

BRITISH
NORTH AMERICA.

as also supposed, imperishable, by a new and simple chemical process, the value of a discovery so important has not ceased to be a subject of deep interest, though no attempt has yet been made to convert it to practical account.

The great saving of first cost in the construction of railways by the use of wood has been abundantly proved. The imperfection of the method undoubtedly lies in the perishable nature of the material; but this has been greatly aggravated by the slight and inefficient character of the first structures of this kind in the United States.

Some very interesting details and observations, relative to this subject, are supplied in the chief engineer's report of the Baltimore and Ohio Railroad, for the year 1847. The affairs of this road are under the presidency of the Honorable Lewis McLane, late minister to Great Britain. This line is considered to have a nearer resemblance to the Western Railroad in Massachusetts, than to any other in the United States, and both may be considered to have much resemblance to the projected line from the Atlantic to Quebec. The following is an extract from the Report referred to.

— "The Bridges.

"This head of expenditure has shown a large and important one for the last three years, principally on account of the necessity of rebuilding most of the many wooden viaducts upon the line. Of these numerous and extensive structures the aggregate length is 4115 feet in spans varying from 40 to 150 feet, besides 1633 feet of trestle-bridging at Harper's Ferry, making the whole length of timber bridging 5748 feet, or 1.09 miles. They carry the road across 11 large rivers, and three smaller streams, intersected by the route.

"They were built originally with a view to much lighter locomotives and trains than those since traversing the road. They were also built of materials, the best to be had at the time but not offering the choice in quality which is now open, and put into the work with but little seasoning. Decay consequently soon commenced, while the increasing weight and frequency of the trains imposed a duty which required increasing instead of diminishing ability to perform. The result has been, that although some of the viaducts have suffered much more than others, yet that an entire re-construction of the whole has been considered expedient, rather than resort to a less thorough renovation, which would have been less safe, and in the end more expensive. In this, no pains and expense have been spared to render them capable of performing the severest duty that can ever be required of them, and entire success has been the result. All the new work has stood the test of its strength completely; and the most difficult and extensive structure of the whole, the wide arch at Harper's Ferry, has now borne the trade of the road under the most trying circumstances for two years, without exhibiting the smallest weakness in any of its parts. A very important part of the improvements applied to the new structures, consists in covering them from the weather, and providing for the seasoning of the timber more perfectly than before; and this protection, it is believed, is now so effectual, as to secure them against all the usual causes of decay, and to render them as durable as if built of stone or iron. The agent of destruction remaining to be guarded against is fire, and this danger can only be averted by a vigilant watch, the employment of which will always be indispensable, but the expenses of which will not increase with the expense of the road, and will thus be a diminishing tax upon it.

"Before leaving this subject it is right to state that the experience of all other roads of heavy trade in the United States, is, in regard to their wooden-bridges, the same. They were built too slightly in the first place, and have required to be re-constructed or strengthened in such a way as to amount to re-construction; and I may add that all the experience of those companies, as well as that of this, has gone to demonstrate the soundness of the principles upon which the Baltimore and Ohio Railroad are built."

It may be remarked that no water crossings of great magnitude are likely to occur on the central line through New Brunswick. The gigantic, and necessarily hazardous, structures which cannot be avoided on the circuitous line, would, under any circumstances, be objectionable; but long bridges immediately on the tideway of the Gulf of St. Lawrence do not appear to give to this line the superlative quality insisted upon in the report that, "passing at the greatest possible distance from the United States, it possesses in the highest degree the advantage to be derived from that circumstance, of security from attack in case of hostilities."

(Signed) J. WILKINSON.

No. 2.

(No. 2.)

No. 2.

COPY of a DESPATCH from Lieut.-Governor Sir EDMUND HEAD to
Earl GREY.

Government House, Fredericton,
January 6, 1849.

(Received January 23, 1849.)

MY LORD,

ON the 2nd of January I received from his Excellency the Governor General a letter on the subject of the proposed railway between Halifax and Quebec, together with copies of a memorandum from the Inspector-General of Accounts in Canada, and of a minute of the Executive Council of that province on the same subject.

Unfortunately the heavy drifts of snow in the province have prevented the