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 boilerpower 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 e-power. You could get an answer on that point far better from a builder than from anybody horse-power.

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 judg-

ment, 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?-
- 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.