

"It would reflect great credit on the Dominion Government if, after connecting British Columbia with the eastern Provinces by the Canadian Pacific Railway, it should now be able to complete its system of railway communication by an extension to Prince Edward Island."

Since that time we have had a survey across the Straits, which shortens the distance to six and a half miles, and at every one hundred and fifty feet of that distance borings have been made to test the character of the bottom. The plan which I have here shows the nature of the material through which the sub-way would have to go. It is not unlike the bottom of the St. Clair River at Port Huron. The bottom was bored and showed as follows, commencing at Carleton Head, P.E.I. :—

Distance from Shore.	Depth of Water.	Bottom of Strait.
1/2 miles.	38 feet.	Soft sandstone rock.
1 "	44 "	do
1 1/4 "	49 "	Red pipe-clay.
1 1/2 "	50 "	do
1 3/4 "	53 "	do
2 "	61 "	do
2 1/4 "	64 "	do
2 1/2 "	69 "	do
3 "	63 "	Soft sandstone rock.
3 1/4 "	66 "	do
3 1/2 "	68 "	do
3 3/4 "	79 "	Brick clay.
4 "	84 "	do
4 1/4 "	91 "	do
4 1/2 "	90 "	do
4 3/4 "	73 "	do
5 "	55 "	Sand and gravel.
5 1/4 "	49 "	do
5 1/2 "	47 "	Brick clay.
5 3/4 "	39 "	do
6 "	30 "	do
6 1/4 "	25 "	do
6 1/2 "	14 "	Soft red sandstone.
6 3/4 "	7 "	do

I alluded just now to the subway that is being built at Port Huron, and I stated that the length of that tunnel was about half the length of ours, but an opinion prevails that our tunnel would be too long—that it is impracticable; that no tunnel of such length is to be found anywhere in the world. I differ materially from those who take that view. I can show that there are tunnels nearly twice as long as this proposed subway. The following are the most important :—

	Miles.
" St. Gothard tunnel.....	9 1/2
Mont Cenis do	7 1/2
Areberg do (Austria).....	6 1/2
Hoosac do (Mass, U.S.A.).....	5
Standege do (London and North-Western).....	3
Box do (near Manchester)...	3
Severn do (nearly).....	5

" and 2 1/2 miles of this has been constructed from 45 to 100 feet below the bed of the rapid flowing tidal estuary, offering engineering difficulties which make it the most remarkable tunnel in the world.

	Miles.
Nochestingo tunnel.....	4 1/2
Sutro do	4
Reginal do	3 1/2
Nerthe do	3
Blainy do	2 1/2
Thames and Medway tunnel.....	2
Mersey tunnel, including approaches... 4 1/2	

" Another tunnel is now being contemplated in the Simplon Pass, 12 1/2 miles."

It was the experience gained in combating water in the Severn tunnel that led to the adoption of the present mode of construction. Some ten or eleven years after Sir John Hawkshaw had tried to build it Mr. Walker's shield was used. Mr. Walker is well known in this country as the contractor who undertook to build the old European and North America road from St. John to Shediac, N.B. He went back to England and took up this question, and finally succeeded in completing the tunnel. I only make use of that to show that greater difficulties than we would have to meet have been overcome in other places and are being surmounted every day.

HON. MR. POWER—Is the work at Port Huron a subway or a tunnel ?

HON. MR. HOWLAN—Both terms are used. Generally speaking, a tunnel is something built of stone and mortar; but those materials are not now used.

HON. MR. POWER—The point I want to get at is, whether the structure at Port Huron is built beneath the surface of the bottom of the river or whether it projects over it.

HON. MR. HOWLAN—Beneath the surface. So is the one at London that is now being built, the City and Southwark subway. A writer in the *Graphic* referring to it says :

" This new means of intercommunication between the city and South London is now rapidly approaching completion. The original Act (1884) empowered its construction from King William street, city, to the Elephant and Castle; but the company subsequently received permission to carry on the line to Clapham Road and Stockwell. The line is a double one; but each pair of rails is laid in a separate tunnel, the two tunnels, of course, running mainly in parallel lines. The city terminus is in King William street, near the monument. The railway is reached by a circular shaft, down and up which passengers will be conveyed by a hydraulic lift; or they can proceed by stairways, which are also provided. After passing beneath the Thames the successive stations are at Great Dover street, Elephant, New street, Kennington, Oval and Binfield road, Stockwell. Hydraulic lifts and stairways will be provided at all the stations. The total length of the line is three miles and a quarter, and its two chief peculiarities are the great depth at which it lies beneath the surface and the employment