

1883.  
NEW ZEALAND.

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# TELEPHONE SYSTEM COMMITTEE

(REPORT OF THE).

*Report brought up 9th August, 1883, and ordered to be printed.*

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## ORDERS OF REFERENCE.

*Extracts from the Journals of the House of Representatives.*

WEDNESDAY, THE 27TH DAY OF JUNE, 1883.

*Ordered*, "That the Hon. Mr. Dick, Mr. Pyke, Mr. J. Green, Mr. H. Thomson, Mr. Barron, Mr. C. J. Johnston, Mr. Peacock, Mr. Hurst, and Mr. Fish, be appointed a Committee for the purpose of inquiring into the telephone system now in operation in New Zealand, with the view of increasing its advantages to the public; with power to call for persons and papers; three to be a quorum. To report in three weeks."—(*Mr. Hurst.*)

FRIDAY, THE 13TH DAY OF JULY, 1883.

*Ordered*, "That the Telephone System Committee have leave to postpone making their report for three weeks."—(*Mr. Hurst.*)

TUESDAY, THE 7TH DAY OF AUGUST, 1883.

*Ordered*, "That a further extension of time for fourteen days be granted to the Telephone System Committee for making their report."—(*Mr. Hurst.*)

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## R E P O R T.

THE Select Committee appointed for the purpose of inquiring into the telephone system now in operation in New Zealand have the honour to report that they have this day come to the following resolutions:—

*Resolved*, That the Government be recommended to make the charge to all subscribers, till further notice, at the rate of £12 for the first year, and thereafter £10 per annum; but that those who have been paying at the rate of £17 10s. per annum shall be charged, at the coming into operation of the new tariff in the year following, £6 10s. for the first year, and thereafter £10 per annum; and to those who have been paying this for less than one year, then a proportionate difference at above rate shall be allowed.

W. J. HURST,  
Chairman.

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## MINUTES OF EVIDENCE.

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THURSDAY, 19TH JULY, 1883 (Mr. HURST, Chairman).

Dr. LEMON, examined.

1. *The Chairman.*] You are Superintendent of Telegraphs?—Yes.
2. You have prepared a return, which has been laid on the table of the House, relative to the cost of the telephone system?—Yes.
3. I see by it that there was a total of 514 subscribers on the 31st of May?—Yes.
4. Can you state how many have joined since?—Yes; the total number of connections made and subscriptions paid up to yesterday was 595.
5. You put down £10 as the cost of each instrument, I see?—That is our selling price to the public. We have virtually a monopoly of the sale of telephones in New Zealand, and that is what we are charging. If you were to buy them in Melbourne you might possibly get them for 10s. less, but you would have to take the risk of examining and seeing that they were all right.
6. The company who sell them to you do not guarantee them all right?—No; we have to overhaul every one and see that it is in order before it is sent out.
7. What proportion do you find out of order?—They all want adjusting or cleaning, more or less. We treat them all as being out of order when we get them.

8. You admit, then, that the £10 is not the price they cost you?—Yes.

9. Are you at liberty to say what you give for them?—No; not without the authority of the Western Manufacturing Company. I could get their permission.

10. I see that the charges for wire, poles, and labour varies. It is less in Wellington than elsewhere. How is that?—Because in Wellington we carry the wires on the housetops, and have to erect very few poles.

11. Could you not do the same in other cities?—Not in all places; Auckland, for example.

12. Are they not, in other countries, now laying the wires underground?—Not the telephone wires.

13. You are not aware that that has been done?—Not by telephone companies. They are sticking to the overhead system.

14. Is it not done in New York?—Not as yet. I believe there has been some agitation about making them put the wires underground, but there are practical difficulties in the way which have not yet been overcome.

15. Then in some places you cannot carry the wires over the houses?—It would not answer in some places. This town is particularly well suited for it.

16. *Mr. Fish.*] Do you pay the owners of the houses anything for that?—No.

17. *The Chairman.*] Will not such an enormous number of wires in the street, as in Auckland, become a public nuisance?—We shall be obliged to have overhead cables. We have them now to some extent.

18. As to the item for salaries, you have one clerk in each place.—Yes; there have been two in Dunedin within the last six weeks.

19. How many subscribers are there there?—225 now.

20. Have you arrived at the information as to how many connections one clerk can carry on with?—One operator, by a system I have invented, and for which I have asked the Government to give me a bonus, can manage 150 with ease.

21. Do you think it desirable that one man should continue for, say, eight hours constantly attending so large a number?—Yes; one man in Dunedin has been working up to 200.

22. *Hon. Mr. Dick.*] He is a very smart man, though?—Yes.

23. *The Chairman.*] And you give him £129 a year.—That is the proportion of his salary. It does not include a bonus. We give each clerk a bonus of 4s. a number.

24. The cost of linemen, batteries, and materials is £213 in Auckland, £134 in Wellington, £222 in Christchurch, and £268 in Dunedin; a total of £887; an average of £222 for each town?—Yes; one pound and seven-tenths is the annual cost of maintenance of each instrument. Out of that there is 12s. for batteries, which leaves £1 for supervision, and for men going round and keeping the line in order.

25. Is that the result of the actual cost?—Yes.

26. Will it not diminish as the number of subscribers increase?—No; it will rather increase. When an instrument gets out of order, it has to be immediately replaced or put in order. That all takes time. The public are very impatient in these things, and everything has to be done at once.

27. Repairs—wear and tear—are estimated to cost  $7\frac{1}{2}$  per cent. Is that exclusive of the rest?—Yes.

28. What does it consist of?—That is the allowance for the usual wear and tear. Of course, in time, we shall have to replace some of the instruments. We have to put in two new cells for each instrument every year. Then this should be remembered: that under the Crown Redress Act we are liable for all accidents. If a pole fell and broke a man's leg we should be put in for it at once.

29. Paper and printing, rent, fuel, light, &c., you put down at £100 a year?—I think that is very moderate. You could not get a room in any of those central places for £100 a year. We take this view: we estimate what would be the cost to a private company starting and doing this. The Government have not had to pay all these amounts, but that is rather less than a company would have been able to do it for. Taking an average of £20 17s. 6d. for each connection, the total cost of the plant has been £12,423.

30. *Hon. Mr. Dick.*] That is taking no account of the discount you get from the company?—The return is made up on this basis: that, if a private company had started, this is the amount in hard cash it would have had to pay. I do not say the Government have paid all that. We were in the position of a man going along the road with a barrow and picking up something on the way which he can carry with a little extra labour. If a private company had done all this it would have cost them more.

31. In some cases you have used the poles already there and have charged for them as if you put them there for the purpose?—Yes.

32. Have you any idea of the difference between the cost if you had had to erect the poles instead of using those already there?—The difference would be about £3 17s. 6d. per subscriber.

33. Then that would reduce the cost from £10 17s. 6d. to £7?—Yes, no doubt; but no private company could have put them up for £10 17s. 6d.

34. What would have been the cost if you had to put up all new poles?—The cost for poles has varied. In Christchurch there was no charge for new poles up to the date of the return—the existing poles were used. In Wellington scarcely any were wanted, the wires running on the house-tops.

35. The £20 17s. 6d. does not include any of the cost of maintenance?—No.

36. For the first year the cost of maintenance of 514 connections is given as £2,583 14s.?—Yes.

37. What is that about for each?—About £5.

38. Then the total cost of erection and maintenance for the first year would be £25 17s. 6d.?—But you are taking the interest on the capital. If you provide for the cost of maintenance you have your instruments and plant at the end of the time.

39. Then in the £2,583 have you included interest?—Yes, at  $7\frac{1}{2}$  per cent. on a capital absorbed of £12,423.

40. I want to know if an estimate of £25 17s. 6d. each would cover everything till the end of the first year?—Yes; and you would have value for £20 17s. 6d. at the end of the year.

41. For which we get, how much?—£17 10s.

42. And that leaves still unpaid at the end of the first year £8 7s. 6d.?—Yes.

43. What do you charge after the first year?—£12 a year.

44. Then by the end of the second year all outlay whatever up to then would be recouped?—Yes, very nearly.

45. Then £25 17s. 6d. to the end of the first year covers the first cost, keeping in repair, and so on?—No; that is not what it actually costs. That is what we estimate it would cost a private company.

46. *Mr. Fish.*] Will you tell us, without divulging any particulars, what is the actual cost to the Government of the telephones and their erection?—The cost would average about £14 each.

47. *Hon. Mr. Dick.*] That is the actual cost to the Government?—About £14.

48. Then the expense of keeping them going and in order is about £5 a year?—Yes.

49. That makes £19, for which we get £17 10s.; that leaves £1 10s. Next year it costs us £5. That makes £6 10s.?—Yes; that £5 will not diminish. The charge for salaries will increase to some extent.

50. Suppose a man gives up his telephone, does it cost much to remove it, and take down the wires?—We take down the wire, and do not often use it again. Of course the instrument can be used again. Sometimes the wire may remain, and be continued on to another subscriber in the same direction.

51. Would the  $7\frac{1}{2}$  per cent. put down for wear and tear cover the cost involved by those throwing up the connection?—Yes; I daresay it would, with what we would get for the sale of the old material.

52. Have many thrown it up so far?—Speaking roughly, perhaps half a dozen at the outside. It has been going now about eighteen months.

53. *Mr. H. Thomson.*] The first total cost being £14, two years' interest on that would be £2 2s., at  $7\frac{1}{2}$  per cent. The cost of maintenance and working for the two years would be £10; that would be a total of £26 2s. You are paid for the first year £17 10s., and for the second, £12; a total of £29 10s., for what has cost you £26 2s.—a profit of £3 8s.?—Yes.

54. *Mr. Peacock.*] But I understand that you are calculating your estimates of all costs just as if it were a private individual who was doing it?—Precisely.

55. *Mr. Barron.*] I understand that to May 31, with 514 subscribers, the total cost was £12,423, say, £12,500?—Yes.

56. Well, if you were to get 25 per cent. yearly return on that outlay would that be sufficient to cover the cost of construction and working, interest, depreciation, and every other charge you could bring to bear. Would not that be a very ample return. I gather that you do not make out that to be the necessary return on your outlay?—No; 25 per cent. would just about clear our expenses. It would leave just a trifle on the right side.

57. It would be sufficient to cover the interest on first cost, depreciation, and working expenses, and all other charges, and leave a margin?—Twenty-five per cent. would leave us just about £500 a year.

58. What you may call a trade profit of £500?—Yes; that is to say, we should pay out all except about £500.

59. I am assuming £12,500 to be the total outlay, though there was not that outlay by the Government; but, taking it to be so, and making a liberal allowance for everything, 25 per cent. on that would cover all charges and leave a profit?—We put ourselves in the position of a company. A company would not do it. The Oriental Company only declared a dividend recently of 15 per cent. on the whole of its transactions.

60. In addition to the profit you have already estimated on that basis you have an additional profit of £500 if you get 25 per cent.?—Yes, I think so, according to those figures.

61. Then if you charged £7 10s. the first year you would have £4,500; that would give you 35 per cent. the first year to the number of subscribers you have?—You must recollect that as the system extends it will become more costly. Directly we get private-house subscribers they will cost far more money than commercial houses in actual outlay. In many cases we should have to carry poles and lines just to one man's door.

62. This 35 per cent., I assume to give you over 35 per cent. the first year, ought to be enough to cover any extra outlay of that kind. If you get 35 per cent. the first year you will have a very ample margin to form a reserve fund for any extra contingency such as you have mentioned. And if you got £5 the second and subsequent years you will have 25 per cent. on the cost of the system and leave you a profit?—No; I do not think so. You must understand that this £5 a year put down for maintenance is for maintenance, office rent, and all other current charges. The only thing you can throw out is rent, which would reduce the total by £400 for the four towns.

63. Well, take it another way. You said the total first cost of each was £14, and maintenance for the first year £5—that is £19?—Yes.

64. Say £20 each, and you got £5 the first year, that is 25 per cent.?—No; because you must look upon our capital as so much dead capital, and £5 a year is all we are earning, and we are spending it, and at the end of the year we are in the position of having nothing.

65. *Mr. Fish.*] You consider yourself entitled to fair interest on the actual cost and maintenance?—Yes.

66. *Mr. Barron.*] Well, you must get that £5 for maintenance back, and then, if you got £3 10s. as a return on your £14, would not that be an ample profit? That is 25 per cent.

Would not that be sufficient to cover depreciation and every other running charge?—That remains for the Government, not for me, to say.

67. That would be £8 10s. Taking into consideration the margin you have already allowed under working expenses, that would leave no loss to the Government?—No, but it would mean no revenue.

68. *Mr. Fish.*] I understand you to say that every private-house connection will cost more than connecting business places?—Yes, no doubt.

69. Then you would not think that the charge for a private-house telephone should be lower than for a business one?—No.

70. If there was any difference it should be higher, not lower. Is that what I understand you to say?—Well, as a matter of fact, if a man has a second connection to his private house now, we make a reduction.

71. Why should you do that, when you say the other costs you more rather than less?—We have not entered on that phase of the question as regards private subscribers. It is impossible to estimate it. In some cases we should have to run poles and wire two or three miles to one man.

72. I understand you to say that, as a general rule, a connection to a private house costs more than to a business place?—Yes.

73. Then how can you recommend giving a man a private-house connection at less than the connection to his office?—We held out that as an inducement to people to take one with the other.

74. *Mr. H. Thomson.*] We had on the 31st May 514 connections. At £14 each that is a capital charge of £7,196. That is all the cost. Supposing each subscriber to pay £7 10s. a year, that would be a total of £3,855. That is all revenue. For maintenance £5 a year each would be a total of £2,570. And renewal fund at  $7\frac{1}{2}$  per cent. is exactly £1 1s., a total of £539 14s. The two charges together would be £3,109 14s., leaving a balance of £745 6s. That is exactly 10 per cent. profit.

75. *The Chairman.*] In Auckland if I send a telegram to the North Head I pay 1s.—that is, delivered within a mile of the office. But if a subscriber to the Auckland Telephone Exchange wants to communicate with the North Shore he rings to be connected with the bureau there, and has to pay 1s. for speaking and 6d. for delivery?—Yes, but in sending your shilling message we use the wire for half or three-quarters of a minute. For the 1s. 6d. you monopolize the wire for five minutes. I think the charge is very reasonable. It is the same as is made in the United States.

76. But supposing a man only wants to speak for half a second?—We know nothing about that. The conversation is private. As a matter of fact, I do not think they stick to the five minutes.

77. Is there any reason why the North Shore should not be connected with the Telephone Exchange? There is Mr. Gardener, the chemist, in Auckland, who has a shop at the North Shore; I know he joined the Exchange and paid his £17 10s. because he thought he would be able to communicate with the North Shore, but he finds he has to pay 1s. 6d. on each occasion; that is no encouragement to join. Why should not the North Shore be included in the Auckland circuit?—Four miles is the limit for the uniform charge; where it is over four miles we charge 1s.

78. *Mr. J. Green.*] Have you any limit as to where the telephone should extend?—There is no limit at present.

79. *Hon. Mr. Dick.*] You can talk as far as Napier, can you not?—Yes.

80. *Mr. J. Green.*] What is the greatest distance you have any subscriber?—We have one at a distance of thirty-seven miles.

81. *Mr. Fish.*] How do you regulate the charges as to distance?—We would connect you twenty miles away, supposing there are no electrical difficulties. We charge £17 10s. the first year for the first half-mile, and £2 for every additional quarter-mile.

82. *The Chairman.*] How much would that be for the thirty-seven-miles man?—That was made a special arrangement. We charged £8 a mile after the first half-mile.

83. *Mr. Peacock.*] You have assumed that the total cost to the Government to the 31st May was £12,423. What do you estimate it would have cost a private company in addition to that?—I do not think, from what I gather from accounts of what has been done elsewhere, that any private company could have done it under £15,000.

84. You consider  $7\frac{1}{2}$  per cent. is sufficient to allow for renewal and wear and tear?—Yes.

85. *The Chairman.*] To what length can you connect a subscriber?—To any length, supposing there are no electrical difficulties.

86. I mean for the £17 10s. Why should not the North Shore (Auckland) be connected?—Because it is one side of the harbour, and the Exchange is on the other. That would mean laying cables. We could easily do it if it was a land line, but one mile of cable costs about £200.

87. Why should not a subscriber to the Auckland Exchange walk into the North Shore bureau and be able to communicate with his office for 3d.?—At Newton, which is a mile away, he pays 6d. for five minutes.

88. Why should it not be the same at the North Shore?—That is four miles, and he pays 1s. It is the same between Port Chalmers and Dunedin, that is nine miles. That four miles to the North Shore costs more than the nine miles at Port Chalmers. There is a three-wire cable, which cost the Government £600.

89. Do you know that in Paris, from the 1st July instant, they were to make a charge of 2½d. for the use of the telephone circuit for five minutes?—I do not know that; I have not seen it stated in the electrical journals.

90. *Mr. Barron.*] Then I understand that, though you estimate the total cost at £12,423, the real cost was about £14 a number, which would be a total of £8,400 for 600 subscribers?—Yes.

91. *Hon. Mr. Dick.*] That is the actual cost to the Government?—Yes.

92. *Mr. Peacock.*] Do I understand that that difference of £4,000 is the difference of cost to you as compared with what it would have cost a private company. I understood you to say it would have cost a company £15,000?—I am quite confident, from what I know of the working of the thing, and from the returns of various companies in America, that what I have estimated to

have cost the Government here £20 17s. 6d. could not have been done for less than £23 by a company in England or America. We have peculiar advantages through the Government taking up the thing with a running staff.

WEDNESDAY, 1ST AUGUST, 1883.

Dr. LEMON, further examined.

93. *The Chairman.*] You have said that you do not think a private company could make each of these connections you have made for less than £23?—Yes; that is, for the first year, exclusive of maintenance.

94. *Mr. Fish.*] How do you arrive at that conclusion?—Simply from this: that not one of the English telephone companies has paid a dividend, I believe. I was mistaken, I find, in what I said about the Oriental Company. That company have been working about eighteen months. They have something like a thousand subscribers, and have paid no dividend.

95. *Hon. Mr. Dick.*] What have been their rates?—They have varied. The company have business in different countries.

96. *Mr. Fish.*] Well, what has been about the usual rate?—About £20 in London, I think.

97. Then, why do they charge so much less in France?—They do not. They only propose to do it. They are charging now £24 in Paris and £20 in the provinces, or *vice versa*—I do not remember which.

98. *The Chairman.*] How long do you suppose the instruments will last?—The instruments are almost indestructible. The only thing that goes is the cog-wheel, and that can easily be replaced. Lightning might damage the bells, but that would be easily repaired. We make people responsible for any wilful damage, and also for destruction by fire.

99. Then any ordinary damage could be repaired at a cost of, say, three or four shillings?—I think so.

100. *Mr. Fish.*] Then, would the  $7\frac{1}{2}$  per cent. you have put down for wear and tear cover depreciation and ultimate replacement of machines?—Yes; I think so.

101. *Mr. Peacock.*] You calculate that  $7\frac{1}{2}$  per cent. on what you estimate it would cost a private company?—Yes. You must recollect this: that the connections up to now have been mainly to mercantile houses. With private-house subscribers there will be considerably greater risk of disconnection, and there will be greater first cost for erection, on account of having to erect separate lines.

102. Then, would you increase the price for private connections, or make it so as to give a fair average for both?—I think it would be pretty safe to keep to the present charge, that is, £2 for maintenance for every quarter of a mile beyond the first half mile for the first year, and £1 10s. a year after.

103. *Hon. Mr. Dick.*] Your idea is that there should be a regular price for everything within the half mile?—Yes; we charge nothing for wire within the half-mile circuit, but beyond that we charge according to distance.

104. *The Chairman.*] Do you not think that the half mile might with advantage be extended to a mile in the large cities?—No; I think not. That, of course, would involve totally different calculations.

105. *Mr. Fish.*] Is it your opinion that the charge for private-house subscribers should be the same as for commercial houses in the first instance?—Yes; and to give a reduction on a second connection for the same man. I would charge private houses only more according to mileage. Most private-house connections would probably be outside the half-mile radius. I will read what is charged in London: Per mile of wire per annum, £6 on the roads and £8 over house or underground. The minimum charge is for one mile, and advancing beyond the mile for every quarter of a mile or fraction thereof. For two sets of instruments (same as supplied in New Zealand), £8 per annum.

106. *Hon. Mr. Dick.*] I did not know that the London Post Office had anything to do with the telephones?—Oh, yes.

107. *Mr. Fish.*] What reduction do you make now for a second connection?—£2 10s. the first year and £2 a year after; that is, exclusive of wire-rent for extra distance.

108. *The Chairman.*] Surely it would not take £1 10s. a year as interest on the cost of a mile of wire?—You might have to run a mile of wire and poles to one man's door. There would be many such instances if we go in for private-house subscribers.

109. *Mr. Fish.*] It seems to me against all the theories of trade when you say that the proportionate cost of working would increase with the number of subscribers?—It will be in this way: that we shall in some cases have to run wires specially for one man. In some cases there may be three or four in one line.

110. *The Chairman.*] What would it cost to run a wire to my own house, say, which is about half a mile off the line?—About £30.

111. Then, how much would it cost me a year?—We could not do it under the rates I have stated.

112. *Hon. Mr. Dick.*] How much does it cost you to put up poles and a wire for a mile to a single house?—On an average it is not much under £50 a mile—twenty poles to a mile—and we charge £8 for that the first year and £6 a year after.

113. How long do the poles last?—We have some totara poles that have been standing sixteen years, and are just as good as ever.

114. *Mr. Peacock.*] Would it not be better to make a charge according to the number of connections there might be on any particular line?—That would complicate our rates. I think there should be a special rate where you have to run a wire a long distance for one man.

115. Looking at it as though a private company were doing all this, would not £10 a year per subscriber give them a reasonable return on this capital?—I think £12 the first year and £10 a year after would pay. The rate in Switzerland is 100 francs a year, in Paris 600 francs, in London 500 francs. It is 400 francs in the French Provinces, and 200 and 300 francs in Belgium. In Italy the rate is

116. That is about £24 in Paris?—Yes; and in London £20.

117. *Hon. Mr. Dick.*] What is meant by private telephones in America?—The same as we have between Lyttelton and Christchurch.

118. That is outside the radius of the exchange?—Yes.

119. Do you mean to say that in America there are 50,000 such as that?—Yes. We have a very large proportion using in that way. We have imported 1,000 instruments, of which 130 are in stock. Of the remaining 870, 595 are connected with the exchanges, and the remaining 175 are used in that way, except about sixty connected with the Government offices.

120. That is nothing like in the same proportion. I see that in America they have 50,000 private telephones to 30,000 connected with the exchanges?—Yes.

121. *The Chairman.*] Would it not be desirable to keep the exchanges open all night?—I think that will follow as soon as you get private-house subscribers. To open them now all night would be of very trifling benefit to any one, because nearly all the connections are with merchants' and other offices, which shut their doors at 5 o'clock.

122. But it would be a great advantage to keep the exchange open, say, till 6 p. m.?—If we extended it till 6 we might just as well keep open till 11 or 12.

123. *Hon. Mr. Dick.*] You could change the hours from 9 to 5, to 10 to 6.—Yes.

124. *The Chairman.*] What would be the additional cost of keeping open all night?—Simply double wages; about £150 a year in each town. If we get private-house subscribers we propose to do it.

125. Do you not think the distance might be extended to a mile for the fixed charge?—No; I think not. Within the half mile most of the connections are on the main line, but beyond that you would get into by-streets, where you would have to erect wires and poles specially.

126. Do you not think that a subscriber to an exchange should only pay half that the general public pay for using a telephone bureau?—Yes; I think that would be a fair concession. I think a subscriber going into a bureau should have the right to communicate with another subscriber at half rates, or with a non-subscriber at half rates; but the non-subscriber communicating through the bureau with a subscriber should pay full rates.

127. And supposing a subscriber wants a message delivered from the bureau, you would simply charge the cost of delivery?—That is all.

128. Which I understand is 3d. within the mile?—Yes.

129. Then you would think it desirable that there should be explicit notice of that difference?—Yes.

130. And would you extend the line for bureaus from four to six miles?—Yes.

131. *Mr. Barron.*] Could not the department devise a scheme to lessen the charge to long-distance subscribers—say, those within two or three miles? Could you not, if necessary, form a separate fund to cover the extra charge on that account, and also to cover the greater risk of disconnection. Would it not increase the revenue very considerably by doing that, and so encouraging such subscribers to join, instead of discouraging them by so heavy a first charge?—A great many private-house subscribers would live in rented houses, and perhaps on a change of tenancy the incoming tenant might not care to continue the connection.

132. Yes; but would not the cost of working for private houses be much less, because those subscribers would use it much less than mercantile men?—But, if you keep open all night on this account, you will need to treble the staff.

133. But by readjusting accounts, and instead of so heavy a cost the first year spread it over a number of years, and making a fund, so to speak, to cover these risks. Would that not have a tendency to increase the number of subscribers?—I think if you reduced the charges within the half-mile radius to £12 the first year and £10 a year after, the department would be very well satisfied, but not with less than that.

134. Might it not be more profitable to the department to make it £15 the first year, £10 the second, and £7 10s. a year after. It would certainly be more likely to recoup your outlay?—I think £12 the first year, and £10 the the second would be much better, and then it would be open for consideration after that whether you should reduce further for subsequent years.

135. But would you not be more likely to keep your subscribers in that way?—I think £15 the first year would be a deterrent. It would be better to charge £12 the first year and £10 the second.

136. And would you reduce after the second year?—I think that would be a matter for the House to consider after the second year, when you see how the thing is going, and not to pledge the department beforehand.

137. *Mr. Peacock.*] The use of the system by private-house subscribers would be chiefly at night, after business hours?—Yes.

138. And that would involve a special charge, irrespective of the use of the system by commercial houses?—Yes.

139. And, therefore, do you think that £7 10s. a year would pay, taking the outlay as the same is a private company had established the thing?—No.