" are to make 200 revolutions per minute, and to supply " steam for them an enormous amount of coal has to be " burned hourly.

" On the basis of two pounds of coal per horse- " power hour, 120,000 pounds will be burned to develop " 60,000 horse-power to attain a speed of 25 knots " hourly; in 24 hours 1,440 short tons will be burned, " a quantity which cannot be understood by merely " reading of it. Thirty boilers of 2,000 horse-power " each will be needed to supply steam; with only three " square feet of grate surface per horse-power there " will be 180,000 square feet of grate surface, which is " comprised in a lot of ground 600 feet long by 300 feet " wide (a big baseball ground), and all the other details " of the steam department are in keeping."

Mr. Watson's opinion regarding the operating of these large steamers is rather a pessimistic one. He says: "Just what will happen when we undertake to " drive a vessel nearly 800 feet long, about 80 feet " beam, drawing upward of 35 feet of water, through " heavy weather every hour at 28 miles an hour for each " successive hour, there is no man living that can accu- " rately predict.

" Experience is cumulative, so to speak, and in- " creases with every departure from precedents. What " vessels of ordinary dimensions and speeds can do is " well known. We now have to learn what follows ex- " traordinary departures therefrom. The "Deutsch- " land," built to make 23 knots an hour continuously in " all weathers, is a very fast boat, but there have been " many voyages when she did not make anything like " it. Now, take 25 knots sea speed continuously, and " build a ship that will do it for day after day month " after month; there are many who will believe it when " the year is over, not before then."

In view of an opinion like this, before going too far, perhaps it would be just as well to await the results given by the new Cunarders, which will be ready for service in a short time. It is just possible that they will be a success. In any case it will be well to watch their operation.

In an explanatory letter from Sir Thomas Troubridge, Bart., the following time-table is given, which, he says, can be adhered to without difficulty, excepting under very exceptional circumstances:—

Atlantic Ocean..... 25 knots.
Pacific Ocean..... 18 and 21 knots.

Leave London, June 1st, Friday, 7 p.m.
Arrive Blacksod, June 2nd, 9 a.m., leave 10 a.m.
Arrive Halifax, June 5th, 6 to 9 p.m., leave 10 p.m.
Arrive Vancouver, June 9th, 10 p.m., leave midnight.

18 knots.

Arrive Honolulu, June 15th, 10 a.m., leave 4 p.m.
Arrive Suva, June 21st, midnight, leave 6 a.m., 22nd.
Arrive Auckland, June 24th, 10 p.m., leave 2 a.m., 25th.
Arrive Sydney, June 27th, midnight.

London to Sydney, 26 days 5 hours.
London to Auckland, 23 days 3 hours.

21 knots.

Arrive Honolulu, June 14th, 4 p.m., leave 10 p.m.
Arrive Suva, June 20th, 9 a.m., leave 3 p.m.
Arrive Auckland, June 22nd, 10 p.m., leave 2 a.m., 23rd.
Arrive Sydney, June 25th, 2 p.m.

London to Sydney, 23 days 19 hours.
London to Auckland, 21 days 3 hours.

The service on the Pacific would not be quite so speedy, and it is possible that vessels running from 20 to 21 knots per hour would be placed on this route. This service is more complicated than that on the Atlantic, due to the geographical position of New Zealand and Australia. Either one of these plans must have the first port of call after leaving Fiji. If it is in New Zealand, Australians will have to travel a day and a half longer to get to Sydney, and if at Sydney, the people of New Zealand will be at a greater disadvantage. Reports show that it is advisable to make Auckland, N.Z., the first port of call, and if this were done Sydney would have the advantage of being the terminus of the line.

Fast steamers such as projected could not be used for heavy freight, as the unloading of steamers, loading of trains, etc., would be too costly. These high-speed vessels would be express steamers for passengers, mails, and express freight.

Cost in this, as in every other undertaking, is an important item. Canada has been offering $750,000 per annum to secure a 20-knot service to and from Great Britain without avail. The "All Red" route would give a 25-knot service at about the same cost, although the cost of operating the service would be much greater.

This is a project that, while benefiting the whole of the Empire, would particularly benefit Canada. It is an opportunity that Canadians cannot afford to miss, placing the Dominion, as it would, on the direct highway of the greater part of the world's commerce.

EDITORIAL NOTES.

The day of the individual gold miner is fast departing. The gold dredge, operated by syndicates, is taking his place, and many old mining districts, long ago thought to be worked out, have been resuscitated from a dormant state to one of activity. At the present time there are some nine large dredges being operated in the Klondyke on rivers and creeks that it was almost impossible to work with success in any other way. Dredging and hydraulic sluicing can be carried on over large areas where the ore is low grade and too poor to be worked by ordinary methods. Until the advent of the dredge it was not possible to follow gold-bearing gravels under rivers, but now it is a simple matter to bring the gravel at the bed of the river to the surface. In Victoria, Australia, there are ninety bucket dredges and hydraulic pump sluices being operated.

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Much difficulty is encountered by the city of Toronto on account of the clause in its contracts calling for the payment to union workmen of the prevailing rate of wages. On this account not one Canadian firm put in a tender for the steel work on the Lansdowne Avenue subway. Three English firms sent in tenders, and the contract was awarded to one of them. This means that work which should be done by Canadian contractors will be done by outside firms, and simply because the unions are being catered to. Are Canadian contractors and manufacturers to be left behind in the race because municipalities practically wish to dictate the rate of wages they shall pay their employees? Not only has the contractor to suffer, but it is quite likely that the municipality will pay a much higher price for the work done than would be the case if this clause were omitted.

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If the efforts of the Toronto Exhibition directors meet with success the Brennan mono-rail will be exhibited this year. Mr. Louis Brennan, of London, England, has been asked to give an exhibition of his invention, and it is said that if possible a cable will be run from the Exhibition grounds to Hanlan's Point, a distance of about a mile and a half. Railway Engineers in Canada do not seriously regard Mr. Brennan's wonderful invention. None of them say that the results, which it is claimed the invention will accomplish, are impossible, having in view the achievements of scientists in almost every subject during the last half century. It is regarded, however, as a wonderfully ingenious and strikingly novel toy. The model which was exhibited before the Royal Society and a train of loaded freight cars, each carrying about 60,000 pounds, have some distance between them. Before railroad