

The fog-alarm building stands on the west extremity of the rock, N.N.W. 80 feet from the lighthouse. It is a square wooden building painted white, with the duplicate horns issuing from the west face.

The fog-alarm consists of a horn operated by steam and compressed air, which gives blasts of 8 seconds' duration, with intervals of 40 seconds between the blasts. The machinery is in duplicate, so that in case of a horn or boiler becoming inoperative, the other can be used.

The buildings were constructed by Messrs. Reed & Green, of Owen Sound, whose contract price was \$4,788. The fog-alarm boilers and machinery were made by Messrs. Carrier, Lainé & Co., of Lévis, at a cost of \$2,400, and were set up by Mr. W. H. Noble; the lighthouse lantern was made by the Chanteloup Manufacturing Company of Montreal. The total expenditure on the installation of this station, up to date, has been \$8,393.28.

#### *Canadian Canal at Sault Ste. Marie and Approaches.*

The ship canal constructed by the Canadian Government on the north side of Sault Ste. Marie, to connect the navigable waters of the upper River St. Mary and Lake Superior with those of the lower River St. Mary and Lake Huron, was opened to general traffic on the 9th instant, and will be kept in operation hereafter while navigation is open.

In connection with the opening of the canal, the Chief Engineer of this department visited Sault Ste. Marie and completed arrangements for lighting and buoying the approaches.

*Location and Dimensions of Canal.*—The canal is cut through red sandstone rock on the north or Canadian side of Sault Ste. Marie, about 4,000 feet north of the existing United States canal. The cut is straight and is 5,900 feet long between the extremities of the cribwork approaches. The canal prism is 156 feet in width at the surface, 143 feet at the bottom, and the water is 22 feet 3 inches deep. There is one lock, which is 900 feet long by 60 feet wide, with a depth on the mitre sill of 20 feet 3 inches. The lift is about 18 feet, varying somewhat as the waters above or below the canal are affected by drought, rain, wind, etc. Outside the canal, at each end, a channel 18 feet deep by 250 feet wide has been dredged, connecting with the American channels.

*Buoys.*—The approaches are marked by spar buoys. The dredged channel east of the canal is indicated by 8 red and 4 black spar buoys. The lowest red spar buoy, near Plummer's dock, is distinguished by being surmounted by a slatwork cone, and the lowest black spar buoy, opposite the International dock, is surmounted by a slatwork drum. Below this easternmost black buoy there is at least 15 ft. of water across to the wharf on the American side of the river, and vessels desiring to cross the river need not keep close to the red buoys any farther east. Above the canal there is an octagonal timber crib surmounted by a day beacon built on the starboard side of the channel off Davignon Point, to mark the only turn above the canal. There are two red buoys between the end of the canal embankment and this beacon. There is a black buoy on the south side of the same stretch, and two black buoys to mark the turn opposite the beacon. Off Vidal shoal there are four red buoys. The outermost of these buoys is a square platform buoy on which stands a pyramidal slatwork surmounted by an inverted cone. On the port side of