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.