

1928, in view of increased wireless competition, it was decided to dispose of the Pacific and West Indian Islands cable systems to the Imperial and International Communications Company, a company formed to take over all Empire-owned cables and lease the Empire-owned beam wireless systems. The necessary legislation was passed by Great Britain in February, 1929, and by Canada in June, 1929, and Canada received \$591,662 as her share of the proceeds of the sale.

Section 2.—Radio Service.¹

Radiotelegraphy.—The administration of radio within the Dominion is vested in the Minister of Marine.

As early as 1904, the Department commenced the establishment of coast radio stations as aids to navigation and for communication with ships at sea. At the present time Canada's extensive coastline is covered by a network of some 60 odd stations, of which 27 are located on the east coast, 13 on the Great Lakes, 15 on the west coast and 5 on Hudson bay and strait. Twice daily at advertised hours, a number of these stations broadcast messages to shipping, containing such important information as weather forecasts, storm warnings, reports in connection with floating derelicts, ice and other dangers to navigation.

The discrimination by underwriters in insurance rates charged on ships plying to Canadian ports has led the Department to feel that any reasonable expenditure which would tend to reduce these charges would be a sound investment. To this end 12 radio direction-finding stations have been established at specially selected sites with respect to navigational routes, 7 on the east coast, 4 on Hudson bay and strait, and one on the west coast of Vancouver island. These stations are fitted with a special apparatus that enables the direction of an incoming radio signal transmitted by a ship to be accurately determined. That these stations have proved exceptionally successful is demonstrated by the volume of letters received by the Department of Marine commending the work of its stations, and it is the expressed opinion of many master mariners that Canadian direction-finding stations set a standard for accuracy and efficiency. A more recent extension of this feature is the development of the direction-finding instrument for use on board ship. To assist this development, the Department has installed radio transmitters at a number of its light-houses and lightships. These radio "beacons", as they are termed, function automatically whenever the fog alarm plant is in operation, sending out a characteristic radio signal with an approximate range of 50 miles. Ships fitted with their own direction-finding instruments are thus enabled to take their own bearings from the points at which the beacon stations are located. The latest type of radio beacon used by the Department is completely automatic in its operation. Such beacons are controlled by a clock which starts in proper sequence the gasoline engine, the generators and other associated apparatus, keeping them operating for a predetermined period and stopping all machinery at the end of the period.

Since the sinking of the *Titanic*, which on her maiden voyage struck an iceberg that had drifted into the transatlantic steamship lanes, an international ice patrol, supported and maintained by the maritime nations of the world, watches the traffic routes of the North Atlantic for the purpose of reporting the

¹ Revised by the courtesy of Commander C. P. Edwards, O.B.E., Director, Radio Service, Department of Marine.