CANALS 615

Aids to navigation, excepting very minor ones, are listed in three annual publications of the Department of Transport covering the Atlantic Coast, Inland Waters and Pacific Coast, respectively. A summary table showing marine danger signals maintained in Canada during the fiscal years 1929-40 is given at p. 581 of the 1941 Year Book.

A great deal has been done to improve navigable waters by dredging in channels and harbours, by the removal of obstructions, and by the building of remedial works to maintain or control water levels. Probably the largest task of this nature has been the St. Lawrence River Ship Channel. An extensive floating plant is in service to maintain and improve the deep-water channel from Montreal to the sea for ocean-going shipping. Incidental to these developments of navigable waters are works to guard shorelines and prevent erosion, and also the control of roads and bridges that cross navigable channels. In order to prolong the season of navigation in important waters that freeze over in winter, ice-breaking operations are carried on at both the beginning and end of winter. This is particularly the case in connection with sea-going shipping from Montreal.

## 1.—Duration of the Season of Open Navigation on the St. Lawrence Ship Channel, 1912-41

Nows -Fortho	wones 1999 to 101	11, see the Canada	Voor Book	1024-25 - 756
NOTE.—FOR the	years 1882 to 191	ii. see the Canada	. rear book.	. 1934-30. D. 700.

Year	Channel Open, Quebec to Montreal <sup>1</sup>	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour	Year	Channel Open, Quebec to Montreal <sup>1</sup>	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour
1912	" 14 " 25 " 14 " 22 " 22	Apr. 30 " 19 " 29 " 30 May 1 " 1	Dec. 3 Nov. 29 Dec. 4 " 11 " 3	1927 1928 1929 1930 1931	Apr. 11 " 26 " 10 " 12 Mar. 19 " 27	Apr. 12 " 26 " 20 " 21 " 15	Dec. 6 " 9 " 7 " 12 " 11
1918. 1919. 1920. 1921.	" 16 " 18 Mar. 29	Apr. 22 " 25 " 21	" 10 " 7 " 8	1933	" 28 " 30 " 28	" 26 " 15 " 13	" 8 " 9 " 11
1922 1923 1924 1925 1926	" 29 " 17 " 10	" 24 May 3 Apr. 24 " 22 May 3	" 2 " 2 " 3 " 9 " 6	1937	Apr. 9 " 12 " 29 " 23 " 14	" 19 " 18 " 29 " 24 " 19	" 8 " 4 " 12 " 5

<sup>&</sup>quot;Channel Open" means it can be navigated although there may be floating ice still in the river.

## Subsection 3.—Canals

Before the period of extensive railway construction, which commenced for Canada in the 1850's, the water routes, more especially the St. Lawrence, the Great Lakes, and the Ottawa, were the chief avenues of transportation. These routes were interrupted at certain points, necessitating portages and, to eliminate the toil of unloading, transporting, and reloading at the portages, the canals of Canada were constructed.