

## APPENDIX No. VII.

## DEEPENING OF SHIP CHANNEL, AND HARBOUR IMPROVEMENTS.

WM. J. PATTERSON, ESQ.,  
Secretary Board of Trade.

MONTREAL, 2nd Nov. 1874.

SIR,

In your note of the 28th ult., you ask me to give you a brief statement of the present capacity of the channel for navigation between Montreal and Quebec, and the accommodation which now exists for ships coming to our Harbour;—as well as the intended improvements, in both the Channel and the Harbour, which the Commissioners are about to undertake.

In doing this, it may be well to observe first, that previous to 1850, no successful improvement of the channel between Quebec and Montreal had been made, and the size of the ship trading to Montreal was limited to a draft of 11 feet at low water;—that being the depth of water through Lake St. Peter, for a distance of 12 miles. Lighterage of cargo at the season of lowest water was so expensive, that few vessels were employed in the trade of over 350 tons burthen. The necessity of deepening a channel from Montreal to Quebec, through Lake St. Peter, and other shallow parts of the river early engaged the attention of the merchants of Montreal, say from 1838 to 1843, when the Government of Canada, unsuccessfully, made an attempt to do so. But it was not until 1850, when a plan of operation was commenced, which in 1853 resulted in a ship being taken through from Montreal to Quebec drawing 16 feet of water, where before there was only 11 feet. The channel was further deepened to 18 feet in 1859; and in November 1865, the present channel of 20 feet at low water, and 300 feet wide at bottom in the narrowest place, was completed, and tested by a vessel loaded down to 20 feet, passing through when there was 11 feet in the old channel.

The result of this is, that steamers of 3500 tons and over, for most of the season, come to Montreal without breaking bulk; but when the water falls to the lowest point, or 11 feet in the flats of Lake St. Peter, giving 20 feet in the channel, large steamers have to lighten to come to, or go from Montreal, with full cargoes, and sometimes it is found unprofitable for the largest steamers, say of 3900 tons, to come up at all.

The effect on the cost of outward freight, by the deepening of the channel to 20 feet, and employing the large ship, has been to reduce freight  $33\frac{1}{2}$  per cent. compared with the rates current, previous to the improvement of the channel. As a large vessel therefore can carry cheaper than a small one, it is highly important, not only for the trade of Montreal, but of Canada, that the channel should be so deepened and the Harbour so improved by facilities therein, for loading and discharging, that ships and steamers from sea of the very largest size, should at all times, and at the lowest depth of water, be able to come from and go to sea without breaking bulk. The Harbour Commissioners believe that the cost of freight will thus be diminished, and as a consequence that the value of what is exported will be increased to the producer, and imports cheapened to the consumer.

The Commissioners have therefore resolved to deepen the channel from 20 to 25 feet at lowest water. There was some doubt as to whether this depth could be obtained, as it was known that rock existed in the channel at "Cap Charles," and "Cap à la Roche," where the tide rises from four to six feet. From an examination, however, which has lately been made by engineers, there is no longer any doubt that at these places (50 miles above Quebec) a 25 foot channel at low tide can be secured, while there is no difficulty in getting the same depth, through Lake St. Peter, and other parts