

1917.  
NEW ZEALAND.

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# FIRE BRIGADES OF THE DOMINION

(REPORT ON THE) BY THE INSPECTOR OF FIRE BRIGADES FOR THE YEAR ENDED  
30TH JUNE, 1917.

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

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The INSPECTOR OF FIRE BRIGADES to the Hon. the MINISTER OF INTERNAL AFFAIRS.

SIR,—

Office of the Inspector of Fire Brigades, Wellington, 26th July, 1917.

Herewith I have the honour to lay before you my ninth annual report, for the year ended 30th June, 1917, relative to the working of the Fire Brigades Act and including matters in connection therewith.

During the year the Ohakune Fire Board was dissolved, and accordingly the Borough of Ohakune ceased to be a fire district; but the Borough of Waihi was proclaimed a fire district on the 11th June, 1916, consequently the number of proclaimed districts remain the same as last year, and are—Auckland, Christchurch, Dannevirke, Dunedin, Feilding, Gisborne, Greymouth, Hamilton, Hastings, Hawera, Hokitika, Lawrence, Masterton, Milton, New Plymouth, Oamaru, Palmerston North, Petone, Rotorua, Tauranga, Timaru, Waihi, Whangarei, and Woolston.

I have officially inspected the brigades, with their stations and equipment, at present working under the control of Fire Boards, as follows:—

Auckland—22nd and 25th June, 1917.  
Christchurch—30th January, 1917.  
Dannevirke—20th September, 1916; 8th May, 1917.  
Dunedin—15th and 16th March, 1917.  
Feilding—19th April, 1917.  
Greymouth—19th January, 1917.  
Hamilton—26th February, 1917.  
Hastings—7th May, 1917.  
Hawera—4th September, 1916; 16th April, 1917.  
Hokitika—22nd January, 1917.  
Lawrence—7th March, 1917.  
Masterton—3rd May, 1917.  
Milton—8th March, 1917.  
New Plymouth—5th September, 1916; 17th April, 1917.  
Fitzroy—5th September, 1916.  
Oamaru—31st October, 1916.  
Palmerston North—14th June, 1917.  
Petone—28th June, 1917.  
Rotorua—23rd February, 1917.  
Tauranga—21st February, 1917.  
Timaru—24th January, 1917.  
Whangarei—16th and 17th November, 1916.  
Woolston—2nd November, 1916; 22nd May, 1917.

In addition to the statutory inspections, in accordance with requests received from local and other bodies, visits were paid for special purposes as follows:—

Devonport—5th July, 1916: Inquiry into organization of brigade, &c.  
Trentham Camp—19th July, 1916: Inspection of manual and equipment.  
Trentham Camp—14th August, 1916: In connection with outbreak of fires.  
Cambridge—10th October, 1916: In connection with licensing of picture-theatre.  
Hamilton—11th October, 1916: Special visit.  
Devonport—20th November, 1916: Inspection of brigade.  
Waihi—22nd and 23rd November, 1916: Report upon water-supply, equipment of brigade, &c.

Featherston Camp—7th December, 1916: Inspection purposes, &c.  
 Featherston Camp—12th January, 1917: Inspection purposes, &c.  
 Featherston Camp—13th February, 1917: Inspection purposes.  
 Balclutha—12th to 14th March, 1917: Attendance at United Fire Brigades Conference.  
 Akaroa—27th March, 1917: Report upon storage of dangerous goods, water-supply, &c.  
 Trentham Camp—11th May, 1917: Inspection purposes.  
 Trentham Camp—11th June, 1917: Inspection purposes.

Inspection visits have not been made as frequently as in the past, in some part due to the better equipment and greater efficiency of a number of the brigades making it not now necessary to visit them, except for special purposes, more than once during the year, but chiefly owing to a great part of my time now being occupied in carrying out other duties following upon my appointment as Departmental Fire Inspector and Honorary Fire Inspector to the Defence Department.

Having received an invitation from the executive officers of the United Fire Brigade Association, I attended their annual conference held at Balclutha in March last and delivered an address to the delegates on "The Domestic Hot-water Service as a Cause of Fire." At the request of the Conference the address has been printed by the Government in pamphlet form for circulation amongst the brigades and local governing bodies.

As usual, instruction and addresses upon various subjects in connection with fire-brigade work was given at the conclusion of the inspection drills. Advice has been given to local bodies and others in relation to water-supply schemes, fire risks and protection, purchase of fire plant, &c. Imported machinery has been tested, specifications drawn up, and supervision exercised over the manufacture of plant and appliances in the Dominion.

The principal improvements effected during the year are as follows:—

*Fire-stations*—Auckland: Additions and alterations have been made to the Grey Lynn fire-reel station to provide a set of married quarters and suitable accommodation for single men.

Dunedin: A district station has been erected and is now in occupation in South Dunedin. The new station is designed to serve the Caversham and St. Clair districts in addition to South Dunedin. The building is constructed in brick, and contains one set of married quarters, accommodation for six single men, commodious engine-room, social hall, &c., and all necessary conveniences.

Feilding: Additions and alterations have been made at the central station so as to provide one set of married quarters.

Hamilton: A new central station has been erected and is now in occupation. The building contains one set of married quarters, accommodation for single men, large engine-room, social hall, &c., and all necessary conveniences.

Woolston: A new central station has been erected and is now in occupation. The building contains one set of married quarters, accommodation for single men, engine-room, social hall, &c., and all necessary conveniences.

*New Motor Appliances*.—Dunedin: Three new 60 h.p. motor hose machines all fitted with telescopic ladders and first-aid pumping outfit.

Feilding: A 25 h.p. commercial chassis purchased and a suitable body built thereon, converting it into a hose tender.

Hamilton: The 65 h.p. motor appliance which had been on order for some time was received in January last. The machine is fitted with a 400–500-gallon turbine pump, and carries a three-section 50 ft. wheeled telescopic ladder.

New Plymouth: The 65 h.p. motor appliance was received in January last. The machine is fitted with a 400–500-gallon turbine pump, a three-section 50 ft. wheeled telescopic ladder, and a first-aid pumping outfit.

Hawera: A 35 h.p. commercial chassis was purchased and the machine converted into a hose-and-ladder tender, a body suitable for the purpose being built locally.

Whangarei: A 20 h.p. (English rating) second-hand motor-car was purchased and converted into a hose-and-ladder tender.

*Fire-alarms*.—An electric system of modified street alarms directly connected up to the main firebell has been installed in Whangarei. The system, which also enables the number of the ward or district to be rung out, and is economical and very suitable for the smaller places, has proved most successful in Whangarei, and is now being installed in several other towns.

Considerable difficulty has been experienced by nearly all the brigades in keeping their personnel up to an effective strength, this applying to the whole fire service of the Dominion. In the "Roll of Honour" book published by the United Fire Brigade Association it states that up to the end of February last 1,030 of its members had enlisted, and of that number 87 has been killed, 116 wounded, 2 were prisoners of war, and 66 invalided home and unfit.

A recommendation was made last year in certain towns where this difficulty occurred that a number of the business people should be asked to undergo a sufficient amount of drill to enable them to assist the brigade when necessary. The idea worked successfully, and in view of eventualities I would suggest to the chief officers of brigades throughout New Zealand that they should at once request men over military age or those otherwise ineligible for military service, including well-grown youths under military age, to volunteer for brigade work. There are many men over military age still hale and active who I am sure would be only too glad to show their patriotism in this respect if the way was open for them to do so.

Following are detailed reports dealing with each fire district.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

## AUCKLAND.

An inspection of the Auckland Brigade, its stations and equipment, was made on the 22nd and 25th June, when the plant and appliances were found in good order and condition; the turnout and drill were carried out smartly and in an efficient manner.

In connection with the inspection the following letter was forwarded to the Secretary of the Board :—

SIR,—

3rd July, 1917.

Following upon my inspection of the Auckland Brigade, its station and equipment, on the 25th ultimo, I would draw the attention of your Board to the fact that upon receipt of an alarm or call at the Remuera Fire-station the officer in charge with all the men respond to the alarm or call, thus leaving the station entirely without supervision and with no means of responding to or sending on a call should one eventuate during the absence of the brigade. As the district protected by the Remuera section now includes Epsom, it means that a very large area remains entirely unprotected for the time being, and that should be rectified.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

It was under consideration to erect a substation at or near the corner of Franklin and Ponsonby Roads to serve both Ponsonby and Grey Lynn districts, thus doing away with the three smaller stations situated respectively in St. Mary's Road, Rose Road, and Richmond Avenue; but owing to existing financial conditions it has been decided to hold that scheme over for the present, and alterations and additions have now been made to the Rose Road fire-reel station, providing one set of married quarters and accommodation for single men.

Having amalgamated with the city, Epsom is now under the control of the Auckland Fire Board: that portion of the fire district will be protected from Remuera, and the fire-alarm system is now being extended throughout Epsom.

The replacement of the old fire-alarms by a more reliable system in the city proper has not yet been taken in hand.

## CHRISTCHURCH.

An inspection of the Christchurch Brigade, its stations and equipment, was made on the 30th January, when the plant and appliances were found in good order. The turnout and drill was carried out smartly and in an efficient manner. The St. Albans and Sydenham Stations and equipment was also found in good order.

The following letter was forwarded to the Secretary of the Board :—

SIR,—

12th June, 1917.

Whilst in Christchurch recently I heard it was the intention of the City Council to fill up remaining ground-level concrete water-tanks. From a fire-protection point of view such action is a grave mistake, particularly so in Christchurch, where the safety of the water-supply throughout the city depends upon one carrying main only. Contrary to the proposed action in Christchurch, it is an object in most cities of any size to provide a secondary or auxiliary supply of water for use in the event of any block fires occurring, and in this case in the event of a fire getting away, say, in Strange's or Goss Mill blocks, the tanks in their immediate neighbourhood would prove of the greatest value; and it is to be hoped the Council will reconsider their decision in the matter.

Now that Opawa, St. Martin's, and Avonside have been included within the city boundaries I would bring under the notice of your Board the necessity for the erection of a substation, with an adequate equipment of men, motor, and fire-alarms, in a position somewhere midway between the Central and St. Albans Stations and the borough boundary.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

## DANNEVIRKE.

Two inspections of the Dannevirke Brigade and its equipment have been made—viz., on the 20th September, 1916, and the 8th May, 1917.

At the first inspection there were present the Superintendent, Deputy, and fourteen firemen; these, with two on leave, accounting for the full strength of the brigade then on the roll. Various drills, both wet and dry, were carried out, and at their conclusion several matters were pointed out as requiring attention.

The second inspection is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

11th May, 1917.

An inspection of the Dannevirke Fire Brigade and its equipment was made on the 8th instant, when there were present at the inspection muster the Superintendent, Deputy, and fourteen firemen; these, with two on leave, accounting for the full strength of the brigade then on the roll.

Various drills, wet and dry, were carried out, but not in a satisfactory manner, and a better method of conducting the drills should be adopted on the lines as explained at the time to both the Superintendent and Deputy.

I note the brigade have not yet been provided with the six collapsible canvas buckets as recommended at the time of my previous visit.

There was no light in the front of the station, and I understand it has been out of order for some little time; it should be attended to. The question of mechanical transport for the men and appliances should also receive the attention of your Board.

The station and equipment are in good order.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

#### DUNEDIN.

An inspection of the Dunedin Central Fire-station and the Maori Hill, Roslyn, and Mornington Substations, with their equipment, was made on the 15th, 16th, and 19th March, when the stations and appliances were found in good order; also, an inspection was made of the then nearly completed new district station at South Dunedin. This station is designed to serve the Caversham and St. Clair districts in addition to South Dunedin. The building is well designed, and contains one set of married quarters, accommodation for six single men, large engine-room, social room, &c., and all necessary conveniences.

Three new 60 h.p. motor hose-tenders have been received, each fitted with telescopic trussed ladder and first-aid pumping outfit.

I would again call attention to the very inadequate supply of water available for the protection of property on and in the immediate neighbourhood of the harbour-front—in fact, the whole question of the city water-supply requires attention, as I understand that the supply of water was cut off last summer from certain sections of the city for as long as twenty-four hours at a stretch.

#### FEILDING.

An inspection of the Feilding Brigade and its equipment was made on the 19th April. The inspection is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

26th April, 1917.

An inspection of the Feilding Brigade and its equipment was made on the 19th instant, when there were present at the inspection muster the Superintendent, Deputy, nine firemen, and one messenger; there, with two on leave and two on duty, accounting for sixteen out of a total strength of nineteen on the roll.

Using the motor hose-tender for the purpose, various hydrant and hose drills were carried out, but not in an efficient manner, due to the repeated failure to ship the stand-pipe properly. I have had occasion to more than once comment upon this same fault, and the men should receive a thorough drilling so as to become efficient in this important part of a fireman's drill. Instruction was given to the Superintendent as to the method of drill best suited to give more efficient results.

Only when responding to an alarm of fire should the fire-alarm gong on the motor be sounded; at all other times the ordinary horn with which the machine is fitted should be used.

The station and equipment are in good order and condition.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

A 25 h.p. commercial petrol-motor chassis was purchased and a suitable body built thereon to serve as a hose-tender. The horse has been sold, and the stables utilized in the alterations made to provide a set of married quarters at the central station.

#### GREYMOUTH.

An inspection of the Greymouth Brigade and its equipment was made on the 19th January, when there were present at the inspection muster the Superintendent, Deputy, and fifteen firemen; these, with three on leave, accounting for the full strength of the brigade.

Various wet and dry drills were carried out in a satisfactory manner.

Up to the time of my inspection nothing had been done to put the steam fire-engine in proper working-order (see report dated 3rd March, 1916), nor has anything been done in that direction up to a very recent date. In view of local conditions the Board would be wise to attend to this matter with as little delay as possible. Also, the wheels of the ladder-carriage at the central station are in bad condition; otherwise the station, plant, and appliances are in good order.

The Blaketown district is still without any adequate means of fire protection.

#### HAMILTON.

An inspection of the Hamilton Brigade and its equipment was made on the 26th February, when there were present at the inspection muster the Superintendent, eleven firemen, and two messengers; these, with three on leave, accounting for the then full strength of the brigade.

The inspection is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

2nd March, 1917.

An inspection of the Hamilton Fire Brigade and its equipment was made on the 26th and 27th ultimo, and in that connection I submit the following report for the consideration of your Board :—

The new pump, ladder, and hose motor combination machine was first taken into Hood Street and got to work from the water-mains there. With one delivery and a  $\frac{7}{8}$  in. nozzle a pressure of 180 lb. was maintained ; with two deliveries,  $\frac{7}{8}$  in. and  $\frac{3}{4}$  in. nozzles, the pressure obtained was 160 lb. The machine was then taken to the vicinity of the bridge and got to work from the river, when with a suction-lift of 10 ft. water was obtained in twenty seconds, and with one and two deliveries a pressure of 160 lb. and 125 lb. respectively maintained ; very satisfactory results, but the nozzles are too small, and four new nozzles—viz., one  $1\frac{1}{2}$  in., one  $1\frac{1}{4}$  in., and two 1 in.—with two new branches, should be obtained immediately.

I notice there are some departures from the original specifications : (1.) Steel wheels in place of wooden ones. In the matter of the supply of an earlier machine Dennis Bros. strongly recommended the substitution, as a result of recent practical experiences, and so far the later steel wheels have proved satisfactory. (2.) Road clearance  $7\frac{1}{2}$  in. instead of 9 in. This is not a serious matter in your case. (3.) No suction-basket strainer supplied. However, as a set-off I consider certain improvements in the machine and extra accessories supplied more than balance the above shortcoming. The electric side-lamps are very small, although giving a good light for their size ; but the acetylene head-lamp certainly takes some time to light, and it would be an advantage to fit a cylinder of " Prestolite " gas in place of the acetylene generator.

The 50 ft. extension ladder was fitted up and a demonstration given of the method of working, mounting, and dismounting it from the motor, &c. The ladder proved in good order and satisfactory in every way.

Instructions were given in respect to some minor alterations and other matters in connection with the working of the motor combination.

A visit was paid to the new central station now nearing completion, and I noticed that several of my recommendations in respect to the fitting-up of the station were not being carried out—certainly a very small matter in each detail, but in all making for the efficiency of the whole.

During the course of my inspection various matters came under my notice that point to considerable carelessness in the care of the appliances, and a total disregard of my teaching and advice. For instance, the hand-pump and hose still lying on the floor of the station, and the hose, which should have lasted at least ten years, now useless ; no hand-lamp available, yet one comparatively new lying on the ground with the glass broken, and only requiring a new glass to make it serviceable ; dragging and scraping boots along the new hose when wet to flatten it—and this last is particularly bad, seeing that at my previous visit I had given some advice as to the care of hose, particularly condemning such action.

In view of the costly equipment now being provided the Board should strongly caution the Superintendent and his Deputy that more care of the equipment must be exercised than has been done in the past.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The new central station is now in occupation. It is of brick construction, contains one set of married quarters, accommodation for single men, large engine-room, social hall, watch-room, and all necessary conveniences.

The installation of the " remote switchboard " system for the ringing of the main firebell is now in hand.

#### HASTINGS.

An inspection of the Hastings Brigade was made on the 7th May. The inspection is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

11th May, 1917.

An inspection of the Hastings Brigade and its equipment was made on the 7th instant, when there were present at the inspection muster the Superintendent, Deputy, and sixteen firemen ; these, with three on duty and one on leave, representing the full strength of the brigade then on the roll.

Wet and dry drills with motor and hand hose-reel were carried out in a satisfactory manner, and the station and appliances are in good order. The main fire-alarm bell at the general station was not then in proper working-order, but I understand the work is now in hand.

The time has now arrived when a street fire-alarm system should be installed. A large number of new buildings, some of them of considerable cubic area, have been erected in the borough within the last two or three years, and the question of providing the said alarm system should receive the early attention of your Board.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

## HAWERA.

Two inspections of the Hawera Brigade and its equipment have been made—viz., 4th September, 1916, and 16th April, 1917. At the second inspection there were present the Superintendent, Deputy, fifteen firemen, and one messenger; these, with three on leave, accounting for the full strength of the brigade. Various drills, wet and dry, were carried out in a very satisfactory manner—in fact, there is a great improvement in the all-round efficiency of this brigade.

The plant and appliances are maintain in good order and condition.

A 36 h.p. commercial chassis has been purchased, and with a body built locally has been converted into a suitable hose-tender. It is proposed to purchase a 30 ft. telescopic ladder to carry on the motor.

## HOKITIKA.

An inspection of the Hokitika Brigade and its stations and equipment was made on the 22nd January, when there were present the Superintendent, Deputy, and twenty firemen; these, with two on duty and three on leave, account for twenty-seven out of the full strength of thirty then on the roll.

The steam fire-engine was got to work, and various drills from the engine and from the town mains were carried out in a smart and efficient manner.

The different stations and their equipment are maintained in good order and condition.

## LAWRENCE.

An inspection of the Lawrence Brigade and its equipment was made on the 7th March, when there were present at the inspection muster the Deputy Superintendent and four firemen; these, with one on sick-leave, accounting for six out of the full strength of ten then on the roll.

One delivery was got to work, which showed a good pressure in the town mains.

The plant and appliances are in good order, but some collapsible canvas buckets for use with the hand-pumps should be carried on the reel.

## MASTERTON.

An inspection of the Masterton Brigade was made on the 3rd May. The inspection is covered by the following report sent to the Secretary of the Board :—

SIR,—

11th May, 1917.

An inspection of the Masterton Brigade and its equipment was made on the 3rd instant, when there were present at the inspection muster the Superintendent, Deputy, and twenty-two firemen; these, with three on leave, accounted for twenty-seven out of a total strength of twenty-nine then on the roll.

Various drills, wet and dry, were carried out in a satisfactory manner, and the station and appliances are in good order. A light is required on the street-front of the central station: it should be fixed over and between the two main doors. Two matters require the attention of your Board: (1.) Provision, in part, of new uniform; at present some of the men are short of both uniform and accoutrements. (2.) Extension of the street fire-alarm system; this requirement is brought about by the rapid growth of buildings in certain portions of the town.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

## MILTON.

An inspection of the Milton Brigade was held on the 8th March, and is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

30th April, 1917.

An inspection of the Milton Brigade and its equipment was held on the 8th March, when there were present at the inspection muster the Superintendent, Deputy, and ten firemen; these, with three on leave, representing the full strength then on the roll.

Various drills with the manual pump, ladders, &c., were carried out. It was very evident the men required more drill with the ladders, and the Brigade should be provided with some old hose for drill purposes. The copper strainer on the pump suction hose requires straightening: with that exception the plant and appliances are in good order.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

## NEW PLYMOUTH.

Two inspections of the New Plymouth Brigade, its stations and equipment, have been made—viz., 5th September, 1916, and 17th April, 1917.

At the first inspection muster there were present the Superintendent, Deputy, and seventeen firemen; these, with four on leave, accounted for the then full strength of the brigade.

An inspection of the Fitzroy section of the brigade was also held, when there were present the Captain, Lieutenant, and ten firemen; these, with three on leave, accounting for the full strength of the section.

In both cases various drills, both wet and dry, were carried out, and the plant and appliances are maintained in good order.

The second inspection is covered by the following report forwarded to the Secretary of the Board :—  
SIR,—

25th April, 1917.

An inspection of the New Plymouth Fire Brigade and its equipment was made on the 17th instant, when there were present at the inspection muster the Superintendent and fifteen firemen; these, with two on duty and two on leave, representing the then full strength of the brigade.

The new motor combination appliance was taken to the Egmont Street Bridge, where, with a suction lift of about 20 ft., water was shown through 100 ft. of hose in twenty-two seconds, with one delivery and 1 in. nozzle, a pressure of 153 lb., equal to a discharge of 250 gallons per minute; and with two deliveries, both 1 in. nozzles, the pressure was 120 lb., showing a combined discharge of 440 gallons per minute. The trial was satisfactory, but some larger nozzles are required for service with the motor pump, and I recommend that three new ones be obtained—viz., one 1½ in., one 1¾ in., and one 1 in. Various drills were carried out with the new 50 ft. telescopic ladder and the first-aid pump outfit, and, in view of their recent acquisition, in a satisfactory manner; but more drill is required throughout.

For the more efficient working of the combination apparatus I would make the following recommendations: Electric lamps with an independent set of accumulators to be substituted for the present acetylene head-lamps; if the latter pair of lamps are sold the price obtained would probably cover the cost of substitution. Raised rim on footboards to be lowered flush as explained. Safety device to be fitted to catch starting handle, so as to avert injury to men in case of back-firing when starting engine. Lugs on the eight new male couplings to be cut down about ¼ in. Seven fathoms of 2 in. rope required for suction hose. Fillets to be fitted on upper sides of iron standards on main frame of ladder so to clear heel of sliding section when lowering ladder.

As it has been decided to ring the central station bell by electricity, a 3 h.p. motor should be provided and a ringing-apparatus fitted similar to that used by the National Electric Company for their remote switch control system as installed in Whangarei, &c.

A visit was paid to the Fitzroy Station and the appliances found to be in good order.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

#### OAMARU.

An inspection of the Oamaru Brigade and its equipment was made on the 31st October, 1916, when there were present at the inspection muster the Superintendent, Deputy, and fifteen firemen; these, with three on leave, accounting for the full strength of the brigade.

The turnout was good, but various drills were carried out not in an altogether satisfactory manner. Certain suggestions were made to the officer which if adopted will certainly improve matters.

The station and appliances are maintained in good order and condition.

#### PALMERSTON NORTH.

An inspection of the Palmerston North Brigade was held on the 14th June. The following report forwarded to the Secretary of the Board covers the inspection :—

SIR,—

3rd July, 1917.

An inspection of the Palmerston North Brigade and its equipment was made on the 14th ultimo, when there were present at the inspection muster the Superintendent and seventeen firemen; these, with two on duty and one on leave, accounting for twenty-one out of a full strength of twenty-two then on the roll.

Various drills were carried out in a very satisfactory manner, and the station and equipment is in good order and condition.

I would suggest to your Board the advisability of providing the brigade with a second motor appliance, thus doing away with the horse vehicle and relieving the present heavy machine from the long runs. I would recommend the proposed machine should be one of 25–30 b.h.p. English rating, or 40 b.h.p. if of American rating; chassis to be guaranteed to carry 30 cwt., and to be fitted with first-aid chemical-cylinder, 180 ft. hose, hydraulic reel, &c.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

#### PETONE.

An inspection of the Petone Brigade was made on the 28th June last, and is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

29th June, 1917.

An inspection of the Petone Brigade and its equipment was made on the 28th instant, and in that connection I beg to submit the following report for the consideration of your Board.

At the inspection muster there were present the Superintendent, Deputy, and eighteen firemen ; these, with three on leave, accounting for twenty-three out of twenty-four then on the roll.

Since my last inspection twelve months ago a considerable improvement is apparent in both officers and men, and the drills are conducted in a more thorough and efficient manner—altogether a decided change for the better.

The motor-body is well designed for its purpose and well built, but it was a great mistake to allow as many as nine men to be taught to drive on the machine, and if it is considered necessary to maintain such a number of extra drivers in addition to the chauffeur any more men learning to drive should practice on a less expensive and older machine than the one in question. From a fire brigade point of view there is one weak point in the machine, and that is dependence upon one system of ignition : battery-and-coil ignition is liable to go wrong at any moment, as has happened in more than one instance in my experience ; and I would recommend that a magneto ignition be provided. The dual ignition will greatly increase the reliability of the machine at comparatively small cost.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

#### ROTORUA.

An inspection of the Rotorua Brigade was made on the 23rd February, and is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

2nd March, 1917.

An inspection of the Rotorua Fire Brigade and its equipment was made on the 23rd ultimo, and in that connection I submit the following report for the consideration of your Board.

At the inspection muster there were present the Superintendent, Deputy, and nine firemen ; these, with seven on leave, representing the then full strength of the brigade.

Various drills were carried out, and the motor with a squad of firemen taken to the King George's Hospital for the purpose of giving the Hospital staff a demonstration of the use of the various fire appliances there placed.

When at the hospital the near-side front tire blew out, and there was a considerable delay before the motor was again ready to proceed ; to prevent a recurrence of such delay in future a Stepney wheel should be obtained and carried on the machine. With some practice it should be possible to attach the Stepney in a little over one minute.

I have again to recommend that the motor be fitted with an ordinary bulb horn for use when out for drill purposes, returning from fires, &c. The siren should only be used when responding to a fire call.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

Up to the time of my visit no improvement had been made in the pressure of the town gravitation water-supply, which, in that direction, is in an unsatisfactory condition.

#### TAURANGA.

An inspection of the Tauranga Brigade was made on the 21st February, and is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

1st March, 1917.

In connection with the inspection of Tauranga Fire Brigade and its equipment held on the 21st instant, I submit the following report for the consideration of your Board :—

At the inspection muster there were present the Superintendent, Deputy, twelve firemen, and two messengers ; these, with two on leave, accounting for the full strength (eighteen) then on the roll—a better attendance than has been the case at any of my previous inspections of this brigade. The various drills were carried out energetically and in a manner as efficient as could be expected under the various circumstances ; but upon my next visit I hope to see that more attention has been paid to my advice than has evidently been the case in the past ; also, it would be well if more attention was given to brigade matters by local members of the Board, as any apathy in this respect is bound to react on the efficiency of the brigade.

The central station reel is altogether too heavily laden and the load should be reduced in the manner explained at the time. Canvas bags in which to carry the hand-pumps are required, and the leather hose attached to the pumps must be properly dressed and kept pliable. One of the pumps should be placed in the Quarter Acres Station ; and eight canvas collapsible buckets are required, four for each pump.

As more fully explained to the Chairman and members of your Board who were present at the meeting held on the morning of the 21st, I recommend the installation of the " remote control switch " system of fire-alarms, with two alarm-points in the Strand, one on the front of the Central Station, and the control switch in the station, or four points in all. When calling for tenders it will be necessary to give the length in one line of the wire it will require for the two points on the Strand ; also to mention that only one control switch is required, the other three points to be fitted with a first-class pattern of press button ; the three street switches to be enclosed in neat boxes with glass panel fronts having thereon the words " Fire-alarm. Break glass and press button." Alternate tenders might be called



for, first, supply of material and complete fitting-up of the system, tender to include a period of maintenance; and, second, supply of necessary material only. I think the first alternative the safest course to adopt.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

#### TIMARU.

An inspection of the Timaru Brigade was held on the 24th January. The inspection is covered by the following report forwarded to the Secretary of the Brigade :—

SIR,—

5th February, 1917.

An inspection of the Timaru Brigade and its equipment was made on the 24th ultimo, when at the inspection muster there were present the Superintendent, Deputy, and seventeen firemen; these, with three on leave, accounting for twenty-two out of a total strength of twenty-three then on the rolls.

Various drills were carried out in a satisfactory manner. The equipment was in good order and condition with the exception of the jumping-net, which is not in fit condition for its purpose, and a new one should be provided; also, the rubber hose being used at present with the smoke-helmet is too short and of an unsuitable pattern. Two 60 ft. lengths of armoured rubber hose, similar to that recently supplied to the Christchurch Fire Brigade for the same purpose, should be ordered from the Dunlop Rubber Company.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

#### WHANGAREI.

An inspection of the Whangarei Brigade and its equipment was made on the 17th November, when there were present at the inspection muster the Superintendent, Deputy, and thirteen firemen; these, with one on duty and three on leave, accounting for the full strength then on the roll.

Various motor hose and ladder drills were carried out, and the appliances were in good order. A second-hand 20 h.p. (English rating) motor-car was purchased and converted into a hose-tender. A modified system of street fire-alarm and bell-ringing apparatus known as the "remote switch control" has been installed. Very successful tests of the system were made at the time of my visit, and up to the present I understand it has given every satisfaction.

#### WOOLSTON.

Two inspections of the Woolston Brigade and its equipment have been made—viz., 2nd November, 1916, and 22nd May, 1917. At the first inspection there were present the Superintendent, Deputy, and four firemen; these accounting for six out of a total of eleven then on the roll. The motor chemical-engine was taken out and some instruction in the working thereof was given.

The second inspection is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

30th May, 1917.

An inspection of the Woolston Fire Brigade and its equipment was made on the 22nd instant, and in that connection I beg to submit the following report for your consideration :—

At the inspection muster there were present the Superintendent, Deputy, and three firemen; these representing the full strength of the brigade then on the roll.

The appliances were well handled, and the station and equipments are in good order and condition.

Every effort should be made to increase the effective membership of the brigade.

I would again bring before your Board the urgent need for providing some means of summoning the brigade in case of fire, as well as the necessity of installing a modified system of street alarms. A system of street alarms is an integral part of any scheme of town fire protection, and is particularly necessary in such a place as Woolston, where the whole of the protection consists of first-aid equipment, and which for efficiency or for any adequate return commensurate with the expenditure absolutely depends upon early information of outbreaks of fire. As previously fully explained to your Board, I consider the "remote switch control" system of local alarm and ringing the bell both economical and suitable to your requirements. A cheap and effective modified system of street alarms would be by means of a few "push-pin" boxes connected to a relay having a drop-shutter for each circuit or line fixed in the fire-station.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The new central fire-station has been completed and is now in occupation. It is constructed of brick, contains one set of married quarters, accommodation for single men, engine-room of ample size, social-room, &c., and all necessary conveniences.

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