

effected was 9 feet, giving a 20 foot channel to Montreal. The increase in trade and in the size of ocean steamers necessitated a further deepening of the channel. By 1878 the depth was 22 feet; by 1882 it was 25 feet, and by the end of the season of 1885 it was $27\frac{1}{2}$ feet. In the straight part of the channel the dredging is from 300 to 325 feet wide, but in other parts it is 450 feet wide, and in the worst place the sides of this submerged canal are over 16 feet high. The total cost of this work to 30th June, 1895, was \$4,566,002, including \$117,563 cost of dredging plant, and the total quantity of dredged matter amounted to 21,556,286 cubic feet. The dredged matter removed consisted of gravel, sand, clay, boulders and shale rock.

1043. The Government of Canada in pursuance of its general policy, decided to construct a canal on the Canadian side of the Sault Ste. Marie, and in 1889 the first contract was made. This canal, with its approaches, is about 18,100 feet in length. The Chief Engineer in his report for 1894 says, "this work has been visited from time to time during its progress by eminent foreign and Canadian engineers, all of whom, so far as I have heard, speak in the highest terms of the character of the work, more especially of the works of construction of the lock, and I believe it is to be one of the finest works of its kind on this continent. Electricity is used as the motive power."

1044. Connected with the St. Lawrence system are the Murray Canal, the Burlington Bay and the Trent River Navigation. The first extends through the Isthmus of Murray, giving connection between the head waters of the Bay of Quinte and Lake Ontario, thus enabling vessels to avoid the open lake navigation. The works on this canal comprise a cut through the isthmus $4\frac{1}{2}$ miles long, and improvements in the way of dredging and other work to the entrance channels at either end, covering a total distance of $9\frac{1}{2}$ miles. There are no locks. The first official notice of this work occurs in 1796, when a resolution was adopted by the Governor in Council to reserve 3,000 acres of land as a grant in favour of its construction. Various surveys were made at different times down to 1867. The work was begun after Confederation and completed in August, 1889. The canal is 80 feet wide at the bottom, and has a depth of $12\frac{1}{2}$ feet at low water.

The Burlington Bay Canal is a cutting through a piece of low land which partly separates Lake Ontario from a large sheet of deep water called Burlington Bay. It enables vessels to reach the city of Hamilton. Its length is one-half mile, and it is navigable for vessels drawing 11 feet of water.

The name "Trent River Navigation" is applied to a series of water stretches, composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the River Trent, on the Bay of Quinte, Lake Ontario, to Lake Huron. Balsam Lake, which is the summit, has an elevation of $589\frac{1}{3}$ feet above Lake Ontario, and the total rise and fall between Lakes Ontario and Huron is about $832\frac{3}{4}$ feet. At present 160 miles of direct and lateral navigation have been opened up. There are 13 locks, with a depth of water on the mitre sills varying from 7 feet to 14 feet. The navigable reaches amount to $132\frac{1}{4}$ miles, and the unnavigable to $60\frac{1}{4}$ miles. Tenders were let for this work in November, 1894.