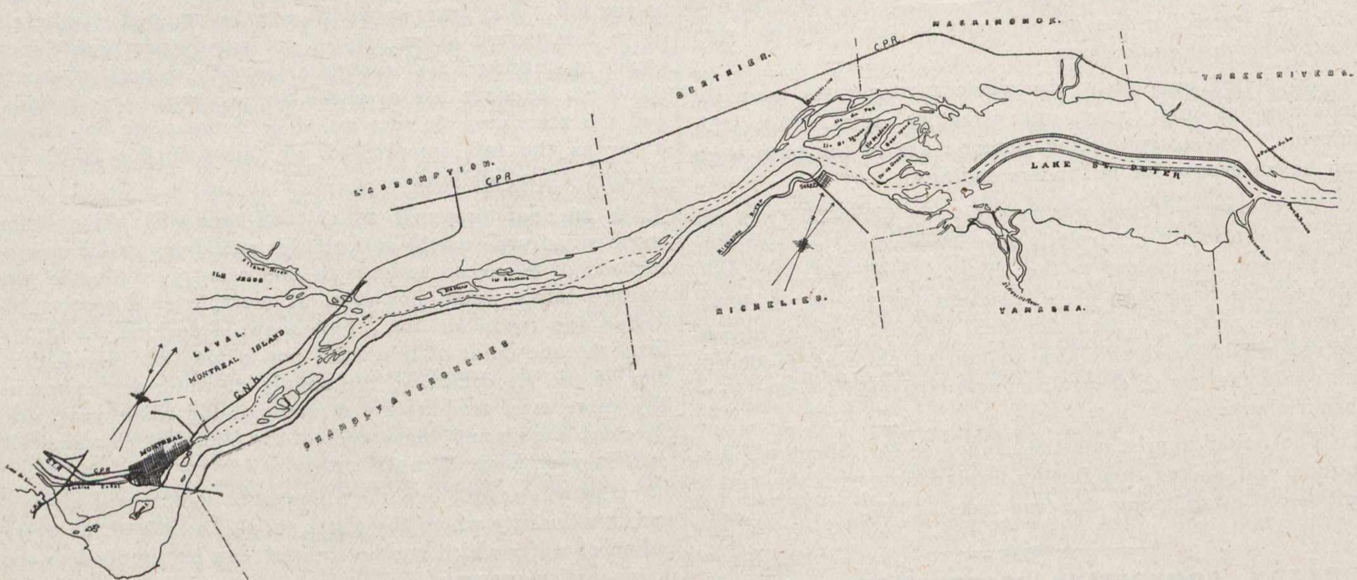
Northumberland Straits between Prince Edward Island and the mainland, and similar communication has been carried on to Newfoundland. It is only a question of time, however, before it will be found necessary to keep the St. Lawrence River open between Montreal and the sea. When commerce demands it, the means will be found. At the present time, it is found easier to land freight at the winter ports of St. John, N.B., and Halifax, N.S., and transport by rail for eight hundred miles. When the volume of trade grows, there can be no question as to the needs of cheaper methods of transit by water, thus keeping open the port of Montreal all the year round.

In Russia, winter navigation has been found to be commercially feasible, and many ports on the Kara Sea require ice-breakers in summer to reach Northern Siberia.

Two powerful ice-breakers were built by the Russian Government; one, the "Yermak," 305 feet long, 71 feet beam, 8,000 tons, and 8,000 h.p., with a speed of 15 knots, was placed in the Baltic to run between Baltic and Cronstadt, and St. Petersburg; the other, the "Urimak," a sister ship of 10,000 horse-power, to navigate through forty-five miles of ice to Vladivostock. These boats are equipped with triple screws—two on the stern and one in the bow—so protected, by being recessed in the body of the ship, as to be unaffected by the heaviest ice.* Another powerful ship, the "Neva," recently constructed, is without the bow propeller. She is of the same size as the "Urimak."



St. Lawrence River from Montreal to Quebec.

Captain C. H. Webb, R.N.R., who for three years was navigating officer in the waters of Vladivostock, informs me that in the worst weather, ships are escorted to their berth bv the ice-breakers, where they are allowed to freeze in until they are ready to sail, when the ice-breaker brings them out again. It frequently happens that a ship will freeze in so securely during a single night as to enable them to discharge their cargo the next morning on the ice. In the face of all these difficulties (if they are real difficulties), it is found to be commercially feasible to navigate in the coldest weather and, what is most important, to receive a favorable rating at Lloyds.

Canada possesses a considerable fleet of ice-breakers. The largest and most powerful was added this year, for the Northumberland Straits. The "Earl Grey" is 250 feet long, 47½ feet beam, 3,400 tons, and 6,985 h.p., with a speed of 18 knots. She does not possess the ice-fighting qualities of the "Yermak" or "Urimak," either in equipment or power—lacking the bow propeller—but she has accomplished splendid work during the past winter in maintaining navigation between Pictou, N.S., and Charlottetown, P.E.I., and has demonstrated what can be done by increasing the size and strength of the boat.

The "Stanley" is a single screw steel steamer, built in 1888, length 207 feet 9 inches, beam 32 feet, depth 17 feet 9 inches, net tonnage 395, and gross tonnage 914; indicated horse-power, 2,540.

At the beginning of the winter up to this year, the "Stanley" was performing mail service and carrying passengers between Georgetown and Pictou, and making tri-weekly trips. The service was continued on this route until May, when the steamer was transferred to the Charlottetown-Pictou route and continued on that route until the end of the month when the Charlottetown Steam Navigation Company commence running their boats.

The "Minto" is a single screw steamer, built in 1899, length 225 feet, beam 32 feet 7 inches, depth of hold 18 feet, net tonnage 372, gross tonnage 1,090, indicated horse-power, 3,150.

At the beginning of the winter, the steamer was on the Georgetown-Pictou route making tri-weekly trips until about May 4th. She then went on the Charlottetown-Pictou route, where she plied until about May 21st, when the summer service was resumed by the Charlottetown Steam Navigation Company.

The "Montcalm" is a twin screw steel vessel, length 245 feet. beam 40 feet 6 inches, depth of hold 15 feet 7 inches. net tonnage 3,508, gross tonnage 550. Indicated horse-power, 4,350.

She assisted incoming vessels through the ice, and furnishes valuable information to shipping through the Marconi Wireless Telegraph as to location, state, movement and direction of the ice, etc.

The vessel was employed for nearly two months transferring mails to and from ocean vessels off North Sydney; she then went to Pictou to take down the necessary supplies and Marconi operators with equipment for opening of Marconi wireless telegraph stations on the south and north coasts of the Gulf of St. Lawrence, Straits of Belle Isle, as well as off