

1.—Canal Systems.

There are in Canada six canal systems under the control of the Dominion Government in connection with navigable lakes and rivers. They consist of the canals (1) between Port Arthur or Fort William and Montreal; (2) from Montreal to the international boundary near lake Champlain; (3) from Montreal to Ottawa; (4) from Ottawa to Kingston and Perth; (5) from Trenton, lake Ontario, to lake Huron (not completed); and (6) from the Atlantic ocean to Bras d'Or lakes, Cape Breton. The total length of the waterways comprised within these systems is about 1,594 statute miles, the actual mileage of canals constructed being 117.2.

St. Lawrence Canals.

The St. Lawrence River group, part of the Montreal to Port Arthur system, comprises six separate canals at different points between Montreal and Prescott, not including the so-called "submerged canal" or channel dredged through shallow parts of the river between Montreal and Quebec.

Lachine Canal.—The first attempts at surmounting the Lachine rapids by means of a canal were made by Sulpician monks in the early years of the 18th century. The present canal, lying along the same route, was constructed between the years 1818 and 1825 and opened for traffic in 1824. It had seven locks and accommodated vessels of $4\frac{1}{2}$ feet draft. In 1843 an enlargement was commenced which, completed in 1848, provided locks with 9 feet of water. In 1885 the present canal with five locks, 270 feet by 45 feet, and having 14 feet of water on lock sills, was opened for traffic.

Soulanges Canal.—This canal, which overcomes the Cascades, Cedar and Coteau rapids, occurs next in order on the St. Lawrence route. It is the longest and deepest of the St. Lawrence River canals, being 14 miles from end to end and having five locks, 280 feet by 45 feet, with 15 feet of water on the sills. Under the French régime four small canals with a depth of only $2\frac{1}{2}$ feet were constructed and later enlarged by the British authorities in 1845, when the depth was increased to 9 feet. The present canal was opened to traffic in 1899.

Cornwall Canal.—The Cornwall canal provides a waterway around the Long Sault Rapids. It is $11\frac{1}{4}$ miles long and has six locks, 270 feet by 45 feet, with 14 feet of water over lock sills. This canal was first constructed between 1834 and 1843, with a depth of only 9 feet, and was enlarged to the present dimensions in 1901.

Williamsburg Canals.—After a navigable stretch of 5 miles, a series of three canals, the Farran's Point, Rapide Plat and Galops is entered. These are known as the Williamsburg canals and extend, including river reaches between, for a distance of $26\frac{1}{4}$ miles, whence river and lake navigation are possible without interruption until the Welland canal is entered 228 miles farther west. The three canals of this system were all first constructed between the years 1843 and 1847, with a minimum depth of 9 feet. They were enlarged between the years 1897 and 1901, with locks 270 feet by 45 feet and a depth of 14 feet on lock sills.

Welland Canal.—This important waterway, which overcomes the fall of 325 feet on the Niagara river, connects lake Ontario with lake Erie. The original canal, opened in 1829, extended from Port Dalhousie on lake Ontario to the town of Port