

WATERWAYS AND CANALS OF CANADA.

The rivers and lakes of Canada, to say nothing of the splendid systems of canals by which they have been linked together, form a continuous inland water route which is unmatched in any other quarter of the globe. From the mouth of the St. Lawrence to the most westerly port on Lake Superior, a vessel may steam continuously in Canadian waters for a distance of 2,260 statute miles : while from Bell Isle to Montreal the St. Lawrence River offers a channel, large enough for the accommodation of ocean steamers, for a distance of nearly a thousand miles. The difference in level between Lake Superior and tidewater on the St. Lawrence near Montreal is 600 feet, and a vessel, in ascending from Montreal to Port Arthur, has to be lifted through this great vertical distance. Of this total 551 feet is covered by means of locks, and 49 feet of it are overcome by steaming against the stream, which, in some stretches of the river, is so strong that the vessels have to be assisted by tugs. According to figures furnished by J. L. Bittinger, consul-general, there are between Montreal and Kingston seven canals, with a total length of 50 1-4 miles, and a total lift at the locks of 207 1-2 feet. The width of these locks is 45 feet, and the depth of water on the sills, 14 feet. Steamers on the run down from Kingston make no use of several of these canals, for the reason that the rapids may be run with safety. From Kingston the westward course is through Lake Ontario to Port Dalhousie, where the

Welland Canal commences. This structure is 26 3-4 miles in length, and the total lift of 326 3-4 feet is effected by twenty-seven locks each 270 feet by 45 feet, with a depth of 14 feet. From Port Colborne, at the Lake Erie end of the canal, there is deep water for a distance of 394 miles to the Sault Canal, which is 5,967 feet in length, and contains a lock 900 feet by 60 feet, with a depth of 20 feet 3 inches, the total lift being 18 feet. Once through the Sault Canal the last natural obstruction is passed, and there is deep water to Port Arthur.

In addition to this magnificent system, Canada has another water-course, which runs from Montreal to Ottawa, and then down to Kingston, a total distance of 245 miles. On this route there are four canals and locks ! In addition to these main-line canals, moreover, there are other canals on the line of the Richelieu River, in Ontario, and through the Peterborough district ; and there are a number of branches connecting with the Rideau and Welland systems. The total traffic through the several canals in the Dominion, in 1889, amounted 6,225, 924 tons. The total quantity of through freight passed through the Welland and St. Lawrence Canals from Lake Erie to Montreal was, in 1890, 231, 746 tons eastward and only 5,991 tons westward. The total expenditure for the fiscal year ending June 30, 1900, was \$3,351,164, and the total net revenue was \$322,642. Commending on this, the council-general says that if it is judged by the net revenue received, as compared to the outlay, the