1898.

NEW ZEALAND.

WELLINGTON–LYTTELTON STEAM-SERVICE COMMITTEE

(REPORT OF THE, TOGETHER WITH MINUTES OF EVIDENCE AND APPENDIX).

Report brought up on 2nd September, 1898, and ordered to be printed.

ORDERS OF REFERENCE.

Extracts from the Journals of the House of Representatives.

WEDNESDAY, THE 13TH DAY OF JULY, 1898.

Ordered, "That a Committee be appointed to inquire and report as to the best means of securing a quick and regular steam-service between the Ports of Wellington and Lyttelton; the Committee to consist of Mr. Buchanan, Mr. Duthie, Mr. J. Hutcheson, Mr. Joyce, Mr. Lewis, Mr. M. J. S. Mackenzie, Mr. McNab, Mr. Meredith, Mr. Millar, and the mover, with power to call for persons and papers, and to report within fourteen days: three to be a quorum."—(Mr. WRIGHT.)

TUESDAY, THE 26TH DAY OF JULY, 1898.

Ordered, "That Standing Order No. 211 be suspended, and the name of the Hon. Mr. Cadman be added to the Wellington–Lyttelton Steam-service Committee."—(Rt. Hon. R. J. SEDDON.)

THURSDAY, THE 28TH DAY OF JULY, 1898.

Ordered, "That an extension of time of one month be granted to the Wellington–Lyttelton Steam-service Committee in which to bring up their report."—(Mr. WRIGHT.)

REPORT.

I AM directed to report that the Select Committee appointed to inquire and report upon the best means of improving the steam-communication between the Ports of Wellington and Lyttelton have called such expert evidence upon this subject as was readily available, and have arrived at the following conclusions:—

(1.) That the importance of the traffic between the two Islands, by way of Wellington and Lyttelton, is such as to demand a faster and more punctual steam-service than that at present provided.

(2.) That the time occupied in a journey between Dunedin and Auckland, or Auckland and Dunedin, by rail and steamer should not exceed fifty-one hours, instead of, as is the case, three or four days, by the existing unconnected service.

(3.) That, in order to render the journey possible within the time now suggested, it is essential that the railway time-table should be recast so that the steamers could be run to connect with the

through express trains in both Islands without any unnecessary delay either at Wellington or Lyttelton.

(4.) That, to make this possible, it will be necessary that the connecting steamers should, except in extremely bad weather, be capable of running from Wellington to Lyttelton, or the reverse, in eleven or, at the most, twelve hours.

(5.) That, in order to accomplish this with reasonable regularity, the steamers to be provided should be of about 2,000 tons burden, fitted with twin-screws.

(6.) That the cost of suitable vessels for the service may be estimated at from £60,000 to £70,000 each, delivered at Wellington.

The Committee direct attention to the fact, as one which greatly affects the safety and comfort of the passengers, that nearly all the principal railway companies of Great Britain have discarded steamers with one screw, or paddles, in favour of steamers with twin-screws, for the services connecting their railways with those of the Continent.

The Committee are of opinion that the moderate acceleration of the trains that will be needed to give effect to the above proposals should prove acceptable to the public, and will attract to the railways a considerable additional traffic.

The Committee recommend the Government in the meantime to invite tenders for the performance of a daily steam-service between Wellington and Lyttelton each way, and are of opinion that any direct loss involved in maintaining it would be recouped by the increase in the passenger traffic between the two ports, by increased railway revenue, and by the saving to be effected by dispensing with the numerous special trains at present run for the purpose of distributing the San Francisco and other ocean mails.

EDWARD G. WRIGHT,
Chairman of the Committee.

2nd September, 1898.

MINUTES OF EVIDENCE.

TUESDAY, 19TH JULY, 1898.—(Mr. E. G. WRIGHT, Chairman.)

Mr. T. RONAYNE sworn and examined.

1. *The Chairman.*] You are General Manager of the New Zealand Railways?—Yes, that is my designation.

2. You are aware of the purpose for which this Committee has been set up?—Yes, I am fully aware of the purpose.

3. Have you considered the advisability of running a service of fast steamers to connect the South and North Island railways?—Yes; the department has considered the advisability of running such a service, and it has been brought under the notice of the Minister for Railways. I have made suggestions in that direction; not quite recently.

4. Would you state to the Committee what your views on the subject are?—I have taken out some information with regard to the subject, of which I have some notes here which I think will meet the case. The memorandum which I have made will show how the train-services would be affected by such a service. Under existing arrangements mails and passengers from Invercargill for north of Oamaru leave Invercargill by train at 4.15 p.m. daily, Saturdays excepted. I may mention that that is a mixed train, and the journey is a very dreary one. The train arrives at Clinton at 9.5 p.m. Passengers have to remain there all night. The train leaves again next morning at 6.5 a.m., and arrives at Dunedin at 10.50 a.m., catching the northern express for Christchurch. You leave Dunedin at 11 a.m., and arrive at Christchurch at 9 p.m., and you arrive at Lyttelton at 9.48 p.m. On Tuesdays, Thursdays, and Saturdays you there connect with the steamer for Wellington, reaching the latter place at about 11 a.m. on Wednesdays, Fridays, and Sundays. As a matter of fact, that is only done when the best boats are running. Thus passengers and mails from the Southland district can leave Invercargill at 4.20 p.m. on Mondays, Wednesdays, and Fridays, and be in Wellington at 11 a.m. on Wednesdays, Fridays, and Sundays, the journey time being, approximately, forty-three hours, including a nine-hours stoppage at Clinton. Going South, mails and passengers for stations south of Mosgiel can leave Wellington at from 5 p.m. to 7 p.m., connecting with southern express at Christchurch on the following morning, and arrive at Dunedin at 9 p.m., remain all night, take express next day, arriving at Invercargill at 3.30 p.m., connecting with trains for Riverton, Orepuki, Kingston, and Bluff the same night. Within the last six months we have put on a fast service between Dunedin and Invercargill, which has been a great improvement on the old mixed train, which was slow, and had to call at nearly every station.

5. It would be as well now to state the effect of that improved service?—The effect as regards traffic has been most encouraging. It was prophesied that it would be bad for the traffic, and

that the trains would not pay; but I understand that a large number of passengers who formerly went by steamer now go by rail between Dunedin and Invercargill, and *vice versâ*. The distance is run in about seven hours, and that is about as good time as we can do it in. This is where an important point comes in: If the connection of the 6.5 a.m. train from Clinton with the northern express is broken, passengers and mails from stations south of Mosgiel for stations north of Oamaru will be compelled to travel by the express which leaves Invercargill at 11.15 a.m. daily, remain all night in Dunedin, and cannot resume their northern journey until 11 a.m. the following day. They will thus occupy twenty-four hours on a journey which at present takes nineteen hours only, including the night of nine hours at Clinton. To obviate this difficulty it would be necessary to run night trains between Invercargill and Dunedin, a distance of 139 miles each way, or 1,648 miles of train-running per week, necessitating an expenditure of over £19,000 per annum. To enable passengers from Dunedin to connect with north-going trains at Wellington, assuming that the steamer journey between Lyttelton and Wellington could be performed in ten hours—that is the time mentioned—the express would require to leave Dunedin at 8.30 a.m. and arrive at Lyttelton at 7.30 p.m. The steamer would depart from Lyttelton at 8.30 p.m., and arrive at Wellington at 6 a.m. next morning. Such a service would enable passengers to get straight through to either New Plymouth or Napier, but would necessitate the running of night trains between Dunedin and Invercargill, as stated above, otherwise Southland would be deprived of its present connection by afternoon train. A considerable amount of delay could be prevented if the steamers at present running between Lyttelton and Wellington left the former port daily at 10 p.m., after arrival of express from south, instead of leaving at 10 p.m. on three days per week only, as at present. The average number of passengers booked by through trains is very small, and is as follows: Napier to Wellington, two; Hastings to Wellington, one; Wellington to Napier, two; New Plymouth to Wellington, four; Wanganui to Wellington, four; Wellington to New Plymouth, six; Wellington to Wanganui, five; Lyttelton to Christchurch and Dunedin, eleven; Dunedin to Lyttelton and Christchurch, ten; Dunedin to Invercargill, ten; Invercargill to Dunedin, sixteen. Passengers from Auckland under existing arrangements leave Onehunga about 1.30 on Mondays and Thursdays, arrive at New Plymouth about 5 a.m. on Tuesdays and Fridays, leave by train at 7 a.m., reaching Wellington at 9.50 p.m. same day. Passengers have to remain in Wellington until the following day's steamer. Passengers leaving Auckland on Mondays cannot therefore reach Dunedin until 9 p.m. on Thursday night. If, however, the boat left Wellington at 11 p.m. on Tuesdays and Fridays, after the arrival of the through train from New Plymouth, and took, say, ten hours on the journey, passengers could connect with express at Christchurch on Wednesdays and Saturdays and reach Dunedin same night, saving at the least twenty-four hours on the journey time. With regard to the running of the steamer between Wellington and Lyttelton, I find from inquiry that the boat has only failed to connect on eight occasions during the last six months. On one of these occasions the cause was due to the disablement of the steamer, two others to the fact of the steamer being detained in Wellington for the San Francisco mail, when the passengers were taken south by mail special. The department always put on a special train in such cases to run through from Lyttelton to overtake the express at Timaru, or it may be at Oamaru. There is always a car put on to that train for passengers. The Clinton train regularly connects with the northern express at Dunedin. It never fails to do that. The northern express has been occasionally detained for a few minutes but not more than that, and that time is made up on the run. There is a margin left for transfer of passengers and luggage—a margin of ten minutes. The express as a rule makes up any time that has been lost. This is all the information I have been able to prepare for the Committee in the time allowed me.

6. *Mr. Duthie.*] Are there many through passengers by the train from Clinton to Dunedin? We want to know the value of the train-communication between Clinton and Dunedin?—There are very few through passengers between Clinton and Dunedin except those who go by the express.

7. You have been dealing with a through service, and I wish to know whether there is much passenger traffic between those two places by the ordinary local service?—There are very few who go by the ordinary train. No one would go by it who had a choice of going by any other. It takes about fifteen hours to get by the ordinary train, and, as you can imagine, no one on a cold winter's morning would go by it if he had a chance of going by a faster train. The fast train which we have put on has been of great service as a mail connection.

8. You have through service from Invercargill to Dunedin daily?—Yes.

9. *The Chairman.*] Will you tell us, Mr. Ronayne, what is your view of the effect that a quick connection between Lyttelton and Wellington would have in increasing the passenger traffic on the railways? It is an important point to know what possibility there is of securing for the railways any passengers who now go by sea between Dunedin and Lyttelton and Wellington and Auckland. What is your opinion?—I do not think that the Railway Service has very much to look forward to in that respect, because you will always have to fill up that gap between the two Islands; you must always cross the Straits somehow; still, if there was a fast steam-service in connection with the trains there would no doubt be a tendency on the part of the passengers to travel by trains which connected with that fast service.

10. Would it not do more than that? Is it not a fact that many passengers coming from the South to Wellington go on to New Plymouth by sea because they fail to connect with the train from Wellington? They get here too late to catch the train, and so they go on by steamer owing to the want of connection. Is not that the case?—Yes; they have to wait until the following morning, and catch the train which used to go at half-past 6 o'clock, but which now leaves at 6.50 a.m.

11. If the trains in the South Island and the steam-service from Lyttelton to Wellington were so arranged that passengers could arrive in Wellington about 7 o'clock in the morning, would you not secure passengers who are now altogether lost to you?—Yes; I believe we should. I believe the department would get an increased number in that way—if there were an express steamer, such

as those which now run between England and France and England and Ireland—twenty-knot boats, or perhaps not quite so fast would suit.

12. Has not general experience shown that improved facilities for travelling have increased the number of travellers?—Yes; I think the greater facilities given to the public the more advantage will be taken of them. That is my experience.

13. Has your department made any inquiries as to the cost of steamers such as would be required to carry out the service indicated?—The department has not made any specific inquiries such as we should do if we contemplated such a service; but I may say I have been given to understand that a suitable steamer would cost about £60,000—that is to say, a steamer of about eighteen knots.

14. Carrying how many passengers?—I have not ascertained particulars as to a steamer which would be fully equal to the requirements of the service. I would ask the Committee not to attach too much importance to my evidence on this point, because I am not in a position to speak definitely on it. I am merely speaking from hearsay.

15. Have you any view as to what her tonnage should be?—No. My evidence on such points is of no value.

16. *Mr. Buchanan.*] In holiday times especially, seeing the long time it takes to travel, say, between Auckland and the various points in the South Island as described by you and *vice versâ*, do you not think that the number of passengers by the railways would be very much increased if the time were cut shorter?—That is, the journey between Wellington and New Plymouth?

17. Yes; and the connections right through the south?—I understand; I do not think that the business would be very largely increased by the alteration, but it would be a great public convenience.

18. Do you not think that the number of people who would travel in holiday time would be greatly increased?—Yes; I think if you could shorten the railway time between Wellington and New Plymouth you would get an increased number of passengers. There is no doubt the journey is a most laborious one, and even a strong person feels pretty stale at the end of it.

19. Then, as to the average number of passengers on the through trains which you have given us. I suppose it would really mean that you would lose a number of passengers if you were to drop out some of the present calling-stations?—You would lose a certain number, but it would be a difficult matter to cut out many of the stopping-stations. You speak, I presume, of increasing the speed of the trains between Palmerston North and New Plymouth. I would point out that that would be a matter of great difficulty on account of the nature of the line. There are so many sharp curves and heavy grades that it would be very difficult to run trains at any greater speed. If the Government were to take over the Manawatu line there might perhaps be a saving made in time of an hour and a half in all between Wellington and New Plymouth; that is to say, by making the train a slight as possible—not taking horse-boxes, dairy produce, or goods of any kind.

20. And what about the Napier line?—Yes; you could improve that immensely, too; much more so than the other service.

21. When the express was first started between Christchurch and Dunedin had you not a much smaller number of calling-stations than at present?—Yes; we had considerably less; but as time went on pressure was brought to bear on the department which it could not resist. Every person who had any stake in the country, or held strong views on certain subjects, wanted the express train to stop at his station, and brought pressure to bear to have his wishes carried out. The department resisted as long as possible, but it was useless.

22. You spoke of a night train between Invercargill and Dunedin; would it not be necessary to have sleeping-accommodation on that train?—That would have to be done; but it would not pay in the present state of our business. It would be a purely through service, and we could not do the same intermediate business as we do now. The train-service is very much supported by the stations on the way. Through passengers by themselves would not pay.

23. *Mr. Duthie.*] You seem to attach some importance to the quick through train between Invercargill and Dunedin; could it not be arranged that the train from Invercargill should reach Dunedin the same night? It is a seven-hours service, I believe, and then you waste some time in Dunedin?—The 4.15 p.m. train is a mixed one, and would not do the journey right through to Dunedin under, at least, ten hours. There is one fast service; two could not possibly pay.

24. Invercargill is the starting-point of the whole northern express service, and for the matter of a few people who come in by the branch lines the whole of that service is thrown out?—It is not so much a matter of through passengers as of the mails.

25. It is a seven-hours service, and if the train left Invercargill at 2 o'clock it would arrive at Dunedin at 9 o'clock, and the service would not be broken to any extent. It would enable your trains to arrive from the different points in Southland in the morning so as to connect with the express at Invercargill, where they would have an hour or two's rest, and time for their dinner, and a spell?—Yes.

26. Could you not do anything to facilitate the service farther north?—Not unless you eliminate some of the stoppages. There is the shunting at Oamaru, which is a very awkward station to work. I have recommended the Minister for Railways to provide funds for removing the site of that station, so that, instead of having to reverse all trains, they could run straight on. Time might also be saved by putting on dining-cars, but between Oamaru and Dunedin it is very bad country to climb, and in many cases the putting-on of a dining-car would necessitate a second engine.

27. Are your engines so pressed that they could not draw an additional dining-car?—That is a very bad part of the country to run trains over. You might, perhaps, save half an hour by running a dining-car and cutting out a number of stops.

28. The Manawatu Company drag a dining-car over the whole of the hills on their line every night?—Yes; but they make a mistake in doing so. They ought to drop it at Paikakariki.

29. Then there seems to be an unnecessary delay between Christchurch and Lyttelton. You take forty-eight minutes to go that short distance?—You might, perhaps, save a few minutes there, but it must be remembered that there will always be some delay when you get to the steamer in transhipping passengers and mails and luggage.

30. It seems to me that you could save an hour in the Dunedin–Lyttelton service if you had a dining-car on the train?—You might save half an hour. Trains going south stop at Ashburton for three minutes, twenty minutes at Timaru, and five minutes at Oamaru, and three minutes at Palmerston South. On the north journey the stops are the same, except that twenty minutes are taken at Oamaru and five minutes at Timaru. You might possibly be able to take an hour off the whole service, but a certain amount of time is necessary for engine purposes.

31. My aspirations differ somewhat from those of our Chairman. I do not think you could get an eighteen-knot service between the North and South Islands. I think a twelve-hours service would be sufficient?—The "Rotomahana" now does it sometimes in twelve hours.

32. With a twelve-hours service the steamer could leave Lyttelton so as to arrive in Wellington at 6 o'clock in the morning?—The train for New Plymouth leaves at 6.50 a.m., and, indeed, very often does not get away till 7 o'clock.

33. That train could be put off until 7.30 o'clock, because, as you say yourself, you could save an hour and a half in the journey?—Yes.

34. I understand the Manawatu Company have been seeking to get this quicker service for years?—The late Commissioners of Railways made an offer to the company to run a quicker service to Palmerston.

35. I think if the department chose to meet the company it could be managed?—The relations between the department and the Manawatu Railway Company are of the most cordial nature; there is no hostility between us whatever.

36. If the Manawatu Company could save an hour and a half, then there is between New Plymouth and Hawera a stretch of level country, but there are a great number of stoppages there, are there not?—Yes; you would have to eliminate a number of those stoppages and then make provisions for the local traffic.

37. There is no other part of the country where there are so many stoppages as there?—It is just a question of eliminating those stoppages to increase the speed.

38. Are there not two or three trains daily there through which the local traffic could be done?—The local people like to travel by the quick train. It is not really an express service. It is called "express" between Palmerston North and Wellington, but it is a misnomer.

39. You would be able to leave Auckland on Monday afternoon, as now, and be in New Plymouth in the morning and then in Wellington at 8 p.m. without any difficulty?—That is so.

40. A steamer leaving at 9 o'clock the same evening would be in Lyttelton the following morning at 9 o'clock. Allowing for some delay in the transhipping of passengers, and so on, you would be able to be in Dunedin that evening at 7 o'clock, and you could leave as now for Invercargill the following morning. In that way you would be in Dunedin in forty-eight hours, and in Invercargill in two days and a half—is not that so?—Yes.

41. Tracing it north again, you could do the same thing if you will only move your trains in both the north and the south?—It could be done by cutting out stopping-places.

42. Yes; and particularly in Taranaki?—Yes; there are a large number of stopping-places between Hawera and New Plymouth; but then it must be remembered that on that part of the line there are only the old 40 lb. rails, and until those are changed, and 56 lb. steel rails laid in their place, we cannot increase the speed. As the cost of relaying would have to come out of ordinary expenditure, and not out of capital, it would be a very serious undertaking.

43. You think there is nothing to prevent the train getting in here at 8 o'clock and the steamer getting away at 9?—No.

44. Is it not very simple?—It seems very simple put in that way, but when you come to work it out and look into the details, and consider the large number of objections that would be raised, and the large amount of existing interests that would have to be considered, it is not such an easy matter.

45. *Mr. Joyce.*] Do you know at what time the steamer arrives at the Bluff from Australia?—I do not know; it is rather erratic, I believe.

46. Do they not usually arrive in the morning?—It depends upon the weather. I do not think they are very regular in their arrival.

47. Have you any passengers through by way of Clinton from the Australian steamer?—No; they would wait for the express on the following day. I have not known of any who have gone that way.

48. The Clinton train would be of no use to them?—No; they would go on by steamer to Dunedin.

49. Is it not a fact that the steamer gets into Dunedin some hours before the arrival of the mail train from Clinton?—It depends upon the detention at the Bluff, and if there is much cargo to land or tranship.

50. I know they do arrive the next morning at Dunedin, and the train from Clinton does not get in until 11 o'clock?—Yes.

51. So that it would be an advantage to delay the train at Invercargill until 2 o'clock. That would catch some of the Australian passengers?—Yes; you would certainly catch them.

52. What is the disadvantage to the branch lines connected with the Invercargill Section as compared with the North Canterbury branch lines?—They have not a connection to make, and there is no delay unless there is some undue detention.

53. They get into Christchurch at 9 o'clock at night?—Yes; the express does.

54. They go in by the express?—Yes.

55. But the Southland people would be at no greater disadvantage than the Canterbury people?—They would be longer on the journey than at present. There are connections between Orepuki and Dunedin, and Gore and Dunedin, and Kingston and Dunedin, and all places south of Invercargill.

56. But by the delay in leaving Invercargill we would be doing away with the stoppage at Clinton—the mails could come in from all sides by 2 o'clock?—You have two mails leaving Invercargill daily now.

57. *Mr. Duthie.*] You mention that at certain times in connection with the arrival of the San Francisco mail you put on an express train?—Yes; between Lyttelton and Dunedin. The Post Office engages them, and pays 5s. a mile for them. That is the cost price; there is no profit out of it.

58. Would it not be cheaper for the Postal Department to pay for an express train from Auckland to Onehunga, so that the mails might go by a steamer in time to catch the mail train at New Plymouth?—You refer to the delay which took place at New Plymouth lately, when you came down. The delay there was caused by the wires being down. The local Chief Postmaster has power to order special trains as required.

59. I want information with regard to the cost; in the service between Onehunga and New Plymouth there are two tidal harbours to navigate, and it is important to catch the tide; if, then, you delay in Auckland and are late at New Plymouth you delay the service?—Unless the mails are put on shore in a boat.

60. Could not the whole delay be avoided if the steamer had left the Manukau an hour and a half earlier?—Yes.

61. And if the Postal Department had paid for an express train from Auckland to Onehunga you would have enabled the steamer to leave an hour and a half earlier?—Yes.

62. And the cost would have been considerably less?—Yes; the cost of an express train between Auckland and Onehunga would be very small.

63. *The Chairman.*] When the express service between Dunedin and Christchurch was last altered there was an alteration involving an additional ten minutes—the express used to arrive at 8.50 p.m., and now it arrives at 9 o'clock, making some additional stoppages. You remember the alteration?—Yes. The time became too fast, and the trains were unable to keep time on account of the additional stoppages.

64. The alteration was made to enable the express to make more stoppages: how many stoppages did she make?—Speaking from memory, I think there were two or three.

65. I can supply the information; there were six additional stoppages, and to make up for the delay caused by them the express only required an additional ten minutes?—I can explain how we gained the time. The time-table was rearranged. Between some stations there had been rather too much time allowed, and by adjusting the time-table the additional stops were enabled to be made by allowing the extra ten minutes only. We had to rob from the time between some stations, and so we managed to make it on the whole into ten minutes additional.

66. Still, six additional stoppages in ten minutes is a large gain to the public convenience?—Yes.

67. Stress has been laid upon the inconvenience that would be caused by the branch services not being accommodated by the alteration in the time-table; you say now they all work in?—The major part of them. They all make connections with the express. We try as far as possible to arrange the time-table so as to make the connections, but it cannot be done in all cases.

68. Is it not a fact that a person wishing to leave Mount Somers for Christchurch on Tuesday, Thursday, and Saturday mornings has to wait at Ashburton from 9.30 a.m. to 3.30 p.m.?—Yes; I believe that is correct.

69. Six hours?—Yes.

70. So that if there are to be some trifling irregularities of that kind at the Gore–Invercargill end of the line it would be no worse for the settlers there than it is for the Canterbury settlers now?—That is so; but you cannot compare the branch line between Mount Somers and Ashburton with the line from Gore, which runs through a very large country; and there are besides the lines from Kingston and the other places to the south of Invercargill.

CAPTAIN ALLMAN sworn and examined.

71. *The Chairman.*] You are Nautical Adviser to the Government?—Yes.

72. The purpose of this Committee is to inquire as to the possibility of accelerating the speed of passage between Lyttelton and Wellington and *vice versâ*, in order to connect the railway systems of the two Islands by a quicker steam-service, and avoid the delays which now take place, and I wish to ask you, assuming that we were to run a ten-hours service between those two ports, what tonnage of vessel would you think suitable?—Well, it is a general condition of guaranteeing speed that you should have a big boat. You would require a 2,000-ton boat to do it.

73. The information I want is as to the displacement of a steamer that would be a safe boat, and one not subject to be delayed by weather?—I should say a 2,000-ton boat—2,000 tons gross.

74. Have you any knowledge as to what such a steamer would cost?—It would make a hole in £100,000. It is the speed which adds to the cost. You could build a vessel with nominal horse-power to drive her ten knots for much less. To get a ten-knot speed out of a 2,000-ton steamer of a fairly good model with sharp ends she would require engines which would indicate 970-horse power. If you want a twelve-knot boat, in order to guarantee it you would have to give a little more horse-power than is absolutely necessary. She would require 1,600-horse power. Twelve knots is about the best result you can get out of any boat at medium cost. If you want to jump from twelve knots to sixteen the horse-power would nearly double itself. That is where the con-

sumption of fuel, the high-pressure boiler, and additional boiler-space come in. It would require 3,800 indicated horse-power to guarantee a speed of sixteen knots.

75. If you want an eighteen-knot boat?—There is an increase again. I should say if you had a vessel of 2,000 tons, and greater speed was required, you would have to give her additional length as well as additional boiler-power. Length always gives speed.

76. You have been all your life running in steamers?—I was for sixteen or eighteen years connected with the Union Steamship Company, commanding in nearly all their vessels. I have never had any experience with an eighteen-knot vessel, but I have had experience with a sixteen-knot one—the "Mararoa." She could do sixteen knots, and the horse-power indicated was about 3,800.

77. Have you had any experience of the class of steamers that are now being run in connection with the railway systems at Home—say, from Hull to Ostend?—For a few days. But I see all the nautical and engineering papers, and I can say that they have been gradually increasing the size of their vessels at Home. Formerly they were 700 tons, and now they are 1,700 tons, and they find they get a better service with them even in the Channel service. Most of the new vessels at Home have twin-screws, excepting those with paddles. Those running from Holyhead to Ireland have paddles, but that is smooth water compared with that between Lyttelton and Wellington.

78. *Mr. Buchanan.*] In the Irish Sea?—Yes.

79. *The Chairman.*] In the German Ocean?—Yes; that is land-locked too. The steamers there have no passenger-accommodation, and there are no berths for passengers. You sit in a room like a drawing-room, and you are across in an hour or so.

80. I am speaking now of the steamers which make longer journeys, such as those from Hull to Ostend?—They supply berthing-accommodation for saloon passengers.

81. Do you know how long they take running across?—I could not say exactly. They make their running during the night. Their passages are similar to ours between Lyttelton and Wellington.

82. The boats of that service are of 1,700 and 1,800 tons?—Yes.

83. They are eighteen-knot boats?—Yes; the last boats that were built are of that speed.

84. There are five boats, practically of the same tonnage and power, which perform the service between Hull and Ostend. They are of 1,700 or 1,800 tons; would they not be equal to the journey between Wellington and Lyttelton?—I do not suppose that a matter of 300 tons would make any material difference. I spoke of 2,000 tons in my previous remarks, but I do not see why vessels of the size you speak of should not do the service.

85. Is there, in your opinion, more risk in running a steam-service between Wellington and Lyttelton than there is in running across the German Ocean?—There is no risk in running a boat on the New Zealand coast as compared with that in running boats in the seas round the British Islands. There you have fogs that you never meet with here, and you have much heavier gales. There are a great many more risks in running boats from Hull and Glasgow and other northern ports to the south than any that are to be met with here.

86. The advantage would therefore be with New Zealand coasts as compared with the weather round the coast of Great Britain?—Yes; certainly

87. *Mr. Buchanan.*] Would not the enormous amount of traffic be an additional danger at Home?—Yes; there is a very large amount of traffic, and then the elements are twice as bad in Great Britain as they are here. I have been sixteen or seventeen years in command out here, and have not been stuck up three times by fog or bad weather off the coast of New Zealand.

88. Could you furnish us with any information as to the cost of these steamers?—I can only tell you what some of the Union Company's boats cost. The "Takapuna," which was brought out as a very fast running boat, cost £67,000 at Home, and £72,000 when she arrived here. It cost £4,000 or £5,000 to bring her out.

89. What is her tonnage?—930 tons. She has 2,000 indicated horse-power.

90. If the "Takapuna" does such good work why do you think that you would require 2,000-ton boats?—The accommodation for passengers would require it. The "Takapuna" is too small a boat, and people do not care to travel in small vessels when they can get a larger one. If you had vessels like the "Manapouri" or the late "Wairarapa" they would be as good an article as you could get for the work at present, provided they had the necessary speed.

91. *Mr. Meredith.*] What is the speed of the "Mararoa?—Sixteen knots.

92. What is her horse-power?—Nominally it would be about 1,270. They measure the indicated horse-power sometimes by using the donkey-boiler. They get more speed out of the machinery in that way. The "Mararoa" supplements her speed occasionally in this way.

93. What was the cost of the "Mararoa"?—I could not say with accuracy. It would be about £120,000.

94. What is her gross tonnage?—2,198 tons.

95. I think the idea is that if two such boats were put on, and they ran regularly every day, they would secure a monopoly of the passenger traffic?—It might be so as far as the coastal passengers, but not as regards the Australian passengers. The companies issue round tickets to them, and they stick to the vessels on the round trip, and very often never miss a meal.

96. *Mr. Buchanan.*] Is it true that Dennys, who usually build for the Union Company, objected to build the "Takapuna"—objected to putting so much power into so small a vessel?—Yes; they objected and would not build her. She was built by another firm.

97. I believe it was a Barrow-in-Furness firm built her?—I believe so.

98. What were the reasons for Dennys refusing?—They would not guarantee the speed unless she was made about 20 ft. longer. She was wanted to carry out a quick service to Onehunga; there are a number of short turns and ugly corners in Manukau Harbour and a longer vessel could not do it.

99. Supposing there were a vessel of sixteen- or eighteen- knots speed, would it be safe to drive her in the face—I will not say of the worst south-easter, but of a pretty strong one, between here and Lyttelton?—You could not drive a boat of the size of the "Takapuna" as compared to the way you could drive a larger vessel. A big ship will not feel the weather so much as a small one, which is lower in the water. A vessel running at a good rate of speed would require a whale-back deck on her forward, as they do at Home. All the fast boats there have them now, and so have the Atlantic liners.

100. You stated your opinion that the "Mararoa" probably cost £120,000. Has not the cost per ton of building all classes of steamers gone down very much?—Yes; you could probably build a steamer for £15,000 or £20,000 less now.

101. Of course, it is not fair to expect exact knowledge from yourself as to the cost of steamers, but would you be surprised to learn that a vessel like the "Moana," with a speed of eighteen knots, is obtainable for £130,000?—No; I know the price has gone down very much of late years.

102. Taking the average weather that we have here, and say a boat with some reserve power could run the distance in ten hours, how often would you expect the weather to stop her from keeping time-table speed?—Well, I do not think on an average that more than twice a month there would be any material delay.

103. That is taking one day with another?—Yes; about twice a month.

104. I suppose you could not give us any idea of the profit and loss on a 2,000-ton boat, running the distance in ten hours, at present passenger rates, with the number of passengers now travelling between the two places?—There is no guarantee as to the number of passengers. There are many passengers who would not go by her. There are a great number of people who do not care to go extra quick. I have seen the "Takapuna" running a quick service between Wellington and Onehunga, and the Union Company charged £1 a head extra for saloon passengers and 10s. a head for steerage passengers going by her, and I have seen the "Penguin" and the "Wanaka" running in the same service, and the "Penguin" was always full, although she went round by Nelson, when there could not be more than half a dozen in the saloon of the "Takapuna." I suppose it was the extra £1 a head which kept them away.

105. *Mr. Duthie.*] You mentioned that the "Mararoa" was a sixteen-knot boat; does she still keep up that speed?—Yes, with the help of the donkey-boilers.

106. What is her time between Wellington and Lyttelton on an average?—I once came in her in eleven hours and fifteen minutes from wharf to wharf.

107. But that was exceptional?—Yes.

108. You have been asked with regard to a boat of sixteen knots. My impression is that the most we can get is a steamer to do the passage in twelve hours. To insure the passage being made in that time what class of boat would be required?—You could get a small boat to go the speed, but you want to carry the people.

109. If there were six steamers a week there would not be so many passengers by each of them; for a twelve-hour service what sized vessel would you have?—I am still in favour of the size I have mentioned—from 1,700 tons to 2,000 tons. The "Manapouri" and the late "Wairarapa" were about 1,700 tons gross. They would be nice suitable vessels, provided they had the necessary speed.

110. This would be a special service with very little cargo, and the great bulk of the 'tween-decks could be used for passenger-accommodation. You would have far more passenger accommodation than woud be practically required. I want to know what would be a fair-sized boat to do the service in twelve hours, with very little cargo, and having to carry ballast?—A 1,700-ton boat would do for that. People do not care to go in small boats; they prefer the larger.

111. A boat some 20 ft. longer than the "Takapuna" could be got at Home now for £50,000 or £60,000; could not a boat of that size or a little larger do the service in twelve hours?—Yes.

112. And the cost would be about £60,000?—Yes.

113. And under the conditions I have mentioned, with no cargo, there would be ample berthing-accommodation for passengers?—Yes; about two hundred.

114. *Mr. Joyce.*] Have you been in the service between England and America?—No; but I have seen the ships repeatedly, and I know pretty well all that is going on from magazines and engineering works.

115. You know these vessels have very heavy weather to encounter?—Yes.

116. And they have to keep up their speed in all weathers?—Yes; but look at the size of the vessels. They are increasing every year until we shall have them all "Great Easterns" yet.

117. Is that one reason why you go for a large ship?—Yes; the larger the ship the more certain is the service to be carried out.

118. How many years have you been captain on the coast of New Zealand?—Sixteen years. During all that time I have been running round the coast.

119. Then, to insure a ten- or twelve-hours service you would require a boat of a certain size and speed?—Yes.

120. What is the distance from Wellington to Lyttelton?—175 to 180 miles.

121. Nautical miles?—Yes.

122. Have sixteen knots been got out of the "Takapuna"?—Fifteen knots were got out of her in Wellington Harbour when Mr. James Mills gave an outing to members of Parliament.

123. If she were 20 ft. longer she would be faster?—Yes.

124. And the "Mararoa"?—She is a fifteen-knot boat now. You could get sixteen knots out of her, if required, on a short run.

125. Do you think that in the service which we contemplate boats should have twin-screws?—Yes; all ships in future in such a service will have twin-screws.

126. Would that add much to the cost?—I think it would. Of course, the machinery is not so heavy, but then it is duplicated. All the new Channel boats they are building at Home have twin-screws.

127. In the Union Company's boats, what is the time of arrival at the Bluff from Australia?—We always made a point of getting in at daylight in the morning. It takes about three and a half days from Hobart.

128. And the time of departure?—About 5 p.m.

129. And of getting to Dunedin?—I used to go slow and get to Port Chalmers first thing in the morning. The distance is only 130 miles.

130. Were the mails delivered much sooner by steamer than if they were put into the train and sent on by Clinton?—Only the southern portion of the mail is landed at the Bluff. The northern mails stick to the steamer.

131. Sometimes they are put into the express at Port Chalmers?—As a rule the postal authorities do so. If the steamer sails that night they leave it on, but if they catch a steamer by train at Lyttelton that night the mails are forwarded.

132. Your arrival at Port Chalmers would be four hours before the Clinton mail got to Dunedin?—Yes.

133. Have you any information as to the number of passengers between here and Lyttelton?—No; I cannot say. The Customs have the number of arrivals and departures.

134. *Mr. Buchanan.*] With regard to lighthouses: you noticed the difficulty into which the "Rotomahana" got the other day; would you suggest anything with regard to better lighting to secure more regularity in passages?—Oh, yes.

135. Putting up additional lighthouses on this route?—I have myself stated that there is a light required on the Kaikoura Peninsula. It is about half-way, and a light there would be a great guide to mariners going backwards and forwards between the two ports. I have recommended it as one of the lights of the future in my report. If a straight course were made between Pencarrow Head and Godley Head you pass three miles off Kaikoura Peninsula and eight miles off Cape Campbell, and to insure greater safety nearly every captain makes two courses of it, whereas if this light were erected they would be able to make one straight course, and thus save about three miles of distance.

136. *The Chairman.*] You say there would be an advantage in the steamer's having twin-screws?—Yes; a twin-screw ship can turn almost in her own length, and that would be an advantage in making a port. There is more chance of a single screw racing than a twin-screw. The diameter is much greater in a single screw, consequently the twin-screws are more submerged in the water.

137. Would you suggest more lighthouses about the Wellington end of the Straits?—No; it is very well lighted now. If you had a chart of the place showing where the lights are situated it would show you how well it is lighted. The lights at Cape Campbell, the Brothers, Palliser, and Pencarrow overlap each other in some positions, and invariably two lights are visible at the same time in clear weather.

138. *Mr. Joyce.*] Do you think there should be a bell-buoy on Tom's Rock?—It would be useful, but I do not think it would stand there.

139. Running from Lyttelton in thick weather, and not sighting the land, is there not a danger of running on to Terawhiti?—I do not think so if you attend to the lead.

140. Is Tom's Rock the only danger?—There is the Karori Rock, which is about a mile from Tom's Rock. There is no excuse for getting into trouble there so long as you pick up Pencarrow. You might perhaps make more provision against thick weather, but I do not think a bell-buoy would stand. There is a fog-signal now at Pencarrow Head, to be used in thick weather.

FRIDAY, 29TH JULY, 1898.

Mr. JOSEPH BELL sworn and examined.

1. *The Chairman.*] You are chief engineer of the "Ionic"?—Yes.

2. Will you state for the information of the Committee what experience you have had in ocean- or coasting-steamers?—I have had sixteen years' experience altogether. I have been twelve years in the employ of the White Star line, and have served in practically all their vessels, including the "Majestic," the "Teutonic," and the "Coptic," which last vessel ran to this colony.

3. How long have you held your present position?—Four years in my present ship. I have been chief engineer for eight years.

4. Have you had any experience in passenger-steamers on the English coast?—No.

5. Would you tell us what is the tonnage, the indicated horse-power, and the speed of the "Ionic"?—She is 4,748 tons, her indicated horse-power is 3,250, and her average speed 13·8 knots, or practically fourteen knots on an average.

6. Will you be good enough to tell the Committee what, in your opinion, should be the indicated horse-power to drive a vessel with all modern improvements—a vessel with the best class of engines and boilers—of 2,000 tons, at a speed of sixteen knots an hour?—I think, speaking roughly, it would be about 3,500 horse-power indicated; that is allowing for a margin in case of the vessel's hull getting dirty.

7. What margin are you allowing—as much as two knots?—No, not so much as that. I should allow half a knot an hour in a short voyage such as that you are speaking of.

8. And what, in your judgment, should be the indicated horse-power of a 2,000-ton vessel to drive her eighteen knots?—You would get eighteen knots out of a 2,000-ton vessel with an indicated horse-power of 4,700. That is the result of trial trips.

9. What should be the consumption of coal per hour to drive a vessel of 2,000 tons sixteen knots?—Do you mean colonial coal?

10. Say Westport coal?—About 2 lb. per indicated horse-power per hour.

11. Is not 2 lb. per hour per indicated horse-power rather high?—Not with Westport coal. That is equivalent to, or rather under, 1½ lb. of Welsh coal. That is what is used always by the navy in trial trips. It is from that that the calculations are made.

12. What number of engineers and stokers would be required for that class of vessel?—You have rules which deal with that.

13. Would you give us your experience?—It would require five engineers for the sixteen-knot vessel, I suppose one storekeeper, three greasers, twelve firemen, and nine trimmers. It would depend upon where the bunkers were situated for number of trimmers required.

14. What increase would be required for an eighteen-knot vessel?—You would require one storekeeper, six greasers, and, say, eighteen firemen, and in a short trip the same number of trimmers might do. Of course, in a long voyage the coals get further and further back in the bunkers, and there is a longer distance to carry them. That would not apply in a short trip, such as that between this and Lyttelton, which, with an eighteen-knot vessel, you could run in ten hours.

15. For this particular service, would you give the preference to twin-screws?—Certainly. The practice now at Home is for all passenger-steamers to have twin-screws.

16. *Mr. Joyce.*] Would five engineers be sufficient for such a vessel with twin-screws?—It would all depend upon the kind of vessel.

17. *The Chairman.*] Twin-screws would not necessitate ten engineers instead of five?—No; but you would require at least six greasers.

18. Will you be good enough to give the numbers for twin-screws?—You would require six engineers, twelve firemen for sixteen knots and eighteen for eighteen knots, and the number of trimmers would remain the same on a short voyage.

19. Then, the only difference would be an additional engineer?—You would require six greasers instead of three.

20. *Mr. Joyce.*] What trades have you been running in?—I have been in the River Plate trade and the Atlantic, and also out here.

21. Have you had any experience in vessels of the "Rotomahana" class, and vessels of her size?—No.

22. *Mr. Buchanan.*] Are you in a position to give the Committee any information with regard to the cost?—Only from what I have read, just as any member of the general public. Of course, it is largely controlled by the class of vessel and the state of trade.

23. Assuming that it is a first-class vessel?—It would range between £25 and £50 per ton gross measurement.

24. That is, to build a first-class passenger-steamer?—Yes; I could give you, as an instance, the "Teutonic." She cost £250,000, and she is between 9,000 and 10,000 tons, but perhaps that is scarcely a fair instance, because the builders are shareholders in the company.

25. You make a reserve allowance of half a knot an hour in a short run?—Yes; that is allowing for the ship being dirty—not having been recently in dock.

26. In your assumption, with regard to a sixteen-knot vessel, did you take the sixteen knots from the builders' trial?—Yes.

27. What would that mean in actual practice for such a run as we have in contemplation without unduly pressing the boat?—They could get about 85 per cent. in the ordinary running on a long voyage or succession of voyages without dry-docking.

28. In dealing with a so-called sixteen-knot boat you would expect only to get 85 per cent.?—Yes; on the builders' trial everything is clean. There is no scale on the boilers, and the hull is clean because she has just been turned off the slip.

29. In arranging for such a service as we have under discussion would you stipulate for a margin over the sixteen knots, so as to allow for adverse weather, and still make sixteen knots an hour?—I should go according to the indicated horse-power. I should consider I was doing my duty as long as the engines worked up to the indicated horse-power, whether the ship was going the speed or not.

30. *Mr. Duthie.*] In the trade for which this steamer would be required there are seldom beam winds; they are generally head winds?—Yes.

31. The probable requirements for passengers would be for two hundred and fifty, both forward and in the saloon. There would require to be cargo-space for, say, 500 tons, and the distance to be run is about 175 knots. We want a steamer that will have comfortable accommodation for the people, and we want to do the passage in twelve hours; what sized vessel do you think would be most suitable to fulfil these conditions?—I think you should have a long vessel to make her comfortable in rough weather. I should say a vessel of between 2,000 and 3,000 tons would be suitable.

32. That seems a large tonnage for the number of passengers and the quantity of cargo?—You require length in the vessel if you want speed, and what is even more effectual is light draught. I was reckoning on a vessel with 16 ft. draught. I do not know whether that would be suitable for getting into Lyttelton Harbour. I have been aground there in getting in.

33. *The Chairman.*] But that was not with a 16 ft. draught?—No; with my own ship.

34. *Mr. Duthie.*] Do you think that nothing less than a 2,000-ton vessel would do?—Not with the weather you have here.

35. But we have had it stated that it is much better than on the British coast?—I have found that it is sometimes very much worse. I have seen it in Cook Strait as bad as anywhere.

36. But we are not going to run through Cook Strait?—Well, entering Wellington Heads. I have seen it so bad here that the Union Company's boat could not get out, and we had to take the mails for her.

37. We have had evidence that the weather on the coast of this colony is better than the weather on the British coast?—I grant you that it does not last so long.

38. *Mr. J. Hutcheson.*] You have already told the Committee the cost per indicated horse-power per hour to drive a boat a certain speed. You have, no doubt, made computations as to the difference between driving a vessel at the same speed in fine weather and in bad weather. It is the purpose of this Committee to ascertain all the facts concerning boats that will make passages in a certain time in all variations of weather. Can you give us a guide towards the difference in cost in your department in driving a boat in fine weather and in bad weather? Have you any data, so that we might take an average of what is the cost in the engine-room department?—The only basis I have is the consumption of coal in the twenty-four hours. If you find out what delay there would be in the passage, then you can find out the cost of keeping up the speed.

39. What would be of service to the Committee would be to know what it would cost in the engine-room department to make so many miles in so many hours in all weathers. You have given us the consumption of coal at 3½ tons per hour for sixteen knots; could you not give us the cost per mile, which would be of more use to us?—It would take an elaborate calculation. As soon as you reduce the speed you economize; if you reduce it to nine knots you economize very considerably. The rule says that the power required to drive a vessel increases as the cube of the speed.

40. Supposing we had a few horse-power to spare, what would be the increased cost in the engine-room to utilise those additional horse-power in order to keep up the speed, and run the vessel between the two ports in the stipulated time in case of bad weather?—I have taken boats of from sixteen to eighteen knots an hour, and I reckon that to drive a boat the two knots more would cost an extra £1,000 monthly in the engine-room.

41. *Mr. Lewis.*] Assuming that you had a steamer of sixteen knots and another of twenty knots, and that you had to keep up a speed of sixteen knots an hour, in the one case you would have to run at full speed, and in the other you would not have to do so; which would cost more?—The sixteen-knot boat would cost more. I mean in coal, and not taking into consideration the additional staff. You would practically be running at three-quarter speed in the twenty-knot boat.

42. *Mr. McNab.*] You know the general amount of traffic between Lyttelton and Wellington?—Yes.

43. And the amount of accommodation we have to meet it?—I have a general knowledge of it, the same as the general public.

44. And a general knowledge of passenger traffic in other parts of the world?—Yes.

45. Are we behindhand in that respect?—By no means.

46. You think we are fairly up to date?—Yes, except in the matter of twin-screw vessels.

47. But so far as getting from point to point is concerned?—Well, you are scarcely up to the Channel boats.

48. But the circumstances are different; they have large subsidies and a large passenger traffic?—Yes.

49. I mean comparing all the circumstances. If we had such a connection between these two ports as has been suggested to you, do you think we should be far ahead of places generally under those circumstances?—I understand you to mean with regard to catering for the public, and not as to mails. I will give you an instance: Two years ago the Holyhead-Kingston Company had vessels of twenty knots, and they have got rid of them and replaced them with twenty-two-knot boats.

50. You are drawing a distinction between mail-steamers and ordinary passenger-steamers?—Yes.

51. I am speaking of a service including the carriage of mails?—I cannot speak on that point as regards comparing your service with others. There are steamers running on the English coast running at the rate of only twelve knots, and sometimes as low as nine knots.

52. You think, as far as the conveyance of mails by steamer is concerned, we are not up to them?—No, but the vessels I have in my mind are those running to connect England and America, and those between England and Ireland.

53. I would ask, from your knowledge of other parts of the world, whether you consider there is a demand for the suggested class of boats between these two ports?—Not for eighteen-knot time-table vessels.

54. You think it is a luxury?—Certainly, I think it is.

55. Taking into consideration the traffic and the mails?—What I mean is that the vessel would not earn enough on her cost. In England they would not do it under the same circumstances unless they had a subsidy.

56. Is it usual to give subsidies in cases similar to this?—In the case of delivering mails in the South, I think they would be entitled to a subsidy if they delivered them on time under a penalty for delay.

57. *The Chairman.*] The question the Committee has to consider is the connection between Lyttelton and Wellington, and not anything beyond by sea?—Then it does not call for a subsidy.

58. *Mr. Buchanan.*] Supposing there were a regular time-table of sixteen knots, and taking the weather one day with another, how many knots do you think the steamer ought to be able to steam so as to keep that up unless in very exceptional weather?—I should say eighteen knots. Unless under very exceptional circumstances you would not have to push her at eighteen knots.

59. You have an idea of the south-easters that are encountered in the Straits: could you drive such a vessel full speed against the seas you have encountered?—Yes, and without danger to a well-built vessel of between 2,000 and 3,000 tons.

60. To and from Lyttelton?—Yes. The worst seas you have here are similar to those you have in the Holyhead service; they are long seas.

61. Are they long seas there?—Yes, at times.

62. In the Union Company's table the distance between the two ports is set down at 175 nautical miles; are these identical with what are known as knots?—Yes; a knot is 6,080 ft.

63. I have always been accustomed to take 15 per cent. as the difference between nautical and land miles?—There is about 800 ft. difference, I think.

64. *Mr. Buchanan.*] Mr. McNab put several questions to you as to whether, in your opinion, an eighteen-knot service was too great a speed, taking the circumstances of the colony into consideration; but having in view that this service is to connect the railway systems in the North and South Islands, and not merely as a connection between Wellington and Lyttelton, what would be your reply?—I will give you an instance of that: there is a service connecting England with Guernsey and Jersey of not less than twenty knots.

65. *The Chairman.*] That service runs from Southampton to Guernsey?—I believe it does.

66. *Mr. Buchanan.*] Do they maintain that service regularly?—Yes, in all weathers. They have a reason for that. There are fruit and flowers and other articles of that sort which have to be on the London market at a certain time, and they keep up the time regardless of expense.

67. Have you taken into consideration the prospective growth of the colony, and, consequently, the increased traffic that would have to be met between Wellington and Lyttelton?—I should think the present vessels would very soon be taken off if they did not meet the demands of the public.

68. *Mr. Meredith.*] What length of experience have you had in the coastal service between Wellington and Lyttelton?—Seven years. Of course, I have not been constantly here; only three times a year.

69. Does the information which you have placed before the Committee refer to single-screw or to twin-screw steamers?—They are practically the same, except as to first cost. The cost of a twin-screw steamer would be a little more, and a slightly larger staff would be required in the engine-room without the horse-power being greater.

70. As a layman I was under the impression that a twin-screw steamer could be relied upon more than a single-screw one?—Yes, by 50 per cent. You could have lighter vessels and lighter draught, and you could save time in getting into Lyttelton, whereas with a vessel like the "Ionic" there is sometimes great difficulty and delay in getting in there.

71. What would be the difference in cost between a vessel of 2,000 tons with a single screw and one having twin-screws?—Practically nothing. The different parts of the engines in a twin-screw vessel are very little more than half the size of those in a single-screw vessel of the same horse-power.

72. *Mr. McNab.*] Mr. Buchanan called your attention to the fact that this service was to connect the railway system in the two Islands, and in your answer you illustrated the service between Southampton and Guernsey; what rate of train does that service connect?—It is a service of 55 or 60 miles per hour.

73. When I tell you that our express trains are only about twenty-knot trains, do you now think that a case can be quoted of an eighteen-knot steam-service connecting such a speed of trains? Do you not think that the proposed steam-service is faster than we might reasonably expect to connect trains with so low a rate of speed?—It depends upon the point of view from which you look at it. If you accelerate the steam-service you would accelerate the railway-service.

74. You do not know of any high-speed steam-service connecting so low a speed of railway-service?—I do not think there is so low a speed of railway-service in the world as there is here.

75. *Mr. Joyce.*] What is the length of the "Ionic"?—She is 430 ft. long.

76. And her draught of water?—Her average draught is 25 ft. She is 44 ft. beam.

77. Have you been running here for seven years as chief engineer?—Yes; four years and a half "Ionic," three years "Coptic."

78. And you have called at Wellington on each trip?—Yes; I have never been to the colony without calling at Wellington.

79. Have you had experience of bad weather from here to Lyttelton?—Yes.

80. And you have had experience of fine weather?—Yes.

81. Can you give us the difference of time in making the trip in fine weather and in bad weather?—I think the shortest trip we ever made was just under twelve hours, and the longest eighteen hours; but that was not altogether due to bad weather. We had to slow down in going into Lyttelton. We have to work into the tide in getting there. Speaking roughly, from what I have seen I should think you might allow two hours as the difference between a passage in fine weather and a passage in rough weather.

82. You stated that the cost of a first-class boat would be £25 or £50 a ton builders' measurement?—Yes.

83. Would it make any difference whether it was a 2,000- or a 4,000-ton boat?—Practically nothing.

84. *The Chairman.*] Would the style of fitting make a difference in the cost?—A very considerable difference. I should say the difference in cost would range from £25 to £60 a ton from an ordinary passenger-vessel to a specially well fitted one.

85. *Mr. Joyce.*] You referred to vessels of the "Teutonic" class, would that be superior to our boats?—Very much so at present.

86. *The Chairman.*] You speak of the cost varying from £25 to £60 per ton. Do you mean to say that the quality of the boats, apart from the fittings, would make that difference?—Oh, no. There is another item which controls the cost very much. It depends upon the rules under which you have the boat built, whether it is under the Board of Trade, British Corporation, or under Lloyd's. For instance, some people are satisfied with fewer bulkheads than others.

87. What would be the difference, apart from the upholstering, between the cost of a low-class vessel and a high-class vessel?—I could not tell you nearer than I have done. £60 a ton is the extreme. That was paid for a yacht for an American millionaire.

88. Do you know the "Rotomahana"?—Yes.

89. Do you consider her an up-to-date boat?—I could not say. I believe she is an old boat; but, as far as the hull is concerned, a matter of ten years does not make any difference. It is the engines. We have a vessel on the Atlantic now which has been running for twenty-five years, and she runs faster now than she did at first, owing to a change in her engines.

90. Are you acquainted with the character of the engines and boilers of the "Rotomahana"?—No; but if they are compound engines they are certainly not up to date.

91. *Mr. J. Hutcheson.*] Do you think there would be any difficulty in getting a steamer of sufficient capacity to steam twenty knots under favourable circumstances, and which would have sufficient reserve horse-power to insure her making the passage at all times at the rate of sixteen knots an hour?—No difficulty whatever.

92. Then, as supplementary to that question, what do you think, from the economic point of view, would be the necessary horse-power to have in reserve over and above the sixteen-knot capacity to insure sixteen knots being maintained in a 2,000-ton vessel of the most modern type, with whaleback decks both fore and aft, and everything favourable to the non-resistance of wind and weather, such as they have at Home?—I should say sufficient horse-power for another two knots.

93. *Mr. Buchanan.*] That is, you require an eighteen-knot boat to insure sixteen knots?—Yes.

94. *Mr. J. Hutcheson.*] Had you in your mind the fact that there were Government railways at both ends, and the possibility is that it will be a Government service connecting them and conveying mails?—No; I did not think of that. I was thinking of a private company.

95. And you do not think the present actual service utilised as it is is out of date?—No; not at present. I will qualify that by saying that if the Government owned the steamers that ran it, it would be to their interest to make them more economical. If I am rightly informed, the engines that are running now are compound, and they should be triple-expansion.

96. *Mr. Buchanan.*] When you were asked whether a boat calculated to run sixteen knots would burn more coal than a vessel capable of steaming twenty knots but running only sixteen knots you said that the twenty-knot boat would burn less coal?—Yes.

97. Would not that apply more to the boilers than to the engines; so if you had boilers calculated to give steam for eighteen-knot engines, then the sixteen-knot boat would take just as little coal as the twenty-knot boat?—The economy is chiefly in the boilers.

98. And has nothing to do with the engines?—Oh, yes, it has, for as soon as you reduce the speed you can economize in the cylinders. Instead of carrying the steam to the half-stroke, you can cut it off, say, at the quarter-stroke. In the "Ionic," with quadruple engines, we expand down from 200 lb. boiler-pressure to 6 lb. in low-pressure valve-casing.

WEDNESDAY, 3RD AUGUST, 1898.

Mr. JOHN BONE sworn and examined.

1. *Mr. Buchanan.*] You are captain of the s.s. "Ruahine"?—Yes.

2. I suppose you are aware of what the Committee have generally in view—namely, the best means of connecting Wellington with Lyttelton by a fast line of passenger steamers. How long have you been in the New Zealand trade?—Twenty-eight years.

3. No doubt you are pretty well aware of the steam traffic between Wellington and Lyttelton, as also the average weather to be contended with?—I cannot claim to have any knowledge of the passenger trade, but I do know something about the weather.

4. Perhaps the most convenient way would be if you would give the Committee your idea of the class of steamers that would be required to run a sixteen- or eighteen-knot service to connect the two ports, taking the average weather?—You mean that you would require a steamer to run sixteen knots on the average, or do you mean a steamer with a trial speed of sixteen knots which would run day by day at a lower speed—do you mean that or do you mean that you desire a steamer which would run more than sixteen knots?

5. Two or three different speeds have been mooted by the Committee, and it would be more to the point simply to deal with the speed which the steamer would be expected to keep up between the two ports so as to keep the time-table arranged for unless in very exceptional weather?—Then you think sixteen knots would do. Is that what you mean?

6. Take a basis of sixteen knots?—Then you would want a steamer which would do at least eighteen knots on her trial trip. You would always want to have a little speed in hand. I think taking it altogether that is the margin of speed allowed on the Atlantic liners, and also in the case of two special steamers which have been lately built by the P. and O. Company to run between Brindisi and Port Said. They are vessels of about 1,800 tons, 300 ft. long, and they run at twenty knots. They have twin screws. Then again you have the type of steamer of the Great Eastern line running between Harwich and Holland. They are 300 ft. long with a beam of 38 ft.

7. What is their gross tonnage?—They are 2,000-ton boats, and they carry cargo as well as passengers.

8. What would be your view of the tonnage of vessels required to carry on such a service between Wellington and Lyttelton?—If they were carrying 400 or 500 tons of cargo, and passengers and mails as well, boats of 2,000 or 2,500 tons would be quite enough.

9. To stand driving in such weather as you sometimes meet on the trip between here and Lyttelton would you recommend a boat below 2,000 tons?—It is difficult to speak with regard to tonnage, because it is so easy to put on measurement in the way of deck-houses and that sort of thing. Perhaps it would be better to give the length of the steamer that would be required. I should think 300 ft. would be quite short enough to get the speed you want out of her.

10. What would be the tonnage of an ordinary steamer of that length leaving out of consideration deck-houses and extras?—I should say about 1,800 or 2,000 tons.

11. From your knowledge of the prevalent weather between these two ports, do you think that an eighteen-knot boat, builder's guarantee, could be depended on to run sixteen knots in anything except very bad weather?—Oh, yes; I think an eighteen-knot boat, builder's guarantee, would do sixteen knots, unless the weather was too bad to drive her at all.

12. Could you give us your idea of what a boat of that class would cost, say to carry 250 passengers?—Of course, my knowledge is not very great in that matter. It would be very much better got from a London broker. It depends upon the style of the engines, the power required, the finish of the boat, and in a great measure on the state of the labour-market. To build a ship now would cost from 15 to 20 per cent. more than it would have cost twelve months ago. The boat employed in the service you describe would have to be a specially built boat, and you could hardly form an opinion of the cost of such a boat without going into details: the strength of boat you required, and so on. There is nothing varies more in price than ship-building. You could get an old tank-steamer for from £6 to £8 a ton, and you could go as high as £20 or £30 or more for a well-appointed passenger-steamer.

13. Would it surprise you to hear that the Committee have been given evidence that a first-class steamer to run the speed which is in contemplation would cost from £50 to £60 a ton?—Of course, if you are going to be extravagant, and to fit up everything with silver and gold, you can put on what money you like for it; but I should think you could get a good average passenger-steamer for about £30 a ton.

14. Do you know the "Mararoa?"—Yes.

15. Say a steamer with her class of fittings, what would her cost be per ton?—I could scarcely say. She has a single screw.

16. Well, with twin-screws?—That would add about 25 per cent. to the cost of the engines. You would not get the same power out of twin-screws for the same money as from a single screw.

17. Do you know anything of the Channel steamers connecting with the Continent on the one hand and with Ireland on the other?—I do not know the present boats. I used to know the old paddle-steamers, but they have renewed their fleet within the last year. All that I have seen since then have twin screws.

18. You see no difficulty in eighteen-knot builder's speed boats running between Wellington and Lyttelton at sixteen knots?—Oh, no; not a bit.

19. Without any interruption except in extraordinary weather?—Yes. Of course, I presume that the extra two knots would be required at times to make up the sixteen knots, and outside that the weather must be exceptionally rough to prevent it. I should think that two knots reserve would be sufficient.

20. *Mr. Joyce.*] You say you have been running here for twenty-eight years?—Yes.

21. Have you been running in steam for twenty years of that time?—About fifteen or sixteen years.

22. And during those sixteen years, how many times each year have you crossed the Straits between here and Lyttelton?—About six or ten times perhaps. We sometimes run two or three times between those ports on the one voyage.

23. The distance is about 176 miles?—Yes.

24. What has been your experience as to weather in making the passage? Have you found it as severe as as on the English coast?—Oh, no; I should say it is very much finer on the New Zealand coast than it is on the English coast.

25. I am speaking of Cook Strait?—Yes; even taking Cook Strait.

26. Then, do you think a sixteen- or eighteen-knot boat would be able to do the passage at any time in the weather that you have experienced during the last sixteen years?—I would not say exactly at any time, because I have experienced very bad weather here, and even, if you had a twenty-four-knot boat, it would not be wise to drive her against such weather. If you were to force her you would be very likely to smash everything and destroy the boat.

27. In such a gale as you have in your mind, what time would such a boat as you have described take to make the passage?—She would very likely have to be brought down to nine or ten knots. Of course, it would be a very exceptional case.

28. The gale of which you speak was a very exceptional one?—Yes.

29. You have not experienced anything like it before?—That was one of the worst I have experienced. Of course, I have met with very bad weather at other times.

30. In weather not so bad but the boat could make her twelve knots?—With a good eighteen-knot boat it would be very bad weather indeed when she could not make her fourteen knots.

31. What is the length of the passage which the special steamers which the P. and O. Company have built to run between Brindisi and Port Said have to make?—I could not tell you from memory. It is two or three days—two days I think, but I would not be certain.

32. Would you recommend twin screws?—Oh, decidedly.

33. And the depth of water?—The draft of the boat would depend upon the size of the hull.

34. Would you have whaleback decks?—You should have a whaleback forward and central accommodation for the passengers.

35. Would it be necessary to have a lighthouse at Kaikoura for such a service?—I always believe in having a street well lighted. I do not think you can put up too many lights.

36. But it would not be an absolute necessity for such a service as this?—Of course, everybody would be glad to have it who goes up and down between these two ports.

37. In making the passage from here to Lyttelton do you steer two courses?—I always steer one course.

38. *Mr. Lewis.*] Assuming that you were in command of a steamer and had to maintain a speed of sixteen knots, would you rather have a twenty-knot boat than an eighteen-knot one?—Of course I would.

39. Have you any idea of the extra cost that would be entailed in building a twenty-knot boat over an eighteen-knot one?—No; It would be merely a matter of horse-power. It is simply a question of engines and boilers to increase the power.

40. What I want to get at is this: Would a twenty-knot boat running at sixteen knots consume more coal than an eighteen-knot boat running at the same speed?—I do not think she would burn a bit more. The best way to hasten her is to have plenty of boiler-power. The more boiler-power you have the easier it is to drive her.

41. You have no idea of what the additional cost would be?—It would be simply a question of horse-power. You could get an answer on that point far better from a builder than from anybody else. Any answer I could give would be only vague.

42. From your experience you think that a margin of two knots on the trial trip would be sufficient for the boats to maintain the regular speed?—Yes; that is on a fair trial. I would not take the speed of the ship on the smoothest of days, with the best coal and everything in her favour, but she should have an ordinary two knots to spare. Take the Atlantic liners; the best of their boats have a guaranteed speed of twenty-two or twenty-three knots, and they run twenty-one knots. Indeed, one of the German line, the "Kaiser der Grosse," ran from New York to Southampton at an average of 22·3 knots.

43. What was her trial-trip speed?—I do not think it was more than twenty-three knots.

44. *Mr. J. Hutcheson.*] Is your ship built under the Admiralty regulations as a merchant cruiser?—No; as a transport. She has not speed enough for a cruiser.

45. Have you acquired any information as to the nature of the conditions to qualify under the Admiralty regulations for Government subsidy as an armed merchant cruiser?—Yes; I do not know that there are any special qualifications required outside of speed. Take for instance the P. and O. steamers; they have single screws, and are divided in the ordinary way, according to the evidence given before the last Committee of the House of Commons, and they receive a subsidy. There are only two boats, the "Teutonic" and the "Majestic" of the White Star line, which have been built to meet the Admiralty regulations as to cruisers.

46. I understand that there are structural conditions necessary to qualify vessels for becoming cruisers, such as longitudinal and transverse stringers, and other means of strengthening the vessel—I wish to ascertain if compliance with those conditions would make a considerable difference in the cost of a vessel?—Very likely. In the first place, to get eighteen knots out of a vessel you would have to strengthen her. With a boat of the dimensions I have mentioned, you would have to make her very strong to keep up the service.

47. Would that diminish her speed?—Oh no, it is the lines and power that give the speed. Naturally a boat of the class you have been speaking of would be on fine lines, and it is not at all necessary that she should be stiff through strengthening her.

48. As the result of your general experience, do you think that compliance with the Admiralty regulations would render a boat unsuitable for the ordinary conveyance of mails and passengers; that is, neglecting the question of extra cost?—Not at all.

49. If you were in charge of the management of this service, how many boats, in your judgment, would be sufficient to carry out an efficient service?—You want one to run from each end?

50. Yes?—The boats must be laid up occasionally to be cleaned. You must have a third boat or borrow another, in case of one of your own being laid up. All the coastal services have a reserve boat.

51. In order to maintain an efficient service, there should be a boat kept in reserve to replace one of the others when laid up for repairs or from any particular cause of disablement?—Exactly so.

52. From the evidence which you have given to the members of the Committee, am I right in assuming that after your experience of the weather here, and the weather on the English coasts, the records of the Home mail-steamers would give us accurate data from which to work on here: that is, if we had a boat equal in power and similar in construction to those which make railway connections at Home, we need not be afraid that she would not do the same work in New Zealand?—Yes.

53. So that any data we may get with regard to those boats will be reliable?—Yes.

54. *Mr. Joyce.*] You are a naval reserve officer, are you not?—I was, but I am not now. I am on the shelf; I was a lieutenant.

55. How long did you hold the rank?—Ten or twelve years.

56. During those ten or twelve years did you acquire technical knowledge of the service in any of Her Majesty's ships?—My knowledge of the service did not extend beyond visiting several of Her Majesty's ships, and some of the building yards.

57. So that in answering a question about making a ship stiff you know from experience that strengthening a ship would not necessarily make her slow?—It would not.

58. The boats in the Atlantic service are built very strong?—Exceedingly strong.

59. Much more so than we should require between here and Lyttelton?—Of course their boats are very much larger than you would require, and the larger they are the stronger they must be built. The proportions between size and strength are worked out by scale. A naval architect will design you a boat if you give him the service and the speed you require.

60. Have you ever had any difficulty in making this port or Lyttelton in thick weather?—Once.

61. Have you any suggestions to make to the Committee as to any fog-signals that would be required to assist in the navigation?—Sirens would be of very great use, such as they have all around the Home coast.

62. Are there any rocks off Terawhiti that give you any anxiety in coming up from Lyttelton?—I do not get so close to the land as to make acquaintance with the rocks.

63. But these steamers would have to go pretty close to the land?—Well, a man who was constantly making the passage and had a local knowledge would be able to judge better than a man who only makes the passage occasionally. He would be guided a good deal by the revolutions of his engines. The boats running between Dover and Calais often go by the beats of the paddles. Of course, they make a passage every day, and they can strike an average. It is an old adage on the Pacific Coast, "In thick weather navigate by the stroke of the paddle," and of course in a screw steamer you would be able to check your distance by the revolutions of the screw.

64. Are there sirens between Dover and Calais?—There are sirens at every lighthouse round the coast of Great Britain.

65. Would they be useful here?—Yes; very useful.

66. How far can they be heard?—It is a very deceptive thing. I have heard a siren at a tremendous distance.

67. What distance?—Four or five miles in a fog, and again I have been close to and have heard nothing. Nothing is a worse conveyer of sound than fog.

68. You would hear them farther in a strong wind?—In a strong wind there would be no fog.

69. *Mr. J. Hutcheson.*] Was it not necessary as a condition to your belonging to the Naval Reserve that you should have a naval training in gunnery and that sort of thing?—I do not claim to be in that position.

70. Is not that a necessary condition to being enrolled in the Naval Reserve?—Not at the time I joined. We were taken direct from the mercantile service.

71. But is there not a certain amount of training on Her Majesty's ships required?—It is purely voluntary.

72. In order that a merchant stemer may be entitled to fly the blue ensign, is she not compelled to comply with the condition that a certain proportion of her crew shall belong to the Naval Reserve?—Yes.

73. What is the proportion?—Ten or twelve, I believe.

74. Not in proportion to the number of her crew?—No; it is a fixed number.

75. Must not these men have made themselves competent in drill on board one of Her Majesty's ships in order to qualify as seamen in the Naval Reserve?—Yes; they drill them either at a battery or on board a ship.

76. What I am anxious to ascertain is this: In view of the possibility of part of the recommendation of this Committee being that these mail-steamers should be subject to Admiralty regulations, so that in time of war they could be utilised as auxiliaries to the Australian squadron, a certain proportion of the crew being trained men, could these conditions be complied with without impairing the mail-service?—Yes, easily.

77. *Mr. Buchanan.*] Could you give us an estimate of the indicated horse-power required for an eighteen-knot boat, builder's guarantee?—I should not like to give a definite answer to that question. I could only give you a rough estimate. The two special boats built by the P. and O. Company for the Brindisi–Port Said service are of 6,000-horse power.

78. What is their tonnage?—Between 1,800 and 2,000 tons.

79. And they run eighteen knots?—They run twenty knots. They are 300 ft. long, and they are 38 ft. beam.

80. And the indicated horse-power is 6,000?—That is the advertised horse-power.

Mr. William Henry Pitcher sworn and examined.

81. *Mr. Buchanan.*] You are chief engineer of the "Ruahine"?—Yes.

82. You are aware of the object with which this Committee has been set up—namely, to consider the question of a fast steam-service connecting the train-services in the North and South Islands at Lyttelton and Wellington respectively. Supposing a steamer to carry, say, 250 passengers and 500 tons of cargo, or thereabouts, and to run the distance between Wellington and Lyttelton, say, in ten, eleven, or twelve hours, could you give the Committee your opinion as to the tonnage of the steamer which would be best adapted for such a service as that—say, ten hours to begin with?—You would want an eighteen-knot boat at that rate.

83. The distance being 176 knots?—That would be at the rate of about 17½ knots, and you would want a little margin. You could do it in ordinary weather, but you must have a little margin of reserve for bad weather.

84. What builder's guarantee of speed would you assume to secure a running speed of 17½ knots?—You would really have to go in for a nineteen-knot boat to keep it up regularly. A boat that will do, say, twelve knots on the measured mile, will not keep it up in the ordinary way. Unless you have a margin, you must use more coal so as to be able to drive her fourteen knots to keep up that rate.

85. What measurement as to length, beam, and gross tonnage would you recommend for such a service?—If you want a comfortable boat you cannot have as small a one as the "Takapuna"; you would require a bigger one than the "Rotomahana."

86. Do you know the "Rotomahana"? No. I have never put my foot on board of her. I have only seen her from outside.

87. What tonnage would you think would be required?—I should say that with a 2,500- or a 3,000-ton boat you could carry your passengers with comfort, and have plenty of room for them.

88. Would a 2,000-ton boat be of sufficient size to permit of her being driven in a three-quarter gale of wind?—Yes, if she were a well built boat you could drive her through it.

89. With a turtleback?—I should certainly recommend it. Harland and Wolff build them in that way for the White Star Company for the Atlantic trade. The "Ionic," too, which comes out here has one, and a very good thing it is.

90. Supposing the service was to be slower than 17½ knots, and that you were to run the 175 miles in eleven or twelve hours, would you make any difference in the size of the boat—would you lessen it?—You would not have quite so much comfort on board for the passengers as you would have on the bigger boat. Of course, you could make the boat smaller. You could make the cabins smaller, and you could cut down the saloon accommodation.

91. What I have in view is the capability of driving the boat in heavy weather; from that point of view, would you recommend a boat smaller than 2,000 tons?—Certainly not if the boat is to go through it comfortably.

92. Have you any idea of the cost of a steamer of 19½ knots with first-class fittings and passenger accommodation?—I have no doubt it would cost a great deal more if she were built by Harland and Wolff than if you had her built on the Tyne.

93. Say, then, at Harland and Wolff's?—Not under £30 a ton. You might get it perhaps for £20, but not of the same class. I reckon that a boat like the "Ruahine" or "Rimutaka" would cost £30 a ton.

94. Would there not be a difference in the cost per ton according to whether the speed was say 17½ knots or less?—Yes; I suppose that would make a difference. If you were to run nineteen knots you would have to make the boat stronger.

95. And the engines would be more costly?—Yes; they would be more costly. I have no doubt it would cost more per ton.

96. What would be your estimate of the coal consumed per indicated horse-power for 19½ knots, builders' guarantee?—New Zealand coal, I suppose, you mean?

97. Yes?—You could not do it, certainly, under 2 lb. per indicated horse-power per hour.

98. Would it be the same whether the speed was 19½ knots or less?—It would be less at a slower speed. Supposing you had a ship, and were going to drive her at nineteen knots, and decided to reduce it to seventeen knots, you would not be forcing her so much.

99. Have you any data to give the Committee of the horse-power required to run a 2,000-ton boat at eighteen knots?—You would want over 3,000 horse-power indicated.

100. *Mr. J. Hutcheson.*] Much would depend upon the model?—Yes, upon the model to a certain extent.

101. *Mr. Buchanan.*] How long have you been trading on the New Zealand coast?—Fourteen years.

102. What comparison would you make between the average weather here and that on the English coast?—We really have had worse weather on this coast than on the English coast during the fourteen years I have been here. Only the other night, coming through the Straits, we took a sea over the top of the "Ruahine" which broke the skylight, and we were 20 ft. above the water line then.

103. Was it a green sea?—It was a medium sea. It did not do much damage beyond breaking the skylight and flooding the saloon. That was on Friday night last.

104. At what speed were you going?—I suppose about twelve knots.

105. Head into it?—No; it was right on the beam.

106. Where was that?—Coming through Cook Strait, just before you get to Terawhiti. We were coming down from Waitara. It was a south-west wind, a little abaft the beam.

107. Perhaps that was a class of question that it is scarcely fair to ask a chief engineer, because he is not a deck officer?—Well, I saw the water, and I saw the skylight broken.

108. Presuming that you had to advise on the builder's guarantee of speed to run a boat at a running speed of sixteen knots, would you advise an eighteen-knot boat or a twenty-knot boat?—If you want to do sixteen knots an eighteen-knot boat would always do it. You could drive the engines with great economy; it is only when you begin to force that you waste coal. If you want to get sixteen knots in all weathers you must have an eighteen-knot boat to do it. Of course, in fine weather you could do it very easily, but if there was a strong head wind you would have to open out.

109. You think that two knots is a sufficient margin?—Yes; quite sufficient.

110. Then, as between single and twin screws which would you recommend?—Oh, twin-screws are much better. They might cost a little more.

111. How about economy of running day by day as between the two?—I do not think there would be much difference. It would be very little. If possible, the twin-screws would be a little more.

112. *Mr. Joyce.*] You have been running to New Zealand for the last fourteen years?—Yes.

113. How long were you in the "Rimutaka"?—Thirteen years.

114. How long have you been a marine engineer?—I have been going to sea about eighteen years.

115. And for the four years before you came to New Zealand in what trade were you?—In the general trade, running to Bombay, Calcutta, New York, and in the Mediterranean.

116. You were in what are known as "tramps"?—Yes; some of them carrying 4,000 tons.

117. And their speed?—Nine and a-half to ten knots.

118. When you spoke of fast boats you simply spoke from what you have heard and read, and not from your own experience?—The boats I have come in to this colony are the fastest I have been in. The others were tramp boats.

119. Do you know anything of the boats running between England and Germany and France?—Yes.

120. The latest additions?—I have only read of them. I have not seen them.

121. *Mr. J. Hutcheson.*] What type of engines should you advise to be put into these boats?—Triple-expansion engines; three cranks.

122. Twin screws?—Certainly.

123. Is there any exact relation as between an engine's working-speed as shown by the revolutions on the indicator and the indications on the cherub-log?—No; it varies entirely with the weather and currents.

124. My question bears on the question of reserve horse-power and boiler-capacity: is it possible that your indicator might show a speed of eighteen knots, when in reality the vessel might only be travelling fifteen knots?—Yes, current would do it. If they knew they had a current to contend with they would allow for that.

125. Then the engine-room record is not a true record of the distance travelled?—No; there is slip also to be allowed for, and it varies from five to forty in different weathers.

126. Is that a greater quantity with a large single propeller than with twin-screws?—There is not a noticeable difference.

127. If you were charged with carrying out this service in a state of high efficiency, in order to insure having a boat at either end ready to leave port, what is the least number of boats you would have?—I should think you would do very well with two boats.

128. But if there is a break-down and you must maintain the service?—Then you should have a third one for a stand-by.

129. If it were an absolute necessity that the service must be maintained to connect the two termini, do you not think that a third boat would be an indispensable necessity?—I do not think that you would really require a third boat.

130. In your experience as a marine engineer, do you not think that if the engines are not attended to in time and minor repairs made at once when they occur that the consequences are sometimes disastrous?—Of course, they require well looking after.

131. Could you not imagine a serious mishap in the engine-room necessitating the regular boat being laid up for a time and an inferior boat being put on, and her being stuck up for perhaps thirty-six hours?—Yes.

132. Seeing that this is a mail service, is it not an ordinary precaution to have a stand-by boat?—I do not think so. I think two boats could do it if they were well looked after.

133. You can imagine these boats will be running almost continuously with very short time in port to effect ordinary repairs; it will be one continuous drive from port to port through all weathers; would it not be a rather severe ordeal on the engines?—At times a boat would have to lie up for repairs.

134. Have you had any experience in yards or engine-shops, either before you went to sea or since, which would make you acquainted with the building-regulations to fulfil the Admiralty conditions in regard to merchant cruisers?—No; I have not.

135. From your general knowledge and from what you have read and heard, do you know that there is any difference in the construction of a vessel intended to carry guns, but intended also to trade in ordinary times?—I think you will find there is some difference.

136. You cannot give the Committee an idea of what compliance with the Admiralty conditions would mean in the cost of these steamers?—I could not tell you that.

137. *Mr. Buchanan.*] Mr. Hutcheson has been putting some questions to you as to the power of continuous running without time for minor repairs; now, in oversea traffic, you have to run four or five days without a chance of making minor repairs?—No chance whatever.

138. Would not the stoppage in port each day from, say, 10 in the morning to 5 in the afternoon, give a chance of effecting the slight adjustments which would principally be necessary to avoid danger from loose bearings or imperfect fixtures?—Yes, a sort of general overhaul could easily be done during the hours they would be in port; but, supposing you broke a cylinder-top the same as the "Otarama" did at sea, then it would take you some time to make repairs. Since we have been on the coast we burst our main steam-pipe, and had to take it down. It took three days to do that and to effect the repairs, and then you have to allow several hours for putting it up again. If you had twin screws, you could go on with one engine and do your ten knots. You could have half your boilers in use, and clean the others, and you could drive with one engine and disconnect the other so as to repair anything that was wanted.

139. The six-monthly overhaul, or whatever is the custom, would be of much shorter duration in a steamer where there was an opportunity every day for ordinary repairs as compared with what would be required in an oversea boat like the "Ruahine"?—Yes. Supposing you had four boilers, you could go on with three, and take off one, and then the surveyor could go in and inspect it. It would take nearly a day for it to cool down, and then you have to take the scale off, so that that would take about three days. That would be just about the time it would take; one day to cool down, one day to survey and clean, and a day to run it up. It takes twenty-four hours to get the steam up in a cleaned boiler, for it is wise to do it quietly.

140. How often are boilers overhauled?—We do it at each end.

141. But in these proposed boats would once in six months be sufficient?—Yes.

142. Not once in twelve months?—No; once in six months you must look over your boilers.

143. Supposing a third boat, and you have an overhaul once in six months, how long do you think that overhaul would take so as to do justice to the boats?—The overhaul would have to be made for the survey, which would cause most detention. The Government surveyor at Home says, "I will come down on such a day and look at your bearings," and you say, "I will have them ready, say, on Tuesday," and then he comes and looks at them, and then you have to close up again; and it is the same with the cylinders and so all through.

144. What time would that take with one of these steamers?—Perhaps three or four days.

145. Once in six months?—Yes; including a survey of the boilers.

146. In the Irish and English channels, where these fast steamers mostly run, is it not a beam sea generally?—Yes, when they are crossing.

147. Between Wellington and Lyttelton it would be a head sea?—Yes.

148. Would not that make the time more uncertain between Wellington and Lyttelton than in those fast English services?—Yes, no doubt it would make a little difference; but when you have the extra power you can cut off at half instead of two-thirds stroke. You would have something to spare, and you could drive the boat through.

149. *Mr. Joyce.*] Do you think three days would be sufficient for the half-yearly or yearly overhaul; you must remember that the ship requires attention as well as the machinery—would it not require a week or ten days?—Oh, no.

150. How many years would boats of this class run before they would require more than three days' laying-up, barring any great accident?—You would not require any more for some years, nothing more than a general overhaul.

151. Three days would be sufficient for that?—Yes; you would of course have to have plenty of men on.

152. *Mr. Buchanan.*] Is it not true that the "Adriatic," one of the White Star ships, is still running across the Atlantic, although she has been at it for twenty-five years?—Yes; she gets a week at the end of each voyage. She runs across in seven or eight days and then has a week of each end.

THURSDAY, 11TH AUGUST, 1898.

Mr. JAMES MILLS sworn and examined.

1. *The Chairman.*] You are managing director of the Union Steamship Company?—Yes.

2. Will you tell the Committee whether there are any steamers in course of construction, either by your company or any other, of greater speed for this local mail-service than those which run at present?—We have none.

3. Will you say when the "Rotomahana" was built?—Speaking from memory, about eighteen years ago.

4. In 1879, according to Lloyd's Register?—Yes, that is so.

5. Has she been running her best speed lately?—No, not her maximum speed.

6. What could she do as a maximum in ordinary weather?—From 14½ to 15 knots. She can steam as a maximum 16 knots, but 14½ to 15 is about the highest she can maintain.

7. *The Chairman.*] She came up yesterday at the rate of about 14 knots; she was 12½ hours coming up. Can you tell the Committee the cost of running that boat per month?—She requires to earn between £2,400 and £2,500 per month to pay cost of running and depreciation.

8. Do you say £2,500?—Close on £2,500 per month.

9. That is what she requires to earn. Can you say what she is earning?—She has averaged £2,000 per month; she has barely paid the cost of running without providing for general overhaul or depreciation. I am speaking of the average throughout the year. She is earning rather less than that in winter.

10. Having been running for nineteen years, is not her cost about written off?—A vessel ought to be written off in twenty years.

11. Is not the cost of her running largely due to her old type of equipment?—No; there is not much in that. She burns a little more coal than a modern vessel of the same power would do, but that is more than counterbalanced by the low charges for insurance and interest now that her value is down to small sum.

12. Could not a boat of better type and equipment and of the same tonnage be run at 16 knots an hour quite as cheaply as the "Rotomahana" at her 14 knots?—No. A boat to run 16 knots would require a very much larger power, consequently a larger coal-consumption, and a larger staff of men.

13. Would not the improved engines and boilers contribute to economy in the coal?—Yes; but we are dealing with larger power, and larger consumption in consequence. Then, you have to deal with interest, insurance, and depreciation on a larger capital.

14. But otherwise the expense would be no greater?—Well, the expense of a more powerful vessel would be greater in various directions. She would burn more coal, would require a larger staff of hands, her wear-and-tear would be greater, and all the expenses of the vessel would be increased in proportion.

15. Can you tell us the number of passengers carried during the year between Wellington and Lyttelton by all your boats, including the intercolonial?—I can, and am glad to give the Committee all the information I am able to do, but I prefer it should not be published.

16. Of course, we do not want to publish, as it were, trade secrets. We do not want to show your hands to possible competitors, but we want to know for our own guidance?—I shall be pleased to give the Committee all information, but do not care for its being all published.

[Mr. Mills was at this stage requested to retire while the Committee discussed the matter. The Committee agreed not to press questions of this nature, which concerned the private affairs of the company.]

On Mr. Mills returning into the room,

17. *The Chairman* said: I would ask you on what terms your company would be prepared to run an eleven-hours service daily between Wellington and Lyttelton?—That also is information which, if published, would affect us in case of negotiations afterwards.

18. *The Chairman.*] However, you can give the figures approximately, and you can keep a reserve?—On my way down from Auckland I went into the matter and prepared some figures; a twelve-hours service requires an average speed of 14½ knots. A vessel specially built for this work and capable of guaranteeing that rate in all ordinary bad weather would require to have a reserve speed of a knot and a half, and be capable of 16 knots. This would mean 17½ on trial. She would have 4,000-horse power, and would use about 2,800-horse power to do 14½ knots. Such a vessel would, I estimate, cost at least £65,000 delivered in the colony with all equipment.

19. *Mr. M. J. S. Mackenzie.*] And the tonnage?—She would be 300 ft. long by about 40 ft. broad. It depends on the construction of her deck-work and other things. I should say she would be from 2,000 to 2,500 tons.

20. That is for twelve hours?—Yes. An eleven-hours service would mean an average speed of 16 knots an hour, and would require to be capable of 17½ knots in order to insure the passage in all weathers, except, of course, extremely bad weather. Such a vessel would require 5,000-horse power, and would use 4,000 in ordinary work. I estimate she would cost about £75,000. A ten-hours service would require a speed of 17½ knots. This vessel would require to be capable of 19 knots, for which she would have 6,000-horse power, and she would use 5,000-horse power in ordinary work. I estimate she would cost £90,000 delivered. I may say the cost would depend largely on the specification. According to the completeness of the specification or otherwise the cost would vary.

21. *Mr. Lewis.*] Fittings, and so on?—Yes.

22. *Mr. M. J. S. Mackenzie.*] So that the faster you have got to go the bigger the margin would have to be?—Yes. I may add that I have made an estimate of the cost of running these boats respectively. The working-expenses of the boat required to do the service in twelve hours—allowing insurance at 4 per cent., interest at 4 per cent., and depreciation at 5 per cent.—would be £3,000 a month. A boat to do the trip in eleven hours would require to earn £3,345 per month; whereas a boat to do it in ten hours would require to earn £3,846 per month. You may say roughly £3,000 in one case, £3,500 in the next, and £4,000 in the third. Estimates are generally exceeded.

23. *The Chairman.*] What are you allowing for depreciation?—Five per cent. I may say, in running the "Rotomahana" last year we hardly expected her to pay, but we knew the general feeling was that some improvement ought to be made in the service, and we decided to give it a trial. During the six summer months she paid her way, but during the winter months she has incurred a very heavy loss. Her average earnings for the year have been about £2,000 per month. Her average earnings in the winter months have only been £1,750. So there is a very heavy loss, and it means we cannot keep her running during the winter. You asked me about the number of passengers between Lyttelton and Wellington, and I demurred to answer. On consideration, I will give you that information, as without it my evidence would be incomplete. During the last twelve months the number of single tickets issued between Lyttelton and Wellington, and *vice versâ*, was—saloon, 4,610; second class, 5,246; return tickets (including Christmas holidays, Easter excursions, &c.), 7,072 saloon, 2,535 steerage. The total of single and return tickets issued for local travel only was thus: 11,682 saloon, 7,781 steerage. In addition to these there were booked at Lyttelton and Wellington for more distant ports, and making their initial journey over this line—single tickets, 1,492 saloon, 1,604 steerage; return, 1,593 saloon, and 426 steerage; the grand total being 14,767 saloon, 9,811 steerage. We have also to allow a second journey for the return tickets, and also for passengers from Australia and elsewhere, who necessarily make this stage in their round. Counting the return tickets a second time, we have 8,665 saloon and 2,961 steerage. The through passengers who have travelled between Lyttelton and Wellington holding Australian tickets and tickets from more distant New Zealand ports are given as 10,954 saloon, 6,026 steerage. These all added together make the total number of people who have travelled between Lyttelton and Wellington, including what we call "through passengers," 34,386 saloon, and 18,798 steerage: altogether, 53,184. Now, as to the numbers carried by what we call "ferry steamers"—that is, the "Rotomahana," the "Te Anau," and occasionally the "Penguin"—which keep up the tri-weekly service throughout the year: The ferry steamers have made 160 trips during the year, and have carried 7,302 saloon and 5,194 steerage; and, in addition, 8,860 through passengers and return tickets—altogether, 21,356 people. This leaves a balance carried by other steamers of 31,828. I may explain our records show we have had equal to a steamer a day all the year round — that is, we have had other steamers running to and from Lyttelton and Wellington besides the ferry steamers, and have made something like 360 trips each way

24. *The Chairman.*] That would mean the colliers, I suppose?—No, the intercolonial steamers, and the "Penguin," and other steamers of that class. To give you an analysis of the work of this ferry-steamering, I may say they carried during the six summer months—that is, from November to April inclusive—saloon and steerage local bookings, 7,781; while in the winter six months—from May to October inclusive—they carried 4,715 passengers. During the summer months the average number of passengers on the round trip was fifty-five saloon passengers and thirty-seven steerage, altogether ninety-two. That is forty-six each way. This, of course, includes the traffic in the holiday season, which adds largely to the average. In the winter season the local bookings to and fro were thirty-five and twenty-seven respectively—altogether sixty-two, or thirty-one each way. The average per trip throughout the year of local bookings was forty-six saloon and thirty-two steerage, equal to thirty-nine each way. Including through tickets, and second-half returns, the average per trip for the year was 133, or 66½ each way. The average earnings of the ferry-steamers throughout the year have been £160 a trip.

25. *Mr. Duthie.*] That includes cargo?—Yes; roughly, £100 passage-money and £60 for cargo. Three trips a week mean thirteen trips a month, but a steamer would require at least a month each year for overhaul, so would run practically eleven months. You can only calculate an average of twelve trips a month. Twelve trips at £160 each equals £1,920 per month, based upon our last year's experience.

26. That is for the "Rotomahana" and "Penguin"?—Three trips a week by these steamers or a substitute.

27. It does not apply solely to the "Rotomahana"?—Oh no, it is for whatever steamers have done the work for the 160 trips. Taking those figures, the amount of subsidy required to cover cost of working the respective steamers which have been described would be: For the "Rotomahana," £6,000 a year; for the twelve-hours steamer, £12,000 a year; for the eleven-hours steamer, £17,000; and for the ten-hours steamer, £22,500. It is thus quite evident that the public idea of the value of this service is a very exaggerated one. The "Penguin," as you know, carried out this service for, I think, two years or more, and did it very well, and it was profitable, because £1,750 a month will cover all her working charges, and interest, insurance, and depreciation. So that in her case there was a very fair profit.

28. *The Chairman.*] At the sacrifice of the comfort of the passengers?—Well, not their comfort so much, but their time. It has always been our custom to consider the interests of passengers, and on this account we put on the "Rotomahana," but the experiment has not been satisfactory. The traffic on all our lines has very much fallen off. The earnings of the local steamers running out of Wellington now, such as the "Takapuna," "Penguin," "Rotoiti," &c., have fallen off compared with last winter. I have gone into these calculations very carefully, and I do not think I am very far out. My estimates of expenditure are based upon the experience of the "Rotomahana," and I have made provision for increased cost of running in the shape of coal-consumption, manning, interest, insurance, and depreciation.

29. Will you say at what price the coal is set down in your estimate?—I have charged the steamers 17s. 6d. per ton.

30. *Mr. Duthie.*] In both ports?—Yes; they get a good deal of their coal in Lyttelton because they have more time there.

31. *The Chairman.*] Is the "Rotomahana" fitted with bilge-chocks?—Oh yes, she was the first merchant-steamer ever fitted with them. That was nineteen years ago, and we have never since built a ship without bilge-keels; indeed, we have fitted them to several vessels which we have purchased, and with very satisfactory results.

31A. How is it she rolls so much?—The "Rotomahana" is on very fine lines. She is very fine at the ends. She was built for speed. Steamers nowadays are not built on such fine lines. They are made more flat on the floor, and have other alterations.

Mr. McNab (to the Chairman): I have not understood that he has given an answer to the question about the cost of this fast steam service.

The Chairman: He has not stated the price at which he was prepared to contract, but he has stated what he estimates the extra cost would be.

Mr. Mills: I have gone into it very carefully, and that is my estimate of what is necessary on basis of present trade.

32. *The Chairman.*] Yes, but that is subject to discount for possible increase in traffic, and for other considerations connected with the fact that you hold a monopoly of the trade. That is as I understood it?—Yes, quite so. We shall be prepared to make an offer for the service at the proper time, and in tendering shall, of course, take into consideration possible increase of traffic owing to altered train arrangements, hours of sailing, &c.

33. *Mr. Duthie.*] You have not alluded to what we call train connection. You run one or two days a week without the benefit of the through passengers. As I understand it, the object of this Committee is to get through traffic to the North. For instance, you could leave Dunedin and get to Auckland in fifty hours. Your steamer over-night would connect with the through train from Dunedin, and similarly at Wellington with the through train to the North. Do you not think that a regular service like that would develop the traffic?—We have been running this ferry service in connection with the Dunedin express train for years.

34. You do not connect with our Northern Railway to Napier, and so on to Auckland?—No.

35. Is it something on the lines you contemplate that, when the southern train arrives at Lyttelton, you would connect with that, and, then, thirteen hours later, the passengers could be leaving Wellington for the North?—If the through traffic is great enough. I do not think it would be. The train-service from Dunedin to Christchurch, and the running of the boat, should be arranged solely for the convenience of the traffic between Dunedin and Christchurch and Wellington. In my opinion, they are not at present. I think the trains and steamers run at the most inconvenient times. The train should leave Dunedin at half-past 9, and the boat leave Lyttelton at 8 o'clock at night, and arrive here at 8 o'clock in the morning. These hours would suit the traffic on the line; passengers would get their meals at more reasonable hours than at present, and Wellington passengers would reach home at a convenient hour in the morning.

36. What we contemplate is that the train should leave Invercargill at 2 o'clock in the afternoon and get to Dunedin that night, and should leave next morning by half-past 8, and the passengers get away from Lyttelton at, say, half-past 6 to connect with trains here at half-past 7 the following morning for the North, so that you have through communication, except for one night, from Dunedin to Auckland?—In my opinion, the Dunedin, Christchurch, and Wellington traffic is more important, and the hours I have mentioned are more convenient for them. It is too early to bundle passengers on shore in Wellington at 6.30 a.m. in winter.

Mr. Duthie: No; I did not say that. I said that the steamer would arrive at half-past 6, but the train would leave at half-past 7. We want to facilitate travelling and passing through the

country, and it does not interfere with you from Dunedin at all. And, if half-past 7 would be too early, then make it a bit later.

The Chairman: Yes, that could easily be done.

37. *Mr. Duthie* (to witness): Do not you think a through service of that sort would tend to develop a greater passenger traffic? The Harbour Board here might be disposed, in order that this should be carried out, to widen the wharf and extend the railway so that the train can come alongside the boat?—In my opinion the local traffic you have referred to is not capable of much development. We have not a large population. We have not people of wealth and leisure travelling about. Our traffic is all business people; you may develop that a little, but not much.

38. Do not the people of New Zealand travel in proportion more than those of any other country? And is not the passenger traffic larger in proportion?—I do not know about that; I have seen it so stated.

39. *Mr. Buchanan.*] How is it then, if people travel only on business, that you see such a very large proportion of women travelling by steamers?—When I said solely on business I should have said largely on business. During the summer season there are a large number of women travelling. What I want to emphasize is that we have not the large proportion of people of wealth and leisure that they have in older countries. All the railway arrangements here are calculated to deter people from travelling. I allude to overcrowded carriages, platforms, and ticket-offices.

The Chairman: Only we want to change that a little by giving greater facilities to the people.

Mr. Mills: I am not an advocate of high speed on our trains, because I do not think the traffic warrants it, but I am an advocate of greater conveniences in the direction I mention.

40. *Mr. Duthie* (to witness).] You have recognised that there is a considerable feeling in the public mind that faster steam-services should be established?—Yes, I have recognised it. That is why we tried the "Rotomahana."

41. You are not at present prepared for any more development of it?—No, not at present.

42. Of course, you understand that the object of the Committee is to try and see if we can do so?—We are not prepared to do so without assistance, but will be glad to undertake it with a suitable subsidy. Our larger steamers do not earn their salt.

43. We are to understand that if it was a daily service instead of a tri-weekly the proportion of loss would be greater?—Yes.

44. You have no steamer faster than the "Rotomahana" in the trade?—No, but if the "Rotomahana" were to run the whole of her boilers she could run at greater speed and maintain a twelve-hours service. There would be more vibration.

45. *Mr. Lewis.*] You say the cost of running the "Rotomahana" is about £2,000 a month, and you want £500 a month for depreciation and interest: is that so?—Yes; for depreciation, interest, and annual overhauls.

46. She has been running for about nineteen years. What rate of depreciation do you allow?—I reckon £250 a month depreciation on her original cost of £60,000.

47. Then, in nineteen years you have written £57,000 off her cost?—Yes.

48. Having regard to her present value, does not that appear to be an excessive sum?—She must be written off in twenty years, her value is coming down every day.

49. Which is to say, that in another year she will have written off her entire cost, and her then value would represent a very considerable sum?—No; because she would require a very large expenditure to make her fitted for a few years' more work, and that would have to be written off in its turn. At the end of twenty years a vessel requires re-boilering, and a very large expenditure in other respects to bring her up to date, so that the writing-down process continues all the time.

50. And some sort of a fund for maintaining her in a state of efficiency?—No, maintenance goes on also. The annual overhauls average from £1,000 to £2,000, according to the size of the ship, in addition to the ordinary maintenance, and in addition to depreciation.

51. And you charge that to the cost of running?—Yes.

52. As to the traffic, you say the putting on of the "Rotomahana" has not resulted in any settled increase of traffic or material?—No.

53. What has been your experience in connection with your lowering fares? Could you give us a general idea what the effect of lowering fares would be? Has it a tendency to increase the number of the travelling public?—Certainly it has, but it has not paid us to do it. We had a long period of low fares, carrying a large number of passengers, but it was very unprofitable; and even now we have recognised that our intercolonial fares are too low, and we have some idea of increasing them, simply because the larger boats are not paying their way.

54. I suppose there is no material difference in the cost of running a steamer full, as compared with half-full, of passengers from here to Lyttelton?—No, only for provisions, and that is not a great matter.

55. Then, if at the same fares we gave increased facilities, which is almost the same as lowering the fares, do you think it would result in any considerable accession of traffic?—There would be some increase of traffic or diversion of traffic, especially if the steamer ran at seasonable hours. As the ferry steamers run at present, leaving Lyttelton at 10 o'clock at night, there is no tendency to increase the number of passengers, as the Christchurch passengers prefer to leave at an earlier hour.

56. Do you think there would be an improvement if the railways were so made to work that there would be better arrangements with the steamers?—I could not say; we now run in conection with the Dunedin–Lyttelton trains.

57. What I wanted to get out was, whether by running the steamers and trains harmoniously, and in the same interest, instead of as now in separate interests, the traffic would be improved, and probably increased?—I do not think it is very likely.

58. To put it roughly, I suppose your opinion is this: that no one travels between here and Lyttelton unless he is compelled to?—I did not say that. There is a large tourist traffic even among local people, but I do not think people travel in winter unless for some special reason.

59. *Mr. McNab.*] Seeing that it would prove so difficult and expensive to reduce the time between Wellington and Dunedin by some two hours through the steam-service, would it not be more economical to retain the present steam-service, and get the two hours' reduction in the train between Lyttelton and Dunedin?—Certainly.

60. *Mr. Meredith.*] Based on the income and expenditure of the steamers "Rotomahana" and "Penguin," running between Lyttelton and Wellington, what bonus might the company want so as to cover the distance between the two ports in twelve hours in a daily service?—I have already practically answered that question. I have given estimates of the deficiency in earnings based on the present traffic. I did not exactly say what we would do it for, because, as the Chairman has said, other considerations might come in. I stated a steamer of large reserve power to guarantee a twelve-hours service would require about £12,000 a year as a bonus.

61. That is the difference between your estimated cost of running and the present traffic?—Yes.

62. *Mr. J. Hutcheson.*] Your estimates of the cost of the service have been based on the "Rotomahana's" work. Would it have been anything like that had she been a modern triple-expansion boat with every modern improvement in the way of cutting down the cost?—I have explained that any saving in coal in a vessel with more modern engines would be more than counterbalanced by the extra value in the vessel, and consequently the increased interest and insurance. The "Rotomahana" is written down to £10,000 in our books, and these calculations as to interest, insurance, &c., are based on this sum. When you come to deal with a vessel of the value of £60,000 the interest and insurance amount to very large figures. In the case of the "Rotomahana" the insurance is £40 a month, while in the case of a larger power vessel it would be from £400 to £600 for interest and insurance. That far more than covers the saving in coal.

63. If you were asked to initiate a service similar to what is now being maintained by the "Rotomahana" you would undoubtedly have a more economical boat?—We could not run another boat as cheaply as the "Rotomahana." I may explain that the "Rotomahana," running a thirteen-hours service, uses 55 tons of coal on the round trip. I estimate that a new boat to give a reliable twelve-hours service, and with reserve power, would use 70 tons for the round trip. This is a difference of 180 tons per month—£157 10s.—besides additional wages, oils, &c., together considerably exceeding £200 per month in engine-room alone in excess of "Rotomahana."

64. But if you were asked to initiate the present service you would undoubtedly require a more economical boat, the "Rotomahana" being at a very small cost now and being obsolete?—The "Rotomahana" being at a low value has an advantage over a new boat at a high value.

65. *Mr. Buchanan.*] I understood you to say that a 16-knot boat—builder's speed, 17½ knots—to run the distance in eleven hours, would cost £70,000. Is that English price, or delivered in the colony?—Delivered in the colony.

66. Would that be the cost of delivering a boat like that in the colony?—The cost of delivering in the colony includes all the equipment as well as cost of voyage out. The silver, and cutlery, and napery, and a lot of spare gear and stores are not included in a building contract. This, together with the cost of bringing her out, varies from £5,000 to £10,000.

67. *The Chairman.*] In short, furnishing the boat?—Yes; and the cost of trials, and so on.

68. Taking the cost of a boat required for such a service, you do not think you are over-estimating the cost of a boat such as we have mentioned—a 2,000-ton boat running regularly at 16 knots—at £75,000?—I do not think so. A good deal would depend upon the specifications. You would require a very much stronger boat for our purpose than is usual for short runs at Home.

69. *Mr. Buchanan.*] Would you call it a ferry-boat such as would run from Hull to Ostend?—They are not fast boats. The fast boats I had in my mind are from Harwich across to Antwerp and Holland—a hundred and twenty to a hundred and forty miles.

70. *The Chairman.*] We want the distance from Hull to Amsterdam?—That is 223 miles.

71. *Mr. Buchanan.*] Would you call that a ferry-boat?—Well, I suppose all those boats running across are ferry-boats. I do not know what class of boat is running there.

72. *The Chairman.*] They are boats of 1,800 tons and 18 knots from Hull to Amsterdam?—Yes; they would probably go from 15 to 16 knots.

73. Would not they require to be as substantial as those from here to Lyttelton?—Possibly; but I know a great deal is sacrificed to speed in connection with Channel boats.

74. Would they carry cargo to any extent?—Yes; what they may need to carry—200 or 300 tons, perhaps.

75. *Mr. Buchanan.*] Would the average weather to be expected between Lyttelton and Wellington be rougher than in the English Channel and Irish Sea?—Not rougher, I think, than in the German Ocean. I think, on the whole, the weather on the New Zealand coast is rather better than on the English coast.

76. *Mr. M. J. S. Mackenzie.*] Was not the "Takapuna" originally intended to run an express service from Lyttelton to Auckland?—She was.

77. How long did she continue?—One season.

78. Why did she knock off?—Because of the poor support she received.

79. What was her time?—From thirty-six to forty hours.

80. From Lyttelton?—From Onehunga to Lyttelton. I believe passengers have reached Dunedin in forty-eight hours.

81. There was a loss?—Yes.

82. Hopeless?—The "Takapuna" has not paid us from first to last.

83. How long would that be ago, Mr. Mills?—Fourteen years ago.

84. Do you not think the increase of population and traffic would make a difference now?—The circumstances are different now, because at that time there was no through train from Wellington to New Plymouth, and all through traffic came by steamer. Now a large number of passengers embark and disembark at New Plymouth. Only a limited number come through by steamer.

85. When you were running the "Takapuna" for that express service I presume that the traffic from Dunedin to Wellington would be very much greater than that from Wellington northwards?—The "Takapuna" did not come further south than to Lyttelton; she ran from Lyttelton to Onehunga. That is what she was designed for.

86. The traffic from Dunedin, then, would reach her in Lyttelton?—Yes.

87. The steamer traffic would be larger, I presume, from Lyttelton to Wellington than from Wellington north?—I imagine so; I have not the figures before me.

88. I suppose if the train-service were altered the steamers would at once fall in with the alteration?—Yes.

89. If the express arrived at 6 o'clock in Lyttelton you would start to suit it in the same way?—Yes; it would suit us to do so, because we have the steamer idle in Lyttelton from 6 in the evening till the train arrives about 10, whereas the time could be spent at much greater advantage in Wellington if she arrived earlier in the morning.

90. Can you explain how it is that, when the Vancouver mail-steamer arrives here at 8 o'clock in the morning, the steamers do not start south sometimes till 12 o'clock at night?—Our steamer leaves Wellington on Saturday nights at 11 o'clock in connection with the Napier and Wanganui trains to suit the convenience of the travelling public.

91. So that the convenience of the mails is sacrificed to local traffic?—I suppose you refer to one particular occasion? Our ordinary running is at times much upset owing to irregularity in arrival of ocean mails.

92. *The Chairman.*] What dividend did your company pay this last year?—Five per cent., with a small bonus from the Insurance Fund—1 per cent. from the insurance.

93. You have told us that your larger steamers "do not earn their salt," and that the "Rotomahana" was running at a loss of from £400 to £500 a month in the winter time. From what source, then, is the dividend derived?—We have a fleet of fifty-seven steamers engaged in various trades, and, naturally, they are not all run at a loss. I stated that we tried the "Rotomahana" for a season as an experiment, but we could not continue to go on running her at such a loss when we could do the service with a cheaper boat.

94. *Mr. M. J. S. Mackenzie.*] Would it be as fast a service with a cheaper boat?—No; the "Penguin" takes an hour longer than the "Rotomahana."

THURSDAY, 18TH AUGUST, 1898.

Mr. W. GRAY, Secretary of the Postal and Telegraph Department, sworn and examined.

1. *The Chairman* (to witness).] Will you please tell us what is the amount paid annually for special trains for the San Francisco and other such mails?—About £1,000 a year.

2. Do you know what the Railway Department charges a mile for these trains?—5s.

3. And is it charged for more than one way?—Only one way.

4. What amount does the department pay to the Union Steamship Company to carry mails between Wellington and Lyttelton, and *vice versâ?*—I could not give you that, but I could give you the total sum paid.

5. Between Lyttelton and Wellington?—About £3,000 a year. Of course, I could get you the other information if you wished.

6. Does that information apply to all parties?—Yes, to all parties.

7. Will you furnish us with a memorandum showing how it is divided?—You mean between the companies?

8. Between the different companies?—Yes, I will.

9. With a more regular and expeditious train-service, and with steamers connecting in the North and South Islands with regular and daily trains, do you think that the special trains would be needed?—I take it that special trains would be needed, particularly in connection with the San Francisco and Vancouver mails, as you could not always time the arrival and departure of the boats at and from Wellington and Lyttelton to suit the ordinary trains. No doubt, though, you could minimise the expense by having a regular and fast steam-service between the two places.

10. It would minimise this altogether?—Well, it would minimise it largely.

11. *Mr. Lewis.*] When you say you pay about £3,000 a year for the mails, how many do you run a week? There are some days when the steamers do not run, are there not?—Yes, that is so. I have a table here showing when the steamers left Lyttelton and Wellington. Taking the month of September, last year, there was on the average only one day a week when there was not a steamer running between here and Lyttelton; and sometimes there were two or three boats the same day.

12. So you have been getting five mails a week, practically?—Yes.

13. *Mr. Duthie.*] What is your arrangement of obligation, because we have had two hitches recently, for the distribution of the San Francisco and Vancouver mails? For instance, the Vancouver mail recently came here early in the morning, and was not despatched until 11 o'clock at night: is that in conformity with your arrangement?—On that occasion there were two steamers timed to leave Wellington for Lyttelton on the Saturday, but owing to bad weather on the coast one of the vessels did not get here at all. The Penguin had been advertised to leave after the arrival of the West Coast train, and her sailing could not be put forward. If she had not met with very

adverse weather on the trip to Lyttelton, the mail would have reached Dunedin all right, and have been delivered before business hours on Monday morning.

14. What I wish to understand is whether the time might be made more suitable?—The boats as a rule leave in the afternoon.

15. Is there a penalty arrangement?—No; but we get a good deal more out of the Union Company than——

16. I mean that the time of the railway running is not in arrangement with the steamers?—There were delays in regard to the last two San Francisco inward mails. And then, there was the Vancouver——

17. Then, do you not think it unsatisfactory that we should have a mail break down on the coast, and yet have to keep the main boats to their time?—Yes; but what can you do when you have a place like New Plymouth to deal with?

18. You said under the contract they were to keep the vessels under compulsion?—Yes, that is so.

19. And has your approbation?—I am speaking now about the San Francisco mail particularly; and I suppose you wish to know whether I consider the time taken for the transfer of the mails from Auckland to Onehunga is reasonable or not.

20. The whole thing is, do you consider three and a quarter hours' delay reasonable?—No. It was arranged between the Chief Postmaster and the agent of the Union Company that the steamer should leave Onehunga at noon. Without consultation with the Chief Postmaster the steamer's departure was altered to 12.30 p.m. A special train, however, would have been of no use, as it would not have reached Onehunga any earlier than the ordinary train leaving Auckland at 10.45 a.m., a quarter of an hour after the last of the southern mails had been placed on the train.

21. Yes; but for all that, you are responsible for it?—I do not know that.

22. But you are. You should have known that at 6 o'clock in the morning the steamer was signalled at Tiritiri?—But we had no such information; and we have had to complain of the failure to get advice from Tiritiri.

23. There is a very great neglect on the part of some of the officials of the Government, I think. Why is that so?—Well, I cannot admit that; it is not only the mails you have to handle, you have the southern passengers and cargo to see to also.

24. I do not think you need detain the steamer much longer for that?—Oh, yes, you have.

25. You have stated about the cargo. The mail-boat was able to be signalled at half-past 6 in the morning. You fixed the Onehunga steamer sailing at half-past 12; there is no reason why it should not have been advertised for half-past 10. Would not this proposed fast service have initiated the stoppage of all those special trains: that is to say, if you have only the daily service between here and Lyttelton—a service leaving Wellington at 9 o'clock at night—the whole thing would depend on that; the mail would always catch it, and there would be no need for special trains?—You would have to have a special train at times.

26. It gets to this: the Auckland steamer leaving Auckland and coming down, and then the mail being taken on by the railway to Wellington, then by steamboat to Lyttelton, and on down South by train. You would get rid of all these subdivisions on which you spend so much money?—Yes, we should get rid of a good many. We spent £1,009 last year on special trains.

27. I do not think you needed to have expended that £1,000 a year?—Well, you know, it is impossible for the steamer from Wellington to connect always with the express from Christchurch to Dunedin.

28. *The Chairman:* That is on the assumption that we retain these slow-going steamers.

29. *Mr. Duthie:* I wish to point out that the need at the present time would be obviated by this special service. With this quick service you would have no occasion to put on specials, because you would not get a steamer available.

30. *Mr. Gray* (witness): The Vancouver service is now responsible for heaviest expense in connection with specials. But for the adverse weather there would have been a second steamer here on the Saturday available for the southern portion of the Vancouver mail. You cannot altogether control these things.

31. *Mr. Duthie:* I think there ought to be some arrangement for a steamer to attend when the mail is due.

32. *Mr. Gray:* Yes, there is such an arrangement. There was a steamer; but, instead of leaving in the afternoon, it did not leave until 11 o'clock at night. I do not recollect the name of the second boat which would have been here but for unfavourable weather.

33. *Mr. Duthie.*] The West Coast is extremely regular?—Yes, it is; but it needs some arrangement to get everything right.

34. Yes; all we get is excuses, and the service is not performed?—I think, taking the service from one year's end to another, it is fairly well performed indeed.

35. I mean the Vancouver service. That service has either broken down or is on the way to it. It is your not having any satisfactory arrangements for the superintending at this end. We get extensions but no proper delivery?—Circumstances have happened which could not be controlled. It was not to be foreseen that the company would have to go into liquidation, and that, among other things, the steamers would have been seized, and the time-table interrupted for several months.

[At the close of his evidence the witness handed in several tabulated returns.]

STATEMENT showing ARRIVALS and DEPARTURES of STEAMERS at and from LYTTELTON from and for WELLINGTON, and the Occasions on which Connection made with Dunedin Express Train, during the Months of May and June, 1898.

Date.	Steamer, and Hour of Arrival.			Date.	Steamer, and Last Train before Departure.		
May 1	Rotorua ...	2.40 p.m.	Sunday.	May 2	Janet Nicoll ...	1 p.m.	...
" 2	Corinna ...	7 a.m. ...	Express.	" 2	Rotorua ...	6.30 p.m.	...
" 3	Rotomahana ...	7 a.m. ...	"	" 3	Rotomahana ...	10.15 p.m.	Express.
" 4	Te Anau ...	8 a.m. ...	"	" 4	Mararoa ...	6.30 p.m.	...
" 5	Penguin ...	8 a.m. ...	"	" 5	Penguin ...	10.15 p.m.	Express.
" 5	Rotorua ...	9.30 p.m.	Missed.	" 6	Rotorua ...	4.45 p.m.	...
" 7	Penguin ...	9 a.m. ...	Express.	" 7	Te Anau ...	10.15 p.m.	Express.
" 7	Elingamite ...	11 a.m. ...	Missed.	" 9	Herald ...	1.15 p.m.	...
" 8	Rotorua ...	5 p.m. ...	Sunday.	" 9	Penguin ...	6.30 p.m.	...
" 10	Rotomahana ...	7.20 a.m.	Express.	" 10	Rotomahana and Waikare	10.15 p.m.	Express.
" 11	Te Anau ...	9.30 a.m.	"				
" 11	Wakatipu ...	4.30 p.m.	Missed.	" 11	Elingamite ...	10.15 p.m.	Express.
" 12	Rotomahana ...	9 a.m. ...	Express.	" 12	Rotomahana ...	10.15 p.m.	"
" 13	Takapuna ...	10 a.m. ...	"	" 13	Takapuna ...	5 p.m.	...
" 14	Tarawera ...	8.25 a.m.	"	" 14	Te Anau ...	10.20 p.m.	Express.
" 15	Penguin ...	5 p.m. ...	Sunday.	" 16	Taupo ...	1 p.m.	...
" 17	Rotomahana ...	7.20 a.m.	Express.	" 16	Penguin ...	6.30 p.m.	...
" 18	Monowai ...	8 a.m. ...	"	" 17	Rotomahana ...	10.15 p.m.	Express.
" 18	Te Anau ...	4 p.m. ...	Missed.	" 18	Tarawera ...	6.45 p.m.	...
" 19	Rotomahana ...	7 a.m. ...	Express.	" 19	Rotomahana ...	10.15 p.m.	Express.
" 21	Westralia ...	8 a.m. ...	"	" 21	Te Anau ...	6.30 p.m.	...
" 22	Penguin ...	5 p.m. ...	Sunday.	" 21	Rotomahana ...	10.15 p.m.	Express.
" 24	Rotomahana ...	7.20 a.m.	Express.	" 23	Penguin ...	5 p.m.	...
" 25	Te Anau ...	8 a.m. ...	"	" 23	Talune ...	8.45 p.m.	...
" 26	Dingadee ...	2.45 p.m.	Missed.	" 24	Rotomahana ...	10.20 p.m.	Express.
" 27	Waikare ...	10 a.m. ...	Express.	" 25	Westralia ...	10.30 p.m.	"
" 28	Mararoa ...	8 a.m. ...	"	" 26	Rotomahana ...	10.15 p.m.	"
" 31	Rotomahana ...	10 a.m. ..	"	" 28	Taupo ...	4.50 p.m.	...
June 1	Te Anau ...	7.45 a.m.	"	" 28	Te Anau ...	10.20 p.m.	Express.
" 2	Rotomahana ...	8.20 a.m.	"	" 31	Rotomahana ...	10.15 p.m.	"
" 4	Rotomahana ...	7.30 a.m.	"	June 1	Mararoa ...	6.50 p.m.	...
" 5	Penguin ...	1.30 p.m.	Sunday.	" 2	Rotomahana ...	10.15 p.m.	Express.
" 7	Rotomahana ...	7 a.m. ...	Express.	" 4	Wakatipu ...	6 p.m.	...
" 8	Talune ...	9.20 a.m.	"	" 4	Rotomahana ...	10.15 p.m.	Express.
" 9	Rotomahana ...	7.30 a.m.	"	" 6	Penguin ...	6.25 p.m.	...
" 10	Takapuna ...	9.30 a.m.	"	" 7	Herald ...	2.20 p.m.	...
" 12	Tarawera ...	9 a.m. ...	Sunday.	" 7	Rotomahana ...	10.20 p.m.	Express.
" 12	Penguin ...	2 p.m. ...	"	" 8	Elingamite ...	10.25 p.m.	"
" 14	Rotomahana ...	7 a.m. ...	Express.	" 10	Takapuna ...	5.5 p.m.	...
" 16	Rotomahana ...	7 a.m. ...	"	" 10	Monowai ...	10.15 p.m.	Express.
" 18	Pareora ...	6 a.m. ...	"	" 11	Rotomahana ...	10.15 p.m.	"
" 18	Rotomahana ...	7 a.m. ...	"	" 13	Penguin ...	6.15 p.m.	...
" 19	Penguin ...	1.35 p.m.	Sunday.	" 14	Rotomahana ...	10.20 p.m.	Express.
" 21	Rotomahana ...	7.35 a.m.	Express.	" 15	Waihora ...	9 p.m.	...
" 22	Wakatipu ...	3.30 p.m.	Missed.	" 16	Rotomahana ...	10.15 p.m.	Express.
" 23	Rotomahana ...	7.15 a.m.	Express.	" 18	Herald ...	4 p.m.	...
" 25	Rotomahana ...	9.50 a.m.	"	" 18	Rotomahana ...	10.15 p.m.	Express.
" 26	Penguin ...	3 p.m. ...	Sunday.	" 20	Penguin ...	7 p.m.	...
" 28	Monowai ...	4.45 p.m.	Missed.	" 21	Rotomahana and Waikare	10.20 p.m.	Express.
" 28	Rotomahana ...	5.40 p.m.	"				
" 30	Duke of Portland	12.5 p.m.	"	" 22	Westralia ...	10.30 p.m.	"
				" 23	Rotomahana ...	10.15 p.m.	"
				" 26	Penguin ...	9.30 p.m.	...
				" 28	Taupo ...	10.10 p.m.	Express.
				" 29	Mararoa ...	8 p.m.	...

STATEMENT showing ARRIVALS and DEPARTURES of STEAMERS at and from LYTTELTON from and for WELLINGTON, and the Occasions on which Connection made with Dunedin Express Train, from 1st September to 9th October, 1897.

Date.	Steamer, and Hour of Arrival.			Date.	Steamer, and Last Train before Departure.	
Sept. 1	Takapuna ...	6 a.m. ...	Express.	Sept. 1	Takapuna ...	Express.
" 1	Te Anau ...	7.30 a.m. ...	"	" 2	Anglian ...	...
" 2	Rotorua ...	9 a.m. ...	"	" 2	Rotorua ...	Express.
" 3	Monowai ...	8 a.m. ...	"	" 4	Te Anau ...	"
" 4	Waihora ...	7.50 a.m. ...	"	" 6	Talune ...	...
" 5	Poherua ...	Noon ...	Sunday.	" 7	Omapere ...	...
" 5	Corinna ...	5 p.m. ...	"	" 7	Rotorua ...	Express.
" 7	Rotorua ...	7.15 a.m. ...	Express.	" 8	Waihora ...	...
" 7	Mararoa ...	2 p.m. ...	Missed.	" 9	Rotorua ...	Express.
" 8	Te Anau ...	10.30 a.m.	Express.	" 11	Rotorua ...	...
" 9	Rotorua ...	7.30 a.m. ...	"	" 11	Te Anau ...	Express.
" 10	Waikare ...	8.45 a.m. ...	"	" 14	Rotorua ...	"
" 11	Rotorua ...	8.15 a.m. ...	"	" 15	Corinna ...	...
" 11	Westralia ...	8.30 a.m. ...	"	" 15	Westralia ...	Express.
" 12	Ruahine ...	8 a.m. ...	Sunday.	" 16	Wakatipu ...	"
" 13	Indraghiri ...	7.45 a.m. ...	Express.	" 18	Te Anau ...	"
" 14	Rotorua ...	5 p.m. ...	Missed.	" 21	Omapere ...	...
" 15	Te Anau ...	7.15 a.m. ...	Express.	" 21	Te Anau ...	Express.
" 18	Tarawera ...	3.30 p.m. ...	Missed.	" 22	Tarawera ...	"
" 21	Te Anau ...	6.45 a.m. ...	Express.	" 23	Te Anau ...	"
" 21	Talune ...	8 a.m. ...	"	" 25	Rotorua ...	...
" 22	Rotorua ...	8.45 a.m. ...	"	" 25	Te Anau ...	Express.
" 23	Te Anau ...	8 a.m. ...	"	" 27	Corinna ...	...
" 25	Te Anau ...	8.25 a.m. ...	"	" 27	Monowai ...	...
" 28	Te Anau ...	7.15 a.m. ...	"	" 28	Te Anau ...	Express.
" 28	Flora	1.30 p.m. ...	Missed.	" 29	Takapuna ...	"
" 29	Takapuna ...	9 a.m. ...	Express.	" 30	Te Anau ...	"
" 29	Rotorua ...	10 am. ...	"	Oct. 2	Rotorua ...	...
" 30	Te Anau ...	6.45 a.m. ...	"	" 2	Te Anau ...	Express.
" 30	Kahu	2.30 p.m. ...	Missed.	" 5	Omapere ...	...
Oct. 2	Te Anau ...	6.15 a.m. ...	Express.	" 5	Te Anau ...	Express.
" 2	Wakatipu ...	6.45 a.m. ...	"	" 6	Waihora ...	...
" 2	Waihora ...	7.45 a.m. ...	"	" 6	Waikare ...	...
" 5	Te Anau ...	8.15 a.m. ...	"	" 7	Aotea	...
" 6	Rotorua ...	9.40 a.m. ...	"	" 7	Te Anau ...	Express.
" 7	Te Anau ...	8 a.m. ...	"			
" 8	Takapuna ...	1.15 p.m. ...	Missed.			
" 9	Westralia ...	6.20 a.m. ...	Express.			

STATEMENT showing GRATUITIES paid for CONVEYANCE of MAILS between WELLINGTON and LYTTELTON for the Year ended the 30th June, 1898; also, average Size and Weight of Mail when no Steamer the previous day.

To whom paid.	Amount.
	£ s. d.
Union Steamship Company	3,417 18 11
Huddart Parker and Company	151 13 1
Owners of other vessels	38 9 1
	£3,608 1 1

Average size and weight of mails when no steamer the previous day: Wellington to Lyttelton, forty-six bags, weighing 1,800 lb.; Lyttelton to Wellington, forty-five bags, weighing 1,100 lb.

W. GRAY.

UNITED KINGDOM.—EXTRACT from "Abstract of Contracts or Agreements for the Conveyance o Home Mails by Sea."

Line of Communication.	How often.	Number and Character of Vessels.	Contractors.	Contract or Agreement.			Payment.	Contract Time.	Deduction for Overtime.	Penalty for general Non-performance.	Remarks.
				Date of Contract.	Terminable.	Service commenced.					
Holyhead and Kingston.	Twice a day.	Four mail-packets specially built and maintained for the service.	City of Dublin Steam-packet Company.	1st July, 1895.	31st March, 1917, or on twelve months' notice after 31st March, 1916.	1st April, 1897.	£100,000 to 31st March, 1917. £80,000 after that date.	Outward journey (including transfer on both sides of the Channel), 3 hr. 37 min. (Distance, sixty-three nautical miles.) Inward journey (including transfer), 3 hr. 32 min.	£1 14s. per minute.	If on any occasion vessel is not ready, penalty of £100, and £10 per hour for every hour beyond stipulated time before vessel starts.	The payment is subject to a reduction of £2,000 in respect of the receipts from passenger traffic. It includes payment for parcel-services.

W. GRAY.

Mr. T. RONAYNE, General Manager of the Government Railways, sworn and re-examined.

36. *The Chairman.*] You were requested to prepare a skeleton time-table showing how it would be possible to expedite the railway and steamship service throughout the colony. Is the plan [produced by the witness] prepared with that object?—Yes, Sir; that plan shows various proposals, which I shall be able to explain. One specially deals with the short services.

The plan was divided into four sections as follow: No. 1, present service, showing through connection between Invercargill and stations north (including Lawrence Branch) by train and steamer to Auckland, giving times, days, &c.; No. 2, showing through connection between Auckland and Southland by a four-days service by rail and steamer after 1st December, 1898, the times of trains being as at present; No. 3, alternative, through train and steamer service between Auckland and Southland, four days per week between Wellington and Auckland, departure time of express from Dunedin to Christchurch altered to 8.30 a.m., steamer at Lyttelton to connect with the express and to leave Lyttelton for Wellington at 7.45 p.m., arrive Wellington 6.45 a.m., north train to leave Wellington 8.0 a.m. after arrival of steamer; No. 4, alternative service, identical with No. 3, except that the train from Wellington to New Plymouth would run on four consecutive days instead of running on alternate days.

Upon these diagrams Mr. Ronayne made the following remarks:—

PROPOSED IMPROVED TRAIN- AND STEAMER-SERVICES BETWEEN AUCKLAND AND INVERCARGILL.

No. 1 (Present Service).

Northward Running.—This enables mails and passengers from Southland for Oamaru and north thereof to leave Invercargill at 4.15 p.m. daily, arrive Clinton 9.5 p.m., stay for night; resume journey north at 6.5 a.m. on Tuesday, Wednesday, Thursday, Friday, and Saturday, and reach Lyttelton at 9.40 p.m. on those days, connecting with steamer leaving Lyttelton for Wellington at 10 p.m. on Tuesdays, Thursdays, and Saturdays. The time taken to do the journey to Wellington under existing arrangements is as follows: From Invercargill, forty-three hours, including nine hours' rest at Clinton; from Clinton and Lawrence, twenty-nine hours; from Dunedin, twenty-four hours; and such journeys can be made tri-weekly—namely, by leaving Invercargill on Monday, Wednesday, and Friday, at 4.15 p.m., and Clinton, Lawrence, and Dunedin, on Tuesday, Thursday, and Saturday, at 6.5 a.m., 6.25 a.m., and 11 a.m. respectively. The 6.5 a.m. train from Clinton connects with the Lawrence branch train at Milton, and takes on passengers and mails from Central Otago (*viâ* Lawrence) to Dunedin, landing them at the latter place at 10.50 a.m. in time to go forward by north express to Lyttelton at 11 a.m.

Passengers from stations south of Clinton, who desire to go through to Auckland overland, require to leave by Monday morning's train, and those from Clinton and stations north must leave by Tuesday morning's train, both reaching Wellington on Wednesday, and Auckland about midday on Saturday following.

The time taken on this journey could be reduced by twenty-four hours if the Union Steamship Company's steamer connected at Lyttelton with the express train from Dunedin on Wednesday

instead of leaving Lyttelton for Wellington at 6 p.m. as at present, thereby compelling passengers to travel on the previous day, reaching Wellington on Wednesday, and necessitating a stay of forty-four hours in Wellington, viz., from 11 a.m. Wednesday, till 6.50 a.m. Friday, whereas if the Wednesday steamer from Lyttelton connected with the express at that place, passengers for Auckland would only require to stay in Wellington nineteen or twenty hours, viz., from 11 a.m. Thursday to 6.50 a.m. Friday.

Passengers from Dunedin and south thereof for Napier arriving in Wellington on Wednesday and Friday go on by train from either Government station or Wellington and Manawatu Company's station, on Thursday and Saturday mornings, reaching Napier at 7.23 p.m. same days.

Southward Running.—Passengers from Auckland leave Onehunga by steamer at 1.30 p.m. on Mondays and Thursdays, arrive New Plymouth about 5 a.m. on Tuesdays and Fridays, leave by train at 7 a.m., arriving Wellington 9.50 p.m.; leave again by steamer for Lyttelton about 5 p.m. on following days, and in the case of Mondays, passengers reach Dunedin at 9 p.m. on the following Thursday, and Invercargill at 3.30 p.m. on the following Friday. The journey includes a break of nineteen hours in Wellington, and for Invercargill passengers a further twelve hours in Dunedin. Passengers who leave Auckland by Thursday's boats reach Dunedin on the following Monday at 9 p.m., and Invercargill on the following Tuesday at 3.30 p.m., having breaks of forty-seven and fifty-nine hours respectively.

Passengers from Wellington to Dunedin, and *vice versâ*, can, as a rule, get through on at least four days per week, the steamers invariably connecting with the express at Lyttelton. Napier passengers travelling to Dunedin and south can likewise get through three times per week.

No. 2 (Proposed Service from 1st December, 1898).

Northward Running.—Under this arrangement the running of the trains from stations in Southland to Dunedin, and express service Dunedin to Lyttelton, will be the same as at present, and passengers from southern stations, as far as Clinton and Lawrence, will be able to make two through trips per week to Auckland, whilst passengers from south of Clinton will be enabled to make one trip per week to Auckland. The former will be accomplished by leaving Clinton at 6.5 a.m. on Mondays and Tuesdays, taking express at Dunedin same day for Christchurch or Lyttelton, stay at either of these places all night, thence by steamer to Wellington on Tuesdays and Wednesdays, arriving at Wellington on Wednesdays and Thursdays, departing for north by train on Thursdays and Fridays, reaching Auckland on Fridays and Saturdays. Passengers from south of Clinton will be able to take the train leaving Invercargill at 4.15 p.m. on Mondays, catch Tuesday night's boat at Lyttelton, and reach Auckland on the Friday morning following.

If the departure of the steamer which leaves Lyttelton for Wellington on Wednesdays were so arranged that the boat would connect with the Wednesday express from Dunedin instead of leaving at 6 p.m., it would enable persons resident in Otago and Southland to make two direct through trips per week to Auckland, with a break of about eighteen hours only at Wellington.

Apart altogether, however, from the advantages to be derived by the delaying of the Wednesday steamer at Lyttelton as above, the service as outlined is an excellent one, and will result in a saving of twenty-four hours on the one direct trip per week which can be made under the proposed altered running of the trains and steamers between Wellington and Auckland, as owing to the fact of there being a train for New Plymouth on Thursday morning, the existing break of forty-four hours at Wellington will be reduced to nineteen or twenty hours, viz., from 11 a.m. on Wednesday to 6.50 a.m. on Thursday.

Southward Running.—By the alterations proposed in the days of departure of steamers from Auckland and the running of steamers and trains on two additional days per week, it will be practicable for passengers desirous of proceeding from Auckland to stations south of Dunedin to make two direct trips per week, and those proceeding to Dunedin will be enabled to make three direct trips per week, as against one trip per week under existing time-table.

Under proposal No. 2, which it is intended to bring into operation on the 1st December next, the running of the trains in the Middle Island will be undisturbed, the whole of the main line and branch connections will be maintained in their entirety, whilst in the North Island the more frequent running of the through trains between Wellington and New Plymouth will afford very much greater facilities for through travel, and at the same time be the means of improving the communication between Wellington and the outlying districts. The extra train-mileage entailed by the running of the two extra trains between Wanganui and New Plymouth will be 22,256 per annum; the cost of the service, based on the average of 4s. 8d. per train-mile, for year ending 31st March last, will be £5,193 per annum.

No. 3.—Under this table the express train would require to leave Dunedin at 8.30 a.m. at the latest, and to arrive at Lyttelton at 7.10 p.m. The steamer would require to leave Lyttelton at 7.45 p.m. and reach Wellington at 6.45 a.m., the through train for New Plymouth leaving Wellington at 8 a.m. Such a service would completely demoralise the whole of the train connections south of Dunedin, destroy the utility of the present afternoon service from Invercargill to Clinton, and the morning train from Clinton to Dunedin as a means of communication with the express trains for Christchurch, thereby deprive persons resident at stations south of Abbotsford of their present facilities, and compel those who desire to travel northwards by express to spend a night in Dunedin. It will also cause considerable delay to mails from all places south of Dunedin. The inconvenience would be specially felt by persons from stations south of Mosgiel, who would practically lose a whole day each time they desired to travel by the express.

It would be impracticable to time the morning train from Clinton to reach Dunedin at so early an hour as 8.30 a.m. It would, therefore, be necessary for passengers from Invercargill and all stations south of Mosgiel to travel to Dunedin by the previous day's express, or to run night-trains between Invercargill and Dunedin, in addition to the present services, which, as previously stated, would cost over £19,000 per annum. Even if such were done, passengers and mails from Otago Central, *viâ* Lawrence, would still be shut off.

In addition to the inconvenience caused to passengers from the South, the early departure of the express from Dunedin would necessitate an earlier start or accelerated running from Dunedin to Palmerston of the preceding mixed train which now picks up passengers at all stations between Dunedin and Palmerston and lands them at the latter station in time to go on by express if they so desire. The earlier starting of this train would seriously inconvenience the workmen and other passengers by whom it is now used, and its acceleration would necessitate a reduction in load and consequent running, at a cost of £2,900 per annum, of additional trains to overtake traffic.

The alteration in the running of the north-going express would be acutely felt by passengers at the various stopping-stations *en route*. It would be two hours and a half earlier than at present throughout. Passengers from Timaru for north would require to leave at 2.37 p.m., instead of at 5.7 p.m.; Ashburton passengers at 4.35, instead of at 7.5 p.m.

The time allowed for the steamer journey between Lyttelton and Wellington is eleven hours only, with one hour and a quarter of a break at Wellington to permit luggage and passengers to get from wharf to Manawatu Railway Company's Station. If the steamer were delayed by stress of weather for any period greater than half an hour it would miss the train, which could not be held. The steamer would therefore require to be capable of averaging a speed of sixteen knots per hour in all weathers. The train-service from Wellington to New Plymouth is based on a thirteen-hours-and-a-half journey, so that train would require to leave Wellington not later than 8 a.m. to reach New Plymouth at 9.30 p.m. To enable the journey to be accomplished in this time the loads will require to be considerably reduced, necessitating the running of extra trains at an additional cost of over £6,000 per annum, over and above the £5,000 additional cost under scheme No. 2 for a fast service, Wanganui to New Plymouth, on two days per week. If the through train to Woodville and Napier *viâ* Wairarapa is held in Wellington to connect with the steamer, the service on that line will be upset, the arrival of the through trains at both Wellington and Napier will be considerably delayed, and inconvenience will arise. Passengers who regularly travel by the trains in question consider that the present hours of arrival—viz., 7.25 p.m. at Napier, and 8.25 p.m. at Wellington—are late enough.

The starting of the Wairarapa train from Wellington before the arrival of the steamer would be calculated to alienate traffic from the Government to the Manawatu Company's line.

With regard to the utility of improved service, such as outlined in No. 3, in replacing mail specials, I find that the total amount paid by the Postal Department for special trains run for conveyance of mails during the year ending the 31st March last was £948, of which sum £141 was paid to the Wellington and Manawatu Railway Company. This amount, even if saved by the new service, would not be worth considering when compared with the increased expenditure which the new train-services would involve, apart altogether from the question of cost in connection with the equipment and maintenance of fast steamers capable of running between Lyttelton and Wellington in eleven hours in any weather.

The remarks applied to No. 3 are equally applicable to No. 4 alternative service, which is identical with No. 3 so far as times, mileages, and cost are concerned. As already stated, No. 2 proposal provides for an excellent through service, which can be still further improved by an arrangement for the Union Steamship Company's steamer to wait at Lyttelton for the arrival of the express passengers from Dunedin on Mondays and Wednesdays, instead of leaving at 6 p.m. as at present.

The additional cost of service outlined in No. 2 proposal is estimated at £5,000 per annum.

It must be distinctly understood that the poposals, as outlined herein and on the diagrams which are being placed before members of the Committee, simply show what could be done if it were desired to run a fast through service regardless of cost and the inconvenience that would arise through the upsetting of all present arrangements. They must not be taken as an indication that the department is prepared to recommend their adoption, or as being in any way binding on the department.

37. *The Chairman* (to witness).] You have set out very fully all the disadvantages attending the proposed alterations, but can you not give us some of the advantages to the majority of the public of the colony?—I think that so far as the North Island is concerned it will be a distinct advantage. The North Island would benefit more largely from this fast service than the South.

Mr. Lewis: That is just the attitude of the southern members; that is why we are here.

Mr. Ronayne: I believe the North Island would benefit from it more largely.

38. *The Chairman* (to witness).] But with facilities for reaching Auckland from Invercargill in three days, as compared with five or six days at the present time, and for all intermediate localities in proportion, do you not think that the improved service would tend generally to increase the traffic?—It certainly would have that tendency. It would divert the passengers to a considerable extent from the coastal steamers to the railways.

39. You have told us that the Postal Department paid £948 for special trains. Mr. Gray's evidence was £1,009?—We said about £1,000. My figures do not give the total amount paid by the Postal Department for the whole colony, but the amount paid by that department for mail specials run on the main through lines between New Plymouth and Longburn, and Lyttelton southwards in connection with the 'Frisco mail.

40. He gave us the exact figures. However, this charge is paid one way only?—That is so. They travel one hundred miles for about one hundred five-shillings—*i.e.*, for £25. If it was a train from Christchurch to Timaru—about a hundred miles—they pay one way only, and that is one hundred miles at 5s. per mile.

41. What is the cost to the department, roughly?—The statistics for the year ended 31st March were for running a general mail-train, 4s. 8d.

42. Therefore, if the Postal Department pay you 5s. only, you only halve the cost?—Just a fraction over half the cost. They pay 2s. 6d. a mile.

43. Therefore, if these numerous specials were superseded by a continuous, regular, and fast

service you would save practically £2,000 a year?—The State would save that—quite £2,000 a year; and also lessen the hindrances caused to traffic sometimes by giving these special mail-trains precedence of the other trains, when you have to put these others into sidings. This is an inconvenience to passengers, and it occasionally slightly deranges the train business, especially during the grain season.

44. Although the Postal Department pays this £1,000 a year, that does not help the distribution of the mails in the Hawke's Bay District?—No; I made an inquiry yesterday as to that. Specials are very rarely run between Palmerston North and Napier for the 'Frisco mail.

45. The mails for that district are not expedited by specials?—Not so far as I was able to learn. Mr. Gray may be able to give more information.

46. *Mr. Duthie.*] The Chairman has drawn attention that you, in stating the case, have dwelt on the inconvenience, and you have also, I observe, given the extra cost that was to be incurred. Would it be much trouble for you to let us have the case stated so that we could judge both sides—I mean an abstract of the extra cost and the savings in connection with it?—It would be rather a difficult matter to say what the increased gain would be by running this special service, with exception of the savings effected by not having to run these special trains for 'Frisco mail. If we had to run at increased speed and maintain time—say, between Wellington and New Plymouth—we must curtail the loads on the through trains. These trains are at the present time fully loaded, and when there is an extra carriage put on it occasionally means that a second engine has to be attached to assist the train. I do not see how we could give you a very reliable statement. We could give you an estimate of the increase of cost of having to run at an increased speed.

47. I do not know whether you have prejudices against the notion, but your official report reads as if you were adverse to it?—I do not think I am adverse. I have no feeling in the matter. I have been putting it different ways.

48. I would like if you could make a statement?—If I gave you any further information as to what the benefit would be, to a certain extent it would be a prophecy—you could not tell exactly.

49. You are an experienced man at the head of a department, and your opinion would be of value?—I shall be glad to put it in as favourable light as I can.

50. Now, as to the New Plymouth service. All, I understand, that would be needed would be the extending of the train between Hawera and New Plymouth on Tuesdays and Fridays?—It would mean the running of four trains per week between New Plymouth and Wanganui. The Hawera–New Plymouth trains would still have to run as at present to overtake local work.

51. Other days it stops. Wanganui is a little matter, because there is a train from Wanganui on to Hawera. One train extra a week seems a very large cost—£8,000?—That is the estimate. Direct trains and the special services would cost a good bit; and then there is the goods that would have to be shut off the accelerated through train.

52. But the other trains would not be disturbed?—No; they would run as at present, but they would have to be supplemented by running fast trains between Wanganui and New Plymouth.

53. *The Chairman.*] You say the increased facilities to be given between Wellington and New Plymouth will entail an additional cost of between £8,000 and £9,000—that is, the additional facilities, as stated by Sketch No. 2, will entail that additional cost. That is what you stated, is it not?—That is right. The additional facilities to be given under Sketch No. 2 will cost the Government Railways over £5,000 per annum for the fast trains alone.

54. Is it not a fact that the Hurunui–Bluff system is the largest contributor to the railway revenue?—Yes, certainly.

55. And in the main the most profitable?—It pays the heaviest rate of interest.

56. What I want to get at is: whether the largest contributors to the railway revenue should be placed in a worse position than the lesser contributors?—No.

57. They should have at least as important facilities?—Yes.

58. Between Christchurch and Lyttelton the first-class fare is 1s. 9d., and between Auckland and Onehunga 1s. for the same distance. Why should that be?—At the present time the 'bus competition between Onehunga and Auckland is very keen, and we are doing less passenger traffic between the two places now than we did several years ago. Although it is a good train-service the competition is so intense with the 'buses that we are going behind instead of gaining; and, if we are going to retain the present number of passengers or increase them, I think we shall have to still further reduce the charges between Auckland and Onehunga.

59. Then, in justice to the people of Canterbury, the charges between Christchurch and Lyttelton should be still further reduced?—Well, it has never been the practice of the department——

60. To consider justice?—To sacrifice revenue by making reductions in fares or freights without there were good and sufficient reasons for so doing.

61. *Mr. Duthie.*] Are you any faster then than the 'bus service?—Yes, certainly. We anticipate an electric tram system there before very long which will still further increase the competition.

62. *Mr. Lewis.*] Does the train-service between Auckland and Onehunga pay?—I cannot say.

63. *Mr. Duthie.*] Suppose the Lyttelton–Wellington steamship service was carried out and the Harbour Board was prepared to berth at the railway wharf, would it be possible for you to put the vans alongside, or the luggage-vans alongside?—The luggage-vans certainly could go alongside, and the passengers could too.

64. You see nothing inconvenient in it?—No. It is practicable.

65. Well, Mr. Ferguson's thought is to widen the wharf?—There will be no difficulties against the railway-train going alongside with facilities which the Harbour Board propose to provide at the wharf. But the starting of through trains from the Railway Wharf will very probably lead to Te Aro being ignored so far as these trains are concerned. It is for the Government to consider whether the Manawatu will be allowed to make the connection or not.

66. Well, it is to be hoped the Government will get charge of the Manawatu before long?—Yes, it is to be hoped they will.

67. It would be a considerable convenience?—Certainly, a great convenience to the public.
68. And to the Railway Department also?—Yes.
69. *The Chairman.*] And the saving to the public would be the saving of cabs and porterage? —Yes.

(The witness was requested by the Committee to furnish them with a table showing the advantages to the public by the train-service.)

Through-train and Steamer Service, Auckland–Invercargill, and vice versâ.

In compliance with the request of the Committee, I have to report on the advantages to be derived by the adoption of a through-train and steamer service, such as outlined on Sketch No. 3 of diagram herewith, as follows:—

By altering the departure time of the express from Dunedin to Christchurch from 11 a.m. to, say, 8.30 a.m., and running steamers to leave Lyttelton after the arrival of express passengers, capable of making the journey between Lyttelton and Wellington in eleven hours in all weathers, and so connecting with the through trains from Wellington to New Plymouth and Napier, it will be possible for a resident of Dunedin to leave at 8.30 a.m. on Monday and reach Auckland about 2 p.m. on Wednesday (allowing, say, fifteen hours for the journey New Plymouth to Onehunga), have twenty-seven hours in Auckland, leave again by boat at, say, 5 p.m. on Thursday, reach Dunedin again at 9 p.m. on Saturday, having done the double trip in six days. Similarly, a person leaving Auckland on Sunday could reach Dunedin on Tuesday, return on Thursday morning, and reach Auckland again on Saturday, at 2 p.m. Under the existing time-table, owing to the break of two days in Wellington, a person leaving Dunedin at 11 a.m. on Tuesday cannot reach Auckland until about 2 p.m. on following Saturday; and a person leaving Auckland on Monday cannot reach Dunedin until following Thursday, at 9 p.m., or Invercargill until Friday, at 3.30 p.m.

Under time-table which it is proposed to bring into operation on 1st December next (Sketch No. 2), it will be possible to make the trip from Auckland to Dunedin three times in a week, and to go from Auckland to Invercargill twice in the week; but persons desiring to travel from Invercargill or Dunedin to Auckland can only get through on one occasion in the week, owing to the fact of the Union Steamship Company's boat leaving Lyttelton before arrival of express on Mondays and Wednesdays.

The advantages, therefore, of a through connection such as outlined in Sketch No. 3 are that three trips can be made in a week from Auckland to Invercargill, two trips from Invercargill to Auckland, four trips Auckland to Dunedin, and four trips Dunedin to Auckland.

The same number of through trips can be made under Sketch No. 4, which is based on same lines as No. 3.

FRIDAY, 19TH AUGUST, 1898.

Mr. FREDERICK HENRY BARNS, sworn and examined.

1. *The Chairman.*] Your name is?—Frederick Henry Barns.
2. You are the representative of Messrs. Huddart, Parker, and Co. in Christchurch?—Yes; my firm is the company's local agents.
3. Will you state to the Committee how many vessels there are running on the New Zealand coast belonging to Messrs. Huddart, Parker, and Co.?—Two—the "Westralia" and the "Elingamite."

3A. Give the tonnage and the indicated horse-power?—I cannot give the indicated horse-power from memory. You can get that from Lloyd's. The gross tonnage of the "Westralia" is 2,884 tons, and that of the "Elingamite" 2,585 tons.

4. Can you give the speed of those steamers?—The "Westralia" is 13½ knots speed.
5. Do you mean she runs 13½ knots?—Her passage from Auckland to Sydney is generally 13·8 knots. The "Elingamite" is about 12½ knots.
6. Can you give the Committee the number of passengers carried by your boats for a period of twelve months between Wellington and Lyttelton?—I can do it—I have taken it out; but it is rather revealing the business of the company. The manager is away in Melbourne. I called in to the Wellington office; and the officer in charge (Mr. Ryan) did not say anything when I told him I had taken out the passenger traffic. I have taken in out for twelve months, month for month.

The Chairman: We do not want you to disclose anything which you think might injure the company.

Witness: I have taken it for the two steamers prior to the "Elingamite." Taking November as the first summer month, we carried in the "Westralia" from the 1st November, 1897, to the 30th April, 1898, the following number of passengers:—Saloon—November, 14; December, 22¾; January, 48½; February, 48¼; March (two trips), 72¾; April, 26¾: total, 233. Steerage—November, 3¼; December, 5; January, 9; February, 7; March (two trips), 15; April, 15: total, 54. In the "Anglian" and "Elingamite" during the summer months the traffic was:—Saloon—November, 23; December, 78½; January, 48; February, 45¼; March, 17; April, 48½: total, 240. Steerage—November, 3; December, 11; January, 3; February, 11½; March, 3; April, 14¾: total, 47. In the winter months the "Westralia" carried:—Saloon—May, 22; June, 35½; July, 24; August, 32½; September, 7; October, 22: total, 143. In the winter months the "Anglian" and "Elingamite" carried:—Saloon—May, 17½; June, 35¼; September, 8; October, 2: total, 63. The number of steerage passengers carried by the "Westralia" during the same months was as under:—May, 4; June, 6; July, 6; August, 5; September, 6; October, 5½: total, 33. The steerage passengers by the "Anglian" and "Elingamite" during the winter months were:—May, 7; June, 11; September, 2; October, 3: total, 23.

7. *Mr. Buchanan.*] What about the local return tickets?—These are the totals. There were 137 return tickets. We only actually took money for 336. These 137 were probably included in the return given you by the Union Company. The steerage bookings were 206, and the returns 82; leaving a balance of tickets of about 124.

8. *The Chairman.*] What are the passenger-rates between Lyttelton and Wellington in each class, and return?—Lyttelton to Wellington, saloon (single), £1; steerage (single), 10s.; saloon (return), £1 15s.; steerage (return), 17s. 6d.

9. *Mr. Duthie.*] Is this rate by both companies?—Yes.

10. *The Chairman.*] Is the "Elingamite" a recently built steamer?—No; she was built some years ago, in 1887.

11. When was the "Westralia" built?—In 1897—last year.

12. Do you consider the "Westralia" a favourite boat with the public?—Extremely so. People wait for her.

13. To what do you attribute this?—She has a very nice saloon, her sleeping-cabins are on the main deck, and she is a wonderfully steady boat. She is very flat on the floors.

14. What is her beam?—She is 41 ft. 2 in.; length, 327 ft. 4 in.; depth, 20 ft. 5 in.

15. *Mr. Buchanan.*] Can you tell the Committee what was the cost of the "Westralia"?—No, I cannot.

16. Supposing a local service of 12 knots from port to port, or 11 knots from port to port, were established, would you anticipate a large increase in passenger traffic?—No; I would not.

17. Supposing that a favourite fast boat were put on the line, do not you anticipate that would increase the number of passengers travelling per annum?—I do not think so. The number of people who want a fast passage is essentially limited; the people do not care whether they come up in twelve or fourteen hours. Those who are anxious to make a short passage are comparatively small.

18. Supposing that a steamer were to fit in with the train arrangements—say, that the line was completed to Auckland, and that the train arrived in Wellington from the North to catch the steamer leaving at 9 o'clock at night, so that a passenger might catch the express in Christchurch at 10 o'clock next morning, arriving in Dunedin a couple of hours sooner than now, and getting into Invercargill early the next day—do not you think that would stimulate traffic very considerably?—I do not think so. There would be only a few passengers who would require to go direct from Auckland to Invercargill. It would be very nice to have the journey shortened for those people who desire to travel that way—a few business people, but not the general public.

19. Assuming that the "Westralia" was of the speed to travel the distance regularly in extreme weather in twelve hours, what would it cost to make a profit on the year's work, supposing that there were two steamers like her going between Lyttelton and Wellington?—I could not say.

20. *Mr. Duthie.*] Your office has an important interest in the colony?—Yes; we run around from Dunedin to Sydney.

21. Do you think, if tenders were invited for an efficient service, connecting with the train, that it is likely your company would tender?—I cannot speak for the company, but, speaking generally, I should think they would. I have no knowledge of the matter. I have never discussed the matter.

22. Your company entered into an arrangement with the Union Company, about two years ago, whereby you work together and interchange passages. Would that prohibit you from tendering?—I do not know; I have not seen the agreement. The Huddart-Parker Company are anxious to cultivate trade in New Zealand. There is another boat on the stocks for the colonial trade.

23. Do you think that if tenders were called for this trade we would have a *bond fide* offer from your company?—I do not know anything of the working of the company. We are not the head agents in New Zealand.

24. Have you an acquaintance with the shipping interests in Australia?—I have not. I know a good deal about shipping, but I have never been in business in Australia.

25. What do you think is the amount the Government would have to give for such a service if we were likely to get a vote for such?—I do not think you will have any difficulty in getting it, but you will have to pay for it.

26. You think we should have the steamers ourselves?—They will cost a lot of money. I do not think there is enough trade to support them.

27. Before you go I wish to know if you had seen Mr. Mills's evidence, or if it was submitted to you?—I had no knowledge of it, except what appeared in the Press Association message in the Christchurch papers.

28. *The Chairman.*] With a view of expediting the journey between Wellington and Lyttelton so as to reduce the time to an eleven-hours service, what tonnage and power of steamer would you recommend?—I think the class of boat used by the London and South-western Railway Company between Southampton and Havre—perhaps a little bigger—say, 300 ft. long instead of 270 ft. These steamers are called the "Columbia" and "Alma." They accomplish the journey between the two ports, a distance of about 140 knots, in seven hours, and never miss the train at either end in any weather. They carry 104 saloon passengers and a good number of steerage. Twin-screws.

APPENDIX.

SIR,— Premier's Office, Wellington, 1st August, 1898.

I beg to forward herewith copy of telegram sent by me at your request to the Agent-General on the 19th instant relative to cost of steamers, and copy of his reply thereto.

I have, &c.,

E. G. Wright, Esq., M.H.R., Chairman, Wellington–Lyttelton Steam-service Committee. R. J. SEDDON.

CABLEGRAM from the PREMIER to the AGENT-GENERAL, dated the 19th July, 1898.

CABLE cost steamer 2,000 tons, twin-screws, chiefly for mails, passengers, capable running 18 knots hour; also boat less power running 16 knots hour; also cost steamer "Dresden" running from Hull.

CABLEGRAM to the PREMIER from the AGENT-GENERAL, dated London, the 30th July, 1898.

BUILDERS "Tutanekai" give carefully estimated cost steamers description indicated message of 19th—namely, 1,800 gross tonnage, 18 knots, £55,000; 16 knots, £49,500. Secondly, Great Eastern Company's "Dresden" cost £70,000.

Captain ALLMAN to the CHAIRMAN, Wellington–Lyttelton Steam-service Committee.

SIR,— Marine Department, Wellington, 30th August, 1898.

In reply to your verbal request for information as to probable working-expenses and earnings of two steamers of about 2,000 tons each employed in the proposed Wellington–Lyttelton steamer-service, I have to state as follows:—

I have based my calculation on my own personal experience and from what I have read concerning similar modern steam-vessels in Great Britain and in America.

For convenience I propose dealing with one steamer with an average speed of 16 knots (nautical miles) per hour; to insure this speed I think it would be necessary for a vessel to do 18 knots per hour on her trial trip. The working-expenses of such a vessel would, I think, be about £2,000 per month, assuming that the steamer did not run on Sundays, and the journey occupied about twelve hours, and the fuel (coal) cost 17s. per ton. The working-expenses of a steamer averaging 18 knots per hour would be about 30 per cent. more than a 16-knot boat.

In my calculation I have not provided for provisioning passengers or maintaining a large staff of cooks and stewards. In a service of this kind I do not think it is necessary, as the passengers would come on board late in the evening and leave early in the morning. Supper and breakfast might be provided for those who wish to order it on payment of a fixed charge. Coffee, &c., in the morning might be provided gratis.

PROBABLE EARNINGS, ETC.

In estimating the earnings of a service of this kind, I have inferred that the vessels are owned or subsidised by the State, therefore it should be assumed that they will carry all the mails and Government officials and employés, the amounts to be debited to the various departments. I am not in a position to say what these earnings would amount to.

As to passengers and cargo, the former fluctuate considerably, varying according to the season of the year and other attractions, such as race-meetings, &c. It must also be taken into account that existing steamship companies participate in the trade, and issue tickets beyond either port, consequently if a service of this sort were inaugurated it would be necessary to alter the railway time-table to suit the steamers. If this were done it would be a great inducement to the travelling public to patronise the service. Assuming that a service of this description was an accomplished fact, I am of opinion that, taking an annual average, each vessel might be expected to carry from five hundred to eight hundred persons per month, including first- and second-class passengers. The passage-money, therefore, would be about £500 per month, assuming ordinary rates were charged. As the service became known and population increased, I have no doubt the number of passengers would increase also.

Regarding freight, I am of opinion that the fast steamers would command the market, as the cargo at either terminus would be landed the first thing in the morning. Each vessel might be expected to get 45 to 55 tons of cargo daily: allowing 10s. per ton as freight, would make £500 freight per month. Total earnings, passengers and cargo, £1,000 per month, to which the public service account is to be added. The figures I have quoted may double themselves in a year or two, or they may not.

If rigid economy is studied, a coal-hulk for storage of coal at Wellington would be necessary. If the present Government steamers kept the supply up, the coal would cost about 12s. per ton—that is, allowing 5s. (the present) freight per ton from the West Coast, and 7s. per ton for small coal delivered on board at Westport or Greymouth.

I have purposely refrained from mentioning anything about insurances and the percentage of depreciation usually allowed on steamships.

In conclusion, I presume that these vessels would be exempt from light-dues and docking dues at Lyttelton.

I have, &c.,

GEO. ALLMAN,
Nautical Adviser, &c.

The Chairman, Wellington–Lyttelton Steam-service Committee,
House of Representatives, Wellington.

LIST of the PRINCIPAL STEAMERS owned by ENGLISH RAILWAY COMPANIES, and run in Connection with their Train-services.

Owners.	Steamers.	Tonnage.	Year Built.	Builders.	Dimensions.			Nominal Horse-power.	Speed.	How Driven.
					Length.	Breadth.	Depth of Hold.			
									Knots.	
Great Eastern Railway	Chelmsford ...	1,635	1893	Earles Company (Limited), Hull	300·4	34·5	16·2	447	18	Twin-screws.
	Amsterdam ...	1,745	1894	" "	302·4	36·0	16·2	447	18	"
	Berlin	1,745	1894	" "	302·4	36·0	16·2	447	18	"
	Vienna	1,753	1894	" "	302·0	36·0	16·2	447	18	"
	Dresden	1,805	1896	" "	302·0	38·0	16·2	476	18	"
Great Western Railway	Pembroke ...	971	1880	Laird Brothers	254·0	30·9	15·0	232	17½	Twin-screws.
	Antelope	672	1889	"	235·5	27·6	13·1	184	17	"
	Ibex	1,150	1891	"	265·0	32·6	14·2	299	20	"
	Reindeer	1,300	1897	Naval Construction Company...	280·0	34·5	16·8	...	20	"
	Roebuck	1,300	1897	" " ...	Building		...	...	20	"
Lancashire and Yorkshire, and London and N.W. Railways	Duke of Clarence ...	1,489	1892	Laird Brothers	312·5	36·2	15·9	299	18	Twin-screws.
	Duke of York ...	1,531	1894	Denny Brothers	310·2	37·0	16·0	323	18	"
	Duke of Lancaster ...	1,546	1895	"	310·0	37·1	16·4	348	18	"
London, Brighton, and S. Coast Railway ...	Seine	808	1891	Forges and Co.	268·9	29·7	15·6	307	20¼	Twin-screws.
	Tamise	953	1893	"	269·0	29·5	15·1	132	21¼	"
	Sussex	1,117	1896	Denny Brothers	275·0	34·1	14·0	292	21¼	"
	Manche	1,000	Building	"	Building		...	...	21¼	"
London, Chatham, and Dover Railway ...	Calais	979	1896	Denny Brothers	280·0	35·0	14·0	292	19	Paddle.
	Dover	979	1896	"	280·0	35·0	13·4	491	19	"
	Lord Warden ...	979	1896	"	280·0	35·0	13·4	490	19	"
	Calais-Dovre ...	1,212	1897	Leslie and Co.	302·0	61·0	13·9	...	19	"
London and North-western Railway ...	Violet	1,175	1880	Laird Brothers	300·0	33·1	14·4	...	18½	Paddle.
	Lily	1,175	1880	"	300·0	33·1	14·4	...	18½	"
	Banshee	1,250	1884	"	310·0	34·1	14·3	...	20	"
	Rosstrevor ...	1,094	1895	Denny Brothers	272·1	35·1	14·2	212	17½	Twin-screws.
	Connemara ...	1,066	1897	"	272·5	35·1	14·2	212	18	"
London and South-western Railway ...	Fredrica	1,059	1890	J. and G. Thomson, Glasgow...	253·0	35·1	14·8	360	19	Twin-screw
	Lydia	1,059	1890	" " ...	253·0	35·1	14·8	360	19	"
	Stella	1,059	1890	" " ...	253·0	35·1	14·8	360	19	"
	Alma	1,145	1894	" " ...	270·7	34·0	14·6	217	19	"
	Columbia	1,145	1894	" " ...	270·7	34·0	14·6	217	19	"
South-eastern Railway	Albert Victor ...	814	1880	Samuda Brothers	250·0	29·2	14·3	335	18	Paddle.
	Louise Dagmar ...	816	1880	"	250·0	29·2	14·3	618	18	"
	Mary Beatrice ...	817	1882	"	255 0	29·2	14·3	618	18	"
	Duchess of York ...	999	1895	R. and H. Green	270·0	30·1	14·5	684	18½	"

PARTICULARS of some of the UNION STEAMSHIP COMPANY'S BOATS and Others trading on the New Zealand Coast.

Owners.	Steamers.	Tonnage.	Year built.	Builders.	Dimensions.			Speed.	Nominal Horse-power.	How driven.
					Length.	Breadth.	Depth of Hold.			
Union Steamship Company	Rotomahana ...	1,763	1879	Denny and Co.	298·2	35·2	23·7	Not recorded in Lloyd's Register	420	Single screw.
	Mararoa	2,598	1885	"	320·1	42·1	24·7		508	"
	Waikare	3,097	1897	"	310·0	41·0	...		306	"
	Monowai	3,433	1890	"	330·0	42·2	24·8		330	"
	Talune	2,087	1890	Ramage and Ferguson ...	280·0	38·2	13·5		259	"
	Takapuna... ...	930	1883	Barrow Ship-building Company	220·0	32·1	17·5		241	"
	Penguin	824	1864	Tod and McGregor	220·5	28·5	14·4		151	"
Huddart, Parker, and Co	Westralia... ...	2,884	1897	J. Laing	327·4	41·2	20·5		412	"
	Elingamite ...	2,585	1887	Swan and Hunter	310·5	40·8	19·7		291	"

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Price 1s.

DIAGRAM

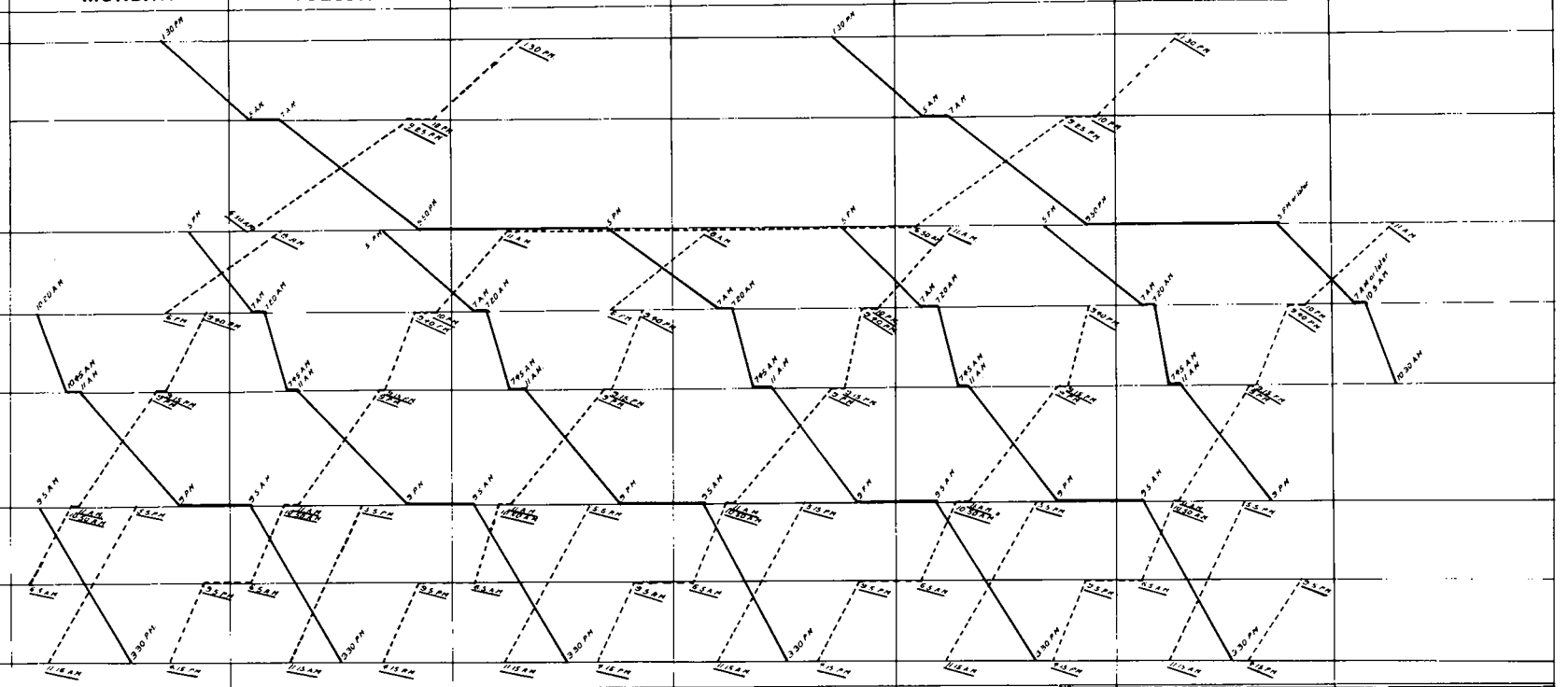
Of Train and Steamer Service between

INVERCARGILL, AUCKLAND, AND WELLINGTON.

No. 1. — SUNDAY. MONDAY. TUESDAY. WEDNESDAY. THURSDAY. FRIDAY. SATURDAY. SUNDAY.

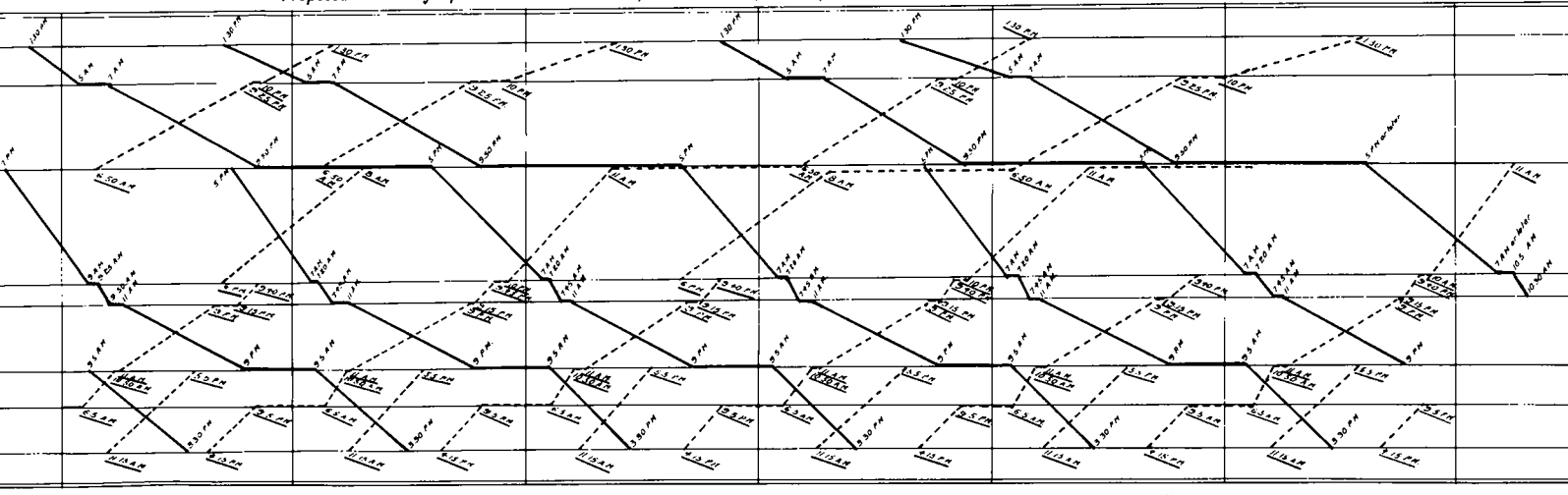
Onehunga
New Plymouth
Wellington
Lyttelton
Christchurch
Dunedin
Clinton
Invercargill

NOTE.—Dotted lines indicate Trains and Steamers running from South to North. Full lines indicate Trains and Steamers running from North to South.



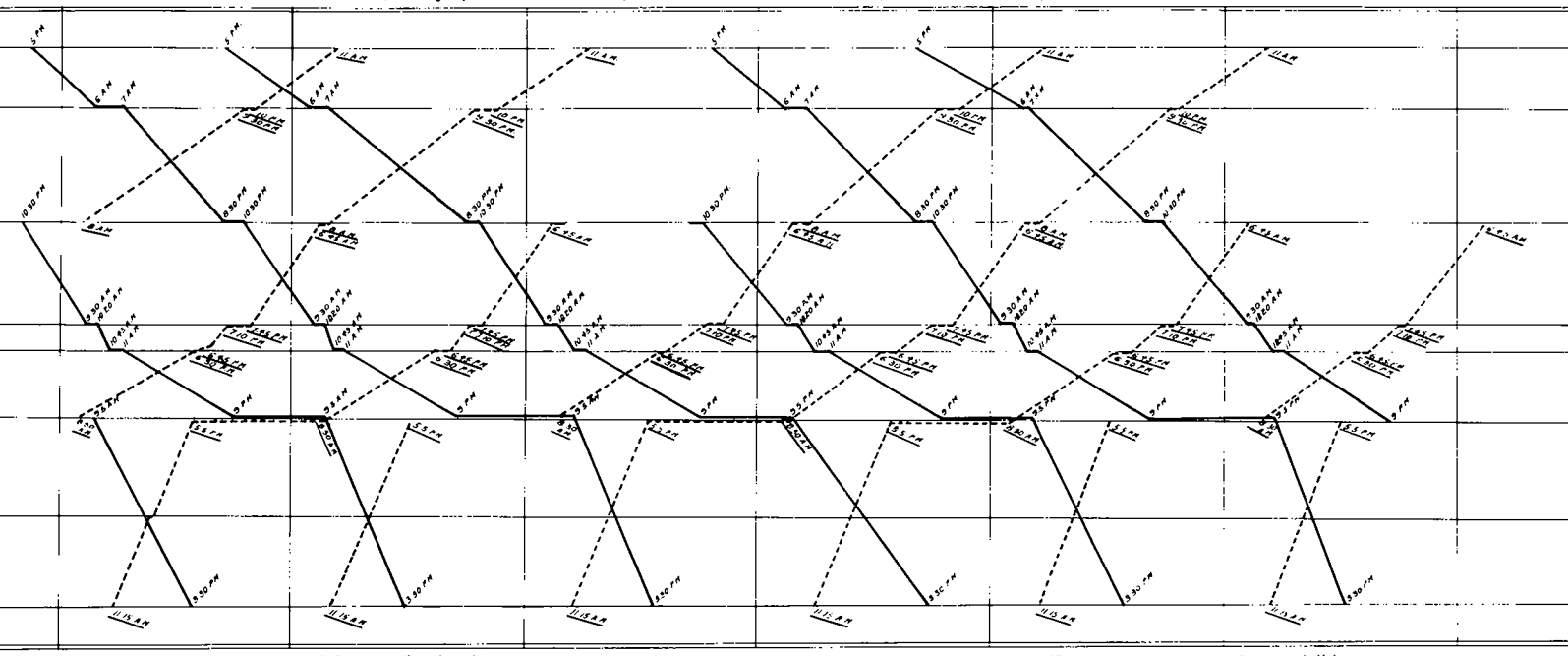
No. 2. — *Proposed on 4 Days per Week Train Service, 1st December, 1898 (Steamer and Train times as at present).*

Auckland
New Plymouth
Wellington
Lyttelton
Christchurch
Dunedin
Clinton
Invercargill



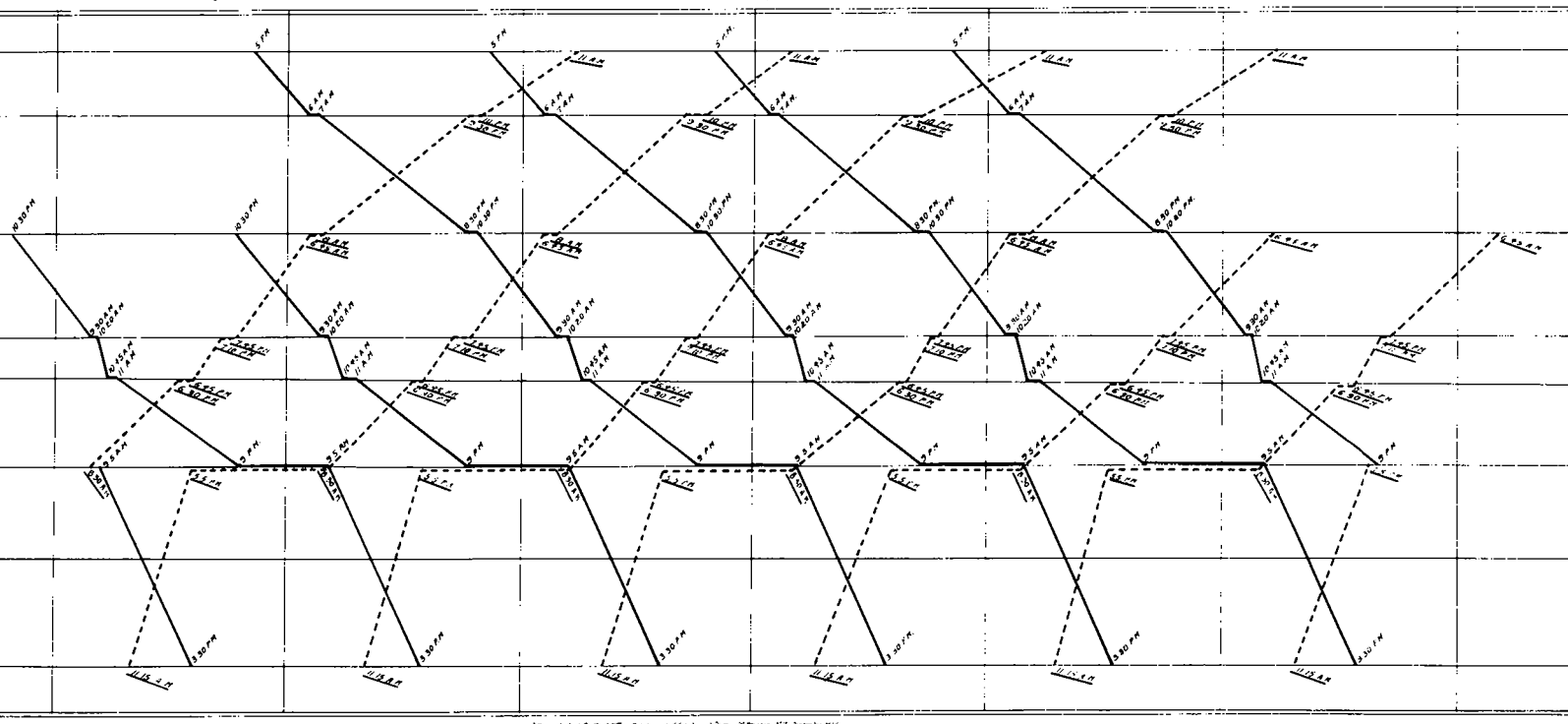
No. 3. — *Alternative Service, 4 Days per Week, with Daily Steamer from Lyttelton at 8 p.m., and 11 hours' journey to Wellington.*

Auckland
New Plymouth
Wellington
Lyttelton
Christchurch
Dunedin
Clinton
Invercargill



No. 4. — *Alternative 4 Days' Train and Steamer Service, Wellington-New Plymouth Auckland (Steamers connecting with Express Trains at Lyttelton at 8 p.m. daily).*

Auckland
New Plymouth
Wellington
Lyttelton
Christchurch
Dunedin
Clinton
Invercargill



Lithographed at Auckland Office, Department of Lands and Survey, Wellington, N.Z. December 1898
F.W. Thompson, Govt. Draughtsman