

the North-West, unless it be a right to hunt, and we hope Messrs. Cartier and Macdougall will not agree to pay them one stiver more than they can possibly help. At the same time, it is well to remember that the Dominion loses every day the country remains a *terra incognita* under Hudson's Bay rule, and that as a mere question of dollars and cents, it may be better to pay a little more rather than suffer prolonged negotiations.

Canada has good cause to look forward with hope to its possession of this immense territory. The Dominion may be said to have just come of age; the North-west will be a splendid inheritance for Great Britain to give her eldest offspring! Under date of the 31st of January last, Mr. Mair says: "The weather is and has been delightful. The country is a great and beautiful one, and surpasses any account I ever read of it." What would the United States give for such a land, when they gave millions for Russian American icebergs? It is almost priceless, and the Dominion has reason to rejoice at the prospect before it. We will then have our prairies as well as our Yankee neighbours. We will have homes on our own soil for our ambitious and enterprising population, and there will be no necessity for emigrating to New Zealand or the Western States. We will have a "tide" of emigration to the great West all our own. In brief, a brighter day will dawn upon Canada—a day big with hope for our future. May Sir George Cartier's hopes for our obtaining early possession be fully realized—and then, let our Government do its duty!

MORE CONNECTING LINKS!

There are some ways in which we like to see Canada connected with the United States. Don't be frightened, reader—we don't mean politically! Our neighbours are very fond of Miss Canada just in that way; but the way we like to be connected with the Republic is commercially, and every circumstance which has a tendency to increase the trade of the two countries, is looked upon by Canadians with favour. One of these "circumstances" is to be found in the recent completion of another suspension bridge over the Niagara River near the Falls. It has been made by a joint stock company, nearly all of whom—if not all—are Americans. It is very many years ago since the Vice-President of the company, Mr. Hollis White, proposed that this bridge should be made, but it was left for the year 1868 to witness the commencement of the work, and the beginning of 1869 its completion and opening for traffic.

The new suspension bridge is situated much nearer the great cataract than the old one. On the American side it is located in what was known as Porter's Grove, a short distance below the American fall, and it touches Canadian soil some 300 feet below the Clifton House, with which all tourists are familiar. The bridge is 180 feet above the water, and is very substantial; it is calculated by the engineer of the work that it would bear a strain of 3,000 tons. The span is no less than 1,268 feet, said to be the greatest in the world. It presents a fine appearance, and reflects credit upon the company, whose enterprise originated and successfully carried out the project.

This new "link" connecting the Republic and Canada, is likely soon to be followed by others of even greater magnitude and importance. The rapid increase of American travel through Canada by the Great Western and Grand Trunk railways, is rendering the ferry boats on the Detroit and Niagara Rivers, altogether too slow and costly a means of crossing. The delay which at present takes place at Detroit and Fort Erie, is annoying and injurious to our railway companies, as well as the connecting American lines, and a remedy has long been advocated on both sides of the boundary. At Detroit it is proposed to cut a tunnel beneath the river to Windsor, and the Grand Trunk Company has long had it under contemplation to connect Fort Erie and Black Rock by a bridge. The Buffalo people are very anxious to see the latter undertaking proceed, and the citizens of Detroit are no less interested in the former. There can be no doubt that both improvements, if carried out, would add largely to the railway traffic across our territory. The commercial community of both countries would be greatly benefited thereby.

Some doubts have been expressed of the practicability of the Detroit tunnel, but the Fort Erie bridge is generally conceded to present no unsurmountable difficulties. For our part, we consider the question to be only one of money. After the Hoosack tunnel, the undertaking of the Canal across the Isthmus be-

tween North and South America, and particularly the Chicago tunnel, which runs two miles below Lake Michigan, we can see no impossibility about tunneling below the Detroit river; and as to the bridge over the Niagara, a people who can boast of the Victoria bridge at Montreal need have few doubts about the success of such an undertaking. The real question is: where would the money come from? and would the projects pay? We are inclined to the belief that both these queries will be answered satisfactorily, and that, too, before we are much older. The bridge, at least, must soon be undertaken. It has been near commencement more than once, and when we think of the immense influence such a structure would have upon the interests of Buffalo, and upon the success of the Grand Trunk Railway, it is reasonable to conclude that means will ultimately be found of making it an accomplished fact.

The more Canada is "annexed" to the United States by such important public works, the better. They inevitably tend to augment our commercial prosperity. But they also do more. Their effect is also to increase international courtesy and good will. This is just the position which the Dominion desires to occupy towards her big cousin over the way. We desire, and are determined to maintain, our independent political existence, believing that there is abundance of room for more than one nation in North America; but, at the same time, we rejoice at the increase of the number of commercial "links" which bind us together, and desire to have the kindest feelings exist between our respective populations.

WOODEN RAILS.

We have received a short pamphlet, suggesting a new system of wooden rail, written by Mr. John Foster, C. E., of this city.

The novelty of the system consists in making the track or rail, not of rails laid longitudinally, but of short pieces of hard wood laid with the grain upright instead of horizontal, and firmly bolted between two longitudinal pieces resting on sleepers.

Mr. Foster calculates that a track, exclusive of grading, could be constructed in this way at a total cost of \$1.80 per yard, or \$8 168 per mile, on which locomotives, weighing 12 to 14 tons, could be used to run at a maximum of 15 miles an hour.

We give his calculations, based on being able to obtain red pine, cut and sawn into longitudinal rectangular pieces at 18 cents per cubic foot, and the hardwood into 3½ inch planks at 25 cents per cubic foot.

Cost of one complete length of seven yards of permanent way.

Red pine, 22 cubic feet at 18c.	\$ 3.96
Hardwood 8 cubic feet at 25c.	2.00
Wrought iron bolts, 28 lbs at 6c.	1.40
24 wooden pins at 2c.	.48
Labour in preparing blocks, grooving longitudinals, assembling, wedging and bolting the same together, and shaping and finishing the upper surface of the two rails under a circular plane, at 63c per rail	1.26
Superintendence and machinery	.83
One cross tie at joint	.25
	\$ 9.98

Say	10.00
25 per cent contractors' profit & contingencies	2.50
	\$12.50

For seven yards.....\$12.50
Or \$1.80 per yard.

We think this estimate high for the wood and for superintendence, but as an offset, we are quite sure that one cross tie in 21 feet would be quite insufficient to bind the track and maintain the gauge of the road. One in every 7 feet would be none too many.

That rails laid in the way suggested, with the grain perpendicular to the radius of the wheels passing over them, would be capable of wearing under moderate traffic an almost unlimited time, we have no doubt. Any necessary renewals on account of the rotting of the wood could be made with great economy and very little trouble. We imagine there would be no comparison in point of durability between rails made in this way and the ordinary maple rail, as proposed to be used in the various wooden railways shortly to be constructed: and if the difference in cost of construction be not very great, we think it might be advantageous to secure this better rail, which would still be very much less costly than if of iron.

Mr. Foster considers this system of rails as peculiarly adapted to a line carried on trussels. He says: "The addition would merely be the trussel work necessary for carrying the road, as the road, that is the rail, would require no further bracing beyond

the diagonals which would be wanted to steady the line longitudinally." The following is his estimate of the road complete, including rails, timber supports, and fixing, ready for traffic on this trussel system:—

For a line with rail raised 5 feet high.	\$ 5.36 per yard.
" " " " 10 "	9.40 "
" " " " 15 "	12.28 "

He considers "the average height of 5 feet for the rail to be abundantly sufficient for forming an estimate for a line in this country, which is equal to embankment containing 13 cubic yards per yard run: the 10 and 15 feet heights would only be required for short lengths, and on the other hand for considerable distances the rail would be laid on the natural level of the soil or at least only raised some 18 inches to admit of ditches and drainage, anything above 18 inches to be carried on timber, as of course the idea is only to use timber where embankments would exist."

Mr. Foster, in introducing his subject, points out the wisdom, and, in fact, necessity of having some kind of colonization road opened into unsettled districts before they are likely to be settled up, and he gives the preference to railroads over all other means of artificial communication. To build railroads, however, through an unsettled country would be for the present, at least, a very unproductive investment, and capitalists would not probably be found willing to put their whole trust in the prospect of a future return. Consequently, it becomes necessary for government aid to be given, and the question at once arises in what way this is to be done. Mr. Foster proposes that a fair partnership in the sale of public lands be offered to induce the public to find the money. He draws a distinction between this partnership and the mode adopted in some of the United States, of giving to railroad companies alternate lots of land, and reserving the intermediate acres. His proposition is simply that there should be a certain division of the proceeds of the sale of lands, the whole control and direction of which would naturally belong to the company.

We quite agree with Mr. Foster in his estimate of the value of means of communication through territories adapted for settlement, and to which it is desired to attract settlers; but great care must be taken, where assistance in either money or land is given. Government that the roads are built only where the country is capable of affording a living to settlers within a year at furthest from the time they first begin to clear the land. We don't want to see spring up a too violent mania for the building of railways, and we trust that the Provincial Governments will not allow themselves to be carried away by a general clamour into giving grants for the construction of unnecessary and useless railways.

THE SILVER MOVEMENT.

CIRCULAR OF MR. WEIR.

SIR.—The delay which has occurred in completing arrangements to receive and pay for the silver at a considerable number of places, renders it necessary that I should explain the cause of such delay, in order to allay the suspicions of our friends, and silence the assertions of our opponents.

It is generally known that up to the last moment the tenders of support were barely sufficient to warrant me in accepting the tenders, and those who were in more immediate communication with me know that I did so, relying upon the forbearance of those who gave me their support in carrying out the details of the movement.

Under ordinary circumstances I should have had little difficulty in effecting arrangements within eight days to receive the silver at all points where support was tendered me; but the immense amount of labour thrown upon my hands immediately upon accepting the tenders, made it impossible for me for several days to give my attention to outside arrangements without a break down at headquarters, and this would have been fatal to our success. Not only was it necessary to receive and pay for the contract silver, but I found it absolutely necessary to remove from the hands of speculative holders nearly two hundred thousand dollars, which otherwise might, and no doubt would, have been used to defeat us. Having overcome these difficulties, I was met with new ones in arranging to receive and pay for silver at so many places, for the Banks, while liberally supporting me here, declined to instruct their Agents to take the trouble of receiving silver in odd or small sums, so that negotiations had to be made with each Agent separately. From the friendly spirit shown by the