

Saving on freight.

in fact, very similar to the charges prevalent on the Welland Canal, which have been levied by the Government itself. The proposed rates, which, although they amount in the average to half a dollar a ton, will scarcely be felt when levied on the bushel or barrel by the shipper, who is accustomed to the high freights levied by the foreign steam lines running through the Straits of Canso to Boston. At this rate one dollar will be saved on all freight going round to St. John by water, and more than that by rail. The freight from St. John to Baie Verte being \$2.50 per ton, while that to the head of the Bay of Fundy is one dollar per ton, there is a difference of \$1.50 per ton, and deducting 50 cents per ton for the transport across the Isthmus, there is one dollar saved in the freight, not to count the saving of time and insurance. The saving, over and above railway carriage, would be \$2 a ton from North Shore ports to St. John, N. B.

Charges on hulls.

The charges on freight cargoes would be at the same rate, no matter by what description of vessel carried, but the rates on the hull would probably be required to be on a sliding scale according to the size of the vessel, the highest rate being on the smallest vessel, because a small-sized vessel would occupy the railway as long as a large sized one, and the revenue otherwise obtainable from small vessels would not bring a profit to the Company. The estimated proposed average rate of 12½ cents per ton would be a fair rate to charge on hulls as compared with that on Canals where the cost of towage is considered; the latter being done on the Ship Railway by locomotives and on the Canals by steam tug-boats.

Time saved.

Respecting the time to be saved and the safety of vessels on the Ship Railway, no less than twenty-four prominent firms of shipowners in London and Liverpool, having experience of the coast of Nova Scotia, have certified that a saving of ten days would generally be made by sailing vessels clearing from ports on the Gulf, and making for St. John, Portland and Boston, by using the Ship Railway, and so avoiding the weathering of Cape North and Cape Canso, as by present route. They have certified also that loaded vessels would not be injured on the Railway, if supported on a cradle such as is used on all marine slips.

Safety of vessels.

The most prominent naval architects of the day, Sir E. J. Reed, the late Sir William Pearce, Sir Nathaniel Barnaby, and Mr. William John, all certify to there being no danger to the ship nor cargo during transportation from sea to sea.

No strain equal to the waves of the sea.

Mr. Bindon B. Stoney, the authority on "strains," says, "A ship resembles a tubular structure, more or less rectangular in section, underneath which the points of support are continually moving, so that when the waves are high and far apart the deck and bottom of the vessel are alternately extended and compressed, in the same way that the flanges of a continuous girder are, near the points of inflection, when traversed by a passing train." No such strain as this is possible on the Ship Railway.

There is reason to believe, therefore, that the ship Railway, when completed, will be an undoubted success in every way, and become the pioneer of many works of like character.

In conclusion, the author would allude to the assiduous care and attention bestowed on this work by his colleagues, Sir John Fowler and Sir Benjamin Baker, the engineers who designed and carried to a successful completion the equally novel enterprise of the Forth Bridge. Without their powerful aid and co-operation the work could hardly have reached its present advanced state of progress. Should it be the success we anticipate, Mr. Meiggs also, who undertook to raise the capital in England, as well as to contract for the execution of all the works, will be entitled to a principal share of the credit which should attach to the inauguration of a new and economic system of transportation for the benefit alike of Canada and the whole world.