

Dominion Marine.

LIGHTHOUSES.

In the *Ontario Division*, extending from Montreal to Lake Superior, there were, at the close of navigation in 1877, 143 lighthouses, light beacons and light snips, and 87 buoys and 4 beacons, 106 light keepers were paid by the Government. A number of lighthouses already commenced, were completed and put in operation during the year. No new ones were commenced. The expenditure for construction during the year was \$16,277, and for maintenance \$56,421.

The *Quebec Division* extends from Montreal to the Straits of Belleisle. In this division there are 126 fixed and revolving lights, 8 light ships, (3 of them with steam fog-whistles) 7 steam fog-whistles at light stations, 8 fog guns, 74 buoys, 55 beacons, and 8 provision depots for relief of shipwrecked mariners. The number of persons employed was 157. Several of the lights between Quebec and Montreal were furnished with more powerful lamps. The new lights at Bay St. Paul and Goose Cape were reported efficient. A new lighthouse was erected on Greenly Island Straits of Belleisle, and the steam fog-whistle removed there from Cape Ray, that having been replaced by a Woodward fog steam-horn. Improvements were made at several other stations. The amount expended was, for construction, \$12,945, and for maintenance, \$105,978.

In the *New Brunswick Division*, including the whole coast of New Brunswick, there were 66 lights, including a light ship and 8 fog-whistles under the charge of 60 keepers and engineers. The two beacon lights at South Tracadie were put in operation, the lighthouses of Pea Point, L'Etang Harbour, and one at Machias Seal Island in the Bay of Fundy, were completed and put in operation. An automatic fog-trumpet was completed at Grindstone Island, and a Neptune fog horn erected at Head Harbour, Campbell Island, Bay of Fundy. A powerful fog bell was erected at Quaco Lighthouse, St. Martin's. The expenditure was, for construction, \$7,034, and for maintenance, 5,998.

At the close of navigation there were in the *Nova Scotia Division*, 110 lighthouses, 10 steam fog-whistles, 1 lightship, and 115 keepers and engineers. New lighthouses were put in operation at Guyon Island, Cape Breton, and at Big Arrow Island, C.B., at Devil Island at the eastern entrance to Halifax Harbour, at Pope Harbour, Halifax Co., and at Fort Point, La Have. The fog-whistle on Cape Sable Island has been in successful operation. That at Sambro has also been in continuous operation, but the sound cannot be heard as far as was desired, and the expenditure has been much heavier than was anticipated. A lighthouse has been commenced on Isle Haute, Bay of Fundy.

Repairs and improvements have been made at a great many of the lights. The cost, including the Humane Establishments on St. Paul, Sable and Scattarie Islands, was \$17,999, and for construction, \$25,550.

There are 22 light stations in the *P. E. Island Division*, besides range lights at some of the stations, making 30 in all—under the care of 22 light keepers. The new lighthouses at West Point, Wood Island, and Blockhouse Point were completed during the fiscal year. New lighthouses were erected and put in operation at North Rustico and Tracadie. Two fixed lights were put in operation at Big Tignish, and at Little Sands. The new lighthouses, Malpeque, Fish Island, on Sandy Island, Cascumpec and Little Channel, or Conway Inlet, were fully completed. \$17,762 were expended for construction, and 11,817 for maintenance.

The lighthouses in *British Columbia* are six in number and one lightship. There are 14 light keepers and assistants. No new lighthouses were constructed last year, but improvements were made to the existing ones. The expenditure in British Columbia was \$15,853.

The *Oil* for the lighthouses, except those in British Columbia, was supplied by the Union Petroleum Co., London, Ont. At Race Rocks and Fraser River, B.C., dog fish liver oil is used and found to give a brilliant light. The quantity of oil supplied was 111,261 gallons, at an average cost of 25¢ cts. per gallon. The total number of lighthouses in operation in the Dominion in 1877 was 416; lights shewn, 509; fog-whistles, 25; fog-horns, 2. The number of persons employed in the service was 474. The total cost during the year was—

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| For construction | \$ 79,603 |
| For maintenance | 377,124 |
| Total | \$456,727 |

DOMINION STEAMERS.

There are five screw steamers, two paddle-wheel and two small steam launches, under the control of the Marine Department. The steamer *Napoleon III* during the season, supplied light stations on the W. shore of the St. Lawrence, the Gulf, Straits of Belleisle, and N. shore of New Brunswick and P. E. Island. The *Druid* supplied lighthouses from Point des Monts to Montreal, laid down and looked after the buoys below Quebec, conveyed Governor General and suite to the Gulf, and was employed also in connection with the Fisheries Commission. The *Lady Head* was employed as an armed cruiser for the protection of the fisheries and also for the service of the Fishery Commission. The *Newfield* supplied the lights in Nova Scotia, and those of New Brunswick in the Bay of