patients accommodated in marquees, and they have done well. I have had all sorts of cases—scarlet fever and smallpox—in marquees, and if properly prepared they make very efficient hospitals.

135. But where you have patients in tents you have them in restructed numbers?—Yes.

136. And better attendance?—Yes, certainly better attendance.

137. *Mr. Salmond.*] You removed the orderlies as well as the patients?—Yes.

138. Do you remember how many there were?—I have not a notion, but a large number. There seemed to me to be quite enough.

139. Would there be a dozen?—I would not like to say how many there were.

140. *The Chairman.*] Were they taken from those who volunteered or taken from outside?—There were two lots of orderlies. I have not been able to fathom the mystery of the orderlies during my short military career. There were some orderlies who had had training, and then fatigue-parties got from the ranks were sent up for a day, and then they disappeared, and you got other fatigue-parties the next day.

141. *Mr. Ferguson.*] Had they become contacts?—They might become contacts.

142. From a medical point of view, are the fatigue-parties contacts?—We did have to treat the fatigue-parties in connection with the cerebro-spinal meningitis cases as contacts, but not the other cases.

143. *Mr. Salmond.*] Do I understand that orderlies were sent for one day and sent back the next day?—The fatigue-parties were.

144. What were their duties?—To clean up the wards under the direction of the more or less trained orderlies.

145. They would not attend to the patients?—No.

146. Did you take steps to obtain any further nursing assistance?—I did when I took charge officially.

147. Until the 23rd June you merely transferred the patients to the racecourse hospital?—That is all; and when I had done that I did not take any further action, but went down to Timaru and resumed my ordinary duties. I sent a copy of my report to the Defence Minister and a copy to the Minister for Public Health.

148. And your action, I presume, was condoned?—Yes, it was approved.

149. *Dr. Martin.*] Who was in medical charge of the place up till the 23rd June: who was responsible for the actual treatment of the patients?—Major Stout was Senior Medical Officer in charge of the camp, and when I took charge I found Captains Harrison and Ferguson in actual charge of the patients.

150. Practically Colonel Purdy was the responsible doctor up to the 23rd June?—Yes.

151. *Mr. Salmond.*] I think the racecourse hospital was not your only feat of hospital accommodation; I think you had something to do with Kaiwarra?—Yes.

152. Will you state what that was?—A few days after I had been to Berhampore I asked a gentleman connected with racing whether it would be possible to have the racecourse buildings for military purposes. Messrs. Pearce, of Levin and Co., happened to hear my conversation with that gentleman, and they asked me on the 8th June whether their building at Kaiwarra, their wool-store, would be of any use. We immediately went out to see, and I acquired that straight away. They offered that.

153. Without any suggestion from you?—Yes. The result was that we got 250 beds for military purposes. As a matter of fact, we have had as many as 260 measles cases there.

154. *The Chairman.*] The resident doctors at the camp could not have taken those steps that you did?—No.

155. Anything of that kind must have been done, if not by you, by the D.M.S.?—Yes.

156. All the resident doctors could do was to attend to the patients?—That is all they could do—do the best they could under the circumstances.

157. *Mr. Ferguson.*] Could they not report?—They could report if the conditions were satisfactory or not.

158. When the number of patients increased, was it not the duty of the juniors to report to Major Stout and for Major Stout to report to the D.M.S.?—As far as I could see they jumped at the suggestion to take the buildings—every one did.

159. *Mr. Salmond.*] When you took those buildings at Kaiwarra you apparently had no instructions at all?—No.

160. You were asked to visit Berhampore and Trentham, but in the meantime you took the Kaiwarra building?—Yes. I had no instructions, but thought it would be useful. After seeing Messrs. Pearce I saw the Minister about it, and got his approval.

161. Did you take measures to equip it?—I got Dr. Frengley to come down that night and see how soon it could be got ready, and what things were required for hospital purposes. It seemed to me the building could easily be adapted for hospital purposes, and Dr. Frengley went down straight away.

162. Who equipped it—the Health Department or the Defence Department?—I was very careful to arrange that the Defence Department paid for it. Our Department got the building and equipped it at the cost of the Defence Department.

163. *Dr. Martin.*] How many beds did you put in?—I got about a hundred beds in there immediately. We took about a week to get it ready. It was occupied on the 18th June.

164. *Mr. Salmond.*] That was ten days after it was offered to you?—Yes. There were 170 patients in Kaiwarra on the 18th June. There were approximately a hundred beds. Some men were on the floor. We could not get any more beds in the Dominion. We had first to furnish Mr. Izard's house—that was fifty beds. There were over a hundred beds at Kaiwarra, I am perfectly sure.

165. You had also to find beds for the old women you shifted?—Yes. There was a tremendous dearth of beds, and we did everything we could do. I went to the Director of the Defence Stores, and as he could not supply them I got them privately from several places as quickly as I could. We were very much disappointed with the beds coming from Dunedin. It was just about this time I was beginning unofficially to make arrangements for a thousand beds.

166. How did you make arrangements for a thousand beds?—I thought a thousand beds would be required before we were on top of this epidemic. I got beds from all sorts of places. I got at least fifty beds from Dr. Hay, of the Mental Hospital, who had some in store. We were very hard put to get beds.

167. What was the date you say that hospital at Kaiwarra was occupied?—On the 18th June, when 170 men went in.

168. Where did you get the 170 patients from?—Those were the measles patients who had been accumulating at Trentham. They were being taken into the racecourse buildings, and then sent on from there to Wellington, Berhampore, or Kaiwarra, according to their condition.

169. Were the Berhampore Hospital buildings used after you vacated them?—No, not to my knowledge.

170. When was Mr. Izard's building first used by you?—About the 8th June. I went out on Monday, the 7th, and I think patients were there the next day.

171. And you got beds for them afterwards?—There were a few beds there, and I got beds from various private people.

172. Now, did you make arrangements in regard to the use of the golf-house?—Yes, that came in in my official capacity. That was on the 26th. I took charge on the 23rd, and on the following Saturday I was offered the golf-house.

173. Can you state what the total accommodation is in those five places you have mentioned—Wellington, Kaiwarra, Izard's house, racecourse buildings, and golf-house?—Since unofficially and officially employed I have been able to acquire 900 beds for purely military purposes—at Kaiwarra, 250; Mr. Izard's, 50; Trentham, 550; golf-house, 50. I have taken the utmost that you could allow. And then, through the courtesy of the Hospital Boards, I have been able to get sixty beds at Wellington Hospital, forty at Palmerston Hospital (which has been raised to seventy-two), ten at Otaki Hospital, forty at Greytown Hospital, and five at Masterton, making a total of 1,055 beds. In addition there were the racecourse buildings I was able to get at Tauherenikau, thirty-five beds, and about fifty beds at Awapuni that the Manawatu Racing Club has kindly offered. I think there are thirty-five under treatment there at present. Then we have had most generous assistance from Mrs. Elder, of Waikanae, and Mr. Field. Mrs. Elder at one time had twenty patients, and Mr. Field has had as many as eighteen patients in his house. In one way or another we have 1,100 beds available now.

174. *The Chairman.*] You have got actual beds there?—Yes, I have the accommodation. For instance, I have allowed for 550 at Trentham. I should not like to accommodate 550 there, but we have had as many as 525 there. Of course, they were overcrowded then. I allow in my estimate of the beds likely to be acquired that at Trentham Hospital you should have 150 beds if you want to run it as an ideal hospital; but, as a matter of fact, we have had as many as 525 in the racecourse buildings.

175. *Dr. Martin.*] In reckoning 1,100 beds you do not reckon the racecourse buildings at Trentham as containing 550 beds?—No; 150 for ideal conditions.

176. We want ideal conditions?—If the worst comes to the worst I could accommodate 550 patients there.

177. You say that is overcrowding?—Of course it is overcrowding. You have to do a lot of overcrowding now. I have got a list of the beds that need to be retained, and I have got Trentham Hospital down for 150 beds.

178. You say there are 1,100 beds available, and you have 550 beds down for Trentham?—Yes.

179. That is overcrowding?—Yes.

180. Then why put that number down?—Because it is the maximum, and we have had to use it in case of emergency. By taking some of the seats out of the grandstand we could easily get in another twenty-five.

181. Then why reckon that in 1,100 beds?—It is just a matter of opinion. I do not want to reckon them in if you do not wish it.

182. But the public will get the impression that there are 1,100 beds available in case of any future trouble, and you say that is overcrowding?—I should not like to accommodate them if they are overcrowded. I have here a list of the beds that need to be retained.

183. What do you mean by that?—I find it is necessary to retain Trentham Racecourse for 150 beds; Kaiwarra, 100; Mr. Izard's, 50; Victoria Ward, including Tin Ward, 60; Oriental Bay Tea-kiosk, 100; Palmerston, 40; Greytown, 40; Masterton, 5; and Tauherenikau Racecourse, 30. I do not think we need retain Awapuni. You see my point.

184. That is 575 beds available, and you say there are 1,000 available: there is not that number available?—That is a matter of opinion.

185. *The Chairman.*] If there is an extraordinary pressure you could expand to 1,000?—Yes. I have only allowed for 100 at Kaiwarra, but we have had 260 there; but that is not under ideal conditions.

186. *Mr. Salmond.*] You mean, if it is necessary you can accommodate 1,000 patients?—Yes, if it is necessary under pressure.

187. *Dr. Martin.*] I do not see how you can make it 1,100 patients?—Yes, under pressure we can accommodate 1,100.

188. That pressure means overcrowding, which has been the cause of this trouble. You cannot accommodate 1,100 patients without overcrowding?—Yes, I cannot accommodate 1,100 patients without overcrowding.

189. Then the present arrangements are not sufficient to meet an emergency of 1,100 beds?—Well, it would not be under ideal conditions.

190. It is not a question of ideal conditions: it is a question can you take in 1,100 patients to-day?—Yes.

191. But you are overcrowding?—We have to overcrowd. I have said that I can undertake to accommodate at the very least 575 patients under fair excellent conditions. In a matter of emergency we can practically double that, but I do not want to have to do it.

192. The whole point is that the medical committee went to Trentham to see what could be done to meet an emergency, and I want to find out whether the beds available will meet any possible emergency?—Yes, I am perfectly sure that the beds available will meet any emergency.

193. With 575 beds you have sufficient?—Yes, unless something very extraordinary occurs we could meet any emergency.

194. It is not correct, then, to say that there are 1,100 beds available?—Well, it is a matter of opinion. They are available under conditions of pressure.

195. The whole trouble is to foresee those things and meet any emergencies, and not to start overcrowding?—I do not think any one can say I have waited for an emergency.

196. *Mr. Ferguson.*] In your list you have included Kaiwarra as a permanent retention: is it possible you can retain that?—It seems very unfair to trespass on Messrs. Pearce's generosity. I hope to be able to do without it, but I am sure if we saw it was essential to retain that they would let us have the building.

197. *The Chairman.*] The wool season will come on shortly?—I will have that building available till October, at any rate, and in the meantime I will be able to look round and see what other buildings can be obtained.

198. Can you state the greatest number you have had in all the hospitals during the epidemic in any one day?—On the 10th July there were no less than 872 patients under treatment in the various military hospitals in the neighbourhood of Wellington.

199. Out of a force of how many men?—Out of a force of about seven thousand.

200. *Dr. Martin.*] Does that include Palmerston?—No.

201. Give me the total?—I could tell you approximately. There would be seventy-five at Palmerston, thirty Waikanae, forty-four Tauherenikau, and ten Masterton.

202. That is, a total of 1,031 beds would be necessary?—Yes.

203. *The Chairman.*] In the summer months would not marquees become available as hospitals?—Yes, certainly.

204. *Mr. Ferguson.*] Apparently you consider that 575 beds are sufficient to meet any emergency?—Yes.

205. Can you tell me whether in your opinion the military authorities ought to have made provision for 575 beds?—No.

206. *The Chairman.*] You must have regard to this in that question: that there was a gradual increase going on during the summer months from the time the camp went there, that there was an increase in the number of men who went there, and that there was the winter coming?—Yes.

207. And apparently no provision, as far as we can ascertain, for future accommodation was fixed upon, but the whole number were put into marquees?—Yes.

208. Up to as late as May?—Yes.

209. *Mr. Ferguson.*] There might be an epidemic of any other kind, such as smallpox?—If any one suggested putting up hospital accommodation for a thousand patients for a camp of, say, eight thousand men at the beginning of the war he would have been laughed at. It is almost unprecedented to have an epidemic of measles and influenza and other unpleasant diseases running concurrently.

210. You now suggest that permanent provision should be made for 575 beds?—Yes; I should not be happy now, having had this experience and with the new drafts coming on, and having had experience of the military side—although it is a very brief one—without doing so. I think we can manage very well with a certain proportion of beds for the civil population, and you can pretty well estimate what they will be; but for military purposes you have got to allow that all illness, even indisposition, must practically go to the hospital. The officers do not like men in the lines unless they are fit to work, so that you have to allow for double or treble the hospital-accommodation as compared for the civil population.

211. *The Chairman.*] In the civil population the patients' own private houses accommodate them?—Yes.

212. *Mr. Ferguson.*] What would you estimate would be the requirements for military purposes as compared with the civil population?—Three times.

213. And can you give us what would be the hospital proportion required in civil practice?—Our average is 2·5 beds for every 1,000 of population. That would give three beds.

214. And for military purposes that would require to be increased threefold as compared with the civil population?—Yes.

215. *Dr. Martin.*] Supposing there was an epidemic next week, could you get space for a hundred beds at Kaiwarra?—I should have to see the Messrs. Pearce about it.

216. And what about the other places you mentioned?—I could keep all the others. The only doubtful one is the Kaiwarra building. Of course, I do not know about the racecourse. I cannot let go the racecourse, if I can keep it by any means, unless I can get another building substituted.

217. The medical committee suggested that a central fever hospital could be put up under way, and it is your opinion that the present arrangement is sufficient?—Yes.

218. This is the opinion of the medical committee: "We consider that all the present cases of cerebro-spinal meningitis (in view of the inadequate accommodation for present cases at Trentham) should be removed, and in view of the probable extension of the epidemic we strongly recommend that a properly equipped central fever hospital should be at once arranged for." What do you say about a central fever hospital?—I myself do not think it necessary, provided we can keep the racecourse buildings or some other suitable building. How long would it take? It would take at the very least four months to put up a building of that description. I got a hospital put up for smallpox patients in about ten days to accommodate thirty patients, but I do not think it would have been approved of by the medical committee.

219. *The Chairman.*] The point is whether something of a light character could not be put up to keep the wind and rain out. That could be run up, surely, in a short time?—Well, with every facility at our disposal it took us about eight days to get the Kaiwarra Hospital ready, and that was a building that is specially adaptable for hospital purposes.

220. But the point is you are putting it there after the epidemic had broken out. It may be no further epidemic will come, but we have an interval in the meantime of, say, a month: could not something be done in that time?—In my opinion it is an unnecessary expense. You could probably keep the Trentham Racecourse buildings. I am perfectly sure you have only to ask for them; and those buildings lend themselves very well for hospital purposes.

221. *Dr. Martin.*] That will give you only 250 beds?—Yes.

222. With that you cannot meet an epidemic?—But with other buildings available and the extension of marquees we would be able to. The weather is also likely to improve.

223. But we will be into another winter before long—the war is going to last?—It is my opinion, and I am perfectly prepared to take the risk if we have the racecourse buildings, with possible means of extension and up-to-date conditions——

224. *Mr. Ferguson.*] And possible means of prevention?—Yes.

225. And with other means of segregation?—I am perfectly prepared to take the risk as long as I get the racecourse hospital.

226. *Mr. Martin.*] The public and the medical men want to be sure of this, and want to know what methods are to be adopted in future to meet any future epidemic?—Well, I have given an indication.

227. All you have to meet a future epidemic are 150 beds at Trentham, fifty at Mr. Izard's, and the other places——

228. *Mr. Ferguson.*] I understand you are looking at it from the point of view of having marquees and additions?—You have been out at Trentham and seen the conditions. On the cement floors we could easily put up marquees, while the kitchen arrangements are really very good. If we spent a sum of money in improving the sanitary arrangements and bathing facilities, and a sum of money on a laundry, with marquees in suitable places, we could accommodate 550 patients.

229. Will you enumerate what buildings they are?—You saw the stewards' stand had been reserved for the nurses' home and for the administrative block, and I think you will agree with me that the accommodation there is very good. At any rate, there have been no complaints, and every nurse has expressed herself as thoroughly satisfied.

230. That would be retained as the administrative block?—Yes, and for the nurses' home. The trainers' quarters could be used, as at present, for the Medical Officers and orderlies, and the two wards and small rooms could be used for some sixteen observation cases.

231. *Dr. Martin.*] That is overcrowding?—There are other rooms there. There are two wards and some single wards.

232. *Mr. Ferguson.*] Opening out on to the veranda?—Yes. I think we could arrange it so that we could have sixteen cases. There are between four and six single rooms available, and I think they will be very suitable.

233. *Mr. Salmond.*] If you had an unlimited quantity of money, and time was no object, and the war was going to last indefinitely, you could make very valuable improvements in hospital administration relative to the Defence Force?—Yes.

234. But I presume you would take the view that as a matter of practicable business you have to look at it in that light, also having regard to the future?—Precisely so.

235. And not to establish an ideal system?—Precisely so.

236. *The Chairman.*] I suppose with those available resources you might even find that the Wellington Hospital could be improved?—There is no hospital, however good, that you cannot find some fault with.

237. *Mr. Salmond.*] And from the practical point of view, having regard to what would probably be the position of the Forces in the reasonable future, you are satisfied that you have now made sufficient provision for the accommodation of sick soldiers?—Yes, I am, perfectly.

238. In addition to obtaining this hospital accommodation, what provision did you make with regard to nurses and orderlies?—When I took charge on the 23rd June my first action was to order the kiosk to be occupied. Until that time the kiosk had not been occupied, and so the men were ordered into the kiosk straight away. There was a good deal of congestion; in fact, there was a good deal of overcrowding in the trainers' quarters, and before I left seventy-six patients were put into the kiosk that night from the trainers' quarters. Then I went round—I think on the 24th—and I said if there was any shortage of beds that the men who slept outside on the concrete part of the kiosk were to be given beds, and the men who slept inside on the wooden floors would have to be content with their palliasses. On the night of the 24th, although I am not responsible for the treatment of the sick, I went round and found there were some men

who were seriously ill. I had been led to understand that the majority of cases of influenza were only minor cases, and would not require very much medical or nursing treatment; but it was obvious to me that some of those men were seriously ill and required nursing. It was also obvious to me that the orderlies could not be relied on for nursing purposes, although I may say the orderlies did their very best—they stuck to their posts and worked like men. They had very little sleep, and it was obvious to me that they should be under the direction of a skilled nurse, for two reasons—firstly, because it was essential that the sick should be thoroughly looked after; and, secondly, because orderlies have to be relied on to look after our wounded probably at the seat of war. Therefore it was necessary they should be properly trained. That was on the night of the 25th June.

239. *The Chairman.*] No selection could have been made in posting the orderlies there: I understand they are those who are attached in the camp to the Red Cross service?—Yes. The day after I took charge I had the orderlies paraded. There were twenty-three orderlies, and of that number there were thirteen available for hospital purposes.

240. Why not the whole twenty-three?—They were employed on all sorts of duties. When I came to the question of this thirteen, there were only two who professed to have had any nursing experience at all, and when I further examined them I found that what nursing experience they possessed was of a very minor degree.

241. *Mr. Salmond.*] What measures did you take to cure that?—I immediately took measures to get trained nurses out, and the first trained nurse arrived on Sunday morning, the 27th June. There were two nurses at first, then within a week seven nurses, and within ten days of my taking-over there were twenty-nine trained nurses, and twenty-one untrained. I might say that the Medical Officers reported that the nature of this influenza was increasing in its malignancy, and we had most extraordinary admissions to the hospital. I have here a chart showing the admissions, and we admitted from the 27th June to the 9th July no less than 919 patients. In these eleven days one-third of the total number of patients were admitted to the hospital since the beginning of the camp. That is out of a total of 2,813 patients admitted to the hospital since the institution of the camp. [Chart handed in.]

242. You have no chart of the position before that?—No. We admitted 118 patients in one day. I may say in connection with those admissions our critics complained about some confusion that might have existed on the nights of the 27th and 28th, and that confusion I do not for a moment deny. I have no doubt, gentlemen, that in the course of your visits to other lands you have seen hospitals there, and I think you can imagine that those hospitals established for five and six hundred patients would have their equanimity disturbed if there were dumped down before their doors 118 patients in one night which they had to provide for. We had, firstly, buildings to improvise; secondly, medical men to obtain, who had never been accustomed to work together; thirdly, nurses who had never been accustomed to work together; and, fourthly, orderlies who had had practically no training. I just mention those facts, gentlemen, because, if I may say so, on the morning of the 28th, when things were at their very worst, there loomed large on the horizon a politician.

243. *The Chairman.*] Do not let us go into that?—Well, a critic.

244. You desire to say something about Dr. Thacker's visit to the camp?—I may say this: that things were just about at their very worst when Dr. Thacker came to the camp. The influence of the nurses had hardly been felt, and I will admit that on the night previous, with the extraordinary number of admissions, there had been some confusion. But, nevertheless, when the nurses came into camp they behaved very splendidly. I am sure it would have done any one good to see those excellent and noble women go into the "stew," as it were, and gradually, as a result of their ministrations, order was evolved. I have already explained to you the number of nurses that came into the hospital within seven days and eleven days, and I can only say this: that considering that Dr. Thacker had had experience of hospitals (and presumably he had some knowledge of the difficulties which must arise with a very large number of admissions to an institution) I do not consider his criticism was either justified, reasonable, or fair. In fact, as the result of his alarming reports I had to leave my position out there and come into Wellington to answer questions. Moreover, he caused such a degree of unnecessary alarm that it naturally spread a lot of dismay and anguish in many a quiet home in the Dominion.

245. Would it be likely to have had an effect upon the patients?—Speaking for the patients themselves, their behaviour has been admirable. I think they realized that everything that mortal man could do was being done for them. I do not remember one single grumble from the men, though at first and on other nights there was some confusion.

246. You mean in regard to the bad weather?—And the confusion that was there. Their behaviour was simply magnificent, and although the medical arrangements may not have been adequate, still, all the serious cases did get adequate medical attention, and I will absolutely swear that no man, even on the worst nights, was cold, and no man was hungry. I went round between 10 and 11 every night until the camp was broken up, and I can swear that no man even on the worst nights was cold and no man was hungry. At the very beginning, when we had to rely upon the trainers' quarters, the cooking was not quite satisfactory; but there was no grumbling about it, and I can say this: that really the worst fed were the Medical Officers and the nurses. Every effort was made to cope with a very, very difficult position. If there had been the lack of medical attention of which Dr. Thacker complained, surely if he is to justify the position he would like to obtain as regards humanitarianism and sportsmanship, surely he would have taken off his coat and helped us instead of rushing off to spread this alarm, and so take men away from their duty. At the same time, while I am on this subject, I will admit that I regret that one of my officers, in reference to one of the patients, said that he got as good, if not better, treatment than he could have got in any hospital in the Dominion. That, I think, is an exaggeration,

and I regret that he should have said it; but if he had said that the men got the best treatment possible under the conditions he would have been within the mark. But to describe it as chaotic, as Dr. Thacker did, is not fair.

247. Did they get medical attention appropriate to the cases?—For the severe cases the medical attention was good right throughout. The difficulty was the sorting-out of the severe cases from those cases which were just indisposed. Directly a case was recognized as being severe that case got every possible medical attention. I can say that the conduct of the Medical Officers and the nurses has been absolutely splendid; indeed, I cannot speak too highly of the way in which the nurses behaved. They were told that they had a very big job in front of them, but they went into it quite cheerfully.

248. *Mr. Ferguson.*] Did you have enough doctors?—We had enough doctors. When I went into camp there were eleven doctors on duty.

249. *Mr. Salmond.*] Did you see Dr. Thacker at all?—No, sir, not on the occasion of his first visit. I got back and heard he had been there.

250. Did you see him subsequently?—I saw him in that sort of passage between the Library and Parliament House.

251. Did he make any communication to you about the medical arrangements?—None whatever.

252. Did he speak about it?—Not at all.

253. You know him personally?—Yes, I have met him.

254. So that after he had visited the hospital may I take it that he did not communicate any suggestion either to you or to any of your officers?—No, sir, he did not.

255. Will you now inform the Commission what arrangements you made as to the medical men in the camp, either in the way of additional staff or the rearrangement of duties?—I took over on the 23rd. On the 24th I met the Medical Officers and discussed generally with them their duties. I gave them details of their duties. I immediately telegraphed for a Principal Medical Officer; it seemed to me that one of the first essentials was to get a P.M.O., and I think that one of the great difficulties has been that there has been no P.M.O. in constant command there. He has gone away with each successive reinforcement. I am trying to arrange for a permanent medical and nursing staff so that there will be no interruption or interference with the work when the reinforcements leave camp.

256. You have, I believe, arranged for a P.M.O.—Dr. Morice?—Yes.

257. When was he appointed?—He was appointed on the 29th June.

258. *The Chairman.*] When did he get there?—He took over on the 29th June. I telegraphed him on the 23rd, and he actually took up his duties on the 28th June.

259. *Mr. Salmond.*] Up to that time, I believe, Captain Stout was the P.M.O.?—Yes. As he was the senior Medical Officer in camp, I made him Acting P.M.O.

260. He had been Acting P.M.O. before that?—I think he had.

261. You continued him in office as P.M.O.?—Yes.

262. *The Chairman.*] Until Dr. Morice came?—Yes. I immediately sent for more officers.

263. *Mr. Salmond.*] What further officers did you get?—I arranged to have the services of the following doctors: Drs. Harrison, Ferguson, Spedding, Simpson, Stout, Tolhurst, McCaw, Brown, Bogle, Farris, Hazlett, Myers, Crawford, Gordon, Goldstein, McKibbon, Creeman, Andrew, and Johns.

264. Were all these doctors attached to the Expeditionary Force, or were they there in some other capacity?—They were all attached to the Expeditionary Force.

265. Were they all going abroad?—Yes, all these.

266. There were no medical men permanently attached to the camp?—Not one. Colonel Inglis was also in camp, waiting for the hospital ship to sail.

267. Were any of these men hospital-ship men?—Yes, sir; in addition to Colonel Inglis, Captains Tolhurst, McCaw, Spedding, and Simpson have gone with the hospital ship.

268. So that five of those doctors were hospital-ship doctors?—Yes, sir.

269. How many of them are leaving with the Expeditionary Forces?—Five of them.

270. There were six Expeditionary Force men and five hospital-ship men?—Yes. In addition to that number I immediately appointed Dr. Finch as Sanitary Officer.

271. He is one of the officers of your Department?—Yes.

272. You appointed him Sanitary Officer of the camp, resident there?—No, he goes out every day. Subsequently Captain Smith has been appointed a Sanitary Officer. They are both acting as Sanitary Officers.

273. *Dr. Martin.*] I thought Dr. Smith was a bacteriologist?—Yes, he is a bacteriologist.

274. *Mr. Salmond.*] Captain Smith was one of your officers?—Yes, I brought him up from Dunedin.

275. What other additions did you make?—On the 28th Colonel Morice joined; on the 30th, Captains Myers and Hazlett; on the 4th, Captain Crawford; on the 8th, Captain Johns; on the 10th, Captain Goldstein; on the 14th, Captain McKibbon and Major Andrew.

276. Are any of these expeditionary officers?—Of the ten I have mentioned eight are expeditionary officers. They are going with one of the reinforcements. Captains Stout, Harrison, Ferguson, and Farris are already under orders, and later on Captain McKibbon will join the next reinforcements.

277. What I want to get from you is this: How many permanent Medical Officers have you got who are not attached to the Expeditionary Forces in any way?—Colonel Morice, Major Andrew, Captain Crawford (he is going subsequently), and Captain Gunn. In addition to that, I am trying to get a permanent staff of elderly men who have no chance of going either with the Expeditionary Forces or any other Force, or to be sent Home with the hundred men which the War Office has asked for.

278. *The Chairman.*] Is there any difficulty in getting them?—No, I do not think I shall have any difficulty.

279. Is it not a fact that the medical practitioners in Wellington have placed their services at the disposal of the authorities?—I have got no definite offer from any private medical practitioner in Wellington.

280. Was there not a meeting of the society held, as the result of which they were to offer their services?—They have talked it over with the Minister, and I believe some communication is being sent to him on the subject. I believe a meeting of the Council of the British Medical Association was held last Monday, and from a private source I have learned that they will be approaching the Department.

281. *Mr. Salmond.*] That would help to solve the difficulties as regards future medical attendants?—Yes, sir, a great deal.

282. Is the medical staff now adequate?—Yes, sir.

283. So that the additional men you want are to take the places of the expeditionary officers?—Precisely.

284. *The Chairman.*] Drs. Ferguson and Harrison, whose names have cropped up a great deal, were working fourteen or fifteen hours a day?—Yes, we all were, I think.

285. Does that not indicate a shortage of officers?—Well, they had assistance.

286. Should they have been compelled to work as long as that?—Well, the first thing I did was to ask for more Medical Officers. I wrote to Major Barclay on the subject.

287. He could not leave Wellington Hospital, could he?—No; but some of his officers could—Captains Hazlett, Myers, and Marshall, who were military officers at the hospital.

288. Apart from this question of hours, I understood that Captain Harrison had to come in from the camp and visit Berhampore, Kaiwarra, and Mr. Izard's every day: was not that rather a large order, seeing that he was so busy with patients on the spot at the camp?—It was a large order, but he had assistance—for instance, Captain Farris; and there were other doctors in the hospital—Captains Hazlett, Myers, Spedding Crawford, Tolhurst, and Simpson.

289. Were these ten doctors all working on the patients in the hospital?—Some were working on the patients in the hospitals and some in the lines, at the sick-parade, and so on.

290. We wanted to see how many doctors there were in the military hospitals there?—In the hospital there were Captains Ferguson, Spedding, Myers, Hazlett, Tolhurst, and Crawford; they were on the ordinary cases. Captains Harrison and Farris were on the measles cases, and subsequently Captain McGibbon. On or about the 10th July Captain Goldstein undertook the work in Wellington, and so relieved Captain Harrison from making visits.

291. That was when the numbers of patients were going down?—Yes; I could not get any more medical men. I did not want them.

292. It is suggested that the services of civil doctors might have been used: is that so?—Well, I had no intimation to that effect.

293. Were you waiting for an intimation, or could you have commandeered them?—Possibly; but I had no complaint from any of the Medical Officers with regard to their long hours.

294. But could the attendance be as effective with these long hours? We want to know whether the civil arm ought not to have been resorted to in this pressure?—Well, I must confess it never occurred to me to ask any civilian doctor to undertake the work. I had every hope that I could get sufficient military doctors to do the work, and, as I say, I had no intimation from the civil doctors belonging to that organization that they were willing to do anything.

295. *Mr. Ferguson.*] But some of these doctors were semi-military: they have military titles. Dr. Elliott is a Major: could he not have seen to the Berhampore and Kaiwarra hospitals?—Yes.

296. *The Chairman.*] During this period, from the 23rd onwards, you had to encounter very bad weather in the camp?—Yes.

297. The weather continued severe for some time?—Yes; it was very bad.

298. I suppose that if there is an epidemic of measles and influenza bad weather such as that renders it liable to spread?—Yes, it did have that tendency. Men would be more housed together, and infection would be more likely to spread under those conditions.

299. And I suppose their getting wet-footed and so on would be contributing causes?—Yes, anything that lowers the vitality would tend in that direction.

300. If those were the conditions, can you tell me why men were compelled to stand in the rain for an hour or more on those daily sick-parades without any shelter being provided for them?—One of my first actions——

301. But is that a correct assumption?—That is quite correct. I would like to explain that on the 24th June I wrote to the Camp Commandant on that subject, and in regard to the flooring with wood of the marquees used for the sick-parade. On the 25th I wrote to the Camp Commandant with regard to the delay in the sick going to the hospital.

302. But as to the delay which took place on the parades?—Yes, I came across an instance where a man had to wait some hours after it had been decided to send him to the hospital, because he had to get a non-commissioned officer to take him up, and he had not been able to obtain one. Almost immediately I made arrangements for the medical examination to be held nearer the hospital, so that it would not be such a long distance for the men to walk from the main inspection hut to the hospital. They were examined in a hut subsequently.

303. Then, apparently the method which prevailed on fine days in the summer was continued whilst this epidemic was going on during the very severe days of winter?—Yes, sir.

304. Who was responsible for that—who should direct on such a subject?—After the 23rd June I should.

305. Should not the military Medical Officers in the camp have made some suggestion on that subject?—Yes, sir.

306. It occurred to you on the first day that you had taken charge, so that it is a subject that would present itself to medical men. The military rules appear to be so very elastic that wet weather or fine weather the same rule was observed. Do you think that factor ought to have presented itself to those in charge of the camp, taking into consideration the conditions of the bad weather and the epidemic?—Well, it occurred to me, sir. I may say that I went down on the very morning I was appointed, and I found men standing outside. There were two marquees in which they could have stood, but they said they did not care to stand in there because there was too much coughing, and I thought they were right.

307. We have heard of men being so weak that they could not continue to stand, and had to sit down?—The Camp Commandant subsequently provided benches for them.

308. In the tent?—In the marquees; and subsequently benches were put in the medical examination-room near the hospital lines.

309. With such a state of things as prevailed it was very desirable that men should not have wet feet or wet clothes?—Yes.

310. Were there any means of drying boots or clothes when you took charge?—No, sir.

311. Did you take any steps in that direction?—I saw the Camp Commandant with regard to using the big kitchen at the hospital for drying purposes. It was subsequently decided to erect special marquees with braziers, and that the drying should be carried on there. That was a great advance upon the drying in the hospital grounds.

312. We have had many complaints about the hospital brought before us, but what you say regarding the sudden accession of so many patients in two or three days will, of course, account for many things that happened. We have been told that there was a want of throat-brushes, and that the throats of several men would be painted with the same brush. I think some one suggested that they were first dipped in a solution before being used again, but was there an insufficiciency of throat-brushes?—If so, it was never reported to me. You know the main road which runs down between the hospital and the camp proper. I was so busily engaged during the first four or five days that I hardly went on the other side of the road. My attention was directed to providing accommodation for the men who required medical attention, and I hardly went across at all. I rode down on the 24th to see a medical inspection, but barring a cursory examination I did nothing over there. There was no complaint of any shortage in equipment, and anything which was brought under my notice as being necessary I promptly got. We used to have a meeting every day in my office, which was attended by the Matron and the principal Medical Officers, and anything which was considered necessary was obtained immediately. I used to go to the telephone and order whatever was required. I had no complaints as to the shortage of brushes.

313. If this practice of using the same brush on, say, a dozen throats prevailed you were not aware of it?—No.

314. *Mr. Ferguson.*] Were you spoken to about it?—No, certainly not.

315. *The Chairman.*] And it was suggested that there was not sufficient sterilizing of instruments before they were used?—I can speak with no certainty whatever with regard to the out-patients.

316. These would be matters that were in the hands of medical men who have now left for the front?—Yes, sir. As regards the medical side and the actual treatment I can take no responsibility. I have been some time away from general practice, and I used to consult the Medical Officers as to the best men to detail for the several classes of cases. Barring that, I can take no responsibility with regard to the treatment.

317. Can you tell us the state at Berhampore Hospital about the 30th June—the numbers daily in hospital there after the 23rd June?—I have no doubt I can get them, but I have not got them here. I am quite confident, however, that there were never over thirty there.

318. After the 23rd?—Yes, sir.

319. I do not know whether you know anything about two cases—Pollard and Fordham—which went to Berhampore?—No, I know nothing about those cases; but I believe those men died.

320. *Dr. Martin.*] When was the first diagnosis of cerebro-spinal meningitis made: what was the date?—The 12th July.

321. Who made the diagnosis?—Professor Champtaloup and Mr. Hurley, the Government Bacteriologist.

322. It has been suggested that in a number of cases it was not cerebro-spinal meningitis: that is wrong?—Yes, that is wrong.

323. There is no doubt about the diagnosis?—I do not think there is any doubt whatever.

324. And the cases which were treated for cerebro-spinal meningitis—you are quite satisfied that they received the proper treatment?—Yes, I have great faith in Professor Champtaloup and Mr. Hurley.

325. How many cases of cerebro-spinal meningitis have there been from the time of the first diagnosis?—There have been twenty-four cases. It is rather hard to say, however, because some of those cases that have died in the hospital may have been cerebro-spinal meningitis cases; but there have been twenty-four or twenty-five cases.

326. And the number of deaths?—There have been five.

327. Does the total number include the suspects, the cases under observation?—Yes.

328. What is the date upon which your attention was directed first to these septic throats?—On the 2nd July Captains Harrison and Ferguson reported to me that they were not satisfied with the cases that were coming in.

329. That is, the septic throats?—Yes, the influenza cases. They said these cases had assumed a much more malignant type, and they were much concerned about it. They made mention of the sore throats. I immediately instructed the Bacteriologist of the Department,

Mr. Hurley, to come out to Trentham and make an examination and obtain the necessary swabs. He came out and gave a report, and on the 4th July he had a vaccine. This vaccine was given by Dr. Harrison, and it seemed to give good results. In the meantime Mr. Hurley was working on the swabs that he had taken; but on the 8th July Drs. Harrison and Ferguson again reported that they were very much concerned with the virulence of the cases, and they mentioned their suspicions of typhus. I immediately summoned Dr. Hector, of the Lower Hutt. He confirmed that opinion, and he said that, at any rate, the disease ought to be treated as one of typhus. I immediately came into Wellington and reported the circumstances to the Minister, strongly advising him to break up the camp. There was a meeting held that night, after the Ministerial portion had been done with, of the heads of the Departments concerned with the movement of the troops. The meeting took place at Mount Cook Barracks, and at 10 o'clock the next morning the first trains left Trentham for Waikanae and Tauherenikau.

330. You could hardly have been more prompt?—No; it was a time for what you call "getting a move on." In the meantime I sent a telegram to Professor Champtaloup asking him to come up, and he came up on the Saturday, and made an investigation with Mr. Hurley, and they came to the conclusion that it was cerebro-spinal meningitis, and not typhus.

331. *The Chairman.*] And the cases have been treated on that footing?—Yes, ever since.

332. Has there been a sufficiency of serum for the treatment?—No, sir, there has not been a sufficiency of Plexner's serum, but the reports of the efficacy of serum are rather conflicting. From the periodicals that I have had to hand so far I find that the efficacy of Plexner's serum in the treatment of cerebro-spinal meningitis is very much urged. There was in my office a week ago a Dr. Vallance, who has been bacteriologist to a camp at Colchester, where many cases of cerebro-spinal meningitis had occurred. He told me that the results with Plexner's serum were very disappointing, and that they found the best results from vaccine.

333. That was the same as Mr. Hurley had produced?—No; but in the meantime I found that there was a shortage of Plexner, and I wired to Australia for a supply, but I could not get it there, so I sent a cable Home for it. We could get it very much quicker that way.

334. *Dr. Martin.*] But you know that Dr. Vallance stands alone in the world in his opinion in this matter?—I do not for one moment pretend to know anything about that matter. All I know is that we have done everything we can. I think I made it clear that all the journals were against him.

335. *The Chairman.*] In that connection, have you seen a recent account of the state of things at Salisbury Plain?—No, sir.

336. In one of the southern papers there was an account recently of an outbreak at Salisbury Plain during the last few months?—Yes, sir, there have been outbreaks there.

337. Have you seen the local reference to it?—No, only general reference to it. There have been several outbreaks of cerebro-spinal meningitis amongst the troops, even in the best barracks at Home. I have wired to the P.M.O. at Whitehall to let me know the details, but they have not come to hand yet.

338. It would be possible for the nervous excitement of the times to be partially charged with this trouble?—Possibly; but it is a disease that is not unknown in New Zealand. I have got reports from Professor Champtaloup, and also statistics of cases that have occurred in the Dominion during the last few years.

339. You cannot help us as regards the Salisbury Plain cases?—No; but I know there were epidemics there in the various camps and barracks.

340. *Dr. Martin.*] Will you allow any man who has had cerebro-spinal meningitis to go to the front?—No, certainly not. He certainly would not be in a fit condition to go to the front, and never would be in a fit state to do any heavy work.

341. But the contacts—the Health Department has them under observation?—Yes. I have issued detailed instructions to all the District Medical Officers by circular. I did that as soon as the disease was recognized. There happened to be an up-to-date pamphlet by the P.M.O. at Whitehall on the subject, and I had that printed and reissued to every medical officer in the Dominion.

342. *Mr. Ferguson.*] Every Medical Officer or every medical man?—Every medical practitioner.

343. *Dr. Martin.*] As to carriers——?—Yes; we found a lot of carriers, and they are isolated at Dunedin, Christchurch, Dannevirke, and at Trentham. We isolate them wherever we can get them, and we are making examinations amongst civilians also.

344. It has been suggested that a Washington sterilizer should be procured for the camp?—Yes. First of all, I would like to say, in connection with that matter, that until the 10th July the Trentham Hospital was never regarded as a permanent hospital.

345. That is, the racecourse building?—Yes. Until the 10th July we were only using the racecourse buildings as a receiving-hospital, and from there drafting all the acute cases to Victoria Ward and to other institutions. It is only since the 10th July, when we had to take preventive measures, that we have had to treat all the cases there. So that there has been no idea of equipping the hospital as a permanent one until the 10th July. Therefore the idea of having a disinfector never occurred to our minds. There is this fact to be remembered: that a steam disinfector would not deal with the material so rapidly as disinfection by formalin by means of a spray and lamps. Dr. Smith, the Sanitary Officer, has made a lot of experiments, and he says that disinfection by formalin is more efficient than disinfection by disinfectors such as the Washington Lyon. It is a great convenience, but a disinfector to be of any use at Trentham would have to be a very large one—one that would cost at least £500. Then we have not got the steam; and, besides that, we should be more satisfied with formalin disinfection than with disinfection by steam. I am quite sure we can justify that from experiments by

Professor Rideal and others. In fact, formalin disinfection has been the practice of the Department for some years now, and we have never had reason to doubt its efficacy. With regard to some other criticism that has been levelled at the hospital, I want to say that the medical committee which went out there did not realize that the hospital was never regarded as a permanent institution till the 10th July; but now that it has been determined to equip it as a permanent institution we shall have to get certain other apparatus and material. We must increase the sanitary arrangements and the accommodation for kit and accoutrements generally. There is ample storage there for kits, but there has been great difficulty with soldiers over their kits, because in these kits they carry all their cherished possessions, and if you take a kit away from a man it has almost the effect of sending his temperature up. The kits are always taken by a non-commissioned officer and put in one of the loose-boxes under lock and key. I have been exercised in my mind as to the best means of putting those kits outside. Now that we know that we are going to have this hospital as a permanency we will be able to make much more satisfactory arrangements for the kits, but nevertheless these kits are disinfected. Where we have them is the cloak-room. Then, there was another thing I want to refer to in connection with the report of the medical committee. On the wet day when they came out they saw a ward overcrowded. We had recognized that, but the weather was so inclement that we could not shift the patients. We thought it was better to keep them in their present quarters than to shift them during the very inclement weather. I do not deny that the place was overcrowded at the time, but that has been beyond control. One of my very first instructions was on the matter of overcrowding the wards. Then, there were some points made about the keeping of notes of cases. In my capacity of Inspector-General of Hospitals I have often complained of the lack of notes even in such large institutions as the Dunedin Hospital—case records—and I think if you were to go into a good many of the hospitals in the Dominion you would find that the records are insufficient. All the essentials were taken here. You must remember that we were working under disadvantages; we had buildings that were not suitable, though they have been made adaptable; they were not hospital buildings. We had to make the best of them. Also, the nurses and orderlies had never worked together. Naturally, things could not be on the same level as they would be in a self-contained hospital. I do not think those medical gentlemen quite appreciated the difficulties we had to contend with.

346. One question that arises out of the disinfection matter you have mentioned is in regard to the men going away with the next contingent, and as to what steps are being taken with regard to their blankets, &c. Has it been arranged for them to take away their clothes and blankets that they have used, or are they to have a completely fresh issue?—They are to have a completely fresh issue. We have a bi-weekly medical inspection of every man in the camp. Moreover, every man as he goes on leave is medically inspected, also the new drafts. I was explaining to the men of the Sixth Reinforcements that they must not consider because they were being inspected that we were afraid as to their health, but it is necessary for us to make the most rigorous inspection.

347. Can we take it from you that there will be issued new kit in every way, and new blankets, so that there will be no risk of contagion to the men going away?—There is no doubt about their kits and blankets, and I should not think there would be any doubt about their uniforms. You may take it that that will be the case.

348. *Mr. Salmond.*] You are referring to the men who have been sick: you do not mean that the whole of the men will be reuniformed?——

349. *Mr. Ferguson.*] The question is as to the new uniforms?—Yes, for those who have been in any way connected or in contact with the sick. I think we can say that all the clothing will be disinfected. You must remember that it is difficult to keep this organism, the meningo-coccus, alive. To bring it in from Trentham to Wellington we have to send it in a thermos flask. Just hanging the clothes in the sun would, I think, be a satisfactory method of disinfecting them. The men who have been in actual contact with the sick will have new clothing and kit; the others will have their clothing and kits disinfected.

350. *Mr. Salmond.*] Do you know that Dr. Batchelor expressed his doubt as to whether this was cerebro-spinal meningitis at all?—Yes, he has expressed the doubt, sir.

351. I understand that serious influenza not infrequently results in some form of simple meningitis?—That is so.

352. Is it possible by the symptoms to distinguish between simple meningitis and cerebro-spinal meningitis?—No, sir.

353. So that this diagnosis depends only upon the bacteriological work?—Yes.

354. Is it not possible that a mistake could be made with such an examination?—It is possible, undoubtedly, but I do not think it is probable with those medical men who have made the diagnosis.

355. You said that there were only twenty-four cases of cerebro-spinal meningitis altogether?—Some of those are doubtful.

356. You said also that the suspicions of the medical authorities were first aroused by the more malignant cases of influenza?—Yes, sir.

357. From them they first suspected typhus?—Yes.

358. *Dr. Martin.*] And from the measles cases too?—Yes, the measles cases were very malignant too.

359. *Mr. Salmond.*] And that some vaccine or virus or serum was devised by Mr. Hurley, for which of the diseases?—Influenza.

360. And was found to be satisfactory?—Yes; according to Dr. Harrison, it seemed to give very excellent results.

361. Were these the same class of cases that gave rise to the suspicion of typhus?—Yes.

362. So that the cases that were submitted to Dr. Champtaloup were the cases that were regarded as malignant cases of influenza?—Yes.

363. There was a great number of them—far more than twenty-four?—Oh, yes.

364. Hundreds of them, perhaps?—Yes.

365. And samples of those hundreds of cases were submitted to Dr. Champtaloup, and he diagnosed them as cerebro-spinal meningitis?—He made examinations of the swabs, and from the spinal fluid of the men who were actually supposed to be suffering from cerebro-spinal meningitis, and then in addition to that he took swabs from the men with sore throats, and in some he found the meningo-coccus—that is, the bacillus incidental to cerebro-spinal meningitis—in the throats of the men who had none of the cardinal symptoms of the disease. These are what we call "carriers."

366. So that the same germs were found in the ordinary patients' throats?—Yes, in some of them.

367. How many of them do you suppose was that germ found in who have not developed cerebro-spinal meningitis?—Lots of them.

368. Scores of them?—I think you might say scores of them.

369. Does not that raise a doubt in your mind as to whether this whole development of meningitis may be the result of influenza?—No, I do not feel any doubt about it. I know that Dr. Batchelor is doubtful. He is certainly a very eminent member of the profession, and a man whose opinion is to be treated with the profoundest respect. On the other hand we have the opinion of Dr. Champtaloup and Mr. Hurley, who are also men of considerable reputation in their particular branch of the work.

370. Does it not strike you as curious that this very disease should develop really out of influenza cases?—No, that is very often the preliminary of cerebro-spinal meningitis outbreaks. The history of our outbreaks here is exactly similar to those at Home. Of course, the organism has not confirmed altogether to what we know as Koch's postulates. We have not been able to reproduce the disease in a human being; but, although I say it with the greatest possible respect to Dr. Batchelor's opinion, I think it is the organism of cerebro-spinal meningitis.

371. Did you say that all the persons who have had influenza in this form have also had cerebro-spinal meningitis?—No.

372. Is it an independent infection from influenza?—Yes, sir.

373. Yet it attacks scores of influenza patients?—Yes. I may say that Dr. Champtaloup is making control experiments with civilians who have not been in any way connected with the military.

374. That is what you understand, Colonel Valintine?—Of course, I go by the reports of the bacteriologists.

375. You have Dr. Smith: he is a bacteriologist?—But Professor Champtaloup and Mr. Hurley are in our Department, and I have been using Dr. Smith for administrative duties.

376. *The Chairman.*] You have accepted it as cerebro-spinal meningitis?—Yes, on these reports.

377. And the cases are being treated on that footing?—Yes; all the men have been having prophylactic , and any man with a temperature is being isolated, and those in contact are being kept under supervision.

378. On the assumption that it is what it has been diagnosed to be by Dr. Champtaloup and Mr. Hurley?—Yes.

379. *Mr. Ferguson.*] You have no doubt in your mind that you are taking the right measures?—Yes, that is so.

380. *Mr. Salmond.*] Can you give the Commission any information as to the steps taken to notify relatives of the illness of troopers? Do you know whether any system existed when you first took over control?—Not that I am aware of. I think very careful records were kept at the headquarters with regard to all admissions to the hospital, and so forth, and I am pretty well confident that communications were sent to the relatives in the event of soldiers becoming seriously ill.

381. Do you know whose duty it was to make these communications?—Well, in the hospital it is one of the routine duties.

382. But at the present time have you made any arrangements about it?—Yes.

383. What are your arrangements?—When I first took charge, in outlining the duties for the guidance of the P.M.O., I drew up a statement on the 28th June, which included an instruction that he was to communicate immediately with the relatives of patients should their condition become serious. I also issued the following notice on the subject on the 29th June: "NOTICE.—The attention of officers is directed to the urgent need for answering without delay all correspondence concerning the sick men under their charge. The prompt notification of the serious condition of each patient to the nearest relative is absolutely essential." That, however, was not satisfactory, so the Minister of the Department appointed a special officer to live at Trentham, to make himself conversant with those in the hospitals, and, so far as I am aware, Captain Combs has carried out his duties efficiently ever since.

384. Do you know when he was appointed?—About the first week in July.

385. *The Chairman.*] If a man is sent away from the hospital, do you still send them away to, say, Kaiwarra?—No, not now. In regard to the notification of relatives, I was in the House one day and heard to my annoyance that some relatives had not been advised, and so I sent a circular telegram to Medical Officers instructing them to notify by telegram relatives of the admission of soldiers to the hospitals.

386. It was not in your time, apparently, that they did not know who the relatives were?—I can remember one man who had no relatives at all—Ford.

387. But I mean where a man became unconscious in a hospital, and so was unable to say whom his relatives were: have the men identification numbers in camp?—No, not in camp; I do not think so.

388. It would be useful then?—Yes, it would be useful. Of course, those cases have occurred. I remember another case where a man was brought in pretty well unconscious, and there was considerable difficulty in finding out who he was.

389. *Mr. Salmond.*] Do I understand that every man who comes into a hospital has his admission notified to his relatives, regardless of whether it is a serious case or not?—Yes.

390. And are the relatives notified from time to time as to his condition?—Yes.

391. Have you taken any measures to supply hot baths or hot shower-baths for the troops?—For the troops or in the hospitals?

392. For the troops?—No; but when I was asked by a Board which was set up to decide as to whether Trentham Camp should be reoccupied by troops, I emphatically suggested that double the number of showers should be provided—two hundred instead of a hundred.

393. Hot showers?—Yes.

394. It was proposed to put up a hundred?—Yes.

395. *The Chairman.*] Is there a Board considering this question as to whether Trentham should be reoccupied?—A Board was set up, of which I was the president, on the 13th July, to consider whether or not Trentham Camp should be reoccupied. That Board consisted of Professor Champtaloup, Mr. Hurley, myself, Dr. Ferguson, and also Dr. Truby King (but he did not arrive till subsequently), and Drs. Hector and Harrison.

396. Was that inquiry not limited to the question of infection?—No, sir; it was to decide certain questions—whether or not it was advisable for Trentham to be reoccupied as a military camp.

397. *Mr. Salmond.*] From all points of view, not merely from the point of view of infection?—No, generally.

398. Has that Board reported?—Yes, some time since. That Board was set up owing to a communication from the G.O.C., saying that it was necessary for the purposes of training to find out at the earliest possible date whether Trentham was going to be used again as a camp of instruction. The Minister immediately set up a Board to report on the matter, and that Board met on the 13th July under my presidency.

399. *The Chairman.*] If that is so, what object is there in our making any investigation?—Well, sir——

The Chairman: We are asked to report "Whether the camp is suitably situated, equipped, and arranged for the purpose for which it is used," and "whether sufficient sanitary or other reasons for the removal of the camp from its present situation." I have never heard of this Board until now.

Mr. Salmond: I knew that this Board had been set up, but I was under the impression that it was a conference of doctors asked to advise on a specific point—as to whether it would be safe, in view of the outbreak of cerebro-spinal meningitis, to send troops back to Trentham on the 8th August, in order that they might go with the reinforcements.

Witness: That is so. I am sorry I conveyed a wrong impression.

400. *Mr. Ferguson.*] You advised the Minister that the men should be taken away from Trentham, and subsequently as a member of this Board you advised that it would be now safe to reoccupy it?—Yes, that is so. Dr. Hector was the other member of the Board; I had forgotten him.

401. *Mr. Salmond.*] I handed to the Commission a complete statement of the sickness in the camp, prepared by Colonel Valintine at my request. I presume he will put it in formally. I do not know whether the Commission has it now in its possession?—It is the incidence of sickness. [Statement put in.]

402. That is a return I asked you for, and was prepared under your orders?—Yes, sir.

403. *The Chairman.*] I wanted to ask you, Colonel Valintine, how you justified what appears to us to be a departure from the number of men laid down by the Imperial authorities to occupy each hutment?—Well, I may say in that connection that I have no special knowledge of huts for troops, and that when the Board was set up to deal with this matter, consisting of Major Morton, Dr. Frengley, and the Government Architect, Mr. Campbell, I was away from the Dominion; but if I had been here I undoubtedly would have accepted Dr. Frengley's recommendations blindly, as I have the greatest possible confidence in that officer. He has been responsible for the preparation of plans of hospital buildings which have brought credit to the Dominion and to the Department. That very excellent Infectious-diseases Hospital in Wellington is of his design, and I would have accepted his recommendations with regard to the huts *in toto*, without having looked at them had I been here. I have never known Dr. Frengley fail me, and I do not know any man who combines common-sense and scientific knowledge so well as does he. More than that I cannot say. I have no special knowledge of hutments.

404. *Mr. Ferguson.*] You have not examined them?—I have been in them, but I have not done more than that.

405. Then it is no use our inviting you to express an opinion upon the subject?—No, sir. I may say this, however: that during some twenty years in which I have been connected with the Public Health side of my profession I have known of many suggestions made with regard to ventilation. Many theories have been expounded and some put into practice, but many of these have now been jettisoned. Take, for instance, the Plenum system. Considerable expenditure was involved in connection with that system at the Belfast and Birmingham Hospitals. This system was adopted on the recommendation of some of the most scientific men in the United Kingdom, and now it has been absolutely jettisoned. Indeed, it has since been shown that that system of ventilation does nothing more than provide devitalized air.

406. *Mr. Gray.*] I gather, Colonel Valintine, that having regard to the accommodation available prior to your taking charge the medical authorities had done the best they could?—Yes, sir, they had made the best of the existing accommodation.

407. And you have no fault to find with what they did in that respect?—No, sir.

408. Are you aware that Colonel Purdy had reported to the authorities and recommended obtaining extra accommodation before you took charge?—No, sir, I was not aware of that.

409. I understand that Colonel Purdy reported on this matter, and submitted a recommendation on the 8th June, and also that he had made a previous report some time in May to the Adjutant-General?—I have no knowledge of that.

410. Do you know that from the end of May onwards there was a great many patients sent to all the hospitals that were then in use?—From the 8th May onwards?

411. The camp hospital, Berhampore, Kaiwarra, and the Wellington Hospital?—I have only knowledge of what happened after the 23rd June.

412. But prior to the 23rd June the number of patients was growing rapidly?—I had no knowledge of that.

413. You did not know of the conditions before the 23rd June?—No, nothing about the details. I knew the details with regard to Berhampore on the 5th, and then I knew what happened on the 13th June, and then I went south, and I did not hear anything more.

414. How long were you away?—About three days; but I did not hear anything more about the increase of in-patients.

415. I believe you appointed Dr. Finch Sanitary Officer?—Not till I took charge on the 23rd June.

416. Did he not go there until the 23rd June?—No. Just about the 18th June I sent a circular telegram to all District Health Officers—a sort of confidential message—telling them that they might have to stand by in order to take over the military camp and hospitals.

417. Were you, prior to your taking charge, frequently in camp?—I had a boy in camp, and I used to go and see him.

418. You were not there officially?—Not till the 23rd.

The Chairman: I notice, Colonel Purdy, that in this report of yours dated the 8th June you state that there were fifty-nine patients at Berhampore. Now, Colonel Valintine tells us that when he went there on the 5th June there were eighty-seven. Can you explain that?

Colonel Purdy: Because the patients were sent out on the Saturday between Colonel Valintine's visit and the date of my report.

Witness: There were eighty-seven there when I went there on the Saturday, and on the Sunday there were certainly thirty less. I would like to submit a statement on the incidence rate in the various huts. [Statement put in.] I think you will find that interesting.

419. *The Chairman.*] There has been a statement made to us that the fewest cases of sickness came from the contacts in the isolation camp?—I do not know whether that was so.

JOHN RICHMOND COWLES, sworn and examined. (No. 95.)

1. *The Chairman.*] What is your rank?—Lieutenant.

2. What company?—D Company, 1st Battalion, Trentham Regiment.

3. When did you join the camp?—On the 25th April.

4. Was your company in huts?—Yes.

5. How many huts?—Of course, they did not come in until the 29th or 30th May. I was in camp some time before that.

6. Did you have certain complaints made to you by your men?—In regard to what?

7. In regard to the huts, and their treatment on the sick-parades?—I had a complaint about the men having to wait on the sick-parade at one time. I could not say who actually made the complaint, but it was said that some of them had to wait for an hour—some more, some less. But after that complaint was made there was some provision made to give the men shelter while waiting.

8. It was a fact that some of the men were kept waiting for an hour?—As far as I can judge. I was not in attendance on any sick-parade, but from statements made to me I take it that that was the case.

9. Was there any illness amongst the officers attached to your company—did any of them have the measles?—Yes, there were some cases of measles in my company's officers.

10. Among the commissioned officers?—Yes, I had half of my officers away. I do not know who made the complaints. We had a great number of men, and we had several complaints.

JOHN RICHMOND COWLES further examined.

11. *The Chairman.*] Do you know Sergeant Gair?—Yes, he was one of my platoon sergeants.

12. Do you remember any difficulty he had with boots?—No, I do not think he has actually reported to me any difficulty about boots.

13. Do you know that he went to Samoa?—Yes.

14. He gave this evidence: "How is it you did not get two pairs of boots?" "They would not issue any from Samoa. They said there was only one issue. I pointed out that they were issued in November last. I had had six months' wear out of my boots, and the new men who came in only had four weeks'. The sole of one of my boots came off. I complained to Lieutenant Cowles, and he told me to go to the quartermaster-sergeant. I went to Captain Simeon and he put me off, and I never really got the boots at all."?—It is rather hard to remember exactly whether it was Sergeant Gair. We have had a good deal of trouble with boots.

15. Then he says, "I spoke to the company quartermaster-sergeant. First I spoke to the company commander, and he said the quartermaster was to take me round and get me a pair, but I could never get the quartermaster free when I was free, and he never got me a pair." *Q.* "Who was it you first spoke to"?—*A.* "Captain Cowles." You say there was trouble about boots: what was the trouble?—In many cases the boots had not been fitted on, and some were small and some were too large.

16. There was delay in issuing them?—Yes; the whole of the company was not provided with boots straight away.

17. What do you mean by "straight away": did they get them within a couple of months?—Inside two months. There were some sizes the stores were unable to supply.

18. Could you put it any closer than that—inside two months?—I could not say definitely, but I should say that every man had his boots at least within a month.

19. That was largely because they had not got them there, was it not?—In many cases, yes; they had not got the sizes.

20. How did it come to pass that they got these unfitting sizes—these non-fits?—We instructed the men when they went in to be very careful about the fitting of boots, and we were not able to watch each man. The consequence was that some men came away without fitting the boots on. They would simply say, "Size 6," or "Size 7," and would take the boots without fitting them on; and when they came to put them on, after they had signed for them, in many cases the boots did not fit at all.

21. Could they not get them changed then?—We had difficulty in changing them.

22. Why?—The stores were not very keen on changing boots.

23. What if a man had just tried them on and found they would not fit?—What we had to do in the end was to try and arrange to change the boots within the company—between each other.

24. Was it to discourage men from complaining that they did this, or what was the reason for not being willing to change them?—The stores did not want to change boots, so that was the only thing we could do—to try and work down the exchanges as much as possible by getting men to exchange in the company.

25. *Mr. Ferguson.*] Did you report that to anybody?—That was a general thing. Our own headquarters knew about it.

26. Did they take any action?—I would not move in that matter at all.

27. *The Chairman.*] The position is that the "Trenthams" came in—your own company in particular—at the end of May?—On the 29th May.

28. And they did not get their second pair of boots for a month in many cases?—In many cases, yes.

29. So that in the event of wet weather they would have nothing to change into unless they happened to have brought their own boots?—That is the case.

30. And it was during a very wet period that that happened?—Yes.

31. Did the men frequently complain to you of their wet feet?—I have not any recollection of men making any special complaint about it.

32. But you knew there was complaint generally on their part?—Yes, generally speaking. I knew that some of the men had only one pair of boots, and, of course, with the wet weather I knew their feet must be wet.

33. And there were no means of drying them?—No.

34. *Mr. Ferguson.*] The officers had no means of drying their clothes or boots?—No.

35. There was no difference in treatment?—No difference at all.

36. *The Chairman.*] Perhaps they had two pairs of boots?—Yes. I had four pairs, as a matter of fact.

37. *Mr. Ferguson.*] And it took you all your time to keep your feet dry?—I had to change them sometimes during the day to keep my feet dry.

Dr. STOUT sworn and examined. (No. 96.)

1. *Mr. Salmond.*] You were in Trentham Camp as Principal Medical Officer for some time: can you give the dates?—From the 12th June till Colonel Morice came in—I do not know when that was.

2. That was on the 28th June?—I acted while he was there for a few days.

3. And what were your duties before the 12th June?—I was one of the Medical Officers to attend the sick-parades. I also acted as Sanitary Officer and Orderly Officer.

4. You were Assistant Medical Officer?—Yes.

5. Who was the Principal Medical Officer?—Major McAra.

6. What became of him?—He went away with the Fifth on the 12th June.

7. So that you had the responsibility of P.M.O. for about a fortnight: how long were you in camp as Medical Officer altogether?—From the 20th May, about.

8. Did you attend sick-parade every day?—Yes, sir.

9. Twice a day?—Twice a day, unless I was off. I used to go off occasionally.

10. The morning parade was at 8 o'clock?—The parades were at 8.15 a.m. and 4.15 p.m. In some cases we were there earlier.

11. What other Medical Officers attended besides you—how many, as a general rule?—Sometimes there were four of us, sometimes five, sometimes six; and sometimes, if it was a small parade, two could do it.

12. You remember cases when there were only two?—Yes, I think I do.

13. It has been suggested by the newspapers that there were none sometimes: is there any truth in that?—No truth in that, and you can prove that by the sick-reports.

14. What accommodation existed for the sick-parade—first, in respect of the medical men themselves ?—When ?

15. During your time ?—A marquee with tables and chairs.

16. What about the dispensary ?—That was in a marquee—a separate marquee.

17. Who was in charge of that ?—A dispenser.

18. Was he a trained man ?—He was not a registered qualified chemist—not a M.P.S.

19. What experience had he ?—There were different chemists in there. Some of them had had five years' experience as dispensers. There was one man named Kelly, but I am not certain whether he was a qualified man. At one time they had a qualified man from the hospital ship. The other men had had a great number of years' experience in dispensing.

20. What accommodation was there for the sick men who were waiting, before Dr. Valintine came into camp on the 23rd June ?—They waited outside of the marquee, and some inside later; when the weather was bad they had marquees to stand in.

21. Before Colonel Valintine came ?—Yes.

22. When you first went there was there a marquee specially set aside for soldiers to wait in ?—No.

23. Then, they waited either outside or they came into the doctors' tents ?—Yes; in those days there were not many on the sick-parades and we got through them very quickly.

24. When was a marquee provided for troopers to wait in ?—I do not know the date.

25. Was it before Colonel Valintine came ?—Yes, sir.

26. *The Chairman.*] How was it, then, that Dr. Valintine tells us that this was one of the first points he addressed himself to ?—They were there about the 12th or 14th June.

27. *Mr. Salmond.*] At first when you went there, on the 20th May, there was no place for the troopers to wait; then afterwards, you said, marquees were provided: do you remember the occasion ?—I think it was when the hospital tent left there and went up to the other end.

28. What does that mean ?—When it went to the racecourse. There was a marquee left there which they could have used if they wanted to do so.

29. But before the 13th June, when Colonel Valintine cleared all the sick men out of the marquees, what was the position in regard to waiting troopers ?—They waited in the marquees in which we inspected them. There were very few received before then.

30. Until Colonel Valintine cleared out the sick men into the racecourse buildings there was no marquee for the waiting men ?—There was one marquee they could have used—Colonel Purdy's marquee.

31. How could they have used Colonel Purdy's marquee—would not that have been high treason ?—He only used it as his office when he visited the camp.

32. *The Chairman.*] Would any man, a mere private, venture into a sanctum of that description ?—Yes, sir, if it were wet weather.

33. But that tent of Colonel Purdy's was not specially set aside for the use of these troopers ?—No, sir.

34. Was there any reason why they should have gone into that tent any more than into any other tent ?—No; but it was vacant.

35. *Mr. Salmond.*] Then your suggestion is that they could have gone into the tent of the Director of Medical Services: did you expect them to do so ?—If any considerable amount of rain came on I would tell them to get under shelter. In those days the weather was fine, but if it was not they came into the marquee where we examined them.

36. And the first special provision was made during Colonel Valintine's time ?—Well, he says "after the 23rd." As far as I know it was before.

37. What accommodation was made then ?—There were three marquees, I think, and another one that was blown down and put up again.

38. Were they the old hospital marquees ?—Yes, one was not, but I think three were.

39. Were the others specially provided ?—I think two were specially provided.

40. By whom ?—By the Quartermaster.

41. At whose suggestion ?—I do not know.

42. Who ordered the tents to be provided ?—I do not know.

43. Would that be in your function ?—I could have asked for them, but I do not remember doing so. I did not write anything down asking for them.

44. That was in Major McAra's time ?—Just after.

45. In your time, then ?—Yes, sir.

46. And you were P.M.O. and you did not supply these tents ?—They were left standing there.

47. No tents were specially provided for the waiting troops at any time up till Colonel Valintine took charge ?—I do not think you can say that. Of course, if you have empty marquees you cannot say that they were specially provided, but they were there and could be used. I know that on one day I stopped the sick-parade and pushed the men into the marquee. I have often told them to go in the marquees.

48. You told us there was not any accommodation, and now we find there were three marquees. Colonel Valintine moved the men out, and that was how the marquees became vacant: that was on the 13th ?—Yes.

49. *The Chairman.*] From the 13th to the 23rd June, then, there were these empty marquees ?—Yes, sir.

50. *Mr. Ferguson.*] And on one occasion you told the men to go into them ?—On one occasion I told the corporal in charge of the men to have the men put into the marquees, also that there was another marquee if necessary.

51. A man coming there ill might have to wait an hour?—Quite likely.

52. In the meantime, we hear they were unable to stand, and some of them had to sit down somewhere?—I have seen them sitting on tins.

53. *Mr. Salmond.*] Was there no seating-accommodation provided for them?—Not as far as I know.

54. Do you not think there ought to have been seating-accommodation provided for them?—Most of these men could stand all right.

55. Do you not think that a man with a temperature of 100 or 101 should be provided with a seat if he has got to wait half an hour or an hour?—It would be a good scheme if he could sit down.

56. Did you ever suggest that it should be done?—I suggested that later, when we got the shed.

57. What alteration did Colonel Valintine make—did he provide a hut or another marquee?—I think I am the one who is responsible for providing a hut. Captain Tolhurst said to me, "Why not collar a hut?" and we got it.

58. That was on your own initiative?—Captain Tolhurst suggested it to me. I obtained the approval of Colonel Morice, and we got it from the Camp Commandant.

59. Do you know when that was?—I told Colonel Valintine about it. I do not know when it was.

60. Before the hospital ship left?—Yes, somewhere in the middle of the week, probably on the Wednesday.

61. Was the hut much used after you did supply it?—Yes, it was used. We used it as a general out-patient department until Colonel McGibbon thought it better to separate up again.

62. What was it used as?—Waiting-room, dispensary, orderly-room, and dressing-room.

63. Then it was not a waiting-room for the men?—It was a double hut.

64. *The Chairman.*] They would not be able to lie down?—No, most of them were on forms. There might have been five or six.

65. You are satisfied that after the hut was supplied no men had to wait outside?—That is so.

66. *Mr. Ferguson.*] Did you take down the partition?—There was no partition there.

67. *Mr. Salmond.*] Is that the system now?—It was when I left. I am on extended leave at present.

68. Do you know what arrangement was made for getting the men to the hospital from the sick-parade?—They were marched along to the hospital. There were different arrangements at different times.

69. Is it not a fact that a man had to be taken there by a non-commissioned officer?—That is the idea.

70. Do you know of a case where a man had to wait a considerable time before he could be taken to the hospital by a non-commissioned officer?—I do not know of a definite case.

71. *The Chairman.*] Do you know of any case where a man was sent to the hospital on a doctor's ticket and was told that they could not take him in, and he turned up on sick-parade next morning?—I had nothing to do with a man after he left the sick-parade.

72. The parade was continuous when the epidemic was on?—It was continuous—there would be an odd case during the day.

73. *Mr. Salmond.*] You would not be engaged all day at the sick-parade?—Not all day, but you would get odd men coming in. There must be a doctor on the spot or handy.

74. So that you were there practically all the time?—There was always some one on duty there.

75. Have you heard of cases where men found to be suffering from measles, or otherwise, with a temperature, had to wait on the sick-parades for hours to go to the hospital?—After they had been diagnosed as such, no. We had to send a few into the marquee until that batch was finished. They would come in with the orderly-corporals, and he would take charge of the men and take them along. We took them in batches. The orderly-corporal brings the men along with the sick-reports.

76. *The Chairman.*] If you found a man at 8 o'clock in the morning and diagnosed his case as measles, with a temperature of 102, what would become of him while you were collecting your batch of patients?—We would put him into the marquee. We kept them in the marquee in the early days. There were only a few put in there.

77. I am referring to the later days: what did you do with him?—There was another marquee for him to stay in, under cover.

78. That is where the waiting men had to stay?—No, a special marquee for that purpose—for men to wait who were going to the hospital.

79. Had that seats in?—A few boxes in it perhaps. They did not have to wait very long in there.

80. Do you know whether there was any seating-accommodation in the marquee?—There might have been one or two old boxes.

81. Did you never go in to see?—Yes, I have seen boxes there.

82. Were the boxes meant for that purpose—to sit on?—No; there were no special forms provided.

83. Do you not think there ought to have been?—They were not in there very long. It might have been a good scheme to have had them.

84. *Mr. Ferguson.*] How many men would there be in a batch with one corporal?—I have seen thirty on one sick-report, but there would not be thirty to go to the hospital.

85. Then you had to examine thirty before the first man could go to the hospital?—We considered it better to send these men along in batches. Then they did out get lost, and when they got there they could be fixed up properly.

86. Do you know that that is one of the first things that Colonel Valintine altered—in regard to this waiting of soldiers to be taken away to the hospital?—Do you mean that he decided how the men ought to go? There were two or three different orders. When we decided upon one method, if it worked well, we kept it.

87. Have you any knowledge of the fact that a day or two after Colonel Valintine took charge he wrote to the Camp Commandant giving instructions that an alteration was to be made in this matter of taking soldiers to the hospital?—I have heard of it here, but I would like to read it.

88. He wrote to the Camp Commandant as to the delay in the sick coming on to the hospital. The letter was written after he had been informed that a soldier who had reported sick at the sick-parade that morning, and was diagnosed about 9 o'clock as suffering from measles, had to wait until 3.30 in the afternoon before he could be taken to the hospital, because there was no non-commissioned officer?—Did he come to the sick-parade, this man? I do not know how he got lost like that. The orderly-corporal ought to have brought him. I do not remember that case.

89. Do you know anything about that direction of Colonel Valintine's?—If he gave a direction he would most likely quote that case.

90. Did he issue any instructions at all about the way in which these men were to be sent on to the hospital?—I cannot remember.

91. I want to know whether that communication of the Camp Commandant ever reached the medical authorities?—I do not remember it. If he sent instructions he would have copies.

92. I am asking you whether you received any instructions from the Camp Commandant about this matter?—I cannot remember. If there are any definite instructions he would send them in writing.

93. What arrangements were made about the sick men's kits being taken to the hospital?—Three or four different arrangements.

94. Did they carry their own?—No; the usual thing was to get some one to carry them. I told the orderly-corporals they were to get some other men to carry the kits. I often stopped a batch and asked who were carrying the kits.

95. Have you ever seen sick men carrying their own?—I would not see them marching along there, but I have seen different parties marching along, and have asked the orderly-corporal about the kits, and told him not to let the sick men carry them.

96. Did you see sick men carrying them?—They were not the sick men.

97. If you did not see sick men carrying their kits, why did you give instructions that they were not to do it?—There were different orderly-corporals, and I wanted them all to know.

98. *The Chairman.*] Did what you saw lead you to believe that sick men were carrying their kits?—No.

99. You thought it necessary to repeat the injunction: was not once enough?—No, because there was a different orderly-corporal each day. It is quite natural for a man only a little sick to try and carry his kit.

100. *Mr. Ferguson.*] We have it that men did carry their own kits. There would be a large number of orderly-corporals?—One went on parade each day. It is quite likely that the men might have carried their own kits.

101. What were your duties as Principal Medical Officer, in addition to attending the sick-parade?—I may say that personally I was not supposed to attend the sick-parade, but I did so. Then, there were other duties about boarding men. There are all sorts of odd jobs that you find about the place. You get a letter from the Camp Commandant asking you to do something, and you have to attend to it. There are all sorts of jobs.

102. Who has the general supervision of the medical affairs of the camp?—The Principal Medical Officer has the general supervision inside the camp.

103. Including hospitals?—Yes.

104. So the arrangements in the marquees that existed up to the time they were cleared out by Dr. Valintine were under the charge of the Principal Medical Officer?—Major McAra. He was there till the 12th. I heard late on the 12th that I, being the senior man there, had to take over the duties.

105. *The Chairman.*] You were the senior man for ten days only?—Yes.

106. *Mr. Salmond.*] Was there any system of medical inspection of the troops, apart from the sick-parade? Was there any system of the medical men going round the camp and visiting the tents and seeing that there were no sick men about?—That was sanitary parade. Sanitary parade was done every day.

107. Was there a system of inspection to see if there were sick men about the camp who did not come to the sick-parade?—If there were any sick men about the camp they would be seen on the sanitary inspection.

108. Was there any system of visiting sick men in their tents?—That has been done.

109. Have you ever visited a sick man in his tent?—I have done it; and in the huts too.

110. How did that come about: there was a message brought to the Medical Officer that a man wanted to see him?—A message was brought.

111. A man who had not got up in the morning stayed in his tent and sent for a doctor?—The Lieutenants—and the Captains—used to send notes saying they had sick men in their lines.

112. We have heard that the sick men were, in the words of one witness, "marched down to the sick-parade" late in the morning—all sick men, apparently?——

113. *The Chairman.*] Many men who were sick suggested that they ought not to have been marched down at all: they were marched down in wet weather or dry weather, they said? The system is to have a sick-parade, and the orderly-corporal writes them in the report and brings them down. If you wanted medical men to visit all round the place they would never get done. If the men were to stay in their tents and get a Medical Officer to go round, when would he finish?

The Chairman: The point is not that you should get done, but that the men should be attended to.

114. *Mr. Salmond.*] It is not a question of whether you could finish your work, but whether these men are exposed to unnecessary risks by being brought out in bad weather when they have measles.

In view of the existence of measles in the camp, would it not have been a proper thing to have inspected the troops who were not well in their own tents?—You mean to get a report of the numbers of the tents where they were, and the medical men to scatter all round the camp and go and look at them?

115. I suggest that that would be better than asking a man with a high temperature to go out at 8 o'clock on a bitterly cold morning in the rain and wait for an hour in front of a doctor's tent to see if he suffered from measles?—Have you ever thought how it could be arranged?

116. Do you think that a system of bringing measles patients to the doctor in the way you have described is a proper system?—Could you tell me a better system?

117. *The Chairman.*] It is not a question of whether there is any better system or not, but whether it is likely to affect the health of the patients, suffering from measles, to be brought out in that way and having to wait possibly an hour outside the tent in wet weather before being examined?—In hospitals I think you will find that people come up and often have to wait in the out-patient department quite an hour before being attended to—whether they have pneumonia, appendicitis, or any other complaint.

118. *Mr. Salmond.*] You are quite satisfied with the system?—I do not see what other system would work.

119. Very well. You have no criticism to offer of the system and are quite satisfied with it?—I should think a very good thing would be to have a motor-ambulance and take a man up and down to the sick-parades and all over the place like that. That is the only way they could do the work. You must recognize that the camp was of considerable extent, and the cases were not diagnosed as measles till they went on sick parade; you might have a man with a slight headache, and do you mean to say he could not go to the sick-parade?

120. I suggest to you that he is not a fair judge of whether he is fit to be exposed to the weather or not. However, you have said you are quite satisfied with the system?—I do not see what other system there could be. Of course, you could do it in huts; you could keep the men in there till they were looked at.

121. Could not the doctor go round these huts every morning and find out what men were sick?—He could.

122. Would not that be a better plan?—Yes; but you would have to get a good number of doctors to do that in the morning, or the men would be waiting in their huts for some time.

123. The sick men could wait in their huts as long as was necessary: there is no objection to that, is there?—No; but you would be taking the man's diagnosis as to whether he was ill or not.

124. *The Chairman.*] It is the man's temperature that enables you to say, I suppose? He does not know what his temperature is?—He does not know what is the matter with him till he gets down there and is diagnosed.

125. *Mr. Salmond.*] You know that there was no system in the camp for enabling the troops to get their clothes and boots dried?—Except the sun.

126. When there was any sun?—There were only a few days of wet weather.

127. Is that conducive to the health of the troops?—No. A report was sent in about that.

128. Who sent in the report?—I remember that Captain Ferguson, about the first day he went round on sanitary parade, sent in a report to his superior officer. Where it went I do not know. He sent in that report in the first week he was there.

129. Have you any idea what time that was?—It would be some time in May.

130. He went into camp at about the same time as you did?—I know that Captain Ferguson made a report on the want of drying-apparatus.

131. Who was his superior officer?—Major MaAra. The report was sent in to him. I think it was Captain Ferguson.

132. Did you ever have any conversation with any of the Medical Officers about the matter?—Yes, we discussed it.

133. With your Principal Medical Officer?—I cannot remember speaking to Major McAra. But this report was put in. That was good enough, was it not?

134. Do you know what view he took of the matter?—No; I do not know what his views were on the subject at all.

135. The report, evidently, was not good enough then?—All you can do is to put in a report.

136. He took no action on it?—He may have sent it on to the Camp Commandant. I do not know. Once you make a report to your superior officer you cannot go and fuss round and see what he has done with it.

137. Why not send another?—You could do that.

138. You do not know what was done? You do not know whether the Principal Medical Officer objected to doing anything, or whether he communicated with the Camp Commandant and the latter refused?—It would not be my business to find that out.

139. You know that there was no provision for hot water or hot shower-baths of any sort in the camp?—Yes, I know that.

140. Was any representation made on that point by any of the medical authorities?—I should think so, but I cannot remember that. We knew the hot showers were on their way. They had decided on that matter, I think. There were cold showers there, and I am not certain that that point was mentioned in the report. That was when Major McAra was there, and I did not have to do with it.

141. However, you never made any representations to any one?—I did not write to the Camp Commandant about it. I had heard they were on the way. In fact, I saw from the paper that some of the people of Dunedin had subscribed £200 for the purpose. That was a mistake, I heard later. They could not be made; the authorities did not have enough workmen to make the huts.

142. *Mr. Ferguson.*] As a matter of fact, they are there now?—Yes, I have seen them. They were there two or three weeks ago. The last time I was there I saw the buildings being put up.

143. *Mr. Gray.*] Was the system of sick-parade which was in force in your time being carried out on the same lines as former sick-parades?—Yes, that was the usual routine, I thought.

144. The usual routine, as far as you know, was adopted?—At 8.15 in the morning and 4.15 in the afternoon; and any man who falls ill during the day can be seen by the orderly-officer, who is on the spot.

145. The orderly-officer being a doctor?—Yes. One was appointed for each day.

146. Would a man who felt sick during the day between parades know that he might see a medical man?—Yes, if he asked his orderly-corporal he ought to know it.

147. Were there occasions on which you yourself visited men in their tents who were sick?—Yes, I have done that.

148. And were they not compelled to go to sick-parade?—I remember going to see different men. I will mention a case—that of a man who was kicked in the face by a horse.

149. Were there other cases in which you went to see men when asked to do so?—Yes.

150. Do you know that your brother Medical Officers did the same?—Yes. Once I was worried at lunch-time to go and see people, and I went and saw them.

151. You did not object to doing that, of course?—No.

152. Do you know of any instance of a man coming to sick-parade in the morning in a state which made it dangerous for him to be out-of-doors?—I remember one morning seeing a man brought down on a stretcher. He was very ill. I said, "Take him to the hospital immediately."

153. You sent him off without waiting to diagnose his case?—It was quite good enough to look at him. There was no use stripping a man or doing anything like that when you saw he was really ill.

154. Do you know of any other case in which it would be dangerous for a man to be on parade?—I have seen one or two men pretty bad on sick-parade, and I have ordered stretchers to be got for them.

155. You do not know of any means by which the system could be improved unless you had a very much larger staff?—You would need a larger staff if you were to visit round the place and to rush them round in motors. I do not see how you are going to do it otherwise.

156. Have you had much experience of military regulations?—No.

157. This is your first experience?—Yes. It is just the same experience that you get in a hospital. Men come up there and have to wait. The out-patient department of a hospital is generally run in the same way as this place.

158. Do you think any unnecessary hardships were suffered by men waiting on sick-parade?—It is not a nice thing to wait about in the mud when you are ill.

159. From the time you went into camp there was some provision made for men who were waiting?—I say there was a marquee there which they did not use.

160. Was that the one which belonged to Dr. Purdy?—Yes. He would not be there in the early morning.

161. Can you say that the men would know that that was available?—If it was wet they could easily go in there, I do not know whether they would know.

162. I understood you to say that you had seen men there?—No; I did not say I had seen men in the tent, but in the other marquee where we were examining.

163. It is suggested that that marquee would not accommodate all the men who were waiting?—No, possibly it would not; but in those days the sick-parade was not very big.

164. You speak of the month of May?—Yes.

165. When the pressure became greater, was provision made for waiting men?—I know there was provision about the 14th June for men to wait.

166. Another marquee?—There were marquees after the hospital had been shifted to the other place.

167. I understood you to say that you had sometimes ordered men to go into the marquee?—Yes, I pushed them in one day, and I have ordered them on other occasions.

168. Did they appear willing to go?—They did not want to go in. They thought they might miss their turn at the dispensary, or preferred to remain in the open.

169. *The Chairman.*] Was it that they objected to being in a tent where there was a chance of infection?—They did not tell me that that was their reason.

170. You guessed their reasons, then?—They were out there. One day there was just a slight rain.

171. We have had it that it was often more than a slight rain?—I mean that on this particular day when I pushed them into the marquee it was just a slight rain.

172. *Mr. Gray.*] Your belief was that they did not want to go in because they would miss their turn?—I can definitely state that that day I had to push them in.

173. And you think that their reason for not wanting to go in was because they were afraid of missing their turn with the doctor or the dispensers?—Yes.

174. As to the dispensers, were you satisfied with them?—They seemed to do their work fairly well. When there were too many of us in the inspection-tent I used to go into the dispensary, and give slight instructions and see what was happening in there.

175. *Mr. Ferguson.*] What system of training medical orderlies was there at the time you were Medical Officer?—The training was in the racecourse hospital. They took all the available men they could get hold of to go to the hospital.

176. They had had no experience prior to that?—They had a little drill and route-marching, and when the hospital ship was in port they had lectures. The men we could allow off would go to those lectures.

177. Apart from the hospital ship, there was no system of giving lectures?—Not while I was there. I do not know what happened before that. But while I was there very few men could attend those lectures.

178. *The Chairman.*] Were you there during the time the throat-brushes were used in the camp hospital—brushes for painting the throat? That was done at the dispensary. Do you mean on sick-parades or in the camp hospital itself?

179. Both?—I do not know anything about what happened in the camp hospital.

180. What was the provision in regard to brushes at the dispensary?—They were sterilized in lysol. I definitely saw them in kerol. We saw them put in there and left in.

181. What we were told was that a brush would be used for one throat, dipped in water that had something in it, and then used on the next man?—I did not see that. When I was in there I explained that it would be better to use cotton-wool than brushes. I do not like brushes much. I did not do that because I saw them using a brush without sterilizing it, but I thought cotton-wool was better than a brush.

182. Do you know if they were using the same brush in half a dozen throats?—Without sterilizing in between?

183. Yes?—No, I do not.

184. That could be done in the dispensary?—Yes.

185. Who would do that?—One of the orderlies or the dispenser.

186. Do you know any orderly or dispenser who was there in your time: who was the dispenser in your time?—A man named Kelly was there; he went away, and we had a man on the hospital ship then. I do not know what became of him. A man named Broome was a dispenser there.

187. Has he gone?—He is on leave, I believe. And there is another man up at Waikanae.

188. Things altered when you got into the hut with regard to brushes?—I do not know. But I definitely told them, before we shifted into the hut, that I would like cotton-wool on the end of a stick better than a brush.

189. It may have been that the orderly—most of whom, you say, were not trained—was using the brush in this way?—I should not think so. It would be more or less sterilized in between. I never saw it done.

190. Had you plenty of brushes, then?—I have seen half a dozen brushes there, I think.

191. You would want more than half a dozen: they could not make half a dozen go round?—They could sterilize them between times.

192. *Mr. Ferguson.*] Who would requisition for stores of that kind?—I would sign while I was in charge there.

193. Were there many requisitions that you signed for?—Not very many.

194. What system was there by which to know what things should be requisitioned for?—The dispenser would bring along a list of the things that he wanted. When I was in charge I wanted them to get stock taken by the dispenser to see what they had and what they wanted. They made out a long list of drugs, and I would go over it, and if I thought they would not want those drugs I scratched them out.

THURSDAY, 5TH AUGUST, 1915.

Mr. Salmond: Your Honour made certain comments on the action of the Defence Department in proceeding with the erection of the huts, and I should like to make a statement in regard to that and other kindred matters, and in order to avoid any misapprehension I desire to speak as explicitly as I can in regard to the functions of this Commission. I suggest it is only necessary to read the Governor's Warrant by which the Commission was appointed to see that the primary and essential function of the Commission relates to the past and not to the future. It is a judicial body to inquire into what has happened in the past, and allocate any blame that may justly fall upon any officers or other persons concerned in the administration of the past of defence matters. It is not essentially or primarily an advisory body on which the Government or the Defence Department desires to shift its responsibility for the future administration of defence matters in this country. Those responsibilities continue to rest, and will rest, on the same shoulders that they have always rested on. Incidentally, of course, an inquiry into the past must involve a reflection on the future also. Criticism on something that has existed amounts naturally and essentially to a recommendation for an alteration, but that is merely incidental. The origin of the Commission is a matter of common knowledge. Cries and numerous charges were made against the Defence officers and Medical Officers of negligence, incompetence, and carelessness in the exercise of their duties. Those charges were made in Parliament, in the street, and in the newspapers: specific officers are implicated, specific cases are referred to; and, as I have said, the reason for establishing this Commission was that those charges should be properly inquired into, that the public should have an opportunity of coming before a judicial body, substantiating those charges if they wish to do so, and that a judicial finding may be obtained throwing light on the whole of the suggestion. That is essentially the purpose for which the Commission is now sitting. Any recommendations as to the future will undoubtedly be welcomed by the Government, and will be given very full consideration, but the appointment of this Commission is not to be regarded, I beg to submit, as a stay of proceedings on the part of the Defence Department. They must proceed with the military matters of this country, with the equipment of the camps, with the equipment of the Expeditionary Forces, as if no Commission had been sitting, and they have, I submit, rightly taken up their position. This is a matter of extreme urgency, and there can be no question of suspension of activities on the part of the Government or of the Defence Department in respect of those matters. Reading the Warrant, the only clause in it which suggests a recommendation

or advice as to the future is clause 11, relating to the site of the Trentham Camp: "Whether sufficient sanitary or other reasons exist for the removal of the camp from its present situation." I may say quite frankly that the question of the removal of the Trentham Camp from its present site is not now a matter for practical consideration. Trentham Camp has had many thousands of pounds expended on it. There is now in progress of expenditure in the way of a great scheme of improvement something like £20,000. The question of the safety of the camp from the point of view of the health of the troops has already been reported upon by a large and presumably competent body of medical experts specially appointed by the Government to report upon that specific fact, and they have reported to the Government that there is no reason why after certain precautions have been taken that Trentham Camp should not be occupied as a camp.

The Chairman: Well, speaking for myself, I am obliged to you, Mr. Solicitor-General, for the statement you have made. We quite recognize that the scope of this Commission does not extend to an elaboration of what should be done in the future. The observations we made yesterday were directed to the question of hutments, and there has been so much evidence brought forward both from a theoretical point of view and from the practical experience which the men themselves have had, although any finding, if one should so find, that the huts were improperly constructed or were not fit places for the men, must necessarily affect—if any notice at all is to be taken of that finding—the construction and adaptation of the huts in the future: so that the observation made yesterday with regard to the findings of the Commission were directed only to the question of the hutments, because, from the special nature of the subject-matter, any finding of the Commission adverse or otherwise must necessarily have some effect in the future. The Commission certainly does not propose to go outside the scope of its Commission, and, speaking for myself, I quite recognize that the military activity must go on. But we have these questions to answer, and whether the military activities have gone on which should not have gone on while the Commission is sitting is, of course, not a matter for us.

Mr. Salmond: I should like to say again in reference to the huts that undoubtedly it is within the function of this Commission to criticize those huts. Any such criticism would be a criticism of the officers responsible for making them, and the question at all times of the safe accommodation of the troops is one of the subjects submitted by warrant to this Commission. But, at the same time, I desire to state that certain further huts have been and are being erected by the Government at the present time. They are not of the same nature as the huts now existing. In the first place, they are wooden, and not iron huts; they are of a different system of ventilation, and they are adapted for much smaller numbers of men. At the same time, I think I am bound to say that the system of accommodating men in huts is essential. It is impracticable and impossible to accommodate the troops in tents, and whatever may be the advantages of putting an army in tents instead of in huts, that question must be regarded as merely a question of the ideal and not a question as to what is practically possible.

The Chairman: There is one other matter that arises out of your observation. It is stated that it is well known what the cause of this Commission was. Speaking for myself, I cannot say that I know it is well known. I knew that there were charges made against the camp, but what the real cause of this Commission was I cannot say. All I know is that here it is, and that we have got to deal with it. Then it is said that the purpose was that we might inquire into those various charges that had been made and allocate the blame. I might say, on behalf of the Commission, I wrote to the Government at an early stage of this inquiry asking them to mention the specific charges that had been brought to their notice, so that we might, instead of having, as we have had to do, to grope round in order to find the fault, have something specific before us. We have had no answer to that beyond the statement that it would be considered.

Mr. Salmond: With respect to that matter, I am aware that the Commission wrote to the Government with that request. The matter has been attended to so far as possible, although no formal communication has yet been made to the Commission. I have had a search made of all the newspapers with a view to seeing what charges have been made public. Most of those matters have already been inquired into. There are some that have not, and I have endeavoured to give an opportunity to all those persons to come here and make those charges themselves. It did not seem part of my function or part of the function of the Government to bring those matters forward on behalf of persons who would not come before this Commission and substantiate the charges. It is a difficult position for us to be in. There are charges made, rumours in the street, conversations heard in the street, letters in the newspapers, and leading articles in the newspapers from one end of the country to another. If the Commission so desires I could place before the Commission a complete collection of the newspaper-cuttings containing those charges. I could also analyse and prepare a list of the suggestions so made in the newspapers, but I am not aware that it would be of any real assistance to the Commission or lead to any practical result.

The Chairman: We have had several individual cases before us, and if no other individual cases are brought before us it is beyond our power to define what they may be. We have no list.

Mr. Salmond: I would suggest this: that I can place before the Commission newspaper-cuttings relative to the whole matter, the relative parts being marked. The Commission will then be in a position to know whether they have in the course of the inquiry adequately investigated every charge that desires reasonable investigation. I think the Commission, viewing those papers that I will submit, will be of opinion that they have done so; but until the Commission has at least reached this stage in its inquiry I do not consider myself justified in laying before the Commission charges that were not my charges or Government charges, but were only newspaper rumours which, if they could be substantiated at all, ought to have been substantiated by the person who made them.

The Chairman: Well, we should like, of course, after having spent so much time, to feel that we had covered the whole ground, and that suggestion which you make may prove of value. Of course,

we should do this—see that we had had in respect of the complaints that are made typical cases at any rate brought before us, and we should be able to judge from what we know now whether anything would be gained by going into further details of specific cases. Upon that, of course, we could determine if any investigation of those particular cases should be further proceeded with.

Mr. Salmond: I will submit the cuttings to your Honour in the course of the day.

Mr. Gray: May I suggest on behalf of those I represent, and those who may be implicated, that it is not the function to have a roving commission and to search through the papers of this country to see what charges may be inquired into. The Solicitor-General has offered to lay before you apparently a precis of the statements made in the newspapers so far as can be ascertained, with a view of inviting the Commission to deal with matters which are alleged in the newspapers. I suggest the Commission has done quite enough by inviting persons who may feel aggrieved to attend here or be represented here to voice their complaints. The fact that this Commission is sitting is known throughout the country. The fact that the Commission is open to all persons concerned so that they may have their complaints investigated by this Commission has also been widely advertised, and I suggest that it would be inexpedient to inquire into charges made by anonymous writers in newspapers. It seems to me, if the Commission is going to investigate newspaper charges without evidence being produced in the proper way there will never be an end to the Commission. We have already had experience here of at least one case which has been grossly exaggerated by some person who is responsible for the publication in a newspaper of a statement in regard to the case. The newspapers cannot be blamed for publishing what is communicated to them in regard to matters of great public interest, and without investigating the truth of the statement, but if the Commission is going to inquire into any charge that any newspaper has chosen to publish there will never be an end to it.

FERDINAND BATCHELOR further examined. (No. 97.)

1. *The Chairman.*] I understand you wish to make a statement?—Yes. A paragraph which appeared in the *Dominion* quite misrepresented my views with regard to those cases under treatment at Trentham. It was so obviously incorrect that I thought it was hardly worth while drawing attention to it, and it was not until yesterday when I heard Colonel Valintine's evidence that I considered it necessary to explain the matter, because I was somewhat dismayed to find that he had accepted the statement as being correct. The statement is this: "Colonel Batchelor said that the New Zealand epidemic was peculiar. It bore such a close resemblance to influenza that he was inclined to the suspicion that it might be no more than virulent influenza. In this doubt Mr. Allen did not share." Well, that is absolutely wrong. From the very first day I visited the camp there were typical cases of cerebro-spinal meningitis, and I have not the faintest doubt from the clinical signs and from the bacterological evidence that there are at the present time twelve cases of cerebro-spinal meningitis, and I think probably there have been more. I may mention that I called upon the Hon. Mr. Allen this morning with regard to this question, but he had not got the impression conveyed by this paragraph. The impression he had was that which I desired to convey—namely, that there were several cases of influenza that it was almost impossible to distinguish from cerebro-spinal meningitis. Some suspicious cases would turn out to be influenza cases.

2. Your observations were directed to those—it was not intended to convey that there was no cerebro-spinal meningitis?—Not for a moment.

3. But there were cases there which bore a very close resemblance to it, but which might turn out not to be so?—Quite so.

H. A. DE LAUTOUR further examined. (No. 98.)

1. *The Chairman.*] Do you wish to make a further statement?—Yes, I wish to refer to a statement made by Mr. Muir yesterday which is not quite correct.

2. We cannot have one witness coming along to explain in regard to the statements of another witness?—It is simply an explanation with regard to what has been published and stated—a statement which would make it appear that the area of 4½ acres mentioned by me was practically an invention of my own.

3. What we know from the evidence is that you did not know what the area was, because you asked us what the area was at the time of your examination?—I beg your pardon, your Honour. It was derived from an article written by Mr. Muir on the 23rd February, and which appeared in the *Evening Post*. The article states that the new town will cover about 4½ acres.

4. We cannot go into those refinements—I do not think it affects the matter at all?—And I do not think I was correctly reported in saying that there were thirteen deaths at the Trentham Camp.

5. We cannot waste time like this. I do not think it is of any moment. You must write to the *Evening Post* to put yourself right in that matter?—I was accused of saying there were thirteen deaths at Trentham Camp, whereas the number of deaths covered those at Egypt, at sea, and also at Palmerston. I did not say that those were the deaths at Trentham. I handed him a list with the dates, localities, and everything else extracted from the newspapers.

6. Evidently there was a misunderstanding. Of course, Mr. Muir's evidence was sought because he went out himself to the camp and saw the conditions on that date?—Yes.

7. He also explained why they did not think fit to publish the letter you had written?—Because they misunderstood what I had said, and they had forgotten that that 4½ acres had been previously mentioned by the Press. The objection I have is that I knew of my own knowledge that there were two thousand men overcrowded into about 10 acres, and the idea of pressing 4,500 men into half that space seemed to me to be monstrous.

8. Well, it was not done, apparently?—No, it was not done, because that was one of the things I pointed out.

Captain DONALD PETRIE SIMSON sworn and examined. (No. 99.)

1. *Mr. Salmond.*] You recently returned from the Dardanelles?—Yes.

2. Where, I understand, you were severely wounded in the throat and mouth?—Yes.

3. You returned with certain New Zealand troops?—I returned on the hospital ship "Willochra," invalided on account of my wounds.

4. In what capacity did you go to the Dardanelles?—As Captain in the New Zealand Engineers.

5. You did not go from New Zealand?—I was in Edinburgh when the war broke out, and two days after war was declared I went into camp with the English Cavalry—2nd King Edward's Horse.

6. And then you subsequently became attached to the British section of the New Zealand Force?—I applied for transfer and it was agreed to, being transferred to the British section of the New Zealand Force who went into camp on Salisbury Plain.

7. How long were you in camp on Salisbury Plain?—During October, November, and December—three months.

8. Had you any other experience in England?—I was two months at Laneley Slough Park, near Windsor, with a Cavalry regiment.

9. Were you ever at Epsom?—No. I was originally in camp at White City, because there was no other camp available, and then we went to Slough. From there I went to Salisbury Plain, and we were in camp at what is known as the Sling Plantation, in tents, for about a fortnight or three weeks, and then we were removed into hutments which were in course of erection.

10. Had you had previous experience of New Zealand contingents?—Yes, I left as an officer with one of the New Zealand contingents for the Boer War.

11. Since you returned have you seen the Trentham Camp?—Yes, I visited Trentham Camp, Waikanae Camp, and Tauherenikau Camp.

12. I wish you now to state to the Commission how you think the New Zealand camp compares in various respects with what you saw in England. First, as to the accommodation for the troops. You lived in huts, I believe, on Salisbury Plain?—Yes.

13. Did they differ in any way from the huts at Trentham?—They were very similar—very slight difference.

14. What are they made of?—Iron, with wooden supports. When we moved in they were in course of being lined. There were probably two thousand hutments in various stages of completion. We went into most of them unlined, and the men later on assisted in lining the huts.

15. *The Chairman.*] What did they line them with?—We lined them with what they called "asbestos lining," but it was simply glorified brown paper.

16. *Mr. Salmond.*] What was the roof composed of?—The same sort of roof as you have at Trentham. That was lined later on just the same way as the walls were with this paper-mache, one might call it, which, when it got wet, peeled off and went musty, and was worse than nothing at all.

17. How were the huts ventilated?—Very well ventilated—too well. They had the same kind of windows as you have in the hutments at Trentham, although not quite so large, and they were higher up on the wall of the hutment.

18. Was there a space at the eaves for ventilation?—There was a small space of about 4 in. at the eaves—that is from memory.

19. *The Chairman.*] Any ventilation in the ridge?—No, sir. On the subject of ventilation I might mention that the flooring-boards were plain and not dovetailed, and they opened out from ¼ in. to ½ in. all along, so that there was a fair amount of ventilation coming up through them.

20. *Mr. Salmond.*] Were the huts cold?—They were very cold.

21. *The Chairman.*] Had you stretchers to sleep on?—No, nothing at all at first. Later on the men were allowed to make straw palliasses—that is, a long canvas strip about 2 ft. wide, and they were filled with straw.

22. *Mr. Salmond.*] How many men did each hut hold?—What they were definitely built to hold I could not say, but we averaged all through in that camp about fifty men in each hut.

23. Did the men have their meals in the huts?—No; we had a separate hut in which the meals were served to the men.

24. How many huts would be placed together in close proximity—would there be fifty, a hundred, or twenty?—They were in rows of about twenty, and there were three double rows—six rows of twenty each. That is pretty near correct.

25. Can you say what space there was between the huts?—There would be the space between equal to the width of a hut—from memory, 20 ft.

26. How many men were there in that camp?—It is very difficult to state the exact number. Every hut was occupied, and in the case of the Canadians they had seventy, eighty, and nearly a hundred in the huts when they were altogether on the plain, pending completion of the huts.

27. Was the site of that camp changed from time to time?—So far as the hutments were concerned, they were permanent.

28. Were they in tents as well?—At first the New-Zealanders were in tents, also Kitchener's Army and the Canadians, and the weather was rather severe. It was winter at the time, and Salisbury Plain is well known as one of the coldest places in England, the chalk subsoil underneath making it so.

29. Were roads made in that camp?—There was the main Salisbury Road which runs through the district: there were no roads in the camp. It was a sea of mud.

30. Did you see Trentham when it was wet?—No. It is many years since I left here, and when I was at the camp last, fourteen years ago, the weather was good.

31. Was any system of surface drainage established at Salisbury Camp?—As fast as possible they were draining over the whole area.

32. Were there any appliances for drying the soldiers' clothes or boots?—There were no appliances whatsoever up to the time of my departure.

33. So that the soldiers marched about in wet boots and wet clothes?—It was no uncommon thing to start out in the morning with wet boots and damp clothes on. Of course, when possible we avoided training the men when it was raining; but they got wet when they were caught accidentally, which was, unfortunately, very often.

34. And when they were caught out in the rain like that I suppose they put on wet boots and trousers next morning?—They often had to do so. They probably only had one pair of boots, and, in many cases, their own light boots for a time.

35. They only had one pair of military boots supplied?—Yes, to start off, and afterwards the supplies came in small lots.

36. Did you ever get two pairs of boots?—I am, unfortunately, one of those who have to buy their own equipment.

37. Was your company supplied with two pairs of boots?—It was not until they reached Egypt that some of them got a second pair.

38. Were any of your men without one pair at all?—There were men who wore their own light boots in spite of the weather instead of the military boots, because they could not get boots to fit them or to suit them.

39. Were there any appliances for giving the men hot baths?—Nowhere on the plain, to my knowledge. A few men would get a little hot water from the camp kitchen when it was available.

40. What bedding were you supplied with?—They were supplied with two blankets, but the majority of them brought a blanket of their own into camp to start with.

41. And mattresses?—They had a straw palliasse, which was placed on the ground, and a waterproof sheet as well.

42. *The Chairman.*] I understand the straw palliasse was not served out at first—you had to sleep on the bare boards in the hut?—Yes. The same would apply to the whole of the Canadian Forces. They had to fill their own palliasses, and it takes some time to fill thirty thousand. As a matter of fact, the British section filled up ten thousand palliasses for the New Zealand Expeditionary Forces which remained in Egypt, and the Canadians got the advantage.

43. *Mr. Salmond.*] Was there a hospital established in the camp?—In the section where I was, where the hutments were, there would be five thousand Canadians and ourselves—that is, the regiments that came under my particular notice—and the officers messed with us in the one mess. There was no hospital up to the time of my departure.

44. Was there any marquee or anything of that kind?—We used a hut for a hospital for any kind of sickness, such as sore throats, chest complaints, or anything that could be dealt with by a doctor on the spot.

45. *Dr. Martin.*] But you had a field ambulance?—No.

46. Not where the Canadians were?—They were with another section, and it took some time to get the equipment from the transport.

47. The first cases of cerebro-spinal meningitis were treated in the brigade ambulance?—It is a big place and a big camp, and where we were there was no hospital. There was a small temporary place about four miles off. Of course, there was a hut in the camp which was used as a hospital. I do not wish to give the impression that there was no hospital anywhere. There was one to be got for the worst cases, and it was well occupied.

48. *Mr. Salmond.*] What arrangements existed with respect to sick-parades?—The sick-parades were worked on the usual rules as laid down—certain hours for the men to parade in front of the medical tent.

49. Were there large numbers of sick when you were there?—Yes, we had a considerable number who would come under the heading of sick—men with colds, and sore throats, and suchlike complaints. At one time out of 220 men we had sixty-odd men coming under that heading.

50. You mean sixty men going to sick-parade each day?—Sixty men off duty out of 220, approximately.

51. What happened to them if they were sick and ordered off duty by the doctors at the sick-parade?—They remained in the hutments, and in isolated cases where it was serious they were sent to London. In some few cases they preferred to be sent to their own homes. Most of the men were more or less resident in England at the time.

52. Were any marquees or huts set aside for sick men?—There was the one hospital hut which I referred to.

53. Having regard to your experience in England, Salisbury Plain, and elsewhere, and having regard to your inspection of Trentham, how do the two compare?—Well, for a visitor to be asked to compare them, taking the day I visited Trentham, which was a dry day, about a week ago——

54. *Mr. Skerrett.*] After the camp had been disbanded?—Yes, quite a recent visit. Speaking of the visit and from what I know of Salisbury Plain, the Trentham Camp compares more than favourably with Salisbury Plain.

55. *The Chairman.*] I suppose the condition of things at Salisbury Plain to a military man would indicate a state of unpreparedness?—Yes, it was undoubtedly so. Thousands of men were put into a camp on a bare plain, and they were endeavouring to make it a military camp.

56. *Mr. Salmond.*] You were there at the end of December?—At the end of September, October, November, and portion of December.

57. During that time had any improvements been made in your camp?—There were, without the slightest doubt, improvements being pushed on as fast as possible, but the improvements to a certain

extent were sacrificed to the haste in which the huts were being run up to get the men into shelter out of the tents on account of the weather.

58. What other improvements were made except putting up huts?—There was a shortage of huts; and they were trying to arrange for huts for the men to dine in—huts for sitting-rooms and writing-rooms, separate from the sleeping-huts. Water-mains were being laid down all over the place. At that time isolated taps were placed here and there, and the place was almost impassable on account of the mud. It was found necessary to supply two narrow strips of woods for footpaths. That was done between all the huts and along the front.

59. Was any attempt made during the two months of winter to supply a drying-apparatus and hot water?—There was considerable talk, and they were always hoping to do so; but in the vicinity where I was they had not arrived at that stage.

60. *The Chairman.*] You referred to sixty men of one company being sick out of 220. Was there a great deal of sickness on the plain?—There was a great deal on account of the weather—colds, sore throats, and minor ailments; and I might add that from experience in a standing camp, where the men are only drilling, they are more likely to attend a sick-parade than if they are on active service or moving to any other part. It was our experience that within two or three days of the War Office telling us to prepare for Egypt the total number of sick came down below ten within forty-eight hours.

61. Did you have cerebro-spinal meningitis at Salisbury Plain?—Not that I am aware of.

62. *Dr. Martin.*] The largest number of deaths were at this camp you were at?—Well, the deaths must have taken place afterwards. We were not informed of them, and did not read of it in the newspapers probably owing to the amount of work we had to do.

63. Also pneumonia and measles cases?—We had pneumonia and an odd case of measles, but you will find that in any camp.

64. On account of the large number of deaths from cerebro-spinal meningitis Parliament appointed a special Board in England to inquire into it?—At the Sling Camp?

65. Yes, with the first lot of Canadians?—I wish to point out that although the camps were all occupied, the actual Canadians at this corner were only about five or six thousand. The main part of the Canadians would be five or six miles off, with camps in between. Among the Canadians when they were in camp with us there was a good deal of trouble owing to what they had contracted, but they got over it.

66. *Mr. Ferguson.*] You told us that the width of the hutments was about 20 ft., and the space between equalled the width of one hut. What is the length of the hutment?—As far as I can remember, from 55 ft. to 60 ft.

67. And the height to the eaves?—Well, I never measured that. I looked at the Trentham huts, and, speaking from memory, I should say that ours were possibly a foot higher on the walls.

68. Had those huts a door at each end?—They had double doors at each end.

69. You say there were three double groups: what distance would there be between each row of hutments?—Approximately 40 ft. It simply gave a division which was used as a right-of-way. In most cases they built latrines and shower-baths in between the 40 ft. space. They were in course of erection when I left.

70. What space was between the huts?—There would be not more than 20 ft. or 25 ft. endways. [Sketch-plan produced and explained.]

71. In the 40 ft. space were the latrines?—Yes.

72. Were there any night-pails in addition?—It was the pan system or bucket system.

73. There were no independent night-pails put near the huts?—There were urine-buckets placed at proper places, and removed before daylight. Those hutments were all built on sloping ground, and where the front of the hutment was flush with the ground the back of the hutment in some cases would vary from 6 ft. to 8 ft. off the ground, and there were brick pillars to support the floor and building itself; and, of course, the wind blew underneath and up through the cracks in the floor.

74. And how was the urine liquid matter disposed of?—It was all carted away. It was all dealt with in the same way, I presume, as in the towns. It was carted under contract.

75. *Mr. Gray.*] I think, in addition to your experience in England, you were in charge of the camp in Egypt?—No; the Engineers superintend the water and latrines, and you might say the sanitary arrangements. They supplied the technical part.

76. What was your position?—Captain of the New Zealand Engineers First Field Company.

77. How long were you in camp in Egypt?—I was there early in January, and I think I left there on the 4th April—over three months.

78. What was the system of sanitation in that camp?—Similar to Salisbury Plain. It was the bucket system for nightsoil.

79. *Mr. Ferguson.*] It was the duty of each soldier to throw earth on his own excretions?—Yes; there was plenty of sand there, and there was no trouble for a man to throw it in.

80. What was done on Salisbury Plain?—There was earth supposed to be supplied, but it was simply a mixture of chalk and mud, and it was so wet you could get nothing dry.

81. *Mr. Gray.*] Did they have incinerators on Salisbury Plain?—Yes, and in Egypt.

82. What sort?—The same as at Trentham.

83. Were they effective?—Yes, quite. Egypt is a dry climate, and anything burns readily; but it is different in Salisbury.

84. But the incinerators were satisfactory on Salisbury Plain?—Yes, as far as they could be under the climatic conditions.

85. I think you served on the Canadian Staff in Salisbury?—I was on loan to the Canadians to assist in putting them into camp—a Canadian Force of over thirty-three thousand men.

86. And you had to provide for housing them ?—The tents were provided, but one had to see that the right regiments went to the right camp, and that they knew where the cookhouse, the stores, and the latrines were—the general duties of what is termed the Camp Commandant.

87. You told the Commission that when the men got news that they were about to go on active service their health appeared to improve ?—Yes, that is so.

88. Do you suggest that the men's health was affected by the depressing surroundings of the camp ?—It is common knowledge, I think, that men who volunteer to go to war do not appreciate hanging around camp, or do not appreciate a standing camp, or doing fatigue work. Their one idea of a soldier is that a soldier's job is to get a gun and go and shoot somebody. I did happen to notice in somebody's evidence that it was thought they should not be called upon to do necessary fatigue work and digging.

89. I suppose his complaint was not exceptional ?—No, it has always been so. The fatigue work is carried out in all parts of the world in all camps, and one finds it is particularly objectionable to colonials—they do not like the idea of it. An idea has struck me, and if I may I would throw out the suggestion to the authorities. There are supposed to be a lot of willing workers in every colony who cannot really go to the war, and I would suggest that a sort of citizen army or working army should volunteer and go into camp and do the necessary fatigues and lay out the camp, so that the soldier who has volunteered to go abroad can spend his whole three months, which is a very limited period in any case, in training and learning his work. To start with these men might have to put up with a fair amount of chaff and ridicule—a soldier will always find some pet name for them—but they would undoubtedly be doing a really good work, while at the same time you would send your men away more fully trained, and the efficiency would be much greater.

90. Did you have any experience of medical orderlies in the camp at Salisbury ?—No; the only medical orderlies were the soldiers who volunteered for the job and took turns at it.

CHRISTOPHER THOMSON sworn and examined (No. 100).

1. *Mr. Skerrett.*] Where do you reside ?—At Ward, near Blenheim; but I have just come out of the Blenheim Hospital.

2. What were you before you enlisted ?—A navvy.

3. You joined the Trentham Camp, I think, on the 30th May last ?—Yes, as a private in C Company, Lord Liverpool's Own, 2nd Battalion.

4. For the first two days in camp I think you were engaged in fatigue work—carrying stones, and so on ?—Yes.

5. For the next three weeks what were you doing ?—Squad drill and fatigue work.

6. How long after you were in camp did you report sick ?—Between three and four weeks.

7. Did you attend sick-parade ?—Yes. I was doing squad drill and a kind of faint came over me. The sergeant got on to me, and I said I felt ill, and he ordered me to the barracks. I went to the doctor next morning at the usual sick-parade.

8. *The Chairman.*] What time in the day was it you took ill in this way ?—About 10 o'clock in the morning.

9. Did you not get any medical attention till the next day ?—I was told to wait in the barracks till the sick-parade. The sick-parade was twice a day, but they did not come to our barracks that afternoon.

10. *Mr. Skerrett.*] You went on sick-parade the following morning, at any rate ?—Yes. I went to the doctor and told him how I felt, and he simply gave me a note to take to the marquee and get some medicine, and I got what they called the No. 9 pill.

11. Did he tell you to call again ?—No, I did not call any more that day. I took the pill.

12. Was there a sick-parade on the afternoon of the second day after you took ill ?—Yes, and I attended that.

13. What symptom did you communicate to the doctor ?—I told him I was suffering from pains in my inside and felt that I had a cold.

14. What happened on the second sick-parade ?—I got the same treatment—another No. 9 pill.

15. Was that in the afternoon ?—No, I did not go in the afternoon at all.

16. Who was the doctor ?—I do not know the doctor's name. It was the same doctor who gave me the pill on each occasion.

17. What next took place ?—On the third occasion I went to him of my own accord in the afternoon. That was the next day, and he said I had no right to go to him without a sergeant going with me.

18. *Dr. Martin.*] You went to him without reporting sick ?—Yes. I showed him that I was breaking out in a rash about the groin, and he had a look and gave me a note to get a box of ointment from the dispensary, which I got.

19. What happened next ?—When I went to him the following day I told him I was feeling ill and wanted to lay up, and he said I had been before him a good deal and that if I was really ill I ought to go to the hospital.

20. Was your temperature taken ?—No, not at all.

21. Did you go to the hospital ?—Yes, to a loose-box at the Trentham Racecourse. I was in a loose-box for a couple of days, and then I was taken into what was called the B Ward—the jockeys' room.

22. How many beds were there in it ?—Ten beds in that room.

23. Did you have a cot in the loose-box ?—No; I had my own palliasse on the floor and my own three blankets.

24. You went in on the 29th May ?—I could not say the date.

25. Do you know how long the hospital had been opened when you got there ?—I think they were just moving the things in. It was some time in the middle of the week when I went there, and I remained in B Ward for four or five days.

26. Was it four or five days or a fortnight ?—I could not say exactly.

27. What were you supposed to be suffering from there ?—They were supposed to be treating me for inflammation of the bowels. My side was paining me terribly.

28. When were you allowed to get up ?—I asked the doctor if I could get up, and he had a look at me but did not think I should go out for a while, and he let me on the veranda for an hour or two. I retired to bed again, and I was kept there for another two or three days.

29. When were you discharged from this hospital as convalescent ?—Shortly after I was allowed to get up I asked him when I could go out, and he said he would give me four days' leave.

30. Who was the doctor attending you ?—I do not know his name—he was a little man, clean shaven.

31. How did you come across Dr. Thacker ?—I met him in Wellington in a barber's saloon. He said to me, "You are looking pretty crook, old chap"; and I said, "I am feeling pretty crook." I did not know who the man was at the time. I thought he was "taking a rise out of me."

32. Did you tell him what you have told us here ?—Yes; I told him they were treating me for inflammation of the bowels.

33. What did the doctor say ?—He examined me. He had a look at my side, and wrote out a prescription, and told me to take it to a chemist.

34. Was your side swelling ?—Yes, it was laying over on my hip.

35. Did he give you a note also ?—Yes. I took it back to the camp, and it was to be delivered to the camp doctor.

36. During the whole of your four days' leave what did you do ?—I was confined to bed most of the time at the house of my sister-in-law.

37. Did you have any medical attention there ?—No; I went on with Dr. Thacker's treatment, painting my side and taking some pills he had ordered.

38. You outstayed your leave by one day, did you not ?—Yes, because I was not able to go back.

39. Then you reported at camp on the fifth day ?—Yes. When the roll was called on the Sunday morning they said, "Thomson is still missing," but I was there. Then the sergeant came and told me I was confined to barracks. On the Monday morning I was told to appear in uniform at the orderly-tent at 7 o'clock. I was tried for breaking leave, and got three days' C.B. and one day's pay stopped.

40. For being overdue one day ?—Yes.

41. Was that the only charge ?—Yes.

42. What took place then ?—After I was tried I went back and had orders to take off my uniform and get ready to fall in. I fell in and went to the racecourse to the usual drill. I was feeling pretty ill, and the sergeant told me to go over to the acting-sergeant, who would give me a bit of drill "on his own"—rifle exercise.

43. Did you do that ?—Yes. In the afternoon we marched down to what they called the golf-grounds, and we were given drill. Then I reported to Lieutenant Lancashire that I was feeling ill on account of my side.

44. What happened then ?—I then went back to camp and went to the doctor next morning. It was the same doctor, and I showed him Dr. Thacker's note. He told me to unloosen my tunic, and simply touched me on the side, and said, "I will have to put you before the Medical Board." He gave me a prescription, and I went over to the marquee and got two dressings for my side. The orderly rubbed my side twice for me.

45. What took place then ?—I then went to the barracks until such time as I got my discharge.

46. When did you go before the Hospital Board ?—That was on the Tuesday the doctor said I would have to go, and I went before the Board on the Thursday.

47. Did the Board make any examination of you ?—No.

48. Have you got your discharge with you ?—Yes. I was discharged on the 2nd July, 1915, in consequence of being medically unfit.

49. Who were the members of the Board ?—I do not know who they were, but one of the doctors gave evidence here yesterday.

50. That would be Dr. Stout ?—Perhaps so. When I went before the Medical Board he then saw Dr. Thacker's prescription, touched me on the side on the outside of my uniform, discharged me, and said I could go back to barracks.

51. How many doctors were on the Board ?—Three.

52. Did the other two examine you ?—No.

53. What was it proved you were suffering from ?—From a strained side.

54. What pay did you get then ?—I was receiving 4s. a day for the first month, and I received all my pay up to the date of my discharge.

55. And I suppose you also received second-class rail and steamer fare to Picton ?—Yes.

56. When did you enter Blenheim Hospital ?—On the Monday after the 2nd July, and I was discharged about a week ago.

57. What were you treated for ?—For a strained side. They put me in plaster and bandaged me up, giving me medicine every two hours.

58. Were you kept in bed ?—Yes, for ten days.

59. Who was the doctor attending you at Blenheim ?—Dr. McKenzie, the hospital doctor.

60. *Mr. Skerrett.*] Do you know how you got the strain ?—I can only imagine that it was caused through my getting back to work before I was fit.

61. *Mr. Ferguson.*] Do you remember ever having strained yourself?—No. I always felt it when bringing the rifle down.

62. Had you ever felt a pain there before?—No, never in my life.

63. You know nothing that would suggest what caused it previously to your going to camp?—No.

64. *Mr. Skerrett.*] I understand you had no funds and were left completely stranded?—Yes, and have no funds now.

65. *Dr. Martin.*] You were a navvy?—Yes, working on the ballast-train.

66. Had you ever been ill before?—I never had a day's illness in my life previous to this.

67. The first time you appeared at sick-parade what did you complain of?—Pains in my left side. The pain was going all round my bowels.

68. The next day you had the pain in the same place?—Yes.

69. Did you say you had a rash on that side?—The rash broke out about my groin.

70. There was no rash where the pain was?—No. The pain was still there, and the rash frightened me, as I thought I might have got some disease from the lavatories.

71. *Mr. Gray.*] When you first reported sick was there any sign of swelling in your side?—Yes.

72. And could it be seen?—Yes. When I first reported sick it was swelling up then, and could have been seen by any one who examined me.

73. That would be two days before the rash appeared?—Yes.

74. Do you say the doctor never examined you?—He simply touched me on the side. The first time I reported sick he merely gave me a prescription.

75. You did not tell him of the swelling?—I told him my side was sore.

76. Did you take the trouble to find out the name of that doctor?—No.

77. Did you know there were several doctors in camp?—Yes.

78. Was it the same doctor you saw each time?—The doctor who inoculated me was a tall dark man, and on the second occasion he was a little clean-shaven man and wore glasses.

79. Was that the man who prescribed for you and ordered the pill?—Yes, and gave me the dressings.

80. When you saw Dr. Thacker you got from him a letter intended for the doctor in camp?—Yes.

81. Why did you not deliver it to the doctor in camp the day you returned?—I was not allowed out of the lines. I told Sergeant-major Berkley that I had a note to give to the doctor, and he said I could not move out of the lines till I got further orders.

82. You were tried and got three days' C.B.: did you explain the reason of your absence?—I explained to Colonel Potter, who tried me in the orderly-tent.

83. You explained your absence on account of illness?—Yes. [Pay-book produced.]

84. You were discharged on the 2nd July?—Yes.

85. Can you say whether you were at sick-parade the day before?—Yes.

86. Was that the last time you were on sick-parade—the 1st July?—The day I went to the Board was, I think, the last day I saw the doctor.

87. Were you discharged on the same day as you went before the Board?—No, I did not get my discharge for a couple of days after that.

88. Was there not a doctor attached to the regiment?—Not that I know of.

89. When did you first feel the pain in your left side?—Before I went to the hospital.

90. *The Chairman.*] That would be after these two or three weeks' squad drill?—Yes, sir. The first time it caught me when I was digging a drain for laying water-pipes in.

91. Was that while the three weeks' squad drill was going on?—Yes.

92. Then you first felt—what?—A pain in my side, and I could not work.

93. Was it the day following that that you reported on sick-parade?—Yes.

94. *Mr. Gray.*] When was it you felt a pain as you dropped the rifle?—It was after I came back from my sick-leave that the pain came again when I was doing rifle exercise.

95. How do you say you felt it?—When I was bringing the rifle down, like this. [Witness showed the action.] It caught me and I could not move.

96. Is the rifle brought down on the left side?—Yes.

97. You explained that to the doctor?—I did not explain anything to him at all; I just simply told him how I felt. There are so many people they have to put through that they just ask you how you feel, and write you out a note, and pass you out like a lot of dogs.

98. *Mr. Skerrett.*] I understand that you were declared medically unfit, and were simply told to go?—Yes. I was told when I got my discharge that I was no longer a soldier.

99. How about your kit?—All my civilian clothes which I left at the hospital I lost. I have Sergeant-major Berkley's order here to go back and forward and try to find them.

100. How about boots?—I lost everything in my private kit. I went before Sergeant-major Berkley and told him I had no clothes to wear. They simply said, "Poor devil!"

101. How did you manage for clothes to wear?—Sergeant-major Berkley gave me his own private clothes, which I am wearing now.

102. And how about boots?—One of the men in the camp gave me a pair of boots, which I still have on.

103. Except for the kindness of Sergeant-major Berkley and your mates you were simply——?—Naked.

104. What money did you have?—There was £2 12s. coming to me. I had to buy underclothing out of that, and pay for my other clothes and one thing and another, and when I had done so it left me with 5d. in my pocket.

105. *The Chairman.*] Are you all right now?—No, sir.

106. Is it not possible for you to get some thorough overhaul?—My side still gives me pain.

107. Were you discharged from the hospital as all right ?—Yes. It catches me a lot now in the kidneys. At night-time I can hardly move with the pain.

108. Where are you living ?—Nowhere in particular. I make my home wherever I put up. I have a mother and sister in Picton. My mother lives on the old-age pension and has no room for me.

109. The only place where you could be attended to is a hospital ?—Yes. They had partly arranged with Dr. McKenzie and my sister in Picton for me to remain there for three weeks.

110. When are you going back to Picton ?—As soon as I can get. The camp authorities rang up Dr. McKenzie on two or three occasions and wanted to know how I was getting on—whether I would be fit for light duties.

111. This was while you were laid up in Blenheim ?—Yes. Dr. McKenzie said they had not quite forgotten me.

112. *Mr. Ferguson.*] But you had been discharged before that ?—Yes.

The Chairman: We will have a letter written to the doctor.

113. *Mr. Salmond.*] What money had you in your possession when you were discharged ?—£2 12s.

114. Did the Board discharge you without making any inquiries as to your means, or where you would go to, or what would become of you ?—No, sir; they gave me a second-class ticket to Picton.

115. Were you medically examined by any members of the Board ?—No, sir. I was simply dealt with by the gentleman who was here yesterday touching me here [place indicated].

116. Was that before the Board ?—Yes.

117. The Board was sitting ?—Yes.

118. Were no questions asked ?—No questions at all.

119. Are we to understand that you went before this Board and one of the members went up to you and touched you on your groin, and then they said you were discharged ?—They told me I could go.

120. Were you ever stripped and examined by any of the doctors ?—No.

121. Do you know what doctors they were who dealt with you ?—I do not know the doctors' names at all. I saw here yesterday one of the doctors who were on the Board.

122. *The Chairman.*] It will be Major Stout ?—He was sitting on the Board.

123. *Mr. Salmond.*] Was he one of the doctors who had previously dealt with you ?—No.

124. Was that the first time you had ever had anything to do with him ?—Yes, the first time I had seen him.

125. Was the doctor who had dealt with you formerly on the Board ?—Yes.

126. Two of them ?—No, only one.

127. And Major Stout ?—There were three altogether—one who had been attending to me (the camp doctor) and Major Stout and another.

128. Do you know who attended to you at the racecourse hospital ?—I do not know the doctor's name at all. I do not know any of their names.

EDWIN LEGGE sworn and examined. (No. 101.)

1. *Mr. Skerrett.*] You reside at No. 12 Bidwell Street, Wellington ?—Yes.

2. What are you by occupation ?—A storeman, at Kirkcaldie and Stains.

3. Did you have a relative—a private at Trentham Camp—who died at the Wellington Hospital ?—Corporal Edwin Matthew Phillips.

4. Of what company ?—He was in the Sixth Mounted, A Squadron.

5. When did he die ?—On the 1st July.

6. Where ?—In the general hospital.

7. At Wellington ?—Yes.

8. From what ?—Meningitis, I believe.

9. That was on the death-certificate ?—Yes.

10. What do you wish to say to the Commission about the circumstances attending his treatment and death ?—I saw him on the Sunday prior to the 29th May at Trentham, and he was apparently all right then; but my daughter went out on the following Sunday to the camp and found that he had been sent into hospital on the Saturday night.

11. *The Chairman.*] It must have been the 26th May when you saw him ?—Yes, about then. On the following Saturday night he was sent into Berhampore Hospital—that is, on the 29th. We heard nothing of it, however, until the Sunday when my daughter went out and found he had been sent into town to the hospital.

12. *Mr. Skerrett.*] What hospital ?—To "the hospital": they did not say which one.

13. In point of fact he went to Berhampore ?—They had sent him to Berhampore.

14. Just go on, please ?—Then on the day of the Carnival—the 3rd June, I think it was—I went——

15. *The Chairman.*] That was a Thursday. Was the Carnival on the Thursday ?—It was on the Wednesday. I went to the general hospital to find out if they knew anything of his whereabouts, but they did not know anything at all. He was not there, and he was not in their isolation ward. We tried to ring up and find out at the camp, but no one could tell us there. He had only just been sent into hospital: that was all the word I could get. The porter told me at the general hospital that he might be at Berhampore, and I went out there "on spec."

16. When did you go ?—On the same day—Wednesday, the 2nd June, in the afternoon. I met a couple of young men coming down Brittomart Street—Red Cross men—and I inquired of them. They told me he was in the hospital, but I could not see him—I was not allowed to go there at all. So

I went up again on the Sunday, and he was out and about on the grounds. He told me he was feeling pretty well, only for a bad pain in the back of his head and a slight cough. He was expecting to get away on leave on the following Wednesday. The next we heard was that he was coming down to my place before he went home to his own people in Auckland. He was coming on the Wednesday, but he did not turn up, and we were thinking probably he had gone right away without calling. Instead of that we got a wire from Auckland to say that he was dangerously ill in the Wellington Hospital.

17. *Mr. Skerrett.*] A wire from his parents, I suppose ?—Yes.

18. On what date did you receive that wire ?—On the Saturday following the 2nd June.

19. *The Chairman.*] The Carnival was on the 2nd June ?—Yes.

20. And you went out on the following Sunday ?—Yes.

21. Then the following Saturday from that Sunday was the date you got the wire ?—Yes.

22. That would be the 12th June, then ?—Yes. I went to the hospital that evening and saw him. He had just come round. He had been delirious all the time. It seems that when he came out of the delirium he told them who he was. They had no idea in the hospital who he was at all. From then on he was in the hospital, and was first of all supposed to be suffering from pneumonia, then typhoid fever, and it finished up with this other.

23. Do you know anything of the circumstances attending his removal from Berhampore to the Wellington Hospital ?—I understood he was put into a motor-car and sent out in a delirious state.

24. He was put into a motor-car at Berhampore ?—Yes.

25. How did you get that information ?—From himself. He told me that he had gone to bed sick in the afternoon, and he did not remember anything till he woke up in the hospital.

26. *Mr. Ferguson.*] How did you know it was a motor-car ?—I was told that it was.

27. *Mr. Skerrett.*] Not an ambulance ?—It may have been a motor-ambulance. It was a motor—not a wagon.

28. You make no point about the method of conveyance ?—No.

29. Is there anything more you would like to say ?—No.

30. *Mr. Ferguson.*] He was ill with measles at Berhampore ?—Yes.

31. You had no difficulty in seeing him on the day you went there ?—Not the first day. He was out in the grounds.

32. Were there many other people seeing their friends there ?—Very few.

33. Still, there were people besides yourself seeing friends ?—Yes. We were not allowed inside the gate.

34. *Mr. Gray.*] How often did you see Phillips at Berhampore ?—Only the once.

35. And you say you were not allowed inside the gate ?—No. He was allowed to come down to the gate to speak to us.

36. He appeared to be getting on all right that day ?—Yes. He said he was getting on all right, except for the pain in his head and the cough.

37. What did he complain of—headache ?—A pain at the back of his head.

38. Otherwise he thought he was improving ?—Yes. He was hoping to get away home on leave.

39. How often did you see him at the general hospital ?—From the time I found out he was there I went there pretty well every night.

40. Do you know on what day he was removed from Berhampore ?—It was on the Wednesday prior to my getting the wire from Auckland, I think. It would be a Wednesday, I believe.

41. You admit that it is only hearsay that he had gone in a taxicab from Berhampore to Wellington Hospital ?—It may have been one of these ambulance motors.

42. It was a motor vehicle of some kind ?—It was a motor vehicle.

43. It may have been the ambulance ?—Yes.

44. You do not know whether he went alone ?—No. There would be the driver of the car, at any rate.

45. This was apparently about three weeks before his death ?—Yes, fully that.

46. *Dr. Martin.*] We have two causes of death given. One return has it that he died from pneumonia following measles, and the other says it was from para-typhoid meningitis ?—Dr. Clay attended him in the general hospital, and he told me on the Saturday night I first found him there that he had very slight symptoms of pneumonia, but he was afraid of the complications that would follow. Then it turned, according to his version, to typhoid.

47. *Mr. Gray.*] Who told you that Phillips died of meningitis ?—It said he was suffering from meningitis on the chart at the head of his bed at the hospital.

48. Your daughter, you told us, ascertained from the camp that Phillips had gone to the hospital ?—Yes.

49. Did she not ask which hospital ?—She naturally took it to be the general hospital. I do not know that she asked particularly ; in fact, I had no idea at the time that they were sending any one to the plague hospital.

50. So that when your daughter was told that Phillips had gone to the hospital she assumed it was the Wellington Hospital ?—Yes.

51. *Dr. Martin.*] When Phillips was in the Wellington Hospital was he amongst measles cases ?—No, he was in No. 4 ward.

52. How many patients were there ?—A great many. It was full—even the aisles were used.

53. Were they soldiers ?—There were a good many soldiers amongst them.

54. *The Chairman.*] When did this young man's parents get word that the illness was serious ?—I sent for his mother a week prior to his death, and I sent for the father, on Dr. Clay's advice, the day previously. He just got down in time to see his son pass away.

55. The hospital people told you, perhaps, to send ?—Dr. Clay, and also the hospital Matron.

MAJOR O'SULLIVAN further examined. (No. 102.)

1. *Mr. Salmond.*] When you last gave evidence you spoke about the supply of boots, and the shortage of boots for the Trentham Regiment?—Yes, sir.

2. You got notice on the 19th April that the Trentham Regiment was coming into camp: is that so?—On the 19th April.

3. And on the 29th May, I think, they came in?—Yes.

4. How many men did the Trentham Regiment consist of?—2,308.

5. You therefore had to supply about five thousand boots more than you expected: is that so?—That is so.

6. On the 1st April you made contracts for the supply of boots with Hannah and Co. and O'Brien and Co.?—That is so.

7. Hannah was to supply how many boots?—1,000 pairs a month.

8. And O'Brien?—1,250.

9. Can you say when the first deliveries were to be made under these contracts?—I may explain that prior to this we had given a private order to Hannah, and it is hard to distinguish. I see that his first delivery of 216 pairs was made on the 7th April; again on the 13th, 72 pairs; on the 14th, 96 pairs; on the 15th, 144 pairs; on the 19th and 20th April, 240 pairs.

10. You need not give us the details. He was already supplying boots under a previous contract?—No, it was under an order for 2,000 pairs.

11. *The Chairman.*] Was there any contract for boots in existence on the 1st April?—The new contract commenced on the 1st April.

12. An old contract had been running up to that time?—Yes.

13. With the same people?—No.

14. *Mr. Salmond.*] Who was the previous contractor?—O'Brien.

15. So O'Brien's contract was renewed, and Hannah got a contract as well?—It was a new contract with O'Brien also.

16. *The Chairman.*] Had you then, on the 19th April, any boots in hand from previous contracts?—We must have had some.

17. Do you know what you had in hand?—I could not tell you the number of pairs from memory.

18. Ought you not to have taken stock of what you had in hand then, in order to know how many more you would want because of the new lot of troops coming in?—We issued them to the camp store as quickly as we got them.

19. But did you not know how many you had?—I could not tell you now.

20. On the 1st April did you not know how many boots you had?—I could tell you by referring to the books, but I did not bring that information with me.

21. The point is whether you made provision beforehand for these boots. You knew on the 19th April what you had to do: how many had you then? How many could you rely on to come in before the men arrived in camp?—I shall be able to give you that information.

22. *Mr. Salmond.*] I was intending to pursue a different line. You made that arrangement, then, on the 1st April for 2,250 pairs of boots a month?—Yes.

23. On the 19th April you found you were going to have a further demand for 5,000 more boots: what steps, if any, did you take to supply these further boots?—May I make a little explanation here, because I think it will make the matter clearer? Our orders for the supplying of men up to the 12th August were 1,690 men every two months—1,690 men on the 20th April, 1,650 men on the 15th June, and 2,120 coming in on the 12th August. That was the scale laid down.

24. And then the Trentham's were in addition to that?—Exclusive of that. Then followed the Howitzer Battery. We got notice of it on the 14th April, 275 men. No. 1 Stationary Hospital, 12th April, 116 men; Trentham Regiment, 19th April, 2,308 men; extra Infantry, 26th April, 200 men; No. 2 Stationary Hospital, 7th May, 94 men.

25. You need not go past April. Tell me the total number of additional men that you were notified about in April—the ones you have read?—2,799 men.

26. *The Chairman.*] Extra?—Yes.

27. What about the 1,700?—And then the 1,700. Those are extra men over and above the ordinary number of 1,700.

28. *Mr. Salmond.*] How many additional men, over and above that number, were you notified about in May?—No. 2 Stationary Hospital, 7th May, 94 men; and hospital ship, 19th May, 59 men.

29. That is all for May?—Yes.

30. We still stick to April, as being the big month. You were notified of 2,799 men, in addition to the ordinary number?—Yes, sir.

31. That would mean how many pairs of boots: it would mean 5,600 pairs of boots?—Yes.

32. What steps did you take to supply that quantity of boots? You made your contract on the 1st April. What additional arrangement did you make for further boots?—I will ask here to be allowed to make some explanation.

33. No, I want you to answer the question. When did you first take any steps to get further boots?—On the 16th April the Northern Boot Company were given an order for 2,000 pairs of boots.

34. That was before you got the notification?—Yes. Then after the notification came the Wellington Co-operative Boot Company were given an order for 3,000 pairs.

35. When?—On the 22nd May. The delivery was to be at the rate of 200 per week.

36. You got your notice of the Trentham's on the 19th April, and the first contract you made after that was on the 22nd May?—Yes.

37. And the Trentham's came into camp seven days later: is that so?—They came in on the 29th May.

38. Seven days afterwards you make the contract with the Wellington and Auckland Co-operative Boot Company: how, then, did you expect to get boots for the Trentham Regiment?—By inquiring of any factories that would come in and gave us a hand. It must be remembered that only four firms tendered for boots right throughout the Dominion.

39. That was when Hannah got the contract?—Yes.

40. Who were the other tenderers?—Sargood, Son, and Ewen, of Dunedin. The terms of their contract were that they could not commence to make delivery until the 1st June and would cease delivering on the 1st December.

41. They offered to supply boots on the 1st June: how many?—Speaking from memory, somewhere about a thousand pairs a month.

42. Who else tendered?—Skelton, Frostick, and Co., of Christchurch.

43. How many?—Somewhere about the same number.

44. Any other firm?—No one else.

45. *Mr. Ferguson.*] Was there any restriction with regard to time in the case of Skelton, Frostick, and Co?—We asked on the conditions how many pairs they could deliver per week. This was when we called for tenders in February.

46. *Mr. Salmond.*] They tendered on the same terms as Hannah and O'Brien?—Yes.

47. Who else tendered?—Nobody else.

48. What about W. J. Barton?—I do not think there was any tender from Barton.

49. Is there not a bootmaker called Barton?—We have not a man named Barton on the list.

50. Do you know a man called Barton?—No.

51. I suggest that if you look at your file you will find that W. J. Barton, whoever he is, offered 500 pairs of boots a month at 19s. a pair. Two of these tenders were accepted on the 1st April?—Yes, sir.

52. On the 19th April, when you knew you had to get 6,000 more boots, did you approach these tenderers?—Yes, sir. I asked Hannah to double the quantity from him, but he could not do any more.

53. When did you do that?—I could not give you the date. Mr. Hannah came to see me in my office. He will not be able to do any more, even at the present date.

54. Did you approach O'Brien and Co?—O'Brien was up from Christchurch also, and I asked him if his firm could increase the quantity.

55. Did he say he could not?—He could not, because he had not his lasts over from Australia.

56. Did you then approach Skelton, Frostick, and Co?—No.

57. Why not?—Because Skelton, Frostick, and Co's price was considered too high for the boots.

58. What was it?—Speaking from memory, I think £1.

59. You will be surprised to hear that it was 18s. 11d.?—Then Sargood's was £1.

60. Sargood's was 18s. 6d.?—I could not tell you. In any case the whole thing was laid before the Quartermaster-General.

61. You said you did not apply to Skelton, Frostick, and Co. because their price was too high?—Yes.

62. Do you know that it was only 6d. per pair more than O'Brien's, which you had accepted?—I do not know till I see the file.

63. You were asked to familiarize yourself with these facts before you came?—I have been at the other inquiry and have not had much time.

64. Does not the other inquiry relate specifically to boots also?—Yes.

65. Is not that all the more reason why you should know the facts?—They did not ask about these facts.

66. Has not the file been produced by you to the other Commission?—No. They might have got it from headquarters.

67. You told the Commission that the reason why you did not approach Skelton, Frostick, and Co. was that their price was too high, and now you tell us that you do not know what their price was?—I am speaking from memory only. I did not anticipate questions of that kind.

Mr. Gray: He might look at the file during the luncheon adjournment.

68. *Mr. Salmond.*] You can get access to the file that is in the hands of the other Commission?—I will try.

69. *The Chairman.*] You did nothing, then, with regard to Skelton, Frostick, and Co., you say?—That is so.

70. You took no steps?—No.

71. *Mr. Salmond.*] Did you approach Sargoods for more boots?—No, because they would not commence delivery until June; they wanted a good long time to buy their leather.

72. *The Chairman.*] You did not tell them of the fix you were in? You did not go round and say you were in a fix—because it may not have been good business?—No.

73. If you did not go to these people, to whom did you go?—I will quote the particulars.

74. Did you approach them in writing, to begin with?—No. They came to our office, having been telephoned for.

75. *Mr. Salmond.*] Who did?—W. J. Staples, of Wellington, on the 17th May.

76. Your contract with Staples was a little earlier than your contract with the Wellington Co-operative Boot Company?—Yes.

77. You saw Staples and Co. and made a contract with them?—Yes.

78. *The Chairman.*] On the 17th May?—Yes, for 2,000 pairs of boots at 200 pairs a week.

79. *Mr. Salmond.*] When were these boots to be delivered?—At the rate that you see laid down.

80. *The Chairman.*] The contract was made on the 17th May. When was the first delivery?—With a new firm, like the Wellington Co-operative Boot Company, or Staples and Co., it would take a fortnight from the time the boot was put on the last till it came off.

81. So you would not get anything from Staples till the 31st May?—No, not from any new contractor.

82. *Mr. Salmond.*] So you could not expect to supply the Trenthams with Staples's boots as soon as the Trenthams came in?—No. Then there was Adam Moore (Limited), of Auckland.

83. When was their contract made?—On the 27th May.

84. That was two days before the Trenthams came in?—2,000 pairs at 200 pairs per week.

85. *The Chairman.*] You would not get any from them until a fortnight after?—They were making boots for us already. They were continuously making boots, under agreement. They would not tender. Then R. Walton, Limited, of Auckland, on the 26th May: we gave them an order for 2,000 pairs at the rate of 200 a week.

86. Would you get any from them before the 31st May?—No.

87. Moore is the only man so far that you would have got anything from before the 31st May?—Moore had been delivering right from February onwards. May I state here that Hannah's contract rate was 16s. for the boots, and all these people came in at that contract rate. That is a consideration to us—2s. a pair.

88. You were told on the 19th April that you had to provide for the Trenthams, 2,800 men, and you made your first contract for further boots on the 17th May, none of which you could get for a fortnight after. With Walton also you could get none for a fortnight. Only from Moore could you get any?—And Hannah, the original contractor.

89. O'Brien and Hannah were not able to supply the quantity required. I want to know what you did between the 19th April and the 17th May to make up the call upon you?—We could not get any more people to come in to make boots for us.

90. How was it you did not get these people in till the 17th May?—We must have had plenty of boots in stock at the camp.

91. That is not the point. I am asking you what you did. If you had plenty of boots in the camp does it mean you did nothing because of that?—No; because these were all the people who came in to make boots for us.

92. You must tell us something more than that. Can you not show us that you made an appeal to the trade to come in on the 19th April, or shortly afterwards?—I did, because the list goes on further. People came in later.

93. I think you must make it a little clearer. Perhaps you can look up something during the lunch-hour, and bring us also those figures that the Solicitor-General wants?—Very well.

94. *Mr. Ferguson.*] Do you do this work on your own initiative, or have you to report to the Quartermaster-General first?—This notice is all we get from the Chief of the General Staff, and then I have another officer who attends to the detail of placing these orders.

95. The General Officer Commanding reports to you that so-many men are going into camp, and then you do this work yourself: you are the responsible officer?—I do the best I can afterwards.

96. And if you could not do anything better, what steps would you take?—I would tell him.

97. The General Officer Commanding?—Yes. But I would point out that we must have enough boots, with these orders coming in, to supply the Trentham Regiment; they would only get their second boots in September.

98. When is stock taken?—We can take stock any day.

99. Is it taken at any definite time of the year?—We have not taken stock since the war started.

100. *The Chairman.*] We have had no clear explanation as regards the blankets. The point was that the blankets were not sent out by one of your subordinates because he thought he had oversent them?—He had no right to think that.

101. *Mr. Salmond.*] Can you produce a statement showing the boots received into store from the 1st January to the 31st July, 1915?—Yes, sir. I will put it in. It shows a total of 29,506 pairs.

102. *The Chairman.*] Can we see from that what number were received into store up to the 19th April?—Yes.

103. You commenced from the 1st January with a clean sheet, as it were?—The statement shows the boots remaining in store on the 1st January.

104. Then you have an account of the issues from the 1st January?—Yes. From the 1st January to the 31st July a grand total of 23,368 pairs of boots were sent to Trentham Camp and these outside camps—Rangiotu, &c.

105. *Mr. Salmond.*] You also put in this other document, showing the orders for boots on the 1st July and subsequent thereto?—Yes. [Documents put in.]

106. *The Chairman.*] I have taken the position as at the 19th April. You would have received into stock on the 19th April 10,713 pairs?—I wish to point out that I do not know what Captain McCristell had in the camp store at all.

107. That would be a matter for you to have found out on the 19th April, would it not?—We must have sufficient boots there, because the order for the Trenthams was completed.

108. According to this you have received 10,713 pairs, and you had issued, up to the 19th April, 9,707 pairs. That would leave you 1,006 pairs of boots in hand with which to provide for these men who were coming in during May. Then during May you received only 250 pairs over and above the contract quantity. You doubled it during the month of June.

109. *Mr. Ferguson.*] It took a month, practically, before your orders took effect?—With some of them.

110. *The Chairman.*] At the end of May you had not enough boots to go round for the new men who were coming in. You were a thousand pairs of boots short at the end of May, to give one pair all round?—There must have been a good supply at the camp.

111. If on the 19th April you had to get these, would not you see what were at the camp?—No, sir; it would not concern me at all.

112. Then how did you know how many pairs you had to provide?—By the requisitions from the camp.

113. *Mr. Ferguson.*] But you did not wait till you got the requisition before you acted?—No. As a rule, we get word from headquarters.

114. *The Chairman.*] You had 1,000 pairs in hand, and you had to provide 4,500 pairs by the end of May, I take it. 1,700 men were in, and the new men coming in would bring the total to 4,500. You had only 1,000 pairs in hand on the 19th April: what did you do to increase the supply? We have only heard that you made an extra contract, but nothing seems to have taken effect until June, except to the extent of 250 pairs?—We placed orders, I suppose. You have the typewritten document there.

115. These contracts came in in July: Coles; Skelton, Frostick, and Co.; Ward; the Equitable Boot; and Wellington Co-operative?—The Wellington Co-operative were delivering in January.

116. Yes; but had these others never supplied before?—No.

117. How did you come to get on to them in July?—I suppose by communication from the man in charge of the office.

118. How do you mean?—The man in charge of the Department.

119. Are you not in charge?—Yes, in charge of the whole place. I cannot see to everything.

120. Cannot you see that orders are placed?—I am too busy with other work.

121. To whom does the Government look if the thing is not done?—To the office, I presume. That is, I suppose, I am the head of the Department, but I cannot attend to every detail.

122. How did you come upon these people in July, and did not do so in May?—I suppose we communicated with them, either by telephone or otherwise. I know the case of Ward particularly, because he came to see me in my own office.

123. In July?—Yes. Ward has established a new business, and he came to know if we would give him an order for boots. But let me point out that the Second Trentham Regiment got their first pair of boots immediately after coming into camp, and were not entitled to their second pair until the 29th September, four months after coming into camp. They get one pair of boots first.

124. And the second pair before they leave?—Just before they leave. I have done more than that. Every man in camp now has two pairs of boots.

125. Were they not short of boots when the Trenthams came in?—I do not think so.

126. Then, what is all our trouble about?

Mr. Salmond: The evidence we had was that every soldier was supposed to have two pairs of boots: he got one pair the day he came in, and the second pair he ought to get, as a rule, within a week of coming in.

Mr. Ferguson: And now the Quartermaster-General tells us that a man does not get his second pair until four months after. That is the point we want cleared up.

127. *Mr. Salmond.*] What was the practice of the camp officers in requisitioning for boots? Did you send in a requisition for so-many boots periodically?—Yes.

128. Did you get a requisition for the Trentham Regiment?—I could not tell you from memory.

129. When these requisitions came in—I am not speaking about the Trentham Regiment only, but generally—were they for two pairs for each man, or only one?—I think, for one.

130. *The Chairman.*] 4,500 pairs were wanted by the 30th May—2,800 for the Trentham and 1,700 for the ordinary number of men?—May I point out that prior to this Moore, of Auckland, and the Northern Boot Company were supplying over and above our contract supply.

131. You see you have so-many soldiers to boot?—Yes.

132. You see that in front of you, six weeks ahead?—Yes.

133. And you have at that date, according to this return, 1,000 pairs of boots in hand?—Yes.

134. How are you going to find the boots for the number requiring them—4,500?—Let me look at the document.

135. *Mr. Salmond.*] He did supply one pair of boots. Every member of the Trentham Regiment got a pair of boots. The point is that they did not get two pairs, and I am trying to get from the witness what the practice was—whether the camp people requisition for two pairs for each man at once, or for one pair?—One pair.

136. Have you got these requisitions? Are they in writing?—They are all in the office.

Mr. Salmond: Well, I think we must ask you to produce the requisitions. I notice that the boots seem to have gone out to Trentham in small quantities.

137. *The Chairman.*] That is what you told us in the first instance: you said it was correct that there was a shortage of boots for the second issue to the 2,000 men who went into camp on the 29th May. What does that mean? Now you say there was no shortage at all.

138. *Mr. Ferguson.*] Because it was not due for four months?—That was the second issue. They would be short of the second issue at that time.

139. *The Chairman.*] If they were not going for four months you would have enough in hand?—They are all supplied now.

140. *Mr. Salmond.*] Were the troops in general supplied with their second pair of boots when they went into camp, or not until they left camp four months afterwards?—Only a short time before they sailed.

141. That is your understanding of the practice?—That is so.

142. You can produce the requisitions you received from the camp for boots?—Yes.

143. Can you do so to-morrow morning?—Yes, sir.

The Chairman: Captain McCristell said it was correct that for the 2,000 extra men who came in there were insufficient boots. With the exception of a few odd sizes here and there every man arriving in camp was provided with a pair of boots. After the second week each man was supposed to receive a second pair of boots. On several occasions this supply had not been forthcoming. His practice was to requisition headquarters for everything required by the men.

144. *Mr. Salmond.*] Did you get a requisition in respect of the Trentham Regiment which you could not fulfil?—I could not tell you from memory.

145. Surely if you had received a requisition for boots for 2,400 men, and could not fulfil it, you would remember that?—But I do not deal with that.

146. *The Chairman.*] Have you not to see to it?—No, there is another officer.

147. *Mr. Ferguson.*] The special officer would only come to you in case of difficulty?—Yes.

148. If all were running smoothly it would not come under your notice?—That is so.

149. Did the man come to you and say he was in difficulty? When did it first come to your knowledge that you must hustle round and get fresh contracts?—Personally I did not hustle round at all.

150. *Mr. Salmond.*] When did it come to your knowledge that hustling was necessary?—I do not know that it came to my knowledge at all.

151. Is there an officer specially charged with responsibility for the supply of boots?—There are two.

152. What are their names?—Mr. Williams and Mr. Hopkinson.

153. *Mr. Ferguson.*] What is the difference in their responsibility?—One officer receives the requisitions, and he or Mr. Williams usually attends to sending the orders on to the various departments. The requisition may contain a large number of items.

The Chairman: Mr. Williams stated that, with the addition of about 1,200 pairs outside the military pattern, the Department had been able to keep up with all the demands. Now, Mr. Hopkinson said that the requisition from the camp was first received by himself. His practice was to date-stamp the requisition and then send the orders on to the various departments. Intimation was received from time to time as to the probable number of men going into camp. The stores branch would then have an idea of the amount required.

154. *Mr. Salmond.*] Would the requisitions for boots be kept separately?—No, they are included with others, but we can easily collect them.

155. Very well: get them out from the 1st January and have them separated so that my officer can see them?—Very well.

156. *The Chairman.*] Is not this the position, broadly: before the Commission sat, was there not a complaint about the shortage of boots?—I could not say. From camp there was.

157. You say you never heard before this Commission of any complaint about the shortage of boots?—The first time I heard it was the night when General Robin called me up to his office and stated that the second issue of boots had not been made. I believe still that they do not issue the second pair of boots until a fortnight after coming into camp.

158. Why did he call you up?—The Minister had been out at camp with General Robin, and he told me they wanted about two thousand pairs of boots to make up the second issue.

159. *Mr. Ferguson.*] It was not the custom, at the time this requisition came forward, to issue a second pair, but in consequence of the visit by the Minister and the General Officer Commanding they decided to make a second issue?—Yes.

160. And you then found that instead of having four months in which to make up you only had——?—A few days.

161. Do you keep a diary?—No.

162. You have no means of fixing that date?—Yes, it was the 4th July. I have his memorandum. It is down at the Commission just now.

163. *Mr. Salmond.*] A memorandum about the supply of two pairs of boots?—No, a memorandum to procure two thousand pairs of boots the following day, if possible.

164. They had not yet got their boots?—Not the second pair.

165. You suggest that a new practice was then instituted?—It must be so.

166. *Mr. Ferguson.*] I presume there is some officer apart from Captain McCristell—some headquarters officer—who can tell us what the custom is?—Colonel Potter should.

167. *The Chairman.*] We have heard something about misfitting boots at Rangiotu?—Yes, sir.

168. Some five hundred pairs?—Yes.

169. Not made according to ordinary ideas of boots?—Quite so.

170. Whose fault is that?—Those were part of the two thousand pairs of boots I was ordered to buy on the Sunday night by General Robin. I was ordered to buy them on the Monday morning so that the men in camp should get their second pair. They are not military boots. His instructions were that we were to get bluchers or anything at all, in order to give them a change of boots.

171. That was on the 4th July, you say?—Yes.

172. Have you had to keep these boots?—We issued them to Trentham Camp.

173. Can you return them to the manufacturer?—I do not know. I have not got them back yet. I have one sample back.

174. How do you account for five hundred pairs of boots which you say are not made according to the ordinary ideas of a boot being accepted?—My instructions were to get bluchers or anything at all within a certain price. We tried every place in town—warehouses and all. We had samples representing six thousand pairs of boots on Monday at 1 o'clock; and out of those all that the boot inspector could pick were about one thousand two hundred pairs—that is, good, strong boots. And they have been a source of trouble ever since.

WILLIAM LEO ROBINSON sworn and examined. (No. 103.)

1. *The Chairman,*] What are you?—Quartermaster-General (2).

2. What are your duties or functions?—My duties at the present time—

3. I do not mean at the present time: what have they been during the period from October to June?—I have had to attend to barracks, movements, and quarterings; I am Director of Sea Transports, and am Chairman of the Transport Board. I am responsible for the maintenance of drill-sheds, and do general administrative work at headquarters.

4. *Mr. Ferguson.*] Do hospitals come under "barracks"?—Yes, the maintenance of them.

5. *The Chairman.*] For instance, would a requisition for a telephone at Berhampore come before you?—No, it would go the Adjutant-General. It would then be passed on to me with a minute "Please supply," and I would arrange for it to be installed.

6. Did you have any requisition, or pass any direction, for a telephone for Berhampore?—So far as my recollection goes, No.

7. Who is responsible for the absence of that telephone? We are told that it was requisitioned for and not granted?—That is rather difficult to say. It depends how far the requisition got. If it reached me and I did not pass it on, I would be responsible. I do not recollect it at all. Certainly if the requisition did come to me I would put it through, and put it through quickly. In the case of anything connected with the medical side I would usually ring up on the telephone and get it done quickly.

8. Would requisitions for things required at the camp come before you?—Not stores.

9. Motor-cars?—No.

10. Storehouses?—Yes, that would come before me.

11. A shed was refused for the men outside the cookhouse: would that come before you?—Yes.

12. Do you remember refusing that?—No, I do not, sir.

13. Do you remember any requisition for drying arrangements at the camp?—No. The idea at first was to have some drying arrangement, but it was not carried out—mostly, I think, on account of the money. I mean that it was just discussed, probably with the Commandant.

14. Was there any requisition for drying arrangements?—There was no requisition at all, as far as I remember.

15. *Mr. Ferguson.*] No requisition would be issued unless they knew that it was going to be accepted?—It was more a discussion between myself and the Commandant. I have only a hazy recollection of it.

16. *The Chairman.*] Would it cost very much to put up two or three marquees and have some braziers?—No, I do not suppose it would.

17. Do you think that money should have been really the objection?—Perhaps, on second thoughts, no.

18. Do you remember anything about cots or stretchers in the huts?—The question of cots in the huts was discussed by the Hutment Board and by the Commandant and myself, and it was decided that cots were not necessary at that time—when we first brought up the hutment question. It was decided that as the huts were to have floors cots would not be necessary.

19. *Mr. Ferguson.*] Were you a member of the Hutment Board?—No.

20. Were you consulted by the Hutment Board?—I was with the Hutment Board when they first met. I produced our original plan. Both the Commandant and myself went down to the Board when it assembled and the plan was discussed.

21. *The Chairman.*] Did you draw up the plan yourself—the original plan?—It was drawn up by Hornibrook, of the topographical section, at headquarters.

22. Under your direction?—Mine and the Commandant's.

23. Where did you get your idea of the huts from?—The idea came from a general discussion of the hutments at Home. We had photographs of those and several different designs brought out. One idea was to have them with no floors; another, with a slanting floor which the men were to sleep on; another, with a floor. There was a general discussion.

24. Your idea at that time was not for a hut to hold fifty?—My personal idea at that time was for a hut to hold fifty and to be quite separate and to be floored. We went into the whole question of air-space. We have a book on barrack-construction. The matter was all gone into in our original proposal.

25. Is that Firth's book?—I do not think so.

26. Can you produce that book?—Yes, sir, I think it can be produced. That was on the question of the original hut. I must explain that at that time we were faced with this proposition: we had not sufficient tents, or we had sufficient tents if they were crowded; but they would get worn out. Even then—at the time we started the hutment scheme—there were seventy or eighty tents in store being repaired. They were constantly being worn out. We were faced with the position that we had to put men in hutments. I personally would rather live in a tent; but we had to make some provision for the men, who then numbered only three thousand. Then we had the additional men thrown on to us. We proposed then to put the additional men into tents; and then we got still more men, and we had to go on with the hutments.

27. *Mr. Salmond.*] The tents that the Main Force had were taken with them?—They were taken from the Dominion. The Main Force took nearly all our tents from the Dominion. We had very few left.

28. Could you supply tents for the present force of seven thousand men?—I think not. I do not think we could possibly do it; further, I do not think we could get them.

29. *The Chairman.*] Would the quest of extra hospital accommodation come before you?—No.

30. Supposing that Berhampore was wanted, to whom would the requisition go?—It would be dealt with by the Adjutant-General and the D.M.S. They are the only two departments affected. If they wanted any extra accommodation built the W.M.S. would say what was wanted, and I would have it erected by the Public Works Department. At present there is no military engineer service in the Dominion. The Public Works Department act towards us as the Royal Engineers do towards the British Army at Home. In the normal course of events when hutments were to be erected the military authorities would, as we did, produce a plan, with our suggestions as best we could get them out, looking up and seeing what we wanted. We would produce this, and send it to the Public Works Department, and say, "This is what we want. Will you produce working drawings?" Their Engineers would produce the working drawings and say how much the work would cost, and we would get authority from the Minister and the Public Works would carry out the work. In this instance the Minister put the matter before a special Board, who went into all the details, and discussed it from every point of view. They discussed the question of putting up wooden hutments, the question of putting malthoid on the roofs, the question of fifty or a hundred, the question of how they were to be lined, and the question of the air-space.

31. They went into all that so far as they could possibly do?—There was a civil engineer, an architect, and a doctor on the Board. I do not see that the erection of hutments could be put before a more expert committee in the Dominion.

32. *Mr. Ferguson.*] And any military advice that was wanted was given by yourself and the Commandant?—Yes; and we asked Colonel Potter for any ideas he had regarding assistance in his administration of the camp. That was the Board before which we placed the original plan that we had drawn. We did not say it was the best or the only plan, but we put it before this special committee of experts, and this, in my opinion, was a very wise action on the part of the Minister of Defence. In the ordinary way the work would have gone to the Public Works Department, and their Engineer would then have said, "This is what we propose as a working plan."

33. *The Chairman.*] Had you yourself experience of living in hutments elsewhere?—I have lived in hutments at the Curragh, in Ireland.

34. What were they like?—They were of wood and some sort of malthoid roofing.

35. They were lined?—Yes. But then it is a much colder country there. The question of lining was, I think, brought up by the special committee, and it was decided not to line the hutments on account of New Zealand not being so cold as Home.

36. Was the coldness of galvanized iron not considered? It was a question more of getting the hutments up quickly. As far as my memory serves me it was December when we started the scheme of hutments, and June is the middle of winter. We discussed the question of wooden hutments. They were out of the question, because we could not get the timber and we could not erect them in the time. The whole matter was a question of time.

37. The men even now, with less than fifty, have to sleep right under the open window? Quite so.

38. There is a blank where there is no window, and then comes the window, and then a blank, and then another window?—Yes.

39. You cannot arrange the beds so that they shall each occupy a space between the windows? No; we have to put the beds right along.

40. Under the windows?—Under windows and all.

41. Was that not considered?—I do not remember the point being brought up.

42. Is it not a very important point?—I do not think so.

43. Does not a man who is not underneath a window get a better chance than a man who is?—Personally, I always sleep with a window open and my head right alongside of it. I know that in barracks at Home we find that men always will shut their windows. You will go there, say, after lunch, when perhaps there is no parade, and you will find twelve or twenty-four men in a barrack-room and every window shut. Often I have gone through the hutments and ordered all the windows and doors to be kept open. The first thing they want is to shut up the doors and windows.

44. It may, of course, therefore have been wise to have this permanent opening, without having to open or close, for that reason?—That is my idea, and I believe it is the idea of the Board and Doctor Frengley.

45. We have had before us the experience of the men themselves as to the great cold there, and we have had temperatures taken, which show, apparently, that galvanized iron gives great variations of heat and cold. It has been recommended that there should be lining placed there so that the temperature may be kept more even. Do you consider that if the huts are allowed to remain it would be imposing unnecessary hardship upon the men?—Of course the question of lining is an expert one.

46. But where you feel the heat or cold, the ordinary man can judge of that. We have the experience of these men in the huts, who tell us that there is much greater variation in the hut than in the tent, and it is much colder in the huts?—They sleep eight men in a tent and they put down the flap and shut the door. Personally I never shut down the flap, so that the air is continually going through, but the men put down the flap. Of course, he is much more comfortable and much warmer, but it is not so healthy.

47. The idea is to induce the men to sleep in the tent with the flap right up?—Yes, especially when there are eight men in a tent. I have seen fifteen men in one of the tents and even then they have had it shut up. A question which I think is more important than closing up the doors is to give the men extra blankets and keep them warmer. Any amount of people sleep outside. I still think we should have any amount of ventilation—I do not say 6 in., but possibly 3 in. would be enough.

48. The huts have been built in block and not in echelon: was that considered?—The position of the huts was considered by the Board. They considered the way the sun struck, and the situation of the huts.

49. That is what the experts call orientation?—Yes, and the huts were put up in accordance with that idea. I may say that the use of the term "in echelon" is rather confusing to me. How could you arrange them in echelon? It is a military formation, and if you continue with it you will produce the same frontage.

50. *Dr. Martin.*] That is recommended by the R.A.M.C.?—But it comes back to squares.

51. *Dr. Ferguson.*] If you have more than a single row it would be a modified form of blocks?—Yes, sir.

52. *The Chairman.*] The suggestion is, at any rate, that the present system gives you a very nice street at right-angles to the main street?—Well, I know that the point was considered on the ground by the Board and the General and myself.

53. You have not placed the huts so that the sun coming over the hill in the morning strikes in between them?—At this time of the year it goes further round. I know that was considered.

54. We had that from a competent man, Mr. Robb, an architect, who explained the matter very fully and showed it on the plans?—Well, the Government Architect was on the Board.

55. They told us that they considered more the mechanical aspect of the matter—at any rate, Mr. Morton said so?—I know that Dr. Frengley was very strong on the point. It was immaterial to the military authorities, but there was one thing which we did not want to see, and that was an unduly large space taken up, because, after all, training is the most important matter, and we wanted our training-area as large as possible.

56. Then, to sum up your opinion, you think that, all things considered, the huts are appropriate, and that they are better than tents?—Yes, I would say they are better than tents in this particular instance. The point is that I would far rather have tents if we had an unlimited supply of tents and unlimited ground so that we could shift them from place to place: failing that, we must have hutments.

57. On the question of the ground there and its accommodation, what number do you consider that that camp area would accommodate? The area is stated at 1,260 acres including all the land—hill and flat. There is flat ground to the extent of 400 acres, approximately, most of it usable. How many men is that camp adapted to carry, if you make allowance for all that ought to be there for training purposes and the general purposes of a camp?—Well, sir, that is rather a difficult question, because for training purposes the ordinary military man would think this camp rather inadequate. As a matter of fact we ought to have miles of training-ground. You give a regiment one day's march, and they would go fifteen miles, and then you would want to manœuvre at the end of it.

58. Apart from the area required to manœuvre at the end of a long march, have you got there sufficient area for, say, shooting?—Ample. That is one reason the camp was put there.

59. When we were at the camp we noticed that tents covered the 600-yards point?—The 1,000-yards, not the 600.

60. Now it is? No, the tents never covered the 600-yards mound. We never teach our soldiers shooting at more than 600 yards.

61. There is quite sufficient scope for shooting purposes?—Ample.

62. With the huts there, and apart from these manœuvres at the end of long marches, is the camp, in your opinion, sufficient to carry four thousand men?—Oh, yes, sir.

63. And more? Yes, sir, for four months' training. One thing I would like to stress is that the authorities considered this place with a view to its accommodating three thousand men, and only for four months, and then the men were to go away and a fresh contingent come in. That was continually kept in mind by the Board, the General, and myself when hutments were considered. It is not by any manner of means a permanent barrack scheme. Moreover, we were particularly unfortunate in the matter of the weather. Had we been a month or two earlier I do not think we would have had any trouble. It caught us badly in the matter of the roads. Every thing was being done at once. The roads were being done as quickly as possible. You cannot make roads and cart stuff at the same time. On the other hand, we were very fortunate because we had stones right at our back door, and they were carried to make the roads as each hutment was completed. We had absolute authority to carry out the work.

64. There was no stint imposed by the Minister upon what might be undertaken?—No, sir. When the Minister visited Trentham in my presence and that of the General he gave Colonel Potter full authority for carrying out the work.

65. It is suggested that if a siding had been put in there would have been greater facility afforded in regard to transport and that cutting-up of the roads would have been saved?—A siding was proposed, and it was put to the Railway Department, and they asked £1,000 for it. This was considered too much, and the matter was referred back to them to see if they could not do it cheaper.

66. That would have relieved the main road?—It comes along inside the main road. We discussed the matter as to how much we would save. A great deal of stores are sent out by road, and therefore the railway is not of much service to us.

67. But the siding comes along parallel with the main road, and consequently there would still be carting required from the terminus of the siding, or from where the wagons were on the siding, to the various points at which material was to be used?—Yes, it would have to be carted.

68. So that at any rate for the side roads the siding would not save very much?—None whatever. It only saves traffic on the one main road that leads into the camp, which is metalled partly by ourselves and partly by the Hutt County Council, and the road has been always in comparatively good condition. The centre of the road is excellent.

69. *Mr. Ferguson.*] It practically shifts the siding from Trentham Station to a point a quarter or an eight of a mile nearer camp?—Yes.

70. *The Chairman.*] We have your opinion, at any rate, that for four thousand men, apart from this question of having ground to manœuvre upon after a long march, there is sufficient area there ?—Yes, sufficient for four months' training, perhaps for a little more than four thousand.

71. Sufficient for seven thousand ?—I think that seven thousand men could be accommodated, though it might be rather crowded from a training point of view, when they are separated up into little squads, and considering the horses.

72. You would really want a much larger area ?—For ideal conditions.

73. You have had experience in the English Army ?—Yes, sir, for two years.

74. What is your experience on the shifting of tents, not only moving one tent to a site immediately adjacent but shifting the whole block to another site ?—Well, sir, at the Curragh Camp in Ireland, which is considered the best training-camp in the British Isles, because there are not so many senior officers there to harry you about, the are fifteen thousand men, and it is not nearly as good a subsoil as you have at Trentham. They are there all the summer, and they do not shift their camps unless in very wet weather. But they take the tent every fine day and shift it into the intervals, and let the sun get on to the place where the tent was, and then they shift it back to its original spot. Even in disciplined regiments the ground gets foul.

75. You do not repitch it on the adjoining site because you look upon that as foul ?—That is so.

76. Are these tents floored ?—No; the men sleep eight and ten in a tent for six months, and the ground is not nearly so good as Trentham.

77. *Mr. Ferguson.*] Is it somewhat peaty ?—No, clayey. The situation was ideal, but it was not ideal ground. The point that has to be considered is this: when you shift a camp or hutments you have to shift the whole of your administrative services, cookhouses, water-supply, and latrines. That is a big job. If you go on for six months you would go into acres of ground for latrines-trenches.

78. Which never can be used for pitching tents ?—Well, people are at variance upon that matter. Some say it is fit to live there again after a year. I found at Sutton Camp and Matarae Camp there was an extraordinary absence of flies, and the trenches are quickly filled in. But comparing Curragh and Trentham—you can hardly compare the two as regards mud, because Trentham is a king to Curragh. You could walk all over Trentham a few hours after the rain and your boots would hardly get dirty. At Home the mud would be half-way up to your knees.

79. Dr. Thacker told us that he went at Trentham to within 3 in. of his knee in mud, and left it on his trousers to show the people down in Christchurch: have you any idea where he found that spot ?—Not the slightest idea. He may have discovered it on the road. It is extraordinary how comfortable men can make themselves if they will only do it. I saw two tents the other day: the men in the one on the worst position had carted some shingle and cut some trenches, and that tent was beautifully dry; the next tent, on a better site, could not compare with it. The point is that men are taken away from all sorts of walks of life, and we cannot immediately train them to look after themselves. It is some time before they learn.

80. Would it not be better to bring the men in, say, a week or a fortnight apart, and so ease the strain on the Quartermaster-General as to the issues of stores ?—Emphatically not. It is already spread over four or five days. The next reinforcement will be coming into camp over a period of about four days, from the South.

81. What occurred to me was that the men when they presented themselves for examination might supply particulars of the sizes of boots and coats, and so on, so that before the recruits reach camp you may know what to provide for ?—No, sir, that is impossible. The men are examined in Wellington, Christchurch, Dunedin, and Auckland, and to collate that information would be impossible. Do you think, sir, they would measure a man for his boots and his coat and so on ? What they do is to look at him, and they can judge the size he requires immediately. It would be absolutely impossible to examine each man.

82. *The Chairman.*] No, but a man knows exactly what sizes he takes in his different clothing ?—Yes, we ask the men the size, but to look up the card sent in by the doctor would be a difficult and impossible matter.

83. But you would get to know that so-many men would be wanting No. 7 boots and so-many No. 8 boots ?—We have no trouble in the matter of quantities. We know the ratio of the various sizes, and it is really extraordinary how closely they can be calculated.

84. You think that the present method of distributing stores and clothing after the men arrive in camp cannot be improved ? I understand that they may reach camp on a wet night, and they are stood in a row outside the Quartermaster's office, and they may have to wait there from 7 o'clock at night till perhaps midnight. He has to supply and fit out perhaps thousands and get them to sign for and check the issues. Is not that a rather clumsy way ?—It undoubtedly is, but the majority do not arrive in camp at that hour: it depends on the train service.

85. They are brought out there about dusk and given tea, and then they are taken up to the Quartermaster's tent for their kits, and the evidence is that they are generally stuck there for three or four hours ?—The southern men get to camp early in the day, but the northern men are more unfortunate and possibly reach camp at night.

86. *Mr. Salmond.*] Could not they wait till next morning to get their uniforms ?—Well, it is not so much the uniforms which are in point. A man brings nothing into camp—no blankets—and he may be given blankets on the night of his arrival and receive the last of his kit a week afterwards. He may get a part of his kit straight away. You see, this was a camp originally intended for three thousand men, and it has been growing ever since, and we have been working at full pressure.

87. *The Chairman.*] We are quite conscious that there is a tremendous amount of work connected with the camp, but we are trying to find out about what have been suggested as defects in the

system ?—Nobody claims that it is perfect, but we have had an extraordinarily difficult job, and every officer and man, as well as the Ministers, has done everything possible to help things along. We are very short-staffed, and have a tremendous amount of work to get through. We have only got one naval officer in the Dominion.

88. *Mr. Ferguson.*] We were told that the vegetables came into camp three times a week. Were you ever asked for some proper means for storing these vegetables: was it ever suggested that there should be suitable storehouses ?—Yes, I believe it was.

89. And how was that dealt with ?—I cannot tell you from memory. There is a milk-store.

90. We have been told that there is a meat-store, but no milk-store or vegetable-store, and that groceries are served out in bulk because there is no proper store for them ? I do not know whether the groceries are served out in bulk for several days at a time. I think the vegetables are served out straight away to the cookhouse, and cleaned and cooked.

91. Then there is none for the next day because they have been wasted ?—No, sir, not wasted, because they are not put in store. I mean to say you could store them outside on sacks or tarpaulins, as we have done many times. It does not mean that they are wasted because they are not used on the one day. I think that the present system of cookhouses provides a most excellent arrangement for feeding the troops. It is miles ahead of Curragh Camp.

92. *The Chairman.*] How about carrying the bread and so on in blankets ? In ordinary camps what provision is made for the carrying of bread ?—Usually the men go along and the bread is counted out and thrown into a G.S. wagon and served out to the men in the tents. There are four companies in a regiment; in each company there is a quartermaster-sergeant who has to requisition for the stores, bread, groceries, and so on, and that is put into the store tent.

93. But I want to know whether in ordinary camps they do not provide something in the shape of a tray for carrying the bread ?—Nothing.

94. How is it done—by wagon ?—It would go from the supply depot to the unit by wagon: from there it is taken into the quartermaster's store, and then it is carried out by hand.

95. Each man getting his own ?—Each tent-orderly would carry it along to the tent. And we usually try to have a box in which the butter and jam and bread unused can be put. That is done in the Trentham huts. Of course, the idea is to have no carrying-over of unused supplies, but that is impossible.

96. Does the arrangement for sick-parades in any way fall under your jurisdiction ?—No, that is entirely dealt with by the camp authorities.

97. It is for the medical men to say whether they shall have the patients standing in the rain ?—The medical man is entirely responsible for the control of the sick. He tells the Camp Commandant what he wants and the necessary arrangements are made for him, the orders being issued by the Camp Commandant in accordance with the Medical Officers' requirements.

98. One of the points upon which we have to inquire is as to whether the men are well fed and whether the clothing is suitable and sufficient in amount. Now, we have had a case mentioned where some five hundred uniforms were returned as being too big in the collar or badly proportioned; then we have the shortage of boots deposed to, especially at the end of May: have you anything to say about these topics ?—It does not come under my department, but I would like to remark upon the question of boots.

99. You heard the discussion we had when we were endeavouring to find out whether there was a shortage and whether somebody was accountable for it ?—I may be able to elucidate that point. The idea was, and has been, so far as my understanding goes, that immediately the men go into camp, or as soon after as possible, they receive one pair of boots each. When they leave, or towards the end of their training, they are supposed to get another pair. The idea has been that they get their second pair when they depart. I do not know whether there is a definite memorandum or order upon the subject. Now, when Mr. Massey and Mr. Allen, and several other members of Parliament, and the Commandant, went out to camp it happened that some of the men did not have their two pairs of military boots. We were then ordered to purchase them, anywhere, any sizes, and at any prices.

100. So as to give them a change ?—The men had two pairs—their ordinary pair which they brought in and the first issue.

101. But their own would be unsuitable for camp life ?—That is so. Anyway, we were ordered to procure them on the Sunday, and they were bought on the Monday.

102. Captain McCristell told us that they were supposed to get their second pair about a fortnight after going into camp ?—I do not know that he is right, according to the policy of the Department.

103. After the second week in camp each man is supposed to have his second pair of boots ? What is the system in the Regular Army ?—A recruit at Home first of all gets a free issue, and, as I say, there is no question of his being measured. The officer goes along and there is a tailor, and he makes marks on the clothing while it is on the man and makes the necessary alterations to it. Then he gets his boots. He gets an allowance of 3d. per day to keep up his uniform. He has always to have two pairs of boots.

104. *Mr. Ferguson.*] He is provided with one pair at once and he has to find the second pair himself ?—I do not think he has to purchase them at once. We only get them in dribs and drabs at Home. The boots are always there.

105. He has always two pairs, at any rate ?—Yes, sir.

106. In the Old Country, then, the ordinary recruit is provided with two pairs, but out here they think one pair is sufficient ?—I do not say that that is so.

107. *The Chairman.*] They have a good deal of fatigue work to do. One man told us that he was ordered to work in a pit in which there was a good deal of water, and as he only had one pair of boots

they got wet and remained wet: that is the sort of story we receive. You think this idea of getting the second pair of boots immediately was simply the result of that visit of the Ministers to the camp?—I think so, sir. The ideal, of course, would be the issue to each man of two uniforms and two pairs of boots immediately on his arrival in camp.

108. He gets denims, as they call them, and one uniform?—I cannot say that we could not do if the resources of New Zealand were properly organized, but under the present conditions it is impossible.

109. *Mr. Ferguson.*] If Major O'Sullivan felt any doubt about such a matter would he come to you or go to the General straight?—He would go direct to the General, but not as G.O.C. But we very often discuss matters between ourselves.

110. He would get your assistance if he wanted it?—Yes, quite so. Very often the Stores Department ring me up for information upon that sort of thing. The Quartermaster-General has too much work. His work, according to Sir Ian Hamilton, should carry the rank of a Brigadier-General.

111. *The Chairman.*] You have probably heard or read of the matters which have transpired before this Commission: is there any point which you would like to address yourself?—No, sir, I do not think there is.

112. Our Commission directs us to inquire as to whether the troops have suffered any preventable hardships or discomfort in the camp?—I do not think there is anything I have to say; but I would like to stress the point that we anticipated a shortage, through the wearing-out of tents, and we took in hand the erection of the hutments. We still consider that we did the right thing. It was forced upon us, although the G.O.C. and myself considered that the men would be more healthy in tents. In December last we anticipated this shortage of tents. We expressed that opinion that we would probably have a little more sickness through the men being in the huts.

113. What provision was made to meet that sickness: was the medical branch told that they would have to provide for it?—There was a military hospital that we are erecting there: that was pushed on with all possible speed. But, of course, before it was completed a great many of the men took sick at Trentham and required to be shifted. That proves that you can only utilize the buildings and resources you have at hand—you cannot provide more.

114. You might be able to provide the personnel of the military medical service and the Ambulance: we are told that the Ambulance section was very short of men?—We did provide the personnel, but the personnel of the Ambulance service were called upon rather severely. The men were sent away urgently. We have not got the class of men in the country. It is all very well to say that the orderlies are not trained, but you cannot produce them. The only institution of the sort we have in the Dominion is the St. John Ambulance Association, and they are not all medically fit men. There is no question that we are deficient in that respect. But we have done the best with what we could get.

115. And then, St. John Ambulance men are men who are in situations?—Yes. I might say that recently we received a cable to send ten doctors and eighty Ambulance men—that is, Red Cross men. At that time we had sixty-six in camp with the Trentham Regiments. Twenty-five of them have already gone, and fifty-five will be wiped out when the Sixth Reinforcements go. We have got to produce another sixty-six new men now, and train them for the Trentham details to leave in October. Recruiting officers are instructed to ask men which unit they would like to join. If a man has done ambulance-work he is put down for the Ambulance Corps; but we often get men who know nothing about the work.

116. But there is nothing to expedite the training of these men?—Then, of course, we are faced with another difficulty in regard to the doctors, when you get a cable such as I have mentioned.

117. Has this epidemic really prevented the training of Ambulance men in their duties?—They never have been trained: they have just gone straight into the hospital, like you or I might have done. Still, these same boys have done very good work. It is not by any means very pleasant work. They knew nothing—and they had simply to glean information as they went along.

118. *Mr. Salmond.*] At Curragh Camp were there any appliances for drying clothes for the soldiers? Yes, at the regular barracks there were drying-rooms, but there was always an overflow of ten thousand men under canvas. There would be twenty-five thousand altogether, and fifteen thousand in barracks. Marquees for drying clothes were also provided.

119. Did the men in the tents have the services of drying-apparatus, as well as those in the barracks?—Yes, if it were possible to arrange it. They could borrow a regular unit's drying-shed, but it was very seldom that that was done.

120. Was there any arrangements for hot showers or hot baths for the troops?—Not for those in the tents—absolutely none. In the barracks there were hot baths and a few showers. There were no hot baths in the officer's quarters. I assure you that we do our men very proud out here as compared with at Home.

121. *Dr. Martin.*] You admit that these things are very necessary, though a man will not be able to get them behind the firing-line on active service?—It is a great advantage, of course.

122. Do you think these things necessary for the troops?—Yes, sir, I consider it a great advantage, but I would not say it is an absolute necessity for them to have drying-facilities. They will not have them at Gallipoli.

123. But it will be pretty hot out there?—It is about the normal climate of New Zealand. That was rather a point in connection with the hutment question—that the New Zealand climate is not as hard as that in England. Of course, the Maoris in Auckland were accommodated in huts, and they had no complaints to make.

124. *Mr. Skerrett.*] Am I right in believing that in October, 1914, the Headquarters Staff recognized that there would be a permanent training-camp for the Dominion at Trentham?—I would not like to say that it was recognized in October.

125. The Main Body left in October?—Yes, there was a possibility of having a camp at Trentham then.

126. Now, it was recognized that it would become a more or less permanent camp—a Dominion training-camp—to be occupied by a succession of regiments to be trained and sent to the front?—Yes, sir.

127. Now, for such a camp, ought not the plan and design of the camp to be laid out according to some settled plan or design?—Yes, so it was.

128. Who designed and laid out the Trentham Camp—who is responsible for the designing and laying-out of it?—It was not designed as we know the Trentham permanent camp now.

129. My question is, when the camp was first established, what officer was responsible for the designing and laying-out of the camp?—It was laid out first by Colonel Potter.

130. Was any plan or design of the camp prepared then?—No, it was just an ordinary duty of an officer—to go out and say, "This is where the tents will be; this is where there will be latrines," and so on.

131. And did a period arrive when it was decided that this camp was to be more or less a permanent camp for the training of all the troops to be sent to the war—it was to be as permanent as the war? I put this to you: can you say that when that period arrived when it became clear that this camp was to be used during the war, and perhaps afterwards for training men for the Dominion, can you say whether the permanent laying-out of the camp was considered by the military authorities?—The camp was already there in October, permanently laid out with its water-supply and all its services, with everything for three thousand men. Then in December it was decided to change from tents to hutments.

132. I am going back to October: direct your mind to October: I understand that it was then intended that three thousand men at a time were to be there?—Yes.

133. That is a largish camp for the Dominion?—A fairly large camp.

134. Was there any general plan or design for the camp?—Why should there be? because the camp was already there. Three thousand men is not a particularly big camp. Last year we had Territorial camps as large as that. It was for the military authorities to go and select the site. The ground is examined by a doctor, the water-supply is tested, and then the camp is laid out. There is no plan drawn.

135. I want to know whether there were any plans prepared on paper showing the lay-out of the camp?—No; no drawing was made. It was done on the ground, which is far better than any plan could be.

136. No plan was preserved showing the lay-out of the camp?—No.

137. And you do not think it was necessary?—I do not.

138. Do you not think it was most important that, in view of the possibly important extensions of the camp, that you should be able to take a view of the general location and plan of the camp?—But you look on a plan in a different light to what I do. A plan to a military officer is simply a convenience to reduce a large amount of country to a concentrated area, so that he can see the whole thing there. But if you have the camp ground before you you do not need a plan.

139. *The Chairman.*] There is such a thing as a design on paper and a design in your head: was there any formulated design in anybody's head?—Quite so; it would be in the Commandant's head.

140. *Mr. Skerrett.*] I suggest that there should have been a plan showing a definite scheme of the camp—not only the lay-out of the camp, but providing for the possibilities of future extensions?—So far as I know there was none; but I know we did provide for possible extensions.

141. Was there any written report on the matter?—Not that I know of.

142. Was the camp reported on by any one appointed by the Headquarters Staff?—By Colonel Purdy. He tested the water and said whether the ground was all right.

143. Did any member of the Headquarters Staff take upon himself the responsibility of inspecting and reporting upon the camp—formally inspecting and formally reporting on the camp so as to make himself responsible?—Not that I know of—from an engineer's point of view.

144. I understand that from the beginning it was anticipated that there would be a shortage of tents: I do not mean in number alone, but a shortage of tents owing to their falling out of repair and being taken away by the contingents. I suppose the succeeding contingents took away large quantities?—Yes, and all our best tents.

145. If the Commission desired it, could they have a return of the number of tents available after the Main Body left?—Yes, I think so. If you asked, Major O'Sullivan would prepare it.

146. I understand that it was anticipated that Trentham Camp would be occupied by about three thousand men in training?—Yes.

147. The occupation of the camp began in October or early in November. Now, it was anticipated, I suppose, that winter would come upon the camp at its usual time—the beginning of May, June, July, and part of August, and so on?—Quite so.

148. What I want you to explain is this: how is it that, there being an anticipated deficiency of tents, &c., no provision was made for the erection of more permanent structures until towards the end of March, when the first sample hutments were erected? That leaves November, December, January, and February, four months gone by without anything being done in the direction of providing permanent quarters?—So far as I can remember, the hutment scheme was proposed about December. We thought we could get on for three thousand men up to December, and then we commenced to decide upon the hutments.

149. But what I am bound to point out to you is this: that it was anticipated from the start that some permanent structures would be required for quarters for the men. Can you explain why it was that those sample hutments were only provided towards the end of February: the Public

Works Department was not instructed to design a sample hutment until the end of February? I am not making any imputation against you, but against the general system?——

The Chairman: The first suggestion of hutments was made on the 30th December, which probably you wrote and General Robin signed. Then the time went along and apparently nothing was done till April, I think it was.

150. *Mr. Skerrett.*] You see there was a delay: was not that too long a delay?—I am certainly admitting that there was undue delay, but I would explain it this way: We were ordered to produce a sample hut, and did so. It was inspected by as good a Board as you will get in New Zealand, and passed as correct. Then we put up the others. I think we should have gone straight on with the hutments without waiting for the sample hut.

151. I almost suggest that the Headquarters Staff were too late in moving in the matter, even at the end of December?—We started them in December, and we certainly could have had them done before winter, only additional work was thrown upon us.

152. At some time or other headquarters determined to bring up the population of the camp to about seven thousand men: when was that first known to headquarters?—That I could not tell you.

153. It would be about April, would it not?—I could not tell you from memory when we offered the extra two thousand men. About that time we knew that nearly seven thousand men would require to be provided for.

154. I would like to know the date when it was known that the number of men to be provided for in camp would reach between six and seven thousand?—I could not tell you from memory.

155. *The Chairman.*] Would it not be about the date when the Department found that it was necessary to get some extra two thousand pairs of boots: that was about the middle of April?—Probably it would be about the middle of April, but I would not like to say. I know that when the troops went away—one of the reinforcements—on the same day it was announced by the Prime Minister that two thousand more men were to go.

156. *Mr. Skerrett.*] We know that men arrived in camp towards the last days in May, when the hutments were incomplete, and when there were insufficient hutments to accommodate them. I want to know what the explanation of that was?—It was first proposed that those two thousand men of the Trentham Regiment should go into tents. Just before this we increased the number of hutments, and as they were completed we proposed to transfer those men from the tents to the hutments

157. Was that adopted?—Yes.

158. Can you deny that the fact is that these men were put sixty and seventy in a hutment, and that they were put into hutments partially incomplete, and with no windows?—No, I do not deny it. I believe that is a fact; but we had difficulty with the workmen at that time, and the weather. The Public Works Department did all they could and we did all we could.

159. Is not the real explanation that the provision of permanent buildings was left over by headquarters until too late?—No, I think not

160. I want to know whether you and the General in command were present at the deliberations of the Board which revised the plans of the hutments?—Yes, sir, we were present at the first meeting, when the General explained the idea.

161. You do not suggest that the appointment of the Advisory Board relieved the Headquarters Staff of all responsibility for the hutments?—Yes.

162. You do? Do I understand you to suggest that the Headquarters Staff did not take the responsibility of themselves considering whether the recommendations of the Board were satisfactory or not?—Quite so. We did, certainly.

163. You did take the responsibility?—We were bound to take the responsibility; we must do so.

164. There was no military member upon that Advisory Board except Major Morton?—No.

165. No member of the Headquarters Staff was on that Board?—No, not officially on the Board.

166. All they had, then, was one conference with you and the General in command?—Yes, sir.

167. You know, I suppose, that it is familiar knowledge that the winter at Trentham is by no means mild?—Well, I would not say it was very severe. I do not know of my personal knowledge that is it any more severe than anywhere else on the same latitude.

168. But we all know that it suffered from severe frosts in the winter and also from extreme winds, accompanied by very cold rains. I put it to you, do you think that you adequately considered the comfort of these men in connection with the erection of these hutments?—Yes.

169. You know that they were young men coming straight from their homes and from civil occupations: that ought to have been taken into consideration, ought it not?—Yes.

170. In view of the fact that there was a large number of these men coming into camp at the beginning of the winter—in May and June—do you suggest that these hutments ought not to have been lined with some material, seeing the time of the year, the class of the occupant, and the cold material of which the huts were composed, iron?—Well, it is very hard to say. I do not pose as a technical engineer.

171. But as a matter of comfort, and speaking as a man who has a certain amount of responsibility?—You want an expert's opinion.

172. As an expert on military camps, I put it to you, did you undertake the responsibility of seeing that these hutments provided for a reasonable comfort of the men?—Yes.

173. Do you say now that those hutments unlined did provide, having regard to the circumstances, for the reasonable comfort of these men?—Yes, certainly they did. They would be more comfortable in hutments than in tents.

174. Unlined?—Yes. I do not know now whether the experts think it necessary to line them for warmth purposes.

175. *The Chairman.*] Some experts do. Mr. Bates says that galvanized iron is subject to greater variations of heat and cold—that on cold mornings it is colder, and on hot days it is hotter—and there

is not the same equable heat and cold that there is in the tents?—That may be so. I would not contradict that.

176. *Mr. Ferguson.*] They are building some additional huts now: are they being lined?—I do not know.

Mr. Salmond: They are being built of wood.

177. *Mr. Skerrett.*] You have been in the country in New Zealand?—Yes, sir.

178. Have you seen the ordinary cow-shed and other similar outhouses in connection with farms?—Yes, sir.

179. Does the architecture of the ordinary cow-shed differ from the architecture of these hutments, so far as the comfort of the inmates is concerned?—Well, after all, it is only a shell: that is all that is proposed.

180. I am using the word architecture in a general sense, and not referring to the ornamentation or appearance of the buildings. I am referring to the comfort of the inmates?——

181. *The Chairman.*] The suitability for a healthy life?—I consider them quite suitable, and more comfortable than the tents for the men, but I would certainly prefer tents from a point of health.

182. *Mr. Skerrett.*] I ask this question: could not lining have been provided for these hutments at a comparatively small extra expense?—Yes; I do not know that it would be very expensive, but, of course, all these things cost money.

183. But where health is concerned it affects, of course, the competency of the men and the adequacy of their training?—Quite so; but a competent Board considered that matter, and were of opinion that these huts were healthy.

184. I can quite understand that, as far as the ventilation is concerned. But then they converted a hut intended to hold fifty men into a double hut with two compartments to hold a hundred men: did you object to that?—No, there was no objection whatsoever. It made no difference. It is just butting up two huts together.

185. *Mr. Ferguson.*] It meant a great deal more than that, because you had a door at each end?—But we had a partition in the centre.

186. *Mr. Skerrett.*] But with the partition in the centre the compartments only are separated and not the huts, so that there was no through-draught owing to the alteration?—Yes; but then we we had 6 in. eave ventilation, and also the window ventilation, one-quarter the size of the hut. That was taken into consideration and fully discussed by the Board, and surely that was enough to make up for the alteration.

187. *The Chairman.*] But there was no distinction between the ventilation and the draught?—Of course, we had a very difficult proposition, because Trentham is very windy.

188. *Mr. Skerrett.*] Do you suggest that in those hutments each compartment ought to accommodate as many as fifty men?—I say that fifty was a reasonable number of men to put into each compartment.

189. Do you maintain that still?—Yes.

190. You know it gives inadequate floor-space according to the Imperial regulations and text-books?—I do not know that you have a regulation to cover semi-permanent barracks. We knew of the conditions laid down, and this additional eave ventilation and the additional windows were put in to provide for this contingency.

191. I want to put this to you: do you not know that if you put fifty men into one of these huts they will be practically touching one another when sleeping: can you work it out?—I cannot tell you the distance.

192. *The Chairman.*] There would be a few inches between each?—There would be 72 ft., and twenty-five men on each side. I cannot say from memory.

193. *Mr. Skerrett.*] It only gives each man 2 ft. and a few inches. What do you say now, supposing you allow 2 ft. 6 in.?—How do you reconcile that with eight men in a tent?

194. That is a different matter?—Quite so.

195. At any rate, it is recognized by authorities that there is a difference between the floor-space and the cubic air-space, both of which must be taken into consideration in preparing hutments for soldiers?—From the medical point of view, or from the military point of view?

196. From the practice of the Imperial Government, and the recommendations of writers on military hygiene. I want to put it to you now: do you say with a sense of responsibility that fifty men ought to have been accommodated in each compartment of those hutments, seeing that each man only has a sleeping-space of about 2 ft. 6 in.?—Yes, I think they were not unduly crowded.

197. You know that this compression of fifty men in a compartment was accompanied by the circumstance that no provision was made for the men eating elsewhere?—Yes.

198. Do you not think that if you are putting fifty men in one of these compartments you should make provision for some accommodation for their recreation and eating purposes?—The same thing applies in tents—the men eat their meals in tents: they have no tables and no floors, as they have in the hutments.

199. Why was no attempt made at any time during this period to provide rough sheds, watertight, in which part at least of the men could have their meals?——

200. *The Chairman.*] They had them at Curragh?—Permanent barracks, that was. We were working as hard as possible over the hutments, and the putting-up of dining-halls would not have assisted matters. It never was intended to make separate dining-halls for the men.

201. *Mr. Skerrett.*] Nor did you consider the provision of some accommodation for the men to write their letters?—They have got it.

202. Did they have it then?—They had it.

203. It was provided by the Salvation Army and other institutions?—Yes, these volunteer organizations have given excellent accommodation for that purpose.

204. Were you aware—if it is not in your department, I will not continue the question—whether at any time there was influenza in the camp?—From the general reports I knew. This comes under the medical side, and does not concern me.

205. Was it ever reported to you that there was a need for increased hospital accommodation in or near the camp; if so, when was that first reported to you?—Not that I can remember.

206. At no time?—I do not remember any report at any time. The medical authorities would simply ask for additional accommodation, and the Q.M.G. would provide it. We did provide a hospital.

207. I have no doubt; but the question is, how was it that although there was a threat of an epidemic throughout the camp, the Headquarters Staff or the Camp Commandant did not seek an official conference with the medical branch of the service?—It should originate from the medical branch through the Adjutant-General.

208. You know of no such request?—No.

209. What I should like to know is this: who designed the cooking-places and the necessary stores, and so on?—It would be a hard thing to say.

210. Did they just grow, like Topsy?—They started off to grow, like Topsy. My own personal opinion is that they are most excellent arrangements in every way. They were designed by the Minister's expert Board.

211. By whom?—By the Board.

212. I understand you to say that you did not find it necessary to provide drying-accommodation for the men's clothes?—No.

213. Was not that an error of judgment, having regard to the winter conditions?—Yes, I possibly will admit that it was an error of judgment, but the Commandant always could provide marquees and he could normally use one of the huts. The Camp Commandant has enormous powers. He holds the position there equal to a Brigadier-General.

214. And he has an enormous amount of work to do?—Yes, and I would like to say here that he is hampered enormously by the general public. It is terrible here how many people hamper the authorities. Thousands of people write for all sorts of jobs and positions, and it does certainly take up a great deal of time which should be devoted to administrative works. As to the drying-room, that could be easily provided by using a hut or taking a marquee.

215. Do you not think it was necessary that the Quartermaster-General in charge of stores should know exactly the basis upon which boots would be supplied, so as to make his arrangements upon some settled basis?—Yes, and so he did.

216. He ought to have known it?—He did.

217. We do not know that he did. I put it to you that when the men came into camp at the very beginning of the winter, ought they not to have been provided, either immediately or within a week of their entry, with a second pair of boots?—It would be very advisable if we could do that.

218. And ought not the authorities to have made every effort to get a sufficient supply of boots to provide each man entering the camp in winter with two pairs?—But we had not sufficient notice. Regiments were coming into camp a fortnight after they were offered, and that is all the notice we had. It is very difficult to keep up with it.

219. *Mr. Ferguson.*] You mean that without consulting headquarters the authorities offered men to the Imperial Government without knowing whether headquarters could fulfil the requirements?—That is so. It is very unwise to buy boots outside, for instance. Everybody has his own idea of a military boot, but when you once start to wear some of them you soon find that they are not up to the mark. You must have a good boot. Those two regiments came into camp at a very unfortunate time, almost in the middle of winter.

220. I understand that you do not suggest that it would have greatly facilitated the work of the camp and the efficiency of the provisioning of the camp if there had been from the very start a siding put into the camp?—No, it would not have greatly facilitated matters, but it would have been an advantage.

221. *Mr. Gray.*] Do you consider that the delay in proceeding with the erection of the hutments was unavoidable, after the plans had been determined upon?—We could not possibly erect them any quicker.

222. Why not?—There was trouble with the workmen.

223. On account of the difficulty in getting workmen?—And I think they were stuck up for the want of timber.

224. You think those are two of the reasons which operated towards the delay?—Yes.

225. Now, personally I understand you approve of the hutments?—Yes.

226. Would you occupy one yourself?—Yes.

227. After all, in a training-camp, whether you have hutment or tent, the purpose of the erection is a covering?—Yes.

228. The hutments were not designed as a permanent habitation for the men?—That is so.

229. Temporary resting-places?—Yes.

230. And whether it is hut or tent much comfort or luxury is not intended?—No; we do the best we can and make them as comfortable as we can.

231. Having regard to their purpose?—Yes, and making the men hardy.

232. With the knowledge that they are to be sent forward to rougher conditions?—Yes. We had that in our training programmes—the men were sleeping out and manœuvring.

233. That is, in training Territorials?—No, in training these men.

234. But even in training the Territorials you have camp life, and I suppose the conditions there are not too luxurious?—Far from it.

235. That is part of the training?—Yes.

236. You spoke of Mr. Hornibrook as the draughtsman who prepared the design?—Yes.
237. He has had Imperial experience? Yes.
238. As what? I think he has had draughting experience at Home.
239. You see no objection to the windows in the huts? No.
240. There is a shelf provided under the whole length of the window? Yes.
241. Does that not afford some protection against the draught? Certainly.
242. *Mr. Salmond.*] What would you think of a soldier who was not fit to sleep in one of these hutments on a mattress with three blankets in the winter in New Zealand: how would he get on in the French trenches?—Not very well. I do not think the soldier is complaining at all. The words are being put into their mouths—a most unfortunate thing. I would like to say that there is a splendid spirit among the men at Trentham, a beautiful spirit. But if these things and ideas are put into the boys' mouths, what can you expect? Still, I consider the spirit out there is wonderful. The men at Trentham will allow nobody to say anything against Trentham Camp. Of course, they do not say that reducing the number in the hutments is not an advantage, but by reducing the number it is going to put the Government to more expense. You might give them one hut apiece, but the Government cannot tell how long they are going to be faced with the requirements of the war. The Government must watch the expenditure even in these matters.

FRIDAY, 6TH AUGUST, 1915.

Dr. WILLIAM JOHN BARCLAY sworn and examined. (No. 104.)

1. *The Chairman.*] You are Superintendent of the Wellington Hospital?—Yes.
2. And you have been since when?—Since the 12th February, 1915.
3. What arrangements, if any, were made with the hospital with respect to the reception of patients from the Trentham Camp?—When I arrived there were some twenty military measles patients there. They were accommodated in the ward known as the Isolation Ward, or sometimes known as the Tin Shed Ward. I would like to explain, in case there may be some misapprehension, that although we term it the Tin Shed Ward, it is a properly constructed ward. It is built of galvanized iron and lined throughout. I do not want the impression to get about that it is a tin shed.
4. Is it lined with wood?—Yes, I understand so.
5. Do you consider lining is the proper thing where you have galvanized iron as the outside covering?—I should sooner not express an opinion upon that without consideration. I am not an expert in the construction of hutments, but I desire it to be understood that this building is lined.
6. You found twenty measles cases when you arrived at the hospital?—Yes, approximately.
7. Was there then an arrangement by which the hospital was to receive any patients sent in from the Trentham Camp?—I could not tell you what arrangement was made. I took over the cases and continued on.
8. As a matter of practice, did you accept any patients sent in from the Trentham Camp when you had accommodation?—Practically, yes. We took in patients in the measles ward and also into the ordinary surgical and medical ward, and that is continued to this date.
9. Did there come a stage at which you had no further accommodation?—Yes.
10. Do you remember the date?—No, I cannot give you the exact date. It was shortly before Berhampore was open for the reception of patients.
11. About the beginning of April?—About that.
12. What was the condition of things then?—At the Wellington Hospital the position was that more measles patients were arriving than we had accommodation for, and the overcrowding became so serious that I had to decline to admit any more in the interests of the patients themselves.
13. Were the patients sent to you in the nature of convalescents, or were they persons who had not reached the convalescent stage, or both?—They were more patients in the acute stages. There might have been a few whom you could call convalescents, but most of them were in acute stages.
14. Then upon this information that the accommodation had reached its limit did any negotiations take place upon the subject?—Colonel Purdy had a conversation with me over the telephone. He asked me if it were true that I could not take any more in, and I said Yes, it was; and I pointed out the reasons for it.
15. Did you hear next that Berhampore had been taken?—Only through the Press and incidentally.
16. You were not consulted with regard to the suitability of Berhampore?—No, sir. If I may add, I may mention that possibly I said something to Colonel Purdy that I heard there was a place called Berhampore, which I thought might be available. I forget the exact words, but I think we discussed the question as to whether extra accommodation could be found in that place. I had heard it was a place that might be got, and that it had been used as a hospital.
17. From what you gathered, no place at that time had been fixed upon in the mind's eye for further accommodation?—No. That was the impression I had.
18. Well, after the Berhampore incident, I take it the hospital went on receiving patients as sent in so far as it could accommodate them?—Yes. We reduced the number of our measles patients to what I considered a safe number for the accommodation I had.
19. Could you tell us how many that would be?—At that time, approximately about twenty patients: that was in one ward.
20. How many had you there beyond that before you indicated that you could not take further patients?—At one time I think I had as many as thirty-nine. I know I had to commandeer one of the

consumptive shelters to put them in temporarily. The shelter is in the hospital grounds. We have several consumptive shelters, and I had to take one of them.

21. You would not say that a consumptive shelter was a proper place if a better place could be obtained ?—It was quite good, because the patients I had there were convalescents. I had to keep them there until they were quite clear of the infection, because they had to go back to camp.

22. You afterwards, I think, had the Victoria Ward appropriated ?—Yes.

23. How did that come about—was that in Dr. Valintine's time ?—That was when Dr. Valintine took over his military duties. The upper ward of the Victoria Ward was taken over for military patients.

24. And how many patients would that accommodate ?—About twenty-six. It has been worked with twenty-six measles patients in.

25. So that your total accommodation at the Wellington Hospital available for patients without turning out the sick and infirm from Victoria Ward was between twenty and twenty-five ?—Of course, the old women patients were removed from the upper ward of Victoria Ward to the Home for the Aged Needy.

26. That was for the purpose of enabling the camp patients to be dealt with ?—That is so.

27. The Victoria Ward was occupied, and had to be cleared to some extent ?—Yes.

28. Apart from the Victoria Ward, you only had the Tin Shed ?—Yes.

29. And that would only properly accommodate from twenty to twenty-two ?—Yes.

30. That was the total that the hospital could in normal conditions provide for ?—For measles, and before the Victoria Ward was cleared.

31. I suppose you carry a little extra room at all times ?—We carry very little surplus room. We have been working nearly up to our limit for some time.

32. So that if an outbreak had occurred in the civil population there would have been very scant provision in the hospital—say, an outbreak of measles or infectious disease ?—Yes, there might have been trouble. As a rule, in the civil population, measles are not taken into the hospital.

33. But such things as scarlet fever ?—They would go in the Fever Hospital, which is a separate building.

34. You had beds available for ordinary cases outside the infectious diseases ?—Yes.

35. When Victoria Ward was arranged for, what numbers were usually to be found there from the camp ?—The full accommodation was twenty-six, and for a considerable time it was kept full.

36. Can you say when the number began to ease down ?—It has certainly been lighter during the last two or three weeks.

37. But up till then it might be said that the accommodation had been fully occupied ?—Fairly well.

38. Was any additional medical assistance in the shape of doctors, orderlies, or nurses provided for you ?—Yes, doctors and nurses. We engaged nurses from the Nursing Institute, and the Defence Department paid for them. The doctors were military Medical Officers.

39. Were the military Medical Officers in constant attendance, or was it simply a daily visit ?—They visited daily.

40. Can you tell us who the Medical Officers were ?—There have been a great many of them.

41. Can you tell us who they were, say, during June and July ?—Since the Victoria Ward was taken over ?

42. Yes ?—Captain Harrison was one of whom I saw a good deal, Captain Farris latterly, and Captain Goldstein. I think there have been others, but I cannot recollect the names.

43. Captain Harrison was located at Trentham ?—I understand so.

44. And was simply paying a round ?—He certainly visited, as far as I am aware, at least once a day, and on some occasions, I believe, more than once a day.

45. I suppose this condition would obtain: that if any emergency arose when a doctor was not there the nurse could summon some one from the hospital ?—Yes. May I hand you this list of suggestions that I drew up when the wards were taken over for military purposes.

46. The suggestions were for the guidance of military Medical Officers ?—Yes. I sent copies to several people concerned, including the staff of Medical Officers.

47. The suggestions read as follows: "(1.) The admission, treatment, and discharge of patients from the military wards is to be done by the military Medical Officers. (2.) Before any patient can enter the wards he must present to the sister in charge a card stating his name, diagnosis of disease, and treatment required; such card to be signed by officer admitting the patient." There was no provision for the name and address of the next-of-kin ?—No, that is so. I assumed those details would be kept by the Military Department.

48. "It is suggested that a supply of these cards be kept at Trentham Camp, and that they be filled in and sent with patients on their removal to the Wellington Hospital; or if a Medical Officer is in attendance at the Wellington Hospital when new patients arrive, he could fill in the cards there." Was this filling-up of the cards done ?—Fairly well.

49. Cases occurred in which there were omissions ?—That is only natural.

50. "Patients arriving without properly signed cards will not be admitted." That was a rule honoured in the breach ?—I tried as far as possible to have the cards sent in and prevent overcrowding. After a little difficulty I managed to get it working fairly well.

51. I suppose you did not turn away from the door any one who came ?—Once or twice I had to take in patients without cards, but on some occasions patients had to be sent away until sufficient had been taken out of the wards to make room for them. I wished to put entirely in the hands of the military officers the admissions and discharges.

52. So that they would know at any time how many were in the wards and should not send patients down for whom room could not be found ?—That is exactly the reason.

53. "(3.) It will be the duty of the military Medical Officers to arrange the discharge of patients so as to make room for new arrivals. Under no circumstances can more patients be admitted than there are beds vacant; when the beds are full, the sister in charge will not admit any more patients. Unless this rule is strictly adhered to, overcrowding, confusion, and complaints will inevitably arise." May I take it that this rule was observed on the part of the hospital authorities so as to prevent overcrowding?—Yes, with one or two possible exceptions in emergency cases.

54. And was it fairly observed on the part of the medical authorities at the camp?—Fairly. There was a little confusion during the first few days, but after that it worked smoothly.

55. There was no attempt to force more on to you than you could accommodate?—Not after the first few days.

56. "(4.) Treatment.—The military Medical Officers will be responsible for the treatment of all patients: this will enable them to judge when patients are fit for discharge. To facilitate work, certain mixtures in the Wellington Pharmacopœia will be stocked in the wards. (5.) Inquirers will be referred to the military Medical Officers. (6.) Visitors will be admitted to the wards only on Wednesday and Sunday, 2 to 4, except on a written pass given by a military Medical Officer; and the Medical Superintendent of the Wellington Hospital may admit at any time the friends or relatives of patients who are dangerously ill." Was that rule as to the admission of visitors acted upon?—Of course, in infectious diseases the visitors were cut down as much as possible. The parents and friends of those who were dangerously ill were admitted practically at all times when they wished.

57. Was there any discussion, or did you offer any suggestion at the time that this pressure began to occur, as to the necessity of making provision for a possible increase in the numbers that would have to be dealt with beyond what Berhampore could accommodate?—No, sir, I did not, because I did not know how many Berhampore could accommodate or anything about it. I discussed the matter in general with Colonel Purdy, but I had no idea of what accommodation was there.

58. You were were filling up the hospital with patients from Trentham Camp, so that if anything had occurred in connection with the civil population there would have been considerable stress?—Yes. The Isolation Ward was a sort of spare or emergency ward.

59. And may I take it that under proper arrangements this isolation or emergency ward should have been left available for the civil population?—I would not like to go quite as far as that. This was an emergency.

60. I am not suggesting that those in the camp should not receive attention, but the point is whether, in view of the probable increase in the numbers of sick, some other provision should not have been made—that that was the emergency rule in a general hospital?—I do not know that I have any definite opinion to express upon that. I think it was quite the proper thing to make use of the Isolation Ward.

61. While it was not used?—Yes.

62. Although it may be that pressure upon it would not afford any room in the case of an outbreak in the civil population?—We had to take the risk of anything of that nature happening.

63. *Dr. Martin.*] Do you remember a man named Colley who was admitted to the Wellington Hospital on the 10th June and died on the 11th?—Yes.

64. We have had two diagnoses given to the Commission as to the cause of death, one being cerebro-spinal meningitis and the other pneumonia following measles?—The diagnosis I had given me was pneumonia following measles. I might explain that several pneumonia cases had meningitis symptoms. Colley died on the 11th June: that was before this disease of cerebro-spinal meningitis was definitely diagnosed. It is not infrequent to get meningitis in an ordinary pneumonia case. If this man had pneumonia symptoms then it is quite possible he had meningitis.

65. Do you know what the temperature was when he arrived?—He was admitted at 9.15 in the evening, but I am sorry I cannot tell you what his temperature was.

66. *Mr. Ferguson.*] When did you first see him?—I cannot tell you whether I saw him that evening or whether it was one of my house surgeons. I certainly saw him next morning. He was very ill.

67. *The Chairman.*] There was no military medical man to attend to Colley—it devolved upon the hospital medical man?—Up to the 23rd June, when Dr. Valintine took charge, I was responsible for the military patients in the hospital at the Wellington Hospital.

68. *Dr. Martin.*] There was nothing to indicate in Colley's appearance that he had been ill for some days?—Not that I remember—nothing out of the way.

69. In regard to the Wellington Hospital acting as a base hospital for the Trentham Camp hospital, do you think it was sufficient to act as a base hospital for seven thousand men? You say you are short for the civil population?—We are overcrowded. At the present time I have somewhere over fifty military patients in all the different wards of the hospital, including the latest returns of thirteen measles cases. The rest are ordinary medical and surgical cases.

70. Taking the Trentham Camp at four thousand, is the Wellington Hospital sufficient as a base hospital for that number—ordinary medical and surgical cases?—Well, so far we have managed, and I am not aware that any military patients have been refused admission to the Wellington Hospital in ordinary medical and surgical cases.

71. Assuming the sick-rate at twenty-five per thousand, are you able to take in continuously for treatment one hundred patients?—No, I do not think I could. At present I have only about thirty, ordinary medical and surgical cases, and I would not like to take in more. It would overcrowd the wards, and the civilian population would have to be kept out.

72. Under those conditions the Wellington Hospital is not sufficient to act as a base hospital?—Excluding the infectious diseases I have about thirty cases in now. Taking odd days picked at random, the numbers are, for June, 34, 35, 33, 30, 26, and 28.

73. Have you got the numbers for May ?—No, I do not go back beyond June.

74. We can take it that the Wellington Hospital is not a sufficient base hospital for a camp of four thousand men working on a ratio of twenty-five per thousand sick ?—No, I would not like to have to provide accommodation for one hundred. I am providing for some thirty, and I think that is about the number we can manage—ordinary medical and surgical cases. I certainly would not like to have to accommodate one hundred with the present buildings we have.

75. With regard to the question of wet sterilization, the Principal Health Officer says that wet sterilization is quite effective for uniforms, coats, and bedding—that is, with formalin: do you agree with that ?—I would not like to oppose my opinion to that of the Medical Officer, who is more familiar with the process of disinfection than I am.

76. In your treatment of infectious diseases, what is your method of sterilization ?—I am most intimate with steam.

77. *The Chairman.*] But if you have not steam available, what do you do—is formalin the next best process ?—As far as my present knowledge goes we have steam at the hospital, and therefore do not use the other process.

78. *Mr. Skerrett.*] Have you any further information in regard to Private Ernest Smith—I wrote to you asking you for information ?—No, I have no further information.

79. And the only Smith you can find is Charles Smith, admitted, I think, in January, 1915 ?—Yes, Cecil Smith.

80. A telegram was received by his brother from you, dated the 8th July, saying that he had left the hospital ?—That was the reply I got from the Registrar whom I asked to make the search, but the nearest I could get was "C." or "Cecil" Smith.

81. Apparently the suggestion of the brother is that although he was discharged from the hospital either on the 7th or 8th July, apparently as cured or as convalescent, he was almost instantly admitted into the Trentham Racecourse, and died shortly afterwards. The suggestion is that he may have been prematurely discharged from the hospital ?—Yes.

82. *The Chairman.*] When did you first diagnose cerebro-spinal meningitis at the hospital ?—I have here the actual report of the Bacteriologist, dated the 22nd July. It might have been a day or two before that when I had a verbal report from Mr. Hurley, the Bacteriologist. [Report handed in.]

83. Was it suspected before then ?—There had been one suspicious case before, but on bacteriological examination it was negatived. The man has since recovered.

84. There were two cases of Fordham and Pollard ?—Yes.

85. They did not arrive alive, I understand ?—No, they were dead when admitted.

86. The report was that they had died at the Wellington Hospital ?—That was incorrect. They were dead when brought in.

87. Was that because you had accommodation for the dead there ?—I understand so; yes.

88. *Mr. Gray.*] I understand you to say you have accommodation for about forty-eight patients outside the normal accommodation—twenty to twenty-two in the Isolation Ward and twenty-six in the Victoria Ward ?—Yes, we have about forty-eight beds available for military patients.

89. Could the accommodation be increased by putting out the old men, as well as the old women, temporarily ?—The old men are still in the lower ward.

90. If they were accommodated elsewhere you could get further accommodation for camp patients ?—Yes.

91. To what extent ?—About twenty-six additional beds.

92. Do you know the hospital arrangements were discussed with your predecessor by the late Principal Medical Officer, Colonel McGavin, some months ago ?—Not definitely, no.

93. You heard they were discussed ?—Well, I assumed some arrangement must have been made. When I arrived military patients had been taken in, and I continued to take them in.

94. You told His Honour that in the event of an outbreak of disease there might be trouble owing to lack of accommodation for the civil population ?—That there might be trouble.

95. Measles is not an infectious disease notifiable under the Act ?—No.

96. Is it the custom to have measles cases in the hospital ?—No, not the civilian cases.

97. In the event of a measles outbreak the hospital accommodation would not be overtaxed thereby ?—That is so.

98. You say that the Wellington Hospital as a base hospital would be insufficient for a camp of four thousand men, based on a proportion of sick of twenty-five per thousand ?—Yes, it would be.

99. Would you assume that the twenty-five per thousand would all necessarily be required to be accommodated in the Wellington Hospital ?—When I was replying to the question I understood the whole twenty-five per thousand would require to go into the hospital.

100. But all sick cases would not necessarily go to the hospital ?—I do not know whether they mean hospital cases or not.

101. If they allow one percentage per thousand for hospital cases you would have ample accommodation for a camp of four thousand men ?—Yes, we could meet that: that is forty patients.

102. With that percentage of ten per thousand for hospital accommodation you could meet it ?—Yes, I think we could.

103. You have been asked about a steam disinfector: have you had any experience of disinfecting with formalin ?—I have had considerable experience in disinfecting rooms with formalin—more than clothing.

104. With your steam disinfector can you put through a good quantity of bedding and clothing ?—Yes; we do a good deal of disinfecting of clothes and bedding in the wards and fever hospitals.

105. You do not know what means are adopted in the big camps in the Old Country ?—No, I have no knowledge of that at all.

106. You got extra doctors and nurses to meet this emergency ?—Yes.

107. Were not some of the nurses supplied by the military medical authorities ?—Yes

108. Through Colonel Purdy ?—I cannot tell you the exact arrangements—they were made through the Matron. I understood the Defence Department was paying the cost of the extra nurses.

109. In regard to Colley, your note is that he was admitted at a quarter past 9 on the 10th June ?—Yes.

110. That would be the time of his admission into the ward, would it not ?—Yes.

111. He might have been in the hospital building for some time before that ?—I should not think long before that—perhaps five or ten minutes before.

112. You did not see him till next morning ?—I cannot remember if I saw him that night or not. He would be seen by one of the house surgeons acting for me.

113. Judging from the condition you saw, do you think there was any risk to his life in his being removed in an ambulance the night before ?—No, I cannot say I saw anything to indicate that.

114. Do you remember Phillips, who was admitted about the 11th June, I think ?—Yes, Lance-Corporal E. H. Phillips, admitted on the 11th June.

115. What was his condition when admitted ?—I cannot remember exactly the condition of an individual patient who came in so long ago.

116. Have you any record of his progress ?—Not here, but I could obtain it.

117. If he had been brought to the hospital unconscious would that fact have been reported to you ?—Yes.

118. Do you recollect anything of the kind in his case ?—No, I do not remember it just now. It might have been reported to me and I may have forgotten it. I will look it up.

119. Is it a fact that arrangements have been made for the whole of the Victoria Ward and the Isolation Ward to be placed at the disposal of the military authorities ?—Yes; but they have not yet taken it over.

120. And also that the whole of the Victoria Ward will be cleared at once if necessary ?—That would mean the lower ward only, where the old men are.

121. Is there any prospect of further accommodation being afforded by additions at the hospital—is there a project under consideration now for additional wards ?—There has been indefinitely for some time, but as far as I am aware there is no definite proposal to build additional wards in the immediate future.

122. Is that being steadily kept in view ?—Accommodation will be required very shortly.

123. *Dr. Martin.*] I take it that the maximum you can accommodate in the Wellington Hospital, acting as a military base hospital, is forty patients ?—I think that would be about the maximum we could handle of ordinary medical surgical cases.

124. Therefore, if my figures are correct, you could not act as an efficient base hospital for the Trentham Camp with four thousand men ?—If no other provision is made; but if the lower ward of Victoria Ward were to be used for that purpose, and not for epidemic cases, of course that would increase our accommodation by twenty-six beds, and might alter the position of it all.

125. Supposing you got twenty or twenty-three wounded patients from the Dardanelles, would you include them in your forty ?—We could not accommodate both forty from the camp and twenty-three returned patients.

126. *Mr. Gray.*] I understood you could make provision for sixty ?—We have been working, as the figures I have quoted will show, with from thirty-four to thirty-five ordinary medical and surgical patients, and we cannot very well accommodate more than that number.

127. *Mr. Ferguson.*] Did it ever come before you at any time that the City Council proposed to find funds to build a ward or wards on land adjacent to the hospital for the purpose of providing accommodation for returned troopers who might come back injured ?—I have heard some mention about it. The matter came up at a meeting of the Wellington Board.

128. Are you aware whether any offer was made to the Government ?—No, I could not tell you that just now. It was mentioned, but as far as I remember it was not discussed further: for some reason it was deferred.

129. You have no knowledge of your own that the Mayor of the city offered to find funds to build additional hospital accommodation in connection with your institution, and to work under your staff ?—I heard it mentioned at a meeting of the Hospital Board, but beyond that I do not know what was to be done.

130. Then the Hospital Board has made no special provisions for returned troopers, and has not been requested to by the Government ?—I could not tell you what the Board has done.

Dr. JAMES MALCOLM MASON affirmed and examined. (No. 105.)

1. *The Chairman.*] You are a medical practitioner, and were at one time Principal Health Officer for the Dominion ?—Yes.

2. What are your degrees and qualifications ?—M.D., Brux; D.P.H., Cambridge, &c.; Fellow, Chemical Society, London; Fellow, Royal Sanitary Institute, London; Barrister-at-Law, England and New Zealand; Lieut.-Colonel, N.Z.M.C., Reserve; late Chief Sanitary Officer and late Chief Health Officer for New Zealand.

3. You remember that some tubercular shelters were erected in the hospital grounds ?—Yes, at Cambridge and all over the Dominion.

4. Was that while you were Principal Health Officer ?—Yes.

5. We have had the hutments at Trentham compared with the tubercular shelters as possessing, as I understand it, the same advantages as the tubercular shelters. Can you give us any information

as to whether the two can be properly compared, having regard to the fact in the case of the hutments that they have to be occupied by a large number of men ?—There is no resemblance at all.

6. Have you seen the hutments ?—Yes.

7. The same principles, in your opinion, are not applicable to both ?—Yes, they would be, but they have not been put into force in regard to the hutments.

8. In what respect ?—The stud, for instance, is too low; the huts are unlined; and the men sleep on the floor. None of these conditions obtains in a hut for consumptive persons.

9. Well, do you consider that in those three respects you have mentioned the huts are defective ?—Certainly.

10. Having regard to the fact that the outside covering is galvanized iron, do you consider that in order to keep the temperature as even as possible lining should be introduced ?—Yes.

11. Is it a fact, in your experience or within your knowledge, that an outer covering of galvanized iron and nothing more is subject to greater extremes in heat or cold than wood or canvas ?—It would be, certainly. I may say there are no shelters for persons suffering from tuberculosis put up with galvanized-iron walls, with or without lining.

12. Even with lining ?—No, I have not seen them: they have always been made of wood, with the surface evened so that it could be properly sterilized.

13. You have told us that you think some elevation above the floor should be used for sleeping purposes ?—Certainly.

14. And do you think it would be an improvement to have the meals taken in a hut separate from that in which the men sleep ?—Most decidedly.

15. Having regard to the number of men ?—Yes, certainly I think so. One of the most important defects I saw there was the absence of a portico to the hut. The road when I saw it had just been ploughed up. One was up over the shoes in mud, and every man stepped straight off the road on to the place where he was to lie down. I think if you put up a portico you would keep out a great deal of the dirt that is now carried in on to the floor—practically on to the beds where the men sleep. They would also be able to dry their overcoats. They would have some place where they could clean the dirt off their boots before they went to what is practically their bedroom. Most of the men were lying with their overcoats over them as a top blanket, practically.

16. *Mr. Ferguson.*] Did you see them at night ?—No, not at night—they were lying down.

17. And that portico could be so provided as to have a heating arrangement in it ?—Yes, I think so, and it would be a great advantage. One other defect in the construction of the huts is the absence of ridge ventilation. There ought to be some ordinary cowl. Further, the huts are very long.

18. *The Chairman.*] There is considerable height above the eaves ventilation where the air apparently will accumulate, and you suggest that some ridge ventilation is necessary to get rid of that ?—I think so.

19. *Mr. Ferguson.*] One witness suggested that the hutment should be sealed above the collar-tie on the ground, that it was objectionable to have a large open space in the roof—he suggested that it affected the perflation of the air, and that it was detrimental ?—I think what they have adopted there is very good, but there is not enough of it.

20. The open space is quite right ?—Undoubtedly. That is one of the best means of ventilation short of mechanical means.

21. *The Chairman.*] From what we have learned of the habits of mankind, apparently it is desirable not to have a ventilating-apparatus that can be shut at will ?—Certainly not.

22. It should be kept open against the will of the occupant ?—Yes, because they will nearly always shut it.

23. *Mr. Ferguson.*] Is the eave ventilation you saw sufficient or too much ?—I think it really insufficient. You want something along the ridge as well.

24. Assuming there was proper ridge ventilation, is the eave ventilation too much or too little ?—I think it errs on the side of being too little, but the principle is an excellent one.

25. *The Chairman.*] And the internal heating could be improved by lining ?—Yes. At present you have a rough stud that could not be sterilized. An unplaned stud would be very difficult to sterilize.

26. It collects the dirt very readily ?—Yes, and the men may be coughing and spitting about.

27. *Mr. Ferguson.*] In regard to the eave ventilation, have you anything to suggest in regard to directing the current of air ?—It would be better to have a baffle to direct the current of air along the roof. It would add to the comfort of the men.

28. If a baffle were put in, and fresh eave ventilation were constructed, and the present hutments were lined, you think they would be efficient for how many men ?—I think about thirty-five men at the outside, even with improved ventilation. Personally, I think it is a mistake to house too many men in one place. If you get a case of infectious disease it goes through the whole group and you cannot stop it.

29. *Dr. Martin.*] Would you consider fifty too many ?—Yes.

30. *Mr. Ferguson.*] You think thirty-two would be a suitable unit ?—Yes.

31. Have you anything to say with regard to the placing of the night-pans for urinating between the huts ?—I think the huts are too close together, but seeing they are up the only thing to do is to cut out every alternate one. The sun cannot reach all of those hutments, and wherever you get any dark places you get dirt. The men have apparently been throwing all sorts of things behind, such as empty tins.

32. That is a matter of camp sanitation and should not be allowed ?—True; but still you find that all through the world. If you do not make the best way the easiest way you will not get the men to do it.

33. *The Chairman.*] We hear that it takes a fortnight to instruct the men how to take care of themselves ?—That may be.

34. *Mr. Ferguson.*] If every alternate hut is cut out you think there is no objection to the night-pans being placed between the huts ?—No.

35. If the sheds could not be cut out, have you any suggestion to make in regard to placing the pans between the sheds so far as health is concerned ?—The only way would be to concrete the space between each shed and run a drain right through to the river. The concrete space could be hosed down.

36. Not soak-pits ?—No.

37. You do not approve of soak-pits ?—Not when you have the river handy.

38. *The Chairman.*] Of course soak-pits were temporary expedients, and now there is a scheme of general drainage it will get rid of the soak-pits; but we cannot condemn the use in the past of soak-pits ?—On, no.

39. *Mr. Ferguson.*] Do you think sewage of that kind could be run direct into the river without a septic tank ?—No, I would have a breaking-up tank at the spot and another small one. A big storm-water drain running right into the river would alter the temperature of that soil very much and make it a much warmer place than it is now. It is difficult to say exactly, but there would probably be a difference of a degree or half a degree. Subsoil drainage has been known to alter the conditions of a place in England to that of the conditions in the south of France.

40. Then you mentioned that at present the sheds are not placed in such a position as to get the maximum amount of sunlight between them ?—Yes.

41. Are you of opinion they should be built north and south ?—Yes.

42. So that they would get the maximum of sunlight in both winter and summer ?—Yes.

43. Have you any suggestion to make in regard to the question of roof water: at present it drips directly down, and there is no gutter or spouting ?—There ought to be, and I have no doubt there will be. That makes the soil all round about muddy and wet, besides wasting good water.

44. Assuming those suggestions are carried out, what is your opinion as to the probability of Trentham Camp being a healthy place ?—I think it would be an excellent place. Proper surface drainage is the first essential. It is rather flat; but still there is no mechanical difficulty in the way of draining it.

45. *Dr. Martin.*] What is your opinion as to this vexed question of sterilization by formalin: do you consider it is as effective as steam ?—No, certainly not. I do not think that has ever been suggested.

46. What do you recommend for the sterilization of mattresses and heavy overcoats ?—A steam sterilizer where you can have steam under pressure.

47. What make do you suggest ?—The usual type is the Washington-Lyon type.

48. It is suggested it is too small and too expensive ?—You could make it as large as you like.

49. *Mr. Ferguson.*] To what temperature do you want to raise it in order to kill the germs ?—If you had a 15 to 20 vacuum, you would raise the temperature to about 130° centigrade or, roughly, 125°. But all that data is in the catalogue.

50. You do not think anything less than that is sufficient ?—I do not think so. I do not think you could sterilize mattresses or any other felted material or overcoat with any other process.

51. Formalin is not suitable for that ?—Not for mattresses or felted overcoats.

52. *The Chairman.*] The next best thing is to burn the whole lot ?—That is what you would do. The difficulty is the overcoats, because in nearly every instance they were being used in the wards. That is why I think it is absolutely essential, even if it cost £1,000 or £1,200, to put them through a steam sterilizer, and it would be far cheaper.

53. You were one of those who inspected the camp with other medical gentlemen at the request of the Commission ?—Yes; but we agreed that one member should represent us all, and he very fully went into the matter.

54. I may take it that you concur in the report that was presented ?—Yes.

55. And generally in the observations made by Dr. Elliott in reply to the questions put ?—Yes. I might say that some of the facts upon which the deductions were made did not all come under my notice. We spread ourselves out, so to speak, and each looked at the part that interested him most, and then we had a final conference; but in the conclusions I quite agreed.

56. *Mr. Skerrett.*] Do you consider it, as a general rule, sanitary to require men to sleep on the bare floor ?—No.

57. Was that condition rendered more important by the fact that these huts were erected at the beginning of winter ?—Undoubtedly.

58. In your opinion it would have been expedient to have provided the men as much as possible with cots or stretchers ?—Stretchers.

59. Is there a Military Sanitary Corps in existence in New Zealand and in Wellington ?—There used to be, but it has been disbanded.

60. Are you a member of it ?—No, I was put on the Reserve of Officers without anything being said to me about it.

61. If there be such a Military Medical Sanitary Corps in Wellington, do you see any reason why their advice and assistance should not have been sought in connection with medical matters connected with sanitation and general matters in the camp ?—Certainly not: that is what they were set up for. I know I was not asked, and I do not know of any one who was. There was a special Sanitary Corps in existence and a Chief Sanitary Officer.

62. *Mr. Ferguson.*] Who was the Chief Sanitary Officer ?—I was.

63. How long ago is that ?—It was in existence six or seven years ago.

64. Had you any duties during that time ?—We did not have very many, but we went and saw camps and gave what advice we could.

65. Did it suddenly become obsolete or was it gradual ?—No, the District Health Officers were originally units in the various districts, and I was under the impression they were still consulting them, but I have no knowledge of that. This corps was set up for that specific purpose by the Defence Department.

66. In the absence of any very full medical service they made use of those Medical Officers ?—Yes, they all had rank.

67. *Mr. Skerrett.*] Is it not a fact that that Sanitary Corps was a branch of the New Zealand Medical Corps ?—Yes.

68. At times apparently the Government thought it was necessary to call in medical advice in connection with the camp—for example, in building hutments, and later still in connection with the question as to whether the reinforcements were to go back to Trentham to be trained. Can you see any reasons why the advice and assistance of that Medical Corps to which I have referred should not have been requested ?—No.

69. Do you think there would have been any difficulty in obtaining their advice and assistance ?—I should not think so.

70. Do you know whether there are medical men in Wellington possessing considerable experience of camp sanitation and hygiene ?—Yes.

71. Do you happen to know Colonel Falconer, of Dunedin ?—Yes.

72. He has been for some time connected with the Wellington or Dunedin Hospital ?—Dunedin Hospital. I know he is a very efficient officer in that direction.

73. *Mr. Gray.*] In connection with the Military Medical Corps, how long is it since you had any active connection with it ?—Since I came back from England—about three years and a half.

74. How long is it since you heard of it performing any active function ?—Before I went away to England—about three years and a half ago.

75. You have not heard of its doing anything since ?—No.

76. Either in the shape of visiting camps or otherwise ?—No, I have had no connection with it since.

77. If it does exist you have not heard of it making any offer of services at all ?—I would not be likely to hear that at all, because I have been put on the Reserve of Officers.

78. It may be dead without your knowing of it ?—I saw in the paper that some of the original officers were acting in a specific direction.

79. You have drawn a comparison between huts and consumptive shelters: there are corresponding features, are there not ?—There are more points of dissimilarity than similarity.

80. Are there the same overhanging eaves ?—Yes.

81. And lowered height of wall ?—The consumptive shelters contain one or, at the outside, four patients.

82. And opening all round ?—Yes, and both ends open absolutely from top to bottom.

83. Built and designed for an absolutely and entirely different purpose ?—Yes.

84. The one to accommodate persons suffering from a dangerous illness, and the other to provide shelter for soldiers ?—That is so.

85. You spoke of the insanitary habit of people sleeping on the floor, I think, partly owing to their taking mud in with them ?—Yes.

86. Could not the taking-in of mud be obviated by putting scrapers or mats at the front doors ?—There are no doors—you would have to put them on the road.

87. I saw the other day some tea-tree mats the soldiers had put there ?—I saw several without.

88. If one could get a tea-tree mat they could all get them ?—Yes.

89. It depends on the men themselves if they want to be clean and tidy ?—No, it is not all clean mud that a man gets on his boots with a lot of horses about.

90. It seems to have been suggested that the style of the hutment has been unduly praised by those responsible for it. Do you think anything more has been claimed in comparing it with the shelters than the principle of ventilation ?—Are you speaking with reference to the treatment of consumption ?

91. I say the principles of ventilation are practically the same—the eave ventilation ?—Oh, no. To that extent the one shelter is only about 8 ft. long, and the other is a long tunnel. To speak of eave ventilation, in one sense it is of the same nature; but in the one case you have air all round, while the other is a house.

92. You approve of eave ventilation ?—Yes, entirely; but I do not think you have enough. You ought to have ridge ventilation as well.

93. If the authorities approved of the suggestions you make you think they would be sufficient ?—Yes, and the men raised off the floor, and less men in them.

94. You spoke of the position of the huts: do you know how they lie ?—I know the district and know where the sun rises. I tested that. It is impossible for every second hutment to get any sun until somewhere about 2 o'clock. Supposing you have four huts lying one behind the other, it would be nearly midday before the sun got on the other side of the valley to flood the second hut.

95. I do not think that was the experience of the Commission last Saturday morning at half past 11. If the huts lie north-west and south-east, is that the proper situation ?—I am only going by what I would do and have done. I would face almost directly the sunlight with a little of the hill in toward me, because if you get the sun sweeping over there it lies right round.

96. In regard to the drainage, you do not suggest there should be a septic tank ?—No; I would have a breaking-up tank. I was thinking more of the surface water at the time.

97. *The Chairman.*] I apprehend that if the sewage is bodily discharged into the Hutt River the Supreme Court would hear of the subject ?—Yes. No one is suggesting that.

98. *Mr. Gray.*] In the absence of a steam disinfector, do you think formalin is the next best process?—Yes.

99. But you think steam is far preferable?—Yes.

100. *The Chairman.*] Is it an experience of military camps got together suddenly that there should be an outbreak of an epidemic?—Oh, yes.

101. Is that a common experience?—Apparently it is very common, because we are having Commissions sitting all over Australasia.

102. I mean, before the present war: was it in the past a condition that might fairly be expected to arise when a large number of men have been got together in a military camp?—Oh, yes, I think so. In camps where I have been there was always a great deal of discomfort, and there was a tendency on the part of those who did not have to lie in the mud and in wet blankets to suggest that that was a good way to harden people—so long as they themselves did not have to do it. There is no sense in hardening men by letting them get pneumonia. Of course, there are conditions obtaining in a new camp that prevent the best thing being done, and looking at the whole thing, I think that the best has been done.

103. *Mr. Ferguson.*] For a permanent camp you think that other arrangements should be made?—Yes; but I think that what has been done—it has not been done quickly enough, that is all.

104. *Mr. Gray.*] But with the material at hand and the conditions that existed, you do not think there is much to find fault with?—There is a lot to find fault with, but what I mean is that they have done just as well as any other set of men would have been able to do. The point I want to make also is this: that it is unfair to delay making the men as comfortable as possible.

105. Is it not being done?—I believe it is now.

106. You think it is insanitary for the men to sleep on the floor, partly owing to mud being brought in?—Yes.

107. Would it not be equally insanitary to sleep on the floor of a tent?—It certainly would.

108. You know that men usually sleep on the floor of tents, not on stretchers?—I do not when I go into camp.

109. I speak of soldiers?—Oh, yes. It is just as dirty there as in the other places; but when you have a place where you can put up something for a man to sleep on I do not see why you should not make him as comfortable as you can.

110. *Mr. Skerrett.*] Is there not a recognized and acknowledged distinction between the condition of a man sleeping on the ground in a tent and a man sleeping on the floor of a hutment containing a large number of men?—Oh, yes.

111. The aeration is better in the tent, is it not?—Undoubtedly.

112. Mr. Gray seemed to think that the main reason for your thinking it was insanitary for the men to sleep on the floor was because of the mud which they brought in?—That is only one.

113. There are many other causes?—Yes.

114. *Mr. Salmond.*] You inspected the camp along with certain other doctors on the 19th July?—Yes.

115. You know, I suppose, that the hospital arrangements were then in process of reorganization? You know that Dr. Valintine took charge at the end of the previous month?—I really did not know who was in charge of the hospital at all when we went there. We had no intimation as to who was really in charge.

116. It is in evidence before the Commission that as a matter of fact Dr. Valintine was appointed on the 23rd June?—Yes.

117. And a complete system of reorganization of hospital arrangements was undertaken. You saw the hospitals on the 19th July?—Yes.

118. There was at that time a very considerable amount of epidemic sickness, was there not?—Yes.

119. Large numbers of persons were being admitted every day into the hospitals?—Yes.

120. Having regard to the fact that you saw these hospitals so soon after the process of reorganization began, do you consider that the men in charge were doing all they could do?—I think so.

121. The report, then, did not mean to suggest in any way that there was any laxity or inefficiency on the part of the then staff?—No, I do not think so. It appeared to some of us that there was a lack of co-ordination between the different officers. We did not quite know, when we went to a ward, who was in charge of it; but I do not think it occurred to any of us that the individual officers were not doing all they should do.

122. You realize, of course, that in a time of emergency like that there can be no question of ideal conditions being established?—That is so.

123. Many things are desirable, but everything is not practicable?—Still, they had been there a good while.

124. These hospitals were first used on the 13th June. Until the 13th June there was no hospital accommodation whatsoever there, except certain marquees?—There ought to have been.

Mr. Salmond: That is not the question. I am asking you as to the subject-matter of your report, which did not relate to the previous conditions but to the new hospitals as you saw them on the 19th July. These hospitals were used for the very first time, as a matter of the utmost urgency, on the 13th of the preceding month.

The Chairman: Five weeks elapsed, and there was no sufficient co-ordination, we are told.

125. *Mr. Salmond.*] Five weeks before Dr. Valintine took possession of the racecourse buildings and transported in one afternoon every sick man from the Trentham Camp into that improvised hospital. Ten days after that elapsed before the present authorities—Dr. Valintine's assistants—had any control in the matter. On the 23rd June he was for the first time appointed Director

of Military Hospitals, with authority to reorganize these institutions. Have you heard or do you know, Dr. Mason, what amount of work was done in the way of reorganization and arrangement in that interval from the 23rd June ?—No. I know there was a great deal of difference at our second visit.

126. Are you aware that the racecourse hospital was not the only hospital ?—Yes, I know that.

127. You knew that there was another hospital with 250 beds ?—No, I did not know that.

128. I mean, at Kaiwarra ?—Yes.

129. That had been organized and equipped ?—Yes.

130. And set to work during the preceding fortnight or three weeks ?—Yes, I know that, but I did not visit Kaiwarra.

131. Did the Commission realize that this was only one of a considerable number of large military hospitals ?——

The Chairman: Kaiwarra was not, strictly speaking, a hospital. It was for convalescents, we understood. If they developed illness there they sent them to the general hospital.

132. *Mr. Ferguson.*] I understand that Dr. Valintine was in no way responsible for the medical treatment. Now I understand Dr. Mason to say that there was want of co-ordination amongst the medical men. In that case Dr. Valintine is in no way responsible for it ?—I do not think any one suggested that he was.

133. You said, Dr. Mason, that you were of opinion that before the 13th June there should have been hospital accommodation provided ?—I think so.

134. Are you prepared to elaborate that in any way ?—I think it is quite obvious. Here apparently on one day it is necessary to commandeer places all about, and apparently the day before it was not. We saw the sick people. I have no personal knowledge of what was done before or what was done after. We were invited to see the sick people at that particular place, and I only paid special attention to the parts that interested me; and each man in the deputation did the same.

135. *Mr. Salmond.*] Then you saw the hospital again on the 31st July ?—Yes.

136. Had considerable improvement been made ?—It was very much better.

137. You were satisfied, apparently, from your second report that a large number of the recommendations which you had made had been wholly or partially carried into effect ?—Yes.

138. You said in your first report that you were not satisfied with the accommodation at Trentham for infectious cases. You said in your second that you found the accommodation at Trentham for infectious cases was satisfactory at the present time and under the present conditions ?—Under the conditions then obtaining. Of course, there were very few cases when we went out the second time. There were a great number of cases on the first occasion. The condition on our second visit was such that I do not think you could wish better.

139. Nevertheless, you go on to say that the erection of a separate fever hospital is necessary ?—Undoubtedly it is. This is not the last epidemic we shall have. We shall have a good many more before this war is over.

140. If the present arrangement is satisfactory, cannot arrangements be made when necessary in future ?—Apparently we were a little late this time.

141. *The Chairman.*] I do not understand the medical men to say that medical arrangements are satisfactory in the sense that they should be relied upon in the future ?—Why, they had no measles when we went out the second time.

142. *Mr. Salmond.*] I suggest that in any army camp it is not necessary to build an infectious-diseases hospital on a large scale in order to anticipate the possibility of an outbreak of measles ?—Well, I do.

The Chairman: The doctor has told us that it is the common experience of camps to have these outbreaks. Why, then, if it is to be a common experience, not provide equally for that as for an accident—say, a kick from a horse ?

Mr. Salmond: This is just the point at issue, I take it, between the medical authorities and the military authorities. The medical authorities look at the thing from a purely medical point of view: consciously or unconsciously they are striving after ideal conditions. The military authorities are perforce compelled to look at the thing from a different aspect: their business is to look at it from the practical point of view, to realize that war is war, that an emergency is an emergency, that money is a matter of importance, and that speed and military efficiency are in time of war to prevail over any risk of infection or sickness amongst the troops. These risks are risks of war.

The Chairman: I understand your argument, but to get the best military efficiency you must have the best medical efficiency.

Mr. Salmond: That, I submit, would lead the wrong way.

The Chairman: It is illustrated by the very advanced character of field hospitals, and so on, as compared with what obtained in the past.

Mr. Salmond: We have had no evidence that fever hospitals are established on Salisbury Plain in anticipation of an outbreak.

Dr. Martin: But there are fever hospitals in England and France on a very extensive scale.

Mr. Salmond: That may be so; but I submit that the accommodation we have provided here is, as compared with the necessities in England, greater than that provided in England. We have the Fever Hospital in Wellington, we have Victoria Ward, we have the other shed, we have the racecourse buildings—for an army of, I suppose, in ordinary circumstances four thousand men.

Witness: You have too many places, really. That is the danger and the difficulty. What we suggest is one place, for comfort and reasons of economy.

Mr. Salmond: It is the first time economical reasons have been allowed to prevail in the doctors' reports, I think.

Witness: I think not.

The Chairman: There might be economy in the saving of energy. We had it that Dr. Ferguson had, from Trentham Camp, to visit hospitals at Berhampore, Victoria Ward, Kaiwarra, and Izard's. One man did this round daily.

Mr. Salmond: That may be a very cogent criticism on the sufficiency of the medical staff, but it is hardly relevant to the question of building a fever hospital.

The Chairman: I am speaking from the point of economy of energy.

143. *Mr. Salmond.*] That, I submit, is not the point of view of the medical authorities. However, I do not wish to address the Commission. Then the same aspect of the matter occurs to me in reference to this suggestion about a steam sterilizer. No one disputes, I suppose, that a steam sterilizer might be an ideal thing to have; but the question that faces the military authorities is whether it is a practical thing. How much, Dr. Mason, would this steam sterilizer that you suggest cost?—About £1,000.

144. Where is it to be got?—We managed to get one for Somes Island.

145. Where is it to be got at the present time?—I have no doubt that if you placed an order with a firm like Luke's they would make one very quickly.

146. Do you suggest that the manufacturers of this country are capable of turning out the steam sterilizer that you refer to?—I think so.

147. Have you had any experience of it?—No, but the specifications are there.

148. Who is to provide the specifications?—They can be got from any manual—from the advertisement-sheet of the Washington-Lyon people.

149. Is it a patent?—Yes, parts.

150. Do you suggest that we should use their patent?—Portions of it: we did so before.

151. So your suggestion is that we should send for a sterilizer?—You would probably want more than one.

152. Is each of them to cost £1,000?—If you put up two it would be £2,000 well spent.

153. Does that save the cost of burning two-shilling mattresses?—No, it is not all that.

154. Are the men with measles to have their mattresses burnt?—I think that all the clothing that the men have had on who have been in contact should be sterilized before they go away.

155. *The Chairman.*] Is not this the point: that sterilization is not merely to guard against infection by the troopers at the camp, but to prevent it spreading to the public?—That is so.

156. It is not a mere camp precaution, but a precaution for the public at large: is that not so?—Yes.

157. *Mr. Salmond.*] Which is the disease in respect to which this sterilization is needed—measles? Yes, measles, or anything else.

158. When measles break out amongst the civil population of the City of Wellington are the clothes of the children affected sent to one of these steam sterilizers?—If they go into a hospital they are.

159. People with measles generally do not go to a hospital—in ninety nine cases out of a hundred, I suppose, they do not: are their clothes sent to a steam sterilizer?—I do not know.

160. *Mr. Ferguson.*] Some of the laundries have steam boiling-apparatus—Victoria Laundry, for instance?—Yes.

161. *The Chairman.*] That is the whole point that is made about washing for the camp—all the clothes are sterilized before they are returned; the laundry sterilizes them. It has its steam plant?—Yes.

162. *Mr. Ferguson.*] Is it your opinion that the troops leaving by transport should be served out with quite fresh clothes, or should have their present clothes sterilized?—Yes.

163. *Mr. Salmond.*] You suggest that every soldier who leaves this country should have all his clothes taken and sterilized in a steam sterilizer?—If he has been in contact with measles.

164. But have they not all been in contact?—Then they should all be taken.

165. Then all their clothes should be taken—uniforms and all—and sterilized in a sterilizer?—Yes.

166. You consider that a reasonable, practicable system of medical administration?—Undoubtedly.

167. Did you ever hear of this being done in any army?—Yes.

168. Where?—In India.

169. When?—A long time ago.

170. What was the disease?—In that case it was cholera.

171. Do you know of its being done with measles?—No.

The Chairman: We had a very bad form of influenza as well, you know, and also there are cases of cerebro-spinal meningitis.

172. *Mr. Salmond.*] Is not meningitis a very slightly infectious disease?—It is not a very infectious disease unless you are in close contact with it. Supposing that a man who has this disease coughs on the top of his overcoat, I certainly think that that overcoat should be sterilized by steam.

173. How long does the organism of cerebro-spinal meningitis exist?—Not very long in the open.

174. A couple of days?—We do not know the life-history of it so well as to say exactly; but it does not live long.

175. A month or a fortnight?—About two or three days.

176. So that in two or three days these organisms would die on their own account?—We have very imperfect information with regard to its life-history.

177. But that is your evidence?—Yes.

178. Nevertheless, you suggest that to prevent this epidemic the clothes and uniforms of the whole of the troops should be sterilized in a steam sterilizer?—Yes, I do.

179. Whereas if they were kept three days the infection would die of itself?—Not with measles.

180. I am speaking of cerebro-spinal meningitis. In three days, or a week at the outside, these clothes, if left alone, would be free from infection?—I do not think they would if you kept them in these huts.

The Chairman: I understand that there is a man actually suffering from meningitis, and then there is a man who has the microbe in his throat but is not affected by it and yet is a carrier. I understand there are those two classes.

181. *Mr. Salmond.*] I suppose the carriers must have their clothes disinfected too? What about the doctors?—They should have theirs too.

182. Should their clothes be sent to the steam sterilizer?—They are supposed to wear aprons when attending to these cases. If you cover yourself with an overall that is impervious to the infection it is quite sufficient precaution.

183. Now, these carriers and people like that—people exposed to infection—how often are their clothes to be disinfected?—As often as necessary.

184. Once a day?—You would wait until a man was better before you sterilized his clothes.

185. Is not the whole thing impracticable?—No; I do not see any impracticability in it at all.

186. Your suggestion to the Commission is that before New Zealand troops should be allowed to leave New Zealand the whole of their clothes should be put into a steam sterilizer?—Yes. If you found measles breaking out on a troopship it would pay you to have sterilized the clothes before.

187. *Mr. Ferguson.*] In considering the question of providing further hospital accommodation, did your committee consider in any way the fact that there will be a large number of returned troopers coming, who may bring with them various troubles?—That was considered.

188. Do you think that sufficient accommodation has up to the present been provided or is being provided?—It has not been provided.

189. *Mr. Skerrett.*] Major Lelean, in his work on the "Sanitation of War," says that about 40 per cent. of contacts in cerebro-spinal meningitis become, for a temporary season, carriers of the germ?—Yes.

190. Do you agree with that statement?—I have not had sufficient experience to say, though I went through an epidemic of it in London. But those are statistics, of course.

191. They might be accepted?—I would accept his statement.

192. He says that they suffer from nasal trouble which lasts for about thirty days?—That is so.

193. And during that period they become carriers of the germ?—Yes.

WILLIAM EDWARD HERBERT sworn and examined. (No. 106.)

1. *The Chairman.*] You are a medical practitioner?—Yes.

2. Are you of military rank?—Yes; Captain.

3. Are you a member of this Medical Corps that is supposed to have suffered extinction? We heard from the last witness that there was some Sanitary Corps?—No, I am not.

4. You, I think, had occasion to visit Berhampore Hospital?—Yes, sir, on one occasion.

5. The only occasion you were there?—Yes.

6. What led you to go there?—I received a communication by telephone to meet Captain Harrison in consultation, to examine two sick men there.

7. Their names, as we now know, were Fordham and Pollard?—Yes.

8. Did you see the men there?—I saw them there on the afternoon, I think, of the 1st July with Captain Harrison.

9. What was their condition then?—Extremely grave.

10. Was it a condition in which they could be removed then to the Wellington Hospital?—No. They were manifestly dying.

11. Did you come to a conclusion as to the ailment?—Yes—very extensive and severe bronchial pneumonia.

12. We understand that this ensued upon them after they had been put into the hospital there. What were the conditions for the care and treatment of men so suffering at Berhampore?—The conditions of the hospital generally I am not competent to pass an opinion upon except in a general way, because I was asked to go out there for a specific purpose—to see two men who were screened off from the rest; and I just examined the men thoroughly. I got a very intelligent history of them from quite an intelligent nurse, and I examined the men's condition, and was asked whether there was anything further that could be done under the circumstances. The hospital itself I did not have an opportunity of examining.

13. But did the men there appear to you to be receiving proper nursing and, considering the building, proper accommodation?—The one nurse that was in charge of them at the time I was there seemed competent. It was a very bad day, but the building seemed in a very dull locality. There did not seem to be sufficient sunshine, and the whole locality, for acute pulmonary cases, seems to me not satisfactory by any means.

14. Have you any knowledge of the place apart from that visit—the exterior of it?—I was never there before—I never saw it before.

15. At any rate, at the stage at which you visited these two patients it was really almost a case of hopelessness?—Quite.

16. What is the result of your examination of Thomson: you might tell us that? But, first, should he be here to hear it, or would it better for him to retire?—He had better hear everything that is said: it will not hurt him.

17. What is the result of your examination as to his present physical condition?—The man is suffering from neurasthenia. There is no organic disease discoverable whatever.

18. That neurasthenia would probably be the result of the previous ailment having acted upon his mind?—Probably; possibly.

19. *Mr. Ferguson.*] Was there a previous ailment?—It is not for me to decide. He says there was one.

20. *The Chairman.*] But assuming a previous ailment?—Assuming a previous ailment, that would have a certain effect.

21. If it has got on his mind?—Yes.

22. *Dr. Martin.*] He said he had a swelling on his left side. There is nothing to indicate that?—No. He is a difficult patient to get exact information from. He acknowledges he has never had any education whatever. He does not know what month this is. He can write his name, but he cannot give any dates at all.

23. He does not require any medical treatment at present?—No.

24. *Mr. Gray.*] Is there anything to indicate now that he ever suffered from any complaint?—No, there is no present sign.

25. The man is rather stupid, is he not—unintelligent?—Distinctly.

26. *Mr. Salmond.*] This man was discharged from the Forces as medically unfit on the 2nd July. The Board sat on the 30th June, and he was actually discharged on the 2nd July. The ground alleged by the Board was that he was suffering from a strained muscle. Is there any sign of any such thing having been wrong with him?—A "strained muscle" is a very unscientific term. It really means nothing. It wants further definition.

27. This is what the report says: "This man was examined by a Medical Board, consisting of Major Stout, Captain Simson, and Captain Boyle, on the 30th June, and on their finding that he has a strained muscle of old standing preventing work he was discharged on the 2nd July"?—Unintelligible to me.

28. Those words are in inverted commas, so apparently they are a quotation from the report of the Medical Board. This is over Colonel Morice's signature?—Dr. Martin may be able to explain to the Commission what a strained muscle is, but I cannot.

Dr. Martin: I do not know what it is.

29. *Mr. Ferguson.*] You have sat upon Medical Boards—Military Boards?—Military Pensions Boards, yes.

30. What steps should be taken to examine a man before dealing with him, to see if he were fit to remain in the service or should be discharged: what steps would you take to examine him?—The same as in examining anybody.

31. You would strip them?—Yes, as we did this morning. We stripped this man, and put him down on the table, and examined him as circumstances would best permit.

32. To examine a man with his greatcoat on would not be a thorough examination before a man was dismissed from the service?—You could not examine a man with his greatcoat on over his clothes.

33. *Mr. Salmond.*] Thomson did not say that he had his greatcoat on: he said he had not been stripped. His evidence was that a member of the Medical Board touched him with his hand in the groin through his clothes, and he was informed that he was discharged as medically unfit. In the man's present condition do you consider him fit for military service?—Yes, physically. He has lost a part of his thumb, I see.

34. He does not look strong?—He is not a robust man, but organically he is all right.

35. Is there not a look of delicacy about him?—He does not look robust, but he is not delicate.

36. You are satisfied that he is in a proper physical condition for military service?—Organically he is free from disease, and if he was fit to be admitted he is fit to go on.

The Chairman (to Dr. Barclay): You agree with what Dr. Herbert has told us?

Dr. Barclay: Yes, I do.

SYDNEY SMITH sworn and examined. (No. 107.)

1. *The Chairman.*] What are you militarily?—I hold the rank of Major in the Medical Corps.

2. Are you a medical man?—I am.

3. An M.D.?—Yes, M.D. of Edinburgh, and I hold the Diploma in Public Health of Edinburgh and Glasgow.

4. You are attached to Trentham Camp at present?—Yes.

5. How long have you been so attached?—Since the 4th July.

6. Have you had experience of disinfecting material?—Yes.

7. We have been told that the process at Trentham is a wet process with formalin?—That is not correct.

8. Will you tell us what the process is?—It is very largely a dry process, and enough formalin is sprayed on the floor to make the air more humid, and the fumes exert their action more completely.

9. You close up the room, and place inside it what is to be disinfected?—Yes, and you drive off the fumes from tablets, and use a little formalin on the floor. You do not wet the clothing at all.

10. You, of course, know the process of disinfecting by steam?—Quite.

11. What, in your opinion, is the most effective process?—Steam disinfection—that is, for all purposes, because with steam you can kill such things as lice and insects; but for destroying surface organisms I think formalin is as effective as steam.

12. How do things come to you? I want to find out the practice in dealing with clothing and material which is to be sent to you—who sends it, and so on?—When a man is found to be suffering from infectious disease, or when, having been suffering, he is discharged, every article of clothing he has used is taken to the disinfecting-station and disinfected—that is, the whole of his luggage and personal equipment.

13. Before he is allowed to go about again or leave the camp ?—Before he is allowed to leave the camp. And when he gets his things back he is sent out at once.

14. In regard to patients that have recovered from meningitis, we will say, are they treated in the same way—is their clothing dealt with in the same way ?—Certainly it will be; not that it is absolutely necessary, but we feel safer to do it.

15. You say it is not absolutely necessary to do it: is that because of what I may call the non-infectious character of the complaint ?—No; it is on account of the extreme readiness with which the organism dies.

16. Under exposure to light ?—Under any conditions at all except the very best. For instance, if we wanted to carry the organism from Trentham to Wellington we should have to take a hot-water bag with us, or it would generally die. Under ordinary conditions I do not think it would live six hours.

17. We have heard that there are such things as carriers ?—Yes.

18. Persons who have not been laid up, but who have the organism present ?—Yes.

19. How are they controlled ?—They are controlled by douching the throat with antiseptic.

20. How are they being found out ?—We go on the assumption that if a case is taken from a tent where there are others, we must treat them as if they had the infection. You can discover it by taking swabs from the throat and isolating the organism.

21. You examine the throats of all contacts, then, to see if they are carrying the organism ?—Yes.

22. Or do you simply content yourself with using antiseptic ?—No. When we get a definite case we have the throat swabbed of the persons who have been in intimate contact with him.

23. And that swab is examined ?—Yes.

24. And none of those persons are allowed to leave the camp until the result is known ?—No; they are not allowed to leave.

25. Is the clothing of contacts or carriers disinfected before leaving the camp ?—Yes.

26. How do you account for carriers having been found, as we have heard, down in Dunedin: these, I understand, are cases of troopers that have either been discharged or sent out of camp ?—Yes; and they have developed sore throats, and in two or three cases this organism has been found.

27. One cannot say, of course, whether these men were treated as contacts or not before they left ?—No. Every man in camp has been using the wash—in all the four camps.

28. It is a regulation now ?—Yes, it is done every morning.

29. Enforced gargling ?—Under military discipline, yes; and the nasal douche, too.

30. That is ensured by being done on parade ?—Yes; and if there are any throats they are given formalin tablets to suck: that will clear out the organisms.

31. From your knowledge as one who is specially qualified in sanitary matters, can you say that these steps that are being taken are the best that can be taken ?—Yes. I cannot think of any better steps that could be taken.

32. Every man in camp is now treated as a suspect, as it were ?—He is treated as if he had the organism in his throat.

33. Are there new cases of meningitis developing up there ?—Since the camps have been shifted there has not been one case in the outside camps. In the Sixth Reinforcements, which were left in Trentham, there has not been a case as far as I know. They are all in the Seventh and the Trentham Regiment; and since they have been shifted there has not been a case among them. A few cases have cropped up from the influenza cases, probably several of them having had the organism in their throat.

34. In what part of the camp were the Seventh Reinforcements at Trentham ?—I do not know exactly where they were.

35. Were they in huts or tents ?—I think they were in hutments—the Seventh Reinforcements and the Trenthams, too.

The Chairman: Does any one present know in what part of the camp the Seventh were located—whether in hutments or in tents ?

Dr. Purdy: The Seventh and the Trentham Regiment were in huts.

36. *Dr. Martin.*] You are quite satisfied, Dr. Smith, with the process of formalin disinfection ?—Quite.

37. There is no occasion to put up a steam sterilizer ?—Of course, if one were put up one knows that a steam sterilizer would kill everything, while formalin will not.

38. You do not think it is necessary at present ?—No.

39. What do you recommend for a camp of four thousand men—that the present process be gone on with, or that a steam sterilizer be installed ?—That the present process be gone on with in the meantime.

40. I mean a continuous camp of four thousand ?—I should prefer a steam sterilizer.

41. Would you recommend that a steam sterilizer be put in, and the present process superseded by it ?—Yes.

42. *The Chairman.*] You are speaking on the assumption that the camp will go on for some little time ?—For several years.

43. *Dr. Martin.*] Say, during the war ?—Then, I do not think it is necessary. If you are going to have a permanent camp, to continue on from year to year, it is more satisfactory to have a steam sterilizer. If, on the other hand, it is to be a semi-permanent or temporary camp, then I should not have one. As I have said, formalin will not kill lice, though if you combine the fumigation with sulphur you will kill them.

44. You do not recommend that the process be changed for a camp of four thousand men ?—No, not unless you are looking forward to a very long stay at Trentham.

45. Say, eighteen months ?—It would not be worth while. It would cost you probably £800 or £900 to put the thing up.

46. *The Chairman.*] And then there is the cost of working ?—Yes. And it would take some months to get it. I do not think you would get one built satisfactorily here. You would need to have it equipped for supplying hot air for drying your clothing. And if you think you can put through the whole equipment for two or three thousand men at one washing you are making a mistake.

47. *Mr. Ferguson.*] You would want more than one: how many—half a dozen ?—Probably more. I do not suppose you could put thirty kits in at a time.

48. *Dr. Martin.*] Could you treat lice with the formalin ?—No; formalin is of very little use for them. Steam is about the only thing you can depend on in that connection.

49. Then, if you get lice there you have nothing to meet them with. Have they had that trouble at Aldershot ?—I suppose you know that at Home, in the slummy districts that many of the recruits come from, half the people have lice. If you have a large number of men kept in hutments or tents everybody there will get them.

50. *The Chairman.*] Does it occur in New Zealand ?—Very little. If you wanted to get specimens here you would have to hunt for weeks. At Home nearly every body that comes into the morgue is pretty well covered with lice. I do not think we shall get an epidemic of lice here, because they are a fairly clean lot.

Nurse HANNA further examined. (No. 108.)

1. *The Chairman.*] We want to get some further information with regard to Colley. Do you remember Colley ?—Yes, sir.

2. You remember the day he was taken away ?—No, not the day.

3. But you remember the occasion ?—Yes.

4. Were you on duty during any part of that afternoon ?—I was on duty when he was taken bad, and then I went off.

5. Do you know at what time he was taken away ?—No.

6. You had temperature-books, had you not, and you had charts for Fordham and Pollard ?—Yes.

7. Do you know what became of those temperature books and charts ?—No; but I think they were destroyed.

8. What had you to do with them in the final clearing up ?—Well, I was there.

9. Did you get the instructions for the destruction ?—I understood them to say at the Defence Stores that we were to destroy anything that had been used and could not be sent back there.

10. You got the instructions over the telephone ?—Yes.

11. And you understood them to be to destroy everything that had been used ?—Yes.

12. How were these things destroyed—by being burnt ?—Yes, in an incinerator.

13. So these books and charts were burnt— ?—I think so.

CHARLES MONK GIBBON sworn and examined. (No. 109.)

1. *The Chairman.*] What is your military rank ?—I am Colonel in the Military Forces of New Zealand, and I hold the appointment of Chief of the General Staff.

2. You had military experience before coming to New Zealand ?—I have been in the service, including Volunteers, for twenty-three years, and I have held a commission in His Majesty's Regular Army for eighteen years.

3. You were in the Boer War, were you not ?—Yes. I have also served on the Headquarters Staff of the Army in India.

4. Will you tell us what your opinion is as to the suitability of the site at Trentham for a military camp, such as is being held there now ?—I consider that it is eminently suitable in every way, as regards training and the provision of range accommodation. The soil and location, so far as I can see, are very satisfactory. I have been in camp on Salisbury Plain and at other camps in England, and even in summer the ground has been much more cut up and infinitely more muddy than has ever been the case here at Trentham Camp.

5. As regards the climatic conditions of the place, what do you say ?—I have no fault to find with them. The weather is not too hot in summer, which is a consideration when you want to work men at high pressure, and in the winter-time it compares more than favourably with anything we get in the United Kingdom.

6. There are fogs in the winter mornings, are there not ?—Yes, a certain number of fogs, but they only last a short time in the morning, and we never have parades before breakfast in the winter. At the beginning of the winter months we discontinued the physical drill before breakfast which we held during the summer months; but they are nothing to signify. I have seen much worse in many other camps that I have been in. I live out at Silverstream myself, and I find the climate very healthy indeed.

7. You can speak, therefore, from personal experience of the climatic conditions ?—Yes. Since I have been in the Dominion I have lived there.

8. What number of men would you say the camp is capable of accommodating so that full training may be given—apart from borrowed ground ?—Provided we have the right to work over land, such as we have been given, so far as training is concerned, I can handle between six and seven thousand men there comfortably. There is a certain amount of difficulty in the winter in finding dry parade-

grounds in the neighbourhood of the camp; the men have to go farther as the ground becomes cut up. But it would be just the same in any camp, on Salisbury Plain, or at Aldershot, or anywhere else. The ground must become cut up as it is worked over, and you have to go farther and farther.

9. The borrowed ground that you now work over—I am not speaking of ground some miles distant, but in the immediate neighbourhood—is that lent by the racecourse authorities?—Yes, we have ground that has been lent by the racecourse people.

10. An area of about 60 acres?—Three paddocks belonging to them. Then, we have the Government Laboratory ground—a considerable acreage there; and we have our own land, and then the whole of the residents of the neighbourhood, with one exception, have given us permission to work on their land.

11. That would be for manœuvring, I suppose?—For manœuvring principally. For drilling purposes the actual grounds in the neighbourhood of the camp I consider easily capable of handling five thousand men in decent weather. At the same time, all the men in camp are not under the same degree of training. The men only do drill close in to the camp for a little more than half their period of training. After that the whole essence of their training is to get them on to fresh ground and varying work away from the camp. We do not want fixed ground.

12. You get that by marching, and then having exercises at the end of the march?—Yes. I came to the Dominion from Shorncliffe, where my regiment was quartered and training before the war; and the training-grounds that we have there vary from two miles to seven miles from Shorncliffe.

13. You marched, then, from the barracks to these grounds?—Yes, and carry out the training. The marching is part of the training.

14. You cannot, of course, out at Trentham provide on your own grounds for the long marches? We do not wish to.

15. Provided you can get grounds at the terminus of the march?—Yes, sir.

16. Are those grounds available to you?—Yes, sir. We have the whole of the Mungaroa Valley and the whole of the Hutt Valley, with the exception of the property of one man; but as his ground is in great part swamp it does not matter.

17. Then it is really by the good will of the landowners in the Hutt Valley and the Mungaroa Valley that you are able to work the camp efficiently?—Yes, we owe a great deal to them.

18. Of course, if this room for extended marches were to be provided, one would want a reserve of several miles of country?—We should want a reserve of country about ten miles in diameter.

19. One hundred square miles?—Yes. We should want to go five miles from camp in any direction.

20. *Mr. Ferguson.*] And the country should be of a varying nature?—For preference, a varying nature.

21. *The Chairman.*] Is the hill country there of any value for camp purposes?—Very valuable for our advanced training.

22. And with the camp there—that is, with the habitations and the various work going on—is there ample scope for shooting?—Yes, the ranges are excellent. We have seventy-five targets there, and all the facilities that we could wish for. The only drawback with respect to the ground, if there is one, is that the ground is not so suitable for training mounted men as it might be. The Wairarapa is a much better locality for training mounted men than Trentham.

23. With regard to the water-supply, we have it that that is a good supply?—Yes, I believe it is.

24. Then, as regards the sanitation of the camp, you are familiar with what has been done there, I presume, from the outset?—Yes. Recently I have taken a great deal of interest in it. The General Staff, as a rule, do not have to deal with camp sanitation, &c., but I am acquainted with everything that is going on.

25. And can you speak generally as to what has been done?—I consider that the sanitary arrangements are better than they were in any temporary camp or semi-temporary camp that I have been in in the United Kingdom. The arrangements are much more complete.

26. The sanitary arrangements that have been carried out there in the past—I am not speaking of what is going on just now—can you say whether they have conformed to the best practice recognized by military authorities?—So far as I can see. But I am afraid I cannot set up to be an expert in the matter.

27. You know these things practically?—From my practical experience I am satisfied with the sanitary arrangements in the camp.

28. I understand now that a system of surface drainage and a more complete system of sanitary drainage are being carried out by the Engineer-in-Chief?—Yes, sir.

29. With the area that you had, would there have been sufficient accommodation if the men had been housed in tents?—No, I do not think there would.

30. Then, to secure the accommodation required, in view of the increasing numbers put into the camp, it was necessary either to remove men away from there or to house them more closely?—I would not put it in that way from my point of view. My point of view is that of training men; and it is almost impossible to give efficient training during winter months to men in tents, and even in summer-time, because there is such an enormous amount of fatigue work entailed. You have probably heard that those men who were sent out of Trentham Camp have found in the outlying camps, where there is constant shifting, that they are not getting in the necessary training, and the men themselves are complaining.

31. So that from the point of view of training it was necessary to have greater concentration?—From the point of view of efficiency it is necessary to have a camp of a permanent nature which does not require excessive fatigue duty.

32. "Fatigue" is a technical term meaning work that falls to be done outside of purely military training?—Yes, sir.

33. What is your experience in camps with regard to the changing of the sites of tents or of the whole block on which the tents are laid ?—I do not think it is practicable to change a tent from the place where it has been pitched to the intervening space that the men have all been walking over and fouling. If you are going to shift a camp at all it is necessary to go to fresh ground altogether. If one is going to remain on the same ground the correct thing to do is to strike the tents and air the spots on which they stand, as much as possible whenever there is a sunny day. Once you have rain come on, no matter even if the ground is slightly foul, practical experience has shown us that it is better to leave the tents standing on the dry ground than shift them during the wet on to other wet ground, especially if you have not got tent-floors.

34. With regard to the hutments that were provided—you, of course, have had experience in military barracks at other places: can you, in view of that experience, give an opinion as to the suitability or otherwise of these hutments at Trentham ?—I joined my regiment in huts that were erected during the Crimean War; they were wooden huts. I have been in hutment barracks at Bordon and Shorncliffe, and I believe our huts compare favourably with them: that is my impression. From what I remember of the huts that we had in England there were about twenty-five to thirty men to a room.

35. That would be one separate building ?—No. We generally had one building, with a doorway in the centre, and a room at either end, the company offices in the centre of the building separating the rooms.

36. Then the number of men under that one roof would be between thirty and forty ?—No, between sixty and eighty in the whole building.

37. The offices between were not boarded up to the ceiling, were they: there would be an opening over ?—They were built right up to the top of the ceiling.

38. *Mr. Ferguson.*] This room containing thirty-five to forty men was quite detached, with one entrance at one end ?—The entrance was in the centre of the building.

39. But the entrance to this room was at one end, and then came the offices, and the entrance to the other room was at the other end ?—Yes.

40. There was no through draught from end to end ?—No, unless the windows and doors were open.

41. *The Chairman.*] Did you sleep on the floor ?—No.

42. Did you take your meals in that room or in a separate room ?—Up to 1910, I think it was, the men always dined in the rooms in which they slept.

43. Was there any portico to any of these buildings—an outside veranda or anything of that sort ?—There was no outside veranda, but the door in the centre of the building went into a sort of centre passage—a central hall—where there were the wash-places, &c.

44. So that a certain amount of mud would be got rid of before going into the sleeping-rooms ?—Yes, it could be.

45. And then, of course, with the sleeping-accommodation raised above the floor, the objection arising from mud on the floor in respect of sleeping-accommodation would not exist ?—No.

46. In the camps that you were at was anything in the shape of drying-rooms provided ?—I have never seen a drying-room in the barracks or the hutment camps in England; but each room was provided with a small stove, which was going during the winter months, and the men dried their clothes in their living-room. In camp we put up a marquee and placed a few braziers in it.

47. We have it in evidence that May, June, and July formed rather a wet period at Trentham ?—Yes, sir.

48. And we have it that at any rate up to some time in June at the earliest no provision for drying existed ?—No.

49. Do you think it would have been a proper thing to have had drying-accommodation in those circumstances ?—I think it would have been a very good thing if we had had it.

50. Who should have seen to that provision ?—The Quartermaster-General's branch has the whole of the designing of barrack buildings, &c.

51. The designing occurs at the origination of the camp, and matters arise in the course of administration which require attention: things are wanted in winter which are not wanted in summer. Whose duty was it to look out for the winter and make proper provision ?—The Quartermaster-General's branch; and the Camp Commandant should ask for anything of that nature that is required.

52. The Camp Commandant is one person who might well have originated the suggestion: is that so ?—Yes, sir.

53. *Mr. Ferguson.*] Would he move of his own knowledge, or would the Medical Officer move him ?—The Medical Officer, if he thought the men's health was concerned, should advise the Camp Commandant to apply for it.

54. *The Chairman.*] The medical men from time to time attached to the camp might themselves have originated the suggestion ?—They ought to have. The Camp Commandant was responsible. The Quartermaster-General's department was originally responsible. It was the Camp Commandant's duty to ask for drying-facilities, and it was the medical people's duty to advise the Camp Commandant.

55. With regard to provision that was made in respect of sick-parades, we have it that during the summer there was not a considerable amount of illness, but this rapidly increased during the winter months. In the summer the course of sick-parades was that the men were marched to the medical marquee, and then each man got his turn. Now, in the winter the same conditions seem to have prevailed. There was no provision against rain, so that the men had to stand for over an hour at times in the rain waiting their turn, and there was no provision made for those who were so weak as to be unable to stand. Is that a proper state of things ?—No; they ought to have been provided with shelter.

56. Whose duty would it be to see that they were provided with shelter ?—The Camp Commandant is primarily responsible ; but it was undoubtedly the duty of the Medical Officers to have placed before him the fact that this was going on.

57. They would be the first to see ?—Yes. About a month or six weeks previously something had gone wrong in connection with the medical bnsiness in the camp, and Colonel Potter had spoken to me about it, and I had rung up Major McGuire, who was then the Principal Medical Officer of the camp, and I found fault with him for not having reported to Colonel Potter that something was wrong in his department. Major McGuire said he had reported the matter direct to the Director of Medical Services. I found fault and said that it was his duty to report to Colonel Potter officially, and bring it to his notice. I said that we could hardly expect Colonel Potter to make arrangements to improve the comfort of the men or rectify what was wrong if the Principal Medical Officer of the camp did not represent these matters to Colonel Potter for action.

58. Could you tell us what this was that you found had gone wrong ?—It was a matter of complaint by one of the dental surgeons.

59. What was the complaint ?—Some allegation against his brother officers. The matter was gone into, and he withdrew it.

60. Was it a complaint with regard to the manner of treatment ?—No.

61. Some personal matter ?—It was a personal affair.

62. You do not wish to say ?—I do not wish to say publicly. I will tell the Commission privately what it was. [Witness did so.]

63. That would not be a case in which the medical treatment of the men was concerned ?—No ; but the principle there was that the P.M.O. was responsible under Colonel Potter for any medical matters, and anything that went wrong, or any complaint whatsoever, should have been referred to Colonel Potter.

64. What was the true arrangement with regard to the issue of a second pair of boots ? We have had two views put before us : one is that the men were to get a second pair within about a fortnight after arrival in camp, and the other is that it was only shortly before they left that the issue was to be made ? I went into the matter of supplies and so on, although it does not concern my branch, in April. I know the number of men who are probably required to come into camp, and I wanted to enable the Quartermaster-General's Defence Stores to work in with the Quartermaster-General's department in the camp. I then asked what was the scale of issue of the equipment and clothing, &c., so that I could get down the exact dates they would be required. I found that the first issue was made immediately the man arrived in camp, and he was then given a complete outfit, with the exception of his service dress uniform. He cannot be given the latter in the first issue, because he requires to be measured for it, and proper sizes have to be picked out ; but he is given everything with the exception of this uniform. I believe he is given two suits of underclothing and a pair of boots. Then he is given his second issue, with his service dress uniform, at the end of a fortnight. It is ready by then—from a fortnight to three weeks after he gets into camp. In the meantime the man is supposed to have in his possession the underclothing and the boots with which he came into camp. I have seen some statements to the effect that the men were not allowed to wear the light boots that they brought in with them. Perfectly correct. We discouraged them from wearing light boots out on the muddy parade-ground when they had had one good thick pair given to them ; but our object was to encourage the men to keep their other boots dry for use in their huts or tents when they came in. Then the second pair of boots and the complete outfit was given to the men about three weeks before embarkation. That went on up to the 9th June. On the 9th June General Robin went out to the camp and conferred with Colonel Potter about various matters, and Colonel Potter recommended to General Robin that the second pair of boots should be issued immediately after the men came into camp, instead of deferring the issue till later, and that a third pair should be given prior to embarkation. General Robin, on his return to Wellington the following day, immediately started to obtain the extra boots necessitated for this increased issue.

65. That will explain what we have never hitherto quite understood. After the 9th June, then, a man might expect to get two pairs of boots shortly after coming into camp ?—Yes, he might expect to get them, and we would give them to him if we could get them fast enough from the makers.

66. Perhaps you will know whether or not a difficulty was experienced in obtaining such a number of boots upon such a sudden order ?—I believe there was, because there were men without the second pair. The details I do not know.

67. You know that there were personal statements made by men that they had not received the second pair ?—Yes, sir.

68. There was a good deal of repeated statement to that effect, I believe ?—Yes.

69. That was really because of the determination come to on the 9th June to have this second pair issued, and the inability to find the quantity required ?—Yes. But there is another cause for there being a shortage of boots. We can only lay in certain stock sizes from estimates of the sizes that will be required. If in a draft we have an enormous run on one size we may run short, and it is possible that, although there may be plenty of boots in stock, there may not be sufficient boots of the size required. That happens frequently, not only out here, but at Home in the Army.

70. We learned that you had many grenadiers amongst your detachments who took 12's and 13's, which were not kept in stock ?—Yes. It is the same in uniforms.

71. We had some evidence that the huts, designed for fifty, contained at times more than fifty men. One estimate, I think, was seventy. Who would be to blame for that if it happened on any particular night ?—The medical authorities would be. At the time this occurred we had very wet weather, and there was a considerable shortage in huts. It was a very great anxiety to me, because the Public Works had not completed the number of huts that we had estimated when the men were

coming in; and when the men came in I asked the Camp Commandant how he had managed to dispose of them. He informed me that he had put extra men into the huts. I thought it was a rather dangerous thing to do, and I said I trusted he had got the Medical Officers' authority for what he was doing, and their permission to crowd men into huts rather than pitch tents for them during wet weather on sodden ground, and he said he had.

72. That was an occurrence that happened only at the initial stage of the men coming in?—That is all. As rapidly as the new huts were obtained we took the men out of the crowded huts.

73. *Mr. Salmond.*] With regard to boots, you say that a change was made on the 9th June?—It was the 9th June when General Robin visited the camp. It was the Wednesday before the Fifth Reinforcements sailed.

74. It was after the Trenthams were in camp?—Yes.

75. They came in at the end of May?—Yes.

76. This was some days afterwards?—Yes.

77. Do you remember what the occasion was when General Robin visited the camp?—In connection with the departure of the Fifth Reinforcements.

78. Had it any special connection with the question of boots?—No.

79. How did that question arise, then?—We visited all the shops in the camp, and the General made inquiries as to the quality of the saddles and the boots, and so on; and he examined boots that were there for repair, and discussed with Colonel Potter various matters relating to boots.

80. Were you there?—Yes.

81. Was any question raised as to the fact that the Trenthams had not two pairs of boots?—General Robin's decision was to issue a second pair of boots to the Trentham Regiment and the Sixth Reinforcements, and to the Seventh Reinforcements when they came in.

82. Do you know whether any instructions were given by him to the Quartermaster or any one to procure these boots?—I understood that instructions were given the following day to Major O'Sullivan to purchase the boots.

83. *The Chairman.*] That was when the odd lots were bought apparently?—No. The odd lots were bought after the visit of Mr. Massey to the camp one Sunday.

84. *Mr. Salmond.*] This document is a copy of a letter written by the General on the 4th July [document shown to witness]?—Yes. This was in consequence of Mr. Massey's visit on the Sunday.

85. *The Chairman.*] May we take it in this way; that after the 9th June steps were taken to supply the shortage, but the shortage was not made up—when I say "shortage," I mean on the second pair—and that Mr. Massey came out on the 3rd July, saw what there was, and gave directions that the boots should be got in any manner?—Yes, sir.

86. That was because a number of the men were still with only one pair?—Yes. Contracts, I understand, had been put out, and we had obtained, I believe, the maximum quantity of boots that we could get made voluntarily under the existing organization.

87. *Mr. Salmond.*] We understand now that originally the men got only one pair of boots; after the 9th June it was decided that they were to have two pairs; and on the 4th July an urgency order was issued that the additional boots were to be obtained at once: that, I think, is all that you know on that subject?—Yes. I would like to point out that the men had their boots that they came into camp with.

88. *The Chairman.*] They could use those for a change?—Yes.

89. Then, if they came in late at night the men had no means of drying their boots by the morning?—No. When I was in camp in England two years ago we officers had only two pairs of boots, the same as the men. We always put on the wet boots in the mornings and kept the dry ones until we came home. It never harmed us so long as we were on the move and so long as we kept dry clothes for inside. No one was foolish enough to get two suits of clothes wet.

90. I suppose we may take it that large numbers of the men when they come into camp for the first time, either from want of being taught or from want of experience, do not attend to such matters as that?—One of the principal causes of their not attending to them is that you have a certain number of men from the backblocks who can stand any degree of knocking about, and they do these things. Then the men from the cities, imitative in these matters, say, "If so-and-so can do it, why cannot I?" They try to do the same, and then they knock up. That is the principal reason.

91. *Mr. Ferguson.*] Is it necessary that all this large number of men should be brought in on the same day? Could they not be spread over a week, and thus more chance be given of educating the men to get the run of the place better?—We do spread the men coming in over three days; but we have officers and non-commissioned officers—there is one officer to forty men, and one non-commissioned officer to every twenty—we have them in camp for a period of five to six weeks before the men arrive, and we educate them in all these points in order that they may be able to handle their men when they come in. But if men come in at varying times it increases the difficulties of training enormously.

92. *The Chairman.*] Are you able to say from your experience whether difficulties were created with regard to the health of the camp by reason of men coming into town and getting drunk?—No, not to my knowledge. With the Third Reinforcements we had a certain amount of trouble. We took it in hand, and appealed to the men, and tried to create a soldierly spirit. We were successful in our efforts, and we have had no trouble since—no anxiety at all. There was for a fortnight in February a little difficulty, and that was all. The men have been exemplary in their behaviour.

93. With regard to the requirements that have come within your sphere of action—have they always been furnished by the authorities?—Invariably.

94. With readiness?—Whenever I have put forward anything and explained what I wanted I have always got it. I have never had difficulties put in my way.

95. There has been no questioning about expenditure, or anything like that?—No; I have always had expenditure sanctioned immediately for anything required in my branch. I have no knowledge of the other branches.

96. *Mr. Salmond.*] I want to ask you as to your action in connection with Berhampore Hospital. On the 2nd June, I think, the Director of Medical Services was absent from Wellington?—It was on a Wednesday.

97. You, from information received, asked one of your officers, or one of the officers, to inspect Berhampore Hospital, I think?—That is not quite the beginning of it. On Friday, the 4th June, I was just leaving for camp in connection with the night operations of the Fifth Reinforcements. As I was leaving the office a man spoke to me and told me that matters at Berhampore were not going quite right. As the General was absent, I wrote a note round to the Adjutant-General before I left, and said I required to have a report the next morning as to the total number of measles patients in any military hospital, and the extra accommodation that would be available if other cases arose. Then on the Saturday morning when I came to the office I received a report, and on that I ordered Colonel Pilkington, Adjutant-General, to inspect Berhampore immediately. I also took other action.

98. Did the report relate to the numbers in the hospital?—The report was that Berhampore was overcrowded.

99. And then you ordered him to inspect the place?—I ordered Colonel Pilkington to inspect the place. Let me explain. When I came into the office on the Saturday morning I asked Colonel Pilkington what was the result of his inquiries about Berhampore and the other hospitals. He gave me a slip of paper, and on it he showed the number of measles patients—158, I think it was, including eight suspects. Of these ninety-two were at Berhampore. In consequence of my inquiries of the previous day—*i.e.*, writing the memorandum to Colonel Pilkington—Major Elliott had come up to make a report about Berhampore, and he was present when I spoke with Colonel Pilkington.

100. How did Major Elliott come into it at all?—He was officiating for Colonel Purdy, who was absent inspecting the hospital ship at Port Chalmers.

101. Was that fact officially reported to you in any way?—It was not reported to me, and I asked Major Elliott, when he made the report about the condition of affairs at Berhampore, why he had not reported before.

102. How did you come to ask him to report on Berhampore?—He came up in consequence of my inquiring into the state of affairs.

103. The Adjutant-General sent for Major Elliott?—Yes, to supply the information I had asked for. Major Elliott was present with the Adjutant-General when I came into the office on Saturday morning. I then questioned him about Berhampore, and he painted things in a very bad light. I asked him why he had failed to report to me, as I was officiating for the Commandant, and he had been in charge of the hospital for some days. I understood him to say that he considered it was not his duty to do so.

104. *The Chairman.*] He says he was only to attend if called upon?—I considered he was responsible for reporting the condition of affairs. I held him responsible at the time, and told him so. I asked Major Elliott what he proposed to do in view of his report of Berhampore being in such an overcrowded condition, and where he proposed to put the men. His answer was that there ought to have been an infectious-diseases hospital out at Trentham. He said then that if the Wellington Hospital Board knew that there was going to be a hospital constructed out at Trentham possibly they would put another ward at the disposal of the Department in the meantime. I said, "Well then, what has to be decided is either to get the Wellington Hospital authorities or the Public Health Department to take over these men. But supposing I go to the Minister now and ask him what he can do in the matter to bring pressure to bear upon the Health Department to obtain this room for us from the Wellington Hospital or elsewhere—you talk about making a bargain with the Wellington Hospital authorities—what do you mean by a hospital out at Trentham? What promise or undertaking do you want as to the size of the hospital?" Major Elliott said he wanted an infectious-diseases hospital with forty beds. I immediately went down to the Minister's office, where I had an appointment on another matter, and when the other gentlemen who were present had left, at 12.30 p.m., I put the matter before him, and he decided to call in Dr. Valintine immediately. Dr. Valintine was called in within twenty minutes. I left the Minister's room after the matter had been put in the hands of Dr. Valintine, and I understood that night that the whole of the military hospitals, outside Trentham, in which there were patients had been put in charge of Dr. Valintine or under his supervision. I believe at that time they were put under his supervision, and that the military Medical Officers were held responsible for the medical attendance. The following morning the General returned and I had no more dealings with the matter.

105. *Mr. Salmond.*] That is all you had to do with the Berhampore Hospital?—That is all I know about Berhampore.

106. *The Chairman.*] It seems to have been a case in which the lay mind summed up the situation before the medical mind had done so?—Well, sir, a complaint was brought before us and had to be gone into.

107. *Mr. Ferguson.*] The Minister was the man who acted promptly?—The Minister acted promptly and unhesitatingly. He could not have done it quicker.

Mr. Skerrett: I want to state that it seems to me that Colonel Gibbon has been called to give general information relating to the camp, and to answer only such questions as the Commission requires an explanation about. It appears to me that I would be serving no good purpose if in my examination of him I dealt with all the points as to sanitation, hutments, and other details. I trust the Commission will agree with me in that.

The Chairman: I think so.

Mr. Skerrett: If I were to deal with all the details of the camp when addressing questions to every witness I would unduly prolong the proceedings of the Commission.

The Chairman: Yes, I agree with you. We refrain from descending to details.

108. *Mr. Skerrett* (to witness).] Ought there to have been in Trentham Camp a system of periodical reporting by the Medical Officer to the Commandant as to the health of the camp?—The Commandant calls for what reports he considers necessary.

109. That is hardly an answer to my question, Colonel Gibbon. My question is framed to inquire whether, according to military routine, a periodical report should not, as a matter of course, be made to the Commandant by some officer as to the health of the men in camp?—There was an Orderly Medical Officer detailed for duty each day whose duty it was to inspect the whole of the camp, and at the end of his inspection to submit a report as to anything that was required. That report comes in every day.

110. Showing the number of sick men?—Yes; it comes in every day and appears in the camp orders of the following day, showing the names of the men admitted to hospital and the discharges from hospital.

111. Supposing it became probable that an epidemic of some extent was likely to break out in the camp, was it the duty of any one to bring that probability under the notice of the Commandant?—Most certainly; the P.M.O. of the camp ought to have informed him.

112. To enable the Commandant to take such steps as he thought proper—to take advice to see what was to be done?—Yes.

113. I understood from you that you would expect that upon the possible approach of an epidemic there would be some report of its character to the Commandant?—I would, if it could be discovered; but I personally think that it was rather difficult to see whether the increase in the number of cases was simply due to the increase in the number of men in camp.

114. It is a matter of degree, necessarily, but there does not appear to be any inherent difficulty in a qualified Medical Officer being able to surmise whether there was a probability of a greater or less approach of epidemic. If you find measles cases coming in from month to month, and the number of acute cases increasing, is there any difficulty in surmising that some precautions ought to be taken?—Precautions ought certainly to be taken.

115. And the report ought to be made to the Commandant, who is really the ultimate officer responsible for the health of the camp?—That is correct, but he has only a limited connection with these matters.

116. But he would be the executive officer to carry out the precautions recommended by the Medical Officers?—Yes; if he failed to do so he would be lacking in his duty.

117. *Mr. Ferguson.*] Is there any purview by any reponsible officer of the daily health state of the camp? Is it ever looked at from a broad aspect to see whether the percentage of cases is increasing?—That would not be within my knowledge. That would be the duty of the Medical Officers in the Adjutant-General's branch.

118. And would there be any reports made?—I do not know whether they called for reports or not.

119. It concerns you, because it has an effect upon the efficiency of your men. You are responsible for the fighting qualities of your men, if they are not being trained, and it comes within your purview eventually?—I cannot do everything, and I have to look to medical experts for the prevention of disease. I am now doing a great deal of work that does not by rights belong to my branch to hasten the time when we may begin again the training of the men under normal conditions.

120. *Mr. Skerrett.*] We quite understand that most of the matters about which you have been asked are matters not within your personal care?—That is so.

121. But you have been asked these general questions, and that is why I venture to ask you this: I want to ask for your explanation of this circumstance: we are told that it was anticipated on the departure of the Main Body that there would be a shortage of tents, and that some provision would require to be made for the erection of more or less permanent shelters for the men, such as hutments. We know that the first sample hutment was not erected until the 19th March. My question is, can you explain the long delay in the provision of these hutments?—Well, at the beginning of the war we did not set out with any idea of training the numbers we are training now. The question of the hutments was taken up, I think, as far back as January. But I had no hand in their erection.

122. The first letter written in connection with them was in December. You see the hutments were not provided, and were incomplete at the end of May?—That is correct.

123. You say that is not within your department, and you do not desire to give any explanation upon that point?—No, it is not within my branch or my knowledge. I was not concerned with the matter until I found there were not sufficient huts.

124. I understand you to say that it was upon medical advice that you understood that men in excess numbers of fifty were placed in these huts?—That is correct.

125. You were so informed?—I was told so by the Commandant.

126. It is noticeable, is it not, that these hutments were only intended to be provided at the beginning of the winter?—That is correct.

127. Was it not an error of judgment on the part of the military authorities not to provide recruits coming into camp at the beginning of winter with two pairs of boots, or, in the alternative, was it not an error of judgment to bring a number of recruits into camp at a time when the authorities had not the necessary accommodation in the huts, and had only an insufficient number of pairs of boots?—I consider there were sufficient boots. The men brought in their own pair of boots with them, and if they had done as they were told—to keep their own boots for use in the huts—they would have got along all right. But this matter, too, is not in my branch.

128. But it was at the beginning of winter?—Well, they got a thick pair of boots for drilling, and if they had kept their own boots dry it would have been all right. I have had to do the same.

129. Is it not a fact that in the Imperial service soldiers are expected to have always two pairs of boots?—But, then, they are never allowed to wear other boots.

130. That may be so. Then, I understand you to say that the military authorities may have placed reliance on the bringing of civilian boots into camp?—Undoubtedly we did. In the early period of the camp it was very difficult to obtain boots, and the men had their own boots. When the First Reinforcements were in Trentham Camp numbers of boots were thrown away, and men preferred to wear their own.

131. But not during the winter months?—I do not consider the second pair of boots was essential. Of course it would have been better for them to have had another pair.

132. But ought it not to have been done for the purpose of conserving the health of the men?—The health of the men would have been conserved better if they had done what they had been told.

133. That is, to use their own boots in the huts. Looking back upon it, do you really think that the military authorities ought to have provided the second pair of boots?—From my actual experience of what they have done I do not think they would have been any better off. The men would put on a dry pair the day after a wet day, and at the end of that day they would have two wet pairs.

134. But there is a difference between two pairs of service boots?—I do not think there is any difference between their own boots and the service boots if they are both sodden with wet.

135. *Mr. Gray.*] I gather that, in your experience, the supply and issue of one pair of boots is sufficient?—No, I do not consider that one pair is sufficient.

136. But one pair at one time. He has already his own boots, and if he gets one pair of working boots you think that is sufficient?—Yes; personally I have been in camp with one pair of boots and one pair of shoes, and I used my shoes for wearing on return to camp after the day's work.

137. And worn your military boots when you were out in the wet?—Yes; and when they were wet I have put them on wet, and my wet clothes also.

138. And your observation is that the men have got both pairs of boots wet?—Yes.

139 Then, nothing could have been gained by giving them two pairs when they went into camp?—I do not think they would have been any better off. Of course, I do not mean that the man with three pairs is not better off than the man with two. I do not consider that a second pair of boots was essential.

Mr. Skerrett: I meant "prudent" and a reasonable course.

140. *Mr. Gray.*] It was not prudent?—If I could have got two pairs I would have given them two.

141. You have been asked some questions about the duty of the Medical Officers: have you any reason to suppose that the Medical Officers do not make daily reports to the Camp Commandant?—They would be lacking in their duty if they did not make those reports.

142. And you have no reason to suppose that was not done?—No. The Camp Quartermaster also accompanies the Orderly Medical Officer on his tour of inspection.

143. All these matters would rest with the Medical Officers of the camp, to make the reports to the Camp Commandant?—Yes.

144. Upon all matters connected with the health of the men?—Yes; and if it lay in his power the Camp Commandant would rectify it, but if not he would refer it to headquarters.

145. Did you ever have a report referred to you from the Camp Commandant regarding the health of the men?—The only matter in which the health of the men would come before me would be if there were so many sick that it was interfering with the camp training. Then that would be reported to me, and I would obtain an expression of opinion from the Director of Medical Services.

146. Do you know whether that occurred?—The only time I have had any report as to health of the camp up to the time in question was on Wednesday, the 7th July, I think it was; that was the day before the decision to evacuate the camp was come to. On that night Colonel Morice recommended to me that the Trentham Regiment should be put out of the camp in order to allow more room in the huts for the other men. I argued with him on the subject to find out what I could. I made an appointment that evening with Colonel Valintine to visit the camp with him on the following day to discuss the matter.

147. That was the first time that any report came to you from the Camp Commandant?—Yes.

148. You were informed by the Camp Commandant that he had the authority of the medical men to put more men into the huts than was originally intended?—Yes.

149. Do you know who the Medical Officers were at that time?—I believe Major McAra was the P.M.O. of the camp at that time.

150. He would be responsible for that being done?—He would be responsible for that advice.

151. Do you know, Colonel Gibbon, if many of these men arrived in camp late at night?—I know it is unavoidable.

152. Is it likely that the men would be put into the hutments first and the authority of the P.M.O. obtained afterwards?—I believe that the permission of the P.M.O. was obtained beforehand. I think this provision was made before, because the huts would not be overcrowded on the first day the men came in.

153. *Dr. Martin.*] The Commission have to be satisfied as to who was the medical head from the 23rd June to date. On the 13th Colonel Valintine discharged all the patients from the camp to the racecourse, and on the 23rd June he was appointed Director of Military Hospitals, and there were a good many complaints before and after about the medical inspection. We want to find out who is the officer responsible from the 23rd June to date—who is the head of the medical services?—It would be Colonel Valintine. I know of my personal knowledge that Colonel Valintine had to look after the men in hospital, and the medical inspections were placed in charge of Major Stout.

154. To whom must the Commission look as the head of the medical services from the 23rd June to date?—Colonel Valintine was head. When Colonel Morice took over the duties of P.M.O. of the camp he was responsible for the camp medical inspections.

155. But is the Director of Military Hospitals responsible for the medical inspections?—Yes: he is ultimately responsible for the efficient carrying-out of medical inspections by his officers.

156. And if anything occurs during that time he would be able to explain it?—Yes.

157. Then, from the 13th June to the 23rd Colonel Purdy was in charge?—I do not know. I know nothing about it before that date. I know that on the 23rd Colonel Valintine did assume charge, but up to that date I do not know who had charge.

158. Up to that date Colonel Purdy was responsible for it?—I assume Colonel Purdy was in charge.

159. Are there any general observations you wish to make?—There is one point I would like to put before the Commission for its consideration. In all my soldiering experience of a good many years, and I have served in India and elsewhere, the whole principle of handling men has been to handle them from the psychological point of view more than anything else as regards the outbreak of epidemics. In a cholera camp or a plague camp the whole aim and object of the military authorities is to keep the men's spirits up and prevent them from thinking about the sickness. On the 28th June, when I know from my personal knowledge that Colonel Valintine was working day and night doing all that he could to improve the conditions of the men, people came to the camp, and, instead of cheering the men up, we find them endeavouring in the papers of the Dominion and elsewhere to find fault with what we were doing, and to try and impress the men with the idea that they were not being properly looked after. The natural result was that on the 1st July we had a record number of cases admitted to hospital. If you applied the same methods to a cholera camp in India you would have half the men of a regiment dead within a few days, instead of stamping the disease out as we always do. If we are to carry on the training of recruits in this country we should not have the whole of the Press and other people trying to pick out every fault, and to impress upon the men that they are being absolutely neglected and that everything we do is wrong. If this is allowed to continue we shall lose our hold over the men. The Sixth Reinforcements had been in camp for a period of three months before the outbreak at the end of June. We had control of the men, and there was no scare amongst them as there was in other units. All the outcry has had an enormous effect upon the men of the Seventh Reinforcements in particular, and the Trentham Regiment, who had only been in camp a short time. I unhesitatingly attribute 50 per cent. of the sickness to the effect upon the men of this outcry. So far as complaints are concerned, it is only right and our duty that they should be looked into. Every one has a right to bring a complaint forward and have it gone into and rectified, but unless we fail to rectify a complaint there is no cause to make an outcry. I consider that if we are to continue to handle the men at all we must be given opportunity to maintain our discipline, which it is impossible to do if our authority is to be undermined as it is at present.

160. *The Chairman.*] The suggestion may be that even this inquiry may have its effect upon the men?—Yes. But if the Commission will give its finding we can make arrangements to have the recommendations carried out. If the Commission condemns our site and hutments we will have to go out of them. But I hope it will not, because it would then be practically impossible to carry out our obligations to the Imperial authorities. We want a clear and definite statement which will settle once and for all the question in the mind of the public as to whether Trentham is all right or whether it is not, and then we hope that the Press will realize the seriousness of my argument and give us a fair run. If anything is wrong, and the complaint is passed on to us, we will deal with it fairly. I can honestly state that since the war began I have to the best of my ability threshed out every complaint put before me.

GEORGE WILLIAM HEAN sworn and examined. (No. 110.)

1. *Mr. Skerrett.*] You reside in Wanganui?—Yes.

2. I think you are a registered chemist?—Yes.

3. On the 6th July of this year were you requested by the Defence Office in Wanganui to provide a dispenser for the camp?—I was asked by the military doctor there if I would provide one.

4. Whether you could spare a dispenser from your establishment for the camp at Trentham?—Yes.

5. What took place?—At that time it was not easy for me to spare an assistant, as two of my fellows were away at the front. It was easier for me to go, and I offered my services if they were required not merely as a dispenser but for organizing the dispensing department at Trentham. I had heard that day that there was a certain amount of muddle, and I offered to go down to Trentham and stay there for a week or a month, or up to six months; but I made it clear that it was not for active service away from Trentham Camp.

6. What happened in consequence of your offer?—The military doctor conveyed my offer to the Defence Office in Wanganui—Dr. Porritt, it was. Half an hour afterwards I had a ring on the telephone to be examined by the doctor. It appears that the Defence Office in Wanganui had transmitted my offer to Palmerston North by telephone, and word came back that a man of such knowledge as I possessed was required at Trentham, and would they get Mr. Hean examined at once.

7. *The Charman.*] To see if you were medically fit?—I expect so. That was about 2 o'clock. I went up to the surgery and was examined and reported all right, and the papers were delivered to the Defence Office, and the result telephoned to Palmerston North. At a quarter to 4 I

received a message from the Defence Office in Wanganui to leave by the next morning's train (Saturday), but I did not leave till the Thursday morning.

8. *Mr. Skerrett.*] You actually did leave for Trentham on Thursday, 8th July, arriving at Trentham about 6.30 that night. To whom did you report?—I do not know that I am sure of the officers' names, but I was told in Wanganui to report to the P.M.O. at Trentham.

9. I presume you did so?—Yes, I found him out. He told me that they had no instructions about me at all—no information. On Tuesday afternoon I believe the papers were posted to Palmerston North, with information that I would be leaving on the Thursday morning, and the officer in charge at Wanganui told me that full information would be at Trentham awaiting my arrival. I got there about 6.30 p.m. on the Thursday evening. I found the P.M.O. and reported to him. He said, "Well, we want such a man." I told him that I was not there as a dispenser, but to do their buying, and so on. "However," I said, "if you want a dispenser, I will go back and send one of my assistants down." He said, "No, we want such a man as yourself." He said that as a matter of fact the suggestion had been made some ten days before that the dispensing department should be under more efficient organization, and said, "They have apparently taken my suggestion and sent you here, although at the present time I have no word about you." Apparently nothing could be done that night, and it was suggested that I should sleep there. I agreed. There were two recruits for the Ambulance section, who had come down with me in the train and reported that same evening. One of the Medical Officers asked the orderly to provide sleeping-accommodation for us. After about ten minutes the orderly took us to a loose-box, and he said, "You will have to sleep on the ground; I have no other place for you." I said that I would go back to town for the night, which I did; but I do not know what happened to the other two—I suppose they remained there. On the following morning I reported to the Health Department, in the Government Buildings, as I had been advised to do by one of the Medical Officers at the camp. Dr. Frengley was away, and I saw Dr. Finch. He telephoned the camp at Trentham, and a message came through to send me out again by the 1.20 train. I went out by that train, and after waiting about for three hours I spoke again to the Medical Officer, who said, "We have received instructions for the breaking-up of the camp, and I think you had better go back to Wanganui." I agreed that I had better do so, perhaps.

10. That was the 9th July?—Yes, the Friday. That evening I came back to Wellington. I thought I would not make a hullabaloo in the papers about my experience, though I appeared to have been sent on a wild-goose chase. I looked up Mr. Rhodes, the Minister, and had a quiet chat with him. He said that there had been some hitch somewhere owing to the breaking-up of the camp, and advised me to go back to Wanganui. I went back to Palmerston North, and called at the Defence Office to see whether the papers had left for Wellington, and I was told they had been sent down here all right.

11. How long have you been a pharmaceutical chemist in Wanganui?—Since 1901.

12. In active and pretty considerable practice?—Yes.

13. So that you may be regarded as a man of experience placing his services and his talents at the services of the Department at a critical stage?—I think so. I have a business in Australia as well.

14. *The Chairman.*] Are you the proprietor of the "essence"?—Yes.

15. *Mr. Skerrett.*] Did you notice while you were in Trentham Camp the hospital in the trainers' quarters?—I was in the hospital quarters of the camp.

16. Near the gateway?—Yes.

17. Did anything attract your attention while you were there?—In the building it did.

18. What was it?—We three who came down from Wanganui had a meal in the kitchen, and I noticed some whispering between the orderlies, and just when I had finished my meal we looked through a door leading into a room into the kitchen. These two orderlies had just walked in front of us, and had gone into a room leading into the side room, and out of that room they carried a stretcher on which was apparently a corpse. I did not see the face, but I saw the feet and the form.

19. Were you informed when that man died?—The orderly at the door told me he had died that morning, and had been in the room near the kitchen all day.

20. *Dr. Martin.*] That was on the 8th July?—Yes.

21. *Mr. Skerrett.*] Did you yourself see or was there any evidence of confusion in connection with the dispensary?—No, I saw the dispensary department the next day. Several cases had been packed up that day for removal, and naturally things were more or less upside down.

22. So that that was no test of the place?—No.

23. *Mr. Ferguson.*] You are unable to give us any advice as to whether the dispensing being carried out at Trentham was satisfactory or not?—No, sir, I cannot say anything about it.

24. They acknowledged that they wanted some one to look after it?—Yes.

25. Is it proper, in your opinion, to carry out dispensing by partly trained men—in your opinion as a registered chemist?—In reply to that question I could quote the Pharmacy Act, which will not allow the dispensing of doctors' prescriptions to be carried out by any other than qualified men.

26. Can you tell us of any feeling amongst the profession as to the Army Medical Corps in respect of the dispensing branch?—I have not heard of any feeling in that regard.

27. *Mr. Salmond.*] Do you suggest that you personally had any grievance against the Department?—None whatever, except that I felt it was hardly fair to waste my time for three days.

28. And presumably your papers were there all the time?—No.

29. Did you inquire?—Yes.

30. I suppose the P.M.O. was glad to see you and have you there?—Yes.

31. Then why did you not stay?—Because they had received instructions for the breaking-up of the camp.

32. You did not suppose that the Army was going to be broken up?—I did not suppose anything about it. You asked me why I did not stay in camp. Well, the Minister said that as no papers had yet arrived he thought I had better go back to Wanganui.

33. You told us that the Medical Officer also told you that you had better go home again?—Yes; I am not positive as to the medical man's name—I think he was the P.M.O., an officer named Harrison.

34. Did you think you were in communication with the P.M.O.?—Yes.

35. He told you to go back to Wanganui?—Yes, because he had received no instructions about me.

36. I understood you to say it was because the camp was being broken up?—Yes.

37. There were two reasons then?—Yes, probably.

38. Did it not occur to you that you might reasonably stay there and help the medical men?—Which I would have done, and offered to do. The medical man said that under the circumstances—the camp was being broken up and as they had no advice about me—the best thing I could do would be to go back to Wanganui.

39. Do you suggest that there was any impropriety in the conduct of the medical men in connection with this dead man and the position of his body—any negligence or incompetence?—No, I do not suggest that, because I am not a medical man.

40. What was the point of your telling that story then?—The papers had it that there was an infectious disease at Trentham; indeed, I was told plainly that night that I could not go back to town.

41. Did you know that that was the hospital?—Yes.

42. Did you know that the disease for which the hospital was established was an infectious disease?—No.

43. You were taken by surprise on finding yourself in an infectious-diseases hospital?—No.

44. If a man died there you would expect to find his body there?—Yes.

45. Then what is the point of your story?—You do not expect to find a body in a room but one leading off the kitchen.

46. There was a ward at the back of the kitchen, and then at the side of the ward there was another room, in which this dead body was placed?—Yes.

47. Have you any criticism to offer as to that: is there anything wrong about that?—I am not offering a criticism.

48. What did you tell the story for?—It was a fact.

49. Why did you come before this Commission to tell this story?—I did not come before this Commission to tell that story; I was subpœnaed.

50. Were you asked by your counsel about this story? For what significant reason have you told this story?—Well, according to the principles regarding germs it would not seem to be a right thing to have a body next door but one to the kitchen where the food was prepared. I made no reflection upon the service.

Major O'SULLIVAN further examined. (No. 111.)

1. *Mr. Salmond.*] Yesterday we had some difficulty in getting from you an explanation as to why you did not supply two pairs of boots to the men of the Trentham regiments. It appears that the practice was only to supply one pair of boots at first until the 9th June, when the alteration in the rule was made. Did you hear Colonel Gibbon's evidence about that?—Yes.

2. Is that right?—As regards the 9th June it is not right, so far as I am concerned.

3. *The Chairman.*] An inquiry is still going on somewhere else?—Not on this particular point. I have my explanation here. I have here a copy of a confidential order to me, dated the 17th May, 1915: "Expeditionary Force Reinforcements and Additional Units: Requirements for Trentham Infantry Battalions.—60 officers and 108 N.C.O.s now in Trentham Camp; remainder of personnel,—viz., 2,192 Infantry and 8 A.S.C.: total (less the 108 N.C.O.s), 2,200, say, 2,250. Will be in Trentham Camp on 30th May, 1915. First issue of uniform, &c., to arrive in Trentham Camp on 21st May, 1915." That first issue includes one pair of boots for each man.

4. Their equipment was issued in three issues?—Yes.

5. The first issue containing one pair of boots and the third issue containing the second pair of boots?—No; the third issue includes the equipment of second pair of boots.

6. On the 17th May you were told to provide how many pairs of boots?—2,100.

7. When did you send those boots to the camp?—They were there about that time, as far as Mr. Williams knows.

8. *Mr. Salmond.*] With what there was already out at the camp, the supply was there?—Yes.

9. *The Chairman.*] So that there was no delay with regard to those boots?—No.

10. When were you called upon for another lot of boots for these men?—They are not due yet. This is an order I got on the 4th July: "Necessary to get 2,000 at least additional boots at once for Trentham. Wire all warehouses and firms, or wire districts and groups to obtain following information at once from firms and boot-shops, and reply to you urgent: 'Number; description, blucher on strong working watertight boots, shooter; cost should not exceed 18s. 6d., with leather laces; sizes 6, 7, and 8; suitable for work at Trentham. How many can you supply at once? Urgent, reply.' *Re* Wellington, buy at once and send to camps.—A. W. ROBIN, D.S.—4/7/15."

11. Two thousand pairs of boots: when did you get them?—On the Monday.

12. The 4th July was a Sunday?—We got samples on the 5th. Altogether with what we had in stock there were 2,200 pairs of boots.

13. *Mr. Salmond.*] You say you got two thousand pairs of boots on the 6th July?—Together with what we have in stock; we bought 1,284 pairs.

14. *The Chairman.*] Tell us about the 9th June, where you say Colonel Gibbon has gone wrong?—I have no order countermanding that instruction of the 17th May.

15. *Mr. Salmond.*] The first issue contains one pair of boots, and the third issue contains one pair?—Yes.

16. *Mr. Gray.*] On the 17th May you received a memorandum from Colonel Gibbon?—Yes.

17. That contained instructions with regard to the Expeditionary Force requirements?—Yes.

18. With respect to the Trentham Regiment, comprising in all 2,250, expected in camp on the 30th May, you were directed to provide the first issue of uniform, &c., at Trentham Camp on the 21st May: did you comply with that instruction?—Yes.

19. Did you supply the first issue on due date, including one pair of boots?—Yes.

20. By the same memorandum you were directed to have the second issue to arrive in camp on the 6th June?—Yes, sir.

21. Did that second issue include boots?—No.

22. You were directed by the same memorandum to provide the third issue on the 17th September: is that so?—Yes, sir.

23. That date has not arrived?—No.

24. Does that issue include a second pair of boots?—Yes, sir.

25. Then the equipment for the Trentham Regiment was directed to be supplied in three instalments or issues?—Yes, sir; they have been supplied in advance.

26. *The Chairman.*] This additional lot you sent out on the 4th July is not a regular one?—No.

27. Then why did you not tell us that a long while ago?—You remember that last night I was quoting from memory, and even the morning paper stated that I was not sure. I was not sure, and when I went up to the office to-day I could not find that record, but Colonel Gibbon gave it to me at midday to-day. I hand in copy of instructions dated the 17th May.

R. H. WILLIAMS further examined. (No. 112.)

1. *Mr. Salmond.*] You are an officer in the Stores Department?—Yes, sir.

2. Under Major O'Sullivan?—Yes.

3. Will you state to the Commission what the rule was as to the issue of boots to the troops: when did they get their second pair?—So far as I know they got their second pair of boots prior to taking their long leave, which is usually about three weeks before sailing.

4. When was that practice altered?—I do not know, only that on the 4th July General Robin stated that we required a further two thousand pairs of boots to give every man in Trentham Camp two pairs of boots.

5. Have any reinforcements come into camp that have received two pairs of boots within a fortnight of their coming in?—I do not know. I have no knowledge of the issues in camp.

Colonel PURDY further examined. (No. 113.)

1. *The Chairman.*] I would like to put to you, Colonel Purdy, the several matters which have occurred to us as requiring answers. The first is with respect to the sick-parades and the method of dealing with them, by allowing men to remain so long before they are examined, with no provision for shelter, and without provision for the weak. The next point is the absence for so long of any apparatus for drying clothes. Then follows the question as to the insufficient number of trained orderlies. Then there is the question of whether the medical staff was or was not overworked. Then there is Berhampore and the condition of things there. Then there is the lack of provision in regard to accommodation for the sick, especially in view of what we gather from the evidence that the epidemic at the camp was increasing; and the absence, even after Berhampore was taken, of any fixed notion of where further accommodation was to be obtained. Other matters may crop up during your examination, but those seem to be the more substantial matters. A very substantial matter is the absence of proper accommodation to meet an obviously growing epidemic: if these words are too strong, then it is for you to say why the daily state did not disclose to you that there was an epidemic which was increasing?—It did, sir; there is a complete answer to everything.

2. Then it is for you to give us your answers?—The first thing I would like to know is what is called an "epidemic."

3. I am not going to split hairs about that, but there was a great deal more than influenza there than was usual, and that kept on increasing?—No, sir, not according to the records.

4. Do you mean to say that it was not increasing? Then, of course, part of the premises is gone: have you any proof of that?—That is what I want to make clear.

5. Let us first take this question: that there was inadequate provision on the part of the medical authorities with regard to hospital accommodation?—Well, sir, I think I can answer that very clearly—that there was not inadequate provision. In 1911, when the defence scheme was formed after much careful thought, it was decided that in the event of hospital accommodation being needed the hospitals of the colony should be used. You must understand that I have nothing to do other than carry out the scheme as it is laid down in the regulations.

6. It was decided by whom that the hospitals of the Dominion were to be used?—By the General and the Council of Defence.

7. If you have one camp at Trentham you cannot make use of the hospitals of the colony?—Why not, sir?

8. Can you shift the men all over the colony?—For any purposes of defence, yes. It is still the same position.

9. For mobilization purposes?—The whole of the hospitals of the colony were worked out, and the number of beds in each that was needed; we went on ordinary statistics.

10. *Mr. Ferguson.*] The mobilization of how many troops—the Territorials?—We based our scheme on twenty thousand troops. I reckoned there would never be more than that number fighting in the field at one time. That was questioned by Colonel Heard. Mark you, I was not in charge when the war broke out in 1914.

11. But why, in view of the daily state of health, was there no provision made for hospital accommodation beyond the beds in the Wellington Hospital?—I cannot understand how this has arisen, because you have the record of cases sent to the Wellington Hospital by you.

12. There is an increasing number?—Pardon me. Here are the dissected figures of the hospital, and you have the return there. The camp began at the end of October. I think the first case was sent to the hospital on the 22nd October—a man suffering from loss of voice. There were two men sent for observation and three cases of appendicitis in October. That was six in all—that is the first of the camp cases.

13. *The Chairman.*] No measles cases?—No measles. In November twenty-one cases were sent to the Wellington Hospital.

14. The first six went to the Wellington Hospital?—Yes, at the beginning of the camp.

15. What were the twenty-one cases?—Six cases of measles, according to the hospital return. The first case of measles was discovered on the 14th November, and immediately all the contacts were isolated, and the same was done with all the other cases of measles. Now, of the twenty-one cases in November there were fifteen cases of ordinary illness—fifteen general cases. I want you to remember this: that it has been stated by more than one witness that there was grave trouble in the camp from the very beginning. One witness said he could prove that cerebro-spinal meningitis was in the camp at an early stage. That is absolutely not in accordance with facts. I do not suggest for one moment that anybody would suggest that the Wellington Hospital authorities have "cooked" those returns; but a serious condition like that could not have gone on for months—it has been stated that the camp was rotten with septic throats—from October till June without something of it having been shown in the hospital cases. It is necessary for you to remember that the Second Reinforcements left in December, and the Third Reinforcements were then called in. You have already been told what trouble we had with the Third Reinforcements, what with Christmas coming on just after they came into camp, and just after they got settled down the races came along and unsettled them. Please note that there was not a single serious case in the Second Reinforcements camp. Might I read a report about the health of the camp at the time of the Second Reinforcements. This was printed in the *New Zealand Medical Journal.*

16. Did you supply it?—I supplied part of it. It reads, "There were over two thousand men in camp, and in view of this large number the illnesses and accidents were very few. Fifty-six patients were sent to the Wellington Hospital, and of these twenty-nine were suffering from measles."

17. *Dr. Martin.*] And how many cases in December?—There were thirty-three cases, of which sixteen were measles. In one return it said there were twelve cases in November. I do not know how this discrepancy has arisen, because the Wellington Hospital return says six.

18. There were sixteen cases of measles in December?—Yes.

19. Those occurred amongst the new men?—Yes, sir.

20. In December there were thirty-three cases in all—sixteen measles and seventeen general?—Yes; and there were two deaths in December.

21. *The Chairman.*] From what?—One, a man called Clark, from pneumonia; and one, a man called Keating, from alcoholism—that was verified at the post-mortem. In January there were forty-nine cases—twenty-one measles and twenty-eight general cases. By this time the camp had increased.

22. *Dr. Martin.*] Any deaths?—No, and no serious cases. In February there were forty-nine cases—measles twenty-nine, and general cases twenty. There were two deaths, one the result of an accident at the Wellington Station, and one a man who was practically not in camp at all.

23. March?—There were eighty-one cases.

24. Measles?—Fifty-four cases of measles and twenty-seven ordinary cases.

25. Deaths?—One death—from endocarditis. Might I point out in connection with the March cases that the new batch of men had come in in February, and also the Samoans were there. In March we were up to five thousand men. In April there were sixty-five cases. In April, you must remember, we opened Berhampore.

26. There were sixty-five cases at the Wellington Hospital?—There were forty-six cases of measles and nineteen general cases.

27. Measles?—Forty-six measles cases.

28. And how many cases of measles in Berhampore?—You can get at it in this way: in April there were eighty-six cases altogether, and there would be about forty cases of measles at Berhampore.

29. In May?—In the general hospital there were seventy-one cases—twenty-nine measles and forty-two other cases.

30. Some pneumonia cases?—You must remember that right away through from the beginning of the camp the general cases kept absolutely at a level until May, when there was a jump

of something like twelve or thirteen cases; the camp had increased then. Of these forty-two cases at least eighteen of them did not come from the camp at all. The return from the hospital is not a fair return as regards the camp cases; other men that were treated in the hospital are put in that return. I know that several troopers came back from Egypt in that month.

31. How many at Berhampore?—Up to the 26th May there were forty-seven cases of measles treated altogether. There were twenty-nine cases of measles treated in the Wellington Hospital during the month of May. Up to the 26th May there were forty-seven measles cases from the camp either in Wellington Hospital or Berhampore.

32. How many of them were admitted to Berhampore?—There were never more than forty cases in Berhampore.

33. I thought there were only eighteen: you say that up to the 26th May there were only forty-seven cases in Wellington Hospital and Berhampore?—There were forty-seven cases reported altogether. During May twenty-nine cases were admitted to Wellington Hospital; between the 26th and the 31st May there were eighty-four cases of measles reported.

34. The total for May?—131 cases for May; measles.

35. Twenty-nine admissions to Wellington Hospital: how many admissions to Berhampore during May?—The books have been destroyed, but as near as I can make out there would be about 102 admissions to Berhampore in the month of May.

36. Take the measles cases alone: how many were there in December?—Sixteen.

37. January?—Twenty-one.

38. February?—Twenty-nine.

39. March?—Fifty-four.

40. April?—Eighty-six.

41. May?—One hundred and thirty-one.

42. How many admitted to Wellington and how many to Berhampore?—In May, twenty-nine admitted to Wellington Hospital and 102 to Berhampore.

43. June?—I have not worked that out.

44. You finished up on the 23rd?—No, that is quite a mistake.

45. But Dr. Valintine took over on the 23rd?—He said so—officially. There were forty cases admitted in the month. The history of Berhampore is a most interesting one. I can give you the figures for June. There were 206 cases of measles altogether.

46. Those are new admissions?—They are taken from the parade-sheets.

47. But some of these cases were remaining over from the previous month?—These would be new cases. They are taken from the sick-parade sheets at the camp. I will dissect the June figures, showing how many were in hospital; but there is a daily parade-state in camp showing what happened in June.

48. Could a man be counted more than once in that?—Not a measles case.

49. *Mr. Ferguson.*] Supposing he parades again afterwards?—I would not put him on my dissected return. There were 206 cases in camp.

50. *The Chairman.*] I thought the position was such that at the end of May the cases had become so numerous it was thought not worth while further having the isolation camp?—No, sir; at the beginning of May the isolation camp was broken up.

51. At the beginning of May?—Yes, sir.

52. It was because the cases had become so numerous that it was no good maintaining the isolation camp?—No, sir, that was not the reason. We had eighty-six cases in April, and an isolation camp for eighty-six cases—that is, seven contacts for each case—would be over five hundred men. We found that we were getting practically no cases from the contacts at all. It was the tremendous rush of cases after the Sixth Reinforcements came in in April that caused the epidemic in May plus the fact that men came in at the end of May with measles with the Trentham Regiment.

53. Was not the fact of their being eighty-six measles cases in April rather a significant one?—No, sir, not for a big camp of over five thousand men.

54. Is it not a significant fact?—It has been suggested that it was a significant fact, and that nothing was done.

55. We have it that measles did not begin in the camp with the beginning of the camp, but that there were six cases in November, sixteen in December, twenty-one in January, twenty-nine in February, fifty-four in March, and eighty-six in April?—Does not that show that there was no epidemic—there were only sixteen in December, twenty-one in January, and only twenty-nine in February—and that the cases were all well in hand? In a town of between four thousand and five thousand people, if you have twenty cases is it suggested that you have an epidemic? Certainly not. You get a fresh batch of men coming in in February, and you get a distinct rise in your measles record up to fifty-four, and then what happened was this: if you want the history of the measles cases from the beginning you can have it. I have been blamed for want of foresight and everything.

56. Can you point us to any arrangement you have made in advance for the outbreak of measles, apart from Berhampore?—Certainly.

57. Where was this arrangement?—At the racecourse.

58. I thought Colonel Valintine arranged the racecourse?—He commandeered the place, but it has been suggested that I had taken no steps. One witness, Dr. De Lautour, the man who started the criticism of the camp, stated that if he had been in charge of the camp he would have taken steps to have gone round to see what places were to be had. The suggestion is that I had never done so. When he was asked what he would have done he said, "I would have established a measles hospital in camp." That is what the great critic said. It may perhaps be news to the Commission that in 1912 I was in daily attendance at the trainers' quarters and

at that time I treated an epidemic of 147 men out of a total camp of 280, and now it is suggested that I knew nothing whatever about the buildings.

59. How was it that you did not make any arrangements about getting them?—I always said "We can always commandeer them."

60. Can you?—Yes, sir, under the Army Act. I suggested it to the "powers that be" weeks beforehand.

61. Where is your suggestion?—All our reports are not put in writing, but there is proof of what I am saying in the report which I wrote on the 8th June, five days before they commandeered the racecourse. I said, "As I have often suggested, if the worst comes to the worst we can always commandeer the racecourse buildings at the Lower Hutt or Trentham."

62. Have you got that report?—Yes; that was on the 8th June.

63. *Mr. Gray.*] Will you read that?—I may say that if I had not been in Dunedin on urgent business nothing would have happened. This is the report, speaking of the new arrangements that were made on the 6th June: "The new arrangements should, as far as one can judge, obviate a like difficulty in the future. The Victoria building and the measles ward in the Wellington Hospital will accommodate sixty patients, Berhampore will accommodate thirty patients, and Mr. Izard's house some thirty more—say, 120 in all—without any congestion or overcrowding. The acute cases will be treated in the Victoria building, and as need arises for the accommodation the semi-convalescents will be transferred to Berhampore, and from there to Mr. Izard's house. I am strongly of opinion that this course should be adopted, and that the marquees at present erected in the Berhampore grounds should be allowed to stand, and for this reason: any day there may be an inrush of measles patients, and we must have a reserve to fall back upon, otherwise we will have the same difficulty cropping up again. There is a perfectly clear understanding between the Health Department, the hospital authorities, and my department as to the procedure. The Health Department undertakes to provide the accommodation, the hospital authorities do emergency treatment, we provide the necessary visiting medical attention at the hospital, and at Berhampore and Mr. Izard's house for all the administrative works necessary for the welfare of the patients. This being clearly understood and laid down, there should be no misunderstanding. I think it will be found in this connection that Berhampore will prove invaluable. It has already proved itself as admirably adapted for the treatment of measles cases—about this there can be no question; and we want, if it is possible, to do away with the measles marquee hospital in camp, and consequently we will need Berhampore as well as Victoria Ward and Mr. Izard's home. Of course, in the event of a great inrush other measures will need to be taken, and, as I have often suggested, we can always fall back upon the racecourse buildings either at Lower Hutt or Trentham, and commandeer them for our purpose."

64. To whom was that written?—To the Commandant, for the Minister.

65. From yourself?—Yes; written on the 7th June, and sent to the G.O.C. The Minister asked me to embody what I had stated in a report on the Sunday morning.

66. *The Chairman.*] But these arrangements had already been made with respect to the Victoria Ward?—No, sir; that is the peculiar part of it. I cannot understand how it has come about. The whole history of the measles epidemic is a most curious one, and I do not know why all the alarm has been worked up. I must explain what led up to it. This report shows the extent to which I had considered the buildings before.

67. Colonel Gibbon tells us that he had his attention drawn to Berhampore on the 4th June?—I had my attention drawn to it on the 31st May, and had made arrangements, which were carried out, with the result that on the Sunday morning there were only fifty-eight patients in Berhampore.

68. Where did they go to from Berhampore?—We will come to that. I have proved that there was no epidemic in the camp until the end of May, when it became epidemic for six days. No one can get away from that.

69. Can you tell us whether, alongside of this, influenza was going on?—No, sir; you have got the history of the cases.

70. We can take it as a general thing that influenza did not develop until when?—There is always influenza in all camps, because nearly everybody who gets a cold is diagnosed as influenza. The people in the colony like it. But there was no influenza until the epidemic came in with the Trentham Regiments. There is not the slightest doubt about it. The figures and the incidence of illness show that.

71. You say that it came in at the end of May?—Yes. One man went straight to the hospital—he came in on the 29th May and went to the hospital on the 31st: it takes five days for measles to develop, so he must have brought it in with him. It is forgotten that the war began in August, and that at that time I was not Director of Military Services: I had been out of the saddle for two months. There was measles in the Main Body, and in two or three camps throughout the colony, particularly in Addington Camp. There were several deaths from pneumonia.

72. In Addington?—I do not know whether they were in Addington, but there were several deaths in the Main Body before they left. But we had absolutely nothing to do with the Main Body. It was supposed to have officially left the Dominion at the end of August, and they did their own work. Colonel McGavin was P.M.O. of the Wellington District at that time, and Colonel Will was Director of Medical Services. This is borne out in evidence. I remember distinctly a conversation I had with Colonel McGavin, because I was helping with examinations, although I held no position. Colonel McGavin consulted me one day with regard to the treatment of sick men from the camps, especially with regard to the measles cases, and he said that the Health Department had suggested Berhampore to him. Now, we have it in evidence also from Dr. Frengley that the Health Department did suggest in the early days of the war that Berhampore should be opened up. That has been forgotten. Colonel McGavin objected; he

said that under the terms of the arrangement made in 1911 the cases were to be treated in the general hospital, and he demanded that they should be treated in the general hospital. After some trouble it was ultimately agreed that all our cases were to be treated in the Wellington Hospital, and that we were practically to have as many beds as we needed there.

73. That does not seem to confirm what Dr. Barclay said?—He was not there then. That is what Colonel McGavin told me—that he had gained his point, and that he had pointed out that it was the hospital authorities' duty to provide the accommodation under the arrangement made, and they could much more easily provide it than we could, and that it would be even easier for them to put up tent hospitals in the grounds of the Wellington Hospital than for us in the camp, as they had all the nursing staff, and so on, handy. Dr. Hardwick Smith's superintendentship of the hospital did not end till February.

74. When did you come on the scene?—I started about the 4th September, but we had nothing to do with the soldiers in camp till the end of October—21st October I think was the day when the first men came in.

75. *Mr. Ferguson.*] You succeeded then to this position of D.M.S.?—I was brought back from the Reserve; under the regulations I was ordered back.

76. There would be hundreds of others on the Reserve: why were you chosen—on account of your seniority?—No; the General simply said I was to come back because he thought I was the best man for the job, and everything I had done was proved correct up to then. They knew I had the whole of the things at my fingers' ends. We did not have our first measles case till the middle of November. I am strongly against an infectious-diseases hospital in camp, and I believe that in that matter I have the backing of practically all the medical military authorities of the day. I have read articles on the subject—it has been my study for years—and I am perfectly satisfied that in this matter I am right.

77. *Dr. Martin.*]—Nor next the camp?—Anywhere near the camp. There should not be an infectious-diseases hospital in or close to the camp. I have always argued that as regards infections, but I have also argued that you must have an isolation hospital for the observation of cases, so that you can put cases there which are on the border-line. You do not want to send a man straight off to the hospital and then find, when he has been there three days, that he has not got scarlet fever or measles. We took the necessary steps for the measles cases; we isolated every man in the tent. Look at the evidence given here by two or three witnesses: they stated that they understood that the isolation was not an isolation camp at all, and when they were asked to give their reasons one of them, an officer and a medical man, said that he had seen men talking to other men there. He was an officer on duty in the camp: what was his duty under the circumstances?

78. Who was that?—Captain Yeates. Dr. De Lautour and Captain Yeates stated that it could not have been an isolation camp because they knew that the men's mates brought their food over to them. These isolated men are the seven men from a tent where the eighth man has had the measles. These men had no mates left, because they were all isolated. That is the sort of evidence you have had.

79. There were special orderlies to carry their food up?—Yes. You had a description of what was done by Sergeant-major Blacklin. I had an interview with Dr. Hardwick Smith, and he agreed with me that it was not wise to treat measles cases at the camp, and that it would be advisable to keep the men in the hospital over the pneumonic stage, a period of fourteen days, and that I was to send all the acute measles cases to the hospital.

80. *The Chairman.*] The Wellington Hospital?—Yes.

81. Without limit as to number?—That, of course. Well, really I cannot understand it.

82. How many could you send?—He said we could have fifty beds.

83. That was the limit?—There was no limit; that question had never arisen. I submit that that would be looking ahead such a long way. There was no reason to imagine that there would be insufficient accommodation.

84. What number could you rely upon in the Wellington Hospital in consequence of this discussion?—Fifty.

85. So that was a reasonable expectation?—More than reasonable.

86. May we take it that you made a definite arrangement that you were to have up to fifty beds at the Wellington Hospital?—I understood from Dr. Hardwick Smith that we were to have all the beds that we required, even up to fifty.

87. For measles or for general purposes?—For measles; we were talking about measles cases at the time.

88. *Mr. Ferguson.*] That is in addition to the beds for general requirements?—Yes, sir.

89. *The Chairman.*] Is Dr. Hardwick Smith in Wellington?—Yes, sir. We never required more than twenty beds in the Wellington Hospital all the time. We had absolutely no trouble in any shape or form until one day in April; and I submit this with a knowledge of what I am saying: I was suddenly told in the camp that the Wellington Hospital had refused to take any more cases of measles. I said it was an impossibility—that such a thing could not be. I went straight to the telephone and rang up the hospital, and got hold of Dr. Barclay. I said, "It cannot possibly be true, as I hear, that you have refused to take any further measles cases?" and he replied, "It is true." He said, "We are full up, and we want to clean out the Tin Shed."

90. How many were in the hospital then?—About twenty, I should think—not more than that.

91. Prior to this you had had no conversation with Dr. Barclay in any way, and you had not thought it necessary to reiterate the conversation with Dr. Hardwick Smith to Dr. Barclay?—No. I submit they might have given us two or three days' or a week's notice.

92. Dr. Barclay suggests that it was in the beginning of April when there was increased congestion?—I was asked how many they had in the Tin Shed; they had other means of putting up the measles cases.

93. You asked him what you were to do?—I said, "It is rather rough on us; we have cases going in now, and there is always an odd case every now and then." He suggested Berhampore.

94. What did you say?—I said, "By Jove, I will see about that; thanks very much." I rang off and immediately rung up the Health Department.

95. *Mr. Ferguson.*] But prior to that you told us that it would be easier to pitch hospital tents in the grounds of the Wellington Hospital, because of the nearness to administrative quarters, than at the camp; also that under the defence scheme, if required, the general hospitals were to be used: why did you not say then to Dr. Barclay, "Go on with the scheme and pitch the necessary tents inside the hospital grounds"?—For this reason: that the troopers in camp were not looked upon as Territorials. I could not get any people to take any interest in them. I could not enlist the sympathy of the people in them. I wrote all round the colony asking the people what they could do for the men in Trentham.

96. *The Chairman.*] What was wanted to be done for these men in Trentham that you appealed all round the colony?—Well, for one thing, there was a fund started in Napier to provide motor-ambulances, which were not wanted, and I said, "Why not do something towards establishing a hospital at Trentham?" and I was told that they had no sympathy with Trentham at all.

97. What else did you wish to be done for these men?—I thought they might have gramaphones and amusements.

98. It was not medical matters that you were referring to?—No; we had more than ample medical equipment.

99. Except the motor-ambulances?—Yes.

100. You have now told us that Dr. Barclay suggested Berhampore, and also that Berhampore was one of the places you had in your mind all along?—So it was. We had heard of it before, but it had been turned down by Dr. McGavin.

101. But you had taken his place?—It was there only in case of necessity.

102. Are we to understand that this idea of Berhampore was Dr. Barclay's?—No; I do not know that it was Dr. Barclay's.

103. Did he remind you of something that had passed before about Berhampore?—I said probably, "I think of opening Berhampore."

104. Then you had Berhampore in your mind?—Yes, sir.

105. *Mr. Ferguson.*] But you said you thanked him for the suggestion?—Yes, and rang up the Public Health Department, and told them they were closing the Wellington Hospital against us, and suggested Berhampore, and I asked them what they thought, and they said "Yes."

106. *Dr. Martin.*] Whom did you speak to?—Dr. Finch.

107. *Mr. Ferguson.*] Had you ever been out to Berhampore?—No, sir. I did not know at that time that Dr. Frengley had offered it, but I did know that it had been used by the Health Department.

SATURDAY, 7TH AUGUST, 1915.

DR. JAMES SANDS ELLIOTT further examined. (No. 114.)

1. *Mr. Salmond.*] Your official position is that of Principal Medical Officer of the Wellington District?—Yes, with headquarters at Palmerston North.

2. Have you had any duties in connection with the Expeditionary Force?—No; the Expeditionary Force and the Trentham Camp were outside my jurisdiction.

3. Before the Director of Medical Services went south on the 2nd June had you any connection with Berhampore Hospital?—Only once, as *locum tenens* for Colonel Purdy—one afternoon he could not get there.

4. And did he ask you to go for him?—Yes, on that single occasion.

5. Do you remember when Colonel Purdy went south?—Yes.

6. Did he have any communication with you?—Yes; when I bade him good-bye he said, "If anything turns up when I am away I suppose you will attend to it?" and I said "Yes."

7. Were those the actual words he used?—To the best of my knowledge, they are.

8. *The Chairman.*] When you bade him good-bye did you attend him on his going, or how did you come to have an interview with him?—We had met to examine two or three soldiers as to their physical fitness for further service, and it was after that when this was said to me.

9. That was generally?—Yes.

10. That had nothing to do with Berhampore particularly?—No.

11. *Mr. Salmond.*] Did he mention Berhampore Hospital or Trentham?—No.

12. What did you understand your duties would be then?—In case of any sudden illness or some decision wanted as to the disposal of a sick soldier, that they would ask my advice in his absence.

13. But until your advice was asked you did not consider you had any duties?—That is so.

14. *The Chairman.*] Then I suppose if Colonel Purdy had been here they would have appealed to him on that particular matter, but if he was going to be away they would be informed by Colonel Purdy that they would have to appeal to you?—I do not know anything about that.

15. Then how would any one know they were to refer to you: you would not be aware of emergencies without being informed?—No; but I can illustrate it by another emergency that did arise.

16. How would any one know that you were to be informed unless there was some military regulation that put you in Colonel Purdy's place, or unless Colonel Purdy had informed his subordinates that you were to be appealed to?—They would not know unless they were advised to apply to me by some Defence officer in his absence.

17. *Mr. Salmond.*] As a matter of fact, did any one apply to you?—The only application I had during that short period was from headquarters, to go out to Berhampore and report as to the number of patients who were there and the general conditions.

18. When was that?—On the 5th June.

19. You then visited Berhampore for the first time since the 31st May?—Yes; and I reported direct to Colonel Gibbon and Colonel Pilkington.

20. In writing?—Verbally; but I also handed some rough notes to Colonel Pilkington.

21. Was there any discussion between you and Colonel Gibbon or Colonel Pilkington as to who was responsible in connection with Berhampore?—Yes, there was a discussion.

22. What was the nature of the discussion?—Colonel Gibbon wanted to know what was to be done with those patients.

23. But was there any discussion as to your status with respect to Berhampore?—No.

24. But Colonel Gibbon consulted you as to what was to be done?—Yes.

25. *The Chairman.*] How did Colonel Gibbon come to resort to you?—Well, I suppose I was the Medical Officer to whom they thought it most suitable to apply in the absence of Colonel Purdy. Colonel Pilkington asked me if I was Director of Medical Services, and I said No.

26. Did they ask you if Colonel Purdy had given you any instructions?—No; he did not ask me.

27. *Mr. Ferguson.*] Was it not a strange thing for the Adjutant-General to ask you whether you were acting: would he not necessarily know—he is head of the department? If any one is appointed to act presumably it must be done with his knowledge or under a system?—I cannot express an opinion about that.

28. *Mr. Salmond.*] Was there any discussion between you and Colonel Pilkington as to whether you were acting as Director or not?—No; there was nothing beyond my answer to his question.

29. *The Chairman.*] You told him that Colonel Purdy had requested you to do anything that cropped up while he was absent?—No, I did not.

30. *Mr. Salmond.*] You simply said No, you were not Acting-Director?—Yes.

31. That was all the conversation?—Yes, he accepted that statement.

32. *The Chairman.*] You undertook the work?—I undertook the work of going out there and reporting to them.

33. *Mr Ferguson.*] You told us you had no responsibility as to any Expeditionary Force or Trentham?—That is so.

34. What duties would be thrown upon you if you were called upon in Dr. Purdy's absence: Berhampore would not be under you because that is part of the Expeditionary Force, is it not?—That is so.

35. So that you claim you could not have any responsibility thrown on you by Colonel Purdy's request because Berhampore is part of the Expeditionary Force?—No; I do not go so far as that. The position is that if there was any case of illness or any question involving medical opinion in his absence, if they had applied to me I would have dealt with it; but I would not and did not visit Berhampore Hospital in his absence until I was asked to go there and report.

36. But you did nothing in his absence unless you were called upon to do it?—That is so.

Mr. Skerrett: May I refer the Commission to two questions put to Dr. Purdy on the 22nd July, as follows: "On your departure for Dunedin did you ask Dr. Elliott to stand by and to visit Berhampore Hospital when requested, or did you ask him to undertake the responsibility of the general supervision of the hospital during your absence at Dunedin"? (Answer) "No, I just asked him to stand by. I did not give him any direct orders." "I understand you to say that Dr. Elliott did not undertake the general supervision of the hospital at Berhampore during your absence, but only undertook to visit it should he be required by the sister in charge"? (Answer) "Yes."

The Chairman: That, of course, gives a more limited view of the matter than Dr. Elliott himself gives. Dr. Elliott does not confine himself to Berhampore.

Mr. Skerrett: No, I suppose not.

The Chairman: His view is that if he was asked generally to do any particular thing, or his opinion sought upon any particular medical question, he would have been prepared to act.

37. *Mr. Skerrett* (to witness).] But you had no initiative?—That is so.

38. *Mr. Gray.*] In the absence of the Director of Medical Services, who is his deputy?—There is no Deputy Director of Medical Services in New Zealand.

39. Not provided for in the regulations?—Not here.

40. Is it not the practice that in each district the P.M.O. acts in the absence of the Director of Medical Services?—The P.M.O. in Auckland, Canterbury, and Otago does the work there that the Director of Medical Services does in the Wellington District.

41. But in the absence of the Director from Wellington, who acts for him?—I do not know who acts for him.

42. He suggests that in his absence the P.M.O. automatically comes into office as Acting Director of Medical Services?—Do you mean in an executive capacity or in an advisory one?

43. I do not know?—That is the point.

44. Would he in either?—He would in an executive capacity if asked, and in an advisory capacity if asked.

45. Does he not automatically come into existence as the representative or deputy Director?—No.

46. *The Chairman.*] If he was asked by whom?—By the Defence authorities.

47. Not by the Director or by the medical man underneath: but if he asked the question of you would you consider that, in the case of a medical man attending at Trentham, you were justified in conferring with him without any further authority than the fact that you were P.M.O. and the D.M.S. was absent?—I would not do so if there was another Medical Officer at Trentham Camp.

48. Supposing the P.M.O. at Trentham Camp wanted to consult the D.M.S. as to some step that should be taken and he was absent from Wellington, and he therefore, rightly or wrongly, came to you, what would you do, the D.M.S. having said nothing to you before leaving?—If that occurred this morning I would say—if it is a matter of urgency, wire to the Director of Medical Services; and if not a matter of urgency, wait till he comes back.

49. That means you would not give any advice?—Not if it was not urgent.

50. That means you would not act?—Not if it was not urgent. The Director would not be out of New Zealand.

51. I am speaking of such a case as you said you would stand by for when Colonel Purdy went to Dunedin. Supposing in a case of emergency, or a case in which some medical opinion was desired, and some doctor in charge of an emergency case desired an opinion and came to you owing to the fact that you were P.M.O. of the Wellington District with headquarters at Palmerston, and Dr. Purdy is absent, what would you do?—I would give him the benefit of my advice if he required it.

52. Would that be because you were P.M.O. and Dr. Purdy was absent?—Yes, and with a desire to help in the public interest. I have instructions from my Commanding Officer, Colonel Tate, that I am a Territorial officer, and that I have no Expeditionary Force duties unless asked to do so by him. I am an officer on his staff, and the headquarters in Wellington have to do with the Expeditionary Force work and not the district headquarters.

53. Colonel Purdy suggests that the occasion on which you said good-bye to him was at your house, and certain other matters were discussed: is that so?—I do not know of other matters being discussed.

54. Was it at your house?—Yes.

55. Did he not tell you he was on his way to Berhampore Hospital then?—I do not remember.

56. Was not the expected arrival of the "Wimmera" with troops discussed?—Yes.

57. He mentioned the "Wimmera" and asked you to attend to the troopers in his absence?—Yes.

58. You attended the "Wimmera"?—Yes, a specific order from Colonel Purdy.

59. Did you apply to Colonel Tate for authority to act?—Not on that occasion.

60. *Mr. Ferguson.*] The position may be summed up that you would advise and not direct?—That is so.

61. You did not consider yourself the *locum tenens* of the Director, but you would do anything you could in the matter of advising but not directing?—That is so.

62. And would not sign any document as his deputy?—No.

63. *The Chairman.*] In connection with the medical men in the Wellington District or the Dominion, is there any such thing as a military medical organization or Sanitary Corps?—There is a very important New Zealand Medical Corps in which many leading doctors in New Zealand are officers.

64. Has that got an official status?—Yes; it is part of the Territorial Army in New Zealand.

65. Can you tell us what part of that organization there was in Wellington?—The doctors who belonged to it were Colonel Begg, Major Holmes, Colonel McGavin, on active service, and, I suppose, about another ten doctors who are here in Wellington at the present time. They are officers of the Field Ambulance, and they are attached to various units and go into camp with them.

66. Have those men been called on to do any services in connection with the Expeditionary Forces?—They have had to do with the examination of recruits on their joining the Expeditionary Forces.

67. Anything more?—Some of them have been on Medical Boards to adjudicate on the physical fitness of soldiers in both Territorial and Expeditionary Forces.

68. Anything more?—I do not know.

69. They are not called upon to render any medical service except that of examining recruits?—Some of them have gone to the front. Some of them were asked to advise on the hutments, for instance, but their report was not acted on.

70. Are you in a position to say whether any assistance was sought from them during the troubles of the epidemic at Trentham?—No; there was no assistance sought from them.

71. Is there a Sanitary Corps apart from the Medical Corps attached to the Territorials consisting of medical men?—There are some officers on the Army List in the Medical Corps who are attached for special sanitary duty—for instance, Major Frengley, who is Health Officer.

72. They are just Health Officers?—Yes.

73. The official officers who are attached?—Yes.

74. But the other medical men are not in that department?—No. The ordinary military officer does ordinary sanitary duties in camp—that is to say, he is Sanitary Officer for the day and makes sanitary reports, and is expected to be a competent man in military sanitation.

The examinations of Territorial officers have to do with sanitation and military hygiene before they can be promoted.

75. We had it from Dr. Mason that it was what is called a Reserve of Officers. There is such a body?—Yes, there is a Reserve of officers.

76. Is that a scheme that was in force some years ago before the Territorial scheme?—I believe it was.

77. And has it been adopted since the Territorial scheme has come in?—I do not know. Colonel Purdy would know more about that than I do.

78. You are not sure as to the position of this old Reserve?—Oh, yes; the officers on the Reserve in time of war come on to the Active List, or they may be brought on to the Active List.

79. Dr. Mason told us he knew he was on the Reserve of the Sanitary Corps, but he is speaking of some years ago, and did not seem to know whether it existed still. Would that be because he was a public officer that he was on that Reserve, or what would be the reason?—I do not know, really.

80. You cannot give us any information definitely about the old Sanitary Reserve, as it may be called, as to whether it was adopted with the new Territorial system?—I cannot give any definite information.

81. What you can say is that there is a Reserve of Officers now?—Yes.

Colonel PURDY further examined. (No. 115.)

1. *The Chairman.*] Confining yourself to this particular point as to what you did to have things looked after during your absence between yourself and Dr. Elliott and anybody else, what have you to say?—I know that automatically the P.M.O. of the district has always acted for the D.M.S. It is not a new thing, but has been so for years. On one occasion I went away for a month, and Colonel McGavin took the whole of my duties. There are four P.M.O.s in New Zealand, one for each district, Auckland, Wellington, Christchurch, and Otago. The Auckland, Canterbury, and Otago District P.M.O.s act for me in each centre. Here, as I am at headquarters, and as the P.M.O., whose headquarters are at Palmerston, happens to live at Wellington, he does not act for me unless I am away.

2. Then you have to inform him you are going away?—Not necessarily. He need not be informed that I am going away.

3. Then how will he know whether he has got to act or not?—Because of the Adjutant-General. I only act when matters are brought before me.

4. But surely you are not only to act when matters are brought before you when an epidemic is on?—We are speaking of the Expeditionary Force as opposed to the Territorial scheme. The Expeditionary Force is separate and extra. All the officers of the corps have been working for the Expeditionary Force, and I submit Major Elliott knew perfectly well when I went away to Dunedin at twenty minutes' notice that he would do anything—he would stand by for me at the time. I need not have asked him to stand by, but I did ask him to stand by for a special reason.

5. Did you tell him the reason?—Yes, I did.

6. What was it?—We had been wirelessed that the "Wimmera" was coming into port with some returned sick soldiers, and I had to clear the ship. After a meeting of the Medical Board held in Major Elliott's house I said, "I am off to-night to Dunedin, as you know. The 'Wimmera' may come in during my absence. Of course, you will go and clear the ship for me," and he said "Yes." That was a specific direction, because it was really outside my definite official duties as D.M.S. That was an Expeditionary Force matter.

7. Why had you to clear it?—Because I am D.M.S. I am acting in all Expeditionary Force matters.

8. Because of being D.M.S. or another appointment?—No, because I am D.M.S.

9. Then it was your duty as D.M.S. to see to the "Wimmera"?—Yes.

10. I thought you said it was outside your duties?—The P.M.O. might have argued it was outside his duties. He undertook to do it. I was then going straight from his house to the Berhampore Hospital, and I said, "I suppose you will stand by if anything is wanted from Berhampore or elsewhere."

11. He denies that anything was said about Berhampore?—He knew.

12. Did you say "Berhampore," or do you say he knew?—I do not think he would deny if I said I mentioned Berhampore.

13. I thought he did deny it?—He said he had no recollection. I submit the whole thing proves it. He had been to Berhampore for me on the Monday night. I asked him to go then.

14. That was not in pursuance of anything special?—No, that was out of kindness for me, to pay my visit for me because I was not really able to get that afternoon. I asked him if he would go for me, and he said he would. He went for me as a friend. He had also, I believe, been at Berhampore to see a patient. I think he had been rung up to see another patient at Berhampore, but I am not sure.

15. He said he was only there once before this special visit?—I think he was rung up once and could not go—something of that sort—and Dr. Clay went.

16. Where are the military rules to say that the P.M.O. of the district takes your place in your absence?—It is ordinary military procedure.

17. Where is it the ordinary military procedure?—Everywhere. The next senior officer steps in without any specific directions being given to him.

18. I should like to see something about that?—You were told, sir, by Colonel Gibbon that when the Commandant went away he stepped in automatically.

19. This is a matter of the D.M.S. voluntarily undertaking duties in connection with the Expeditionary Force, which you say was not connected with the Territorials. Therefore the P.M.O. might well question whether he was in your place or not?—I did not quite say that.

20. That is what I understood?—I said that technically the Expeditionary Forces were not, unless we volunteered. We are not supposed to do Expeditionary Force work.

21. Did you volunteer?—Yes, we all did.

22. Did Dr. Elliott volunteer?—Yes.

23. In what way?—He volunteered to go to the front.

24. Did that make him an officer in the Expeditionary Force if he was not accepted?—It meant that he would do the work the same as all other officers did. We have all been doing the work. Before I was appointed D.M.S. I was doing Expeditionary Force work.

25. Was this voluntary or in pursuance of any duty? You say you spoke to him because you might have some doubt as to his position, this not being a Territorial matter?—I do not think I exactly said that. It was only after hearing his evidence; but why I specially mentioned the "Wimmera" was so that there would not be any doubt that the ship would be cleared in my absence. I knew she might come in, and he would have to go very early in the morning, and I specially mentioned that, but even if I had not mentioned that he——

26. It would have been his duty, you say?—It would, because the Adjutant-General would have told him that I was away.

27. *Mr. Ferguson.*] But would the Adjutant-General take up the detail duties of telling him to do your work in your absence?—It is not a duty; it is done automatically in my absence.

28. *The Chairman.*] I want to see the regulation which states that the P.M.O. had to take up duties not connected with the Territorial Forces?—That the P.M.O. was bound to act for me?

29. Yes, was bound to act for you in connection with the Expeditionary Force?—I have not got the orders. It is the custom in the Army—it has always been.

30. I do not see what the custom in the Army has to do with the Expeditionary Forces?—In any case, Dr. Elliott was specifically asked to stand by.

31. The question is whether this undertaking of his was voluntary or whether it was his duty?—I see, sir. I do not think it could be said to be anything but voluntary.

32. Well, that is the whole point?—I do not think any man can be ordered to take another man's place.

33. If there is a rule that he is to act in the absence of his superior officer, then it is his duty?—It is the custom; but I submit what would happen would be this: that if during my absence even for a day the P.M.O. was requested to do any duty and he refused because it was not his job he would at once be relieved of being P.M.O.

34. *Mr. Salmond.*] Do you consider it was Major Elliott's duty to go and do your work at Trentham during your absence?—If he was asked.

35. Without being asked was it his duty to go to Trentham during your absence?—I had nothing to do at Trentham during my absence.

36. But you were not relieved of your duties?—But what were my duties at Trentham? My duties at Trentham principally were general supervision. I also had other duties—I had to sit on Boards. Those Boards met every Tuesday and Thursday, and I arranged when I went away on the Wednesday that no Board would sit on the Thursday, and I had no specific duties to call me to the camp at all. If anything had cropped up demanding an authoritative answer from me Major Elliott as P.M.O. would have been asked in my absence, and he could then either have adjudicated or have said, "You had better wire to the D.M.S."

37. Do you consider it was Dr. Elliott's duty to inspect Berhampore Hospital when you were away without being asked?—It was not his duty—he was asked.

38. Do you suggest he neglected any duty?—No, I have never in any shape or form suggested that.

39. *The Chairman.*] Then I understand he was under no duty, except what he volunteered to do, to do anything in your absence?—No.

40. What is the limit that we are to place upon it?—It was not my duty, you might say, or anybody's duty to go and inspect Berhampore. That was a special inspection that was suddenly called for.

41. *Mr. Salmond.*] I will withdraw the word "inspect" and say "visit": do you consider Dr. Elliott was under a duty to visit Berhampore Hospital during your absence without being asked?—No; there was no need to pay a visit to Berhampore Hospital unless something happened.

42. *Mr. Ferguson.*] How long were you to be away?—I was going on the Wednesday and coming back on the Sunday. I told them at the hospital that if they wanted a doctor they could ring up Dr. Elliott.

43. *The Chairman.*] Why did you suspend the meeting of the Board at Trentham in your absence if Dr. Elliott was your deputy?—Because very probably there would not be any cases.

44. Did you suspend it?—No.

45. You said the Board should not meet in your absence?—You misunderstand me, sir. I went up regularly every Tuesday and Thursday, and very often when I went up there was no Board—no one to come before the Board. I telephoned on the Wednesday to say I would not be up on the Thursday.

46. Is attendance paid for on those Boards?—To a certain extent.

47. What is the payment?—5s. per head of the men examined.

48. On the Medical Board?—Yes. That was a new regulation introduced for Expeditionary Forces in war-time.

49. Was your Board for examination as to fitness to meet on Tuesdays and Thursdays?—The men in camp who were not considered quite fit had to come before the Board.

50. What about the medical examination before they went into camp?—That was always in the hands of the P.M.O. of each district; he managed the whole of that examination himself in his own way.

51. You had nothing to do with that?—Except that I had the whole supervision of the whole camp.

52. Did you examine persons to see if they were fit before being admitted?—Only as an ordinary practitioner or with the other doctors.

53. I thought as D.M.S. you had nothing to do with that: you had supervision?—No; I said about the regulations. When I was appointed D.M.S. there was no salary attaching at all to the office, and in 1911, two years after I had been D.M.S. when the Territorial scheme was formed, it was decided that I should be the D.M.S.

54. *Mr. Salmond.*] The Territorial scheme was not formed in 1911?—Well, when was it?

55. In 1909?—Well, put it the other way. I am almost certain I am right. In 1909, when I was first appointed Acting D.M.S., there was no salary attaching to the office. My definite position as D.M.S. started on the 5th May, 1911. Between 1909 and the 5th May, 1911, General Godley had come out. The Army Council was done away with, and new regulations and everything were drawn up.

56. There was an alteration made?—Yes; I was appointed D.M.S. of the new Army, with a position on the Headquarters Staff, with an honorarium of £150 a year, and my duties were to visit the centres in the colony on an inspection at least once in the year, and to pay a weekly visit to headquarters. It was distinctly stated in the warrant of appointment that this was in no way to interfere with my ordinary private practice as a medical man. It was just the same with Dr. Elliott, Dr. McGavin, Dr. Holmes, or any other medical man in the colony. If there was any examination in my district or another district the men were sent to me or to Dr. Elliott, or Dr. McGavin, or whoever it might be, first, because they were officers of the corps, and principally because they were doctors, and that was part of their private practice.

57. *The Chairman.*] Then, although the P.M.O.s in other districts undertook the examination of a man, that is only to supervise the examination?—The P.M.O.s in each district ran their own examination. For instance, the P.M.O. in Wellington was Colonel Begg when the war broke out. Well, we formed a syndicate or association of, I think, fourteen doctors. There was a tremendous number of men to be put through in a short time, because the advance party was ordered away suddenly. There would be something like sixteen or seventeen hundred men to be put through, and Colonel Begg asked fourteen doctors to come in and do the examinations at one time. He arranged that, instead of each doctor putting down an individual man for his 5s., the doctors would take sections—one man the chest, another man the feet, and so on—and be paid *pro rata* for the amount of work done.

58. *The Chairman.*] I understand that you as D.M.S. were really acting under the P.M.O.?—As examiner, yes—under his personal directions.

59. Then when you went away on this occasion was Dr. Elliott in charge of these examinations?—Yes. At that time he was P.M.O.

60. You would be under him in the matter of examinations?—He could ask me to come, or need not ask me to come, as a doctor. I have done very few examinations for the last four or five months—since February.

61. You were one of the Board of fourteen?—Yes; and then I was one of three—Colonel McGavin, Major Elliott, and myself—and I think I have done no examinations under Major Elliott since he came on as P.M.O.

62. Well, to sum it up, the position of Major Elliott as P.M.O. in regard to the Expeditionary Forces does not seem to be very clearly defined. All he is bound to do is what he may undertake to do voluntarily?—Just as clearly as any other officer's duty was defined; just as clearly as mine was defined. I stepped into the D.M.S.

63. *Mr. Ferguson.*] You said you had a warrant?—That is for the Territorial scheme, and I was told what my duties were; but since I was called up last September to step into the position of D.M.S. I have been at headquarters every day, and sometimes twice a day, and I have practically done no private practice whatever. I might say that was voluntary on my part.

64. *The Chairman.*] Would this be putting the position unfairly: that during your absence from Wellington you were responsible for the direction of medical services?—I was.

65. And included in that whatever had to be done in connection with Berhampore?—Yes.

66. And that so far as Dr. Elliott was concerned his connection in respect to the direction of medical services would be simply such as you expressly told him to do or which he might voluntarily undertake to do?—Yes.

67. Is that the true position?—Yes; he would stand by for me and do anything I called upon him to do.

68. Then I may take it there was no military obligation by virtue of any rules of the service which rendered him responsible for any military services in your absence?—Yes.

69. That is a true putting of the position?—Yes. I was wired to several times when away in Dunedin about matters of importance.

70. By Dr. Elliott?—No, from headquarters. He was only to stand by to do anything that would crop up in my absence.

71. *Mr. Skerrett.*] I understand you to say that you requested Major Elliott to stand by and perform any duties which he was asked to do?—Yes, quite so.

72. He was to exercise no initiative, then?—No, except with regard to the "Wimmera."

73. Then he was to exercise no initiative except with regard to the "Wimmera," but was to do such of your duties as he was asked to do?—Yes, he was to stand by.

74. I think at the interview which we have heard of, which was held at Wellington Hospital, at which the Minister of Defence, General Robin, Dr. Elliott, and yourself were present, you stated explicitly, did you not, that Major Elliott was in no sense responsible for Berhampore?—I did, most certainly.

75. I gathered from the explanation you gave that the duties of P.M.O. of a district are district duties?—Of course, they are district duties.

76. And have no connection with the Expeditionary Forces?—Yes, they have now, in war-time, to do with the Expeditionary Forces.

77. What have they got to do?—All their work. For instance, all the applications for appointment have to go through the P.M.O.

78. Appointments to what?—The Expeditionary Forces as Medical Officer. All matters affecting his district from the Expeditionary Force point of view have to go through him.

79. Then, you say that in ante-war-time his duties were confined to district duties; since the war his duties are still district duties, but superadded to that are certain duties in connection with recruits?—Well, in connection with war duties.

80. What other duties do you suggest besides recruits, and so on?—Well, for instance, if there was a camp at Palmerston North he might be asked to stock it if it was a district camp.

81. That is unimportant for the purposes of this controversy?—Yes.

82. Any qualification that is important for the purposes of this controversy will you mention?—Well, it is not mandatory, but he is practically on all the Boards. He attends a lot of Medical Boards, and the men who come back from the front. You may say that is done out of courtesy, but it has always been the case that the P.M.O. has been asked if he would form a Board.

83. Apparently his duties were district duties except in certain respects which are quite immaterial, but in connection with the responsibilities of Major Elliott in respect to Berhampore he had none?—Yes, quite so. I have said over and over again that he had no responsibilities with respect to anything that happened at Berhampore.

84. I judge from your statement that your duties as Director of Medical Services are Dominion duties?—Yes.

85. And since war-time to those duties have been added duties in connection with the Expeditionary Forces?—Yes.

86. *The Chairman.*] May we take it this way: that assuming there was overcrowding at Berhampore during your absence, Major Elliott would not be responsible for that?—Most certainly not—he could not possibly be.

87. Then, no instructions were given to him to keep a hand upon the numbers that were admitted?—No, sir, because there were none to be admitted during the time I was away. I had given specific and direct instructions before I went away to Sergeant Yallop, who was the orderly, but nothing to do with Major Elliott at all.

88. And Major Elliott was not responsible for any overcrowding if any existed?—No.

89. *Mr. Ferguson.*] Supposing there had been plenty of room at Berhampore, would the question of admissions to Berhampore have come under Dr. Elliott?—No, because the admissions were automatic—they had to do with the A.M.O. of the camp.

90. *Mr. Gray.*] Major Elliott was to attend to anything that he was asked to attend to?—Anything that required my personal supervision.

91. When you left for Dunedin you were going away for three days?—Yes.

92. Were you at that time required to attend to Berhampore?—No; there was not the slightest necessity for any medical man.

93. There was a medical man attending there every day?—No.

94. Not in the shape of Captain Harrison?—No, not then. This was on the 2nd June.

95. You were attending Berhampore at that time?—Yes.

96. When you went away you thought there was no necessity for a medical man to be in attendance for the next three days?—I know there was not, because I had seen all the patients and no more were to come in.

97. May we take it that you left for Dunedin with the idea that if Berhampore required the services of yourself or any other medical man the nurse in charge would ring up Dr. Elliott or somebody else?—Yes. Dr. Elliott was specially mentioned.

98. *Mr. Ferguson.*] What is the position of Colonel Tate, of Palmerston North?—I do not know what Major Elliott is referring to when he says he is not to do any Expeditionary Force work. I am certain there must be something wrong there.

99. It was said he was under Colonel Tate, at Palmerston North?—He means, under the officer in charge of the district.

100. *The Chairman.*] With headquarters at Palmerston North?—Yes. Major Elliott is under him for duty, the same as I am under the Adjutant-General. He has nothing to do with me except the channel through which all my communications pass.

101. *Mr. Gray.*] Perhaps you might explain what you want to say about the Medical Corps, if it will not take too long?—If there is anything that the Commission would like to know I shall be glad to explain.

The Chairman: All we wanted to know was this: whether there was a reserve of medical men whose services could be called upon as a matter of right to assist the Medical Officers at the camp.

102. *Mr. Gray.*] You might shortly explain that. There is a Reserve of Officers?—Yes, a Reserve of Officers of all kinds. When they are past duty or over age and leave the corps to which they have been attached they are either put on the Retired List or on the Reserve, and any Reserve officer can be called on if necessary.

103. *The Chairman.*] Apart from Reserve officers, were there any other medical men in the Wellington District who could be called upon as a matter of right to afford assistance?—Yes. We have throughout the Dominion a magnificently organized New Zealand Medical Corps.

104. We want to know whether there was a body of men that could as a right be called upon to give their assistance at Trentham Camp at the time of the epidemic?—There is the New Zealand Medical Corps.

105. That is so, is it?—Yes. They are under orders, and have to obey them.

106. What we want to get at is this: there was, in addition to those men who were actually present at Trentham Camp doing duty, a body of officers who could be called on as a matter of right to assist there?—No, not unless they were ordered.

107. *Mr. Salmond.*] The Expeditionary Force is entirely distinct from the Territorial Force. It is a question of law, of course, but I should think it very doubtful whether there were any officers, except those attached to the Headquarters General Staff, who could as a matter of duty or right have been called upon to take any part whatever in the Expeditionary Force. The standing organization of the Defence Forces of this country is the organization of the Territorial Force, and the Medical Corps, as I read the matter, does not owe any obligation in respect to the Expeditionary Force—the members of it are volunteers?—That is so.

108. *The Chairman.*] Then is this the position: that if at Trentham Camp the authorities considered that further medical help was necessary or desirable, they could not commandeer that medical help, but would have to ask for it?—That is so.

109. Though there is no doubt that it would, if asked for, be given?—That is so. May I point out that where I think you have been led astray is with regard to the Sanitary Corps. When General Godley revised the regulations out here it was laid down that we had in all things to conform with the ordinary usage of the British Army, so that if ever we had to take part in any war alongside British troops we would go there with exactly the same organization and fit in just the same as if we were regular troops. Consequently Surgeon-General Skerman, at that time Director-General for the Dominion—the man who preceded me—formed what he called a Sanitary Corps in the New Zealand Army—in the Volunteer army. Now, the officers who were appointed to that corps took a very peculiar view of their duty. They reckoned that they were an independent corps acting on their own initiative. They had their own interior economy.

110. One does not want all that. Tell us if they had any status at the time of the outbreak of war?—None at all. The corps had been done away with by General Godley. But we have a Sanitary Corps in the New Zealand Medical Corps, and always have had.

111. And that is in the same position as the rest of the Medical Corps?—The whole of the New Zealand Medical Corps is a Sanitary Corps.

112. That is, in the same position as regards voluntary work or compulsory work as you have already described?—Yes.

The Chairman (to Dr. Elliott): There is nothing further now, Dr. Elliott, is there? We do not want to open the question again.

Major Elliott: If I may say so, I am in agreement with what Colonel Purdy has said with regard to Berhampore; but when some responsibility was fixed upon me for three days, and when it was suggested that, seeing I had been in charge for three days, I should have reported something, I simply want to make it clear that I have no advisory capacity in regard to Berhampore and no responsibility in regard to Berhampore.

113. *The Chairman* (to witness).] One point now with regard to Berhampore is this: we had it that the hospital at Berhampore was taken about the 17th April?—On the 15th April, I think, the first cases were sent to Berhampore.

114. Who was to determine whether a case was to go to Berhampore?—The Medical Officer at the camp.

115. What instructions were given to him as to the number that could be sent to Berhampore?—There were never any definite instructions given as to the number. We talked it over, and knew perfectly well how many there were.

116. Would the Medical Officer there be prepared to admit that he knew there were only so-many?—Yes.

117. Who was the Medical Officer?—They have all gone to the front.

118. You say it was understood?—We knew the number of beds we had.

119. What was the number?—We had up to forty in Berhampore.

120. Without marquees?—Without marquees. We could take in quite comfortably up to forty, but we preferred not to have more than thirty-five, without marquees.

121. That is by putting them in all the outbuildings?—They were most excellent places.

122. At any rate, they were not more than thirty-five?—We preferred to have not more than thirty-five, but could take up to forty.

123. Did you keep a hand on the numbers that were admitted?—Oh, yes.

124. Will you tell us how it was that the place came to be overcrowded? I understand that no admissions were to be made while you were away, and that while you were away the matter was investigated and the hospital was reported to be overcrowded. So, if that report is sound, Berhampore Hospital must have been overcrowded before you left. How did it come to be overcrowded before you left?—Up to the 26th May there was no overcrowding at all. Up to that time there had been forty-seven cases of measles in May from the camp, but they were not all in Berhampore.

125. *Dr. Martin.*] What was the number in Berhampore Hospital?—There had never been more than forty up to the 25th May. At that time—on the 25th May—there would be about thirty in the hospital. There were only forty-seven admissions altogether in May; there were only forty-seven admissions in twenty-five days, and the average period was fourteen days; and

of these forty-seven some had gone to Wellington Hospital. So that one could put it down that there would be not more than forty admissions to Berhampore from the 1st May to the 25th.

126. *Mr. Ferguson.*] Cannot the number of admissions to Wellington Hospital from the 1st to the 25th May be obtained from the Wellington Hospital returns?—They might be. They do not give the date in their returns.

127. I think they do?—Then one can easily work it out.

128. *The Chairman.*] There were thirty at Berhampore on the 25th May?—Yes, about thirty on the 25th May.

129. "About"?—I cannot say definitely, because that is not the important time. The important time begins on the 26th May. On the 26th May there were twelve cases of measles from the camp.

130. *Mr. Ferguson.*] Did they all go to Berhampore?—No. We will lump them all together at the finish, as Dr. Martin suggests. Unfortunately for me the books have been destroyed, or they would have proved my point better than I can do it now. On the 26th May, which happened to be a Wednesday, there were twelve admissions to the camp.

131. *Dr. Martin.*] What was the total number on the 26th May at Berhampore?—I cannot tell you. We will have to get at it at the end of the month. On the 26th May there were twelve admissions from the camp into the hospitals—Berhampore and Wellington. On the 27th there were fourteen to Berhampore and Wellington. I was at camp on the 27th, and stated then that I thought there were too many patients at Berhampore.

132. *The Chairman.*] To whom did you state that?—We discussed it with the Medical Officers.

133. Who were the Medical Officers?—The Medical Officer in charge at the time was Major McAra. They all went to the front.

134. Who were the people to whom you stated this, because if they sent in men notwithstanding your statement there may be something to answer for?—But I said I would put up marquees.

135. Tell us, please, who the Medical Officers were?—Major McAra, Captain Tapper, and Captain Bowerbank.

136. *Mr. Ferguson.*] Did you have a Court?—No.

137. How did you know these men were present, then?—Because we had a Board that day, and we discussed medical things generally.

138. *The Chairman.*] Was any one else there?—That was all.

139. You stated to them——?—That I would have to put up a marquee at Berhampore. And a marquee was put up at Berhampore—in fact, I ordered two marquees to be put up.

140. *Mr. Ferguson.*] Where was that marquee obtained?—From the Defence Stores.

141. We can obtain the date of your requisition, then, I suppose?—I think I rang up on the telephone. That was the one that was put up on the slope.

142. *Dr. Martin.*] On what date was it put up?—I cannot say definitely, but it was in that week.

143. *Mr. Ferguson.*] Who put it up?—They sent special men from the store to put it up. Well, then, on the 28th May there were nineteen cases sent in from camp to Berhampore and Wellington Hospital. I was at Berhampore on that day, and there was certainly no overcrowding at that time, with the two marquees.

144. *The Chairman.*] We want to know what the numbers were, and we can judge whether there was overcrowding?—It is proved absolutely in evidence that the largest number of people ever in Berhampore Hospital was 104.

145. On the 29th how many came in?—On the 29th there were eleven cases came from the camp; on the 30th—that was a Sunday—there were nine cases; and on the 31st there were nineteen: making a total of eighty-four cases in six days sent to Wellington and Berhampore Hospitals, or a total altogether of 131 for the month of May.

146. *Dr. Martin.*] 180 is the number shown on these papers that I have here. I worked it out last night. The total number of cases with measles sent out of Trentham Camp in May was 180?—From what did you work it out? I took my figures from the daily sick-report and from the hospital.

147. I have gone over it most carefully, and these are the figures: November, 14 cases; December, 16; January, 23; February, 24; March, 59; April, 95; May, 180; up to the 16th June, 248?—There must be some mistake somewhere. I took my figures from the daily sick-returns, and they tally with the numbers that were in Wellington Hospital and Berhampore.

148. *The Chairman.*] What were the figures for the 1st June, because you go down to the 3rd June, and then it is taken away?—No, sir. You see, on the 31st May there had been thirty-nine admissions since the 28th May, when I paid my last visit, and probably more——

149. You left on the 31st, was it?—No, I left on the 2nd June.

150. Will you tell us how many were there on the 1st June?—There were 104 patients on the 1st June.

151. In Berhampore Hospital?—Yes.

152. And on the 2nd June?—I think, twelve less. There were never more than 104.

153. Then on the 3rd June?—I cannot say; I was away.

154. You left in the morning?—I left on the evening of the 2nd June, and came back on the morning of the 6th June.

155. *Mr. Ferguson.*] You told us you left on the Wednesday night?—The 2nd June was a Wednesday.

156. *The Chairman.*] You left on the evening of the 2nd June, and you say you left instructions with Yallop about further admissions?—No, sir. I got as far as the 31st May when you asked me on what day I left for Dunedin.

157. On the 1st June there were 104 cases in Berhampore: on the 2nd June there were, say, ninety-two. When did you give Yallop instructions not to admit any more?—On the 1st June.

158. Did he get any statement as to limit?—Yes; he was to admit none.

159. He was to admit no more: is that the position?—Yes.

160. *Dr. Martin.*] Was the camp at Trentham advised not to send any more cases?—But this was at the camp.

161. *Mr. Gray.*] Where was Yallop?—In the camp. On the 31st May Major Elliott went to the Berhampore Hospital instead of me, and he rang me up and told me that Berhampore was very overcrowded.

162. *The Chairman.*] I cannot understand how it is that the camp should not know that Berhampore was overcrowded?—Because we had put up four marquees then.

163. But you knew what numbers could be accommodated. How did it come to be overcrowded and at the camp they did not know it?—But they did—I am just telling you.

164. Somebody rang up from Berhampore to tell them?—No, they knew by the numbers. We put up four tents, which held sixty-four people.

165. *Mr. Gray.*] Let me put a few questions. On the 15th April the first case was sent to Berhampore?—Twelve cases were sent to Berhampore.

166. On the 31st May there were approaching a hundred cases?—Yes, in Berhampore.

167. In the meantime how many marquees had you erected there?—Four.

168. On the 1st June there were 104 patients?—Yes.

169. Now you say that on the 31st May Major Elliott, who had been to Berhampore, telephoned to you at Trentham Camp?—No, at the Hutt, either on the evening of the 31st May or early in the morning of the 1st June.

170. Major Elliott telephoned to you at the Hutt that Berhampore Hospital was overcrowded?—He told me about his visit of the previous night, and he said that he considered Berhampore very much overcrowded.

171. Then what instructions did you give?—I went straight up to Trentham Camp and told the Medical Officers there that no more cases were to be sent to Berhampore.

172. Was Major McAra in charge then?—Yes.

173. You gave instructions that no more cases were to be sent to Berhampore?—Yes, and ordered marquees to be put up in Trentham Camp for any measles cases there might be.

174. Up to that time all measles cases had been sent to Wellington Hospital or to Berhampore?—Yes.

175. On the 1st June you gave instructions that no more measles cases were to be sent to Berhampore?—Till I told them to the contrary.

176. And marquees were to be erected at Trentham for the accommodation of new measles cases?—Yes.

177. Were those instructions carried out?—Yes.

178. What, if anything, did you do with regard to reducing the number at Berhampore?—I asked for a good non-commissioned officer and at least three orderlies to be sent to Berhampore at once.

179. Why?—Because I wanted specific instructions carried out with regard to the overcrowding there to get the congestion relieved.

180. *The Chairman.*] How would the sending of Yallop and three orderlies relieve the congestion?—They would keep people out, for one thing. There had been a good deal of trouble about the men's kits. Headquarters insisted that we were responsible and would have to pay if a man lost his kit.

181. This was a step taken to relieve congestion?—Yes.

182. How did that relieve congestion?—I wanted an authoritative officer there to look after things and see that the men were sent away.

183. *Mr. Gray.*] Up to that time who was in charge in Berhampore?—The nurse. Nurse Keith was the senior nurse. There were three nurses and, I think, three orderlies.

184. Were you satisfied with the attendance of the orderlies up to that time?—Yes.

185. Then why did you ask for a good man with three assistants to be sent from Trentham?—I wanted a sergeant, not a private, because there were a good many convalescents who had stripes. I wanted a man with authority.

186. And Yallop was selected?—He was mentioned to me as being a first-class man, and I said Yes, I knew he was, and I would take him.

187. And was he sent in?—Yes, with instructions from me that no more patients were to be admitted.

188. You had already told the doctors at Trentham that, too?—Yes. He was told that he was to see to things generally, and see that everybody was comfortable, and all that sort of thing.

189. Then what did you do in the direction of reducing the numbers at Berhampore?—I went up myself on the 2nd June to Berhampore.

190. And you found there—how many cases?—I think, about ninety-two, or something like that. I went through all the cases and the time they came into the hospital, and I worked it out with Yallop that so-many would have to leave; their time would be up on the Saturday.

191. Convalescents?—Yes.

192. That was the 5th June?—On the Saturday night there should not be more than fifty-eight patients in the hospital.

193. You reckoned up with Yallop that there would be so-many convalescents to be discharged on the Saturday?—Yes.

194. Leaving fifty-eight in the hospital altogether?—Yes, on the night of the 5th.

195. Did you intend to admit any patients to Berhampore to take the place of any of those convalescents who would go out before the 5th?—No.

196. Then the number was to be reduced to fifty-eight and not afterwards increased?—No. and it never was.

197. *The Chairman.*] But was it reduced to fifty-eight?—Yes, on the Sunday morning when I paid my visit.

198. *Mr. Gray.*] You went away on the night of the 2nd June?—Yes. I left Berhampore Hospital at about 5.30 p.m.

199. Having seen all the patients who were then in hospital?—Yes.

200. And were you satisfied about the condition of all of them?—Yes, I was.

201. Were there any cases then that you would call serious?—No, no serious cases.

202. All doing well?—Yes.

203. And you felt you were able to leave without any anxiety?—Yes.

204. You returned to Wellington on the morning of Sunday, the 6th June?—Yes.

205. You attended a conference, I think, with the Minister?—Yes, at the Wellington Hospital.

206. And the General and Major Elliott?—Yes, and Dr. Barclay.

207. Do you know how many patients were at Berhampore that day?—Fifty-eight.

208. Then the number has been discharged that you had reckoned to be discharged?—Yes; there were only 104 patients in Berhampore Hospital for one night.

209. In your opinion, was the accommodation at Berhampore sufficient for as many as 104 even for one night?—Yes; but it would not be very convenient to continue it for any length of time, because there were not enough sanitary arrangements for such a number. That was the only trouble we would have had.

210. At that time was there any other place to which measles cases could have been sent from Trentham?—No.

211. How many patients on the 1st June were there in the Wellington Hospital?—I cannot say exactly. There were twenty-nine measles cases admitted into Wellington Hospital in May according to their own list. There would not be more than twenty in Wellington Hospital at the time; but I had arranged with Dr. Barclay to always work in so that if we had to send any in from Trentham they would always be admitted without question.

212. How many patients had you expected to be provided for at the Wellington Hospital?—We always expected up to fifty.

213. Was that by arrangement with Dr. Barclay or Dr. Hardwick Smith?—Dr. Hardwick Smith. I always understood that they could take up to fifty.

214. *Mr. Ferguson.*] When was that arrangement made?—I think early in the war. Colonel McGavin told me when it was originally suggested by the Health Department that Berhampore should be opened.

215. *Mr. Gray.*] Was that for measles cases only?—I do not know how it came up.

216. *Mr. Ferguson.*] We want to know whether early in the war they had anticipated having up to fifty measles cases provided for in the Wellington Hospital?——

217. *Mr. Gray.*] Can you say that?—I cannot say thing about it at all other than this: that Colonel McGavin told me that it had been suggested that sick soldiers should go to Berhampore, and he objected to Berhampore. Later on, when the measles began to be bad, I had a conversation with Dr. Hardwick Smith, and he agreed to take in the cases, and I understood then that we could have up to, at any rate, fifty beds.

218. You thought that would be sufficient provision?—Yes. We were talking about measles at the time, and I understood it was apart from the ordinary run of special cases, which never totalled more than twenty per month, if that.

219. *The Chairman.*] So that you would get up to fifty?—Up to sixty-five or seventy beds.

220. Twenty-odd cases a month?—They do not stay in the whole time.

221. Where would the room have come from for seventy beds in the hospital: how could such a promise have been made as that without turning people out?—You have already been told in evidence that Dr. Barclay had in the Tin Shed room for, I think, twenty-six, and also that he had opened, I think, one of the consumptive wards. He had thirty-nine measles patients at one time in there.

222. *Mr. Gray.*] Did not your arrangement with Dr. Hardwick Smith lead you to believe that you could have up to sixty or seventy beds?—Yes, up to fifty for measles. That is what I understood; and we never needed that number.

223. Then Berhampore was opened?—Yes.

224. In consequence of Wellington Hospital declining to take more measles cases?—Yes. They wanted to clean out the Tin Shed. That is what they told me; and it was closed for about a fortnight.

225. In the absence of further accommodation being available at the Wellington Hospital and Berhampore, what did you propose to do with regard to providing for further cases?—If there was going to be an epidemic—and up to then there had not been—I had always intended to commandeer the buildings either at the Hutt or Trentham.

226. You had already given instructions at the camp to erect marquees?—Yes, five marquees.

227. That is, for measles cases which could not go either to Wellington or Berhampore?—During that week of pressure.

228. *Dr. Martin.*] What date was that?—On the 1st June.

229. *Mr. Gray.*] Did you at that time consider the possibility of an epidemic?—Not up to then.

230. *The Chairman.*] Up to the 1st June?—No; there had been no epidemic. We had it in mind that we would get increased numbers of measles cases, but no man could possibly foresee that we were going to get eighty-four cases in six days.

231. *Mr. Gray.*] Did you, on the 1st June, consider that an epidemic was beginning?—I said then we would have to prepare——

232. *The Chairman.*] To whom did you say it?—The other Medical Officers.

233. You must know if you made an official statement or a statement to the man in the street?—But you must understand that I had supreme control over these things.

234. Then it does not matter whether you told anybody or not?—No.

235. *Mr. Gray.*] What did you do? On the 1st June did you consider that an epidemic was at hand?—Yes, I did later on.

236. No, on the 1st June?—It had started then.

237. Did you recognize that an epidemic had begun?—Yes.

238. What provision did you make to cope with it?—We put up five marquees at Trentham.

239. To accommodate how many?—Eighty; and we could have as many more marquees as we wanted: they were told that.

240. Who were told that?—The Medical Officers who were doing the administrative work.

241. Was it under your direction that five marquees were put up at Trentham?—Yes.

242. Did you tell the administrative officer that if more cases occurred he was to provide further marquee accommodation?—Yes.

243. Did you, besides providing marquees at the camp, take any steps to consider whether you could get buildings anywhere near the camp?—Yes, I did.

244. What did you do?—I had to go to Dunedin post haste the next day, and this had to wait till I came back. I had already suggested to the authorities and told the Camp Commandant that we would commandeer the racecourse buildings if necessary.

245. Prior to your departure for Dunedin you had discussed with somebody the possibility of commandeering the racecourse buildings?—Yes.

246. When was that discussed, and with whom?—Several times.

247. With whom?—Colonel Potter, Colonel Pilkington, Captain Skelley.

248. As late as when?—I should think as late as that week—early in May.

249. When did you discuss it?—I should think early in May.

250. You referred yesterday to a report you had made to the General Staff or the Adjutant-General in which you referred to previous suggestions that these buildings might be commandeered?—Yes. I remember quite well one time when Major Alec. Roberts was up there and heard me discussing it.

251. *The Chairman.*] What time was that?—In May.

252. *Mr. Gray.*] I think the Commission has the date of the report that you referred to yesterday?—The 8th June.

253. *The Chairman.*] That is after the event?—No, sir, five days before.

254. *Mr. Gray.*] Yes. The point is that in the report of the 8th June Colonel Purdy referred to a previous recommendation to commandeer the racecourse buildings. When did you make that previous recommendation?—I should think, early in May.

255. To whom?—To the Camp Commandant.

256. *The Chairman.*] Would he be the man the get the buildings?—No; I would be.

257. It is not a recommendation?—I said "suggested."

258. We must have this made clear, because the Camp Commandant might be made responsible if steps were not taken. What was the object in mentioning it to him?—He was the officer in charge of the camp.

259. How could he commandeer the racecourse?—He had nothing to do with commandeering the racecourse.

260. *Mr. Gray.*] The Camp Commandant is the supreme authority in the camp?—Yes.

261. And he would, I suppose, direct the Medical Officers if necessary to put up these marquees?—Yes.

262. Was it quite in the natural order of things that you would discuss with him the advisability of commandeering outside buildings if the occasion arose?—Undoubtedly.

263. That would tend to relieve pressure on the camp?—Yes.

264. You say you did discuss this advisability with the Camp Commandant some time in May?—That if things came to the worst we could always get the racecourse buildings.

265. What did you say to Colonel Potter?—In the course of talking about measles I said, "Well, now, it is evident that these fresh batches bring in fresh cases of measles; we may get some more cases, more than we have now; but if we do get a rush of cases we can always fall back upon the racecourse buildings, failing getting other places." Berhampore School was suggested to me, for one place.

266. *Mr. Ferguson.*] You say it was evident that fresh batches brought in fresh cases. The first batch came in at the end of May?—No, not at the end of May.

267. *Mr. Gray.*] Had any fresh reinforcements brought in fresh cases prior to the Trenthams coming in?—Yes, the Sixth.

268. When did they come in?—About the end of April.

269. And they brought fresh cases?—Yes.

270. Measles cases?—Yes.

271. Who suggested the use of Berhampore School?—I think the first person who suggested it to me was Major O'Sullivan. He said, "There is a new school at Berhampore: why do you not take that?"

272. When was this suggestion made?—I should think, towards the middle of May.

273. Did you approve the suggestion?—No. I said, "How could we possibly get the Berhampore School?" seeing that the inhabitants were up in arms already and had demanded that we should not have any cases in Berhampore at all, even in the old plague hospital.

274. You went away to Dunedin on the night of the 2nd June?—Yes.

275. And left the instruction that you have told us of?—Yes.

276. Why did you go to Dunedin?—On the morning of the 2nd June I came into my office as usual, and I was sent for.

277. Why did you go to Dunedin—was it on your own business or on hospital-ship business?—On hospital-ship business.

278. By whose direction?—General Robin's.

279. He ordered you to go?—Yes.

280. Mr. Skerrett wants to know what you had to do with the hospital ship?—I was the general supervisor. I had to do all the outfitting of it.

281. Was it necessary for you to go to Dunedin?—The Board thought so.

282. Which Board?—What you call the Transport Board. He asked me to go to the Board with him, and at the Board this question suddenly cropped up——

283. Never mind. Did you get instructions or directions from the General to go to Dunedin about this hospital ship?—Yes.

284. Mr. Skerrett wants to know whether there was a minute of the Board to that effect?—I do not know.

285. From whom did you get your directions?—General Robin.

286. He is the supreme authority, I suppose, in war-time?—Yes.

287. Did you say anything to General Robin about the increase in measles cases in the last few days?—We were always discussing measles at that time. Every time I saw him we were discussing——

288. *The Chairman.*] Did you put it to him like this: "Here are these measles at the camp. We may suddenly have to commandeer the racecourse, and I must be here." Did you put anything of that kind to him?—No.

289. *Mr. Gray.*] Did you think it necessary to explain to General Robin that the number of measles cases was increasing?—I did not think it necessary.

290. Did you see any necessity for remaining in Wellington and not going to Dunedin?—No; I did not see any necessity for it after what I had done.

291. During your absence between the 2nd and the 6th June was there a serious increase in the number of cases?—No.

292. When did the next notable increase begin?—On the 1st June there were eleven cases—these are from the sick-parade figures; on the 2nd June there were seven; on the 3rd, nine.

293. *The Chairman.*] Were those sent to hospital?—Some of these on the 1st June: there were eleven altogether. On the 2nd there were seven.

294. *Dr. Martin.*] This return which I have here—the return sent in by Dr. Valintine—gives fifteen on the 2nd?—I got my figures from the sick-parade. We got the Wellington Hospital returns and the sick-parade returns, and they tally. I cannot explain why there should be such a discrepancy.

295. This return includes all the cases sent from Trentham?—Where to?

296. It does not say: some in isolation, some in Wellington, some at Berhampore?—Oh, yes, some in isolation. These of mine are from the sick-parade returns, and every man reported sick on parade that day is put down in the return.

297. *Mr. Gray.*] Give us the figures as you understand them, at all events?—3rd June, 9; 4th June, 22; 5th June, 11; 6th June, 5; 7th June, 10; 8th June, 11; 9th June, 8; 10th June, 17; 11th June, 16; 12th June, 12; 13th June, 4; 14th June, 3; 15th, 4; 16th, 11; 17th, 5; 18th, 4; 19th, 8; 20th, 6; 21st, 7; 22nd, 1; 23rd, 1; 24th, 1; 25th, 1; 26th, 1; 27th, 1; 28th, 3; 29th, 3; 30th, 3: making a total of 206.

298. *Dr. Martin.*] Those figures cannot be borne out at all?—I cannot help that.

299. *The Chairman.*] How did you get the place so overcrowded by the 23rd June?—It was on the 1st June it was overcrowded. If my figures are all wrong it is rather curious that this return was made out by the authorities at Trentham Camp about the 22nd June, and in that return they had a total of 200 cases taken from the hospital books, which tallies with my figures of 206. I submit there must be some error.

300. *Dr. Martin.*] I will give you my figures. I have 659 in all from the opening of the camp up to the 16th June. What are your figures?—649.

301. *Mr. Gray.*] Are those all measles cases?—Measles cases. These are the figures that were sent to me. The return was simply asked for, and was made up to the 20th June.

302. *Dr. Martin.*] How many measles cases on the 8th June?—Eleven.

303. Thirty-two are shown here?—There must be some discrepancy.

304. *Mr. Gray.*] Is it possible that sick-returns were not filled in for all these cases of measles?—No. Where did the measles cases go to if they were not at Berhampore, or in Wellington Hospital, or in the camp? The whole of my figures tally with the number of cases in Berhampore and the number of cases in Wellington.

305. This sheet gives the name of every man and the date of his discharge from Trentham, I suppose?——

Mr. Salmond: It may not be the date of his discharge, but the day he was reported sick.

Witness: That is where the discrepancy may have arisen.

306. *Mr. Gray.*] Would you get the same total in the end?—Yes, we are within ten.

307. *The Chairman.*] According to Dr. Purdy's evidence, from the 22nd June to the 30th there was only one case a day?—I think if you look up the sick-returns you will find that a great

many of them were put down simply as colds, and probably many of these cases ultimately developed measles.

308. *Mr. Gray.*] These returns were compiled from the camp records?—Those are the camp daily records. The hospital book, of course, would put in the number of patients sent away each day to the hospital. But I submit that you cannot have more sent away than were admitted to the Wellington Hospital and other places. The two come within ten of each other.

309. *Dr. Martin.*] But that does not show when the epidemic started?—The disease became epidemic, as far as I can judge, on the 26th May.

Colonel POTTER recalled and further examined. (No. 116.)

1. *The Chairman.*] Do you know anything about the second issue of boots that was directed on the 9th June? Colonel Gibbon told us that he was under the impression that General Robin had, on the 9th June, directed a second issue of boots to be made immediately. General Robin, on our communicating with him this morning, says that that was so—that he verbally intimated that on the spot?—Yes. My Quartermaster said to me that it was practically imperative that we should try and get the second issue of boots made, and he requested me to ask General Robin, which I did. I spoke to General Robin out there that day, and he said he would see about it and see that they got the boots. That is the conversation as far as I remember it.

2. Then you had no direction to requisition for boots? Would it be your duty to requisition for the boots or to see that they were requisitioned for?—For this second issue, I take it, the requisitions were already in.

3. The position, as I understand, was that although the men were not entitled to have their second pair of boots, because they were not on the point of going away, yet in view of the wet weather, and to provide each man with a change, General Robin indicated, as I understand from Colonel Gibbon, that a second issue should be made at once?—Yes; but we had already issued a second pair of boots to some of the units.

4. Were they units that were going away?—Yes.

5. This issue that I refer to is for men who had recently come in—the Trenthams, for instance. It would be very shortly after they were in—on the 9th June?—Yes; it was some time in the early part of June when I spoke to the General about it.

6. Was your suggestion to him with a view to providing the men with a change, or with a view to having them ready for the men to go away with?—With a view to their having a change of boots.

7. In view of the wet weather?—Yes, sir.

8. *Mr. Ferguson.*] You wished to antedate the issue—to make the issue then instead of three or four months afterwards?—I think we issued the second pair of boots as soon afterwards as possible.

9. That is just the point: we are told you did not?—I think that is what we have been doing.

10. *The Chairman.*] I am afraid we have had two opposite views presented to us. Can you tell us what was the practice from the start with regard to the issue of the first pair and then of the second pair of boots?—The issue of the first pair was made immediately on coming into camp.

11. Except odd sizes?—Yes; and the other issue would take place within a month if we had the boots to issue.

12. *Mr. Ferguson.*] Did you have any written instructions to that effect, or was it simply custom, or what?—Custom.

13. *The Chairman.*] I suppose you would make the issue as soon after, then, as practicable if you had the boots?—Yes.

14. *Mr. Ferguson.*] It would be from ten days to a month afterwards?—It would be.

15. *The Chairman.*] That was the practice right through?—As far as I remember now.

16. Then, when we came to the beginning of June this question of yours was directed to expediting the issue?—To getting the second issue of boots made as soon as possible.

17. *Mr. Ferguson.*] Your Quartermaster reported that you were short of stock and could not make the second issue, and you urged the Headquarters Staff to get more boots?—That is so.

18. *The Chairman.*] The fact that you wanted boots—would that be communicated to the Stores Branch in town, or had they the announcement made in advance to them?—I take it that our requisitions had already gone in for the second issue, and that General Robin would see that they were expedited. I took it from our conversation that that was really what happened.

19. There was delay, then, in the boots for the second issue coming out early in June—or, at any rate, if there was not delay you thought it necessary that there should be expedition?—Yes, that we should have them on account of the wet weather.

20. Then, do you remember Mr. Massey being out there?—I do.

21. We understand that what took place was that he gave directions for the purchase of boots immediately?—Yes; but he gave that instruction to the General, not to me.

22. But you remember the occasion?—I remember the occasion.

23. Do you know why it was that that order was given?—Because of the complaint he had received that the men had only the one pair of boots and had not had their second issue.

24. A large number of them?—Yes.

25. And was that a fact?—Yes.

26. And that was because you had not received the boots from Wellington?—That is so. We had not got the second issue in store to issue to the men.

27. *Mr. Ferguson.*] And you would not make a partial issue because of the squabbling there would be among the men?—If we had had enough boots to do one company we would issue them. We would not wait to do the whole regiment.

28. You had practically none?—Practically none.

29. *The Chairman.*] Could you say if there would have been a third issue or not before the men went away, if an early second issue had been made?—No, unless it was absolutely necessary. If the men's boots were worn out and unfit to wear or take away with them we would have to issue a further pair then.

30. *Mr. Ferguson.*] There would not be a regular third issue?—No.

31. *The Chairman.*] With regard to the drying-apparatus, you told us before that you now have marquees with braziers?—That is so.

32. It is not a difficult provision to make, is it?—No, it is a very simple thing.

33. Do you remember the occasion, when Colonel Valintine was in charge of the hospital there, that he came in and intervened in the matter?—That is so.

34. We gather that these drying arrangements were put up after he intervened. You told us when you gave your evidence that they had been up about a fortnight, I think?—That is so.

35. It would be about the beginning of July, then, that these would be put in. I am taking it at about a fortnight before you gave evidence?—I think I said "two or three weeks." I was not quite certain.

36. The beginning of July is near enough. Can you say why they were not put up before?—I never gave the matter a thought. In my experience I had never seen drying-apparatus. I had never seen them used or heard of them.

37. Of course, it was rather wet weather?—It was wet weather.

38. And you realized, when you became conscious of these things, that they were advantageous, I suppose?—Quite so.

39. Do you remember on whose suggestion they were introduced: was it Colonel Valintine who suggested them, or some one through him?—I cannot say from memory. I know my Quartermaster was speaking to me about the matter, and it was he that told me about the system that was adopted in his regiment.

40. None of the medical authorities had called your attention to it?—No.

41. We may take it, then, that it had not occurred to you, and it had not been mentioned to you by anybody?—That is so.

42. Now, with regard to the sick-parades, what we have is that for some time, at any rate when the men began to get ill in numbers, sick-parades were of long continuance, that the men had to stand in the rain, and that there was no seating-accommodation for the weak who could not well stand. That, we understand, was altered?—Yes, that was altered later on.

43. In Colonel Valintine's time, was it not?—Yes.

44. And the provision made was that there were marquees provided near the medical tent with some seating-accommodation?—I do not think so. I have never seen any seating-accommodation there, to my knowledge. The seating-accommodation was in the hut that we put in afterwards: we gave it later on.

45. The hut came into use later on?—Yes.

46. But before the hut some marquees were put up?—There were four to five marquees down there, to my knowledge, for shelter purposes, handed over to the medical authorities.

47. When was that?—They have always had marquees down there, to the best of my knowledge.

48. We have had various evidence about that. It was said that there was a marquee there which the men might have gone into, used by Colonel Purdy as an office?—Colonel Purdy's office was a small hospital marquee, as far as I can remember.

49. It was said that the men might have gone into there for shelter. Is that one of the marquees you provided for shelter?—No, it is not.

50. There would be one marquee, would there not, in which the medical men would be?—The examination marquee: that is so.

51. You say there were shelter-tents near by for the men to take refuge in if it rained?—That is so.

52. They were always there?—To the best of my knowledge, they have always been there. They were handed over to the medical people for that purpose.

53. *Mr. Ferguson.*] Have they not got beds in them? Were they not used as hospitals?—Only one, as far as I remember.

54. And one was used as a dispensary?—The examination and dispensing took place in that: as far as I can remember it was the one. I believe that an extra marquee was put up when Dr. Valintine came in; but that information you would get from my Quartermaster.

55. *The Chairman.*] Would the question of whether further tents were wanted for patients rest with you or with the medical staff?—Entirely with the medical staff.

56. They would have to speak to you on the subject?—If they wanted any accommodation they would have to apply to me for it.

57. This is what Colonel Valintine said: "*Q.* "Can you tell me why men were compelled to stand in the rain for an hour or more on daily sick-parades without any shelter being provided for them?" *A.* "One of my first actions——" *Q.* "But is that a correct assumption?" *A.* "That is quite correct. I would like to explain that on the 24th June I wrote to the Camp Commandant on that subject, and in regard to the flooring with wood of the marquees used for the sick-parade." Do you remember that?—I do not.

58. He goes on: "On the 25th I wrote to the Camp Commandant with regard to the delay in the sick going to the hospital." You do not remember?—I have not seen those letters.

59. Colonel Valintine's evidence goes on: "*Q.* "But as to the delay which took place on the parades?" *A.* "Yes; I came across an instance where a man had to wait some hours after it had been decided to send him to the hospital, because he had to get a non-commissioned officer to take him up, and he had not been able to obtain a non-commissioned officer. Almost immediately I made arrangements for the medical examination to be held nearer the hospital so that it would not be such a long distance for the men to walk from the main inspection hut to the hospital. They were examined in a hut subsequently." Do you remember the arrangements for the medical examination being held nearer the hospital?—That is in the hut.

60. Was that near?—That is near the hospital. I remember that, because I spoke to the medical people about that at the time. That is the time I went down with Mr. Allen to an afternoon parade, which I mentioned to you before.

61. You suggested this?—Colonel Morice said to me he would like a hut, and I told my Quartermaster they could have one.

62. Colonel Valintine's evidence goes on: *Q.* "*The Chairman:* Then apparently the method which prevailed on fine days in the summer was continued whilst this epidemic was going on during the very severe days of winter?" *A.* "Yes, sir." *Q.* "Who was responsible for that—who should direct on such a subject?" *A.* "After the 23rd June I should." *Q.* "Should not the Medical Officers in the camp have made some suggestion on that subject?" *A.* "Yes, sir." *Q.* "It occurred to you on the first day that you had taken charge, so that it is a subject that would present itself to medical men. The military rules appear to be so very inelastic that wet weather or fine weather the same rule was observed. Do you think that factor ought to have presented itself to those in charge of the camp, taking into consideration the conditions of the bad weather and the epidemic?" *A.* "Well, it occurred to me, sir. I may say that I went down on the very morning I was appointed, and I found men standing outside. There were two marquees in which they could have stood, but they said they did not care to stand in there because there was too much coughing, and I thought they were right." Colonel Valintine said there were two marquees. Now you say there were two or three marquees which the men might have used if they had chosen to stand in out of the wet?—That is so, four or five. There were four or five marquees down there which, I took it, were for this purpose. They were handed over to the medical authorities down there some months ago for that purpose.

63. The evidence goes on: *Q.* "We have heard of men being so weak that they could not continue to stand, and had to sit down?" *A.* "The Camp Commandant very kindly provided benches for them"?—I do not know anything about that.

64. You do not remember such an act of kindness on your part?—I do not; my Quartermaster might.

65. It goes on: *Q.* "In the tent?" *A.* "In the marquees, and subsequently benches were put in the medical examination-room near the hospital lines"?—That is so, in the hut. Those are forms.

66. With regard to drying, Colonel Valintine said: *Q.* "Did you take any steps in that direction?" *A.* "I saw the Camp Commandant with regard to using the big kitchen at the hospital for drying purposes"?—That is quite correct.

67. He goes on: "It was subsequently decided to erect special marquees with braziers, and that the drying should be carried on there"?—That was done. We were already experimenting with those. We put up those before he mentioned that about the kitchen, and as these were a success it was not worth while going to the trouble of turning that room into a drying-room.

68. *Mr. Ferguson.*] You say you had not received the letters?—It would be in my letter-book if I received them. Every letter that comes into my office is entered in the letter-book.

69. *The Chairman.*] Colonel Valintine said, "On the 24th June I wrote to the Camp Commandant on that subject, and in regard to the flooring with wood of the marquees used for the sick-parade."

Mr. Gray: I understand that Captain McCristell got it.

70. *The Chairman.*] He also says, "On the 25th I wrote to the Camp Commandant with regard to the delay in the sick going to the hospital"?—Well, I do not remember getting it.

71. You have a return, I understand, that you are going to give us?—Yes. I took it from the telephone message that this was the return you wanted—the units we had in camp, the strength of those units, the time they arrived in camp, and the time they embarked. [Return handed in.]

72. *Mr. Skerrett.*] Do you think that for recruits arriving in camp at the beginning of winter it was a prudent provision for headquarters to supply them as soon as possible with two pairs of boots?—It would be an advantage to have them supplied within a week with two pairs of boots.

73. Colonel Gibbon, when it was put to him, suggested that one pair of boots was enough, and that the recruit ought to be depended on to conserve his private pair of boots for use after the day's work: you do not agree with that view, I understand?—I do not say that I do not agree with it, but I look at the matter from a different standpoint. I look at it from our colonial standpoint, which is that every man likes to get into a dry pair of boots, and does not like to work in a wet pair.

74. That is a sanitary point of view as well, is it not?—I know nothing about the sanitary portion of it.

75. Was there any regular system by which the Director of Medical Services rendered to you periodically a report upon the general state of the health of the camp, and whether the existing accommodation for the sick was sufficient?—The Director of Medical Services was out at the camp there two or three times a week, and I used continually to ask him if everything was all right, and when he returned from his rounds he has often told me that everything was splendid; but I have had no written report, and I do not think that was necessary, considering that the Director of Medical Services was there two or three times a week.

76. My suggestion is that headquarters should have required and established some system by which the Director of Medical Services, whoever he was, should periodically report upon the health of the camp and make himself responsible in writing for the sufficiency of the accommodation from time to time: what do you say to that?—You do not refer to camp headquarters, but to general headquarters?

77. The chief headquarters. I do not refer to you at all?—I would not pass an opinion on what general headquarters should do.

78. I understand from Colonel Purdy's evidence that early in May he told you that fresh batches of troops were coming in and might be expected to bring in fresh cases of sickness, and he said to you that if you did get a rush of cases he could, in default of other means, commandeer the racecourse buildings at Lower Hutt or at Trentham. Do you remember that conversation?—I could not repeat the exact words, but I do remember that we had a conversation about new men bringing in measles. To the best of my recollection now—it has rather taken me unawares—one afternoon in my office, when we were discussing that matter about measles, we did discuss the question, and I believe he did say that if he had a rush of measles he could commandeer the racecourse buildings; but I could not say positively what buildings were mentioned, whether those at Hutt or those at Trentham. I would not like to say now from memory.

79. Was there a serious discussion at any time between the Director of Medical Services and yourself as to the provision in the immediate future of increased hospital accommodation in connection with an epidemic of sickness?—No, I have never discussed that point.

80. You say there was no such discussion in regard to the immediate provision of hospital accommodation to meet a case of epidemic?—No, that has not been discussed. I remember that one afternoon we were discussing how it was that we could not stamp measles out of the camp, and the Director then told me he was firmly convinced that it was brought in from outside. That is as far as I recollect; and he said then that if there was an epidemic he could commandeer those racecourse buildings. That is the only conversation I can remember on the subject.

81. *Mr. Gray.*] That conversation, as I understand it, was in consequence of some reference to the increasing number of cases of measles?—That is so.

82. And a possible prospective increase?—Yes.

83. That, if necessary, he would commandeer the racecourse buildings?—That is so.

84. Do you recollect Dr. Purdy telling you that the Wellington Hospital refused to take any more measles cases?—Yes, he did.

85. And what was done in consequence of that?—I believe he took over Berhampore.

86. Was anything done at the camp?—Yes; he had, I think, two marquees in the camp.

87. Why was that done?—Because, I think, he had not got accommodation in the Wellington Hospital.

88. Do you know that instructions were given to send no more cases to Berhampore?—Yes, I believe instructions did come along.

89. *The Chairman.*] They would not come to you, would they?—No, they would go to the medical men in charge of the hospital.

90. *Mr. Gray.*] But you would know?—Yes, I would hear about it.

91. Was it after that that those marquees were put up in the camp—after the stoppage of sending cases to Berhampore?—I could not be certain now, but I think it was so.

92. With respect to the accommodation for sick men on parade, when did you say that marquees were first provided for their accommodation?—They have always been provided, to the best of my knowledge—right from the beginning.

93. Have you ever heard of any complaints of men standing outside in the rain?—Not until that epidemic took place.

94. When that epidemic took place what provision was made?—I never heard of it until I saw a letter in the paper about it.

95. If it was thought necessary that provision should be made, whose duty was it to mention it to you?—That of the Principal Medical Officer or the Director of Medical Services if he was there—the medical authorities.

96. Your communications, I suppose, were chiefly with the administrative Medical Officer in camp?—That is so.

97. And if he wanted additional accommodation he could get it by applying to you?—That is so.

98. You told Mr. Skerrett that the Director of Medical Services was frequently in communication with you, and told you everything was all right. In addition to what he told you, did you have the daily sick-returns sent to you?—The daily sick-returns came to me every day.

99. And the parade-states?—Yes.

100. So you could see for yourself how the health of the camp was progressing—how matters stood with regard to the health of the men?—I could to a certain extent, but a lot of these cases might be detained in hospital for observation, and I could not tell from a medical point of view what it was.

101. You got the daily sanitary reports from the Sanitary Officer, did you not?—No; the Principal Medical Officer gets that.

102. Are they sent to you?—No. If the Principal Medical Officer finds anything there of a drastic nature that wants doing—anything they cannot put right—he sends the reports on to me: it is only anything of vital importance.

103. If there is anything in the report of the Sanitary Officer which requires specially to be dealt with he will bring it under your notice?—It would not do for the Sanitary Officer to go the rounds of the camp, then come back and write a long report, and then send it on to me, and it would perhaps be two or three hours before I could go through it. If a Sanitary Officer says

anything wants doing it has got to be done immediately, and that is the idea of his going round with the Quartermaster.

104. Then, if there was anything that required to be done, in his judgment, he would report it to you?—Yes, through the P.M.O.

105. Otherwise you were not immediately concerned?—No.

106. With regard to drying-apparatus: you have been in camps before?—Yes.

107. And you have never seen drying-apparatus in a camp?—No, not in India even, and I was there for twelve months training.

108. Perhaps it is not so wet there as here?—It is pretty wet sometimes. I have never seen drying-apparatus or heard of it.

109. Did it ever occur to you that it was required at Trentham?—It did not till this sickness and heavy rains came along.

110. And it was not suggested to you by the Medical Officers?—No.

111. Up to the end of May—a little after the Trentham Regiment came in—what in your view was the state of the health of the men generally?—For the number of men we have had in camp it has been excellent. I am comparing it now with many of the Territorial camps and other camps.

112. *The Chairman.*] Is that apart from the epidemic?—Oh, yes, that is before the epidemic.

113. *Mr. Gray.*] Do you recollect when Colonel Purdy bade farewell to you in his official capacity?—I could not give you the exact date.

114. At what time did Colonel Valintine take upon himself duties in camp?—It was some time in June, but I cannot give you the exact date. It was done by higher authority than I.

115. Do you recollect when the sick men were shifted to the racecourse buildings?—I do. You mean from the marquees?

116. Yes?—Yes. I think it was a Sunday.

117. Without telling us the exact date, did Colonel Valintine assume duties from that time onward?—I could not say exactly who was in command then. I believe that Colonel Valintine did assume command.

118. *Dr. Martin.*] Was that the time they shifted?—The time the marquee blew down. Dr. Valintine came out that Sunday, and he immediately commandeered the racecourse buildings.

119. *Mr. Gray.*] Can you tell me how long it was after the shifting of those men to the racecourse buildings that Colonel Purdy officially bade you farewell?—I cannot say from memory. I do not know the dates.

120. You remember the occasion of the men being shifted to the racecourse?—Yes.

121. Was it long after that, or within a day or two?—Speaking from memory, I should say it was within a week.

122. Prior to the shifting of these men to the racecourse, was there any discussion between Dr. Purdy and yourself as to the advisableness of taking one of the huts for measles cases?—I do not remember it.

123. Was there any discussion between you and him about the merits of huts or marquees to put measles cases in?—I do not remember that either.

124. *Mr. Salmond.*] Had you any responsibility at all in connection with the medical affairs in the camp?—No, except as regards the matter of discipline—that is, as to the Medical Corps and the Ambulance men.

125. Did you exercise any control over the doctors?—No; but, of course, they could not do as they liked.

126. If a medical man wanted to shift men from the hospital in to Kaiwarra or to the racecourse, would he act with your authority or under your directions?—No.

127. Without reference to you?—Without reference to me. Once a man is sent to the hospital I am finished with him.

128. Do you know whether marquees were provided for the waiting men on the sick-parade?—There were tents provided to the best of my knowledge. I have seen them, but I cannot say exactly the number. I have always been under the impression that we had four marquees there.

129. *The Chairman.*] Apart from the marquee used for dispensing, how many marquees were there where the men could go without any risk of being turned out if it were raining?—I cannot say from memory.

130. There was at least one?—At least two.

131. *Mr. Salmond.*] Were they set apart solely for these men?—Solely as a waiting-marquee.

132. Did you make investigation as to what accommodation there was for the waiting men?—No; but I saw there was not sufficient.

133. How do you know there was not?—There were some marquees there, and Mr. Allen asked why the men did not go into them.

134. He asked the men?—Yes, and they said it was too stuffy.

135. What date was that?—I cannot give you the date.

136. Was it in Colonel Valintine's time?—About that time. It was during the early part of the epidemic.

137. I confess I cannot reconcile that with the evidence of Major Stout?—He has got the marquees there, and he can do what he likes with them.

138. *Mr. Gray.*] Were the marquees for the accommodation of the sick waiting men provided before Dr. Valintine came on the scene at all?—Yes, from the very start of the camp.

139. In regard to the daily sick-reports, do they show the name of every man who was reported as sick from the various units, whether he was on parade or not, that day?—Yes, it should show that.

140. Even if he were not on the sick-parade?—It must be on the sick-report.

141. Supposing he was in his tent or somewhere else?—If he were taken sick in his tent then the orderly-sergeant would take charge of him, and afterwards report it.

142. Then the daily sick-report should show the name of every man who was sick in camp on that day?—That is so.

143. *The Chairman.*] In regard to the conversation with Dr. Purdy, when he referred to the racecourse, you said that at this time it was mentioned that the measles were really due to the new men who had come in?—He put it down to that.

144. Did that mean the "Trents"?—No, the new men of the different reinforcements.

145. When do you consider the epidemic broke out: have you any definite date in your mind? The "Trents" came in at the end of May. Had the epidemic, in your view, broken out before the end of May?—No, it had not—that is, what I call the epidemic influenza.

146. And measles?—No, influenza.

147. When do you consider the measles epidemic broke out? Perhaps that is not a fair question, because "epidemic" is a technical term?—We have always had the measles in the camp.

148. Then, when the sickness developed, you do not regard that as having developed into the extent of an epidemic until after the "Trents" came in?—That is so.

149. Was this conversation about the racecourse before or after the "Trents" came in?—Some time before, I think.

Commandant's Office, Trentham Camp, 14th August, 1915.

Secretary, Trentham Royal Commission, Wellington.

Re questions asked by His Honour Mr. Justice Hosking on Saturday, 7th August, 1915:—

Question: "Did you receive a letter from Colonel Valintine drawing your attention to the delay in sending men to hospital?"

Answer: "No, I do not remember getting same."

Question: "Did you receive a letter from Colonel Valintine *re* furnishing a marquee and seats for men waiting at sick-parades?"

Answer: "No, I do not remember same."

On returning to camp I looked up my letter-book and found that both letters were received during the week I was laid up with influenza. Both letters were dealt with by my Adjutant during my absence, hence my not remembering their receipt.

H. R. POTTER, Lieut.-Colonel N.Z.S.C.,
Camp Commandant.

Captain MCCRISTELL further examined. (No. 117.)

1. *The Chairman.*] You heard the points as to the boots?—Yes, sir.

2. Will you please tell us what you have to say about it?—Well, at the end of May I was getting so far behind on requisitions that I spoke to the Commandant about it. The weather was wet, and I asked him about the possibility of shaking them up. Before the end of May I had requisitioned for 25,585 pairs of boots, and I had received 20,701 pairs. The Commandant said that the G.O.C. was coming out, and the matter could be placed before him.

3. Did he speak to the G.O.C.?—Yes, sir.

4. Were you there?—No, sir.

5. What happened?—Colonel Potter told me that he had spoken to the G.O.C. about the boots, and told him that we wanted them out as soon as possible.

6. You did not directly communicate with the Stores Department?—No, sir, I had previously done so.

7. In writing?—No, by my requisitions. I had put it on my requisitions that we wanted the boots as soon as possible. I sent numerous wires to them also, copies of which I have.

8. You spoke to the Commandant, and he asked the G.O.C., and we know that you did not get them for a very long time after?—No, sir. The last I got was on the 9th July. I returned them to town so that they could be sent on to the new camps.

9. Will you tell us what the practice was at the outset with regard to the second issue?—There were three issues of uniforms or clothing—the first was made on the date of arrival, the second within a week afterwards, and the third issue about three weeks or a month previous to the departure of the reinforcement. In the last issue the second pair of boots was given. The second pair of boots was never given, previous to my speaking to the Commandant, before the last issue a month or three weeks before the men were going away.

10. The second issue of boots was not made within a fortnight?—No, not from the beginning; but I used every endeavour to get them when the weather was bad.

11. Because the boots department, if I may call it that, did not realize that they had to supply the boots at any time prior to three weeks before the date of the contingent leaving?—I do not see how they could think so, because my requisitions were in for 25,585 pairs, and I have only received 20,701 pairs.

12. Nearly 5,000 pairs short: when was your last requisition sent in?—My last requisition was sent in on the 17th May for 1,750 pairs of boots.

13. *Mr. Gray.*] Can you tell us what these three separate issues comprised?—Yes; the first issue (on the men arriving in camp) comprised a greatcoat, a hat, suit of denims, underclothing, a pair of boots, towels, blankets, waterproof sheet, and eating-utensils.

14. That sets a man up at once?—Yes.

15. He gets all he wants for immediate requirements?—Yes. The second issue comprises a set of underclothing and a uniform if I have them in stock.

16. And the third issue comprises——?—Another uniform, boots, housewife hold-all identification-discs, and so on.

17. So that if the Q.M.G.(3) in charge of Stores is directed by headquarters on the 17th May to arrange for the requirements of the two Trentham battalions coming into camp on the 30th May three issues as follows: The first on the 21st May, the second on the 6th June, and the third on the 17th September. He would be within the scope of his duties in seeing that they got their second supply of boots sometime in September?—No; I think if you look at the memorandum you will see that it says that that does not absolve the Camp Quartermaster from requisitioning.

18. You mean that it does not override the clause which says that "The Camp Quartermaster will, as usual, send in requisitions," and so on?—That is so.

19. The first practice was for the men to get their second pair of boots shortly before they left for the front?—Yes, previous to May; but in May I was getting far behind my requisitions—I was over 5,000 pairs behind.

20. Can you tell me where there is anything to show that the second pair of boots was not to be comprised in the third issue?—No.

21. So that the Q.M.G.(3) would still know that the third issue of clothing for the Trentham Regiment would include boots?—Yes, sir.

22. *The Chairman.*] As between the Stores and Captain McCristell, the Stores are behind on his requisitions to the extent of 5,000 pairs of boots. It does not matter to the Stores whom they are for. He is to have 25,585 pairs, and they have given him only 20,701 pairs: did they ever repudiate these telegrams you sent to them?—No, sir.

23. The fact that you sent telegrams to them which they did not repudiate would seem to indicate that they were behind, and knew they were behind, and could not give any promise when they would be able to fill the requisitions?—That is so.

24. *Mr. Gray.*] If the old arrangement to supply the second pair of boots within a few weeks of the men's departure for the front had held good there would have been no necessity for the Stores Department to deliver the boots in advance of the requirements of the men? You say that if the C.G.S.'s memorandum said two pairs were to be issued at those intervals there was no compulsion on the part of the Stores to send them out earlier?—Well, no, I suppose they could please themselves—they have done so up to the present time; but I may say that I have had actually to put boots aboard ship for the men to complete their equipment.

25. Can you tell me this: did you tell the Stores Department to send out the second issue of boots for the Trentham Regiments before the 31st May—to arrive before that date?—No; I requisition for the boots and clothing as required. I may put on, "For reinforcements and Trentham Regiment."

26. You knew the Trentham Regiment's requirements for boots: would that include the two issues?—The second would include the two.

27. When was the second requisition made?—From the 1st to the 8th June I requisitioned for 3,500 pairs of boots. You cannot requisition for two pairs of boots at once, because you do not know the size of the feet till you have issued the first pair. The only thing to do is to give a requisition for sufficient for one pair for each man. Then when you get the men in and you know the sizes required you can send a requisition for the second lot.

28. Then the second boots for the Trentham Regiment would not have been requisitioned before the 31st May?—No, because they did not come in until the 29th. I could not tell the size of the feet.

29. Do you remember any hospital marquees being put up?—Yes, sir.

30. How many were put up altogether?—When?

31. Prior to Dr. Valintine coming there?—Prior to his arriving the hospital had eight marquees and one operating-tent—that is, a small marquee.

32. Do you know whether there were marquees for the accommodation of men waiting on sick-parade?—Yes, sir, there were marquees available.

33. When?—Right throughout.

34. Do you know how many?—I know there were three marquees adjacent to the inspection-tent and dispensing-tent—three marquees and the operating-tent.

35. Would it be known to the men waiting on sick-parade that these tents were available?—Not unless the medical authorities told them.

36. Were they open?—They were open at the four corners, but, of course, the curtains were on.

37. Was there more than one operating-tent?—Yes; but one was used as a cookhouse, and was not available.

38. Was there an orderly-room tent in connection with the hospital?—Yes, the hospital authorities had three more tents in addition to that.

39. In addition to the eight?—Yes, they had eight and an operating-tent, and then they had another marquee.

40. How many tents were there altogether?—Previous to the arrival of Dr. Valintine there were eight marquees and one operating-tent.

41. Was there an orderly-tent besides?—I do not know what the medical authorities used each tent for.

42. *The Chairman.*] Were these tents marked with a red cross, or something of the kind, to show they were hospital tents?—No, sir; they were simply handed over to the medical authorities.

43. They were standing on a distinct part of the camp by themselves?—Yes.

44. They formed a camp of their own?—Yes, sir.

45. How do you account for the men standing out in the rain when waiting instead of going into the tents?—I asked that question one morning of one of the Medical Officers, and

he said, "Well, the men prefer to stand outside. They do not seem to care about coming inside." I saw the men standing outside.

46. Do you say there was plenty of opportunity for the men to stand inside without any other tents?—Yes, sir.

47. Then, with regard to Dr. Valintine's alteration, did he make any other provision than by transferring the examination-room to the hut?—Well, he did, sir. Dr. Valintine sent a note to the Commandant asking for one marquee and some benches to be put in as a waiting-room. This came to me marked "Urgent" in red ink.

48. Do you know whether he got those three marquees?—I sent them.

49. And the benches?—I instructed the carpenters to get some rough benches made, which they did.

50. Was not one of these marquees used as an office by Colonel Purdy?—No, sir, he was using the operating-tent.

51. Colonel Purdy suggests that there were three small operating-tents?—There was one that Colonel Purdy used as an office, one used for an oil-stove, that was all—only two.

52. *Mr. Salmond.*] If these marquees were available all the time before Colonel Valintine's time, what was the additional marquee provided for?—I could not tell you, sir. I simply received a note asking for another marquee and some benches, marked across the corner in red ink "Urgent."

53. And specially for the sick men?—Asking that a marquee be erected for the sick men, and also to provide seats.

54. Do you think there was any occasion for that new marquee to be provided?—I could not say, sir.

55. Is it not a fact that there were certain tents in the neighbourhood of the medical examination-room which might have been resorted to by enterprising, inquisitive soldiers if they wanted shelter, but there was no place specially set apart for these men, or notified as being available for their use: is that not so?—I do not know what the medical authorities did. I was asked for the tents, and the medical authorities did entirely what they liked with them.

56. But as an impartial observer of what was going on you could have seen it. I was asking whether that was not a fact that, though there was no special accommodation provided for these sick men waiting on parade, that there were certain tents in the neighbourhood into which they might have intruded themselves?—No, I would not say that; but there were three tents there empty, and any one outside in the rain could soon have got under cover.

57. Then the marquee provided by Colonel Valintine was not necessary?—I do not know; that is for Colonel Valintine to say.

58. As to boots now, we got a list of requisitions supplied by Major O'Sullivan. In this list it appears that you requisitioned for 4,000 pairs on the 31st May: is that right?—No.

59. Let me show you this list of alleged requisitions and see whether it corresponds with yours?—[Lists compared by witness.] In some cases it does correspond with mine, and in other cases it does not.

60. But on the 31st May 4,000 pairs were requisitioned?—On the 25th May I requisitioned for 1,800 pairs; he has not got that down.

61. But you told us that your last requisition in May was on the 17th?—The requisition I was speaking about then was that dated the 17th. My last requisition sent in May was dated the 25th, for 1,800 pairs. On the 18th May I asked for 1,860 pairs.

62. What was your last requisition in May?—The 25th May, for 1,800 pairs.

63. Is that requisition for 4,000 pairs an imaginary requisition on the part of Major O'Sullivan?—That is for the Seventh Reinforcements.

64. Was any such requisition made?—Well, I am not dealing with the Seventh.

65. At any rate, this is what you state: that you were 5,000 pairs short in your requisitions on the 31st May?—Yes, sir.

66. For whom did you want those boots?—Some for the Sixth, some to complete the Trenthams, and some for other men. As a matter of fact, I had to get boots half-soled and heeled in order to get the men away.

67. But the boots you wanted for the Trenthams: you had not yet requisitioned the second pair for the Trenthams?—No, not then, at the end of May.

68. And the last requisition you made in May was on the 25th, and they had not been supplied by the end of May?—No.

69. You said you remonstrated by telegram with the Stores Department: when?—Repeatedly.

70. What was the last occasion?—I could not tell you until I look them up.

71. Will you send in to me these telegrams or copies of them, and so let me see what correspondence passed between you and the Stores Department with respect to the policy of the Stores Department in regard to the supply of your requisitions for boots?—Yes, sir.

72. *Mr. Gray.*] We are told that Colonel Valintine requisitioned the erection of another marquee?—Yes, sir.

73. Did he not, as a matter of fact, remove the medical lines from their former situation to a new situation near the hutments?—Not Colonel Valintine; no.

74. Any one?—No one. They were removed to the racecourse hospital.

75. Is there any marquee for the sick-parade?—The sick-inspection place was removed.

76. From the old medical lines to a situation near the hutments?—Into hutment No. 16.

77. Was there not a marquee erected beside that?—Not that I know of.

78. Not for that purpose?—Never beside the hut.

79. The new marquee was erected in the old place?—Yes.

The Chairman (to Colonel Potter and Captain McCristell): Is there any other matter that either of you would like to speak upon in addition to anything regarding which you have already been examined?

Colonel Potter: No, I do not think there is anything else I want to refer to.

Captain McCristell: Yes, sir. Regarding blankets, Mr. Sewell, according to the evidence in the papers, stated that I had 4,000 blankets that were not accounted for. I have got a list of blankets issued to me by the Stores Department, where they are, and who has got them. I have accounted not only for 4,000 blankets, but for 1,902 which were returned by discharged men over and above what I got from the Stores. The total number of blankets returned to me was 2,051. Then, again, there was a statement made by Mr. Williams that I could not take all the goods sent to me from the Stores. Now, as a matter of fact, I did return goods sent to me by the Stores, but what I returned was 800 greatcoats sent out to me in an open lorry on a hot summer day; they were covered with dust so that I could not tell which was coats and which was cart. Some size 5 denim clothing I also returned because I did not ask for them.

80. *Mr. Gray.*] You have a statement showing how the blankets were disposed of?—Yes. [Statement put in.]

Colonel PURDY further examined. (No. 118.)

1. *The Chairman.*] We were dealing with the figures in June for sickness: did the figures for June show an increase of cases over those for May?—Yes, sir.

2. That is, speaking with regard to measles?—Yes, sir, the figures show that the epidemic began at the end of May.

3. The epidemic of measles?—Yes, sir.

4. Must not we take, as running alongside the measles, the epidemic of influenza and pneumonia?—No, sir. The second epidemic, or what is called the "double infection," began early in June. The figures clearly show that. That is, the rush of cases from the Sixth Reinforcements came on at the end of May. Those same cases came in with the Trentham Regiment that came in on the 29th and 31st, and we know there were some men admitted to the hospital straight away from the Trentham Regiment. In June, four or five days after the Trentham Regiment came in, influenza began; but there was a distinct fall as regards the measles after about the middle of June, but a rise in the influenza cases. Then there was a combined increase.

5. *Mr. Gray.*] When did it occur to you that the cases of influenza were getting numerous?—I had nothing to do with them. I was not in camp at all.

6. *Mr. Ferguson.*] Did they occur at the hutments in Trentham Camp?—I had nothing whatever to do with the hutments from the time they were put up.

7. *Dr. Martin.*] You were not responsible or in charge at Trentham?—Not after the close of May.

8. There were 126 cases in May of colds and sore throats?—Yes.

9. And in the same month there were 180 cases of measles?—Yes, sir. They were probably all at the end of May. They were brought in by the Trenthams. They were all between the 26th and 31st May.

10. *Mr. Gray.*] The number of men in the camp had increased considerably between March and May?—At the end of May there were practically over seven thousand men there.

11. And in the early part of May about five thousand?—Yes.

12. And the number of cases were increasing?—The number had been increased.

13. Was it reasonable to expect a proportionate increase in the number of cases with the increased number of men coming into camp?—Undoubtedly.

14. Did it not occur to you before the end of May that the percentage was getting large at an unusual rate?—The percentage did not increase: it all happened in a solid block. It was not until the figures were worked out later that it was seen. You will find that in June there were very few men on the sick-parade.

15. *Dr. Martin.*] You have told us what steps you took towards providing additional accommodation for measles cases?—Yes, sir.

16. Was there any additional accommodation provided for ordinary ailments, influenza and colds, and so on?—There was not any needed at that time.

17. Were these men not accommodated anywhere—influenza cases, and so on?—The majority of the men up to the time the Trentham Regiment came in, about the 31st May—at least 75 per cent. of them—were simply suffering from what in civil life they would not have gone to a chemist for medicine for—ordinary sore throats.

18. *Mr. Gray.*] Were there not men confined to the hospital?—Very few. I would like to point out here that Colonel Fulton, in charge of the Trenthams, objected to any men who were feeling sick being allowed to stay in their tents or huts, even for one day.

19. But he had no authority to do so?—He held that he could.

20. Did he interfere with you?—No, not with me. That was when more men were sent into the hospital—light cases.

21. Colonel Fulton was so anxious about the health of his men that he would not allow men to be suffering, however slightly, without sending them into the hospital: that increased the number of sick cases?—I think Colonel Fulton was quite right.

22. *Dr. Martin.*] After the 31st May what provision was made for the increasing number of cases of influenza and colds?—I went away on the 2nd June and did not come back until the 6th, and when I came back on the 6th June that was taken out of my hands.

23. Up to the 2nd June was there any additional accommodation provided?—There were altogether nine marquees in the medical lines—four for minor cases and five for measles.

24. They were at the disposal of the hospital authorities—five for measles and four for other ailments?—And some bell tents.

25. Was the quota of medical men sufficient on the 2nd June?—On the 2nd June there were nineteen medical men in camp.

26. Were the services of all of them available?—Yes.

27. Who was the P.M.O.?—Major McAra.

28. *The Chairman.*] Could he say to any of these medical men, "I want you to come to the hospital and do this or that"?—Certainly.

29. All their services were available to the P.M.O.?—Yes.

30. *Mr. Gray.*] The Trentham Regiment had its own doctors?—Yes; I include them in the nineteen.

31. But their services were available to the P.M.O.?—Yes.

32. What had you to do, after you returned, with the first of the measles cases?—It was arranged on the 6th June that Dr. Valintine should provide all the accommodation that we wanted.

33. That the military medical authorities wanted?—Yes; we had only to say what we wanted and he had to provide it.

34. What did you do in consequence of that?—In consequence of that arrangement I asked how many beds they could provide in the Wellington Hospital. Dr. Barclay said that we could have forty. That was on the Sunday, and Dr. Valintine corroborated that. I said, "What are you going to do if you have a sudden rush of a hundred cases in two or three days? You want more than that." Dr. Valintine then wrote to the Minister, and it was arranged that we were to have sixty beds at the Wellington Hospital.

35. You have seen his letter?—Yes, sir.

36. It is on the file?—Yes, he wrote that on the 7th June. On the 6th we distinctly understood that we could have forty beds, and on the 7th we were told we could have sixty.

37. Was there anything said or arranged as to where additional cases were to be sent if you had more than sixty?—I saw Dr. Valintine and he asked me about Mr. Izard's, and I said "Yes, it would be a good thing if we could get it."

38. Had Mr. Izard's house been mentioned before?—No, because it was understood that it had been offered for returned sick and wounded men.

39. When did he offer it?—I think, early in April. I often said could we not get Mr. Izard's home for measles cases, and the Defence authorities said "No, it was for the sick and wounded soldiers"; but when the rush came on us he allowed it to be used for camp cases.

40. You had a discussion as to the desirableness of getting that place for measles cases?—It was his business to find accommodation. He also mentioned to me that Mr. Pearce had offered him a wool-shed at Kaiwarra.

41. He had undertaken the duty of providing accommodation for all cases that required hospital attention?—Yes, and I provided the treatment.

42. Dr. Valintine was to look after the hospital accommodation?—Yes.

43. *Dr. Martin.*] On the 6th June you were responsible for the medical treatment of the sick?—The arrangement made was that the Public Health Department were to provide us with the accommodation, and I would be responsible for the administration and treatment.

44. You were responsible up to that time for the medical treatment?—Yes.

45. And that if extra accommodation was required all that you had to do was to tell Dr. Valintine that you wanted accommodation for so-many cases?—Yes.

46. You still being responsible for the treatment?—Yes.

47. *Mr. Gray.*] What was done from the 6th June in the way of placing patients in other places than Berhampore and the Wellington Hospital?—They started to get other places ready.

48. You had nothing to do with that?—No. On the 12th June they opened Mr. Izard's house.

49. Was that the first additional place opened?—Yes, as far as I remember. They opened Mr. Izard's house on the Saturday afternoon. That was the day the Fifth Reinforcements went away. I detailed Sergeant-major Dorizac to take charge of that place.

50. With respect to the other places, Kaiwarra and so on?—They were not taken in hand until the next week. They were getting it ready.

51. Any other?—On Sunday, 13th June, I went to the camp about 10 o'clock in the morning. I saw all the patients when I was seeking for a man named Bayldon. I found them all cheerful and practically convalescent; there were no bad cases there then.

52. Are you speaking of measles cases, or all the cases?—Yes, of measles. One of the marquees had just blown down. It turned out that that marquee had blown down in the night and they had re-erected it rather hurriedly, and it blew down again. Dr. Valintine came on the scene and asked me if I was satisfied with the accommodation, and would I like to have an extra building. I said, "Certainly." Then he said, "When would you like it?" and I replied, "As soon as possible"—the weather was bad. He said, "Very well, I will get you one," and he got it at the racecourse.

53. On that day?—Yes; and we shifted all the patients to the racecourse. I told him that I knew the buildings well.

54. Were these patients removed by you in conjunction with Dr. Valintine?—Yes, sir.

55. After the patients were installed in the racecourse buildings, what had you to do with their treatment?—I understood that I still had to do with their treatment. Dr. Valintine and I were working in amity, and I told him that we ought to appoint a Medical Officer to look specially after the ordinary sick cases, and one to look after the measles cases. He agreed, and he also agreed to Dr. Ferguson being appointed O.C. of hospitals, and Dr. Harrison O.C. of measles hospital. That was done.

56. And orderlies were appointed?—Yes, sir.

57. Was that done under your direction or under that of the Medical Officers in charge?—We simply asked for them and they were sent down.

58. That was on Sunday, the 13th: did you continue to supervise the hospitals at the racecourse after that date?—On the 15th June I went out to camp.

59. What happened on the 14th?—I do not know. I went up to camp on the 15th (Tuesday), and I first went into the racecourse hospital to see how things were getting along. I went through the hospital and saw Captain Ferguson, and had a talk with him. Captain Harrison was away in Wellington. I went through the hospital with Captain Ferguson. I did not go through the measles hospital. I then went up to the camp and did my Medical Board, and then went home. I went up again on the 17th. I did not go near the hospital. I went straight away up to the medical lines to do the Medical Board. There I was told that Dr. Valintine had been up every day, and also Dr. Finch, and that he (Dr. Valintine) had been giving orders to the medical men, and they asked me who was in charge. That was the second time Dr. Valintine had been up there. He had been making requests for drugs and other things. He had taken over from me at that time.

60. *Dr. Martin.*] Without consulting you?—Yes.

61. Whose business was it to supply equipment to the hospitals?—Mine, up till then.

62. This was a surprise to you?—Yes.

63. And you had been superseded: you had not been told by any written instruction?—No, but it was in the air. I knew it was in the air.

64. *Mr. Gray.*] Did you consider from that date that you had been superseded?—I went to the office of the O.C. camp to get some papers signed, and said, "This is my last visit to the camp."

65. That was on the 17th June?—Yes. On the morning of the 19th June Colonel Robin asked me to go into his office. He asked me how things were going on, and I said "All right." He said, "Are you working in conjunction with Dr. Valintine?" I said, "Yes; there has been no friction."

66. *Mr. Salmond.*] What date was that?—Saturday morning, 19th June.

67. You told him that?—Yes, and that I understood that Dr. Valintine had been up there at the camp practically all the time lately.

68. Did you know that he had been there every day?—Either he or some of the officers of the Health Department. In that time Kaiwarra Hospital had been opened and stocked, and I had never been in it.

69. *Mr. Gray.*] You had nothing to do with Kaiwarra?—Nothing at all. I did not put in the orderlies or the staff.

70. Did you consider that from the 17th June you had been superseded?—I considered that the whole thing had been taken out of my hands—the whole of that week.

71. Have you had nothing to do officially with the hospitals since that date?—No; I have never seen the racecourse hospital or the tea-kiosk—I mean as a hospital.

72. You were there on Sunday, the 13th?—Only in the jockeys' and trainers' quarters, and only on the 15th in the trainers' quarters. Since then I have never been in, except when I went for His Honour to get some records a week past Wednesday, and then I did not go into the hospital—I only went to the orderlies' room.

73. Until Dr. Valintine appeared on the scene, do you think you could have done anything more than you did in the way of making provision for a possible epidemic?—No; I am sure we could not have done any more than we did. As a matter of fact, what was done would have been done a week quicker.

74. You could have commandeered the racecourse buildings if the necessity arose?—Yes.

75. You relied upon sixty beds in the Wellington Hospital?—Yes.

76. Did it occur to you that there was a necessity for making immediate provision for the possibility of an increased outbreak?—Nobody had any idea of the second epidemic, and we had discussed whether the measles epidemic had not reached its height.

77. Dr. Martin has pointed out that there was a large increase in the influenza cases?—Absolutely new cases; they came into camp with the Trenthams.

78. When was that remarkable?—I do not know, because I was away from the camp.

79. *The Chairman.*] Did it not arise in May?—Not the influenza—not the same type that became virulent afterwards.

80. *Mr. Ferguson.*] It was simply colds and sore throats?—Yes. You must remember this: Up to the middle of May from the very inception of the camp we had most marvellous weather. From the 26th May until the first week in July we had more unprecedently bad weather than I have known since I have been here—twenty-five years—almost continuous rain, heavy fogs and frosts, and particularly no wind.

81. *The Chairman.*] But we have it that the rainfall during April, 1914, was on twenty days, as against eight days only in April, 1915?——

Mr. Gray: That was not at Trentham.

The Chairman: Lower Hutt.

Mr. Gray: The conditions are quite different. There is no meteorological station at Trentham.

The Chairman: There were twenty days on which rain fell in April, 1914, eight in April, 1915, twenty in May, 1914, nine in May, 1915, sixteen in June, 1914, and fifteen in June, 1915. The rainfall during the whole of 1915, as far as we have the figures, was in every month except March lower than in 1914.

Witness: That bears out what I say, that we had exceptionally fine weather up to the end of May.

The Chairman: In March, 1915, there were eighteen days' rain as against fourteen days in March, 1915.

82. *Dr. Martin.*] The epidemic at that time was very mild, because the cases went in one day and came out the next?—Yes; a man with an ordinary cold was treated as an influenza case. They were only under observation, because I gave a lecture in camp and stated that any man that showed the slightest symptoms of cold should be put under observation in view of its becoming a measles case. As I said, there was an unprecedented spell of bad weather from the end of May till the beginning of July; there was practically no wind in Wellington for about six weeks, and there was a tremendous amount of mud out at the camp.

83. *Mr. Gray.*] From the end of May till the beginning of July there was a great deal of wet and an absence of wind?—Yes.

84. *The Chairman.*] We know that as regards measles the incubation period was fourteen days, so that these men who had to go to the hospital at the end of May had been incubating for from seven to fourteen days?—Yes, that is an important point. If you get a regiment coming in, and six or seven days afterwards they develop measles, they must have had it before they came into camp.

85. But your assumption that May had this unprecedentedly bad weather is quite wrong?—The weather was quite fine, I said, up till the end of May. Measles became epidemic on the 26th May, but there was added a new epidemic after that which was *the* epidemic. I contend that it was, because these new drafts came in with sickness on them. You get two battalions of men, each numbering the same—that is, 1,100 men—coming into camp at the same time under the same conditions, and housed and looked after under the same conditions; you have one battalion with practically no serious sickness, while the other battalion has all the fatalities and all the serious sickness: what does that indicate to the medical man?

86. You say that most of the sickness occurred in the one regiment?—I am informed that all the fatalities came from the 2nd Battalion. They began to be ill about the middle of June, with what Captain Harrison called the double infection—that is, influenza superadded to measles. Some of these men developed measles and then developed influenza.

87. So far as any actual preparation to meet the increased number of cases was concerned, only Berhampore had been acquired and equipped?—That is so.

88. And in regard to future requirements, you had in the beginning of May in your mind only the commandeering of these racecourse buildings?—Yes, sir.

89. Then, what provision had you made with regard to providing the necessary beds and equipment: had any steps been taken to see whether the necessary beds could be got together on twenty-four hours' notice?—We had a certain number in stock.

90. How was it, then, that there were so many who had no beds on their removal into the racecourse building?—There were very few on that day without beds. I never heard there were any.

91. We have had evidence that several had to sleep on the floor?—That was later.

92. Were any steps whatever taken to ascertain whether any additional beds could be acquired, and where, or additional bedclothes, and so on?—I knew we could get beds from the store.

93. Do you mean bedding?—Bedsteads.

94. How is it that the men were put on the floors?—I do not know; that was not in my time.

95. This was on Sunday, the 13th June?—I say most distinctly that I saw no man put on the floor.

96. *Mr. Gray.*] Do you say that no man slept on the floor in the trainers' and jockeys' quarters on the 13th June?—I am almost certain of that.

97. *The Chairman.*] But we have had people who actually slept on the floor come and tell us so?—But you have had men saying all sorts of things.

98. Do you mean to say that positively that no one slept on the floor?—But in the jockeys' quarters there were bunks for the jockeys.

99. But I am talking of the loose-boxes?—In the loose-boxes there was not a patient put on the Sunday to my knowledge: they were orderlies that were put in there. We got thirty extra bedsteads, and I personally helped to put up six bedsteads in the loose-boxes.

100. *Mr. Gray.*] Did you know what bedding accommodation was in stock—bedsteads, mattresses?—No, I did not know exactly how many they had in stock.

101. *The Chairman.*] What record had you to refer to?—We always got what we wanted when we requisitioned.

102. Could you at any moment have told me or any one else how much you had in stock?—Yes, I could, at fifteen minutes' notice.

103. By ringing up the Stores?—Yes.

104. *Mr. Salmond.*] Do you mean that the military Stores Branch had bedsteads in stock?—Yes.

105. For what purposes?—For hospital purposes—hospital stock.

106. But you had not a hospital?—Yes, at camp, from the very initiation of the camp.

107. Were there bedsteads in it?—Yes; at one time we had twenty-two.

108. *Dr. Martin.*] On the 13th June Dr. Purdy says that Dr. Valintine had complete charge of the patients at the racecourse?—No, I did not say that. I said that on the 6th June the arrangement was that the Public Health authorities were to provide accommodation, I providing the administration and treatment. I also said that on the 12th June Mr. Izard's home was opened, and patients were sent there. On the 13th June the racecourse buildings were commandeered.

109. Give me the date when Dr. Valintine took charge?—When I went up on the 15th June I was informed that Dr. Valintine had been up there on the Monday, and had been giving orders to the medical men, and from that date I was never in the hospital again.

110. What date did you cease having charge of the patients?—15th June—practically on the 13th.

111. Dr. Valintine said the 23rd?—He said "officially."

112. Who was in actual charge of the patients from the 13th to the 23rd?—Not me.

113. Colonel Valintine said he was not?—I cannot help that.

114. When did you give up charge?—On the 15th June; but I practically gave up charge on the 17th. The whole of the treatment and the directions to the doctors had been taken out of my hands.

115. *Mr. Gray.*] On the Sunday, the 13th June, when the patients were removed to the racecourse, did Dr. Valintine do any more than provide the accommodation?—Not on that day.

116. Who directed the medical men and orderlies to assume their duties?—Dr. Valintine; we were both helping there that day.

117. Was he helping you or you helping him?—I did not say that.

118. On the following Tuesday was Dr. Valintine there?—Yes. I did not see him. I was told he was there.

119. Did you give any orders or directions on the Tuesday?—No, none at all.

120. *Mr. Ferguson.*] Did Captain Ferguson tell you that Colonel Valintine was giving orders?—Yes, sir.

121. And from that you assumed you had been superseded?—Yes. I had also had a conversation with the Minister.

122. What date was that?—I do not know the date, but I had to call and see the Minister about something, and it was either on the 7th or 14th—it was a Monday, I know. After the official business he told me that changes were to be made or were being made.

123. Did he say in what direction?—No, not definitely.

124. With regard to what?—With regard to the medical services.

125. *Dr. Martin.*] You deny having any responsibility or charge of the patients from the 17th June onwards?—Yes, absolutely.

126. Colonel Valintine said he denies taking over until the 23rd June?—I cannot help that.

127. Between the 17th and the 23rd we do not know who was in charge?—I was not.

128. *Mr. Salmond.*] Who relieved you from responsibility?—Colonel Valintine.

129. He could not relieve you from responsibility: who discharged you from your responsibility?—I simply dropped out.

130. May we put it that you abandoned them?—No.

131. Did you understand from all these things that you had actually been superseded?—Yes; and I had an interview with General Robin.

132. After the interview with the Minister, what did he tell you?—After the interview with the Minister he outlined what our respectives duties would be. He had it in writing, but he did not give it to me.

133. *Mr. Ferguson.*] He did not indicate that your work was suspended?—He did, at the camp. I am going on with my work just the same, minus the camp. There is a further proof of this; I was asked to appoint a P.M.O.

134. Asked by whom?—The C.G.S. sent the original memorandum, and then General Robin asked me to expedite it. I sent a letter to Dr. Andrews, Stoke, near Nelson, offering him the appointment.

135. As what?—A.M.O. at the camp; and he was to wire me his acceptance or otherwise. I did not get this wire about the time that I thought I would—about the Wednesday, 16th June—and I was then asked why I could not get a P.M.O. I suggested then that Colonel Morice, of Greymouth, should be offered the appointment.

136. Is that a camp appointment or a hospital appointment?—It was to be a new appointment—P.M.O. of the camp. On the Monday morning, 21st June, General Robin called me into his room and said, "I hear you have appointed somebody as P.M.O. of the camp." I said, "I have not, but I am going to; I am trying to get Dr. Morice, of Greymouth." He said, "You have not sent him word yet?" I said "No." He said, "For Goodness' sake, don't, because Dr. Valintine has that in view himself." That was on the 21st June. Dr. Valintine had already appointed a Sanitary Officer at the camp.

137. *The Chairman.*] When you had that interview with the Minister and he told you there was going to be a change, did you ask him why?—Yes.

138. *Mr. Gray.*] What did he say?—He said that I ought to have foreseen the increase in the measles cases. I said that I did not see how any more could have been done. I also told him that if I had not been away everything would have been done.

139. *The Chairman.*] I have not been able to discover yet, beyond the hiring of Berhampore, that you did anything?—I put up five marquees at Trentham and four at Berhampore, and I arranged for the orderlies to go out; also for the patients to go out, so that there were only 104 in there for one night.

140. *Mr. Gray.*] What provision did you make for additional cases?—There was no necessity. I always had in the back of my mind that we could get the racecourse buildings.

141. May we take it from you that from about the 14th June you considered that you were not in charge?—Undoubtedly, I was not in charge.

142. That is the date of the interview with the Minister?—We will say the 15th June. I knew then that Dr. Valintine was taking charge.

143. You give that as a definite statement?—Yes, I do.

144. *Dr. Martin.*] You saw the Minister, and as a result of that interview and other interviews you came to the conclusion that you had been superseded?—As regards the camp.

145. There is nothing in writing, no letter from any administrative officers on the subject?—No.

146. Has anything been sent to you since?—On the 17th June General Robin told me. He gave me the details of duties. I gave it in to the Commission here.

147. It was a letter detailing your duties?—Yes.

148. What is the date of that?——

Dr. Martin: It was signed by the Minister on the 18th June, and initialled by Dr. Valintine on the 21st July.

Witness: Dr. Valintine told me that he had told the Minister that unless he had supreme charge of the camp he would not take it on.

149. *Dr. Martin.*] I want to be clear on another point: on the 15th June did you hold yourself responsible for the sick-parades or any medical trouble that arose at the camp as distinct from the Trentham Racecourse?—No; I was free from the whole onus of the camp or the sick-parades.

150. You had nothing to do with the Trentham Camp or racecourse?—Nothing.

151. Now, another point, about Berhampore: when did you cease having medical charge of Berhampore?—On the 12th June.

152. Because Colonel Valintine says he was not in charge of Berhampore until the 23rd?—"Official charge" that is.

153. Who had charge of the patients?—Captain Harrison was in charge of the patients.

154. But supreme charge?—I had not. Dr. Valintine gave orders to Captain Ferguson in the succeeding week. I paid my last visit to Berhampore on the 12th June. On the 13th June the racecourse buildings were commandeered. I was going back to Berhampore on the 14th, and I said to Captain Harrison, who was the O.C. of measles, "You will look after Berhampore," and he said "Yes."

155. *Mr. Ferguson.*] When did you give up control of Berhampore?—On the 12th June.

156. *The Chairman.*] You told Captain Harrison on the 12th that he was O.C. of measles hospitals?—Yes, sir.

157. *Mr. Gray.*] And that he would require to look after Berhampore?—Yes, sir.

158. *The Chairman.*] And if the nurses or orderlies had to communicate about Berhampore business they would not communicate with you after that date?—That is so.

159. *Mr. Gray.*] Had you any communication with the nurses at Berhampore after the 12th?—I think I had to ring them up about one case, but I was never there again. To clear up this Berhampore business I may say also that the same course of procedure was followed until the closing of Berhampore.

160. In what respect?—The visit from the doctors.

161. A daily visit—there was a regular visit?—But there were more bad cases then. Dr. Valintine stated in evidence here that there were eighty-seven patients, ten each in two wards which were built for four. The Commission has seen Berhampore Hospital, and they have a plan of the two wards. When Dr. Valintine and the Minister and myself inspected the hospital on the 6th June, the Minister in my presence asked him where were the two wards with ten patients each, and he took them into one on the left as you go in, and he said, "This ward was built for four but could really accommodate six." The Minister said, "What nonsense!" It was self-evident.

162. *The Chairman.*] If you put them between the windows would it accommodate more than four?—Yes.

163. Is not that the way the hospital was built?—I do not think so. If this ward would only accommodate four, why, when they had full control of Berhampore, did they continue with never less than eight in it? I was not in charge of Berhampore then at all.

164. Where could they put them?—It was overcrowded while I was in charge, but they continued afterwards to put at least eight in that ward. Then the same report also stated that "in one marquee there were fifteen, in another nine, and in another sixteen."

165. *Mr. Ferguson.*] In all there were four marquees?—Yes.

166. We only saw three and the remains of a bell tent?—That bell tent was the one for the orderlies.

167. There is another opposite?—There were two on the other side.

168. With wooden floors?—They had straw floors with ruberoid covering.

169. Two were on the other side of the hill?—Yes, one on each side of the hospital—one where it was terraced and one on the other side of the hospital; and then two on the other side of the road.

170. The nurses did not say that?—One said there were three, and one said there were four.

171. Would you consider that suitable accommodation down in the gully where two streams meet?—They were not down in the gully.

172. *The Chairman.*] Would you call that anything more than the merest temporary accommodation?—No, sir, it was only temporary accommodation. Remember this, that the Public Health Department themselves had had marquees erected there, and had there over a hundred patients on a previous occasion for weeks. My point is that Dr. Valintine says that "in one marquee there were fifteen patients, in another nine, and in another sixteen. The marquees were meant to hold twelve sick men." It is laid down distinctly that a marquee will hold eight sick men or sixteen to twenty-four well men. You can put in eight beds for sick men. Now, all the men in the marquees were convalescents; they were apparently well men. It was on this report that all the trouble was based, and Colonel Valintine admitted that he got that from

hearsay, and the plan showed his measurements were not correct. His Honour pointed that out. My point is that if there were only three marquees holding sixteen men each, that would be forty-eight patients. Even on his own showing the hospital would accommodate at that time over eighty patients quite comfortably with the three marquees.

173. *Dr. Martin.*] Did you have a guard?—The orderlies were supposed to be the guard.

174. No fixed guard?—We had no fixed guard.

175. Is it usual to have a fixed guard?—Not in actual camps like this.

176. *Mr. Ferguson.*] Is it the duty of the Medical Officer to see that that is provided?—No, I do not think so.

177. *The Chairman.*] Who would look after such a place as Berhampore?—The camp authorities looked after the interior economy of Berhampore from a military point of view. For instance, it was reported to me in the early period of Berhampore that four of the patients were not in their quarters at bedtime. The nurse reported it to me, and I immediately sent the report on to the Camp Commandant. I saw Colonel Potter and requested that these men should be punished, as I considered it was a grave breach of discipline to leave without permission, and more especially from a measles camp.

178. What was done?—They were punished. That was just the day before they were going out.

179. *Mr. Gray.*] Had you all the equipment at Berhampore that you thought was necessary?—My instructions from the Minister from the beginning of the camp were that if I erred at all I was to err on the side of generosity—I was to spare no expense whatever. I could order whatever equipment I wanted.

180. Did you get everything you wanted?—Absolutely.

181. It was sufficiently supplied with all the necessary equipment?—Yes.

182. Had you a sufficient staff of orderlies?—Yes.

183. Did the men all have beds to sleep on in the marquees?—Not in the marquees; they had palliasses. They had these straw floors and ruberoid coverings.

184. They were not men who were confined to bed?—No; they were quite well men.

185. As to the sick-parades at the camp, what had you to do with them?—I had nothing to do with the sick-parade at the camp. The Medical Officers at the camp had charge of the whole interior economy of the camp, and as long as it was carried out according to the regulations I was satisfied. All that I had to do was to go round and see that things were being done properly.

186. Was there any complaint made to you of the lack of attention on the part of the medical men in the camp?—No, sir. May I point out that Major Holmes was brought over specially from Samoa to take charge of the Third Reinforcements camp.

187. Because he had experience?—Because he was such a strong disciplinarian. I wish here to most strongly repudiate the suggestion in regard to him, because he was a most excellent officer. I know from my personal knowledge that he stated that he wanted a tent pitched where the men could wait on sick-parade, and a marquee was pitched, and we have had it ever since.

188. *The Chairman.*] You confirm the evidence that there were at least two marquees provided for the men to wait in?—One at that time, and two later when the camp got bigger.

189. *Mr. Gray.*] Was there at all times sufficient accommodation for the men to take shelter?—Yes, there was. I would like to explain that my tent was there also, and was used by the Trentham Regiment.

190. So far as you know, were the sick-parades carried on in accordance with the ordinary military requirements and regulations?—Always.

191. *Mr. Ferguson.*] Were you ever there at the time of a sick-parade?—No, sir.

192. How then can you say they were carried out in accordance with the military regulations?—Because I have heard.

193. It has never been reported to you that they were carried out otherwise than according to the regulations?—That is so, and I have seen the tent.

194. *The Chairman.*] You should not regard that as a mode of proof?—What I say is absolutely correct. I have seen men brought up on stretchers on at least five occasions; they were men being carried up to have their wounds dressed or their throats attended to.

195. *Mr. Gray.*] Now, as to the absence of apparatus for drying clothes, did it ever occur to you that the men should be provided with such apparatus?—No.

196. Why not?—Well, it has never been the custom, and we had such wonderful weather all the summer, and, of course, I naturally concluded that everything would be done when the huts were built, in the way of the latest ideas.

197. *Mr. Ferguson.*] Do the latest ideas include drying-apparatus?—No, but they include a place where the clothes could be put.

198. *The Chairman.*] You say you naturally concluded that such a thing would be provided: had you in your own mind thought that drying-apparatus would be provided?—No, sir.

199. How could you naturally conclude that it would be there?—It was a place to hang clothes on.

200. The matter of the huts was taken out of your hands in the early part of the year and referred to a special Board?—Yes, sir.

201. *Mr. Ferguson.*] You saw the preliminary plans?—I did.

202. And the first plans did not contain any special provision for hanging clothes?—They did not.

203. Therefore no suggestion went forward from the medical branch?—No.

204. *Mr. Gray.*] As to the insufficient number of trained orderlies?—We had all the men we wanted for our requirements. We had a full squad, and these men were trained.

205. Where?—Up in the camp, daily.

206. You are able to say that?—I can prove it.

207. Trained by the Medical Officers in camp?—Yes, and by the sergeants.

208. Did you take any part in that training?—Yes, to a certain extent. I inspected them on parade, and I watched them drilling, and talked to the officers, and lectures were given practically every day.

209. By whom?—By the various Medical Officers.

210. Did you lecture to them at all?—Not to the Ambulance men, but to the N.C.O.s on sanitation.

211. You really gave a formal lecture?—Yes, sometimes to as many as a thousand men.

212. A thousand N.C.O.s?—That was a wet day and many men came in.

213. You have spoken of the Second Reinforcements: what happened in regard to the later reinforcements?—There was a certain number of trained men went away with the Second, and a certain number were called in for the Third. They were trained in stretcher drill, squad and company drill, and got the necessary training of an orderly in the first months of their camp life.

214. Did they go away with the Third Reinforcements?—Yes, sir.

215. *The Chairman.*] The instruction does not seem to have produced very good results, because we have it that several of the men were absolutely ignorant?—But that has nothing to do with the question at issue. I may say that the Second and Third Ambulance Corps have been at the front, and we know they were well trained. When the Third went away and the Fourth were being called up we were told we were to call up no more Ambulance men.

216. Who told you that?—The powers that be.

217. What reasons were given?—No reason was given, because they had their quota.

218. Where did they have their quota?—At the front. You have to supply wastage, and each arm has to make up its wastage.

219. Can you say when the isolation camp was discontinued?—Early in May. There is a report about it. [Report put in.]

MONDAY, 9TH AUGUST, 1915.

CHARLES GEORGE FREDERICK MORICE sworn and examined. (No. 119.)

1. *The Chairman.*] You are a medical practitioner and, I think, hold the rank of Lieut.-Colonel?—Yes.

2. I think on the 29th June you were appointed P.M.O. at the Trentham Camp?—Yes, I took over about that date.

3. Will you tell us if there was any special designation of your duties made on your appointment, or, if not, what your duties actually are?—At the time Colonel Valintine told me he wanted a permanent P.M.O.: he was about to lose the services of other members going with the hospital ship, and a permanent P.M.O. was required; he thought I might act in that capacity and take general care of the camp and hospital.

4. Your jurisdiction extends over the camp as well as the hospital?—Yes.

5. You are head of the medical men in charge of the camp proper?—Yes, all those in the camp.

6. Then your duties as P.M.O. as regards the camp have been such as would be those of P.M.O. under military regulation?—Yes.

7. When you took charge on the 29th would you briefly tell us what was the condition in which you found things in regard to the hospital?—Well, there was a large number of patients in various parts of the racecourse hospital on the 29th June. I might say I had watched the camp and hospital for two or three days previously, to get some idea of the work and see if I could undertake it. It seemed a very big thing.

8. What was the condition of things?—There was an increasing number of patients coming into the racecourse hospital during that two or three days, and they were disposed of in the different buildings.

9. The grandstand had been taken over when you were there: was that in use?—A day or two afterwards they began to go into the grandstand. The kiosk, jockeys' and trainers' quarters were all that were in use when I took charge, and then the stewards' stand was taken.

10. Can you tell us what the ailments were of those who were using the hospital?—There were two broad divisions—influenza cases and measles cases.

11. Of course, you might have influenza cases that ended in measles, I suppose?—Yes; they were arranged as far as could be done: many of them were caught in the catarrhal stage, and some of them would turn out to be measles.

12. But were the measles cases mixed up with the influenza cases in the same building?—Not intentionally. They were drafted in different directions.

13. When you say "not intentionally" did it happen that there might be a development of measles on the part of a patient while in the influenza ward which would put him in the class of measles men amongst the influenza patients?—Yes, that is so, amongst the measles cases. The measles was a severe epidemic, and they were caught in the catarrhal stage before the rash came out. In some hours the rash would develop, and then the cases would be recognized as measles cases, and were transferred to the ward where the measles cases were.

14. In every case?—Yes.

15. You are speaking of your observation now and before?—Yes.

16. It would be wrong, therefore, to say, except in so far as the measles cases develop from influenza in the influenza ward, that the measles cases were mixed up with the influenza cases?—Quite wrong.

17. Had at that time cerebro-spinal meningitis been diagnosed?—No, not at that time.

18. I understand that early in July Dr. Hector was sent for?—Yes, on the 8th, and by then the minds of Medical Officers were very much exercised as to what this malignant form of measles was—by the symptoms in a small proportion of cases.

19. When did those special symptoms begin?—There was a suspicious case when I arrived. There were one or two suspicious cases, and on my taking over they were referred to as malignant measles—"black measles," as they are called. That was on the 29th or 30th. The first suspicion I had was on the 2nd July, when I was first informed of the hæmorrhagic form.

20. *Dr. Martin.*] There had been some before that, had there not?—Yes, I think so.

21. *The Chairman.*] That suspicious case was kept under special observation?—Yes, the man was placed not altogether by himself, but he was in the trainers' quarters. It was then looked upon as a very serious case of measles. It was not until some days later, when talking it over, that we thought there must be something more in it than measles.

22. He was not getting better?—No; getting worse.

23. Did any other cases arise that was puzzling after the second?—There were two or three other cases. A man named Jewell had died in the Wellington Hospital, and I think there was some suspicion then of cerebro-spinal meningitis.

24. Do you remember when Jewell died?—On the 7th July.

25. And then you were informed that there were suspicions of cerebro-spinal meningitis?—It was only later I heard of that. He died in the Wellington Hospital, and it was not until later that I heard it was a case of cerebro-spinal meningitis. My knowledge did not come till some considerable time later.

26. What led to Dr. Hector being called in?—We came to the conclusion that it was something more than malignant measles, and wanted some further advice. Dr. Valintine was conferred with on the 7th, and on the Thursday morning Dr. Hector was brought up.

27. He has some special qualification, has he?—I believe so. I heard Dr. Hector say he had seen typhus at Home.

28. Then it was suspected by you, or Dr. Valintine, or others that it was typhus?—Yes. A conversation took place between the Medical Officers, and I remarked about the 6th or 7th that it reminded one of the old spotted fever, and I think that was the first indication of any suspicion that it was more than malignant measles. That was within two or three days. We went on and got Dr. Hector's advice.

29. And his view of the matter was that it was typhus fever?—Yes.

30. And immediately on the same day that it was reported arrangements were made to remove a large body of men?—Yes. Immediately on that report Colonel Valintine came into town, and during the night we heard that the camp was to be broken up the following morning. At 10 o'clock the next morning the clearance commenced.

31. Were all the men who were well sent away?—No, some remained, but I could not say how many. The Sixth Reinforcements remained, but there was such a clearance that it allowed for spreading and thinning out the men, with the result that the men got comfort and ease in the camp. The huts were empty, and there was plenty of room.

32. So as to ensure better sanitation of the huts, is that what you mean?—Yes.

33. Up to that time do you know what the huts were accommodating?—They varied from about forty. I know they were overcrowded in some cases. We found sixty in one hut one night: that was in the early stage of my going there—shortly after the 29th June.

34. You say the men were in and out constantly, and it was difficult to ascertain from time to time who were in the hut. Who was the person who should have seen that those huts were not overcrowded?—The various unit commanders, and the Camp Quartermaster over all.

35. On the 29th June it was reported to Colonel Valintine that there was overcrowding. Do you remember making any report to him?—No, I made no written report. It was mentioned; we were talking it over.

36. Were any steps thereupon immediately taken to prevent this overcrowding?—Yes, I had a conversation with the Camp Commandant myself. I cannot fix the date exactly—it was about that time. I was with the Camp Commandant each day, and we were talking over various things. The overcrowding arose soon afterwards. The question cropped up in connection with getting one of the huts for sick-parade, and I was told I could not have it because they were not getting the number of men reduced. However, we did get it owing to the men being taken from other huts to the hospital, and the numbers were thinned down.

37. That would be the 29th June—the day you first took charge?—Yes.

38. With regard to this question of overcrowding, unless some rule was laid down as to how many men each hut was to hold, you were, of course, prepared for the Medical Officer to report or mention it as soon as it came under his notice?—Yes.

39. When you spoke to the Camp Commandant it would then be his duty to take steps to prevent the overcrowding?—Yes.

40. That was a matter of discipline?—Yes.

41. Can you say what steps were taken to prevent overcrowding from that time?—I do not know what steps were taken to remove the men, but in a very little time there was no sign of overcrowding—the numbers were reduced.

42. That would happen before the 8th July—before the camp was depleted?—Yes; the camp was being depleted all the time by the men going into the hospital.

43. There is, of course, a daily inspection of the camp: do you take part in that, or is that done by the Sanitary Officer?—In the early stages I did it myself. I put in about an hour going round making a tour, but since then the ordinary Medical Officer has been appointed to do it.

44. When you went round would any other Medical Officer accompany you?—At times Major Stout went round.

45. That would be in the morning: would that enable you to see whether there was any overcrowding?—Yes, by the number of mattresses.

46. Before you came whom would it devolve upon to see whether there was overcrowding or not, who should have seen?—The officers for the day.

47. Who would they be?—They vary each day. The military authorities tell off an orderly-subaltern, who goes round with the Camp Quartermaster.

48. Does not the Medical Officer go round?—Yes.

49. But before that?—I do not know how they managed. I know Major Stout told me he went round on several occasions.

50. He was only there in charge from the 13th to the 19th June?—Actually in charge.

51. But, at any rate, he was Medical Officer—he was P.M.O who was acting?—Yes.

52. The camp was removed on the night of the 8th. When typhus fever was apprehended and the camp was removed, what was the next step taken to cope with the position?—Orders were issued to have all huts cleaned out. They were cleaned and washed out with a solution of kerol, a disinfectant, and left vacant as long as possible. We had a sanitary staff for that purpose.

53. *Dr. Martin.*] How long were they left vacant?—Until the men began to come back. They have been coming back from sick-leave for the last two or three weeks.

54. *The Chairman.*] They would be vacant for, at all events, a week?—Yes, more than that in the case of a lot of them. They were occupied by the men of the Sixth Reinforcements—the huts were cleaned out, and the men were shifted about. The Sixth is a very healthy regiment.

55. Why were certain men left in the huts in camp?—It was so near the conclusion of their training that they had to be: they go at the end of this week.

56. Was that the whole of the reinforcement?—No. Most of the Sixth since then have been going on extended leave before embarkation.

57. How many men would have been left there?—At sick-parade we counted close on five hundred men—that is, the inspection-parade. The Sixth were a very healthy lot.

58. Were there many admissions to the hospital from that lot you left behind?—No, very few. There was a big falling-off after that.

59. But take it by way of percentage?—I have not had time to work out the percentage, but the number of new cases fell away considerably. I have a list showing the falling-off after the 10th July, but I wanted to show the number of admissions since then, and the number of readmissions who came back with colds, as distinct from new cases from the huts.

60. You might state the figures generally?—On the 28th July, allowing for the time the men began to come back from sick-leave, there were fourteen admissions—one measles and thirteen influenza; and of the other diseases eight were readmissions and had been examined by the doctors, and were taken to the grandstand ward for watching.

61. *Dr. Martin.*] Were any of them carriers?—No.

62. Did any of those readmissions develop cerebro-spinal meningitis?—No, no man coming back from sick-leave had cerebro-spinal meningitis.

63. What about the man at Dannevirke?—I do not know anything about him.

64. Did he go from Trentham?—No, I understand not. I only saw it stated in the newspaper.

65. *The Chairman.*] Before the men are allowed to go on sick-leave, or before they are discharged from the camp, are their throats examined?—Yes, in every case.

66. To see if they are carriers or not?—To see if they have anything suspicious about their throats. You cannot examine them all bacteriologically, but every man is examined before going on sick-leave, and if he has got a sore throat he is not allowed to go out, but is kept in the ward.

67. *Dr. Martin.*] How many days do you keep a man in the ward if he has a sore throat?—You cannot fix the day that the sore throat will disappear.

68. Supposing a man happens to be admitted to a ward with a sore throat, how long a period do you keep him there?—They are all looked upon as influenza cases. The influenza cases generally remained for a week and then were examined, and any one with a still suspicious throat was stopped.

69. *The Chairman.*] But I understand there is a gargle parade every day?—Yes, that is in the camp.

70. That is still continued?—Yes.

71. And I suppose you gargle the hospital patients more than once a day?—That is left to the Medical Officer. There is a Medical Officer there to see the gargle parade carried out. It has been done twice a day by the men, and the inspection by the Medical Officers is bi-weekly. Every man's throat is examined twice a week.

72. A man might have a sore throat and might not mention it?—Yes, they often do. A man may have a rash out and not mention it.

73. You have found cases of that sort?—Yes. There was one case I examined on the 8th July, when the camp broke up—a man with measles. He did not feel a bit sick, but he was caught and prevented from going to the new camp and introducing it.

74. When you have a suspected case of cerebro-spinal meningitis, is that isolated from the others and put into a separate ward at the hospital?—Yes, as soon as there is any suspicion.

75. And are quarantine methods adopted with regard to those?—Yes. The men in the immediate neighbourhood of him are isolated also and taken to a different part. Swabs are also taken from their throats and bacteriologically examined.

76. Do you consider you have the facilities there for properly isolating those men and keeping them under observation?—Oh, yes, it can be done quite well now.

77. When did you begin to get those facilities?—When the numbers in the hospital were reduced.

78. That would be at the time of the break-up of the camp?—As soon as we got the kiosk empty. That is used for the isolation of the cerebro-spinal meningitis cases. That was looked upon for days beforehand as the place where the cerebro-spinal meningitis cases must be put, but bad weather came on, and we could not move the patients.

79. It would have been dangerous to have done so?—Yes, in that cold stormy weather.

80. Do you remember the date you removed them?—We were going to remove them on the 19th, and many patients were being shifted, but the cerebro-spinal meningitis cases were not shifted till the 20th.

81. As regards the cerebro-spinal meningitis cases, is the kiosk strictly quarantined?—Yes.

82. So that persons without authority cannot go in and out?—No one can go there without permission except nurses and doctors. Friends and relatives of patients can go in, but they take the precaution of wearing gowns and face-masks, and have to keep at a distance.

83. With those precautions have you any reason to suppose that the rest of the people out there, whether in the camp or hospital grounds, are likely to be infected from the kiosk?—I do not think there is a chance. There is a considerable air-space.

84. And I understand there is an objection to the removal of those cases to a distance?—Yes; it is looked upon as almost fatal. Some of those there now could not be removed—it would be inhuman to remove them.

85. As regards the treatment, and so on, do you expect a large percentage of recoveries where you diagnosed the illness in time?—Yes; they seem to be all recovering just now, or improving. They vary from day to day. On Friday last one man was looked upon as hopelessly ill, and yesterday he appeared to have a good chance. He is getting treatment, and is certainly better. All the others are on the mend, but they are all very chronic. Some of them managed to get sick again, but I do not know whether it is the cerebro-spinal meningitis trouble plus something else or a cold.

86. They have to remain in the hospital apparently for about a month in many cases?—Yes, some have been in six weeks already.

87. It seems to be a slow process of recovery?—Yes, in some, and in others it is absolutely fatal in thirty-six hours. It seems to vary very, very much. One man died in thirty-six hours after he was discovered, while others have lived on for six or seven weeks.

88. Now, with regard to the conditions of the camp, you have been there now since the 29th June, and you have seen the various alterations and improvements that were in progress, both in regard to sanitation, clearance of surface water, hutments, and otherwise?—Yes.

89. Could you tell us generally whether those conditions are now reaching a satisfactory state?—As regards the surface water and drainage, that seems to be well taken in hand. The roadways are being formed.

90. There are large cuttings there?—Yes. There is a railway-siding in, which has been attended to, I think, by the Public Works Department. They are ploughing up the surface of the roads and grading them, and there will be water-tables to carry away the surface water.

91. And passages from the huts?—There will be paths along the front of the huts.

92. The water gets in between the huts?—Yes. I do not know what is to be done with regard to that, but something will have to be done, because the water is lying between the huts now.

93. Could that be done with ploughing and draining?—I do not know. It will require filling up to some extent, and I think it will be necessary to carry the route water into proper gutters.

94. There is no catchment except the natural ground?—No. Trenches have been dug.

95. You look at these matters, I presume, from the point of view of P.M.O.?—Yes.

96. You think it is necessary that this should be attended to so that the water shall not be allowed to collect between the huts?—Yes. I have heard it is in hand, but I should like to insist on the spouting being attended to.

97. You have heard suggestions with regard to the hutments—that at any rate not more than thirty-five men should be placed in a hut: from your experience, do you think that is a safe and proper number?—I would go by the floor-space. I cannot give the exact figures. I worked it out, and I thought thirty instead of thirty-five men should be the number.

98. *Dr. Martin.*] Would that be your recommendation to the Commandant?—Yes. It is not likely to be exceeded, because bunks are to be put up.

99. *The Chairman.*] There are a great many bunks there now?—Yes. That would provide for fifteen men a side.

100. Do you consider that separate hutments should be provided for meals?—That was one of my early suggestions.

101. Has that been carried out?—I do not know. They have plenty of huts there just now for doing it.

102. Although no hut has been set apart separately, the huts formerly occupied are now used as dining-rooms?—Yes.

103. And from your experience you consider that is a very prudent thing to do?—Yes, personally. I much prefer that idea to sleeping and messing in the one tent or hut.

104. Now, with regard to the ventilation: one recognizes that the ventilation must not be such that the men themselves can of their own will shut it up—it is compulsory ventilation. There is a suggestion that each side should be provided with flaps?—Yes.

105. Do you approve of that suggestion?—Yes, I think that would meet the case to some extent.

106. Then, there would have to be some officer in charge to see that the flaps were not abused?—Yes.

107. Do you think one could safely trust the officer with regard to that?—A non-commissioned officer—yes, I think so.

108. *Mr. Ferguson.*] Would the same thing be gained by having an inclined plank running the whole length of the shed immediately below the opening so as to throw the draught up in the centre of roof?—I do not think that would improve matters, because the cold draught comes up into the roof and falls down over the men at the side.

109. Now it comes down on to the heads of the men?—Yes; but on a still night it would not do that. The cold air forces itself in and down upon the men on the far side. I asked one of the non-commissioned officers, who agreed with me in that, and he had arranged his hut in such a way as to avoid that. He said the prevailing wind was from the north-east, so that the breeze blew on the men on the west side of the hut. Therefore the men on the west side of the hut made cubicles for themselves, but the men on the east side did not require them, the draughts having blown right across.

110. Would you have outlets in the roof?—Yes, in the ridge; that would obviate the draught.

111. Is anything being done with regard to lining the huts?—Not yet, that I know of.

112. Has the use of bunks in any way relieved the complaint about draughts?—I have not heard.

113. Do you get complaints now about coldness and draughts experienced in the huts?—No, I have not heard any lately—I have not made inquiries—there have been so few men there. It is only now the men are beginning to come back.

114. Do you consider that lining should be added?—I should think so, for personal comfort.

115. Do you know if the openings left by the corrugations of iron against the walls—the openings at the floor-level—have been stopped up?—They have been in some huts by the authorities, and by the men in other cases with paper, which is being removed.

116. Paper would only collect dirt and dust and filth?—Yes, and vermin; but an attempt was made to stop that by putting in a corrugated plate lath.

117. That is, in the new huts?—Yes.

118. But if the men are on stretchers, is there any objection to a small amount of draught coming in on the floor—it would be rather an advantage?—I do not think so.

119. Providing the men are raised off the ground by stretchers, is it not an advantage to have a small entrance of air?—If it is not on their heads.

120. *The Chairman.*] Do you agree that the matter is helped by the nature of the outer material being galvanized iron?—It is colder.

121. That leads to a more enlarged variance in the temperatures?—Yes, both extremes.

122. Are there further huts going up now?—Yes, some wooden ones are being put up. I have not had a chance to inspect them.

123. Do you know whether they are introducing improvements in the new huts or not?—I cannot say.

124. Who is in charge of putting them up?—The Public Works Department.

125. Now, you have seen the drying-apparatus that is in use there—marquees with braziers in them?—Yes.

126. Do you consider that effective?—Yes, they are doing very well; but what one would like in addition would be a fan arrangement to produce a draught.

127. They have electric power out there?—Yes, they are getting it.

128. And there would be little difficulty in fixing that up?—I think, very little.

129. You think a fan arrangement in the marquees?—Yes, in the huts used for drying.

130. Would huts be set aside instead of marquees?—Yes.

131. That would be an improvement, would it?—Yes. We have a place in the hospital we are using in that way, with braziers, for drying the bedding.

132. This drying system was only adopted after you went there?—Yes; I do not know that there was any before.

133. It is a very proper thing to have, I presume?—Yes, I think so. In very bad weather there is a lot of wet clothing.

134. What do you say as to having porches to the huts, where the wet boots can be taken off and the mud prevented from being taken inside?—I think that is the very first suggestion I made when I saw the state of the men's boots going into the huts. It was very muddy then, and one saw the camp at its worst.

135. I believe at the time you took charge they had just got into the racecourse buildings, the measles cases were increasing, and it was a centre of trouble which you landed in?—Yes, about the worst of it.

136. Now, as to the distance between the huts from a ventilation and sanitary point of view, do you think they are sufficiently far apart, or have you any observations to make?—I myself have thought they were close together. I think the space between the huts is less than the width of the huts themselves. I thought it should have been at least that; but that is an expert matter.

137. You do not advance any opinion of your own on that subject?—No.

138. Then, as regards the sun, you know how the sun works out there?—Yes, the lie of the huts is not quite north and south, but they are not far off it.

139. Do you think they are sufficiently far off to necessitate any change being made in the way of twisting them round?—I do not think so.

140. Are they putting the new huts up in the same line?—Yes, in the same line; there is no alteration that I know of.

141. *Mr. Ferguson.*] In your opinion, the new huts should be facing as much as possible the north and south?——

142. *The Chairman.*] Is not the question of the sun getting to the huts of great consideration?—The sun seems to be a great element in destroying the germs of cerebro-spinal meningitis.

143. In regard to the sterilizing-apparatus at the camp, I suppose it is not as effective for all purposes as steam sterilization? We understand there are certain things the present process will not deal with satisfactorily, such as lice?—I do not know. They get a very good dose of formalin. A 10-percentage of formalin is being used, the blankets are folded, and that will permeate through any material. I think that is very hard on any germ or parasite that is there. Steam disinfection has been talked over by Dr. Valintine and myself many times, and he hopes to make use of some steam there for the purpose in the future.

Dr. Valintine: At the very beginning, I suppose on the 24th or 25th June, I wrote to the Sanitary Officer, Dr. Finch, in regard to establishing a steam disinfector in the camp in conjunction with the Agricultural Department. Plans and specifications have been drawn up, and on the 24th June it was decided to have a steam disinfector at the camp as soon as we could get the electrical apparatus in working-order.

Dr. Martin: I asked the question, and I understood that formalin was to be continued.

Dr. Valintine: I said in my evidence that I was quite satisfied with formalin disinfection.

Dr. Martin: I understood from the evidence that there was no intention of putting up a steam disinfector. We were told that it was not to be put up.

Dr. Valintine: I do not think I conveyed that impression in my evidence.

The Chairman: If you are quite satisfied with the present system there is no need, possibly, for an alteration.

Dr. Valintine: I am quite satisfied with the present system, but with steam we can put through a greater number of articles. If we had the steam available we would like to have a steam disinfector.

Mr. Ferguson: But you have not the steam, have you?

Dr. Valintine: I understand there will be steam available. I wrote a letter about it, which I will show you.

144. *The Chairman* (to witness).] With regard to the use made of the present process, are all the patients' things disinfected: is there a regulation on the subject which has to be observed?—Yes, and special officers for the purpose.

145. What is the regulation: we want to see that those things are done?—The patient to be discharged on a certain day, say, to-morrow, would have his kit taken over by the disinfecting officer to-night before 8 o'clock, and that would be sprayed and fumigated at night, and in the morning he would get it back.

146. So that no patient is allowed to leave the camp without all his things having been disinfected?—Yes.

147. *Mr. Ferguson.*] Including his greatcoat?—Yes. It is done during the night, when the man is in bed. All his things are taken from him and the disinfection carried out.

148. *The Chairman.*] You have had no experience with a contingent leaving?—Not previously, but with the present contingent every kit is being disinfected with 10 per cent. formalin. The process is going on now.

149. Will that kit be handed back to the man?—Yes, after disinfection.

150. You hope it will not be touched again by the time he leaves?—It is to be hoped not.

151. It is impossible to disinfect them all on the same day?—Yes.

The Chairman: The letter from the Sanitary Officer reads, "Disinfection at camps: With reference to the enclosed memorandum from the Hon. Minister, I beg to inform you that the clothing and kit of every man who has suffered from any infectious disease is efficiently disinfected before such patient goes on leave, method varying according to circumstances. At Kaiwarra a railway-carriage has been utilized, and blankets, kit, &c., are lightly sprayed with formalin and then disinfected by means of formalin-vapour lamps. Articles of little value are burnt. Cars used to convey patients to hospitals are fumigated in every case. At the Victoria Ward all clothes are fumigated, and the patient is given a warm bath in Jeyes' or lysol on the morning of leaving. At Trentham and Tauherenikau similar precautions are taken. At Waikanae there is no disinfecting-chamber available, and the clothing, blankets, &c., are there sprayed with formalin and put out in the sun to dry. Baths are also provided. At Rangiotu blankets and equipment of infectious cases are sent with the case to Palmerston Hospital, where a special fumigating-chamber has been built to deal with same. You may take it as definite that no case of infectious disease, or any person who has been in close contact with same, is allowed to leave the camp without complete and thorough disinfection. In addition, as you know, every man in the Forces, sick or well, gargles the throat and washes out the nose and posterior pharynx with suitable antiseptics daily."

152. *Dr. Martin.*] I asked the question of Dr. Sydney Smith on the 6th August, whether a steam sterilizer was to be installed, and he said it was not, and there was no intention of doing so?—It does not mean to say the present system is inadequate, but the steam system would be more expeditious.

153. *The Chairman.*] We have had specific cases deposed to by various witnesses of inattention on the part of the orderlies and want of equipment. Have you seen any complaints that have been reported?—No; I have not had any definite reports.

154. But in the newspapers in regard to the evidence given before this inquiry?—Yes, I have seen that.

155. Have you any observation to make upon any that have attracted your attention?—No.

156. For instance, one that was spoken of was the case of Badger: do you remember anything of his case?—I remember his illness. I did not attend to him.

157. At the time you arrived were there nurses there?—On the 27th the nurses came.

158. How many came there then?—Two, I think; then within a day or two seven or eight more; and then within a very short time we had twenty-one nurses and twenty-two probationary nurses.

159. Then you had a certain number of orderlies?—Yes, and fatigue-men.

160. Those men were not all up to the standard?—They varied, but they all did their best. Some of the South African men were rather expert.

161. Was there any system when you arrived of notifying the next-of-kin of patients who suddenly became seriously ill?—They were notified at that time as far as possible from headquarters, I think, as the cases were reported.

162. You would report to the Camp Commandant?—When I came on special clerks were sent down from headquarters, and a record clerk was sent from town, and the reporting to friends and relatives was kept very thorough.

163. It wanted a certain staff and organization?—Yes. When they were coming in small numbers it was not very difficult to do, but when the tremendous rush came then special clerks were obtained from the 27th onward.

164. There were cases in which a man might be going on well and suddenly become seriously ill?—Yes, that is so.

165. Was it the practice to send word to the parents of every one who went into the hospital?—Not in the first place. A rule was soon made to that effect.

166. Only serious cases were notified in the first instance?—Yes, I think so—before I arrived there.

167. I have a letter here of the 25th June in regard to the question of a steam disinfector. It reads, "Would you please get in touch with Mr. Read, of the Veterinary Department, with regard to the erection of a steam disinfector, which I believe can be run in connection with the machinery for the electric-light plant or the machinery for the hot-water shower-baths. The Veterinary Department is also very anxious to have a steam disinfector for the disinfection of some of their material." So that it would be run in connection with the horse-lines?——

Dr. Valintine: Yes, as well as the camp.

Mr. Ferguson: Has anything come out of that?

Dr. Valintine: As soon as we can get the steam we want the apparatus there. The plans and specifications have been drawn up, and as soon as we can get the steam the matter will be put in hand. No one denies that a steam disinfector would be very useful for disinfecting mattresses and suchlike.

The Chairman: It is not being held back on the score of its going to cost £1,000 instead of £500?

Dr. Valintine: No.

Dr. Martin: The argument put forward was that it was too costly.

Dr. Valintine: We do not know yet whether we can get the racecourse buildings permanently, and therefore it would be absurd to put up a steam disinfector which would cost about £1,000.

Dr. Martin: The point is that they were satisfied with the present method of formalin, and I was told in evidence that a steam disinfector was not to be put up.

Dr. Valintine: Not until we knew definitely whether the racecourse buildings are to be permanently used. When we know definitely that they can be we shall be able to make all sorts of innovations which it would be absurd to do now.

Dr. Martin: The racecourse buildings have not been obtained permanently.

Dr. Valintine: I should like to know from the Commission whether we can look upon them in a permanent light.

The Chairman: I understand that has already been decided upon to a certain extent.

Dr. Valintine: I am not aware of that.

The Chairman: I think a Board of medical men decided that the camp might be resumed, at any rate so far as any question of sickness is concerned.

Dr. Valintine: But we are using the racecourse. I have to wait the decision of the Commission whether we can regard the use of the racecourse buildings as permanent.

The Chairman: It would be only our finding as to whether Trentham is or is not a suitable place for a camp.

Dr. Valintine: Yes. Then I may go on making arrangements at the racecourse?

The Chairman: I did not say that at all.

168. *The Chairman* (to witness).] Did you see a description by Sergeant Badger in regard to getting correspondence delivered?—Yes.

169. The in-and-out character of the patients made it very difficult to track them?—It would, of course.

170. And then, of course, the hospital is quite a distinct organization from the camp?—Yes.

171. Did you see what he had to say on the subject?—I did, but I do not remember it now; I saw the newspaper report.

172. The official report is as follows: "It was then, I understand, the duty of the corporal of that platoon to see that the letters were redirected to wherever that private had gone. As the private in question had been sent to the kiosk hospital, it was the duty of the corporal to see that those letters were sent to the kiosk, and have an effort made to find the patient. Subsequently the grandstand was used, and the buildings near the gate. It was the practice for an orderly to go round and call out the names for whom there was correspondence, but it was possible

for those patients to be asleep and for the man alongside of them not to know their names. Then the corporal would attempt to find the patient in another part of the hospital. The result was that after a great deal of wandering round on the part of the corporal somebody would say, 'Oh, he is at Kaiwarra.' There seemed to be people there who could give information on every subject in the world. The letter would then go back to his original platoon, and the whole thing would be started over again." Is that something like a fair description of the position, do you know?—There was a great difficulty when the rush was on.

173. The official report of Sergeant Badger's evidence says, "The difficulty in connection with the hospital again was insurmountable owing to this fact, as I may show later, that we would have over one hundred and twenty admissions in a day and perhaps something like sixty discharges, and it was absolutely impossible to keep a record of those names—the names of those coming in and those going out." It was an impossible task?—Yes.

174. That is correct?—Yes; and a marquee for clerks was erected.

175. Have you at all times had sufficient medical men there in point of numbers?—Yes; I consider we have had.

176. The doctors were working a good many hours, were they not?—Yes, working very hard; but there was no complaint from them.

177. Going fourteen and fifteen hours a day?—Yes.

178. Does not that show there were not enough there?—Some were working those long hours in the hospital buildings. But if any one else had been introduced I think it would have caused confusion. I do not see how it could have been done otherwise.

179. There is Dr. Harrison, for instance: he had to come into town, visit Kaiwarra, Izard's house, Berhampore, and Victoria Ward?—Yes; he had a good deal in that way. He left a Medical Officer in charge of his ward at the racecourse while he did that. He got through it perfectly well. I asked him if it was too much, but he seemed to enjoy the life. Of course, the majority of cases were straightforward cases, and did not take up a great deal of time.

180. They were simple cases?—Yes. Later on a doctor was appointed for Wellington—Dr. Goldstein. It was not because there was any absolute need, but because Dr. Harrison's time for extended leave was approaching, and Dr. Goldstein was put on to take up part of the work.

181. Are you a member of the Medical Board which determines whether a man shall be discharged from the Force as being medically unfit?—Not necessarily.

182. There was the case of a man named Thomson, whom we had here?—Yes. I have been on most of the Boards, but not that.

183. Did you see an account in the newspapers about Thomson, as to what happened to him?—No, I did not.

184. What do you do when a man comes up to be examined as to whether he shall continue in the service or not?—There is a printed form on which we write whether the man is fit or not. The question is whether he is fit for military services, and we say Yes, or No, as the case may be.

185. Does the suggestion as to whether he is fit come from you or the Camp Commandant?—From the Medical Board. As a rule a man is recommended to the Camp Commandant to be reported on, and he later comes before a Board of three Medical Officers.

186. Is he stripped and examined?—Some indication is given as to what is his trouble, and the affected part is examined.

187. You may have known his history through his illness?—Yes; one of the doctors probably knows him.

188. In that case, if the previous history is known he would not be stripped and examined?—It depends on what the cause is. In any case, if a man complained he would be examined.

189. Do you know if a strained muscle is considered sufficient?—I can imagine a strained muscle being sufficient.

190. In the case of a strained muscle, where would you look to find out?—He would describe the symptoms and where there is pain.

191. Well, here is a man who says he was dismissed without a proper examination, and his certificate says he was dismissed on the ground that he had a strained muscle. Were you a member of that Board which sat on the 2nd July?—No, I am sure I was not.

192. *Dr. Martin.*] Can you tell me the number of measles cases you have admitted at the racecourse hospital from Trentham during the last week?—You mean the number of measles cases that have occurred?

193. Yes, at Trentham?—For the last week I have a record of only one measles case.

194. Has any case from the camp to the racecourse hospital developed cerebro-spinal meningitis during the last three weeks?—From camp to hospital with some other diagnosis?

195. Has any case admitted to the racecourse hospital from the camp developed cerebro-spinal meningitis during the last twenty-one days?—Yes; there is one man who is still a suspect.

196. What is his name?—Sulman.

197. Only one case?—That is the only one I know of. That was on the 31st July.

198. *Mr. Ferguson.*] Had he any previous history? He had been in camp for some time. He is only a suspect still.

199. *Dr. Martin.*] He was admitted on the 31st July, and is still a suspect?—Yes. He is in the kiosk; he is not a marquee case. I am wrong in saying that he is still a suspect.

200. He is in the kiosk, among the other cases of cerebro-spinal meningitis?—Yes. I was wrong in saying he was only a suspect; but his is only a mild case.

201. *The Chairman.*] He is under observation?—He has passed that stage. He is there, and is more than a suspect.

202. *Dr. Martin.*] In the last three weeks there has been only one case of cerebro-spinal meningitis from the camp?—There was a case since that, but I am not quite sure of it.

203. Another case?—I cannot state from memory what that is.

204. Is that cerebro-spinal meningitis?—Yes. I have a case mentioned here, but I cannot remember it or say anything definite about it.

205. Do you consider that Trentham Camp at the present time is free from measles?—There have been three cases of measles admitted to the hospital in three weeks.

206. Is Trentham Camp free from an outbreak of influenza?—It is practically free now.

207. Have any cases of influenza been admitted during the last week?—There have been no cases of actual influenza. Cases with congested throat have been brought in for preventive purposes.

208. Can you give me the total number of admissions at the hospital from the camp during the last week—admissions for sore throat—I mean throats under observation and cases of sore throat?—Thirty-four is the total number of new cases admitted from the camp to the hospital, as compared with a much larger number of readmissions.

209. Thirty-four throat cases were sent from the camp to the hospital?—Thirty-four new cases, as compared with eighty readmitted—sick men who have come back and been taken in for observation and attention.

210. Have any of these thirty-four cases developed any other illness?—Speaking from memory, I should say No.

211. Are any of them seriously ill?—No.

212. When was the last sick-parade at Trentham Camp?—There would be one this morning.

213. How many men reported sick?—I did not get word. There were very few, I know.

214. Say yesterday, then?—There were two at last evening's parade, and about four in the morning.

215. *The Chairman.*] Their trouble would not necessarily be influenza or measles?—No; it may have been throat. I know that one case was a poisoned finger.

216. *Mr. Ferguson.*] Out of about how many men?—Five or six hundred.

217. *Dr. Martin.*] Since you have taken over you have seen cases of measles taken from the hutments and sent away?—Yes.

218. What was done to the hutment directly the case was taken out—what was done to the hutment itself and to the men who had occupied—that is, after you took over on the 29th June?—I do not know that very much was done in a case of measles.

219. I want to know if anything was done. A man would be taken out of a hutment suffering from measles: what was done with the men who occupied the hutment and with the hutment itself?—In measles I do not think much was done. Measles cases were generally taken not from the hutment, but from the sick-parade.

220. But they came from the hutments?—Yes.

221. What was done to the hutment: was anything done?—Not that I am aware of.

222. Has anything been done to the hutments?—Since then they have all been washed out, and had the floors scrubbed out and washed with kerol—all the huts.

223. I take it that since the 29th June, if a case of measles developed in one of the hutments, the man was taken out and sent away, but nothing was done to the contacts, nothing was done with regard to sterilization, and nothing to the hutment itself?—No, not when the large numbers were coming out. The floors, of course, were always being cleaned.

224. But no method of isolation was followed?—You could not isolate the whole lot, because cases were coming from every hut.

225. The whole camp was affected?—Practically, yes.

226. Was any man allowed to go out from the camp among the civil population during that period?—There was restricted leave for a long time. The camp was quarantined.

227. Could the public visit those hutments at all?—No.

228. From what date?—From the time that typhus was suspected—from Tuesday, the 8th July.

229. A certain number of men went on sick-leave at this time: is that so?—Yes.

230. Men who had not developed measles, or cerebro-spinal meningitis, or headache?—They would go from the hospital—those who went on leave.

231. I mean ordinary leave, not sick-leave—a certain number of men went away from camp on ordinary leave at about that time: is that so?—I do not know about that.

232. But you would know, as Principal Medical Officer: I mean, men going on ordinary leave?—Yes, there would be some.

233. Some men did leave the camp at that time on ordinary leave?—I cannot say from memory.

234. These men had been exposed to infection: would anything be done to sterilize their clothes or to examine them medically before they left?—They would all be examined medically.

235. You see, there have been charges made that measles cases have been taken out of a hutment and sent to the hospital, and that nothing has been carried out with regard to isolation or sterilization of the equipment or of the hut itself, and that later on some of the men who occupied these hutments went home on leave: is that true?—You must remember that the camp was practically empty all this time.

236. Still, there were men there?—Yes.

237. *Mr. Ferguson.*] The Sixth Reinforcements were all there, and they have received extended leave since?—Yes.

238. *Dr. Martin.*] We want to find out the date that leave was given?—I could not tell you. I do not quite see what you mean.

239. We want to find out if any effort has been made to prevent the spread of infection?—There was disinfection, and so on.

240. From the camp and the hospital?—From the hospital they were all disinfected, certainly.
241. Were any from the camp?—That I do not know.
242. The Sixth Reinforcements were in the camp at this time?—Yes.
243. There were men of the Sixth down with measles?—Yes.
244. Taken from these hutments?—Yes; very few of the Sixth.
245. Was any man out of a hutment allowed on leave within a fortnight of the occurrence of any case in that hutment?—All leave was stopped after the 8th July, except extended leave for men who were approved.
246. I am speaking of the 29th June?—Then there would be, yes.
247. Then we may take it that a man would be taken out of a hutment suffering from measles, and no effort be made to isolate the contacts, and these contacts would be allowed out into the civil population within a fortnight?—Yes, I think that is so.
248. We want you to be quite definite?—I do not remember whether disinfection of those contacts was done. I really cannot remember.
249. In that case the measles would be carried from the camp into the civil population?—If that is so, yes.
250. It was possible?—I cannot remember whether that disinfection was carried out. I know some precautions were taken.
251. If you are not sure I do not wish to press you?—No, I cannot remember just now.
252. Now, with regard to these carriers of whom we have heard at Dunedin and Christchurch: are they from the Sixth?—I could not say. I have not had their names or any particulars.
253. Have you had any evidence at all that carriers have been discovered from the Sixth?—No.
254. Had you anything to do with Berhampore?—Nothing at all.
255. *The Chairman.*] Were any patients sent in to Berhampore by you?—Not by me personally—they would have been sent in by the officer out there: I never sent any.
256. Have you any control over the persons sent in there?—I would have had, but there was no need to refer them to me.
257. Convalescents were sent there after your time, were they not?—Yes.
258. With regard to the question I asked you at the first as to the progress or decrease of the troubles, could you state the increase or decrease in percentage? You have it perhaps shown on that chart?—No, I have not the percentage. It would have to be worked out on the reduced total number in the camp.
259. We should like to know that, if it would not be much trouble. Then, could you give us specific information with regard to what was done in reference to contacts and their detention in camp, and so on, after the 29th June—what was done in the way of disinfection and preventing their mingling with the civil population?—Very well.
260. *Mr. Ferguson.*] And I should like to know whether a return was made showing the number of men in Kaiwarra Hospital, and Berhampore, and Wellington Hospital, and so on, so that we might know whether your Medical Officers in camp had before them the vacancies which could be filled up?—Yes, there was a daily return.
261. Can you obtain that over a long period—before you came there?—Not before I came there.
262. Can you let us have that return since you have been there?—I have not had that myself. I dare say it could be obtained.
263. What we should like is a daily return of the patients in each one of the subsidiary hospitals?—Very well; that can be produced quite easily.
264. And I presume the men in the racecourse hospital as well?—Yes; that is made up each morning.
265. *The Chairman.*] The percentage of admissions is the other point?—Since when?
266. *Dr. Martin.*] The 29th June?—It will be hard to find the number in camp. Perhaps I can get that from the Commandant.
267. *The Chairman.*] It seems to be supposed that it is within the scope of our Commission that we should report as to whether the camp is in such a condition that troops may safely be brought in there now. Whether that is exactly within the scope of the Commission is to me a matter of doubt. At any rate, we are asked whether the camp is suitably situated, equipped, and arranged for the purposes for which it is used, and whether sufficient sanitary or other reasons exist for the removal of the camp from its present situation. We have had the history of this camp told to us from the medical point of view—that there was a sort of gradual increase in the cases of measles as fresh men came in, and that by the middle of April there had been a very large increase in the measles cases, so that accommodation at Berhampore was then obtained. Influenza appears about the same time to have broken out in the camp, and to have taken hold of very large numbers there. Measles also, as you know, increased very rapidly. And we have had, alongside of the measles and the influenza, these cases of cerebro-spinal meningitis. Now, you have been in charge there since the 29th June. You know the medical history of the camp from that date. Would you undertake to say, in view of the criticisms that have been passed upon the habitation of the men—the hutments—and of the sanitation and drainage—criticisms that you yourself concur in—would you say that it is a safe thing to bring in batches of troops to the camp?—It is a very difficult question to answer, and time alone will prove; but with the improvements that are being carried out, one hopes that by the time the large number of men who are coming in have arrived—the 25th of this month—things will be in a satisfactory state.
268. Do I understand that you see no objection arising from the site of the camp and the climatic conditions?—It is not perfect, but I think it is very, very good.

269. Then it is what may be called the allied conditions that we have to look to, such as the question of sanitation—the artificial conditions?—Yes.

270. And you think that when these artificial conditions, now alleged to be defective, are remedied it will be safe?—Yes, for a considerable number of men, but not so many men as were there before. It was overtaxed before.

271. What number would you suggest?—There were seven thousand men in at one time: that is far too many. I suppose four thousand would be a fair number. May I make a remark regarding that question of disinfection of measles cases? Orders were issued by Colonel Valintine bearing on that matter quite early.

272. What date?—Quite early in July. It is not actually dated. It would be about the middle of the first week in July. The second paragraph here states, "The separate isolation of the three diseases now epidemic must be strictly adhered to. All cases of infectious disease shall be notified. . . . As regards measles or influenza, the ordinary precautions against spreading the disease must be strictly adhered to." Those were carried out by the camp officers.

273. Were these the instructions that were issued? They might be very useful as showing what steps might be taken?—This is only one lot. There was such a rush on at that time that it was impossible to segregate the whole lot or disinfect the contacts, but a good deal was done. "Medical Officers must exercise their own judgment as regards the number of persons to be considered as contacts. If in doubt as to the procedure the Sanitary Officer is to be consulted." I may say that at that time Major Finch and Major Smith were in constant attendance on the camp, and they were doing all that part of the work, and I know it was carried out very thoroughly. When you asked me I could not quite recall the fact.

274. *Dr. Martin.*] We want to find out if the contacts in the hutments were isolated for a fortnight before going on leave?—I cannot quite recall what was done with those. I think all leave was stopped for a time.

275. It has been stated that these cases got out among the civil population without any examination having been made with a view to isolating them?—I think that is not right. The camp was quarantined. I know we were being besieged with requests to relieve the quarantine.

276. At the 29th June?—Quite early, but one cannot fix any definite date. These precautions were taken by the Sanitary Officers, who were in attendance practically the whole time while that big rush was on.

277. *Mr. Gray.*] You took charge, I think, on the 29th June?—Yes.

278. When were you first approached to see whether you would undertake the duties?—I think it was on the 22nd. I had a wire from Colonel Valintine.

279. You spoke of some overcrowding in the huts after the 29th June?—Yes.

280. Would not the company commander be responsible for that under the regulations? Rule 2 of section 2 of Chapter I in this "Manual of Elementary Military Hygiene" says that the sanitary organization of the Army is based on the principle that the commander of every unit and formation is responsible for the sanitary condition of the quarters of the localities occupied by his command, and he is to take all measures necessary for the preservation of the health of those under him. It would be the duty of the commander of the unit, would it not, to see that there was no overcrowding amongst his men?—Yes, even the non-commissioned officer in charge of the hut would see to that. I do not mean to say that overcrowding up to sixty was permanent, but on occasions there was that overcrowding.

281. *The Chairman.*] Men could steal in there and sleep if they chose, and no one would be the wiser?—Yes.

282. *Mr. Gray.*] For that neither you nor your subordinate Medical Officers could be held accountable?—No.

283. You think the huts should be lined?—I think so, personally.

284. With a view to making them warmer, I suppose?—Yes, to avoid the extremes of heat and cold.

285. Would it not add to the risk of infection to having lining?—I do not think so.

286. What would you do supposing you had the huts lined with wood that had not been treated in any special way if there was a case of infectious disease in the hut?—That wood would be sprayed and cleansed in the ordinary way.

287. Could it be done more readily and more effectually than with material such as iron?—The surface of the iron itself would certainly sterilize more easily.

288. *The Chairman.*] The uprights are in the rough, are they not?—Yes.

289. *Mr. Gray.*] It is suggested to me that untreated wood would be more likely to absorb and retain infection?—It has to be used in the interior of hospitals, and so on—not absolutely untreated.

290. In hospitals it is treated in some particular way?—It is painted.

291. Would you suggest lining these huts with ordinary rough timber, or canvas, or material like that?—Some smooth-surfaced material would be the best—malthoid, or something of that sort. I do not know whether it would be too expensive.

292. There is the question of cost again, is there not?—Yes.

293. Do you not agree that it is more advantageous to have the walls as impervious as possible—impervious to moisture?—I do not quite follow your meaning.

294. Would not a solid substance like galvanized iron be safer in the matter of infectious diseases than any absorbent material?—It would be better, but I do not think it would matter in that case.

295. Now, with regard to aspect: the huts lie, I understand, nearly north-west and south-east. Do you find much fault with regard to their situation in that regard?—Not very much, but I think they would be better north and south.

296. You know the prevailing winds are north-west and south-east. Is there not an advantage in having the wind blow directly between the huts rather than against the huts?—I do not know that that would matter very much.

297. You spoke of the number of doctors and the work they had to do; Captain Harrison's name was specially mentioned. Did you consider that Captain Harrison ought to have had some assistance in the duties he performed, mentioned by His Honour?—He had assistance at the racecourse hospital: he had one or two under him.

298. I do not suggest that Captain Harrison made any complaint; but in your opinion did he have too much to do in visiting the patients in Wellington as well as at Kaiwarra and Trentham?—At the time I thought of it, and it seemed to him a relaxation.

299. And Captain Harrison made no complaint?—He made no complaint, and when he was away from Trentham there were two or three juniors there to keep his work watched.

300. Now, as to the disinfection of contacts: supposing a man were taken out of a hut with measles and sent to hospital, would it be possible to have all the rest of the occupants of the hut isolated?—No, I do not think it would.

301. Eventually you would have had to isolate the whole camp?—Yes; every hut and every man in every hut.

302. It has been suggested there was some lack of precaution in not disinfecting or treating in some way the men who had come out of the huts and come into Wellington: do you know of any neglect of such precaution?—I cannot instance any neglect.

303. You say that the camp was quarantined for some time?—Yes.

304. What is done in ordinary civil practice if a child or young person has measles in a house: are all the occupants of the house prevented from going about their ordinary avocations?—No, and the quarantine is not so rigid as it was at Trentham Camp. The child is out probably a day or two afterwards running about with its mates.

305. *Mr. Salmond.*] I understand, from the questions that have just been submitted to you, that you have expressed the opinion that these huts ought to be lined in some way?—I think so, for personal comfort.

306. To keep them warmer at night?—Yes.

307. Do you consider that that is necessary in the spring and summer?—No; it would be necessary to keep them cool, perhaps.

308. Your criticism of the huts as being too cold, I suppose, would relate to the winter-time?—That is the only time I have had any experience of them.

309. In the summer-time I suppose unlined iron huts would be quite warm enough at night?—On cold summer nights they would be cold. I do not know what the conditions are out there in the summer.

310. Are you of opinion that soldiers would incur undue hardship in the New Zealand summer by sleeping in an unlined iron hut with proper blankets and bedding?—With average temperatures I do not think they would.

311. And the winter is practically past?—Yes.

312. It would cost a very considerable sum of money, I suppose, to line these huts?—I suppose it would.

313. Some thousands of pounds?—Yes. I am not entering into that matter: I refer only to personal comfort. I have remarked on two or three occasions when I have gone home to Trentham that I was glad our places were lined.

314. That can be well realized in the middle of winter, but warm weather is approaching. This improvement would cost probably some thousands of pounds. Do you think that if these huts are only to be used in the ensuing spring and summer it is necessary now to line them?—If we had that assurance I should be very glad to hear it.

315. And as the winter approached they could be lined then if it was necessary then to use them?—I suppose they could.

316. May I take it that you agree with this, that if lining is necessary it may reasonably be postponed until the approach of another winter, if, unfortunately, these military preparations should still be going on?—One would think so on first thought, but I should like to consider the question.

317. *The Chairman.*] In view of the epidemic of measles and influenza that has prevailed at the camp, and the suggestion that coldness of the huts has, at any rate, not prevented that epidemic, would you not consider it a prudent step to remove any chance of trouble by having the huts lined?—Done at once, you mean?

318. Yes. Variations even in summer will occur, and these are accentuated, we understand, by iron?—I have always held out for lining them, from my experience of them there.

319. *Mr. Ferguson.*] Is not the effect of variation of temperature upon the human being in summer just as serious as in winter—a sudden variation?—Yes. I do not know what the climatic conditions out there are during the summer, but I can imagine there will be cold spells of weather, and then these troubles would come again.

320. *Mr. Salmond.*] But there is this point that I want to submit to you: these men are not living in the huts; they are sleeping in the huts: is that not so?—Yes.

321. In the huts they are to be supplied with stretchers, blankets, and mattresses, and the time of year is spring and summer. Do you, as a medical man, think that troops so housed would be exposed to undue and improper hardships?—One can hardly think they would be improper in summer-time, but the local conditions affect it so much. I know an iron hut near a glacier that would be as dangerous in summer as in winter. And this place is something intermediate between the seaside and a higher elevation.

322. You can form some idea as to the extremes of temperature felt in Wellington. It is not the South Pole, you know, and it is not the tropics: it is a very moderate climate, is it not?

—Trentham is a somewhat damp locality. They tell me there are frequently cold winds. I do not profess to be able to foretell what the conditions in the summer will be.

323. Would you be satisfied as a medical man if you had an assurance that if these huts should be needed for another winter they will be lined before any cold weather comes?—I do not know quite what the conditions would be in the summer.

324. *The Chairman.*] You do not know enough of the climate to be able to say?—No.

325. *Mr. Salmond.*] So you think that even in a Wellington summer troops about to proceed on active service are exposed to undue hardships if they are asked to sleep, with proper bedding, in an unlined iron hut?—It seems a good deal to say, but they are not yet troops. Most of them are recruits from comfortable homes, and if they are subjected to discomforts they will suffer accordingly.

326. As a medical man do you not think that part of the training of troops for the front consists in enabling them to endure a certain amount of hardship which they are not accustomed to?—Yes, they get that by degrees, not all at once.

327. Therefore a reasonable amount of discomfort, and discomfort which they have not hitherto been accustomed to, is an element in their training, is it not?—A reasonable amount, yes.

328. It is suggested by the Defence Department that part of the training of these troops is to enure them to certain reasonable hardships. For that purpose is it not the case that they are kept out at night even in bitter weather sometimes?—They have night marches.

329. If troops were sent away from New Zealand to undergo the rigours and hardships of active service, and had never been exposed to any hardships here, and were not accustomed to them, would not the amount of sickness on active service be greatly increased?—It depends on the climate they get into. I think the training is hardening them all the time. The lining of the huts is a matter of personal comfort or discomfort; I do not think that it is a matter of hardening them. The training is going to harden them.

330. The lining is merely a matter of comfort and discomfort?—And general health.

331. Do you think it affects their health if the huts are not lined in the spring and summer?—I think it has done.

332. Is it going to affect their health during the spring and summer if these huts are not lined?—That is a hard thing to say. It depends on what sort of spring and summer it is.

333. This proposal to line these huts is not a light matter—it is a proposal to spend some thousands of pounds, which might perhaps better be spent in some other way?—That discomfort and condition of health predisposes them to further illness, which is another source of concern.

334. Are you prepared to say that it would be a proper and reasonable thing to spend, say, £3,000, in lining these huts in order to save these troops from a certain amount of discomfort in the spring and summer?—Not discomfort only, but all it leads to. I would not take the whole responsibility of that myself, but I thought it would be more than £3,000.

335. I am only guessing the figure—we will say it would be £5,000: could that money not be better spent, in your opinion?—Think of the thousands of men who are going through there and the total amount of discomfort those men will have to put up with. It is a matter for expert opinion and consultation. I would not like to give an opinion.

336. You know it has been considered by experts?—I do not know their opinion.

HENRY HARDWICK SMITH sworn and examined. (No. 120.)

1. *The Chairman.*] You were at one time Superintendent of the Wellington Hospital?—That is so.

2. At what date did you leave?—I think, about the 14th February of this year.

3. Did you have any arrangement with Colonel Purdy or other military authorities as regards the admission of patients to the Wellington Hospital while you were Superintendent?—A verbal arrangement.

4. Would you tell us what it was, as far as you can recollect?—To take in as many patients as I could.

5. Was there any suggestion as to fifty?—It is a long time back to remember conversations, but I have an idea that fifty was given as practically a maximum of all kinds of patients, infectious and otherwise.

6. Fifty was, according to your idea, the limit up to which it would be possible to go?—We averaged between forty and fifty, I think, for some long time.

7. Can you say when the conversation about the provision at the hospital took place?—No, sir. It was not an arrangement, as far as I can remember, but cases came in soon after the camp was started, and we gradually took them until no doubt we got as many as we possibly could take.

8. This is what Colonel Purdy said: "Colonel McGavin told me that it had been suggested that sick soldiers should go to Berhampore, and he objected to Berhampore. Later on, when the measles began to be bad, I had a conversation with Dr. Hardwick Smith, and he agreed to take in the cases, and I understood then that we could have up to, at any rate, fifty beds." *Q.* "You thought that would be sufficient provision?" *A.* "Yes. We were talking about measles at the time, and I understood it was apart from the ordinary run of special cases, which never totalled more than twenty per month, if that." *Q.* "So that you would get up to fifty?" *A.* "Up to sixty-five or seventy beds." Do you remember any arrangement of that sort?—No. I think Dr. Purdy must have been mistaken, because we could not possibly take more than a certain number—twenty to twenty-five, or even thirty at the most, measles cases; and I am certain I was referring to the total number of cases when I said that.

9. Colonel Purdy went on: *Q.* "Twenty-odd cases a month?" *A.* "They do not stay in the whole time." *Q.* "Where would the room have come from for seventy beds in the hospital? How could such a promise have been made as that, without turning people out?" *A.* "You have already been told in evidence that Dr. Barclay had in the tin shed room for, I think, twenty-six, and also that he had opened, I think, one of the consumptive wards. He had thirty-nine patients at one time in there." "*Mr. Gray:* Did not your arrangement with Dr. Hardwick Smith lead you to believe that you could have up to sixty or seventy beds?" *A.* "Yes, up to fifty for measles—that is what I understood. And we never needed that number." You were not there when a refusal to take in more cases was made, were you?—I do not remember doing so.

10. Would you have had room, taking into consideration the calls upon the hospital otherwise, to have given fifty beds absolutely for measles?—No, not unless we made other arrangements, which I presume has been done since.

11. Measles, I suppose, would be treated in a separate room?—Yes. I was treating them in the so-called tin shed.

12. How many would that hold?—Between twenty and thirty.

13. Victoria Ward was not used for the purpose in your time?—No.

14. *Mr. Ferguson.*] It was built for a specific purpose?—Yes.

15. *The Chairman.*] Would Colonel Purdy have visited the hospital during the time?—Yes, he came several times when I was there, and saw the patients.

16. He would know they were accommodated in the tin hospital?—Yes, he saw them there.

17. *Mr. Gray.*] I do not think that the staff refused to take any measles cases from Trentham, did you?—No.

18. What was the greatest number you had?—I cannot remember.

19. Would it be as much as forty?—No, not more than twenty-five to thirty at the most, I should say.

20. Was it not suggested to you that if the number increased it might be desirable to make other arrangements?—I cannot remember any conversation about that.

21. Do you think that no such conversation occurred?—I cannot remember. If I could remember I would tell you.

22. If it had become necessary, could you have made arrangements for extending the accommodation?—Not unless we built, or turned out some of the other patients.

23. As was done by your successor later on?—Yes.

24. You had no difficulty, had you, in taking such cases as were sent to you by Dr. Purdy?—No.

25. *Mr. Ferguson.*] Was it understood that Wellington Hospital was the base hospital for the Trentham Camp? Did the military authorities ever arrange with the Wellington Hospital authorities that Wellington Hospital should be the base hospital for the military camp at Trentham?—I really cannot tell you. I do not know if there was anything written on the subject at all. I only know that we took in the cases as they sent them along, and treated them; but as to any written arrangement I cannot tell you. The Health Officer might know, but I cannot remember.

Captain THOMAS HARRISON recalled. (No. 121.)

1. *The Chairman.*] Were you a member of the Board of Examiners from time to time?—I was never on the Board of Examiners.

2. Not for the purpose of discharging persons?—No.

3. Can you tell us who were?—It was generally any three medical men in camp who could be got at any one time.

4. Do you know anything of the case of Private Thomson?—Nothing except from hearsay.

5. He was not under your charge at any time?—I never saw him.

6. A charge, as you may have noticed, was made by him in reference to the method of examination?—Yes, sir.

7. But you had nothing whatever to do with him?—No.

8. You, as you told us before, were chief officer of measles?—From the 12th June to the 4th July.

9. And that comprised the cases of measles out at the camp as well as in town?—Yes.

10. Now, with regard to the condition of things at Berhampore, we know that it is admitted on all sides to have been at one time overcrowded: can you tell us a little more specifically what the numbers there by the 12th June were?—I cannot tell you the exact number.

11. We have not been able to get a precise return: the records appear to have disappeared?—As far as I remember when I first took charge I did not count the number of people. I saw there were a considerable number discharged; and as the time for discharging came I discharged them, and if possible put no more in their place. I gradually got the numbers down until they were absolutely nil. There were not more than forty when I first took charge.

12. Was the number ever above that while you were in charge?—Never in my time. It was lower at each succeeding discharge.

13. *Mr. Ferguson.*] You think that with forty it was crowded?—With forty it was uncomfortably full.

14. *Dr. Martin.*] Without marquees?—Without marquees, certainly.

15. *The Chairman.*] Did you use marquees when you were there?—They were used for patients who were absolutely well, just waiting for their quarantine-time to expire.

16. You did not think it proper to put patients who were not absolutely well in there, did you?—Not in the marquees.

17. So that the buildings themselves are, in your judgment, the only proper places where persons still suffering should be put?—Persons who were not absolutely well.

18. In that ward where Fordham and Pollard were we had it there were eight patients?—Eight patients.

19. That has been criticized, because Colonel Valintine appears to have stated in his report that there should not be more than four there, except in an emergency. Had you any instructions whatever as to the numbers that were to be placed in any particular ward?—No, none.

20. It was left to your general discretion?—It was left to my discretion.

21. *Dr. Martin.*] Dr. Valintine would not be likely to know whether it was overfull in any way: there would be no occasion to communicate with him unless you had a complaint?—No; I was in complete charge.

22. *The Chairman.*] If you had thought it was overcrowded you would have had to refer to him?—I would have had to refer to the officer.

23. *Dr. Martin.*] I understand that those eight patients would not be in the whole day?—No, only those who could not leave their beds.

24. During the day some of these men could get out if they wanted?—Practically half of them could get out in the fresh air.

25. *The Chairman.*] Did you send to Kaiwarra any patients that were not quite recovered, or were they under treatment at the time?—They were all under treatment, more or less. I sent convalescents—those whose temperature was normal—to Kaiwarra. Frequently their temperature rose the next day or the following day, and I had always about a dozen patients whom I had to see every day personally—patients with temperatures a little above normal. No patient went there whose temperature was not normal before he left.

26. Is it a fact that while you were at Berhampore you had never less than eight in this ward that has been referred to?—I had eight in each ward practically all the time I was in charge. I considered that the change of air which one could get through the open doors and the open windows was sufficient for the patients, taking into consideration the fact that half the patients were out during the daytime.

27. These were not permanent in-patients?—No.

28. And from what you saw of it, then, with that condition—that is, patients being out in the air for some hours during the day—you think that no inconvenience was suffered by having it as you had?—Absolutely none.

29. To pass from Berhampore to the camp, was it any part of your business to go round the camp to inspect—on the daily inspections?—Not after the 12th June.

30. Had you occasion at any time to visit the huts before the 12th June?—Once.

31. Did you make any observations then that would be of value in this inquiry?—No; it was in the middle of the night. I went with a stable-lantern to see a patient who had been taken suddenly ill.

32. You did not go round for the purpose of seeing if they were overcrowded or anything?—No.

33. Is that the only occasion on which you went to the huts?—That was the only occasion I was in the huts while they were occupied.

34. You did not go round as part of the day's duty with the orderly, and so on, to inspect the camp, did you?—Yes; I went round twice before the 12th June.

35. Before the huts were occupied?—They were occupied at the time.

36. Did you not inspect the huts on that occasion?—Yes. The men were all out doing their drill.

37. Was there anything to indicate how many were in each hut?—No, only the bedding.

38. Did you see how many were there?—I did not count.

39. Did you inquire?—No; but the huts looked perfectly clean and the air in them was perfectly fresh, and my knowledge of camps at that time was nil, and I did not know how many were required for each hut.

40. So that was not a point that came under your notice actively?—No.

41. How long have you been in the camp?—Since the 1st June.

42. You were there during the rapid rise in the epidemic?—Yes.

43. You have been there continuously since?—Till the 28th July.

44. Then you went on leave?—Yes.

45. Are you able to express an opinion upon the propriety of bringing back any batches of troops to be camped at Trentham? In considering any answer that you may give to that you must bear in mind the history of the epidemic, which you know, and the fact that certain criticisms have been made upon the sanitation and the hut accommodation. You heard, I think, the criticisms that were passed upon the hut accommodation by Colonel Morice this morning, did you not?—Yes.

46. Having those factors before you, can you express an opinion as to the propriety or otherwise of bringing in the troops again, either without limit as to numbers or within limits?—At the present stage, in view of putting only thirty in each hut, I think it is absolutely safe to bring back men up to the original number of four thousand for the camp, considering the fact that the epidemic has practically ceased.

47. Do you consider that the means taken now in camp—the safeguards, such as gargling each morning—are reasonably sufficient to prevent an outbreak again?—Considering the frequent gargling and the inspection of every man in camp twice a week, I think it is absolutely safe to bring the men back again.

48. Would it, in your opinion, be desirable to continue the present system of precaution—to continue the gargling for a period of time, and the inspection?—My own opinion is that if the

gargling is continued for a month after the last case of measles or influenza it may then cease, and a weekly inspection, instead of the bi-weekly inspection, would suffice, unless another epidemic should start.

49. As a site for a camp, climatically and in other respects as regards situation, have you any opinion to express regarding Trentham?—I have had no previous experience of military camps, but from my experience of ordinary camps and "roughing it," as men have to do in the country, I think the camp at Trentham is in a very good state for the average man—the average man who has already been passed by a medical man.

50. Do you find the climate there unduly severe?—No.

51. What is your opinion about the climate there?—It is not exactly the climate for a health resort, but it is a climate for any able-bodied man who has already been passed for service. It should have no bad effect upon him.

52. Is it an invigorating climate?—Yes, I should say it is. The nights are cold.

53. We were inquiring this morning as to what was done in connection with contacts with patients who had been in the huts. Was anything done during your time—from the 12th June on—with reference to the patients who were drawn from the huts?—Yes; the name and company of every patient who came into the hospital with measles, and the hut from which he came, were taken down by Inspector Kershaw, and he made it his business to find out every day the exact huts and the exact places in these huts that these men came from, and he sprayed the places, and 10 ft. round each place, every morning, for each measles man.

54. Was any work of spraying the whole hut at regular intervals undertaken in addition to that?—No; that would have meant spraying every hut every day, because we had measles patients from every hut every day, practically.

55. But the patient's location in the hut was sprayed?—Yes, and 10 ft. round it.

56. *Dr. Martin.*] You are quite satisfied that every precaution was taken this time to prevent the spread of measles into either the city or any other part?—Every precaution; considerably more precautions than are taken in general practice.

57. *Mr. Salmond.*] Do you care to express an opinion on the question of lining these huts?—No, sir.

58. You have no view on it?—No.

59. *Mr. Gray.*] When did you first go to Berhampore?—On the 13th June.

60. At that time there was a little overcrowding, was there not?—It was congested.

61. Did Colonel Valintine tell you of his anxiety to get rid of Berhampore as soon as possible?—It was the general opinion, as far as I can gather, that Berhampore should be gradually evacuated; but it was a time of emergency—we had as many patients as we could in each place.

62. And it served its term?—It served its turn very well.

63. Do you think that no more patients were put there in your time than the place could accommodate?—No more than it could accommodate.

64. From what time did you receive directions from Colonel Valintine?—The 13th June was a Sunday. From about the 15th June, I think. I received general directions at about that time. I was in charge of measles at the time, and I had no particular directions.

65. But directions from him about measles cases?—I was in full charge of measles cases at the time. There was really nobody above me in measles cases.

66. Who would put you in complete charge of measles cases?—Colonel Purdy.

67. A few days before?—Yes.

68. *Dr. Martin.*] Colonel Purdy appointed you on the 13th June?—On the 13th, if the Sunday was the 13th.

69. *The Chairman.*] Were you at the camp when that appointment was made?—No. I visited Berhampore for one of the earlier medical men. I was going to town, and he said, "Would you look in and see a patient for me?" I did so, and Colonel Purdy asked me if I would take full charge of measles cases, and I said "Yes."

70. There and elsewhere?—Yes.

71. That means at the camp as well?—Yes.

72. Then when did you come under Colonel Valintine?—I cannot say definitely. It was more about the middle of June.

73. *Dr. Martin.*] With regard to Berhampore Hospital, Colonel Valintine had nothing to do with it unless you made a report?—Nobody had anything to do with it except myself, unless I made a report complaining about anything.

74. You did not make a report?—I made no report.

75. *Mr. Gray.*] Can you not be a little more definite as to when it was you began to get directions or suggestions from Colonel Valintine?—I got no directions about measles. The general idea, as far as I can gather, was that when the racecourse hospital was taken over Colonel Valintine was in charge of hospitals and Colonel Purdy in charge of the embarkation part.

76. That was your opinion from the time the racecourse hospital was taken over?—Yes, although I received no definite instructions.

77. When was the racecourse hospital taken over?—On the 13th.

78. *Mr. Ferguson.*] Who was in charge of the clinical part: was Colonel Valintine in charge of the clinical part as regards other disease?—There seemed to be two heads, as far as I was concerned; but I thought that Colonel Valintine was in charge of the whole lot of the hospitals after that time.

79. *Mr. Gray.*] A suggestion was made this morning that you may possibly not have had time for the performance of your duties as overseer of measles at Trentham, Kaiwarra, Berhampore, Wellington Hospital, &c. Were you able to accomplish all these duties?—Yes, quite able.

80. And you did give the patients the attention they ought to have had?—Yes; they got more attention there from me than I would have given private patients in a similar epidemic.

81. From the time you joined the camp can you say how many marquees there were for sick-parade?—I think there were three marquees for sick-parade, including the Trentham Battalion's marquee, and one for a dispensary: that is as far as I remember. I was there only twelve days.

82. They were there when you went into camp?—Yes. That would leave two for the rest of the camp.

83. *The Chairman.*] Would those two be for shelter, or for what?—Both for shelter and medical examination.

84. Would the medical men occupy one tent and the men another?—No. The medical men, when I was there, occupied the tent, as well as the patients. There would be about thirty or forty patients in a tent with the medical men—standing inside.

85. *Mr. Gray.*] And the other marquee?—There were probably one or two medical men as well with the rest of the patients on sick-parade. Of course, some would prefer to stay outside.

86. Supposing it was raining?—If it was raining they crowded into the tent. I saw no case of any man getting wet or being unduly exposed to the wet on account of standing outside.

87. *The Chairman.*] It was voluntary on his part, you say?—Absolutely, because he could have got into the tent if he had wished to do so.

88. We have had it suggested that there was no shelter, and they were obliged to stand out in the rain for two or three hours: you say that during your experience that was not so?—I do. Our sick-parades started at a quarter past 8, and were always finished by a quarter to 10, which makes an hour and a half.

89. Did you on any occasion go round the tents if a man was reported not fit to attend parade?—I went to the hutments.

90. If any case was reported in which a man was unable to attend, he was visited in the hut?—Yes, by a Medical Officer.

91. You are able to speak of that from your own knowledge?—Yes.

92. That affects the period from the 1st to the 12th?—Yes.

93. *Mr. Gray.*] Do you remember the case of Pollard?—Yes.

94. And the case of Fordham?—Yes.

95. Pollard was sent to Kaiwarra from Berhampore, was he not?—I cannot speak definitely as to that. He was in Berhampore when he first showed signs of getting worse.

96. Was he regarded as one of those men who were not very ill when he went to Berhampore?—Yes; he was a convalescent, really, when he went to Berhampore.

97. Do you happen to know why he was sent from Kaiwarra to Berhampore and into Wellington?—No, unless he had a very slight rise of temperature. With any men at Kaiwarra who had a slight rise of temperature, if I had accommodation for him elsewhere I sent him there.

98. Do you know that Wellington Hospital was full at the time—could not take any more?—It must have been, or I would not have sent him to Berhampore.

99. Then you would not have sent him to Berhampore from Kaiwarra if Wellington Hospital had not been full?—No.

100. Does the same apply to Fordham, who came from Trentham to Berhampore?—No. Fordham was perfectly convalescent when he went to Berhampore.

101. It was a rule, was it not, that no serious cases were to be sent to Berhampore at all?—No serious cases were sent.

102. *The Chairman.*] Do you know if charts were kept of Pollard and Fordham?—Yes, they were.

103. How would it be known whether a person could go into Berhampore or not? You say you did not send any for some time, until the numbers came down?—That is so.

104. Was there any record kept of the number of men in Berhampore?—Each day as I went round the measles cases I took a note of the number of patients in each place, and the number of beds that would be vacant the next morning, so I could adjust the places the next day according to the increase of patients from the lines the next day.

105. Was there any record kept by which one could now find out how many were in Berhampore from day to day?—There was no record except that kept by the sister in charge of the patients.

106. The camp record would show "Sent to somewhere"?—Yes.

107. "Sent to hospital"?—No, sent to such-and-such a place.

108. A measles man would be getting about and he would be sent from the hospital at Trentham?—Yes.

109. Have you a record of him when he goes there?—The orderly in charge knows which hospital each man is sent to.

110. And is that entered up?—It was in my time.

111. *Dr. Martin.*] What did you do with the convalescents from Berhampore: where did they go after that?—They remained there eighteen days from the time the first symptoms of measles appeared—from the time they came under treatment; and their clothes were fumigated and they were given a warm bath.

112. Where were they fumigated?—At Berhampore. They were given a bath of disinfectant and sent to their homes for ten days.

113. They left Berhampore for their own homes?—Yes.

114. *The Chairman.*] Was the same process followed at Kaiwarra?—The same at each measles place.

115. *Dr. Martin.*] Their throats were inspected before they left?—They were inspected frequently.

116. Was any routine treatment of their throats carried out?—The routine treatment of gargles and outward applications of .

Major STOUT recalled. (No. 122.)

1. *The Chairman.*] Do you know the case of Thomson, who gave evidence here with regard to his discharge?—I have an idea I was in it.

2. This is what he said: *Q.* "Did you know there were several doctors in camp?" *A.* "Yes." *Q.* "Was it the same doctor you saw each time?" *A.* "The doctor who inoculated me was a tall, dark man, and on the second occasion he was a little clean-shaven man and wore glasses." I do not know whether the "tall, dark man" would be you?—There were others who might be called dark.

3. Then the evidence goes on: *Q.* "Did the Board discharge you without making any inquiries as to your means, or where you would go to, or what would become of you?" *A.* "No, sir; they gave me a second-class ticket to Picton." *Q.* "Were you medically examined by any member of the Board?" *A.* "No, sir; I was simply dealt with by the gentleman who was here yesterday touching me here." *Q.* "Was that before the Board?" *A.* "Yes." *Q.* "The Board was sitting?" *A.* "Yes." *Q.* "Were no questions asked?" *A.* "No questions at all." *Q.* "Are we to understand that you went before this Board, and one of the members went up to you and touched you on your groin, and then they said you were discharged?" *A.* "They told me I could go." *Q.* "Were you ever stripped and examined by any of the doctors?" *A.* "No." *Q.* "Do you know what doctors they were who dealt with you?" *A.* "I do not know the doctors' names at all. I saw here yesterday one of the doctors who were on the Board." *Q.* "*The Chairman:* It will be Major Stout?" *A.* "He was sitting on the Board." *Q.* "*Mr. Salmond:* Was he one of the doctors who had previously dealt with you?" *A.* "No." *Q.* "Was that the first time you had ever had anything to do with him?" *A.* "Yes, the first time I had seen him." *Q.* "Was the doctor who had dealt with you formerly on the Board?" *A.* "Yes." *Q.* "Two of them?" *A.* "No, only one." *Q.* "And Major Stout?" *A.* "There were three altogether." What he complained of was that he was sent away without proper examination, but he had had a previous examination?—Yes. Captain Bogle is in the Trenthams: I think this would be the man. Captain Bogle had watched this man for some time, and he told me about him when he came along. He had been on sick-parades. He would be in the First Trenthams, I think, and Captain Bogle was doing both Trenthams at one time, so Captain Bogle brought this man along and put him before the Board. It has to go before the Camp Commandant, and he approves of it, and then they send along the list to us, and three of us have to sit on the Board.

4. *Dr. Martin.*] Captain Bogle knew all about the man?—Yes, and told me all about him. He appeared to have had this pain in his side for quite a long time, and it did not get better under treatment. A man like that is not much good for active service

5. *The Chairman.*] He said he had a swelling on his hip. You were not the one who attended him?—No. Captain Bogle attended him, and I was on the Board. There had to be three men in nearly all these cases. One man who was on the Board had seen him.

6. What he said was that he came to town and met Dr. Thacker, who gave him something to paint himself with and some pills. Then the evidence goes on: *Q.* "Then you reported to camp on the fifth day?" *A.* "Yes. When the roll was called on the Sunday morning they said 'Thomson is still missing,' but I was there. Then the sergeant came and told me I was confined to barracks. On the Monday morning I was told to appear in uniform at the orderly-tent at 7 o'clock. I was tried for breaking leave, and got three days C.B. and one day's pay stopped." *Q.* "For being overdue one day?" *A.* "Yes." *Q.* "Was that the only charge?" *A.* "Yes." *Q.* "What took place then?" *A.* "After I was tried I went back and had orders to take off my uniform and get ready to fall in. I fell in, and went to the racecourse to the usual drill. I was feeling pretty ill, and the sergeant told me to go over to the acting-sergeant, who would give me a bit of drill on his own—rifle exercise." *Q.* "Did you do that?" *A.* "Yes. In the afternoon we marched down to what they call the golf-grounds, and we were given drill. Then I reported to Lieutenant Lancashire that I was feeling ill on account of my side." *Q.* "What happened then?" *A.* "I then went back to camp and went to the doctor next morning—it was the same doctor—and I showed him Dr. Thacker's note. He told me to unloosen my tunic, and simply touched me on the side and said, 'I will have to put you before the Medical Board.'" Would that be you?—No, that would be Captain Bogle.

7. He goes on: "He gave me a prescription, and I went over to the marquee and got two dressings for my side. The orderly rubbed my side twice for me." *Q.* "What took place then?" *A.* "I then went to the barracks until such time as I got my discharge." *Q.* "When did you go before the Hospital Board?" *A.* "That was on the Tuesday the doctor said I would have to go, and I went before the Board on the Thursday." *Q.* "Did the Board make any examination of you?" *A.* "No." *Q.* "Have you got your discharge with you?" *A.* "Yes. I was discharged on the 2nd July, 1915, in consequence of being medically unfit." *Q.* "Who were the members of the Board?" *A.* "I do not know who they were, but one of the doctors gave evidence here yesterday." *Q.* "That would be Dr. Stout?" *A.* "Perhaps so. When I went before the Medical Board he then saw Dr. Thacker's prescription, touched me on the side on the outside of my uniform, discharged me, and said I could go back to barracks"?—I do not remember seeing anything from Dr. Thacker. I have not seen his writing.

8. You think that if Dr. Thacker's prescription had been brought before you it would have impressed itself on your mind?—I would have looked at it and read it. I do not remember doing so. If a man brings a note along I read it.

9. You were left as Acting P.M.O., I think, from the time that Major McAra left—from the 12th June to the 23rd June, was it not?—I do not know when it was I finished doing it.

10. Do you remember during that time going round the camp to inspect the sanitary conditions, and so on?—I have been doing it off and on all the time since I have been in. I was appointed Sanitary Officer some days before that date, and used to go round with the captain of the day and others.

11. Did you from time to time look at the huts?—Yes, I have been in the huts.

12. Did you go into the question of whether they were too hot or too cold, whether they were clean or the reverse?—Yes, I have been into that question; I got a note from Captain Cardale, who was Acting Camp Commandant, drawing my attention to a report from the Commander of the 2nd Battalion of the Trenthams—I think it was Lieut.-Colonel Stuart—and asking me what my opinion was of the huts. But at that time Dr. Frengley was going to inspect the huts, so I left it to him to decide whether the huts were good or bad. I did inspect the huts, and went round them, and tried to find the draught the men were complaining of; but I did not write a report as Dr. Frengley was going to report on the matter, and as he had been connected with the question from the first I thought his report would be the thing they wanted.

13. Did you see whether the huts were overcrowded or not during the time you were there?—I have only been into the huts once when the men have been there sleeping—that was the same night when Dr. Frengley went round—at about 12 o'clock, I think.

14. You never went into the huts for the purpose of seeing whether they were overcrowded or not?—No. That night I went in I just accompanied Dr. Frengley. Those were the Trenthams huts, and Captains Bogle and Brown were the regimental doctors for the Trenthams; and with respect to anything about the overcrowding of the huts, they would have to advise their officer commanding, I should think, or the officers in command of the units would have to ask their advice. Then it would go to Colonel Pilkington, then to the Camp Commandant, and then if he wanted me to report on it I would so so.

15. The Trenthams had their own Medical Officers?—Yes.

16. And your inspection therefore did not go into the internal question of the huts?—No. With regard to the inspecting of the huts, Captains Bogle and Brown were only supposed to inspect them once a month, I believe. I think that was a sort of barrack order, but I am not certain about it. I think it is the officers commanding the units that have to do all the inspecting of the huts. But I have been into the huts to see that they were tidy when the men first went in.

17. But you never went into the question of whether there were too many men in the huts?—No; I do not know how many were in them. I did not have control of the huts, but I heard that night there were thirty-five in one and twenty-five in another.

18. Was that the only occasion upon which you had gone into the huts to verify the numbers there?—That was the only occasion.

19. What was the nature of the complaint?—They wanted to know about the draught—whether it was advisable to have lining.

20. Major Frengley had that in hand?—That is so, and therefore there was no necessity for me to deal with the matter.

21. Of course, that was after Dr. Valintine took charge?—Yes, it must have been, because I had that report, and Dr. Finch was mentioned.

22. You have been through the whole epidemic?—Yes, since the 19th May.

23. And you have resided out there?—Yes.

24. You have heard the questions being put in regard to the propriety or impropriety of bringing troops back into camp under existing conditions, or under amended conditions, in regard to habitation and sanitation: are you prepared to express an opinion on that?—No; I have not gone into that matter at all. They had a Medical Board to deal with that.

25. Do you know who were on that Medical Board?—I do not know.

Mr. Salmond: That Board consisted of Colonel Valintine, Dr. Champtaloup, Dr. Hector, Dr. Truby King, Captain Harrison, Mr. Hurley, and Major Frengley.

26. *Mr. Gray.*] What was in charge of the camp hospital after the 13th June?—Well, the camp hospital was divided into two sections—influenza and measles: Captain Harrison was in charge of the measles patients, and Captain Ferguson in charge of the influenza patients.

27. Who was over all?—I was, as Acting P.M.O.

28. And who above the P.M.O.?—That is difficult to say.

29. You did not know?—I have not seen any definite writing to say who was in charge.

30. Apart from any record in writing, what occurred after the kiosk and the trainers' quarters were commandeered and opened up?—Colonel Valintine came in fairly often.

31. After the 13th?—He and Colonel Purdy were there together on the 13th, when the whole place was shifted. Then Colonel Valintine was there often after that.

32. On successive days after the 13th?—I think he was there nearly every day; Colonel Purdy was there one day.

33. If any trouble had arisen to whom would you have reported—to the Camp Commandant or anybody else—as P.M.O.?—I had orders to report to the Camp Commandant.

34. And supposing you had thought some further accommodation was necessary?—I would report to the Camp Commandant; I do not think that is an absolute rule, but I did not make any reports.

35. You were not called upon to deal with that question?—No. Different routine orders came through, making different arrangements; whether they would prove who was in charge I

do not know. The notice to say that Captain Harrison was O.C. measles and Captain Ferguson O.C. influenza was put through.

36. There was no appointment of P.M.O. put through?—There was not one put through camp orders. They put Colonel Morice through in camp orders, and Dr. Finch, when they were appointed as Sanitary Officers, and so on.

37. *The Chairman.*] We understand there was no nurse there until the 27th June?—I think that is true, though I could not swear to it.

38. But there was a period, we will say, from the 13th till towards the end of June, during which there were no nurses there?—Yes.

39. And it was simply in the hands of orderlies?—Yes; we were shifting over that day, I think, and I spoke to Colonel Valintine and asked him if it were not advisable to have nurses there.

Colonel Valintine: I never heard a word about nurses until I got them myself.

40. *The Chairman.*] Why were nurses not got before?—Possibly Colonel Valintine might explain that. I thought I discussed with him the point whether we should not have nurses. Still, if Colonel Valintine does not remember it, there is an end to it. I did not put anything down in writing.

41. Do you think it would have been advisable to have had nurses there earlier?—I think if you have a hospital it is advisable to have nurses there.

42. Do you think experienced nurses would have been better than orderlies?—Yes, trained nurses. I think nurses are better than orderlies, especially such nurses as were there, because they had been to Samoa.

43. Up to the end of June the measles cases were on the recovery?—Yes; but I had nothing to do with the treatment of them. I know numbers were coming in. It shows on this chart how they were coming in. [Chart put in.]

44. *Dr. Martin.*] Who made this up?—Captain Comb.

45. It shows that they came out of the tents as well as out of the huts?—You would have to find out which were in the huts.

Colonel VALINTINE further examined. (No. 123.)

1. *Mr. Salmond.*] In July, Colonel Valintine, a Medical Board was established by direction of the Minister of Defence to report on the Trentham Camp: who were the members of that Board?—Professor Champtaloup, Major Frengley, Captain Harrison, Dr. Hector, Mr. Hurley, Dr. Truby King, and myself.

2. Dr. Truby King was not present?—No.

3. Did he not concur in the report?—He came up subsequently and concurred absolutely, as far as I understand, in the report, except that he took exception to some of the points in the hutments.

4. That Board met, I believe, at the camp on the 13th July?—That is so.

5. And came to certain conclusions embodied in the report, of which, I believe, that is a copy [report put in]?—Yes, that is it.

6. Was this report in all respects unanimous?—Yes, sir, in all respects unanimous.

7. What does it say? I do not propose to read the whole of the report, because it relates in some parts to irrelevant matters. The first question submitted to this Board was as to "whether the camp will be available for occupation by two thousand men on the 8th August": who were they?—The Sixth Reinforcements.

8. It was intended to bring them into camp on the 8th August?—That is so.

9. What decision did the Board come to on that question?—They came to the conclusion, "That there is no reason why the fifteen hundred men comprising the Sixth Reinforcements should not be retained in Trentham Camp, provided ordinary precautions to prevent the spread of the disease be taken."

10. And then as to the remaining five hundred?—The Board decided, "That, provided all proper precautions be taken, especially in the direction of not overcrowding men in the huts, and further that the general sanitation of the camp be put in order, there is no objection to its being occupied by two thousand men on and after the 8th August."

11. That means that part of the Sixth remained in camp all the time and the others were to be brought back on the 8th August?—That is so.

12. The next question submitted to the Board was, "Whether the camp will be fit for occupation by the two thousand men to come into camp on the 15th August, the camp being evacuated by the Sixth Reinforcements on the previous day. These men will form the Eighth Reinforcements"?—That is so.

13. That question was apparently considered with a further one as to whether the camp would be available for occupation by a larger number of men by the beginning of September?—Yes, sir.

14. What was the decision of the Board?—The Board decided that, provided certain details were carried out with regard to improvements in the sanitation of the camp, there would be no objection to that number of men coming back to the camp.

15. I think the decision of the Board appears on page 3 of the report: you might read it?—The Board decided, "That there is no objection to the camp being occupied by four thousand men, provided the following important details are attended to: (*a*) The thorough disinfection of the whole camp; (*b*) that no more than thirty men should be allotted to each half-hut; (*c*) the provision of messing-accommodation; (*d*) the provision of stretchers; (*e*) the improvement of the

huts as regards the exclusion of draughts, &c.; (*f*) the improvement of the roads; (*g*) the improvement of surface drainage; (*h*) the improvement of sanitary arrangements, &c."

16. Then a question was put to the Board as to the epidemic of cerebro-spinal meningitis?—Yes, sir.

17. What decision was come to by the Board?—The Board decided "That if there is no case of cerebro-spinal meningitis within fourteen days prior to embarkation there would be no reason to delay the departure of the Sixth Reinforcements, and that prior to departure a very strict inspection be made of all men."

The Chairman: That is not a question which comes before us.

Mr. Salmond: No, not as to embarkation; that is so, sir.

18. *Mr. Salmond* (to witness).] Did you concur in all those recommendations?—Absolutely. I say that the Board was unanimous.

19. What are the facts as to cerebro-spinal meningitis in the Sixth Reinforcements?—Since the distribution of the camp there has been one case of cerebro-spinal meningitis amongst the men distributed in the various camps, and even that case has not been absolutely verified. That case died under suspicion at the Dannevirke Hospital.

20. Was he a member of the Sixth?—A member of the Seventh.

21. Where did he come from?—He was at Waikanae. There was one suspicious case, a Russian, amongst the Sixth, and that was the only suspicious case in the Sixth. That has not actually been verified, and I think the Medical Officers are generally of the opinion that it is not a case of cerebro-spinal meningitis. I saw the man yesterday, and he is quite well.

22. That is all the evidence I propose to ask Colonel Valintine to give to the Commission with respect to the inquiries of the Board, but I desire also to ask Colonel Valintine to put in a considerable number of documents which may be of advantage to the Commission, without referring specially to their contents—official instructions and various memoranda, relating to the execution by Colonel Valintine of his office with respect to the military camp. The definite facts may be ascertained in a better way by perusal of these documents by the Commissioners than could be got by laborious evidence.

The Chairman: Just so.

23. *Mr. Salmond.* These papers, I understand, have been detached from the official files?—That is so. [Documents put in.]

24. They are all memoranda either written by yourself or relative to the execution of your office as Director of Military Hospitals, or in reference to your action as to hospitals before that appointment?—That is so. I have not had an opportunity of revising them; I suppose I may see them again and do so. There are one or two other papers I would like to put in.

Mr. Salmond: This is a copy of the report of the Board. [Report put in.]

25. *The Chairman.*] There were two factors which you had to consider necessarily, aside from the health of the troops: the first necessity was that there should be some effective training-place for the troops who were to be immediately sent away?—That is so.

26. Then there would be, alongside of that, the expense and practical impossibility of providing training-ground elsewhere within the time before the reinforcements were to go?—That is so, if New Zealand were to fulfil her obligations to the Imperial authorities.

27. Did you, in giving your consideration to these matters, treat the health of the troops, or the need of getting so many away, as the paramount consideration?—Well, sir, by the fact that the Board was composed almost entirely of medical men, it would show that we were considering the health of the troops of more paramount importance than even our obligation to the Imperial authorities.

28. Was it, in fact, so?—It was so, absolutely.

29. Then you transferred yourselves to the camp to make the inquiry?—Exactly so.

30. Did you have any data before you as to the history of the epidemic, and so on?—Yes: all the data was available. There were medical men who were quite *au fait* with all the details of the epidemic, and also from the military side. There was the Chief of the General Staff in attendance

31. You have stated that the Board decided that the troops would be able to come into camp by the 8th August, subject to certain details?—A certain number—two thousand of them.

32. Without the details?—Without all the details having been fulfilled.

33. And the four thousand, with all the details attended to?—Yes, with all the details attended to.

34. Did you anticipate that by the 8th August these subordinate details would be completed for the two thousand?—A good many.

35. Do you know if they are?—Well, the camp has been thoroughly disinfected, which is one thing. Then provision has been made that not more than thirty shall be allocated to one hut.

36. Have they beds and stretchers provided?—No, not yet; but they have been selected—the kind of stretcher has been decided on. I have no certain information as to whether the whole of the stretchers are out there already. The improvements of the roads and the improvement of the surface drainage is going on very rapidly, and also the improvement of the sanitary arrangements. No arrangement has been made for the provision of separate messing-accommodation, and I understand that no arrangements are going to be made unless it is insisted upon.

37. I want to know who is to insist upon it. We may find simply that provision should have been made, but that is all. We are to recommend as to future improvements, and if we recommend, as we probably should have done, that there should have been stretchers and beds, and none are obtained in the future, well, that is the concern of somebody else?—Yes.

38. We are going to have before us the Engineer-in-Chief, in order that he may tell us what stage has been reached in connection with these matters. We do not know really what has been

going on in detail: would he be the man to tell us?—Yes, and Mr. Hiley.

39. What is Mr. Hiley's connection with it: what is his particular function?—He is in charge of constructive works.

40. That includes roading and ditching?—Yes.

41. He will be able to tell us what is being done and what is going to be done?—Precisely.

42. Do you know if any provision is intended to be made with regard to the water between the huts that comes down from the roofs?—I understand that that provision is to be made.

43. What is the date of that report?—The 13th July.

44. Since that report there has been nearly four weeks further experience: are you acquainted with the experience of the camp during that time?—Yes, sir.

45. Do you see any reason to modify the views expressed in that report by reason of your subsequent experience of the camp?—No, sir. On the contrary, I feel confident that there is no reason to alter the decision of the Board, or to make the Board feel that they did not give a right decision. That is my personal feeling.

46. Would that decision involve this, that these men might be brought back into camp whether they were well or ill?—No, sir; I do not think there is any possibility of a man getting back into camp ill.

47. You have to bring these men from another camp: have you considered their state of health before they are brought in?—Yes. They are subjected to a bi-weekly medical inspection; also, they have gargling-parade; also, as they are sent back they are medically inspected, and also on their arrival. Under those conditions therefore no sick men ought to arrive in camp.

48. *Mr. Ferguson.*] Notwithstanding that a man left Waikanae and by the time he got to Dannevirke he was in a state of collapse?—That is so. That man had been inspected, but a disease like this develops rapidly, though it is unusual for it to develop so rapidly as that. I have heard subsequently that the man was concealing his illness.

49. *The Chairman.*] One has seen that they have a number of contacts in Dunedin and other places?—They have contacts in several places.

50. Do you know where they came from?—They are men on leave, either on extended leave or sick-leave.

51. Would their illness, or the development of it, have begun before the breaking-up of the camp on the 8th July?—Their leave began on the 16th July. It was decided not to grant any leave after the meeting of this Board, and it was decided by the Board that if there were no cases between the 13th and 16th that the men should be allowed to go on extended leave.

52. Was an examination made of them before they went on that leave?—Yes, sir. I know that a most rigorous examination was made. I am confident that an examination was made of all these men going on leave on the 16th.

53. Who could tell us, confidently?—Major Andrew.

54. Did these men not go from other camps?—But that was the rule. I have there some orders that were issued with regard to the daily examination. I have put them in.

55. They were in force before these men got their leave and went to Dunedin, Christchurch, and elsewhere?—Yes, sir.

56. If that is so, how do you account for "carriers" being found afterwards?—It may have developed afterwards, but the probability is that they had this meningococcus in their throats at the time they left.

57. It would seem that it was not discovered by the examination?—It is very difficult to discover. It takes some time to develop in the various processes. At the present moment Professor Champtaloup is making researches in civilian throats, because we have reason to believe that this meningococcus is also to be found in the throats of the civil population. The bacteriologists will tell you that all these cases are not cases of cerebro-spinal meningitis.

58. Does that not to some extent invalidate the assumption you have made as to the security to be made by these precautions?—We thought we had better act on the safe side.

59. You have added to them—increased them many times?—No, sir; we have adhered to exactly the same routine right throughout.

60. If you find that these carriers have been discovered in these various places, have none been discovered in Wellington?—Yes, undoubtedly, we have discovered some carriers at the camp.

61. It would seem odd that the carriers have gone abroad?—No, sir; we have some here at the camp.

62. Under observation?—Yes.

63. Is there a definite time after which, in medicine, it can be affirmed that if no case occurs no men in the camp are subject to this disease?—Well, the incubation period varies; it is very hard to say—from a few days to some months, as far as I can gather. But for more than a month after the camp had disbanded we had no definite case reported, so we felt pretty secure about the matter. It certainly does not appear that there are grounds for alarm that we are going to have a spread of the disease. It is over a month since the camp was disbanded.

64. Then I suppose we may look at it in this way: that having become fully alive to its existence and possibility, your position is far different to what it was before the organism was discovered?—Certainly, we are in a very much better position that we were a month ago.

65. That is, knowing what is the cause of the disease?—Yes, sir, undoubtedly.

66. Then, on the subject of pneumonia, can the camp be pronounced free from that?—No; you could not say that any camp, or any place, is free from pneumonia.

67. The pneumonia that has existed there may be regarded as having spent itself, so that if pneumonia did break out it is not because pneumonia has existed there, but as being from influenza?—The organism of pneumonia is practically omnipresent, and it is when the vitality

is lowered that it gets into the blood. There is hardly any place without the organism of pneumonia.

68. So that if these details recommended by the Board are attended to, the causes which lower the vitality will be removed?—Exactly.

69. *Dr. Martin.*] What are the dates of these diagnoses?—We suspected typhus on the 8th; we got Professor Champtaloup up on the Saturday, and he reported on Monday, the 12th.

70. You reported that that side room in Berhampore would only hold four patients, and when Fordham and Pollard died there were eight patients in that ward: you would not know there was overcrowding there unless it was reported to you?—No; I had received no report about it.

71. You said that you did not take over charge until the 23rd?—I am absolutely sure that I can prove that I did not take over until the 23rd. They have confused the date. I am absolutely certain, because I never gave an order to any officer until after the 23rd, when I took charge.

72. *Mr. Ferguson.*] Any such order after the 23rd had nothing to do with the clinical part of it?—No; that is so. The details of my work were outlined in the Minister's memorandum. I did not see the patients professionally; I did not attend them medically—you see I have been fifteen years out of practice. I was to provide accommodation and equipment, and the transfer of the patients not only at Trentham, but at all the other hospitals and camps—about five camps and five hospitals.

73. Who was in charge during that period?—The Principal Medical Officer was in charge of that side, and I wrote—as you will see by the instructions—saying exactly what his duties were: to appoint such Medical Officers to look after the sick as he might think fit. I can prove that I never gave an order to any officer until the 23rd.

74. *Mr. Gray.*] Whoever was supreme head, the P.M.O. and his assistants were doing their duty?—Yes, I hope so. I went down South after the 13th. I was down at Timaru.

75. *Mr. Ferguson.*] And you would not have gone if you had thought you were going to be responsible?—No, certainly I would not have left.

76. *The Chairman.*] Regarding the 29th June, Major Frengley stated to us that he made reports to the Health Department that he had found overcrowding in the huts on that date. He reported to you. This is his evidence: "Was any action taken by the Health Department in that matter?—I cannot say what action was taken. Did you take any action?—No, not beyond reporting to the Director of Military Hospitals." Do you remember that occasion?—Yes; I had a talk with the Camp Commandant on general matters, and that was brought up.

77. Was there anything done to stop it in the future?—I understood there were to be tents set apart, and I understood that the P.M.O. had the matter in hand; that was Colonel Morice.

78. That would be the very day he came in?—I think I explained in my evidence that when I took charge on the 23rd my time was almost entirely occupied providing accommodation on that side of the road where the hospital stands, with the exception of a ride that I took down to the Ambulance lines to see the condition of the men awaiting inspection. I did nothing in the actual camp for some few days. I spoke to the Chief of the General Staff with regard to a waiting-room for the men, and boarding the inspection tent.

79. There is one other matter. Major Frengley says that before you returned from England General Robin spoke to him with regard to the arrangements for the treatment of soldiers in hospital. He says, "As Dr. Valintine was just returning—that would be in February last—I suggested to General Robin that he should await Dr. Valintine's return." *Q.* "What followed upon that?" *A.* "I know that General Robin, immediately after Dr. Valintine's return, got into touch with him over the matter of the soldiers. I do not know the particulars of it. Dr. Valintine will know the particulars." *Q.* "Dr. Valintine returned in February?" *A.* "Yes, sir." *Q.* "Then, after that, were your services engaged in connection with camp matters?" *A.* "No, sir. Beyond my being a member of the special Board referred to previously, I have not acted in any capacity for the Defence Department in connection with the camp, nor been called upon"?—My arrangements with General Robin were with regard to the sick returning from the seat of war. I said there would be no need for any special accommodation for these men, provided we received ample notice of the departure of the transport with the sick on board. That would allow us five or six weeks, which would be sufficient notice. It would be possible to put up any special accommodation that might be required, but I was of opinion that the hospitals of the Dominion would be able to cope with them, because naturally the friends of the sick and wounded would desire that they be accommodated in the hospitals nearest their homes.

80. That had nothing whatever to do with arrangements for the accommodation for the patients from the camp?—No. The only matter that we discussed was as regards the fees which the military authorities were to pay to the Hospital Boards.

81. You would naturally be called upon to give an opinion upon that point, because the hospitals were sought to be made use of?—Yes.

82. And you were in charge of the hospitals at that time?—Yes, civil hospitals.

83. Can you say whether it was arranged that the Wellington Hospital should be a base hospital in connection with the Trentham Camp?—No, sir; in fact, I am sure no definite arrangement was made.

84. I understand that there was some sort of arrangement under which, in case of mobilization, the hospitals are to stand as base hospitals: was there any arrangement formally made in regard to Trentham Camp?—Not prior to the 5th June when I made those arrangements myself. I am not aware of any definite arrangement made by the military authorities.

85. *Dr. Martin.*] If it is in writing the Secretary of the Hospital Board would have a record of it?—Undoubtedly.

86. It would not come before you?—No.

87. Only in case there was a dispute?—That is so.

88. You made arrangements with the Hospital Board?—Yes, sir, direct, on the 5th—about sixty beds.

89. Did you ascertain whether any arrangement was then in existence, and whether you were superseding an old arrangement or making an original arrangement?—When I had my conversation with Dr. Barclay I said something to the effect that it was quite necessary to know how many beds they could set aside for military purposes. I went on to say, "There is the Victoria Ward: why not give that entirely for military purposes?" He agreed to do that. That was done, but he asked me subsequently to hold over the taking of the Old Men's Ward, giving instead what is known as the Tin Ward. Subsequently they agreed to give the whole of the Victoria Ward with the Tin Ward: that is a total of sixty beds.

90. *The Chairman.*] So far as you learned at that time that was an entirely original arrangement?—Yes, I am sure of it.

91. Did you learn of any definite arrangement prior to that?—No. I knew that the Medical Superintendent was taking cases into various wards, but I knew of no definite arrangement.

92. *Mr. Salmond.*] Relating to the first matter upon which you were examined, the safety of Trentham Camp, assuming that four thousand troops had to be accommodated in the camp, are you of opinion that they would be just as safe at Trentham as anywhere else in the Dominion?—Yes, absolutely; safer, I should say.

MAGNUS BADGER further examined. (No. 124.)

Witness: If your Honour will permit me, I would like to say a few words in connection with the mixing of measles and influenza patients. I noticed in reading my evidence over that I must have conveyed a wrong impression. When I first went to the hospital—that is, the hospital at the main entrance to the racecourse grounds—it was utilized in connection with measles cases. Part of my duties consisted, the moment a case was diagnosed as measles in the kiosk, in providing for men to carry the patient away from the kiosk to the hospital; so that there was a mixture, a temporary mixture, of the measles and influenza patients, but it could not be avoided.

1. *The Chairman.*] They were separated immediately a patient developed the measles?—Yes, sir. When a patient came from the lines he would bring a slip of paper on which would be written "Influenza" or "Detain—suspicious." The nurse would inquire of me, and I would say "S": that would mean "suspicious," but the patient would not know what it meant. We would isolate those patients as much as possible from those which were clear, definite cases of influenza. That was the only mixing there was. I would like also to refer to the matter of patients being discharged prematurely. The greatest difficulty we had was to keep them in. One witness has said that patients were discharged prematurely. We had the greatest difficulty from keeping the patients from going amongst the convalescents, so that towards the last I got the names in a list from Dr. Harrison and formed the men up in a line in one way, and then afterwards re-called the names, and so I found two patients who would not have otherwise been detected. Then, in connection with the question of giving medicines with a spoon: after the 29th June medicines were given by the nurses only. They were never at any time after that date given by orderlies, except in the form of tabloids. I contend it was absolutely wrong to say that a nurse ever gave medicine out of a spoon to two patients in succession so that the second patient used the same spoon as the first. There was no form of medicine in that hospital that was ever given in a spoon in the way of an aperient.

Colonel PURDY further examined. (No. 125.)

1. *The Chairman.*] In the evidence you gave us originally you were asked whether complaints were made about the tents being too close in the first camp?—No, there were never any complaints.

2. You said there were later on?—Yes; I was referring to a letter which Dr. De Lautour wrote on the subject.

3. They were Dr. De Lautour's complaints?—Yes. I stated that there were no definite instructions laid down as to the spaces between tents. Dr. De Lautour said there were; but what he quoted has reference to the intervals between the rows of tents and not the spaces between the individual tents. I am astonished that he should have said such a thing with his thirty-five years' experience. In "Royal Army Medical Corps Training" it says (the latest edition, 1911), "In a properly arranged camp the intervals should be always sufficient to render the shifting of a tent to a new site possible" (page 72). The Field Service Regulations also refer to the same matter and state, "In a standing camp tents will be struck periodically, and the ground underneath well swept and left exposed for some hours at least, the tents being eventually replaced on their former sites. Tents should never be pitched for occupation in the intervals" (latest edition, Part I, Field Service Regulations, reprinted 1914, page 72). With regard to sanitation also we had some criticisms in the Press and also written to the Minister. That was proved to be absolutely incorrect. Now, Dr. De Lautour was our first and severist critic, because he was supposed to have had practical military experience. In his statements he could quote from no text-book past 1886. Now, everything that we did is laid down in the very latest manuals.

4. But his book of 1886 was not a military book at all?—Yes, sir, Surgeon-major Duncan's. He said there were not sufficient latrines, and that the average laid down was 8 per cent. Now, every manual lays it down at 5 per cent.; and if there are over five hundred men in camp, then it should be 3 per cent.: that is in every manual. Then he said that earth was not used in the latrines. Well, sir, earth was used till I stopped it. I pointed out that it was a wrong method, and that the most modern method was to use kerosene, and to have the pan emptied every day. This method is now used everywhere. If they can get a sufficient force of men to empty the pans, then they prefer not to use earth. I believe we were the first people in any camp to use kerosene, and now it is universally used. In Blake Knox's "Military Sanitation and Hygiene" he says, at the foot of his chapter on "The dry method of removal of excreta employed in barracks," "In stations abroad the use of dry earth is being in many instances abolished, a solution of cresol in water being used instead." That has become universal. They find it much better to shift the tins every twenty-four hours. We appointed a special permanent sanitary squad in camp as well as the routine squad and fatigue-parties. Then we had criticism with regard to the number of men per acre, and Dr. Mackenzie stated that we should follow the lead of the Japanese on this matter. The Japanese shifted the sites of their tents frequently. That is the sort of criticism we have had to put up with ever since the initiation of the camp. Now, as a matter of fact, the Japanese did not generally use tents, but in the few instances where they did use tents these were the ordinary white bell tents, and we are told that the Japanese did not believe in overcrowding. Now, we know that although it was in their regulations that no latrine should be within 20 yards of a tent, they had a latrine stuck behind each tent. There is reference to this in the British Army War Reports, page 507, Report of Lieut.-General Burnett. We are also told that in the ordinary Chinese huts they put sixteen men to sleep, and the space is only 20 by 12. Latrines were immediately outside. It certainly shows that they had no satisfactory sanitary arrangements at all. Dr. Mackenzie said we had 620 men to the acre, and also Dr. De Lautour said that we had twenty tents to the quarter-acre, and therefore 640 men to the acre. If Dr. De Lautour had reflected for one minute he would know that we never had 640 men to the acre. The surveyor who went out and subsequently gave evidence here said that there were twenty tents to the quarter-acre; but then you must remember this: that in every twenty tents there were at least eight tents with practically no one in them, and we only had eight men in those which were fully occupied. When I was out there the other day I took the opportunity to see if my memory was correct, and to take down from the Quartermaster the number occupying the tents. There was one tent for the O.C. of each company; there were other tents for officers, orderly-room, one for food, one for Quartermaster, a C.S.M. tent, and one sergeant's mess-tent—that would be eight tents.

5. That would leave ninety-six to the quarter-acre?—About a hundred—not more than a hundred. The camp was never overcrowded. I submit that the whole tent life of the camp proves that what I stated in my original evidence is correct, that there has never been a camp so successful as this one. The incidence of sickness was low.

6. The criticism founded upon six hundred men to the acre would fall to the ground because there were never more than four hundred men to the acre?—That is so, never more than four hundred men to the acre. Then, Major Elliott said that the orderlies were not trained. The first and second-stationary-hospital orderlies had no training, because there was no adequate hospital to train them in. He knew perfectly well that No. 1 and No. 2 stationary hospitals were never in camp for more than four weeks. They were trained from the very first. There were nurses, and they were given special lectures. We lumped all the training together. Then, Mr. David Robertson, of Petone, made a statement about the equipment. He stated he was shown into a marquee in which there were four beds and only enough room for three. This marquee was 29 by 19, and it is laid down in military regulations that it will hold eight.

7. Now, as to Major Fyffe's reports?—Major Fyffe wrote two reports, which were sent in at the same time. I never saw that report about the hospital and tents and the equipment, but the other report was one about the food-scraps being sent out of the camp by a man who had a pig-farm. I remember distinctly he called me into his tent and showed me the report, and he said, "Do you agree with that?" I said, "Yes, most thoroughly"; because I was opposed to scraps being taken out of the camp at all. I think they should have been burned. He sent that report in, and I wrote that document to back him up. At the same time he sent in a report about the hospital, and the record clerk, when they were brought before him, must have put the one belonging to the pig-farm on to the one belonging to the hospital. It does not belong to that at all.

8. Did you send it on to the A.G.?—No.

9. Would you put the report of the pig-farm before the Minister of Defence?—Yes, sir. Dr. Fyffe suggested that there should be a destructor bought, and this would be very expensive, and the A.G. decided that it was not a question for us.

10. You say this memorandum does not refer to the hospital at all, but to the question of the disposal of camp-refuse?—I am absolutely certain of that.

11. Why did you want the destructor?—To destroy everything that came from the camp.

12. *Mr. Ferguson.*] Where is the result of Major Fyffe's request?—I do not know, sir.

13. *Dr. Martin.*] Was this report not sent in?—I do not know.

14. There is nothing to show that the Minister saw it?—No, sir; but I know for a positive fact that sheets and pillow-slips were in that hospital in January. If you read Mr. Robertson's evidence you will see that Dr. Fyffe stated to him that there was a lack of sheets. Mr. Robertson said that they handed over the £10 which they had subscribed to equip a bed; but did Dr. Fyffe expend that £10 on the things he said he was in need of? No; he bought kitchen utensils. Later on they handed over another £13, which made £23 altogether, which would have bought

double the amount of sheeting and bed-clothing required. What was bought? An operating-table, which was never used; a chest of drawers, which was not needed; a lamp, which also was not needed, because they could have had as many as they liked; and a filter. The first I knew of it was in this room when the evidence was given, because I have objected to all filters except Chamberlain's. There was no necessity to have a filter up in that camp. With the £23 there was nothing bought the lack of which had been complained of.

15. At any rate, Dr. Fyffe bought an operating-table?—No, Major McGuire. It was an operating-couch, but it was never used. Then Dr. De Lautour stated that if he had been in charge he would have taken the racecourse buildings long before it was done. Mr. Skerrett was good enough to show me a letter from the Mayoress, stating that I told her sheets were not used. Well, that is true. Under the regulations provided for a Field Ambulance hospital no sheets are laid down.

16. But this is not a field hospital?—No, but it was an Ambulance hospital. Mrs. Luke was up asking me in March about the equipment of the stationary hospital, and I told her distinctly that sheets were not laid down for Ambulance hospitals, but only for the clearing-hospital. Besides, sheets were in the hospital.

17. Dr. Fyffe stated on the 19th February there were no sheets?—But there were. I assure you there were sheets there.

18. *Mr. Ferguson.*] It seems a strange thing that Dr. Fyffe should put it in writing?—As a matter of fact they were there that day, but what he complained was that they were not sheets, but bits of old linen—pillow-cases split up. Then I have been charged with failing to send reports of cases of grave sickness in the camp: that is not correct.

19. *The Chairman.*] What were the instructions that the medical men or others had in regard to reporting to parents information relating to serious illness: what instructions did you issue?—The hospital authorities reported all cases of illness.

20. Did you issue any instructions on the subject: we find there are instructions laid down?—The ordinary instructions.

21. What are the ordinary instructions?—That in all cases of serious illness the next-of-kin are to be informed.

22. Where are they?—In the medical regulations.

23. But you had men there who did not know much about them: did you lay down any definite instructions?—The camp authorities ran the whole of their own business.

24. But they do not know when a man is ill until they are told by the medical authorities?—They were told at once. There was never a single complaint, because the men were informed immediately. Right away up to the epidemic of measles there were never any reports of grave sickness to make, except the few serious cases, and I often discussed with General Robin and the Adjutant-General the various things at the camp. It is laid down in the medical regulations that the D.M.S. shall give verbal directions and reports if he chooses. Then, with regard to the equipment, we were never short of equipment—we wanted for nothing. The Minister gave me a free hand, and told me I was to spare no expense. With regard to the inspections of the men, I may say that the men were most rigorously inspected. It has been proved in evidence that the first thing that is done to them is to inoculate them for typhoid. That is an inspection to start with. We held feet-inspections and other inspections regularly—never less than once a week.

25. Nothing has arisen with regard to the feet?—The men were inspected regularly, and before they went away on the ship, and the proof is that on the twenty-six transports there has never been an outbreak of disease on any of them. Of course, there have been isolated cases.

26. *Mr. Ferguson.*] Was there not in the Third Reinforcement twelve cases of measles and one case of cerebro-spinal meningitis?—It was not diagnosed as cerebro-spinal meningitis. It is a fairly common condition after measles. It must be remembered that the epidemic started on the 26th May, and, although there were far more cases of measles in Wellington then than there were ever in the camp, nobody took any notice of it. There were eighty-four cases in the camp from the 26th May till the 31st, but these figures were not worked out till afterwards.

27. *The Chairman.*] What you said was that on the 13th April some cases of measles occurred, and then you say, "I think towards the end of May we would begin to have more cases, and I always anticipated that in June we might have an epidemic, and that something might have to be done"?—Yes, I thought we would probably have an increased number of cases, and if fresh batches kept coming in we would probably have two hundred cases in June.

28. Then you told us that you interviewed Dr. Hardwick Smith, and said that you did not like to treat the measles cases in the camp?—But that was in November.

29. You said then that it was not proper to treat the measles cases in tents?—I did not like to do so.

30. And you also said in May that you expected an outbreak in June?—Yes.

31. If in May you expected an outbreak in June, I want to know what provision you had made, apart from tents, to meet that?—We were trying to get buildings.

32. I have not been able to put my finger upon anything that was done?—I went all round the Upper Hutt to get houses, or schools, or churches—various places were suggested.

33. In April you do not seem to have had in your mind any place, because you rang up the Health Office to know if they could provide any building for you?—That was under the arrangement.

34. You see you had no building in view: all that you had then was Berhampore, which would hold from thirty to forty patients?—And the hospital.

35. Then we have this: that Berhampore grew in numbers so that you had to do what you said you preferred should not have been done—namely, to put up tents to accommodate measles cases?—But only as a temporary resource.

36. Then, if it was a temporary resource, it began when?—On the 26th May.

37. Then we have the position that on the 26th May you had no building in sight, and it was necessary to erect marquees to accommodate measles cases at Berhampore, marquees being things which you had previously in effect condemned as being improper for the treatment of measles cases?—No, sir, tents.

38. But marquees and tents are the same things?—Not quite.

39. Do not you mean canvas—in all sorts of weather?—There is much more protection in a marquee than in a tent.

40. Do you mean to say that you were worrying as between marquees and tents?—I do not like canvas for the treatment of pneumonia out there.

41. There is this, then: the only place you had on the 26th May was the hospital, eked out by four marquees, but in May you had formed the opinion that there was going to be an increase in June. On the 29th May Dr. Elliott rings you up and tells you that Berhampore is overcrowded, and what did you do—you did not do anything?—I put up five marquees in the camp.

42. But that is not a building: you did not take any steps to acquire any buildings?—I cannot make buildings. I was going about looking for them.

43. Is this a fact that you had the racecourse in view?—Yes, sir.

44. Why did not you take it then?—It was not absolutely necessary then.

45. Did you approach the racecourse authorities?—No, because we were going to commandeer it if needed.

46. You said in your evidence that on the evening of the 31st May Dr. Elliott asked you if you were aware of the overcrowding at Berhampore. You had visited it on the night of the 28th. That is, three days had gone by without any knowledge on your part of its being overcrowded?—That was Saturday and Sunday.

47. Then what steps did you take beyond getting Sergeant Yallop down and putting up marquees? You did not set about putting up buildings?—I was then seeking for buildings.

48. Did you go out and see Berhampore yourself?—Yes, sir.

49. You did not see Berhampore between the 26th May and the 2nd June?—No, because Major Elliott had been. He was quite reliable.

50. But five days went by without your having visited it?—But Monday was my day for visiting, and I asked Major Elliott to go, and he went.

51. At any rate, the position was this: that Berhampore was overcrowded, and that marquees had been erected there for some time before the 26th May?—No, sir; there was one erected, and then two, and then four for a day, and then one was taken down, because the overcrowding only lasted for one day.

52. No?—There was only 104 for one day.

53. The maximum?—That is what I meant.

54. What I want to point out is that here was Berhampore overcrowded, with an increasing number of measles cases from day to day, and no buildings found, although you condemned tents?—Yes; but I was trying to get them.

55. What did you do to get them: what persons did you speak to?—General Robin, the Adjutant-General, and Colonel Potter. I said I was trying to get buildings. General Robin asked me if there were buildings round about the Hutt.

56. Were any buildings got before the 13th June?—I had nothing to do with that, because it was taken out of my hands on the 6th.

57. Well, were any buildings got before the 6th?—Mr. Izard's home was taken immediately and opened on the 12th.

58. Were any places begun before the 6th or arranged for?—No, I was away.

59. Was not that a very critical time to go away? I may be wise after the event?—There were no bad cases.

60. But what I want you to look at is whether provision was made for the future?—Only the fact that we could have got the Lower Hutt and Trentham racecourses, which I knew about.

61. But you had not taken them?—But we would have taken them.

62. In November you said you did not believe in treating measles cases in tents, and yet you erected extra marquees at the camp to relieve the congestion?—But we had other than tents. We had practically room for ninety patients in the hospital and Berhampore.

63. Did you know that that was not enough without additional marquees?—But it would have been enough if the cases had not come in within a few days. Nobody could foresee the conditions.

64. Is it a fact that you did not make arrangements for any buildings before the 6th June?—Yes.

65. You had the racecourse in your eye?—Yes, sir.

66. And although men were being treated in tents you neither applied to the racecourse authorities——?—I never applied direct.

67. Or indirectly?—Yes, I said we would take it when we needed it.

68. *Mr. Ferguson.*] Did you mention it to your senior officers?—Yes; I would have had power to take it.

69. Under what?—Under the Army Act. I said, failing that, we would commandeer a couple of huts.

70. *The Chairman.*] But if the huts were all filled?—But there was nobody in them at that time. We could have taken them out if they were, but we did not. I am perfectly willing to take all the blame, but, honestly, I cannot see——

71. That is not the right way to look at it?—But I did not say you were suggesting it. I admit that, looking back now, I should have commandeered the buildings before, even though we did not want them at the time.

72. But you wanted to get beds, and so on?—We had the beds; we had all the equipment. I could have equipped up to two hundred beds in six hours.

73. But we know there were no beds in certain parts of the kiosk?—But that was when they had already had about a thousand beds—six hundred, anyhow. They had stocked the whole of Kaiwarra. They got all the beds for that in no time.

74. The men in the marquees were on the ground?—On palliasses and ruberoid flooring or straw. They were convalescents.

75. Those were the men who were removed to the wooden buildings on the Sunday?—No, sir; there is quite a mistake altogether about that.

76. Were not the men in the marquees removed?—Some of them, but most of them were convalescents. There were very few cases of measles.

77. You told us you worked all day long shifting the patients?—There were sixty measles patients and eighty-three cases of influenza and colds.

78. That would not make more than two hundred beds required?—One hundred and forty.

79. How was it that there were not beds for them all when they were shifted into the kiosk?—But there was a motor-lorry came there laden with beds. We had all we wanted.

80. Some of them who were shifted in had no beds?—Not till later.

81. But when they were in the marquees?—There were no beds in the marquees.

82. But you tell us you knew where you could get beds?—We could always get them from the stores.

83. Why were they not got?—Because if you put beds in marquees you reduce the room considerably, and you could only put in eight people instead of sixteen. These were convalescents. We had beds in some of the marquees there, and there were also three or four bell tents with beds in. There were always beds in the camp hospital. We had at one time two marquees and four bell tents up there. They vary from two patients to sixteen under observation.

84. The main point is that there was an absence for provision of accommodation in town, and the question is whether that absence of provision should should have been allowed?—I submit that, as I had to go to Dunedin, and if when I came back on the 6th, Sunday, things had been as when I went away I would have taken the buildings.

85. But you told us that you realized the epidemic on the 26th May?—No, when I made out the sick-reports. I said, "This backs up my point that I did not know anything about it."

86. We have your evidence as follows: "When did you first during the use of Berhampore Hospital conceive the extreme probability of measles or sickness?—I thought towards the end of May we would begin to have some more cases, but I always anticipated that in June we would almost certain to have an increase, and that something would have to be done"?—That is what I say.

87. That was after you had taken Berhampore, and nothing was done. And you went away without leaving anybody to take those places in your absence?—But when I went away the extreme possibility had not arisen. One might say, "Look what happened later." There was a sudden inrush of four or five hundred cases, and nobody had made provision for that. You do not expect them all tumbling in on top of you within two or three days. There might have been a slight increase. The Trenthams came in, and the Sixth Reinforcements came in, and the whole thing was jumped upon the camp as a chain of circumstances that might never occur again. There was no wind, practically. I myself do not see how one could have done much more. I certainly do not believe in putting up a huge infectious hospital. You might as well say that if there was an epidemic of measles in Wellington (which there is at the present time), and you had three or four thousand cases, that it is time that the authorities should put up another hospital to accommodate these three thousand measles cases.

88. *Dr. Martin.*] What is your official salary as D.M.S.?—I have not any salary.

89. You have an honorarium of £150 a year?—Practically. I wish to make this absolutely clear. It might appear that I was grumbling, but I have never grumbled. One or two witnesses gratuitously made statements that a man's ability was measured by the amount of money he got, which was a gratuitous insult. My salary since the beginning of the war came to about £800.

90. But your official honorarium is £150?- Yes; but my pay as Colonel on active service would be between £800 and £900 a year.

91. As the Director of Military Services, in England, for a district or a division what do they get?—I do not think they get more than £100 a year—that is, for Territorials.

92. But in time of war?—About £700 or £800 a year.

93. And with allowances, about £1,000?—I should think about that.

94. But those officers at Home have assistant Directors of Military Services to help them: have you had one to help you?—No, because we never needed them.

95. You have been quite able to do this work yourself?—Yes. Of course, some days I had to get up early in the morning, but I never grumbled at that. There have never been suggestions at headquarters that I have not done the work. I think it was because of the way I had done the work that when this trouble arose, when I was away, I was sympathized with. They have never had any cause to complain of the way in which I had done the work.

96. Did the military ever refuse to give you any necessary help?—No.

97. Nor anything in the way of equipment or supplies?—No, sir. I should like to state that the Adjutant-General was very much upset because he thought what he said might be misconstrued. He meant to say that the medical services had been starved before the war according to Lord Kitchener's scheme, but since the war there had been no expense spared in

regard to medical equipment. As a matter of fact, I have grumbled dozens of times at the amount of money that has been spent. For instance, they wanted motor-ambulances, and they asked me how many they should get, and I said ten; but they sent fourteen. The equipment was seven motor-ambulances and three horse-wagons, and yet they sent fourteen.

98. Did you think it necessary at any time to have a motor-ambulance at Trentham?—Yes, there was one coming.

99. Did you ask for one?—Yes.

100. What month?—I think it was in March or April.

101. When did you get it?—We have not got it yet, because somebody was good enough to give us a motor-ambulance, and it was stopped on the way. We have never been without a motor-ambulance, but we had to pay the hospital.

102. You have sent patients in in taxis?—But never any patients who should have gone in an ambulance.

103. But patients have gone in taxis?—Well, not exactly convalescents; but a man with a fractured tibia, he could be taken in a taxi quite well. I suggested to the General a long time ago that it would be much better for us to have an ambulance, because we would save a lot of money. He told me there was one coming; but, as I said, it was stopped. We had two or three now.

104. *Mr. Gray.*] As to the insufficient number of trained orderlies?—I have pointed out that we have never had an insufficient number of trained orderlies. The orderlies were trained; they were brought in as partly trained men. We could not staff the whole of the hospital from our own men, but certainly we provided 75 per cent. of them.

105. The best-trained men went away with the Main Body?—No, we have had men trained ever since, up till now; but you cannot train stretcher-men when you have only twenty men in camp.

106. Was it anybody's fault that there was not more trained orderlies at the time of this rush?—No.

107. Could they have been got?—I cannot quite understand, because there were plenty of orderlies in camp at that time because the hospital-ship men were in camp at that time.

108. Should the medical staff have foreseen the possibility of the large increase of cases of sickness in June and provided orderlies accordingly?—There were orderlies coming in. There was a big batch coming in with the Trenthams and the Sevenths. I had asked for forty more orderlies.

109. When?—I should think it was some time before the "Willochra" came in, at the end of May. I asked the Chief of Staff for forty. And he said "All right," and his chief clerk was told to call them up. But the C.G.S. asked me afterwards whether I had considered that there might be thirty or forty orderlies coming back with the "Willochra," and I said that we had better wait till she came in.

110. Are you able to say whether there was a sufficient number of orderlies during the time you were in control of the hospital?—Absolutely.

111. *The Chairman.*] Was not the call for the extra number of orderlies due to the fact that you had five different places to run?—No; that was long before.

112. *Mr. Gray.*] Can you say whether the medical staff was or was not overworked?—I do not think they were overworked.

113. You have heard what Captain Harrison said about his own experience—he made no complaint?—No; I told him that he ought to have got an assistant. He said, "Colonel Valintine has very kindly let me have Captain Faris, and I get a day off now and again."

114. You say that the medical staff was not overworked?—I do not think they were overworked. They had plenty to do for a time, as we all had.

115. Why was the isolation of the patients, or the contacts, discontinued?—Because we did not think it was worth while continuing it. We practically never got a case from the contacts.

116. Everybody was a contact?—It was coming to that.

117. Was it practicable to continue the isolation of patients?—We began to see that it was not of very much practical value, and at that time, early in May, there would have been about five hundred contacts, and that number would have increased in June—possibly to twelve hundred or seventeen hundred.

118. Did your medical staff agree with you?—Yes.

119. It is suggested that there was a lack of system and that your time was taken up too much in detail work?—I suggest that there was no lack of system at all in the camp. I had nothing to do up there except the Medical Boards and general supervision.

120. You were not the P.M.O. of the camp?—No; he did everything. He was practically in charge, just the same as Colonel Morice is now.

121. You were a headquarters man?—Yes.

122. And the P.M.O. was responsible for the medical administration of the camp?—Yes, and they had to refer to him for medical work. If I had not been doing Medical Boards I would not have gone up to the camp at all, except occasionally.

TUESDAY, 10TH AUGUST, 1915.

ROBERT WEST HOLMES further examined. (No. 126.)

1. *The Chairman.*] When you were here on the last occasion you told us that you had in hand the question of surface drainage and the sanitation of the camp?—That is so. We also had the roading in hand.

2. *Mr. Salmond.*] The work of going on with the camp includes an amount of roading: will you say what it is?—The principal work in hand at present is the formation of streets between the lines of huts. A little has been done to the road leading up to the camp from the main Hutt Valley Road from the station, but that was stopped in deference to the request of the Defence Department.

3. Are sufficient roads in process of construction to give access to all the huts and buildings of the camp?—Yes.

4. Are those roads being metalled?—Yes.

5. How long do you think that process will take to complete?—We expect to have about two-thirds of the work done by the time the next reinforcements go into camp. That has been delayed a week.

6. And when will it be completed?—I should think, within three weeks or a month after that. It all depends upon the weather. We have suffered considerable delays by reason of the weather.

7. What arrangement exists with respect to the surface drainage of those huts: are they channelled?—We are forming a concrete channel on each side of the street in the same relative positions to the streets as ordinary street-channelling in a town.

8. Is any arrangement made for the overflow water from the roofs of the huts?—We are going to place surface tile drains between the existing huts, and we are fixing ordinary roof-guttering to the new huts, the water from which will be led into the street-channels.

9. Then, do I understand that there will be no accumulation of water from the roofs of the huts in between the huts on the immediately adjoining ground?—We are doing our best to prevent that state of affairs. Arrangements are being made to have that drained into the channels—into the streets.

10. *The Chairman.*] And when the surface drainage is complete the surface will then be as dry as could be expected under the circumstances?—Yes.

11. And they will be dry and comfortable?—Yes, we hope so.

12. *Mr. Ferguson.*] There is no spouting being put on the existing huts?—No, it would cost too much. It will be cheaper for us to put ordinary channel tiles along each side between the huts to catch the drips from the eaves.

13. That is assuming they drip vertically?—We shall slope the ground in between so that any water that does not fall into them may drain into them.

14. *The Chairman.*] You mean a direct form of channelling?—Yes.

15. *Mr. Salmond.*] Are any other drainage surface works being constructed?—That is all in connection with the huts. We are going to put in hand some surface drainage in connection with the road leading up to the camp.

16. But no further surface drainage-works in the camp itself?—No.

17. *The Chairman.*] Do you think those works will be reasonably sufficient for the surface drainage of the camp?—Yes, we think so.

18. *Mr. Ferguson.*] You must have some outlet?—We are leading the surface water away into the Trentham Stream, and the Trentham Stream is being deepened for the purpose of improving the drainage of the camp generally.

19. *Mr. Salmond.*] I understand further buildings are being built?—Yes.

20. How many?—There are twelve huts for the men, one hospital inspection hut, one hut for hospital orderlies, a small hut for the orderlies attending on infectious patients, besides additional cookhouses and ablution-stands, and we are constructing an experimental drying-building for dealing with wet clothing.

21. That is a complete list of the buildings being put up?—Yes, I think that is all.

22. *The Chairman.*] When will the experimental drying-building be ready?—That should be ready very shortly now—this week.

23. *Mr. Ferguson.*] And there are bathhouses?—They are not in hand—they are only contemplated. Plans have just been completed for shower-baths, and they are being submitted now to the Defence Department for approval.

24. Is the number of shower-baths fixed?—A hundred, and about twelve for officers.

25. We were told there were two buildings going up for shower-baths?—We are completing those buildings.

26. *Mr. Salmond.*] I understand that the plans for the system of shower-baths have not been agreed upon?—Yes.

27. There is some doubt as to how best the arrangement is to be effected?—Yes.

28. Where are the plans obtained from?—We are preparing them in my office.

29. But are they on some English system?—No, just on a system adapted to the military requirements. We are just providing hot and cold water.

30. And that system is going to be tried as an experiment?—Yes.

31. And is the drying-room also an experiment?—The drying-room is a distinct experiment. The showers are hardly in the nature of an experiment, because the plan is being based on similar bathing arrangements that I have already constructed at the Sunnyside Mental Hospital at Christchurch.

32. What number of drying-rooms is it contemplated shall be put up?—Eight, I think—one for each five hundred men.

33. As to these new huts for the men, how many are they to hold?—Sixty—thirty in each end.

34. Is there any reduction in size?—No, the same size.

35. I understand they are made of wood?—Yes; we are constructing them with vertical close boarding battened on the outside.

36. *The Chairman.*] What about the ventilation?—The ventilation is being slightly modified by inserting vents in the ridge and allowing for upward ventilation through the windows in addition to the eave ventilation. The eave ventilation-space is being slightly reduced.

37. Are there to be any other alterations or additions?—A slight alteration in the arrangement of the windows—they are being made single instead of double.

38. You will be better able to get the beds between the windows?—Yes; they will be spaced so that there will be no necessity to place the beds directly under the windows.

39. *Mr. Salmond.*] Are stretchers being provided?—Yes.

40. Are they in the camp now, do you know?—On Monday morning about fifteen hundred had been sent out. They are being manufactured, I suppose, at the rate of two hundred or three hundred a day.

41. *The Chairman.*] There will be four thousand there by the 27th?—Yes.

42. Is there anything in the shape of a porch or portico being arranged for?—Not at present.

43. Or the construction of something for hanging anything outside in the shape of damp clothes or taking off dirty boots?—That was considered for some time, and finally it was decided not to do anything.

44. Would there be room there to put them in without interfering with the roadway?—They would encroach on the footpaths, or that part that is reserved as a footpath.

45. Would that be the case with the new huts too?—Yes.

46. How have they been orientated?—Parallel to the present ones.

47. No alteration made?—No.

48. It was suggested in evidence that the position they are in at present is such that most of the sun is not made use of?—The site of the present huts is practically regulated by the land available to place them on, as the military authorities particularly desired that the parade-ground should not be unduly encroached upon, so that we were confined to a space between the existing huts and what will be the hospital ground.

49. Is the same space left between the huts?—As far as I know, yes. It is supposed to be 20 ft.

50. *Mr. Salmond.*] I understand no arrangement has been made for separate messing-accommodation for the troops?—No.

51. They will take their meals in the huts?—Yes, that is the position.

52. Do you know of anything else that is going on in the way of improvements in the camp?—A railway-siding has been put down. I think that is complete.

53. *The Chairman.*] That will tend to relieve a good deal of the traffic from the other side?—Yes, it will relieve a good deal of carting. We are fencing in the ground that has to be allocated to the hospital.

54. Is there a necessity for much ground around the hospital if it is only for fractures and so on? How much space are you fencing in?—I think we are bringing the fence down to within 60 ft. of the front of the huts.

55. How much space would that leave for the hospital?—Then the hospital inspection hut comes. It is not very far then to the building—perhaps under 100 ft.

56. What area are you taking in: is it an acre for the hospital?—Somewhere about that.

57. *Mr. Salmond.*] Can you state the approximate expenditure involved in these improvements?—Not at present.

58. In regard to sanitary drainage, what improvements, if any, have been made?—Nothing has been done yet.

59. Is anything contemplated?—We contemplate having to dispose of sewage by means of soak-pits, but it remains to be proved whether they will be sufficiently efficacious. I do not think they will be until we complete the deepening of the Trentham Stream, because the existing soak-pits are flooded by the stream.

60. Is the process of deepening going on now?—Yes.

61. *The Chairman.*] The soak-pits have been tried there ever since the camp began?—Yes.

62. Is not the efficacy of the soak-pits determined one way or the other?—To a limited extent.

63. But you mean on a larger scale?—On a larger scale; and in the position where we had to dig the soak-pits they have to be dug clear of the parade-ground, and that place is well over towards the Trentham Stream, where the ground is waterlogged by the stream-water.

64. *Mr. Ferguson.*] I understand you are taking the soak-pits away from the vicinity of the habitations?—As far as possible.

65. *The Chairman.*] You say they have experimented. Supposing the experiment shows they are not a success, what then?—We shall have to resort to some other system, probably sewage irrigation on the sewage-farm principle. Another system would be to take the sewage to the Hutt River.

66. You could not discharge it there without having it purified?—The difficulty is to purify the class of sewage we have to deal with. We cannot treat it in a septic tank, it being composed of ordinary kitchen and bath waste.

67. With regard to the sanitation, of course it has been going on in the past: do you consider it is ineffective now?—It is ineffective now through the soak-pits being flooded.

68. Is that owing to the floods, or what?—No, with the general waterlogged nature of the ground.

69. Is not that a matter of prime importance?—Yes; we are attending to it as fast as ever we can.

70. Will it be attended to and done before the troops come in?—I doubt it. It is hardly possible to get it all completed in that time, but we will make temporary arrangements by digging intermediary soak-pits where the ground is favourable.

71. *Mr. Ferguson.*] In the meantime I understand you are widening the area of the habitations, closing up all the soak-pits in the immediate neighbourhood of habitations, and making fresh soak-pits in the area there, which I understand is quite sufficient for present requirements?—Yes.

72. *The Chairman.*] Is not this question of sanitation more important than roads?—It is equally as important.

73. *Mr. Salmond.*] Is there any immediate practical difficulty in the way of sanitary drainage—anything to stop this camp being presently occupied by four thousand men?—I do not see any difficulty or objection in the way. I think they will be able to carry on quite well till we get the Trentham Stream deepened.

74. *The Chairman.*] How long will that be?—I expect it will take us at least a couple of months. It depends upon the quantity of labour we can obtain.

75. *Mr. Salmond.*] How many men have you working there now?—I have not seen the latest return, but I should think there must be three hundred there altogether.

76. I asked you some time ago whether you could approximately state the total expenditure involved in these improvements. I would like you to give some estimate even although it is a few thousand pounds wrong?—I could not do so at the present stage.

77. Not within £5,000?—No; I have not gone into it at all. I could have a statement prepared.

78. I understand the camp is being now improved and reconstructed for the accommodation of four thousand men?—Either four thousand or four thousand five hundred.

79. You will have seventy huts at sixty men per hut, will you not?—Then there are officers and orderlies.

80. *Dr. Martin.*] Does that include medical orderlies?—I think they reckon to have about four thousand five hundred men living there—four thousand troops and five hundred supernumeraries—other people living about the entertainment-places, shops, and so on, and officers and orderlies.

81. *Mr. Salmond.*] Do you know that in addition to this camp at Trentham there is in process of construction another camp on the same style?—We have in hand the construction of a camp at Featherston.

82. For how many men?—Two thousand five hundred plus one thousand. I think that is the latest information—about three thousand five hundred.

83. That will involve a very substantial expenditure, I suppose?—Yes.

84. And a large amount of work on the part of the Public Works Department?—Yes.

85. Is it going on now?—Well, we are doing a little, and it would have been going on much faster, but up to the present we have not been able to obtain men to do the work.

86. *The Chairman.*] The labour has to be devoted to Trentham?—Yes.

87. When was the Public Works Department first asked to do the work in connection with the camp?—I could not say. The first consultation on the matter was about three weeks ago: that was in connection with the whole camp.

88. *Mr. Ferguson.*] On Thursday before the 19th July you stated you had been called in: that is about the time the camp was shifted?—It was after that. The Department had in hand the construction of the huts prior to that.

89. But the lay-out of the camp as a township was not in any way undertaken by the Public Works Department?—Not that I am aware of.

90. I understand that all the District Office had to do was to erect certain buildings in positions fixed by the military people?—I believe that was the position.

91. You were in no way responsible for the drainage, or road-formation, or general lay-out?—No, nothing to do with that.

92. *Mr. Skerrett.*] Is it proposed to line the existing hutments?—No.

93. That is not thought to be considered necessary?—No.

94. Do you not think, having regard to the fact that the hutments consist merely of galvanized-iron sheds, that lining is reasonably necessary for the comfort of the men?—It would be a very decided improvement.

95. What is the objection, then, to their being lined?—Time, difficulty in obtaining the timber, and interference with the work of training. I think those are the principal objections.

96. In summer is it not likely that the iron huts will be too warm for the men?—I should say they would be very hot, but as to whether they would be too warm I can hardly answer.

97. *The Chairman.*] Could not some of this modern material be obtained which gives a smooth surface for the lining inside and which could be hosed down almost?—It has to be supported against some other surface of timber.

98. For instance, canvas would not require to be, would it?—It must be supported, otherwise it would be damaged. Anything stretched from side to side must be supported by an unresisting wall behind it.

99. *Mr. Ferguson.*] I suppose asbestos sheets do not require supporting except at intervals?—Yes. It is perfectly surprising what an amount of damage a lot of troops can do inside a hut when they are skylarking.

100. *Mr. Skerrett.*] I understand the new huts are made of wood?—Yes.

101. And unlined?—Yes.

102. *Mr. Ferguson.*] What is the objection to putting spouting to the existing huts: is there any practical difficulty in putting the spouting along?—The way the roof has been built renders the fixing of the spouting a very expensive matter. They are very wide eaves, and practically just iron resting upon the perlin, and nothing to attach the spouting to without the aid of spacing-attachments.

103. *Mr. Gray.*] What is your opinion of the orientation of the huts?—I think as they are standing they are quite satisfactory.

104. It has been suggested that it would be better if they approximated more towards the north and south?—At present they are about 45 degrees off due north. It would no doubt be an improvement as regards that part of the hut which would be facing the north. They would get the sun shining in the door, but the hut at the rear would not be materially improved.

105. As a matter of fact, at midday do not the whole of the rooms of the huts and the spaces between get the full benefit of the sunlight?—Not quite as they are arranged at present.

106. But, in your opinion, they are satisfactorily placed as regards the sun?—I think so.

107. Although a little alteration would improve them?—I do not think it would be worth making any alteration.

108. *The Chairman.*] It would be very costly, I suppose, to twist all those buildings round?—It would be a very difficult job to carry out owing to their flimsy construction. You would probably have to saw them up into sections.

109. *Mr. Gray.*] In your opinion, is the height of the huts satisfactory?—Yes; I think it is quite sufficient.

110. And will ridge ventilation get rid of any foul air there may be?—Yes.

CHARLES MONRO HECTOR sworn and examined. (No. 127.)

1. *The Chairman.*] Have you any military rank?—No, none at all.

2. What are your qualifications in medicine?—M.D., Edinburgh University, and B.Sc. in Public Health in Edinburgh University.

3. I think you, with some other medical gentlemen, made a report recently in regard to the Trentham Camp?—Yes.

4. Do you remember the terms of it?—In a general way.

5. Do you still agree with it, or would you like to look at it again?—I should like to look at it again.

6. The Board was set up to ascertain if the Trentham Camp was fit to be reoccupied?—Yes.

7. The Board decided that, provided certain details with regard to the improvement of the sanitation of the camp were carried out, there would be no objection to that number coming into the camp. The Board decided, "There is no objection to the camp being occupied by four thousand men, provided the following important details be attended to: (*a*) Thorough disinfection of the whole camp; (*b*) not more than thirty men to be put in each hut; (*c*) the provision of messing-accommodation; (*d*) the provision of stretchers; (*e*) the improvement of the huts as regards the exclusion of draughts; (*f*) the improvement of the roads; (*g*) the improvement of the surface drainage; and (*h*) the improvement of the sanitary arrangements generally." That report embodied at the time the opinion you had formed upon a consideration of the whole matter?—Yes.

8. Since that time there has been a diminution in the influenza and measles cases, and, with regard to cerebro-spinal meningitis, there has been one case at Trentham and one under consideration. In view of the bodies of men going back to the camp, and having regard to what you knew when you made your report, do you think it safe for the men to be taken back?—Yes, I should say so.

9. Then, with regard to bringing the total number up to four thousand, do you still adhere to the views you have expressed as to those alterations that are requisite?—Yes.

10. You have heard that it is not proposed to have separate messing-rooms apart from the sleeping-accommodation. In your opinion, what importance should be attached to the question of separate messing-rooms?—I consider that in agreeing to the report sent in, that was one of the necessary features, and I still think that ought to be provided.

11. You think £2,000 or £3,000 would not be misspent in doing that?—Not at all.

12. *Mr. Ferguson.*] It would be better for the men to have meals in the messing-rooms than to have entertainments provided in halls which are otherwise empty. Should the large halls be utilized for messing purposes?—I do not think it would be advisable.

13. They should be in small batches?—Yes.

14. *The Chairman.*] Did you consider the question of lining the huts when you were dealing with this report?—No, I did not consider that.

15. Are you in a position to give an opinion as to galvanized-iron huts consisting simply of an outer covering without any internal lining, as regards healthiness?—I might say I have a small hut, 15 by 9, of my own built on exactly the same plan, and I find it is not unduly hot in warm weather and not unduly cold even in a severe frost. It differs from those at Trentham in that the corrugated iron is on the outside of the plate, and not on the upper surface. In that respect I think the Trentham huts have an advantage. The arrangement in my hut causes a draught up the side of the wall, and I think it is better not to have the draught at the side of the wall. There certainly is a draught when the corrugations are so placed.

16. *Dr. Martin.*] What is your opinion in regard to formalin sterilization at the camp?—I was led to believe as a student at Edinburgh that it was the most reliable method known at that time. I have made no experiments to upset my opinion about it.

17. *Mr. Salmond.*] Do you think that the troops are being exposed to unnecessary hardships by being asked to sleep in those huts without lining?—No, I should say not.

18. And you would not consider the expenditure of £3,000 or £4,000 on lining the huts a reasonable expenditure of public money?—I do not consider it necessary.

19. *The Chairman.*] That is provided the draughts through the floors are stopped, I presume?—And other improvements made in the ventilation.

20. And stretchers provided?—Yes, I think they are necessary.

21. *Mr. Salmond.*] Why do you think there ought to be separate buildings for the soldiers to have their meals in?—Because I think that part of the trouble in the past has arisen through having the men in the huts most of the day in wet weather for meals and sleeping, and I think that has lead to the overcrowding which has been largely responsible for the epidemic.

22. Do you know it is proposed to have only thirty men in each hut?—Even so, I think that is as much as they should have.

23. Assuming there are only going to be thirty men in a hut, would you consider it dangerous to their health to have their meals in the huts?—Yes, I think so, because I consider it leads to overcrowding and the vitiation of the air in the huts.

24. But there would be no more overcrowding than when they are sleeping there?—But I think that accommodation ought to be reserved for sleeping-accommodation.

25. You do not picture the men as living in the huts?—I do in the wet weather.

26. They would not do so any the less because there is another dining-room?—But they have to be out in the fresh air for a time to go to their meals.

27. Do you not think there is rather too much fresh air than too little?—No.

28. I am rather surprised to hear you say they stay in the huts when it is wet?—I have only gathered that from what I have been able to read.

29. You know there are large buildings in the way of recreation-rooms and other buildings?—I know there are some buildings of that kind.

30. So your reason for saying that there ought to be separate messing-accommodation is that they would thereby be prevented from spending the whole day in the huts and being unduly overcrowded and not getting enough fresh air?—Yes.

31. *Dr. Martin.*] You say the overcrowding is one of the reasons for creating the spread of the epidemic?—Yes.

32. *The Chairman.*] Do you think that huts with fifty men in—and, as we heard, seventy in one for a fortnight—that they were overcrowded?—I think so.

33. *Mr. Gray.*] In regard to your own tin hut, is it occupied by human beings?—I sleep in it at week-ends. It is a week-end cottage.

34. And used in both summer and winter?—Yes.

35. And you have not found any inconvenience from the fact that it is not lined?—No, not any at all.

36. Has it got any fireplace?—No, no fireplace. There is a heater, but it is not used for the purposes of heating the hut.

CHARLES JOHN WARD sworn and examined. (No. 128.)

1. *Mr. Gray.*] What are you?—Works-manager for R. Hannah and Co. (Limited).

2. Your firm were contractors for the manufacture and supply of military boots?—Yes.

3. When was the first contract made?—Our contract started in April of this year, but we had supplied considerable quantities before on orders—not on contracts.

4. What was the contract in April?—For a thousand pairs a month for the twelve months.

5. And the rate of delivery?—That was the rate of delivery monthly, but we were delivering as we went along, owing to the shortage.

6. Was your contract to supply the same kind of boot that you had manufactured previously on orders?—No, a new one.

7. What was the new pattern of boot?—This is the new pattern of boot. [Sample produced.] A specification was drawn from the English sample. This [produced] is the English sealed sample.

8. *The Chairman.*] You have nails?—Yes, and the English boot is also nailed now.

9. *Mr. Gray.*] There was a specification and an English sealed sample?—This is the specification [produced].

10. And there was an English sealed sample boot?—Yes.

11. Did you manufacture the boots according to that specification and that sample?—Yes.

12. What was the nature of the material and the kind of leather?—This [produced] is the original English boot issued in 1913. It is what we know as a chrome upper, but a vegetable-tan sole. What we term "chrome" is a chrome-tanned hide. It is tanned by chromic acid: that is really the basis of it, as opposed to the older leather known as "vegetable-tanned." I have samples here in connection with them.

13. Does the specification provide for the chrome leather that you speak of?—Chrome leather in the upper.

14. Were any complaints made about the quality of your boots?—No.

15. Have you heard of any complaints being made?—Not specific complaints; but, of course, complaints through the Press.

16. Since this inquiry started?—Prior to that; more previously than since.

17. *The Chairman.*] This is the suggestion, I think: "When the boots were made for the first Expeditionary Force the lining under the front was made from a leather called split russet, but since then they have altered them and put in cowhide." Is that true?—I have here a specimen of the original boot, cut in two. This is split russet [indicated], the very thin stuff inside.

18. Is this so, that the authorities substituted cowhide?—This is cowhide. [Shown on boot.]

19. Which is the better, the cowhide?—Yes.

20. So the substitution was of a better material?—It is a better boot right through. There is no comparison between them.

21. *Mr. Gray.*] When was the alteration made?—The first orders were issued in April.

22. The new boot had the alterations you have spoken of?—Yes.

23. This was said about your boots: "These leathers"—he produced samples of the chrome that is outside and also of the lining—"these leathers are very porous." What do you say to that?—I say it is wrong, absolutely wrong.

24. "They were adopted by the Defence Department on account of their softness"?—They were adopted by the Defence Department because they had been adopted by the English War Office after lengthy experiments.

25. The same kind of leather?—Yes.

26. "When it gets wet and dried again it becomes hard and harsh unless you oil it"?—Not to my knowledge.

27. Is that true of all leathers?—I have a boot of the kind he prefers here [produced].

28. Then it is suggested that the kind of leather that should be used is a waxed kip?—I can only say that that was abandoned by the English authorities after using it for about a hundred years.

29. Do you say that the leather which is specified and which you use is better than a waxed kip?—Yes.

30. "That leather," the witness told us, "would stand in water from twelve to twenty-four hours without letting the water through." What do you say to that?—I do not know a leather that will stand for twenty-four hours without special treatment.

31. "The farm hands in the country would not have the leather which is being used in these boots at any price." What do you say to that?—I can only say that as far as the boot trade is concerned these waxed leathers are dying yearly, and chrome is all the while coming in, taking the place of it.

32. On account of cheapness?—No; it is not cheaper.

33. "By having the boot made from this leather and the damp getting into their feet it is apt to give the men colds, because this leather is a very cold leather at any time." What about that?—The atmosphere certainly does affect the feet more quickly through chrome leather, owing to the tanning agent that is used, than through what we term vegetable leathers. What we term chrome does not get the loading that the wax leathers do, and it is the loading and not the leather that keeps it out. Chrome can be treated to give exactly the same results if wanted, but it is not treated in that way.

34. *The Chairman.*] When you speak of "loading" you mean the chemical treatment?—They are technical matters. [Witness produced samples of different leathers, and explained technical points in connection with them.]

35. The chrome leather, you say, is used in the British Army now?—Yes. The British boot is here. This one came from England specially.

36. *Mr. Gray.*] And you made your boots from that pattern?—I drew the specifications, which were adopted by the Department, from that pattern.

37. *The Chairman.*] I understand you are an instructor at a Technical College?—I was. The award that I hold is the highest in England. This medal that I have here is the first medal of the City and Guilds of London Institute, the first in England in boot and shoe manufacture. I was also first at the Cordwainers Company; I was second instructor at the Merchant Adventurers' Technical College at Bristol, and first instructor at the Stafford Technical School.

38. You prepared the specification from the British Army boot?—Subject only to the modifications required for colonial manufacture.

39. Did those modifications at all spoil the boot?—They did not make it any better; but, of course, the boots had to be manufactured. There is a certain sole-leather obtained in England the export of which they have prohibited, so a detail in connection with that had to be altered.

40. *Mr. Gray.*] What about the sole-leather?—I would not contend for a moment that the sole-leather is as good as the English leather. The cattle that are being killed now, owing to the pressure, are not so old, and the stout leather is prohibited to be exported from England.

41. Is the sole-leather you use the best procurable?—The very best.

42. *The Chairman.*] With regard to the sole, will you explain about the screwing?—Yes. [Witness described the method of soling, &c., with the aid of a sample boot.]

43. Is the screwing process the proper process?—The objection to it is that it is only those with considerable capital that can carry it out. There is no objection to the process itself: it is adopted in the English specification.

44. But it means that it would cut out any hand maker?—The specification does not do that, because it is alternative. There is riveting provided for as well, and this the smaller maker can do. All the highest class of Cookham boots from England that are not welted have the standard screw.

45. *Mr. Gray.*] This is what the witness said: "With regard to the attachment of these soles, they are being standard-screwed on—a wire screw is put through the middle and slip of the sole. The outside sole is stitched by the machines. That boot would be a far more durable boot if it were standard-screwed right through. I do not know why the stitching is put there at all." What do you say to that?—I think a good deal of daylight can be thrown on the matter in this way: the boot that the witness was attacking was not the present boot at all—it is the old one that I have here, cut in sections; and he has been under that disadvantage right through. The specification provides that the boot must be reinforced with the screw that he is calling upon us to put in: so it has already been provided for.

46. *The Chairman.*] Then possibly the boots he saw were those made prior to this contract?—Yes.

47. *Mr. Gray.*] It is suggested that the standards of size were not suitable?—That is so.

48. You admit that that is so?—Yes.

49. Whose fault is that?—We manufacture in New Zealand what is known as a broad-fitting boot. There is no standard last in New Zealand as there is in England. In America the authorities get over the difficulty by supplying the last themselves; but here in New Zealand, if we had had the stock, the makers have sufficient different forms of last, so that practically every foot could have been fitted. But there is no stock of boots. That is one of the things that have given rise to complaint. The boots have been going out absolutely damp from the factory to the camp.

50. *The Chairman.*] How long should they be kept to mature, as it were?—When they are drying for export we always keep them stored a month, and then they are dried by fans. We have fans which not only drive fresh air into the room, but we have fans that take it out, and the boots are kept a month.

51. *Mr. Gray.*] It is not practicable to do that with the soldiers' boots?—If they had the boots in stock it could be done.

52. *The Chairman.*] The drying provision should be in the Stores Department?—Or else have the boots in the factories longer.

53. *Mr. Gray.*] It was said by a witness that belly leather was being used in your boots, instead of shoulder leather, as specified?—That would be a matter of inspection: the inspector would be to blame; it is contrary to the specification.

54. Have you put any belly leather in your boots where shoulder leather is specified?—No.

55. *The Chairman.*] Is shoulder leather specified?—Yes. I have the specification here: it provides that the middle soles shall be cut from well-tanned shoulders. The middles of the bellies can be used, and are perfectly good, but not for the outer sole, only the inner sole.

56. It was suggested that if you could not get ordinary sole-leather Canadian bends might be used?—Yes, that is a very excellent substitute.

57. Is that obtainable here?—In limited quantity. Repairers can get enough of it to go on; but if one of the factories went into the market the repairers would be out of it in no time.

58. *Mr. Gray.*] Is it preferable to the leather that you use in your boots?—Only as regards weight. The supply would not represent a fraction of what we require in the factories.

59. Then it is not procurable in sufficient quantities?—No, not for practical work in the factories.

60. Could the boots be improved for wet weather by being waxed or greased?—Yes.

61. Any boot which is subject to use in wet weather is all the better for that, I suppose?—Yes.

62. Would you recommend it for these military boots?—I should have strongly recommended that the boots be what we call viscolized or, at all events, oil-dressed before going to camp.

63. It was said by the witness that there was no difficulty in getting what was called kip leather?—Not for a start, but when once we got a start we would run out. I was in the tannery a fortnight ago in Christchurch where a great lot of this chrome leather is produced, and I asked the master tanner how long it took him to tan this chrome leather that we are using in the military boots, and he said "eight hours." I asked how long it would be with kip, and he said "four months."

64. *The Chairman.*] I understood from the authorities that it was in January that the contract was entered into for forward supply: that is not so, apparently?—I am speaking of our contract. We had considerable orders before.

Mr. Salmond: It was the 1st April.

65. *The Chairman.*] Then you came in for a contract for supplying a thousand pairs of boots. Were you after April asked to increase the quantity per month?—No.

66. Never after April?—No.

67. Could it have been done?—When one is put to it one does not know what one can do; but, speaking as an ordinary business proposition, we should have asked to be excused.

68. You could not have turned out a couple of hundred pairs a month more, for instance?—I should not like to say that. We did 3,500 pairs for them in a fortnight on one occasion—for the First Contingent.

69. *Mr. Ferguson.*] You are only working the ordinary forty-four hours a week?—Forty-five it is.

70. *The Chairman.*] Then you were never called on to make any extra exertion in April, May, or June?—No.

71. *Mr. Ferguson.*] Nor to work overtime?—No.

72. Nor to put on special hands?—No.

73. *Mr. Gray.*] Could you have done it?—We would not have got hands.

74. *Mr. Ferguson.*] Could you not have worked overtime?—We were working overtime on our own goods. Every pair we have made for the authorities has been a pair taken away from our own shops. To put it briefly, there was never any pressure or any suggestion that we should expedite matters.

75. *The Chairman.*] Or supply more?—No.

76. *Mr. Gray.*] Could you have done more to any appreciable extent?—I have never been faced with a task when I have not been able to do something; but, speaking as a business proposition, we could not have done any more.

77. Can you say anything on behalf of the other manufacturers of boots?—Those that have been approached—I know several of them—have put themselves to very great inconvenience; but there is an undercurrent of complaint amongst them all the time about insufficient time being allowed and not providing far enough ahead in connection with what was wanted. You are all the while expected to do a bit more than you are asked to do.

78. Do they manufacture boots from the same specification and pattern as you have done?—No, not all of them. There are several boots; that is one of the things that complicate the position.

79. *The Chairman.*] You and O'Brien's are working to the specification which was drawn up?—Yes.

80. The boots that are got from others——?—In some cases are modified.

81. *Mr. Ferguson.*] Is that to suit special machinery?—No. In some cases it has been from pure misapprehension on the manufacturers' part. They have made a boot from a description, and you can read a description in various ways. The boot, perhaps, is sent in, and a dispute arises, but as they had accepted the sample they had to go by that sample.

82. *Mr. Gray.*] You have something to say about the boot that you have in your hand?—Yes. This is the Australian boot—for the Australian Forces.

83. Does it differ from the New Zealand boot?—It is a chrome upper leather, coloured brown instead of black, and a vegetable-tanned sole—a very much poorer sole than ours.

84. Is it a lighter boot?—Yes. These are also being made with the flesh outside, the same as the French Army boot is being made. That is because the majority of the French soldiers fight with bare feet.

85. *The Chairman.*] And so a stocking is made for them inside the boot?—It is made very clean inside.

86. *Mr. Gray.*] What is that other boot that you have there?—This is a kip boot. It was made for a backblocks man three weeks ago, and he returned it because the water went through it. This is a waxed-kip boot.

87. That is the boot the material of which is supposed to be impervious to wet?—It is absolutely mildewed all the way through. The customer sent it back and asked if we could do something to waterproof it.

88. *Mr. Skerrett.*] Can you tell us something about the system of inspection of boots delivered pursuant to contract?—Yes.

89. What is the system?—At first two men who were saddlers did the inspecting, and there is no doubt about it that they did the work very thoroughly, and had a lot to do of which the new inspectors have reaped the benefit.

90. Those were men outside the Defence Department?—No, Defence Department men.

91. What are their names, please?—One I do not know; the other is McComish.

92. Is he an inspector at present?—Not of boots. They have their own men now.

93. Who are their own men?—A Mr. Lightfoot, a clicker, and a Mr. Curgenven—he is what you term a bootmaker. One cuts the uppers in the trade and the other does the bottoms; so between them they should get what they want.

94. Do you know these men yourself?—Lightfoot has worked for me; Curgenven worked for Hannah and Co. years ago, but has not done so of recent years.

95. Are they both competent men?—As far as I can hear Curgenven is. I can say from our own experience that Lightfoot is quite competent.

96. *The Chairman.*] Could you say whether other manufacturers in April could have supplied a demand for, say, two thousand pairs of boots?—Of course, two others who tendered were cut out by a few pence.

97. The fact that there was a contract with you did not prevent the authorities from getting other contractors to make boots at the same price?—No. Our contract in April was very much lower than O'Brien's, but we had a clause providing for a rising market, which O'Brien did not have, and it was only when the market rose and our first stock was exhausted that we came to O'Brien's price. For quite a time we were considerably under O'Brien's.

98. Do you think that there could have been supplied by other manufacturers than O'Brien and yourselves, say, four thousand pairs of boots in the months of April and May?—Yes, if the English method had been adopted of sending an expert round, instead of their sitting in the office.

99. You mean going round to the factories and putting it to the manager, "Can you turn me out so-many pairs of boots in such-and-such a time"?—That was done in England.

100. You think that could have been done here?—It should have been done, I think.

101. A personal interview does much more than a nicely typewritten letter?—Yes. A manufacturer might have material that prevented him from contracting at the price offered. If a man who understood the game went in he could tell in five minutes whether it was worth 6d. a pair more to put that material in. In some cases permission might be given to use substitutes.

102. *Mr. Ferguson.*] Some of the smaller men might have been able to turn a smaller quantity out, which would have been an appreciable help?—Skelton, Frostick, and Co. could have done just as much as we.

103. Have you particulars of the tenders and the variation of prices from different firms?—Skelton-Frostick tendered at 18s. 10d. or 18s. 11d., I forget which.

104. *The Chairman.*] You think it was just a question of personal hustle?—If it had been a business proposition instead of an official one the boots would have been obtained all right. A business man would have got them all right.

105. *Mr. Salmond.*] Do you know a firm called Barton and Co.?—I know them by repute, that is all.

106. Could they turn out any quantity of boots?—Not a great quantity.

107. Five hundred pairs a month?—I think they might do that.

108. What do you suppose Skelton-Frostick could have turned out?—As many as we were doing—a thousand pairs a month.

109. Perhaps you could tell us whether there is any difference, from a military point of view, between boots and shoes. I see here a requisition for so-many thousand boots and so-many thousand shoes: what does that mean?—Is it canvas shoes you are dealing with? The terms "boots" and "shoes" are very loosely used. In America "boots" are knee-boots—like the Russian boots we read of in the paper a few days ago—purely for trench-work.

110. *Mr. Skerrett.*] Besides yourselves and O'Brien, who are the big manufacturers of boots in New Zealand?—Skelton, Frostick, and Co. Then there is Sargood, Son, and Ewen; but in their tender they put a very late date, and what they offered was of no use to the Department.

111. Any one else?—There is the Northern Co-operative Company, in Auckland, of quite considerable size.

112. Barton?—He is one of the smaller men. Then there are two or three here in Wellington who are making. Staples and Co. are making; the Equity have just started manufacturing for them; and the Wellington Co-operative, down at Kent Terrace here.

113. Are not Ross and Glendining very large manufacturers of boots?—Yes.

114. Where is their factory?—In Dunedin.

115. Do you know whether they supplied any boots to the Department at all?—They did not tender.

116. But they are large manufacturers of boots?—Yes.

117. You do not know whether they have been approached or not?—That was my meaning just now when I said that a business man should have taken it up.

118. *Mr. Ferguson.*] Can you give us any idea as to why these various firms did not tender?—It is a difficult boot to make. The trouble is that you cannot use more than two-thirds of the material in the uppers and about a third in the bottoms.

119. *The Chairman.*] The rest of the hide has to go elsewhere?—We have to find another market for it. It is a matter that wants considering by the military people. I think that if they adopted a boot like the English people have adopted for recruits to use at first—a sort of go-between—it would be very much better for them, and certainly very much better for the recruits. The present boot is too heavy for a man who goes straight into camp. Take a man from the city: we have had men from our own works—quite a number of them—go there, and they have been crippled when they have started with these heavy boots. Watch them in the town when they come from camp—very few have a heavy boot on. I notice that in England the majority of them have been provided with a lighter boot, and they only get the heavy service boot when they go to the front. I have read that in the trade journals. It would help the colonial manufacturer very considerably if something of that style were adopted.

120. *Mr. Salmond.*] Had you any difficulty in supplying the Department with the right sizes of boots?—No, I do not understand the difficulty about sizes. When the contingents first started they were fairly well distributed over all the sizes. Now there is a great run on 6's, 7's, and 8's, and 9's and 10's are hardly called for at all. We were asked to-day for five hundred pairs of 7's and none other, and that we could not do.

121. On what principle were the sizes distributed?—The first lot went according to what we call the current sizes—that is how they run in the trade—and there was none left in store.

122. There is a recognized practice in the trade?—Yes.

123. Until that order was given had the Stores Department ever approached you to alter the proportion of the sizes you were making?—Yes.

124. When?—On several occasions. We have always met them. I notified them that our factory was run on what we called a seventeen-days roster, and that after their goods were in hand seventeen days we could change the sizes to be run. We have done that repeatedly.

125. *The Chairman.*] I notice that the witness who came here on this subject—Reynolds, I think, was his name—said this: "I read in the *New Zealand Times* that a committee of Palmerston men which presented the Palmerston boys with boots turned down the chrome boot in favour of the kip boot. All the Palmerston boys were provided with kip boots." He said the letter was written by you. Do you remember that?—He is right generally, but the term "turned down" is his own, not mine. It was an interview in which I stated that the Palmerston committee had ordered the kip boot.

126. Was that after they had considered chrome?—I could not say. I only know of the order we received from Palmerston.

127. You do not know whether the two things were submitted to them for comparison?—I do not think they were. From what I know the kip boot was ordered from experience in South Africa. The older troopers would have used the kip boot in South Africa, and it was they who ordered it here; they would have had no experience of the chrome boot at all. I should like to state this, sir: I was asked if there had been any complaint, and I said No. Well, we have had several quantities back on account of details in the inspection, but nothing in the nature of complaints that led to rejection. There is rarely a consignment goes through from which some are not sent back, but it is not final rejection. They go through the hands of sixty-six people, and there are two inspectors, and sometimes a detail gets missed. Those boots come back again, and go forward again in the next consignment.

12th August, 1915.

[Since giving the above evidence Mr. Robert Hannah has informed me that Major O'Sullivan has twice had conversations with him on the question of expediting delivery, but Mr. Hannah decided that Major O'Sullivan's request could not be complied with, and did not mention the matter to me.—CHARLES JOHN WARD.]

Head Office, Leeds Street, Wellington, 13th August, 1915.

The Secretary, Trentham Camp Commission, Parliamentary Buildings, Wellington.

DEAR SIR,—

We understand that when our works-manager, Mr. C. J. Ward, gave evidence before the Trentham Camp Commission he stated that if pressure had been brought to bear we might have been able to supply more than a thousand pairs of military boots per month. Mr. Ward was evidently not aware that Major O'Sullivan had on different occasions urged two of our directors, Mr. R. Hannah and Mr. J. A. Hannah, to supply a larger quantity, and on one occasion, about the month of April, he begged of us to make the quantity two thousand pairs per month. Mr. Ward controls the manufacturing department of our business only, and does not deal with the distribution of the goods after they are delivered to the warehouse. It was quite impossible for us to undertake more than a thousand pairs of military boots per month, and to keep up that quantity we had to advise a number of our wholesale customers that it was impossible for us to execute their orders. We have the plant for turning out four thousand pairs per week, but owing to the shortage of labour we are unable to extend beyond two thousand five hundred pairs, and we are in a continuous state of disorganization owing to the enlistments and the constant moving of labour from one factory to another. If it were possible to obtain a larger output we would be obliged to send the goods to our own retail stores, as at present we are not able to keep them adequately supplied. No doubt Mr. Ward could have accomplished more by working additional overtime, but excessive overtime is not a paying proposition, and cannot be entertained when working on a contract price governed by ordinary working-hours. We consider it only fair to Major O'Sullivan and his officers to bring the above facts under your notice.

Yours faithfully,
For R. HANNAH AND CO. (LIMITED),
R. HANNAH, Director.

LEO BLAKE sworn and examined. (No. 129.)

1. *Mr. Gray.*] What are you?—A clothing-manufacturer.

2. What is the name of your firm?—L. and J. W. Blake.

3. Your firm tenders for the supply of some kinds of clothing for the Military Forces?—That is so.

4. What sort of clothing is it?—Full uniforms and pantaloons are the garments we have been supplying.

5. Is that all?—That is all.

6. When did your contract begin?—We have not a contract: we have been supplying from order.

7. Since when?—About the 12th January.

8. From what do you manufacture—patterns?—Patterns that we have submitted to them and that have received their approval.

9. And you make in different sizes, I suppose?—Yes.

10. Have any of your supplies been rejected?—Yes, we had a few.

11. *The Chairman.*] We were told there were, I think, five hundred sent back for being too big in the collar?—That is not correct: there were not five hundred sent back.

12. *Mr. Gray.*] Were any sent back from Trentham Camp?—I make visits to see that everything is all right, and on one occasion they took me upstairs to show me these garments which had been sent back from Trentham. There were several cases. I went through the garments, and found that with regard to the trousers there was nothing wrong whatever. With regard to the tunics, in the opinion of the Quartermaster the collars of some of the uniforms were too large. But we have always made the collars loose-fitting. I understand that the men wear jerseys and sweaters underneath, and if they think it is a fault, I maintain it is a good fault.

13. In making those tunics which were rejected, had you made them according to sample?—Yes.

14. *The Chairman.*] According to sample as regards size?—Yes.

15. How could they reject them if you had made them according to sample?—I do not know.

16. *Mr. Gray.*] It was Colonel Fulton's idea, apparently, that they were too full in the neck. He wanted them tight-fitting?—Our original instructions—and I think they came from General Godley—were to make everything easy and loose, and we kept to those instructions.

17. What became of these tunics that were objected to?—I had thirty-two back for alterations, and I altered these as they required them.

18. Whose requirements were they?—The Stores', in Wellington.

19. *The Chairman.*] It is said that five hundred uniforms issued from the Stores Department were returned by the officer commanding the Trentham Regiment. The Stores Department stated that the uniforms were all right except as to size 9. The majority of these uniforms came back and were reissued to the unit. That is what we were told. It was size 9, apparently—one particular size—that went wrong?—It is possible that a mistake might have been made by the cutters in what we call a "lay." We cut them in lays of thirty. I examine all the uniforms before they go out. If they were out I missed that.

20. *Mr. Gray.*] Is it a fact that five hundred uniforms came back?—No; I know of no more than thirty-two.

21. Which were sent back on account of a complaint that they were too big in the neck?—Yes.

22. You altered that and sent them out again?—I altered them, and I understand they have gone back again.

23. *The Chairman.*] Can you explain how it is that five hundred are mentioned?—That is a matter regarding which I should like to have known the reason. I asked them when I went up to the stores what was wrong with these uniforms, and they told me they had not received a report from the camp upon them.

24. *Mr. Gray.*] Except in regard to those thirty-two uniforms, have you ever heard of any other complaint?—I have not heard of any others.

25. Have you heard any complaint as to the quality of the material in your goods?—Never a complaint. We have put the best into the garments.

J. CAMPBELL, Government Architect, recalled. (No. 130.)

1. *Mr. Gray.*] I think you want to make a statement with regard to the hutments?—Yes, sir, I should like to make a few remarks on certain matters in connection with the hutments. Since I appeared before you last a great deal of criticism has been passed to which I think the Advisory Board should have an opportunity of replying. I should like to mention the considerations that influenced the Board in deciding on certain matters in connection with the huts. A great deal has been said on the use of galvanized iron for the walls of these hutments. It has been stated that it is a most improper material to use without internal lining. Well, I will first of all mention a few of the advantages of galvanized iron as walling-material. It is non-absorbent—a very important quality for internal wall-lining. It has a clean, smooth surface—also an important sanitary quality. It has few joints. It does not shrink like wood, which has many joints. It is fire-resisting—a very important quality in an encampment where the huts must be fairly close together. It is cheap—it is cheaper than any other material that can possibly be used.

2. *Mr. Ferguson.*] Cheaper than timber?—It was, I should say, when the Advisory Board considered the hutments. It was cheaper than any possible material so long as the thirty-five huts were being erected which the Advisory Board had to do with. It has been suggested that we chose iron for the material when it was at £39 10s. a ton. That is nonsense. We did not pay, I think, more than £19, or perhaps £19 10s. I know for a fact that the thirty-five huts were each completed for within a few pounds of my estimate, which was founded on the normal price of iron. The huts since erected, I believe, have cost a great deal more, but iron has gone up enormously. When the Advisory Board considered the use of iron it was at its normal price, or not more than £2 above normal. The normal price was about £19, and some of the iron was got for a little over that; the bulk for about £19. Then, galvanized iron is quickly fixed: that was a very great consideration at the time. It can be fixed in much less than half the time that it would take to fix wood. Those are what might be called the good qualities of iron. Now, it has one—only one—defect that I know of: it is what is called a good conductor—it conducts away heat from the interior of a building. It has been said that the Advisory Board should have considered a lining of some description, as iron would conduct away the heat. Now, that suggests to me the question, What heat is there to conduct away? Is there any heat in those hutments? Remove the human beings from within and the temperature is exactly that of the outside air. The temperature of any building built of thin substance such as this is, with any openings to the outside atmosphere, must be the temperature of the outside atmosphere if there is no heating within. Who will suggest that we should heat a building with human beings? I can understand that we should put a non-conducting substance on a hot-water pipe, but I cannot understand that we should put a non-conducting substance on a cold-water pipe. These huts are in the position of a cold-water pipe. Is it logical to use non-conducting substances in a building that has no heat within? The Board considered this matter, and thought it would be a shameful waste of public money to put a non-conducting substance in a building with no heat within. It, of course, is asserted that human beings heated the buildings. Any one learning the first principles of hygiene or ventilation knows that that is the very thing that must be immediately removed. The heat consists of the hot breath and emanations from the skin—of polluted matter. That is the heat that arises from human beings sleeping in a hut. It should be removed immediately: it should not be conserved. When I was before you previously I was asked this question, Would I think it a hardship to sleep in one of these huts, and I said, Not at all. Now, had I been asked whether I considered it a hardship to sleep in a tent, I should have said that I certainly did. I have had experience of sleeping in military tents. In my younger days I was a Volunteer for many years, and slept in military encampments. I know what is done in a tent. I have all my life been to a certain extent a lover of fresh air, and I know that young men in a tent in cold weather close it up. The last thing done as a rule is to lace up the door if the night is cold. Some one in the tent may protest, but the man at the door will not allow the tent-door to be opened. He will, in more or less polite language, say he will see the fellow who wants the ventilation in a hot place before he will open the tent; and so they allow the temperature of the tent to rise. It does rise. How does it rise? The tent cannot give off any heat itself: the bodies give off the heat. The hot air accumulates, and in the morning the temperature is up. It was not so in the huts—the ventilation was too good. It may be said that the iron conducted away part of the heat. Doubtless it did. But it is the case that the temperature of the huts remains the outside temperature, practically. It cannot rise if there is any ventilation worth speaking of; and with the extensive ventilation that there is from the eaves of these huts no sensible person for a moment would say that the temperature could rise—in fact, the men stated that the chief complaint they have to make about the huts is that it is too cold—there is too much fresh air.

3. *The Chairman.*] The fresh air came up from underneath?—I am not at all surprised that it should to a certain extent. We took every human precaution to prevent its rising. I wrote the specification for the huts. I took particular care to state that the timber for the flooring should be thoroughly dry and seasoned. There was very great trouble, I believe, in getting seasoned timber—there always is. I understand that seasoned timber was got for the flooring in the end. A large proportion had to be condemned, but I believe our Engineer insisted on getting seasoned timber for the flooring. The studding-timber could not possibly be got seasoned, because it is rough scantling, and there is no quantity of seasoned rough timber kept in the yards. We took steps to close all the openings at the base of the galvanized iron—the corrugations; but timber always does shrink, and I am prepared to believe that this timber, battened below the iron, did shrink a little, and there would be a certain amount of air get in; but even in our own dwellings we can find places where fresh air gets in. I know that I have in my house found fresh air coming in round the skirting owing to the shrinkage of timber. I maintain that any draught from that source would be infinitesimally small. Now, I think you will understand the reason why the Advisory Board did not think it necessary to provide lining for the huts. We admit that the huts are cold; but is it a bad thing to have cold air in one's sleeping-apartment? I cannot impress this too forcibly on you, that the Advisory Board—or, if I speak for myself, I did not look upon these tents as barrack-rooms. My idea of a barrack-room is that it is a soldier's permanent home. I understood these hutments to be chiefly dormitories. The men had to take their meals in them, but the principal purpose for which they were erected was as sleeping-apartments or dormitories for the men. Now, most people sleep in apartments that are not heated in winter here.

4. *Dr. Martin.*] You had no idea they were to be used for meals?—Oh, yes; we quite understood they were to be used for meals three times a day; but we never for a moment considered that they would be used for sitting-rooms.

5. You provided tables?—Yes. We understood that the huts were to take the place of tents, where the men sleep and take their meals, but not as sitting-rooms, and for reading in of an evening. I would consider it a hardship for the men to have to use the huts as sitting- and reading-rooms.

6. Where else would they have gone for a reading-room or sitting-room: there was no other place provided for them?—We understood that there were other places provided for them for that purpose by the religious bodies, and for music, and so on. I certainly understood that there were such places provided for the men to sit in.

7. *The Chairman.*] Was the view you took rather confined to the structure of the huts than the location of the ground, or the area they took up, and that kind of thing?—We were supplied with a block plan showing the position of the huts, and we considered the placing of the huts as to their distance from each other.

8. And as regards the sun?—Yes.

9. Did you go out and inspect them?—No; we sketched diagrams at the time. Dr. Frengley measured the height of the huts and the distance between the huts, and it was provided that the right-of-way between the huts should be one and a half times the height of them. That is the rule for hospital-ward construction. We agreed that that space for sun and air was sufficient. I have prepared a diagram showing how the sun strikes the huts. May I say that the sun, when it gets to 13 degrees above the horizon, will shine into the windows of the huts. That can be demonstrated by the diagram. That is a very low sun indeed. I question very much if it is over the hill when it is 13 degrees above the horizon. I do not think it is, in Trentham, in the winter-time. As regards the spacing of the buildings, may I suggest that there are millions of people who are living in streets that are only in width once the height of the buildings bordering them, so that those unfortunate people get very much less sun than the men in these huts.

10. *Mr. Ferguson.*] Not the same density of population, though, as in those huts?—Possibly not, sir, but not very far from it. I know that in the city in which I lived, Glasgow, the streets are 1 chain wide and the buildings are uniformly 50 ft. high, on the tenement system, so that the street is about one and a fifth the height of the building. In many parts of Glasgow the population is very dense. I should say the population is quite equal to that in these huts; and yet those people lead fairly healthy lives, because Glasgow is very advanced in sanitation matters. Paris is a very similar case. The streets are narrow, except in some of the main thoroughfares.

11. *The Chairman.*] That may be quite sound from one point of view, but we have to go on the military experience and rules laid down in these books, which give a certain amount of space per soldier, and they are putting fifty men into a space which is less than according to the British manuals. We have here military experience and rules, and if they are to be departed from there should be some good reason shown for it?—Well, I cannot speak on that point.

12. I understand from Dr. Frengley that your Board thought that with the extra ventilation you could safely have less space?—Yes.

13. Of course, you get less space in a cabin on a ship?—That is so. I think that if the ventilation is provided there should be no means of shutting it off.

14. You do not suggest any alteration in the present hutments?—No, sir. I know the benefit of having a lot of fresh air in my room, and even draughts. I prefer to sleep in a draughty room rather than in a stuffy room.

15. But we had such a long spell of still weather?—That is the trouble when you are dependent on natural ventilation or natural phenomena for your ventilation. If there is no wind there is no ventilation. The Board never intended that the eave ventilation was the only ventilation for these huts. I could open the windows and there would be abundant ventilation by diffusion. You must have ventilation by wind pressure or gravity. You cannot get it by gravity if it is cold.

16. And what do you think of the proposal to put only thirty men in a hut instead of fifty?—Of course, it is better to have only thirty men than to put in fifty.

17. We now have a report from six medical men who have submitted certain recommendations, and you see that Dr. Frengley, who was a member of your Board, and who is also a member of this Board, has reported in favour of thirty men in a hut. We cannot very well lose sight of the fact that these six medical men have recommended certain alterations?—I would not oppose the opinions of medical men for one moment.

18. But there are also two or three specially qualified men who are members of the Board—a Bachelor of Science and Public Health?—Well, sir, a new condition of affairs has arisen. We have had an outbreak of an infectious disease which our Board never dreamed of when we suggested that there could be fifty men in a hut.

19. This is a question of precaution?—And I think it is a very wise precaution. I was going to remark *re* the lining of the huts: If the walls of these huts are lined I venture to predict that it will not be possible to raise the temperature one degree.

20. It will conserve the heat?—The huts will be as cold as ever if the outside air is coming in and you have no artificial warmth.

21. *Mr. Salmond.*] You cannot boil a kettle by tying it up in a blanket?—No, that is so.

22. *Mr. Ferguson.*] But would not the temperature change quicker in an unlined hut? The chill after the sunshine is off will more suddenly decrease the temperature of the outside air than the air inside the hut?—Yes, sir, but in winter at Trentham the sun disappears between 3 and 4 o'clock in the afternoon, and the iron is so thin that it immediately responds to the external temperature. The men do not go to bed until 9 and 10 o'clock, and long before that the internal heat of the hut will have been dissipated.

23. *The Chairman.*] And the changes of temperature are sudden: that is the trouble which Mr. Bates drew our attention to?—Yes, sir, the changes of temperature will affect the iron.

24. Did you hear Dr. Hector's evidence?—Yes.

25. He stated that he has a galvanized-iron place not constructed like these in which he does not feel the cold?—Yes, sir. Well, I have slept in galvanized-iron huts, lined and unlined, in New Zealand, in shepherds' huts, and tourists' huts at high altitudes. I have felt the cold, but I did not blame the iron: the iron was carelessly put on.

26. They have lined galvanized-iron huts at Mount Cook?—Possibly; but, as I say, I have slept in huts that have not been lined, and I think very few have the corrugations stopped, and the draught there is very intense, but they are put up in a very slipshod way.

27. Can you tell us whether, as a rule, stables and cowsheds in New Zealand when built of galvanized iron are lined, or is it customary to put the animals into unlined galvanized-iron sheds?—I have not had much experience in drawing plans for cattle-sheds, but I have been in unlined stables.

28. It has been stated that no farmer would put his animals into unlined sheds?—I cannot say. But glass transmits heat in very much the same way as galvanized iron.

29. *Mr. Ferguson.*] I can hardly agree with that. It does not radiate the heat again; it retains the heat?—My information is that glass is a great radiator of heat, but it is a bad conductor. As to the ventilation of the huts, it was stated that iron sets up all sorts of induction currents and radiates dangerous, cruel, and unhealthy draughts. Now, sir, I suggest that that is incorrect. Iron does not radiate currents at all. Radiation has to do with heat.

30. The point is that with these huts they are very cold and subject to sudden changes, and the only question is how that is to be got over. One suggestion is to stop up these openings, and another is to give the men stretchers?—Yes, sir.

31. We could recommend either without knowing anything about the properties of iron and so on?—But the evidence seems to have impressed many people with the idea that iron does give off draughts, and that it radiates cold. It is absolute nonsense to talk about receiving a draught from a sheet of galvanized iron. I could quote from Mr. Robb's evidence where he said that iron sets up all sorts of conduction currents and radiates dangerous, cruel, and unhealthy draughts. Mr. Bates referred to conduction draughts. I think I know what they meant. The air moves under the operation of gravity influenced by heat. I would suggest that you should get an opinion upon that matter from the professor of physics at the Victoria College, or Professor Scott, of Christchurch.

32. I think the best way would be to spend a night in the huts?—I am simply opposing statements which have been made and which are not correct. With regard to the ventilation it has been suggested that we ought to have had ridge ventilation, but in the present light of knowledge regarding ventilation ridge ventilation is largely disparaged. It used to be used a lot, and I suppose no man has used so many ridge ventilators in New Zealand as I have, but I have also had to remove them. I have had many complaints, and it is well known that they do occasion down draughts, very severe at times.

33. *Dr. Martin.*] Ridge ventilation is to be employed in the new huts?—So I understand. I never knew of ridge ventilation being used where it was possible to have cross-ventilation.

34. They are going to have both?—In my humble opinion it would be a great mistake to have both. I have here a view of a ward in the King's College Hospital, Denmark Hill.

35. This is practically the same as ridge ventilation, because the outlet is at the height of the roof?—No, there is cross-ventilation. The air ascends on account of its heat.

36. We have a huge draught above the eave, and it is to get rid of the air that goes up that I understand the ridge ventilator is to be put in?—Well, I am afraid that you will find there will be down-draughts, and the men will be in a worse position that they were in before.

37. *The Chairman.*] It would appear that opinions on ventilation vary like the winds?—They do.

38. I do not think there is much to be said one way or the other?—But I would say that with ridge ventilation the supposition is that the hot air ascends and goes out.

39. Dr. Hector himself said that with that ventilation fifty men in a hut was too many?—Well, I will not oppose the doctor's opinion, of course.

40. We do not want to sit in judgment upon it, but they have made certain recommendations?—I am defending our actions in adopting cross-ventilation as against ridge ventilation. I have found that cross-ventilation is more possible and effects better ventilation.

41. Are you aware that it is said that the ridge ventilation will tend to incline the air upwards from the eaves?—I do not think it is quite advisable to throw the current up.

42. You do not want the current to go down. The men say that the current comes right down along the wall on to their heads?—It may go down a little bit on the leeside of the hut. The roof will lead it up in this direction. If you admit fresh air at any level almost it moves about under wind-pressure. You cannot control it or say where it is going to. The ventilation depends upon wind-pressure. I may say, sir, that something has been said about the intention having been to make the huts resemble sanatoria shelters. I think that is absurd, except that cross-ventilation is almost always used in sanatoria buildings. I suppose in that class of building the ventilation receives more attention than anywhere else. I was one of a party of experts who inspected sanatoria buildings in Europe and England, and I found that cross-ventilation was general in them all. The party visited the Nordrach Sanatorium. I was not present, but I ascertained that the rooms there were left open from one wall to the other so that the wind would sweep through, and that is the system of ventilation adopted in practically all sanatoria buildings. It is remarkable that it should be adopted in these buildings if it is not the best form of ventilation. I have here a photograph of a building showing the cross-ventilation at the Nordrach Sanatorium. It shows the windows entirely removed so that the wind will blow right through. In winter-time the sashes are fixed in again, but in summer they are removed altogether. I am sorry if I have taken up too much of your time, but it has been suggested that we have been neglectful.

The Chairman: No, not at all.

ROY GLEN sworn and examined. (No. 131.)

1. *Mr. Skerrett.*] You are a private in what company?—C Company, Sixth Reinforcements.
2. Where do you reside?—Christchurch.
3. And what are you in civil life?—A farmer.
4. Did you go to the racecourse hospital at Trentham as a patient?—Yes, sir.
5. On what date?—The 21st June.
6. Was Private Badger a patient at that time?—He came in on the 23rd or 24th.
7. The 23rd, we are told—two days after you came in. Where did you lie—on the veranda, or indoors, or in the trainers' quarters?—On the Monday when I was brought in I was placed in the Jockey Club buildings, and on the Saturday we were all removed over to the kiosk.
8. *The Chairman.*] You were there from the Monday till the Saturday?—Yes, in the Jockey Club rooms.
9. You had measles?—No, influenza.
10. *Mr. Skerrett.*] Where was Badger put on the 23rd?—In the kiosk.
11. Were you removed inside the kiosk or on the veranda?—Inside.
12. Did you have a bed?—No; I was on the floor.
13. And how about Badger?—He was on the floor next to me.
14. It has been suggested that aspirin tabloids were served out regularly at meal-times?—Yes, sir, I had two with every meal for nine days.
15. Did Badger have the same treatment?—Well, he took aspirin tabloids. I was only alongside him for seven days.
16. You took aspirin tabloids in your case as a regular thing?—Yes; I had a high temperature.
17. Have you anything to complain of regarding your treatment in the hospital?—At the start I thought we should not have been on the floor, and we had to get up out of bed if we wanted to go outside.
18. *Dr. Martin.*] Were there any water-bottles?—No; there was a kerosene-tin.
19. A man had to get up and walk outside?—He had to go through the kiosk to a side room off the kiosk.
20. But you were not particularly ill in there, were you?—No; I had a temperature of 102 and 103.
21. Had you to get up when your temperature was high?—Yes.
22. *The Chairman.*] Who was attending to you?—The orderlies; and the doctor came round about 10 or 11 o'clock in the morning.
23. *Mr. Skerrett.*] How long did you remain in the kiosk?—From Saturday till Tuesday night.
24. After your discharge where did you go to?—Back to the lines; and then I went to Christchurch on sick-leave.
25. *Dr. Martin.*] You went back to camp: was your overcoat sterilized?—No; I took everything straight out of the loose-box.
26. You had your overcoat in the kiosk: was anything done to it?—No, sir.
27. *Mr. Skerrett.*] When you left how was Badger?—On the Monday he was to be discharged. Well, he did not feel very well: he was shivering, and had got another relapse of influenza. When I was discharged I went over to him and he was very bad, but he recognized me. I left on the Tuesday night, and when I got to Christchurch I told Mrs. Badger and she wired up.

28. You say that when you last saw him on Tuesday he appeared to have had a relapse, and was not very bright, although he knew you. Was he sluggish?—He was very ill, you could see.

29. Is there anything else you have to complain of?—Just the attention during that time. Everything improved when the nurses came in.

30. Were you ordered back from the kiosk to the Jockey Club room?—It was mentioned to me that he was first put into the kiosk, and he came over to the club rooms, and on the Saturday morning we were all ordered over to the kiosk again.

31. *Dr. Martin.*] Why was that done?—I do not know. I suppose they wanted the rooms for the nurses. The nurses occupied those rooms afterwards.

32. *Mr. Skerrett.*] You went on sick-parade before you were transferred to the hospital?—Yes, on the Sunday night.

33. How many times had you been on sick-parade?—Twice—Sunday night and Monday morning.

34. Had you to wait long?—Not a great time.

35. Where did you wait?—Outside the tent.

36. Why outside the tent?—There was no other place to wait.

37. It has been suggested that there were two or three marquees which were empty and which were intended for soldiers waiting to see the doctor?—I never saw them.

38. Could you have gone inside those tents?—No, sir.

39. Do you remember an occasion when an officer or a doctor would say, "Why do you not go inside the tent"?—No, sir.

40. Do you remember any objection on the part of the men to going inside the tent because there was so much coughing there?—No, sir, I do not remember.

41. *Mr. Ferguson.*] You were in charge of a corporal?—Yes; we were marched up in charge of the orderly-corporal.

42. When you speak of the absence of tents do you mean tents or marquees?—No, marquees.

43. You were referring to the doctors' marquees?—Yes.

44. *The Chairman.*] They were in the hospital lines, the Ambulance lines?—I think it is the Ambulance lines.

45. And the tents for sick people are there?—Just for the sick-parade, yes.

46. *Mr. Gray.*] You say there were three marquees?—I cannot say how many there were. I know there were no waiting-tents at all.

47. There were not less than three marquees?—Not less than three.

48. And the men who were to be examined went into these marquees?—Yes, sir.

49. You were only on sick-parade twice?—Yes, Sunday evening and Monday morning.

50. There was a great rush of patients when you were sent to the hospital?—Yes.

51. And a certain amount of confusion?—They seemed to manage them very well, but they were rather slow. Every one took his turn; each company took its turn.

52. At the sick-parade?—Yes.

53. But in the hospital there, there was a great rush of patients?—Yes, sir.

54. And I suppose you are quite willing to make allowance for the rush?—Yes, sir.

55. You do not make any complaint about it?—It ought to have been kept cleaner. The floor was filthy dirty.

56. *The Chairman.*] It was muddy weather, and everybody who went in would bring mud?—Yes, sir.

57. *Mr. Gray.*] How long were you there altogether?—From the 21st to the 29th June.

58. Eight days?—Yes, sir.

59. You are none the worse for your experience, I hope?—No.

60. Do you seriously tell the Commission that you had two aspirin tabloids with every meal for a number of days?—Yes.

61. How do you know they were aspirin tabloids?—One of the orderlies told me, and also the bottle is labelled.

62. Did you help yourself out of the bottle?—No; the orderly had it.

63. *The Chairman.*] Do you know Sergeant Badger?—No, sir.

Mr. Gray: I do not know whether it is suggested that it is not sound medical practice to give aspirin tabloids for influenza.

Dr. Martin: No, sir, it is quite all right.

64. *Mr. Salmond.*] You went on sick-parade twice?—Yes.

65. On two successive days, or twice the same day?—On successive days—Sunday night and Monday morning.

66. What happened to you on the Sunday night?—Well, I was given some sort of medicine and told to parade again next morning.

67. What sort of medicine—a pill?—Yes, I had a pill.

68. Was your temperature taken?—Yes; it was 99·4 on the Sunday night.

69. Did you complain of a headache?—No; I had a very bad cold, and I was aching all over with influenza.

70. You told the doctor that you were aching all over and you had a bad cold, and you were given some medicine and told to come back next day?—Yes, sir.

71. You came back next day, and what was your temperature then?—101; and then I was sent over to the hospital.

72. Did the doctor who saw you the night before say what was the matter with you?—I do not think so.

73. *Mr. Ferguson.*] How was your temperature taken—in the mouth?—Yes, under the tongue.

74. And was the thermometer washed?—Yes; it was sterilized every time.
75. *Mr. Salmond.*] What doctor was it?—I think it was Dr. Ferguson.
76. Was it the same doctor you saw next morning?—No; it was a different doctor next morning.

Dr. FRENGLEY further examined. (No. 132.)

1. *The Chairman.*] I understand that you wish to make a short statement about the hutments?—Yes. When the first hutment was put up it was built purposely for criticism, on the suggestion of one of the members of our Board. The result of the criticism was that the space provided for eave ventilation was reduced from 6 in. to 4 in., and the gable ventilation and the method of through ventilation by means of expanded metal between the two sections of the hut was cut out, on the ground that there was too much ventilation through the louvres provided. When considering the plan I myself noticed that the huts put up for Kitchener's army and for the Canadians did not show any roof ventilation. They showed under-gable ventilation by louvres, just as we put into these huts, and which we were asked to leave out on account of there being too much air. The question of the aspect was very fully considered. I myself, on the occasion of our visit to the camp, at just 12 o'clock in the day, drew my colleague's attention to the shadow caused by a post just at the guard, giving us a very good idea of the direction of the sun. Another point was in regard to the prevalent wind. Our standard work, "Theory and Practice of Hygiene," by Notter and Firth, says, "Like permanent barracks, they [that is, the huts] are best placed in echelon to receive the full advantage of winds." The huts as we put them are between north-west and south-east, so that standing between the huts you get the north-west wind blowing right down between them. I hold, therefore, that the idea that microbes and other things will pass from one hut to the other as being extremely unlikely, if not impossible. With the south-west winds it is possible that air from one hut will blow towards the other; but with regard to the conveyance of infection through the air the tendency of medicine at present is to regard air as a conveyer of infection as of no account. In former years scarlet fever, measles, and other infectious diseases were regarded as being carried by the air, but that is not the present view. For the information of the Commission on this point I would quote the opinion of Dr. Chapin, an American Health Officer of considerable standing, if not the most prominent Health Officer in America. He says, "There is no clinical evidence that common diseases are air-borne. Animal experimentation indicates that tuberculosis and anthrax may be air-borne. While it is not possible at present to state with exactness the parts played by aerial infection in the transmission of the different infectious diseases, we are by the evidence forced to the conclusion that the current ideas in regard to the importance of infection by air are unwarranted. Without denying the possibility of such infection, it may be fairly affirmed that there is no evidence that it is an appreciable factor in the maintenance of most of our common diseases."

2. You say that if these huts are not absolutely orientated by the sun they are by the wind?—Yes, sir, by the prevailing wind. Further, I wish to say that I do not regard the huts as being so near to one another as to be of any consequence, and even if there were no wind we could disregard the possibility of aerial convection. I know that some one has been making a picture showing microbes travelling out from one hut and into the eaves of the next one, and so on, and Mr. Bates did refer to the possibility of one hut at the end of a line containing the worst air of the lot. The reason for having them in echelon does not seem to apply here, since we have a very prevalent north-west wind. Then, there is another point I wish to refer to, the joining of two huts together. That too was considered, and with regard to the prevalent wind. Separating those two huts for 20 ft. or more, with the space running at right angles to the prevalent wind, did not appear of any sufficient value. Another point is that on the night I visited the huts, though it was a calm night and there was some evidence of overcrowding, in no one case did I find a door open. There is a tendency to disregard doors and windows as means of ventilation, and that I think was the case when Mr. Bates made his investigation—he found the windows were not in use. Then, regarding the capacity of the huts, I have informed the Commission that I regarded those huts as sufficient for accommodating fifty healthy persons, and I hold that one is justified in considering that more healthy persons can occupy a certain space than when sick. Colonel Firth, in his "Military Hygiene," says, speaking of the marquee tent, "It gives about 375 square feet of floor-area and some 3,200 cubic feet. It is intended really for sick men, and can accommodate eight of these, or sixteen healthy men." That gives the same cubic feet as we have in our huts. I hold that it is reasonable to put a greater number of healthy men in such a building than you would put sick men. I myself supported the recommendations which have since been made by the Medical Board to reduce the number of men to thirty, because of the reason that we have now a serious infectious disease amongst our men, and it is unwise at the present time to regard any single one of them as healthy. As to the text-books, I endeavoured to show how all standards of air-space vary. There is no definite foundation for them. They change about, as Colonel Firth himself quotes 500 ft. for barracks and then 400 ft. for huts. My colleague, Mr. Morton, has asked me to refer you to a later book than that. This work is called "Municipal and Sanitary Engineering," by W. H. Maxwell, A.M.Inst.C.E., and J. T. Brown, M.R.San.Inst. It is dated 1910, and consequently it is more recent than Firth's book. Under "The camp space" it says, "Owing to physical difficulties connected with the locality this is subject to variation, but the main principle to be borne in mind is that each tent or hut should be separated from its neighbour by an interval equal to its own height. The risk of camp life, however, lies not so much in excessive density of population on the gross superficies as in overcrowding of individual tents or huts." Now, I would ask you to notice what he regards as overcrowding: "So far as possible each occupant of a tent or a hut should be allotted an available space of 20 square feet in order to minimize the facilities for direct infection from man to man which camp life does so much to foster." And that article,

dated two years after Firth's book was published, is initialled "R. H. F.," which stands for Lieut.-Colonel R. H. Firth.

3. That, at any rate, deals with the cubical contents, as the other book does?—Yes; in the other book he gave 50 and 40, and now he comes down to 20 ft.

4. *Mr. Ferguson.*] But a space 20 ft. long by 1 ft. wide would not be a suitable place?—No; it must be 6 ft. by 3 ft. 4 in.

5. Is 3 ft. 4 in. a sufficient space for a man?—By the analogy of the tents I think it is.

6. *The Chairman.*] But the men's heads in the tent are much farther away?—No, sir; they are fairly close together.

7. There is nothing to go by in the books?—No. Mr. Campbell has addressed you with regard to the ventilation methods in sanatoria, and I visited four of the principal German sanatoria in 1901, and therefore have had personal experience. In their hospitals the principal system was to make use of cross-air admitted direct through the window fanlights.

8. But if the temperature is the same inside as outside the hut, is it not right to increase the ventilation by making the opening 6 ft. instead of 6 in., so that the men should be as though they were in the open air?—I would have had it like the open-air sanatoria at Cambridge, England, but you would have to educate the men and public to that. Then there is the question of dining and sleeping in the same room. The pictures we were shown of Kitchener's Army and their huts at Home in almost all cases show that the huts were used for both dining and sleeping.

9. Dr. Martin directs my attention to a statement in this work on Municipal and Sanitary Engineering, from which you have quoted, to the following effect: "Whenever possible special accommodation should be provided in all camps for the eating of meals and the storage of food. The eating, storage, or retention of food in the living tents or huts must be discouraged, as the facilities for contamination in these crowded places are great"?—Yes, sir, and my Board recommended that a food-store be provided. Colonel Firth also makes the same point in his book. As to the walls, you will have noticed in our report that our Board recommended that all woodwork should be treated with sanitary distemper. Our object was to render the inside of the huts as germ-proof as possible. Therefore, from a standpoint of ready disinfectant, we were justified in favouring iron. It is obvious that you would not have an operating-theatre lined with wall-paper. Zinc lining would not look very well, but it would make a very suitable aseptic wall. The walls of these huts are aseptic for a considerable portion. If they were covered with untreated wood you would have dust gathering, and there would be also undesirable odours. Therefore, having in view the fact that a serious infectious disease has broken out, I myself am unwilling to take the responsibility of a departure from a wall which can be readily cleaned, and which itself does not absorb either odours or germs. It is not only the question of the lining being considered from a warmth point of view, but the lining must be very tight, otherwise the dust will go through. The lining would require to be treated with some material to render it unabsorbent. I think, then, particularly in view of the weather we have ahead of us, that lining will be simply putting on another wall, and producing an aseptic surface when already an aseptic surface exists. When I recommended the filling-in of the little spaces between the corrugations and the timber it was not only from the point of view of draughts reported, but because they were already, as I saw, becoming receptacles for dust and bits of dirt. I think one member of the Commission will remember that I held a match close to the wall, and we saw there bits of shavings, and so on, so that I had in mind the necessity for keeping the wall and floor as readily disinfectable as possible. I would urge upon the Commission that the comfort to be produced by lining the walls must in this case be considered with due regard to the necessity for securing that no danger shall exist from infection by dust or anything adhering to the surface of the wall. Now, as to the aspect of the building, to place the buildings absolutely north and south did not appeal to me, for the reason that the early morning sun, in winter especially, cannot be counted, because it is of little value, as the hill is in the way. The eastern approach of the sun is shut out to a certain extent by the hills. Therefore I personally thought it was better to turn them as they are now, which also suited the general configuration of the locality as to the main road and the branch roads off same. That would ensure the buildings getting the whole advantage of the afternoon sun, and we all thought it better to try and get as much of the available sun as was possible. I think that as much sun as possible gets into those buildings, and as much as they are now turned as would get into them if they were turned absolutely north and south. That is my feeling. I have seen a plan drawn showing these huts turned absolutely north and south, and the difference is very little from what they are now, from the point of view of the sun getting access to the buildings. There was another point which I would like to refer to, and that is based on the reports regarding the analyses of air. I contend, sir, that the figures given are only figures, because the proportion or the amount of CO_2 contained was compared with certain other buildings, but we know nothing of the time of the year or what these rooms were used for, nor have we any other information to show that it was a fair comparison.

10. That is the English barracks?—Yes, sir.

11. One sample taken from what is called the Artillery No. 1 floor contained 1 per cent.?—Yes; but the point I wish to make is this: that in the light of recent knowledge and the experiments made by Professor Leonard Hill, F.R.S., it is shown that the consideration of the amount of CO_2 is only of value when considered with regard to the temperature and moisture. He made experiments which go to show what I think is common knowledge. Supposing you have in a picture-theatre a certain excess amount of CO_2 present, and a certain temperature and moisture, some person may faint. Leonard Hill's experiments went to show that if you kept the temperature low, with the same amount of CO_2 present, no one would suffer. So that the mere amount of CO_2 is not so important. If you read the reports of Scott's Antarctic Expedition you will see that the men must have breathed an amount of CO_2 which is regarded by authorities as being impossible. Further, an Esquimau's hut would look to us like the Black Hole of

Calcutta, but nevertheless it is actually quite able to support life without discomfort. With regard to these analyses I hold that the very fact that the temperature was low shows that we made arrangements to keep down the temperature so that there can be no fear that the conditions would become as dangerous as in a barrack-room, where the temperature is usually very much higher. I desire to quote from Price's Handbook on Sanitation: "Until very recently the CO_2 in excess of 3 or volumes per 10,000 was regarded as the only reliable index of air-impurity. Pettenkoffer, De Chaumont, and others have taught that we must regard the air in a room in which human beings are present as impure when CO_2 exceeds 6 per 10,000 in volume. This has been regarded as a valuable index of air-impurity, and this test is still used to determine the character of the air in houses, schools, &c. As has been noted, large quantities of CO_2 may be breathed with comparative impunity when they are not due to the products of respiration and an increase of temperature, and the presence of organic emanations from overcrowding are of much more importance in the determination of the purity of air than the mere quantity of CO_2. It is very important to make tests of the amount of dust and the number and kind of bacteria found in the dust of the air of rooms, and it is imperative when determining the character of the impurities of the air in a room to measure all the various factors, such as the increase of CO_2, the increase of relative humidity, the temperature, and the amount and character of the dust and bacteria." And again: "The decrease in the amount of oxygen is not very serious and has very little effect upon the quality of the air. The increase of carbonic acid is usually very slight, and very seldom exceeds 20 or 25 per 10,000 volumes. The increase of CO_2 was formerly thought to be the main cause of the bad effects of vitiated air. It is doubtful, however, whether the ordinary increase of CO_2 in the air is of much consequence, as CO_2 becomes toxic only when its amount in the air is not less than 10 per cent. Increase of moisture adds to the relative humidity of the air, which causes discomfort when it exceeds 80 or 85 degrees. Serious discomfort is also caused by the increase in temperature in overcrowded rooms." I wish to make this point: that though CO_2 is apparently about the recognized percentage, at the same time the temperature being low, I hold that it is by no means injurious, even on a very calm night, to breathe the atmosphere of those huts. And I think it was hardly what I would call a fair test to make the analyses when it was known that the windows on the lee side were not being used. The windows were shut. Nor was it fair to contrast the hut-air with the tent-air when the huts had about thirty in them and the tent only three. It would have been fairer to have taken it when the tent had eight men in it. This point has been made, that so long as the temperature is kept down the inhabitants can breathe without injury to themselves a good deal more CO_2 than if the temperature is raised.

12. Then you may have a different temperature in winter to that in summer?—Yes; we require much more air in the summer than in the winter.

13. You were a member of the Board which reported upon the prudence or otherwise of the troops being returned to Trentham?—Yes, sir.

14. You have heard the report read recently?—Yes, sir.

15. And you know the history of the camp since that report was drawn up: do you desire to qualify or add to your report in any way?—No, sir.

16. In view of all that has been brought out recently?—No, sir.

17. You still adhere to the opinion expressed in the report?—Yes, sir.

18. Subject, of course, to the carrying-out of those conditions laid down by the Board?—Yes, sir.

The Chairman: I may say that we sent a telegram to Dr. Champtaloup, of Dunedin, who was also a member of the Board, as follows: "Trentham Camp: Referring to experts' conjoint report, in which you concurred, and having regard to history since, particularly in view of your subsequent experience cerebro-spinal meningitis or carriers, do you still adhere to the report? We ask this of you as if you were called as a witness, as we desire to report on the fitness of camp for return of men for occupation." His reply to telegram is as follows: "Still adhere to report of Medical Board on which I sat *re* Trentham site, provided all conditions laid down by Board are given effect to."

TELEGRAM to DR. CHAMPTALOUP.

Dunedin, 10th August, 1915.

TRENTHAM Camp: Referring to experts' conjoint report, in which you concurred, and having regard to history since, particularly in view of your subsequent experience cerebro-spinal meningitis or carriers, do you still adhere to the report? We ask this of you as if you were called as a witness, as we desire to report on the fitness of camp for return of men for occupation.

J. H. HOSKING, Chairman, Trentham Commission.

REPLY from DR. CHAMPTALOUP.

Mr. Justice Hosking, Wellington.

STILL adhere to report of Medical Board on which I sat *re* Trentham site, provided all conditions laid down by Board are given effect to.

CHAMPTALOUP.

By Authority: JOHN MACKAY, Government Printer, Wellington.—1915