

WHY MUST THE INTERCOLONIAL RAILROAD COST OVER \$20,000,000?

ON a former occasion we pointed out the advantages that would accrue to the Dominion of Canada from the expenditure of \$20,000,000 or \$22,000,000 on the construction of the Intercolonial Railroad. But we did not say that the road could not be built for less than that enormous amount. On mature consideration, it is evident that several cogent arguments might be adduced to prove that this road—all important as it is—might be advantageously built on what is known as the "cheap" principle, or the 3 ft. 6 in. gauge. Mr. Sandford Fleming's report, from which we get the estimate of twenty or twenty-two millions, is based on the "dear" principle, or the 5 ft. 6 in. gauge. Why not, before committing ourselves to it, get an estimate at all events of the cost on the "cheap" principle. With the view of interesting the public on this question, we have made some calculations of what the Intercolonial Road would cost if built on the "cheap" principle. These calculations must necessarily be crude; but to show that they are not worthless, we may say they are based on an official report of Mr. J. E. Boyd, civil engineer for the Government of New Brunswick, on the construction of cheap railways; and in Mr. Fleming's official report of the survey of the Intercolonial Railway.

Mr. Fleming marks out fifteen routes along which the road might be built. We will take No. 10 route—a central one—to illustrate our subject. This route is 496 miles in length, of which 61 miles are already made. According to Mr. Fleming, the average cost of making and equipping this line would be close on \$46,000 per mile, or over \$20,000,000. Now, as a railway is never constructed within the first estimate, we may assume that in reality \$24,000,000 at least would be expended upon it. Further, we may assume that in proportion to the original costliness of the line, would be the yearly amount required for wear and tear and repairs. The reason assigned by Mr. Fleming for the magnitude of the outlay required, is the nature of the country through which the line will be laid. The grades will be many and steep, the curves numerous and sharp, much bridging will be needed, and embankments often necessary.

Bearing the above facts in mind, let us turn to Mr. Boyd's report on "cheap" railways. In the first place, he shows that cheap railways are peculiarly adapted to mountainous countries. By means of them a grade of 100 feet in the mile may be easily overcome, whereas on the dear principle, a grade of 70 feet in the mile would be the possible maximum. Again, on a 3 ft. 6 in. gauge, curves of 350 or 400 feet can be constructed with as much safety as curves of 1,500 or 1,600 feet radius on a 5 ft. 6 in. gauge. The result is that on the narrow gauge much tunnelling, embanking, bridging and cutting are avoided. Besides, the annual cost of repairing the narrow gauge and keeping up the rolling stock is only a tithe of the amount necessary on a 5 ft. 6 in. gauge.

The estimate of constructing and equipping the International over No. 10 central route on the 3 ft. 6 in. gauge, we arrive at this way. Mr. Boyd says that such a line through a "medium country" could be made and equipped for \$12,000 per mile, or, at any rate, for \$14,000. We will take the larger estimate, and multiplying it by 435, the number of miles to be constructed, we get \$6,090,000 as the amount for which the road, so far, could be constructed on the cheap principle. This is not the total cost of the Intercolonial, however. There are already constructed 61 miles of road, over which a third rail would have to be laid down to suit the narrow gauge. From Mr. Boyd's estimates we infer this could be done \$4,000 a mile, or for \$244,000 in all. Add this to \$6,090,000, and we get the total cost of constructing the Intercolonial Railway at \$6,334,000, or considerably less than a third of the estimate, according to the dear principle and the broad gauge.

But we have been assuming that the road would be built of iron rails. Let us suppose that steel rails were substituted for iron—and steel rails last perhaps five times as long as iron; yet, according to Mr. Boyd, they would only cost on the 3 ft. 6 in. gauge less than \$2,500 per mile more than iron. Let us take the cost at \$2,500 added to \$14,000, or \$16,500 per mile, and we find that the 435 miles to be constructed would cost, if steel rail laid, \$7,177,500. To this we must add the \$244,000 for laying the third rail over the 61 miles already constructed, and we have \$7,421,500 as the total cost of a steel rail Intercolonial road on the 3 ft. 6 in. gauge, that would last five or six times as long

as the road that, according to Mr. Fleming's report, would cost over \$20,000,000!

To remove all objections to this estimate, however, it must be remembered that in making it Mr. Boyd had reference to a "medium country." We must assume that the route selected for the Intercolonial is not through such a country; that the country, in fact, is unfavorable to railways on the broad gauge at all events. For these extra difficulties we must allow (say) an additional \$3,500 per mile, making the total cost for steel rails no less than \$20,000 per mile. This appears to be a liberal allowance to overcome difficulties which, in the case of a 3 ft. 6 in. gauge, would not, in some cases, present themselves at all, and which in no case would be so formidable as in a 5 ft. 6 in. gauge. Taking then the rate at \$20,000 per mile, the cost of the 435 miles would be \$8,700,000; add \$244,000 for laying third rail over the 61 miles constructed, and the sum total is \$8,944,000, or, say, in round numbers \$9,000,000. Mr. Fleming's estimate for the 5 ft. 6 in. gauge being over \$20,000,000, the saving that would be effected by adopting the narrow gauge, after making ample allowance for the extra difficulties of the route and securing steel rails, would be over \$11,000,000!

It would be impossible in a short article like this to enumerate all the arguments that could be adduced for and against the construction of the Intercolonial on the "cheap" principle. A few, however, readily present themselves. It may be argued that the Imperial Government would object to a 3 ft. 6 in. gauge. But then this is by no means certain. All the Imperial Government wants is a good military road, and if it could get that for half price it would not object. The fact that it is under obligations to furnish other guarantees for defence and for the purchase of the Hudson's Bay Company's rights, would go far to make it accept a cheap and efficient Intercolonial; always provided that a portion, if not all, of the sums for which its guarantee are given were paid for out of the amount already guaranteed to the road. But even if no part of the surplus were to be devoted to such purposes, there are many public works in Nova Scotia, New Brunswick, Quebec and Ontario, to which the Imperial Government would gladly see it applied. At present great stress is laid upon the fact that the road is intended more for military than for commercial purposes, the greater reason, therefore, why the cheap line would suit. As commerce increased in the course of years, it would be time enough to widen the road, and then it could be done at little additional cost.

Again it may be said that a 3 ft. 6 in. would not do, because it would necessitate the breaking of bulk at Riviere du Loup. Well, that is an objection; but does it more than counterbalance a saving of over \$11,000,000 in the construction of the narrow gauge? If breaking bulk is a thing that must be avoided, according to our former calculations, a third rail could be laid down on 60 miles of the Grand Trunk Railway for \$2,400,000; and less than \$600,000 would buy the additional rolling stock required to equip it. So that by an expenditure of \$3,000,000 out of our saving of \$11,000,000, we would have a first-rate narrow gauge from Sandwich to Halifax and a balance of \$8,000,000 to invest in other public works. It will be objected that that plan would be too much for the benefit of the Grand Trunk Company. But as the point does not come up into practical shape, there is no use in alluding further to it.

In conclusion, we would say that, after all, our intention in writing this article is not so much to advocate the construction of the Intercolonial Railway on the 3 ft. 6 in. gauge as to draw public attention to the desirability of getting a road that will answer all the demands of defence and commerce, and that will not be so costly as Mr. Fleming, in his report, sets forth. There are a variety of plans that could be adopted. We might have a 4 ft. or a 4 ft. 8 in. gauge as they have in some parts of England, or we might have a broad 5 ft. 6 in. gauge; but constructed on cheap and efficient principles. That is the object of our writing. We have got an estimate of a first class line—fit for the most rich and populous country in the world; what objection can there be to getting estimates for a line suited to a country poor in wealth, and spare in population. Now is the time to discuss this question, it will be too late to do so when the contracts are given out.

PENETANGUISHEW FUR SALE.—Mr. Thompson's annual sale of Furs came off on the 2nd instant, and realized over \$18,000.—*Barrie Advance*.

THE MARITIME LAW OF NATIONS—A VOICE FROM BIRMINGHAM.

THE recent meeting at the Corn Exchange of the Council of the Montreal Board of Trade, assembled to confer with the representative of a great commercial corporation in England, on important points of international law, was a new and extraordinary incident in Colonial history, and a proof that the union of the Provinces has already begun to do its good work. Hitherto the scattered and divided colonies of England in North America were regarded as mere adjuncts of the parent state, without station, influence, or place among the nations; but henceforth they take their rank with principalities and powers, as a country that has even now considerably advanced in population and wealth, and is certain to attain greatness in the future, and that not a distant one. The Provinces of Canada, Nova Scotia and New Brunswick were of small account in the estimation of the world; but the Dominion of Canada, embracing all these, and hereafter to extend from Newfoundland to Vancouver's Island, presents a different object for contemplation; and, as we have said, begin to reap the benefits of their union under one government.

Mr. Alfred Field, Vice-President of the Birmingham Board of Trade, informed the meeting at the Corn Exchange that he had been deputed by that body to visit the Boards of Trade of the United States and Canada to request them to bring their influence to bear on the English and American governments for the purpose of inducing the two countries to abandon the use of privateers, in the event of war, whether between themselves or between the United States and any other country. If this were the sole aim of Mr. Field's mission, we imagine he would encounter little difficulty in fulfilling it. Privateering has virtually ceased in Europe since 1862, when the Congress held in Paris on that year declared that it should no longer be practised by the powers there represented, a declaration which has been adopted by every civilized country with the exception of the United States. But as the Government of Washington, at a later period, expressed their desire to come into the agreement, it is to be supposed that they, too, will sooner or later, adopt the principle. Mr. Field, however, in the name of his constituents, proposed a further important change in maritime international law, by which all private property, not contraband of war, should be exempt from capture by a belligerent.

That Mr. Field's proposals will everywhere meet with much respectful sympathy, there can be little doubt. But the question is if his views can be practically carried out. For ourselves, we suspect that privateering will still exist, though under new forms. The old letters of marque will cease to be issued, but there is nothing in the convention of Paris to prevent any government from granting regular commissions to the officers of ships, really the property of private citizens, thus giving them the character and status of national vessels. Self preservation, the first law of nature, may often make this a pressing necessity. If a great naval power were to force a war—unjustly perhaps—on one of the minor States, such for example, as any of the South American republics, the latter could only retaliate, for the loss and injury inflicted upon it, by attempting to destroy the commerce of its opponent at sea; and the feats of the Alabama and other Confederate cruisers have shown how effective such a mode of aggression can be. Would a weak power, without a navy of its own, hesitate to accept aid from its subjects or others, in the predicament to which we have alluded. We think not. Still the change which renders a nation, instead of individual adventurers and speculators, responsible for the acts of all armed ships is an improvement on the old system. Mr. Field's second project, we imagine, presents greater difficulties in its attainment. That commerce would derive immense benefits by rendering private property secure from seizure, war or no war, there can be no question; and with respect to these Provinces especially, it would remove one of the greatest objections to our continent connection with the mother country. But this is only a single phase of the case, and we suspect that statesmen and governments will view the matter in a somewhat different light from that in which it is seen by the merchant and philanthropist. For instance, England and the United States possess the two largest commercial navies in the world, and their property always on the ocean is of incalculable value and extent. If we only take into consideration the ruin that the loss of this property, in ships and their cargoes, would entail on the people of both