1900.

NEW ZEALAND.

GOLDFIELDS AND MINES COMMITTEE

(REPORT OF) ON THE PETITION OF TIMOTHY CORBY AND OTHERS *RE* FIRE AT THE CARDIFF COAL-MINE, MOKIHINUI.

Report brought up 3rd October; Evidence brought up 9th October, and ordered to be printed.

ORDER OF REFERENCE.

Extract from the Journals of the House of Representatives.

TUESDAY, THE 3RD DAY OF JULY, 1900.

Ordered, "That Standing Order No. 211 be suspended, and that a Goldfields and Mines Committee, consisting of seventeen members, be appointed, to whom shall be referred all matters relating to mining, and all Bills relating to mines; with power to call for persons and papers; five to be a quorum: the Committee to consist of Mr. J. Allen, Mr. Bennet, Mr. Carncross, Mr. Colvin, Mr. Duncan, Mr. W. Fraser, Mr. Gilfedder, Mr. Guinness, Mr. Herries, Mr. Lang, Mr. R. McKenzie, Mr. Millar, Mr. Mills, Mr. Palmer, Rt. Hon. R. J. Seddon, Mr. Smith, and the mover."—(Hon. Mr. McGOWAN.)

REPORT.

No. 294.—Petition of TIMOTHY CORBY and Others.

PETITIONERS pray that an inquiry may be instituted into the origin of the fire in the Westport-Cardiff Coal-mine, and the measures taken for the extinguishment of the same.

The Committee, having taken evidence relative to the fire in the Westport-Cardiff Coal-mine, have the honour to report that they recommend the petition of Timothy Corby and others be referred to the Government, with the recommendation that a Royal Commission be appointed for the purpose of making full inquiries into the inspection and management of the mine. The Committee further recommend that, in the event of such a Commission being appointed, the scope of its inquiries be extended to comprehend the inspection and management of the coal-mines of the colony generally.

3rd October, 1900.

PETITION.

To the Honourable the Speaker and Members of the House of Representatives in Parliament assembled.

YOUR petitioners humbly show that on the 28th of January last the Cardiff Coal-mine at Seddonville was discovered to be on fire, and at the present date is still burning. And we, the undersigned residents of Seddonville and district, humbly pray that your honourable House will cause an inquiry to be held as to the circumstances connected with the origin of said fire, and also as to the steps which have been taken for the purpose of suppressing it. We crave an inquiry on the following grounds:—

1. That a large area of valuable coal, the property of the colony, is, through the continuance of the present fire, threatened with destruction.

2. That, at the first discovery of the present fire, had simple means—such as any ordinary miner would have employed—been adopted, the fire could have been easily extinguished, and with little or no expense.

3. That, instead of this, evidence can be brought to prove that the means taken to subdue the fire had the opposite effect—viz., to make it burn with greater force.

4. That the present methods which are being taken under the direction of the Sub-Inspector of Mines are, in our opinion, wholly inadequate and impracticable, and a sheer waste of public money.

5. That the residents of Seddonville and surrounding districts depend, in a very large degree, upon the working of the coal-mines for their support, and it is a matter of pressing concern to them that every reasonable means shall be taken, and every practical and adequate method adopted to subdue the Cardiff fire and save the coal-measures of the locality from destruction.

6. Should the inquiry prayed for by us be granted, reliable evidence will be forthcoming to prove that official negligence, delay, and incompetence have been the contributing causes which have prevented the subduing of the fire in its early stages, and that the same causes are operating at the present time to render the work now in progress not only futile, but absolutely destructive.

7. We sincerely trust that, in the interests of the colony generally, and of the people of this district in particular, your honourable House will grant the inquiry prayed for on the above grounds.

And your petitioners will ever pray, &c.

TIMOTHY CORBY, Contractor, and 58 others.

Mr. J. HAYES to the UNDER-SECRETARY, Mines Department.

Westport, 30th June, 1900.

Re fire at Westport-Cardiff Colliery: Confirming my telegram of the 25th instant, I arrived at Seddonville that morning, went over the Westport-Cardiff Colliery property with Messrs. Dixon (Granity) and Tennent, Inspector of Mines, and discussed the position with them.

To make my remarks quite clear, it is necessary to revert to the early history of the fire. The rough tracing attached will help to elucidate matters.

The fire was first discovered about the end of January last, some four months or thereabouts after work was stopped at the colliery. Mr. Tennent was informed of it on a Sunday, and went out immediately to assist the company in taking what steps were possible to get the fire under control. He was subsequently joined by Mr. J. Dixon, Mining Engineer to the Westport Coal Company at Granity. Fire was found between the main haulage-road and the worked-out ground in the Hector Block; and I understand the conditions were such as to entirely preclude the possibility of sealing off the fire anywhere within reasonable distance of the locality in which it was found. Owing to the intense heat and smoke which ascended the air-shaft, very great difficulty was experienced in getting this blocked off by filling in, and, although it would have been very desirable to have got a stopping erected at or near the place marked 4 on tracing, this, I understand, could not be accomplished at the time, and it became necessary to fall back to 1. The second stopping was erected at 2 in the tunnel near the Bow-string Bridge.

The effect sought was to shut off the supply of air to the fire, and so allow of the carbonic acid gas (black-damp) given off—(*a*) by the fire, and (*b*) naturally from the strata—to accumulate, and so act as an extinguisher. Black-damp will not support combustion. This is the general practice all over the world for dealing with mine-fires of this class. For obvious reasons flooding is seldom resorted to unless the conditions are such that the workings cannot be effectively sealed in any other way.

I visited the West Coast about the end of February last, and went to the Westport-Cardiff Colliery in company with Mr. Tennent to see how matters stood in relation to this fire. At this time the company were in possession. On going over to the cliffs near the bridge (Hector Block) an examination of the ground there showed me that, in the event of falls of roof occurring in the worked-out ground near the outcrop—conditions likely to be brought about by the great heat in the mine—air-vents would be made to the surface. Owing to the roof material being a strong sandy rock, it was not likely that such vents (if once made) would close up, as might be the case in a soft or clayey ground. They would therefore act as feeders of air to the fire, and probably rouse it from a smouldering to a fierce state within the area affected by the fresh-air supply.

These conditions being so different to those generally met with in deep workings (where sealing off the air for some months is usually effective), the question of erecting a dam at the entrance at 1 was forced upon me. The object of this dam was to allow the mine-water to accumulate, so as to reduce the area available to the fire. The rising water would also force the accumulated black-damp on to the fire, and so help to extinguish it.

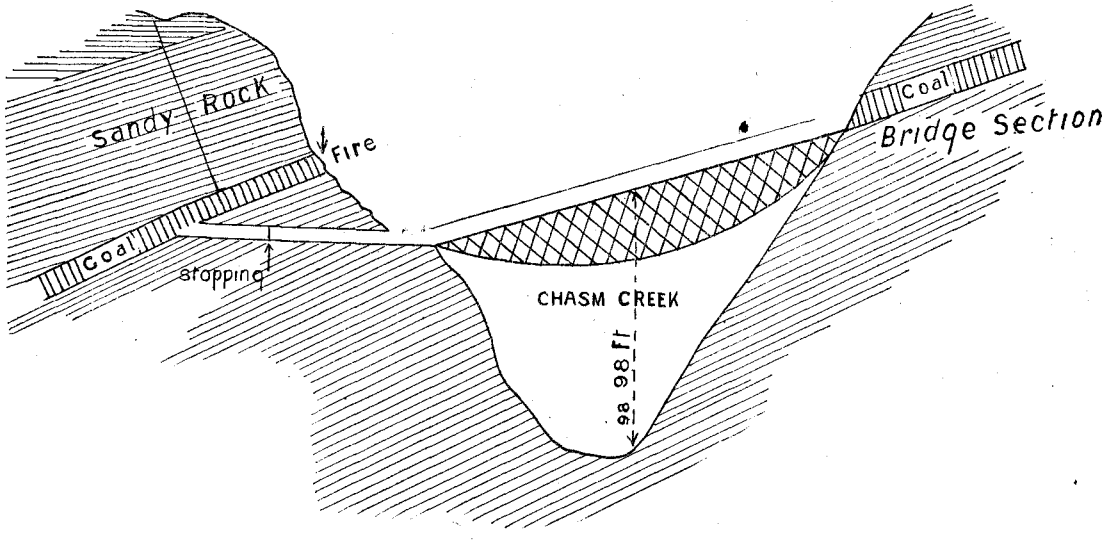
On mentioning my views to Mr. Tennent, I found he had already recognised the same possibilities, and had arranged with the company for the erection of a strong log stopping which would form a dam. On returning to the mine entrance we selected a site for this dam, and instructed the company's underground foreman, Mr. A. Mitchell, as to the method we wished to be adopted in order to insure a good job.

Instead of placing this in Mitchell's hands, it appears the company let the work by contract to Peter Martin, a carpenter at the colliery. Mitchell informs me that he was employed with Martin at this work, and that a good base was obtained by cutting down to solid ground, but that, as the erection of the stopping was approaching completion, Martin cut a log in two to save himself the trouble of fitting it properly in a single length. A weak place was thus made, which had to be tightened up with wedges. The dam stopping was erected some 6 ft. back from the light stopping which had previously been put in by Messrs. Dixon and Tennent to cut the air off the fire. The space between the two stoppings was filled with clay. An iron pipe was also fitted, by which the mine-water could be led away during the erection of the log-dam stopping, and was subsequently plugged up to allow the water to rise. (The clay obtainable is not at all good for puddle-work; it lacks body.)

It appears quite evident that this stopping (after being made tight) acted very well for a time, but the efficiency of any dam in this position was found to be minimised by the discovery of an old subsidence at 5 on tracing, which acted as an outlet for the accumulated water after it had risen

to the surface-level of this subsidence, 45 ft. (aneroid reading) above the log-dam stopping. Some little time afterwards Mitchell found the water ceased to overflow at the subsidence, and also that it was disappearing. In the meantime the company do not appear to have been doing anything, and a partial collapse of the timbers at the mine-entrance took place. Being anxious to find whether the stopping was keeping tight, Mitchell went in to examine, and informs me that he found water escaping from below the sole-piece of the dam very rapidly, and he considers there is every reason to suspect that the sole-piece had been deliberately undermined for a length of about 3 ft., evidently for the purpose of allowing the water to escape and the fire to gain ground. From some remarks I heard casually from another source, my own suspicions have been aroused, and I am inclined to think there is something in Mitchell's view.

At the time the accumulated water was overflowing at the subsidence referred to, I estimate that all the underground area, tinged blue on tracing, would be under water. (The average of three readings of aneroid gives 58 ft. of rise between stoppings at 1 and 2.) The accumulation of water over this area must have forced the black-damp on to the fire, and I am strongly of opinion that active fire only exists at the present time adjacent to the outcrop, where it can get the necessary fresh air for its support. I am led to this opinion by the fact that some distance back from the cliffs black-damp can be found in cracks to the surface, also that although there is fairly active fire above the tunnel at 2 the stopping there was quite cool when I examined it. (See sketch.)



Near 3 on tracing, the fire at outcrop is very fierce; it is at an elevation beyond the effective power of available water.

So far as operations at the mine are concerned, the present position is as follows: The question of putting in a dam at or near 4 on tracing, and another at top stopping (2 on tracing), which would enable the mine to be flooded practically to the outcrop, appears to have been considered by Messrs. Dixon, Tennent, and Mitchell practically from the first; the difficulty was, how to get to the site for dam at 4, seeing that so large a body of black-damp has accumulated. Owing to its specific gravity (one and a half times heavier than air) it stands to reason that when it can be got at surface cracks back from the burning outcrop, every bit of open ground in the mine must be full of it, and no better fire-extinguisher can be obtained.

However, as Messrs. Shore, Alison, and Foster have recommended something on the same lines, Messrs. Dixon and Tennent determined to try to give effect to the gist of their recommendation. As it was considered there would be a considerable element of risk to life in attempting to open out the air-shaft, they decided to erect the fan near the mine entrance, and attempt to force back the black-damp over the fire. If this scheme succeeds, the dams will be erected, and this will enable the mine to be flooded to out-crop level, but it is no use erecting the dam at 2 unless the place at 4 can be reached, and a dam built there. In the meantime, the site at 2 is being conserved by keeping the fire at the outcrop above the tunnel in check. For this, water has been conveyed in 2 in. pipes from a small creek across the bridge for a distance of 15 chains; but when I visited the source of the supply all the water in the creek could be carried by a $\frac{3}{4}$ in. pipe, and as this appears to be the only water available at the elevation required Mr. Tennent was naturally very anxious about being able to keep the fire above the tunnel in check, having the possibilities of the erection of a dam in view. Heavy rains have since fallen, and at subsequent visits to this point, I find the increased water-supply has enabled the fire to be kept as well in hand as can be expected, short of complete flooding, which cannot be effected at such a height unless the dams referred to can be put in.

Mr. Tennent has been criticized for using 2 in. pipes instead of 4 in. I find he used what was already on the ground, and the water-supply has not been enough to fill them for some time. Delay and expense would have been incurred (and probably more damage) if he had waited till larger pipes could have been got and fixed.

As preparations for carrying Messrs. Dixon and Tennent's plan into effect were fairly well advanced when I arrived, I thought (after discussing the matter fully with them) that it might be as well to give it a fair trial. The bad weather of the last two or three days has rendered pro-

gress slower than it otherwise would have been, but everything is expected to be in readiness for Monday morning, the 2nd July.

The success or otherwise of the scheme depends greatly on the present condition of the roadways. If falls have occurred of sufficient extent to prevent the fan driving the black-damp back (they will also be damming up water), then there is no alternative but to erect another dam at 1, and let the water rise to the same level as before, allowing the fire to burn at the outcrop. To attempt anything beyond this is simply to throw money away uselessly. The question of reopening the mine would necessarily have to be left in abeyance until this small area had burnt itself out, or become choked by black-damp and falls. As I have already pointed out, the black-damp would (under these conditions) only allow of actual fire close to the outcrop at the cliffs where fresh air is to be got.

I propose remaining a few days longer to see what results are attained.

J. HAYES, Inspecting Engineer, Mines.

P.S.—I have made an examination of the workings in the Bridge section. These appear to be standing very well, but the area is so cut up with faults, &c., and the coal so crushed (as explained in my report in October last) that, under existing conditions, no real commercial value can be attached to this part of the property.

As to the area of coal supposed to exist between the North Block and the Hector Block, the numerous faults met with in driving the main road (and shown on plan) indicate the existence of broken ground. The prospects of profitably mining coal here are, in consequence, very problematical. To my mind, the very fact of this area—so near the main thoroughfare of the mine—not having been worked to a greater extent before the development of more remote parts of the property shows that the management did not place much real value on it.

For practical commercial purposes, my opinion is that the future value of the colliery lies in the possibilities of the Cave area, which should be prospected on the lines suggested in my October report. I also think that the flats between Seddonville and Mokihinui should be tested by bore-holes. There is also the question of what lies beyond Mokihinui Mine. Mr. R. B. Denniston considers there is a good area there. A thorough geological survey of that part of the district is desirable. Owing to the broken and patchy character of these West Coast coalfields, all possible information should be obtained without waiting till the present available fields are unable to supply demands.

J. HAYES.

The Under-Secretary for Mines, Wellington.

MINUTES OF EVIDENCE.

THURSDAY, 20TH SEPTEMBER, 1900.

J. HAYES in attendance, and examined.

1. *The Chairman.*] What is your name, please?—John Hayes.
2. And your official position?—Inspecting Engineer to the Mines Department.
3. You have heard this petition read?—Yes.
4. And you are acquainted with the matter referred to therein?—Fairly well.
5. You have been over the mine where the fire is?—Yes. I may say that I have not seen the petition at all. I have simply heard it read, and if you wish I will take the clauses seriatim and deal with them. With reference to the first clause in the petition, "That a large area of valuable coal, the property of the colony, is, through the continuance of the present fire, threatened with destruction": This plan which I have here is copied from a tracing which Mr. Broome supplied to the department at the time the company ceased operations, and if this tracing is to be relied upon—and I should think it is—it at once puts aside the question of a "large area of coal." The large area of unworked coal in that connection does not exist. I may say that what is known as the old portion of the mine, or the Hector block of the old portion, is the portion in which the fire is burning. Fires in colleries are not at all uncommon things, as I happen to know from twenty-five to twenty-seven years' experience. The active fire at the present time is, in my opinion, simply confined to the small amount of outcrop coal left near where the coal has been extracted, and there is nothing of a commercial value in it—*i.e.*, where the active fire is really burning. That is my candid opinion.
6. Not much coal of a commercial value?—No. This coloured portion on the plan represents coal absolutely got; but outcropped coal is along this line [indicating the line on plan], and it outcrops into a chasm. The chasm is a huge gap in the coal-seam. Then, on the opposite side of the creek is what is known as the Bridge section. The coal there was the only coal which the company had to work at when they ceased operations about a year ago. That coal is not only very much broken up by faults, but these are samples which I took from the mine [produced]. I have not opened this packet since I took the pieces of coal, but members can see for themselves the nature and quality of the coal.
7. *Mr. R. McKenzie.*] That is taken from the Bridge section?—Yes. I got these samples nearly a year ago.
8. Have you had it on exhibition?—No; it has been in the office, and the packets have never been opened.

8A. *Mr. Smith.*] It is very frail?—Yes; of course, much of it is much softer than that. It would not stand shipment. That is how it was the company gave up operations, I understand.

9. *Mr. R. McKenzie.*] But there is no fire in the part of the mine which this came from?—No. I simply produce this sample of coal to show the class of stuff which the company was working when operations were suspended. Nearer the main entrance, at what is known as the North block, there is a small patch of faulted coal, a considerable part of which appears to have been worked out.

10. Which do you call the main entrance?—By the main entrance to the mine I mean the one next Seddonville. That is really the entrance into the whole mine system. There is a block there known as the North block, which appears to be considerably faulted, and I should say that something more than one-half of the area of coal has been worked out. Then, between the main haulage-road and the Hector block there are a few acres of coal which Mr. Broome described to me and on his plan as a soft-coal area—this unsaleable stuff. I think that had it been otherwise he would have worked it, and not left it there. So the question of the present fire, to my mind, does not affect any considerable extent of marketable coal which remains in the mine. Now, with regard to paragraph 2, as to the first discovery of the fire. I understand the first intimation Mr. Tennent, the Inspector, had of it was one Sunday, about noon. He immediately got a trolly and trollied out to Seddonville, and was joined by Mr. Dixon, mining engineer to the Westport Coal Company, at Granity, who was requested by the company to go over there and see what could be done. At this time the property was in the hands of the company. Mr. Dixon was, I believe, requested to go by Mr. Bayfield, the company's agent.

11. Would you be surprised to learn that that is denied?—It is what I understand; to the best of my belief it is so.

12. You said the mine was in the hands of the company?—Yes. The company, I believe, had a caretaker, Mr. Broome's brother, employed at the time.

13. In the mine or the office?—At the colliery. Mr. Broome, the manager, had left, and his brother was acting as caretaker. How long the fire had been burning before Mr. Tennent got word I do not know; but, according to the information I received from him and others, as soon as he heard he went out, took a railway trolly, and trollied out to the colliery. I really do not know what is meant by the petitioners in this clause 2 of the petition—with reference to the extinguishment of the fire. Then, coming to clause 3—"That, instead of this, evidence can be brought to prove that the means taken to subdue the fire had the opposite effect—viz., to make it burn with greater force." I find that the member for the district read in the House a statement to the same effect. The statement reads: "That the action which has hitherto been taken under the direction of Mr. Tennent, the Inspector of Mines, has tended to make the fire rage with greater force. A dam having been constructed in the main tunnel with a view to flood the mine, and so help to extinguish the fire, was let go, and the outside air being admitted give the fire greater freedom to burn." Now, this is what I want to speak about. That statement was written on the 11th June. As a matter of fact, the dam was not removed until the 2nd July. Now, how the persons making that statement can make out that the action taken caused the fire to burn with greater force three weeks before it was done is more than I can make out.

14. Was the dam watertight then?—Unfortunately, it was not. That letter, which was read in the House, states that the letting-go of the dam had had the effect of making the fire burn with greater force. It is a funny thing that the letter should have been written before the dam was taken down at all, or before an opening was made in it.

15. But you say the dam was not absolutely watertight?—No, not absolutely.

16. Then, it was practically useless?—I could not say that, because it was keeping out the air. The writers of the letter say that the action taken tended to make the fire burn with greater fierceness. As a matter of fact, no action was taken at all to take out that dam; but when the dam was broached, and we managed to get across it, we found that on the opposite side of the dam heavy falls from the inside and water had brought down a tremendous amount of *débris*, which had raised the water roof high, and therefore it was absolutely impossible for air to get in to make the fire burn with greater fierceness. The thing was an absolute impossibility. [Witness here made a statement of a technical nature, illustrating his remarks by references to plans of the mine.]

17. *Hon. Mr. McGowan.*] In your opinion, Mr. Hayes, have the measures which have been taken to put out the fire been in compliance with both the scientific and practical means of putting out such fires in coal-mines?—Yes, as far as I have seen, they have. The first time I saw the mine after the fire broke out it was impossible for any one to get in. The air was stopped off at the entrance and opposite the Bridge section, and nothing more could very well be done at the time.

18. Were the results of your examination such as to lead you to conclude that there was no immediate danger of the destruction of any large area of valuable coal?—Yes, that is so.

19. Is it the usual thing in cases where a fire breaks out in a coal-mine or in a portion of a coal-mine that has been worked—is it the usual thing to endeavour to shut off the portions of the mine unworked and allow the fire to burn itself out?—That is the general rule where a fire is of any extent all—to cut off the ingress and egress of air.

20. So far as you could see had the Inspector taken proper measures to save any portion of the mine where valuable coal was supposed to exist?—I should say that he had, because he and Mr. Dixon endeavoured not only to locate the seat of the fire, but to get in stoppings as near to it as they could; the smoke and gases, however, were so dense as to drive them back.

21. And after you visited the place and virtually, as his superior officer, took charge of the operations, you consider that you adopted every scientific and practical method for preserving the coal and extinguishing the fire?—Yes. That, of course, if I understand you aright, was at the time

the mine was in the company's hands. We did not really take charge of it when I first saw it after the fire.

22. Did you find that there was any antagonistic feeling amongst the residents there who had been working in the mine in regard to the Inspector, or was there confidence in the Inspector in respect to his management of the operations in extinguishing the fire?—I think there is a certain amount of antagonistic feeling, and has been for a considerable time, but I do not know the reason for it.

23. Then, do you think that, with the information that we had, all reasonable means were taken for the extinguishment of the fire and the preservation of any marketable coal there?—I certainly think so under the circumstances as detailed to me.

24. You had a knowledge of the report of Messrs. Shore, Alison, and Foster when you were at the mine the last time?—Yes, I had seen it.

25. Do you remember what your instructions were in regard to that report?—Generally to see if things were being done in a way conducive to the saving of any valuable coal in the mine, and to give effect to what was necessary, being guided, of course, by circumstances as I found them.

26. But, apart from other circumstances, had you any instructions from the department to carry out the recommendations of these three gentlemen?—No, not definitely.

27. Had you no telegram to that effect?—I do not think so; I have no recollection of any telegram.

28. As far as I remember, I got Mr. Eliott to send you a wire to the effect that in putting out the fire you were to carry out as far as possible the recommendations of Messrs. Shore, Alison, and Foster.—I have no recollection of such a wire. I do not remember receiving anything of the sort.

29. *Mr. Colvin.*] Have you examined the mine since you got the report of Messrs. Shore, Alison, and Foster?—Only so far as I could get in.

30. But you have been on the property since?—Yes.

31. And have you taken any steps to carry out the recommendations of those three gentlemen?—Yes, as far as possible and as far as the circumstances permitted.

32. They recommend that a 4 in., or larger size, water-supply pipe should be laid?—Yes.

33. Did you get this?—No, for the simple reason that a ¾ in. pipe would carry all the water that was running.

34. I have known times when a 6 in. pipe would not carry all the water.—Sometimes a ¾ in. pipe would carry it; but in any case there was nothing to be gained by laying a larger-sized pipe.

35. You say there is no marketable coal in the Hector block?—The only marketable coal in this block is here [indicating place on plan].

36. Do you think Mr. Broome knows the extent of the coal area as well as any one who has ever been there?—Yes.

37. And if he says there are 12 acres of marketable coal that the fire is likely to affect, would you think that statement reliable?—Yes. I had a letter from Mr. Broome yesterday, and he ended up by saying, "As far as the Cardiff fire is concerned, my opinion is that it is best left alone. I do not see what further damage it can do. It certainly will not cross the big faults into the Cave area, and there is really very little marketable coal left in where the fire is raging."

38. *Mr. R. McKenzie.*] Did you ask him about this?—No; his letter was quite unexpected, and he was writing to me about other matters totally foreign to mining.

39. *Mr. Colvin.*] What is the distance between the Hector block, where the fire is burning, and the Cave area?—From memory, I should say it is getting on for half a mile, if not more.

40. What separates them?—Some large faults.

41. Who wrote the letter that you complain of—the one that you quoted from?—Mr. Charles Stewart. I quoted from *Hansard*, but he wrote the original letter.

42. When you went to Mokihinui, did you consult any of the miners who had been working in the mine as to their opinion of the best way of putting out the fire?—No, I did not. I made some inquiries as to where the miners were, and I found they were about Granity, or working on some road. There were very few of them about.

43. Are you aware of the fact that I had an offer from a man—and I told the department—that he would undertake to put out the fire for £500, and if he did not succeed he would charge nothing?—I did not know that.

44. *Mr. Smith.*] When you were sent down to inspect this mine, was it in the hands of the company?—No, not the last time I was down; the first time it was, but not the second time.

45. And while it was in the hands of a private company you could not deal with it the same as you could if it were Government property?—Not exactly. At the time of my first visit I was in the district, and, having heard incidentally of the fire, I went to see how matters stood, and found that the air was stopped off at each entrance, and I did not see what more could be done at the time.

46. Then, you wish to state to the Committee that you took every rational and feasible means—scientific means—of extinguishing the fire?—Mr. Tennent had been for some time in consultation with Mr. Dixon, and the last time I was there I found they had given full consideration to the report of Messrs. Shore, Alison, and Foster. I think they would know what should be done better than the three gentlemen named, because they were able to get into the mine before the stoppings were put in, while Messrs. Shore, Alison, and Foster were not able to get in at all. More has been suggested to put the fire out than was actually done, but, considering the very small area of coal, to have done more would simply have been to throw money away.

47. Do you suggest there had been any tampering with the dams, or that any of the work that had been recommended by you had been interfered with by any private person?—All I can say is this: In renewing the dam after leaking—I am simply giving you now the statements as I heard them—the evidence went to show that where there was a solid foundation when the dam was first put in, when taken out it was found that the ground had every appearance of having been blasted; not only that, but an unexploded plug of dynamite was found. This looks as though there had been tampering, but who it was who tampered with the dam I cannot suggest.

48. Then, you consider that some one had suggested a certain way of putting the fire out and, as this was not carried out on the lines suggested, they might have interfered with the dam in order to put the fire out?—That would be a rational inference, but I do not say it is so.

49. *Mr. R. McKenzie.*] You said the dam had been tampered with?—I said that from the evidence it appeared as though the dam had been tampered with.

50. Did you see the ground yourself?—No; we did not pull it all down to get in, only as much as enabled us to get over.

51. I want a plain answer to my question: you state that this dam was tampered with, and a charge of dynamite found there?—That is the information I have received.

52. What was the date of the discovery of this charge of dynamite?—I could not say exactly from memory; I should say it would be some time in July. I could get the date by reference to the papers in the office.

53. Was the dam tight up till then?—The dam had ceased to be tight before I went there.

54. You cannot tell us when it was discovered that this dam had been tampered with?—No, I could not.

55. Was this tampering with the dam discovered after Alison reported?—The actual thing was only fully discovered when it was taken down, but Mitchell told me that some time before this he noticed the water was running away, and he went into the tunnel to look, and found that water was coming from under the dam.

56. Are you satisfied this dam was holding water when Alison reported?—No, not when he reported; it was leaking then; Shore told me so.

57. And are you satisfied it was tampered with at that time?—The tampering must have been previous to that, I think.

58. Would not they have seen it then?—It is not at all likely.

59. And you did not see it for some time afterwards?—The actual condition was not seen, and could not be seen, until the dam-framing was all taken down.

60. Would it surprise you if Mr. Shore would swear on oath that they pulled this dam down?—They did not pull it all down; they pulled down only sufficient to enable them to get inside. They, I believe, got through the dam, but not through the last air-stopping, because that last air-stopping was not penetrated till I was there myself.

61. What was the distance between them—the air-stopping and the dam?—Only a few feet.

62. You maintain the dam was always watertight at the bottom?—No; all that I can maintain is that it must have been watertight at the bottom when it was running over at the subsidence. Bear in mind I did not see it.

63. But then you state definitely that it was watertight?—It could not have been otherwise; if water was running over at the subsidence the bottom must have been tight.

64. Alison, who pulled the dam down, says that it was never watertight from the day it was put up: could you convince him that was not so?—No, I do not know whether I could convince him to that extent. They pulled a portion of the dam down to get in.

65. But Messrs. Shore, Alison, and Foster are prepared to give evidence that they pulled that dam down and got to the inner stopping, and after that the inner stopping did not hold water?—It was not put there for the purpose.

66. You are satisfied that the inner stopping never held water?—Yes.

67. All the water that the dam could hold, then, would be the depth between the top and the bottom—I may say 5 ft. or 6 ft.?—If the water ran over at the subsidence the dam must have been holding.

68. You say that this dam had been tampered with?—I do not say it had been. I say that the evidence of the weakening of the bottom made it appear as though it had been blasted—that looks like tampering. This was not seen until the dam was absolutely pulled bodily out, and that was since I was there.

69. Was it tight when Alison and Shore were there?—No, I think not.

70. Was it ever tight?—I understand it was so; it must have been.

71. Did you see the water running over at the subsidence?—No; I was there before the dam was put in, and not again till after Alison and Shore had been there.

72. Have you seen the lease between the Crown and the Cardiff Company?—No.

73. Are you familiar with the conditions of this lease?—I have not seen it.

74. You are in a superior position to the Inspectors: are they responsible to you?—Not under the Act.

75. Do the Inspectors take their instructions from you?—I cannot say that they do. Inspectors take their instructions from the department.

76. What is your official position?—My position is that of Engineer to the department. Inspectors have charge, under the Act, of their various districts.

77. They are not under the instructions of the Engineer?—There is no provision made for it in the Act. An Inspector of Mines is directly responsible, according to my reading of the Act, to the Minister for the time being.

78. Are you aware whether the Inspectors were acting under the Engineer before you were appointed to the department?—At the time I was Inspector in the South I never received any instructions or orders from my predecessor in my present position. I took them from the Minister or Under-Secretary.

79. You cannot tell the Committee anything as to the conditions in the lease?—No; I have not seen it.

80. Do you know the mining regulations under the Coal-mines Act?—Yes.

81. Is it necessary for any lessee to get permission before he can take pillars of coal out of a mine?—Not under the Act.

82. Nor according to the lease?—Leases may be drawn to meet special cases.

83. Do you wish to convey the impression to this Committee, then, that any colliery proprietor on Crown lands can start to take out pillars of coal when he likes?—Yes, provided he is working his mine in a proper way.

84. Without asking permission from the Inspector or Minister?—Yes; that is my opinion.

85. But suppose the conditions of his lease are that he cannot touch the pillars?—If there are such conditions in the lease, of course, he would have to abide by them, but unless there are such conditions there is nothing to stop it.

86. In the event of crushing, is there danger of spontaneous combustion?—In some mines, not in all.

87. Was this mine liable to combustion?—I was only in it once before the fire, so that my absolute knowledge of that particular mine is limited. I was never in it when it was working.

88. When the fire started this mine was under the control of the company?—I understand it was.

89. Are you sure the company was not in liquidation before the fire started?—I do not think they were.

90. Do you know that under the Act they are bound to keep a manager at the mine?—Yes; when the mine is working.

91. Unless they have authority from the Minister must they not always keep a manager there?—A certificated manager is not necessary unless more than six men are employed; if six men or under are employed, a person may receive a permit from the Inspector to act as manager.

92. Was your Inspector wrong when he said in his report that he told the agent for the company that they must have a certificated manager there?—That, I understand, was after the fire broke out. Men were working, I take it, in fixing up matters in relation to the fire. What Mr. Tennent would mean would be some competent manager to take charge of the men who were engaged in the work of shutting off the fire.

93. But there was no one working there then?—No; but they would have to get a few men to do odds and ends—putting up stopping and so on. I take Mr. Tennent's meaning to be this: here is a mine doing nothing; a number of men will have to be engaged; it will not do for these men to be all captains; we must have some one in charge. I could not be certain of the exact details; I know that Mr. Tennent considered that some one should be in charge. As to asking for Mr. Dixon, I really could not pledge myself to anything.

94. As a matter of fact, you do not know?—I really do not know. My impression was that Mr. Dixon was asked to come there on behalf of the Westport-Cardiff Coal Company.

95. Do you know when Mr. Broome severed his connection with this company?—I think, in January.

96. Before the fire started?—Yes; I think so.

97. What sort of manager do you consider him?—A very good one.

98. You know Mr. Alison, the manager of the Brunner Mine?—I have met him once or twice.

99. Do you think he would know a coal-mine from a quartz-mine?—I think he should.

100. I suppose you know Mr. Shore?—Yes.

101. Is he an experienced mine-manager?—Yes.

102. Did you consider him a practical, capable mine-manager?—Yes; he is very good.

103. Do you think Mr. Alison would be in charge of the mine which he is in charge of now if he were not a capable man?—It is hardly likely.

104. Do you think the Inspector was stating a fact when he said that these men did not know whether the mine was a coal-mine or a quartz-mine?—What Mr. Tennent says is this: "Bridge section: This section of works was not inspected by the gentlemen named above to ascertain whether the coal was faulty, or whether it was a coal- or a quartz-mine," All Mr. Tennent says there is that they did not inspect the Bridge section at all.

105. He was not with them?—Yes; I understand he was.

106. As a matter of fact, they did inspect the Bridge section?—He says here that they did not.

107. You have read these gentlemen's report: do you think it a reasonable report?—Scarcely; for one thing they did not see the inside of the mine, and naturally could not be so conversant with the conditions as either Mr. Tennent or Mr. Dixon.

108. Was Mr. Dixon ever inside the mine?—He was inside, I understand, with Mr. Tennent soon after the fire broke out.

109. How far?—As far as he could get. Mr. Dixon told me that he got up to about 25 chains from the mine-entrance.

110. Messrs. Shaw, Alison, and Foster condemned the method of your bringing a fan to bear on that fire?—As a matter of fact, a fan was never brought to bear on the fire at all, because, as I told you, when we got in here [indicating place on plan] we could only get in about 10 ft. for black-damp.

111. When was this?—When I was there in July.

112. I mean the first time you were there?—I am not prepared to say anything about that.

113. Do you condemn or approve of the scientific plan of bringing a fan to bear on that fire?—It all depends on the circumstances, and without having the absolute circumstances before me I cannot say.

114. With regard to the water from the creek which has been brought into the mine, to what time did you refer when you said that a 2 in. pipe would carry all the water?—The last week in June.

115. Do you know the climate there?—Yes.

116. Is it fairly dry in June?—It rains sometimes in June. I had very nice weather.

117. How long were you there?—About a week.

118. How many tons of stuff approximately have been taken out of the Cardiff Mine altogether?—I could not tell without looking at the returns.

119. Do you know what West Coast winter weather is?—Yes.

120. In fairly damp weather how long would it take that creek to fill all the cavities and excavations in the Cardiff Mine?—I could not estimate it just now.

121. How long would it take a 2 in. pipe, approximately, without pressure, to fill a cavity out of which 500,000 tons of coal had been taken?—I could not say now, but it could be calculated.

122. Do you think it could be filled in twenty-four hours from that creek after rain—that is, with the whole creek turned into it?—I should be inclined to doubt it under the conditions.

123. Do you think it could be filled in forty-eight hours?—In a heavy flood it might.

124. Was that dam put in when you were first there, Mr. Hayes?—No, not when I was there first; that was in February—at the end of February or the beginning of March.

125. The dam was not put in then?—No.

126. So that, as a matter of fact, you do not know whether that dam held any water between the middle of February and the end of June?—Not from my own observation, only from what I have been informed.

127. So that if evidence is brought forward to prove that it never did hold any water I suppose you will be convinced that you were wrongly informed?—Yes; if evidence proves that, I certainly should.

128. The Minister of Mines asked you the feeling in the district in regard to the Inspector, and you said that feeling was antagonistic?—There appears to be an antagonistic feeling in the district.

129. Did you meet any one there who has got an antagonistic feeling towards the Inspector?—Personally I may say that I have not gone about talking to any man whom I have met. I have not spoken to any one on this question.

130. Then, how do you make the statement that the feeling appears to be antagonistic?—Partly from correspondence I have seen.

131. Have you got that correspondence now?—Not with me.

132. Can you produce it?—There is correspondence in the office going back for a year or two.

133. Do you mean that that correspondence refers to this district or Denniston generally?—I should say both to Denniston and Westport-Cardiff districts. In conversations I had had with Mr. Tennent he has told me one or two things, and Mr. Broome also.

134. Was that before or since the fire?—Previous to the fire.

135. Do you think, then, that the feeling as regards the Inspector is anything different since the fire from what it was before?—Just about the same, I should think.

136. You do not think that any one has got a particular down on him about the fire?—That letter from the Seddonville Vigilance Committee, which I quoted a little while ago, shows that very plainly, I think.

137. Would you consider a man who has been, say, from the beginning of February to August putting in a dam in which there was, probably, only 15 or 20 yards of stuff at the outside a competent man to put in charge of these works?—As a matter of fact, the dam was put in and stood for months, and has been put in again since this damage was found.

138. But it was not effective?—They say it was.

139. After Alison was there?—Some time elapsed between the time of this being built and their being there. Mr. Tennent had a great deal more to do than that—the entire work of his district. There are many other circumstances connected with the matter besides the act of putting in a dam; that would not be a big thing; but there may be thousands and thousands of circumstances which may prevent a man doing just as he would like straight away.

140. But the fact of the matter is that the dam is not in yet—a watertight dam has not been put in?—A dam is now in, and I understand it is watertight.

141. Do you know whether it is concrete?—I understand it is a timber dam backed with concrete.

142. How much would it cost to put that in?—I could not say.

143. Has the department got the accounts?—Yes, I expect so. I have not seen the accounts.

144. Do you know the quantity of material in the dam; would it be 10 cubic yards of concrete?—Possibly about that.

145. How much would you reckon that to be worth?—It depends upon circumstances.

146. Would it be worth £100?—Under ordinary circumstances it would not cost £100, but under the circumstances in this case it might cost a good deal more.

147. Under ordinary circumstances it would not cost £25?—Not under ordinary circumstances.

148. Was there any reason why a dam such as that could not have been put in in the first

place?—No, I do not think there was. The first dam was put in by the company at their expense. Mr. Tennent made arrangements with the company, I understand, and they voted the money for the dam.

149. But was not the dam put in under Mr. Tennent's supervision?—I do not know that it was put in under his supervision. He arranged with the company that one should be put in, and they let the contract to their carpenter.

150. Have you read his reports to the department?—Yes, I have glanced at them.

151. What do you think of this, under date of 9th February: "Sealing-down of Cardiff Mine was completed at 2 p.m. to-day, and I consider the work has been carried out vigorously, substantially, and satisfactorily"?—That was when they sealed off the air; it does not refer to the water-dam at all.

152. Take another part, under date of the 6th February: "Main intake is sealed off by 3 in. plank-clayed stopping. As no other officer here, am remaining until all outlets are sealed and everything left in safe condition." What do you gather from that?—I gather that that is the time when he is sealing off; finding that there is no officer at the mine, he is sealing off the two entrances so as to shut in the products of combustion.

153. But had you been Inspector of Mines there and that fire was reported to you, and you knew the conditions as to fires in mines in the mining regulations, would you have considered that everything was done for the safety of the mine?—Yes.

154. And if the company had declined to do as suggested, would you have taken active steps on behalf of the Government to have it done?—The Government being lessors, assuming that the company had refused to do anything, I should in a case like that have asked for instructions.

155. Supposing you had known that the mine had been burning for three months, and practically abandoned, would you have taken steps on behalf of the Government to have curtailed the extent of the fire, or to cope with it?—Yes; on the fire breaking out, I certainly should.

156. And you think Mr. Tennent should have done the same in this case?—I believe he did.

157. So that he took full charge?—I believe he took what steps he could, considering the concern was in the company's hands at the time, and what was reasonable to prevent the spread of the fire. I know he was as anxious as anybody.

158. How is it, then, that there has been no result from the steps he took to suppress the fire—can you show us what the result is?—I take it the result is—so I believe—that no active fire exists except at the absolute outcrop, and if the steps taken have confined it to that part, then I say he has done very good work, and as much as any man could be expected to do.

159. But nothing of that description was done till Alison, Shore, and Foster reported; you mean the outcrop at Chasm Creek?—Yes.

160. Do you know the length of that seam that is burning now?—About 10 or 12 chains altogether.

161. It could not possibly be 20 or 25 chains, could it?—I did not see any evidence of fire for that length.

162. How far is the Cave area from the bridge?—As near as my memory serves me, half a mile.

163. How far is the nearest fault from the fire?—About 5 or 6 chains from the bridge—probably 7 or 8.

164. Is the Committee to understand that the fire cannot pass that fault?—I do not think it possible. As far as I have seen, the fire has not passed the bridge in the direction of the Cave area more than, perhaps, 2 chains. This was when I was there last time—last June. The fire had not got in nearer than some 2 chains, and there were faults coming right out to the surface, which evidently stopped it from going any further; the furthest active fire there was in this direction was just past the bridge.

165. Did you get any reports about it since?—Only that the outside conditions were unchanged. Generally speaking, I understand that the fire is somewhat subdued as compared with what it was when I was there. Mr. Tennent telegraphed to the department fairly often. I have been away for some five or six weeks and do not know what has gone on in my absence, but I understand the fire is not so active as it was.

166. What is the width of the first fault between the Cave area and the Hector block?—If you mean the extent of area between the Hector block and the Cave area, about half a mile.

167. Now, that is bush-country, is not it?—Yes.

168. Is not all the bush liable to take fire?—I asked that question, and they said that, owing to the extreme dampness of the climate, it is not.

169. And is that all you are depending on?—Yes, the general wetness of the country. They say there are no bush-fires there at all.

170. You know Reefton?—Yes.

171. Do you think it is any more moist at Mokihinui than it is at Reefton?—I should fancy so.

172. Why?—From my own experience of the weather there.

173. You think it is more moist at Mokihinui than at Reefton?—Yes, I should think so.

174. Yet the whole Town of Reefton was nearly destroyed by fire a few years ago, and it took the whole population several days to save it?—I will again quote what Mr. Broome says: "As far as the Cardiff fire is concerned, my opinion is that it is best left alone. I do not see what further damage it can do; it certainly will not cross the big faults into the Cave area, and there is little marketable coal left in where the fire is raging."

175. About these 13 acres that you mentioned, you said that Mr. Broome stated that the coal was no good?—He described it as a soft-coal area, which is practically not marketable. I think a very good answer is the very fact of their having left it unworked. He was hard up for

coal when he was over here, and if it had been good he would have worked it. That is my opinion.

176. Do you know of your own knowledge whether the coal is good or bad?—No.

177. Did you see any of it?—No.

178. You do not know whether Messrs. Alison, Shore, and Foster are right when they say there are 13 acres of good marketable coal there?—No; because they never saw it any more than I did.

179. How do you know they did not get in to see it?—Because they could not get into the mine at all.

180. But they got in some distance—how far?—Not further than this air-stopping; perhaps a couple of chains from the entrance.

181. You cannot say what effect the fire would have on that part of the coalfield?—As far as the Bridge section is concerned, the fire would practically have no effect on that, because the coal in the Bridge section, from the amount of ground they have opened out, has proved itself uncommercial.

182. How much ground have they opened out there?—It is shown on the plan.

183. But they have only just started on that, as a matter of fact?—No; what they found there was that the coal next to the outcrop was fairly hard, but when they got further into it it was very soft. There is some barren ground between the workings and the Cave area, according to Mr. Broome.

184. Well, now, this ground being burnt (? barren), what difference would it make in opening up that country—a distance of about ten miles from Mokihinui to Ngakawau?—I do not know that it would make any difference, because, as far as I know the country, I think it is a country that might be opened from that Cave area. However, I do not know the district well enough to speak confidently.

185. Do you think the fire likely to get across the outcrops at Chasm Creek?—No.

186. Why not?—Because it would have about 8 or 9 chains of a gap to span.

187. Is it not all bush?—It is not bush down that 100 ft. of rock gully.

188. Do you mean to convey the idea that a bush will not convey that fire across Chasm Creek to this ten miles of coal-bearing country?—I was not thinking of a bush-fire; I was thinking of a mine-fire.

189. But what is your opinion?—A bush-fire might carry it, but I do not know anything about bush-fires.

190. But you think it would be possible for a bush-fire to do it?—It might be possible.

191. You said you do not know how much the Government have spent on trying to extinguish this fire. Are they still working at it?—Not to my knowledge.

192. You do not know whether they are or not?—I do not think they are.

193. What are the last reports from Mokihinui that you have seen?—I saw a report a few days ago that the dam was tight.

194. Do you know how much the bridge cost—the bridge across Chasm Creek?—Only from Mr. Broome's statement.

195. Has the Inspector reported to the department that the bridge is likely to be carried away or burnt down, or has practically started to burn down?—I have not heard of its being burnt down.

196. Did you see the bridge?—Yes.

197. Do you think, from your own knowledge, that it cost £1,000?—I should not think so.

198. Mr. Tennent has not reported to the department that the bridge is in danger—that it is likely to be carried away at any time?—Not from fire; but he reported to the department that owing to the soft coal on the bridge side, on the opposite side of Chasm Creek, the ground was giving way.

199. When did he report that?—It might be ten days ago, perhaps.

200. Did he report about the anchorage of the bridge carrying away?—That was it; the ground was slipping, and the anchorages were weakening.

201. How far has the coal been worked from the end of the bridge on the Hector block side?—No coal had been worked on that side for some time before operations were stopped.

202. But how close to the end of the bridge has the coal been worked?—Perhaps a little over a chain. Judging from the plan, it is probably a chain and a half. There is a sketch among these papers illustrating that. [Sketch produced.]

203. Now, Messrs. Alison, Shore, and Foster reported that had a capable man been placed in charge at first there would have been no trouble in putting the fire out: what is your opinion in regard to that statement?—I do not know what to make of it, especially when the other circumstances are taken into consideration.

204. What circumstances do you mean?—To begin with, I am not aware that either Mr. Foster or Mr. Alison are men experienced with regard to fires—in fact, I believe they admit they have not had any such experience. Mr. Shore has, because I know the Kaitangata Mine, where he was manager, is a place where they have had some experience of fires.

205. But must not Mr. Alison have a certificate before being manager?—A man may be brought up all his life in collieries and never experience a fire.

206. Were those men right or wrong when they said that had a capable man been placed in charge at first there would have been no trouble in putting the fire out?—I am not sure whether a statement of that kind would not be actionable.

207. Take another paragraph in this report: "In conclusion, if the department carry out the above recommendations, we would urge that they appoint a thoroughly competent man, who has had experience of underground fires, to supervise the work, as the building of these dams

should not be left to others than a person with this qualification." Now, do you take that as a hint to the Minister that he should make a change in the man who is supervising the work at the mine?—I really do not know what they mean. The best plan would be to get one of them here and ask him.

208. But what would you take that paragraph to mean?—I would take it in this way: that it might not be the slightest reflection upon the Inspector; they might think he had enough to do to mind his duties outside of this, and it should be put into the hands of some one who had had some experience of fires.

209. Would you consider that it would have been better if the change had been made in compliance with this recommendation?—I do not know that it would. If you took a stranger who did not know the local conditions it would not have been desirable at all. The local conditions affect the circumstances of the mine.

210. You cannot express any opinion on this question of whether the man who was there was competent, after spending six months in putting up a dam, and then did not put up one that was watertight?—In the way the question is put I will not commit myself to anything.

211. Coming to the present time, Mr. Hayes, do you think any action should be taken now to try to clear that bush, and so prevent any fire from getting across Chasm Creek or into the Cave area?—If it is thought that there is a risk of bush-fires it might be desirable to do so. It is a point that is probably worth consideration and careful investigation; but, as I told you, when I was last there, I asked if there was any possibility of bush-fires, and local opinion seemed to be that there was not.

212. Have you formed any opinion as to how this fire started?—No, unless it was by spontaneous ignition. I know that that is a common cause of fires in mines.

213. But you have never heard anything said in the district about the likelihood of its being set on fire?—Only in a vague way that it might have been the work of incendiaries, but nothing that I could really place any credence in.

214. With respect to this tampering with the dam, Messrs. Alison, Shore, and Foster did not know that the dam had been touched till it was absolutely taken down?—They said it had been tight up to a certain time.

215. But they did not know anything about the dam being tampered with before it was taken down?—Not definitely.

216. It was some time subsequent to your being there?—Yes.

217. So that it was not tampered with when Alison, Shore, and Foster were there?—If it had held water previous to that, and the tampering with it had caused it to leak, the tampering must have been previous to that.

218. You said that your people did not know anything about the dam being tampered with until they took it down?—Not definitely.

219. If they knew the dam had been tampered with why did they not report it before?—I do not know that they knew it had been tampered with until they took down the old dam, and saw the evidences of a blast. I do not see how they could know.

220. It was some time subsequent to your being there when they took the dam down?—I do not see how they could know until they took out the bottom. Mitchell told me that when he found the water running away it was coming under the dam, and it led him to suspect that the dam had been tampered with.

221. You did not see it yourself at all?—No; it was all messed up with muck and *débris*.

222. Where did that come from?—From the drippings from the mine, and the tunnel partly collapsed.

223. Was there a wheelbarrow full of this *débris*?—Yes, a good many. The dam was put in in the first place in good hard rock.

224. Had that rock given way, then, to the extent of more than a wheelbarrow full?—Yes; and the water which had come through had brought a lot of *débris* out of the mine.

225. You said the water was coming out at the top, and the bottom was tight?—You misunderstand me. I will sketch it, and explain the matter in a few moments. [Witness explained his meaning by means of a sketch on a piece of paper.]

226. Did you hear any rumour when you were at Mokihinui to the effect that the dam was tampered with by your own men?—No, I did not hear that.

227. How was the entrance to the mine at the time you saw the dam?—When I was there at the end of February or the beginning of March you could get in all right. I heard afterwards that it had fallen.

228. You did not hear anything about the dam being tampered with by one of your own men?—No.

229. Did you try the water that came through, whether it was cool or warm?—It was at a temperature of about 70 degrees, approximately.

230. I would like to ask the Minister of Mines what Mr. Hayes's position is in the department—whether he is in charge of the Inspectors?

Hon. Mr. McGowan: What Mr. Hayes has stated is exactly correct. The Inspectors are under the Act, and while they are under the Act they are paid by and under the control of the department. Mr. Hayes is the Engineer to the department. The Inspectors carry out their duties according to the Act, and not according to instructions. We could not give any instructions that would in any way interfere with the actions of a Mining Inspector, because his duties are defined by the Act, and he must carry them out accordingly.

Mr. R. McKenzie: I want to know whether Mr. Hayes issues any instructions to the Inspectors?

Hon. Mr. McGowan: He cannot issue any instructions that contravene the Act.

231. *Mr. R. McKenzie.*] Are the Inspectors subject to your instruction, Mr. Hayes?—No, I cannot say that they are, and I never presume to instruct them. When I was an Inspector the departmental Engineer certainly never gave me instructions as to the carrying-out of my duties.

232. As a matter of fact, you say you have not got the power to instruct the Inspectors?—I consult with them, but I do not know that I instruct them.

233. Do they act under your orders?—No.

Hon. Mr. McGowan: Mr. Hayes has made the matter as clear as possible. All the Inspectors are under the control of the Minister; and Mr. Hayes and the others are under the Act. An Inspector must carry out the law. I have no power to interfere under the law.

234. *Mr. R. McKenzie.*] As a matter of fact, Mr. Hayes, did you not always consider it was not worth while to put this fire out?—I cannot say that.

235. What opinions did you form when you were there as to putting the fire out?—I thought it was most desirable and necessary to get it out, and that the steps taken by sealing off the air were reasonable and practical, and such as are carried out all over the world.

236. Did you consider yourself the responsible party to see that the fire was put out?—No, I do not know that I did consider myself a responsible party.

237. You did consider that you had responsibility in seeing that it was put out?—I do not see where my responsibility would come in. The place was in the hands of the company as lessees.

238. You are a Government officer, and you did not consider it part of your duty to see that that fire was put out?—In a general way, Yes; and I satisfied myself that as far as possible what could be done had been done. The mine was stopped off with plank stoppings right across both entrances. These stoppings confined the air.

239. Do you think that anything that would not hold water would hold air?—Yes.

240. You think water will go through anything more easily than air?—Yes, most decidedly. Under pressure water will find its way where air under the normal pressure of the atmosphere will not.

241. I will undertake to say that air under pressure, which would be the case in this instance, would find its way where water would not?—Yes, under pressure.

242. You say that you did not recognise it to be part of your duty to take any steps to put the fire out?—I say this: As a matter of duty I went to see the place, and found that what was done was in accordance with the usual practice all over the world.

At this stage the examination of Mr Hayes was adjourned till the next meeting of the Committee—Wednesday, 26th September.

FRIDAY, 28TH SEPTEMBER, 1900.

Examination of Mr. HAYES continued.

1. *Mr. R. McKenzie.*] Have you the last half-yearly reports sent in by the Inspector?—Nothing beyond what is published.

2. Have you not the report sent in last December?—Not with me. That is published in the annual reports. It is in print.

3. Under the Act or regulations is it not necessary for owners of mines standing idle to give notice to the Inspector, and the Inspector to send notice to the Minister?—If a mine is absolutely abandoned, or the workings discontinued, there is a provision in the Coal-mines Act directing notice to be sent.

4. Has that notice been sent?—I presume it would be sent to Mr. Tennent; it would not be sent to me. I am not a District Inspector, and have no statutory power.

5. Did you get any written instructions when you were appointed as to what your duties were?—Simply as Inspecting Engineer to the department.

6. Did you get any instructions as to your duties?—None whatever.

7. You do practically as you like?—I do not say that at all.

8. I think you said you are of opinion that every scientific and practicable method was adopted to try and put the fire out as soon as it was discovered?—I think so.

9. Do you think putting a fan in the mine was a scientific and practicable method of putting the fire out?—Since I was here last week I have looked more closely into that with respect to the conditions reported by Mr. Dixon, and I am perfectly satisfied that the course taken was a perfectly right one.

10. You say that to bring a fan to bear on a fire was a proper course to take?—Under the circumstances, Yes, decidedly.

11. What circumstances?—The circumstances were these: the mine was so full of smoke and poisonous gases that, to enable the men to live in it, it was necessary as far as possible to remove the deleterious smoke and poisonous gas.

12. How do you know the mine was full of smoke—you did not see it?—I think it would save a great deal of time if I gave you Mr. Dixon's report on the whole thing.

13. I ask you how you know the mine was full of smoke if you were not there?—I was not there, but I think my answer is quite feasible and possible. I must base my opinion on the reports. I was not there at the time.

14. Why did you not say so?—I did say so.

15. Coming back to the tampering with this dam: did you see that tampering yourself?—No. It was discovered after I left.

16. After you left in June?—Yes. In July.

17. There was a charge of dynamite?—That was after I left.

18. Were you in the mine?—I was in as far as it was possible to get.

19. You did not put that charge of dynamite under the dam?—I did not. I did not see the dynamite, but I heard it was there.
20. Are you satisfied that Mitchell did not put it there?—I do not know who put it there.
21. Are you satisfied it was there?—Yes.
22. Did you see below the dam?—No.
23. Could you see the sides when you were there?—I saw the sides.
24. Did it not require cutting out or blasting the bottom?—Yes; it was cut down by the picks and wedges.
25. There was no blasting?—Not that I am aware of.
26. You do not know whether there was or not?—I was not there to see it.
27. Are you sure that Mr. Tennent did not bring that dynamite in there?—I think it would be just as unlikely as that you or I did.
28. Do you think the first dam put in was tight?—From the evidence I saw I should certainly say it was.
29. When?—Some time after it was put in.
30. Did you see that it was tight?—No. I was in Otago at the time. I was shown the subsidence where the water flowed up over the top, and a ditch was cut to carry it away from the tunnel-mouth.
31. You did not see it?—No.
32. In Mr. Tennent's report he says the dam was finished satisfactorily and substantially on the 9th February?—He is referring to the air-dam.
33. How do you know that?—Because the water-dam was put in afterwards. I was there myself in February.
34. Were you there on the 9th February?—No.
35. Are you sure the dam was finished then?—I am sure the water-dam was not started then It was built by the company after the end of February.
36. But the company was not in existence then?—The company granted a sum of money for it.
37. Was not the stopping finished on the 6th February?—Yes; but not the dam to turn back the pressure of water.
38. What does Mr. Tennent mean when he says that the clay stopping was done on the 5th February?—That would be the air-stopping at the entrance to the mine, but a water-stopping was put alongside it a month or so afterwards.
39. Mr. Tennent says it was finished on the 9th February?—He does not say it was the water-dam. He is referring to the air-dam.
40. How do you know?—I know because I was there myself between the time the air-dam and the water-dam were built.
41. When this water-dam was finished did Mr. Tennent report that it was watertight?—I would not be quite sure from memory.
42. Do you know whether he made any report at all in connection with it?—From memory I could not be certain. I was away South on the Rivers Commission until June.
43. You state, I think, that the company got Mr. Dixon to go there?—Yes.
44. You are sure of that?—Yes.
45. Who asked him to go on behalf of the company?—Mr. Bayfield.
46. Are you satisfied that Mr Bayfield has not written to the Minister of Mines denying that?—I do not know. I will read you what Mr. Dixon himself says.
47. Where was Mr. Dixon?—At Granity.
48. He received the message from Westport?—He says it was a telephonic message.
49. How could Mr. Bayfield communicate with him on Sunday?—These things are very easily done. Arrangements can be made with the railway-station.
50. There is no telephonic communication with Granity on Sunday?—There is a private wire in Mr. Dixon's own house.
51. Is it not a fact that they went out by railway-trolly and told Mr. Dixon?—I have not heard of that.
52. You make the assertion that Mr. Bayfield did ask him to go there?—I do, on Mr. Dixon's own authority.
53. Are you aware whether Mr. Bayfield had any connection with the company at this time?—To the best of my knowledge he had.
54. You do not know as a matter of fact?—I understand he was agent for the company.
55. You do not know?—I do not know absolutely for certain.
56. When you were there in February did the department take any active steps in connection with the fire?—At that time active steps had been taken.
57. By whom?—By Mr. Tennent on behalf of the lessors, and by Mr. Dixon on behalf of the lessees.
58. What active part did Mr. Tennent take?—By sealing the mine to make it airtight.
59. How long did it take?—About twelve days according to Mr. Dixon's report.
60. And still you say the department did not accept any responsibility?—The Crown was lessor and the company lessee, and the company was then in existence.
61. And was the whole of the works under Mr. Tennent's control?—No; between him and Mr. Dixon jointly.
62. How long was Mr. Dixon there?—He was there several days.
63. How many?—I could not tell exactly.
64. You do not know how long Mr. Dixon was there?—I do not know, without taking out the time from Mr. Dixon's report.

65. Do you know anything about this matter up to June from your own personal knowledge?—So far as my own personal knowledge goes, I can only speak from being in the mine once last year, before the fire, and before Mr. Broome left.

66. The mine was not working?—No; it had just ceased. When in the district at the end of February or the beginning of March—I had heard incidentally of the fire—I saw what was done, and was quite satisfied that what had been done up to that time was all that possibly could be done under the circumstances.

67. What was the condition of the mine when you saw it in October?—It was very clean—so clean that I was rather struck with it.

68. There was no refuse or anything lying about?—There was much less than I had expected to find.

69. Do you know whether the fire started with the slack coal?—I do not know.

70. Did the Inspector ever report to the department or to you that he insisted upon the refuse being taken out of the mine in October?—No, I do not know that he did, but I understood it was the practice to do it.

71. I want you to tell us what you know of your own personal knowledge?—When I was there in February I saw that the mine entrance and outlet had been sealed up, and, as far as I could judge, what had been done to preserve the coal remaining there had been well done.

72. What date was that?—The 24th February.

73. No start had been made to dam the water?—Not at that time. I was not there again until the end of June.

74. And, of course, you could not get near the mine then?—No.

75. In their report Messrs. Shore, Alison, and Foster recommend that a certain course should be adopted?—Yes.

76. Did not the Inspector put a 2 in. pipe across the gully before that?—Yes.

77. When did he put it in?—I do not know. It was not in when I was there in February.

78. Did he ever report on it?—I expect he did, but I have not got the report.

79. Have you no report at all?—I could get it at the office.

80. Messrs. Shore, Alison, and Foster recommended that either a 4 in. or 6 in. pipe should be put across the gully?—Yes.

81. What size pipe did you put in?—A 2 in. pipe.

82. I mean after their report?—There was no more pipe put in. There was no water the thickness of my finger when I saw it in June. When I was there for several days a $\frac{3}{4}$ in. pipe would have carried any water coming in.

83. Have you ever been there in wet weather?—Yes, fairly wet.

84. Was there no water then?—It was just off and on.

85. This is what Shore, Alison, and Foster say about the water-supply: "The present method of dealing with surface outbreak at Chasm Creek, between K and H, is: A 2 in. pipe has been laid from a creek on Bridge section across bridge to above tunnel; a 20 ft. piece of canvas hose with nozzle is attached to this, and for eight hours per day, from 8 a.m. to 4.30 p.m., one man is in charge playing the water upon the fiercest flames"?—I think with all due deference to those gentlemen they did not grasp the meaning of that pipe and why it was there.

86. Why did you allow the water to run to waste sixteen hours out of the twenty-four?—I was not there. The gentlemen who made this report did not grasp the conditions fully.

87. Why not?—Because had they done so they would have reported very differently.

88. These three gentlemen were all qualified men—as qualified as yourself, Mr. Hayes?—Will you allow me to state the object of that 2 in. pipe? It was not to cope with the surface outbreak of fire, as such, at all: The object was to conserve the stopping put in the tunnel, so that if they could get the dam in lower down they might put a watertight dam in the tunnel near the bridge.

89. Can you tell why you put a nozzle on for that purpose?—Just to play round about.

90. Suppose you wanted to conserve that, why did you not use it the whole twenty-four hours?—It was so used.

91. Here it says it was not?—It does not follow that it was to be played all about.

92. You say you never took the water across to flood the mine?—No.

93. Still, you put a dam in?—Yes.

94. This is what these gentlemen say about it: "We must certainly condemn the above system of working. The water-supply is inadequate, and what is available is not being used to advantage"?—That is their opinion. I do not admit that last portion.

95. They go on to say: "We would recommend that a 4 in. or larger line of pipes for main column be laid from source of supply to end of bridge at mine-exit; a T-piece with 2 in. branches be then connected to the column, and the present 2 in. pipes be laid along face of cliff on both sides, extending altogether from H to L"?—That is their opinion.

96. Here is a quotation from Mr. Dixon's report at page 9: "No. 6. The fire in mine was located to-day in the back heading of the Long Jig." Can you tell us where that is?—Yes. [Indicated on plan.]

97. Which way did they go into the mine to locate that fire?—[Indicated on plan.] They were driven back by the smoke and gas.

98. Where does he say that?—In the report sent to the department.

99. Of course they had the fan working at this time?—A fan was erected temporarily with the object of drawing sufficient air in to enable them to get in and build a stopping. Had the heavy fall not taken place they would have been able to get a really good dam in.

100. Suppose there are people who are prepared to give evidence that there was no serious difficulty or trouble in throwing water on the fire?—I think it would be a very foolish method to

begin with, because if you had gases backing up, the man in charge would have acted criminally if he had allowed the men to go in so as to endanger their lives.

101. If it had been possible for them to have got in they might have put the fire out?—If it had been possible to put the fire out there they would have done it, and the fact that they did not do it proves that it was not possible to do it.

102. Was that part of the mine worked out?—There were a few pillars left.

103. When Mr. Alison and the others condemned the use of the fan on the fire, did you agree with them?—No.

104. You think it was the correct thing to do?—Yes. If I had been in charge of the mine I should very likely have done the same myself.

105. They say, "The utilisation of a fan to create a strong draught to a mine on fire was contrary to recognised custom of dealing with fires"?—I disagree with them, because it is often necessary to carry a sufficiency of air for working purposes to the seat of some fires in the Old Country in order to seal the fire-area off. I think, from reading what Mr. Dixon had to say about it, it was justifiable and in accordance with the best Home practice.

106. You are one of the examiners for coal-mine managers' certificates?—Yes.

107. Are there any books or authorities dealing with candidates' certificates that lay that rule down?—No; but since you have asked for some authority I think I can give it to you. Mr. Dixon, in referring to this very matter——

108. Do you reckon Mr. Dixon an authority? Where did he take his certificate out—in America?—No; in New South Wales. As a matter of fact, Mr. Dixon quotes some of the best authorities in the Old Country.

109. What is the date of his report?—He made a report on the 13th July, and subsequently gave a rebuttal of certain statements made by Messrs. Shore, Alison, and Foster, which is dated 20th September.

110. Was that written since the petition was presented to the House?—The last one was, not the first. Mr. Dixon quotes authorities to show that under certain conditions it was a satisfactory course to pursue to use the fan.

111. This dam you started to pull down on the 2nd July?—Yes; it was not tight then.

112. According to your own showing it was not tight at any time?—I think it was found to be loose and made tight.

113. When did you first discover that it was not tight?—Mr. Mitchell discovered it. He was formerly underground foreman for the company.

114. When did he discover it?—I have not the date. It was before Shore's party was there.

115. You do not know when it was originally finished?—No; it was put in after my visit there at the end of February.

116. It was finished probably in March?—I think so.

117. You cannot say whether it was ever tight or not?—Not from my own knowledge.

118. And you left it leaking for months?—I do not say that.

119. You say it was not tight when Shore was there—that was June?—I say the water-dam was not tight when Alison and Shore were there. Another has been put in since then.

120. Alison and Shore say that somebody should be left in charge with power to employ extra men if there is danger from a fresh outburst on the surface?—Yes.

121. Do you reckon that is a proper report to make?—No.

122. Why not?—If they considered that no one was in charge it was right, but if they considered Mr. Tennent was in charge it was not right.

123. They say, "In conclusion, if the department carry out the above recommendations, we would urge that they appoint a thoroughly competent man, who has had experience of underground fires, to supervise the work, as the building of these dams should not be left to others than a person with this qualification." The inference to be drawn from that is that the people in charge were not fit to be intrusted with the building of dams?—I do not know what they meant.

124. You did not act on their reports?—As far as was reasonable and practicable.

125. How far are we to understand that you did?—In endeavouring to put a dam in good solid ground. To put one in at one place where they recommended would have been simply madness. We would have put one in the other place, but circumstances over which we had no control prevented us.

126. The only thing you know about this of your own knowledge was what you learned when you were down there in July: all else you know is from the reports?—From the official reports.

127. You say there was antagonism in the district towards the Inspector?—I think the correspondence proves that.

128. Will you read one of the documents?—I have the original here of the document which appeared in *Hansard*.

129. Are you basing your opinion on that that there was an antagonistic feeling in the district towards the Inspector?—It is shown so in the *Hansard* report already referred to.

130. But Mr. Martin is a practical man?—He is not a practical mining engineer.

131. You do not know Mr. Martin?—I have seen him.

132. Outside of that, did you find any one in the district antagonistic to the Inspector?—I did not make it my business to ascertain.

133. As a matter of fact, is it not the Inspector's methods that are objected to, and not the man?—I maintain that the writer of that letter is not competent to judge as to the Inspector's methods.

134. You have no other ground for basing your opinion except that correspondence?—Nothing

beyond the official correspondence in the office, which shows there is an antagonistic feeling there towards the Inspector.

135. *Mr. Herries.*] Messrs. Shore, Alison, and Foster say that proper steps were not taken when the fire first broke out, and that if proper steps had been taken the fire might have been confined to the area where it broke out. Is that your opinion as an expert?—From reading Mr. Dixon's report, I should say that steps were promptly taken.

136. Promptly and rightly?—Yes. I must be governed by the reports, and from the reports of Mr. Tennent and Mr. Dixon I should say that what was done was promptly and rightly done.

137. Messrs. Shore, Alison and Foster say, "We cannot but express our surprise at the method adopted of sealing off the mine by brattice-cloth stoppings, and must state that if at this point had temporary stoppings of boards lined with clay been used we consider the seat of fire could easily have been located in a day or two"?—Mr. Dixon's report deals with that.

138. Do you think the use of brattice-cloths is proper?—Yes; for temporary purposes, not for permanent purposes. It was only done as a means to an end.

139. I think we understand that the 2 in. pipes were not meant for flooding?—They were not meant for flooding; they were simply used as a protection for that adit-tunnel. In reply to a question as to how long it would take to flood the mine, put to me before, I have to say that it would take over two months for a Government head of water to fill the mine up.

140. With regard to the construction of the water-dam, was it put in by the company or by the Government?—By the company.

141. Are you satisfied that it was properly put in?—From what I have had reported I think it was. I did not see it put in, but when I saw it there was a leakage. They had not got in the air-stopping.

142. From your knowledge and experience, do you think that dam was properly finished in the first instance?—I understand there was a leakage which was made tight by wedges. All I can say about its tightness or otherwise is that when I was last there I was shown a big subsidence, and was told the water had flowed over. If that is so, the dam must have been tight.

143. The dam was built by the company?—Yes.

144. Under the instructions of Mr. Tennent?—At his request.

145. Would he have authority to direct as to the way it was to be built, or would that be left to the company? Who passed it when it was built?—I cannot say.

146. Supposing it was badly built, would he have the power to have it taken down?—Yes.

147. Who maintained it?—The company, so long as it was in existence.

148. Do you know when the mine was abandoned?—It ceased working in October.

149. Who was in charge of the mine when Mr. Shore made his visit—the company or the Government?—I should think the Government, but I am not quite sure. I do not know the exact date of the liquidation. The Government did not take charge until about the time of the liquidation.

150. This dam was made tight by the company?—Yes.

151. Was it through neglect on the part of the Government that it became leaky?—I do not think so. I cannot help but think it was tampered with by somebody, and that that caused the leakage. The mine-entrance was repaired at the Government expense at the end of June. They were just finishing the repairs then.

152. Mr. Shore recommended that this air-shaft should be opened out again?—Yes; but they say not at present, but in the future it could be opened out.

153. You would not follow their recommendation?—They refer to that as a future method of getting into that area, not as a present one.

154. In your opinion, while this dam was tight a certain area was all flooded?—Yes. I estimate while that dam was tight the flooded area would be where I have edged it blue (on the plan). It was under water at that time, leaving only a bit of coal in the pillars where it started. The accumulated gases would tend to put the fire out, and drive it to the little bit of coal shown on the plan adjacent to the outcrop.

155. Last week you could not give us any estimate of the amount of coal there was?—I have looked up the return, and find that 227,441 tons had been taken out. This report is for statutory purposes, and I do not think will include waste coal, and that used for the company's requirements, and miners' houses.

156. Can you make any calculation as to what is left in the mine now?—I could calculate it, but I have not done so.

157. Do you think there is a large amount of valuable coal still left in the mine?—No, I do not. Looking at the plan—these dot-and-dash lines are faults—the other unworked part is so broken up with faults that Mr. Broome did not think it was of any commercial value.

158. You do not think there is much marketable coal in the mine?—No, I do not. I do not say in the lease itself, because there is Cave area, which has not been touched yet.

159. What is the present state of the mine—has anything been done with it?—The present state of the mine is that it is being allowed to gradually fill up with water.

160. Is there anybody in charge of it?—Mr. Mitchell is caretaker.

161. Is he paid by the Government?—Yes.

162. Could you give us any estimate of what it has cost up to the present?—I have not seen the accounts.

163. What is proposed to be done in the future?—The company is in liquidation, but I understand some one is desirous of taking the mine up with a view to working an area in the same lease.

164. As far as you know, the Government propose to do nothing with the parts on fire?—All that can be done, so long as that stopping is tight, is to leave it alone for the present.

165. You propose to do nothing for the present?—I should not waste a sixpence, but simply see that damage is not done elsewhere in the lease. There is property there which it is necessary to have under the charge of the caretaker.

166. Whose property is it?—It belongs to the Government.

167. *Mr. Millar.*] Are you in charge of the inspection of the coal-mines?—I am not an Inspector of Mines now. I am an engineer to the department, but I have no statutory power.

168. Then, the Inspectors are responsible to Ministers direct?—Yes. I confer with them.

169. To your own knowledge, there are fires in other mines besides Cardiff?—Any amount.

170. *Mr. R. McKenzie.*] You stated distinctly that Mr. Bayfield asked Mr. Dixon to go there on behalf of the company with Mr. Tennent. This is a copy of a letter sent by Mr. Bayfield to the Minister on the question?—I was only quoting Mr. Dixon's own statement. There is one little matter I would like to mention to the Committee, with respect to the possibility of the fire spreading to the bush. I wrote to Mr. Broome as follows after I was here last week: "A question has cropped up in respect to the possibility of the outcrop fire at the Cardiff Mine setting fire to the bush. The last time I was there the same idea occurred to me, but I found local opinion was somewhat to the effect that the bush never got dry enough to burn. As you have perhaps as good an experience of the conditions there as anybody, and are not likely to speak at random, I should be glad to have your views on the point." As there was not time to receive a written answer, I wired him to telegraph his reply. Mr. Broome replies: "Knowing from experience how difficult it is to get bush about Seddonville to burn, even after felling, and also how the fire refuses to spread into the standing bush surrounding a clearing, my opinion is that there is no danger of the bush taking fire."

Approximate Cost of Paper.—Preparation, not given; printing (1,200 copies), £9 19s. 6d.

By Authority: JOHN MACKAY, Government Printer, Wellington.—1900.

Price 9d.]