3. As to Speed.

I have just said that I think it would be unwise to give a heavy subsidy to any postal line

attaining a less speed than the best P. and O. and Orient ships.

The P. and O. Company's contract with the Imperial Post Office is for a speed of 11 knots between Brindisi and Alexandria, and $10\frac{1}{2}$ knots between Suez and Ceylon; but the ships can of course do much more. Their contract with the Victoria Government is for a speed of 12 knots between Ceylon and Melbourne; and the Postmaster-General of Victoria gives the mail time between Brindisi and Melbourne as 895 hours (thirty-seven days seven hours). But the ships of the Orient line go very much faster than that. The "Orient" left Adelaide upon her homeward voyage on the 14th April, 1881, at 8.30 p.m., and arrived at Naples on the 13th May, at noon. She left Naples at 5 p.m. on the 4th November, 1881, and arrived at Adelaide on the 4th December at 3 p.m. (apparent time); carrying letters which had been posted in London at 7.30 p.m. on the 4th November, to overtake the ship at Suez, and put on board there; so that (allowing for difference of time) the transit of these letters was made in twenty-nine and a half days.

Now it may be looked upon as certain that, if a new P. and O. contract had to be made to-day, a speed of 13 to $13\frac{1}{2}$ knots would be insisted upon by the public. The pressure for accelerating the Brindisi route has not yet been very marked, but the Imperial Post Office is well aware that it must come, and that the acceleration must take place; with a proper allowance, of course, to the P. and O. The average mail time between London and Melbourne under the P. and O. contract has been thirty-nine days two hours outward, and forty-one days twelve hours homeward; and the course of post has been about eighty-eight days. The average mail time under the San Francisco contract (between London and Auckland) has been, outward forty days, and homeward forty and a one-third days; and the shortest time, thirty-eight days out and thirty-six days home. The San Francisco contract gives a speed of 11 nautical miles per hour, and requires the voyage to be made between San Francisco and Auckland in 550 hours (just under twenty-three days), which could of course be materially shortened. The United States Post Office has recently accelerated its overland service acrosss the Continent by a day, and (as was pointed out in the last New Zealand Post Office Report) the overland time will be still shorter when the Southern Pacific Railway carries the mails. And although, out of nearly 700 voyages across the Atlantic which I have taken out, the average time outward between New York and Liverpool was a little over nine days, and homeward eight and a half days, the "Brittanic" (White Star Line) has done it in seven days eleven hours, the "Servia" (Cunard Line) in seven days seven hours, and now the "Alaska" (Guion Line) in seven days four hours out, and a few minutes over seven days home, being the fastest on record.

Such feats as these by both the eastern and western routes show what is being done in steam, and should warn us not to bind ourselves to anything but the very best, if we undertake it at all. The "Servia," for instance, is a ship built entirely of steel, with a gross measurement of 8,500 tons, having indicated horse-power 10,500, 530 feet long, and width of beam 52 feet. Every month some new achievement in design surpasses the previous experience. Last year Sir John Lubbock said, in his address to the British Association for the Promotion of Science, "that the steam pressure had been increased from less than 51b up to 701b, the square inch, and that the consumption of coal had been brought down from 51b or 61b, per horse-power to less than 21b." But over the whole of the Clyde now a pressure of from 751b, to 1251b, is more the rule than the exception, and in our triple-

expansion engines the pressure would be 125lb.

I am unable to conceive a contract being now contemplated for a direct service which should not require the mail time between London and the port of arrival to be equal to the best average that could be done by the Suez Canal or by San Francisco. Even the Galbraith-Denny estimates of 1878 gave only forty-two days out and forty home; and yet it can hardly be doubted that if we had bound ourselves then to give £80,000 a year for eight years merely to get a two-monthly service, we should long ago have regretted it. It must be allowed, as the P. and O. urged in 1879, that in looking at the working of a postal line you must have regard not to exceptionally fast voyages, but also to the slow, as serious casualties and irregularities are fatal to the commercial interests which a mail service is required to subserve; yet these P. and O. steamers had, even then, travelled 13,000,000 miles without accident, and the India, China, and Australian mails were delivered with almost the same regularity as the Dublin mail. I take it that a direct postal line should have a speed of at least $13\frac{1}{4}$ knots, or it is not worth the subsidy we should have to pay for it.

4. As to Route.

The Galbraith-Denny designs of 1878 were for a route outward viá the Cape, and homeward viá the Suez Canal. I assume that until the Panama Canal problem is solved no idea would be entertained of subsidizing a direct postal service to New Zealand except viá the Suez Canal both ways; the question of touching at Ceylon is not so material, as the deviation to Galle does not take a boat more than 350

miles out of the direct track to Aden, and does not mean more than thirty hours' steaming.

I mention the Panama Canal now, because I suppose New Zealand will not be willing to determine anything relating to a new postal contract without considering the change that must come over the Pacific trade if that canal is ever made. It is true that a canal at Panama would not divert any of the present trade to Australia, because the distance from (say) Liverpool or Milford Haven to Melbourne by the Suez Canal is 11,200 miles, while by the Panama Canal it would be 12,800; so that the Australian Colonies will always take the eastern route. But the figures are just reversed in the case of New Zealand, because the distance to Wellington by the Suez Canal is 12,700 miles, while by the Panama Canal it is only 11,500, and therefore the New Zealand trade would soon go that way. If the Panama Canal were made, New Zealand would be less dependent than she has been on the Australian steam services; but her interests as a grain-growing colony would be largely affected, as the making of that canal must greatly develop the shipment of cereals from the Pacific Slope to Europe, and the shortening of distance (6,000 miles as compared with Cape Horn) would be sure to lead to the employment of steam for the transport of grain from San Francisco to the Mersey.