

## Radiotelegraph and Other Electric Aids to Navigation.

As detailed in Canadian Railway and Marine World from time to time recently, the Dominion Naval Service Department's Radiotelegraph Branch has established several wireless telegraph direction finding stations which have been operated very successfully on the Atlantic coast and another one is being erected at St. John, N.B.

The U.S. Commerce Department's Navigation Bureau is studying the determination of ship location by radio signal. The system in use at present by the U.S. Navy employs radio compass stations on shore which measure the angle from which the signal is sent by the vessel to be located. By a system of triangulation two or more stations working together can determine the location of a vessel. The new system under test by the Department of Commerce reverses the operations by sending the signals from shore stations and doing the radio compass work aboard ship. Recent tests on this system are reported to have been very successful, but further investigation both as to apparatus and methods of manipulation are anticipated before any extensive application will be commended.

In connection with the radio location of ships the U.S. Navy Department has under consideration the establishment of a large number of additional radio compass stations. These will be placed along the western seaboard and on the Great Lakes. It is anticipated that they will find extensive use in directing the merchant marine, though they will be designed primarily for naval service. It is said that stations will be established on the Great Lakes at Detour, Grand Marais, Whitefish Point, Eagle Harbor, Thunder Bay Island, Wind Point or Grosse Point, and several other points.

A Paris cablegram says that the French Ministry of Marine has decided as soon as possible to lay down in all French ports and across the Channel, in collaboration with the British Admiralty, electric cables which will enable ships to steer safely into port in the densest fogs. The invention which is to be used is that of the French engineer, Loth, which, it appears from the account given at the Academy of Sciences by Admiral Fournier, resembles in its general principles that recently experimented with in America. An electric cable along which a current of alternative frequency is passed is submerged in the fairway. Secondary currents which such a cable induces at a distance are picked up by ship's instruments and, according to the distance of the sound, the pilot can judge whether he is in the middle or at the outskirts of the fairway. Even an aeroplane fitted with receiving instruments can follow the submerged cable, and the proposal is made that the sea cable should have an overland connection to the aerodromes, to enable pilots to steer through fog.

The United States Navy Department is reported to be completing a series of tests in New York harbor on a system using what is called a "radio piloting cable." This system was first tried by the Navy Department nearly a year ago but the first tests were not successful, due to damage of the cable by fishing operations. A new cable designed by the Radio Division of the Bureau of Engineering of the Navy Department has, however, proved successful and recent tests are reported to be exceedingly encouraging. The work requires a cable

energized by a low frequency alternating current laid along the center of the channel through which vessels are to be guided. The magnetic waves from this cable are picked up by any one of several types of receiving equipment aboard the ship and the pilot lays his course in accordance with the relative intensity of the signals from the right or the left receiving units. A full report upon this work will be available on completion of the present tests.

## The Cunard Co.'s Canadian Services.

London, Eng., Oct. 13.—The Cunard Co. will probably supplement the partial service to Canada now being provided by the Saxonia and the Caronia with several of the 13 ships now under construction for the company. As the new ships will all be oil burners, of approximately 20,000 tons each, the Cunard Co. expects to become serious competitors of the Canadian Pacific Ocean Services. The sailings will be from London to Halifax and New York. The British offices of the Cunard Co. refuse to confirm the report that the company will put a passenger fleet on the Pacific Ocean to compete with the C.P.O.S. there, using the Canadian National Rys. across Canada.—Copyright cablegram to Montreal Gazette.

## Francis King on the Proposed St. Lawrence River Improvements.

At a sitting of the International Joint Commission at Kingston, Ont., Oct. 11, Francis King, M.A., Chairman of the Kingston Board of Trade's marine committee, stated that, as General Counsel for the Dominion Marine Association, he had at Buffalo, N.Y., on Mar. 1 last, explained the attitude of Canadian ship owners towards the proposals so far as their position was indicated by the Association's records. They had made no declaration then and had made on declaration since on the question whether transportation would benefit by the adoption of the proposed scheme of improvement, but they had asked for some such plan as a solution of their difficulties in relation to power development. They had objected to the present system of parcelling the river out to private individuals, and to corporations, with the result that navigation was imperilled and that the Government was in danger of losing control of the stream. Mr. King stated that the Association and mariners themselves recognize that power is a very important factor, and that the demand for more of its must be met soon. The Association therefore asked the Government for a scheme which would protect navigation interests and at the same time permit the development of power. To that extent the Association agreed on the proposals, and in spite of other differences among individuals, such as those engaged in freight and passenger traffic, those with ships of large size and those with ships which can already navigate the canals, those who have strong views on the non adaptability of lake ships for ocean trade, or ocean ships for lake trade, and those who believe a new type might develop or that transshipment would in any event take place at Montreal; in spite of these differences the Association believes that some scheme must be adopted, and the one before the Commission seems practical and might be decided upon.

Mr. King said the Association should

go farther, and suggested that if the change must come, dams and slack water lakes in the river would be preferable to canals. Speaking for Kingstonians, he pointed out that in advocating the St. Lawrence waterway, on account of the need of power, they were quite unselfish, as when the Welland Canal deepening was proposed, it was felt that it would make the foot of Lake Ontario the end of deep water navigation and build up Kingston. With the deepening of the St. Lawrence this advantage would be gone, but they believed the good of the greatest number must be considered and must prevail.

## Marine Public Works Contracts.

The Dominion Public Works Department has awarded the following contracts:—Repairs to checkwater pier, Cobourg, Ont., York Construction Co., Toronto, Sept. 15, schedule of rates. Repairs to public wharf, Owl's Head, N.S., Naugle & Hiltz, Lawrencetown, N.S., Sept. 14, schedule of prices. Dredging in deep water berths, St. John, N.B., J. A. Gregory, West St. John, N.B., Sept. 20, class B, 32c. a cu. yd. scow measure. Wharf, Thetis Island, B.C., Vancouver Pile Driving & Contracting Co., Vancouver, B.C., Sept. 15, schedule of prices. Reconstruction of superstructure of west pier, Pelee Island, Ont., Border Cities Construction Co., Windsor, Ont., Sept. 22, schedule of prices. Repairs to wharf, Campbell River, B.C., W. Greenlees, Vancouver, B.C., Sept. 23, schedule of prices. Construction of wharf, Lyall Harbor, B.C., Vancouver Pile Driving & Contracting Co., Vancouver, B.C., Sept. 23, schedule of prices. Renewal of wharf, Moresby Island, B.C., Vancouver Pile Driving & Contracting Co., Vancouver, B.C., Sept. 23, schedule of prices. Reconstruction of wharf, Owen Sound, Ont., E. Conroy, Peterborough, Ont., Sept. 27, schedule of prices. Ice breakwater, St. Joseph de Sorel, Que., A. Lacroix and H. Gravel, Montreal, Oct. 1, \$2,800. Public floating wharf, Princess Creek, B.C., F. Cogle and H. Perryheake, Proctor, B.C., Sept. 27, \$7,980. Reconstruction of 466 ft. of superstructure of east pier, eastern channel to Toronto harbor, Toronto, C. S. Boone Dredging & Construction Co., Toronto, Oct. 12, schedule of prices.

## Wreck Commissioner's Enquiries and Judgments.

Investigations have been held and judgments delivered in connection with the following casualties:—

### Stranding of s.s. Edward Pyke.

Held at Quebec, Oct. 7, before Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. C. Lapierre and J. Couette, as nautical assessors, into the stranding of the steam tug Edward Pyke, near Pointe a Pizeau, Quebec harbor, Sept. 5, while towing the sailing ship Grand Duchess Maria Nicolaeroc.

The court found that the master of the tug, Capt. A. Larsen, and the pilot, A. Arcand, failed to exercise the prudence required by their respective positions and responsibilities. The fact that the casualty was trivial in a monetary sense was no concern of the court, but on the principle involved the court held that the action of each of the parties brought the tug and her tow into danger, and ordered Capt. A. Larsen to pay the costs of the enquiry, and fined the pilot, A. Arcand, \$150, to be paid by Nov. 1. With respect to E. deVillers, pilot of the sail-