

ELECTRICAL INSTALLATION.

As mentioned previously, the power-house is in combination with a waste weir about half-way down the summit level, the Grease River, which passes under the canal at this point being used as a tail race. A 20-ft. head is easily secured here



FIG. 18. VIEW OF PONTOON USED FOR HANGING LOCK GATES.

and the area of the canal prism admits of a large discharge without creating an objectionable current, besides which, discharging into the stream

eral Electric Co., who placed Mr. Hoffmeister in charge of the erection work.

POWER-HOUSE.—A gap in the south bank, about 120 ft. in length, is barred by a heavy concrete wall founded upon piles (Fig. 19). The middle third of this is widened out into the canal to form two vaults for wheel chambers. Three arched openings, closed by "Stoney" sluices, are placed on each side of the wheel pits to form regulating valves for the summit level. In each wheel chamber are four Victor wheels working on one horizontal shaft. Both shafts pass through the concrete dam in packing boxes to the generators. The dam forms one wall of the power-house, which is a handsome brick building with sandstone trimmings (Fig. 20).

There are two, 3-phase, 60-cycle generators of 264 K-W. each, direct-connected to the wheel shafts, which make 225 revolutions per minute, generating a pressure of 2,500 volts on the line. Two exciters of 15 K-W. each are belted direct to the wheel shafts. The switchboard is of marble; there are 2 generators, 2 feeders and 1 exciter panels fitted with the latest operating instruments.

DISTRIBUTION.—The pole line being on the opposite side of the canal, the current is carried across in four-lead armored cables to a switch cabin on the north bank, whence one power and



FIG. 19. VIEW OF POWER HOUSE DAM FROM CANAL SIDE.

creates no damage claims. Mr. A. M. Rice, of Dayton, O., designed the hydraulic development, and the Royal Electric Co., of Montreal, worked out the electric power required and its application to locks, bridges and lighting. The contract for the work, however, was secured by the Canadian Gen-

light circuit is run up and one down the canal. The poles are of British Columbia red cedar, dressed octagonal and painted with four coats of white lead. They are spaced 120 ft. apart, every fourth pole carrying an enclosed arc lamp of 2,000 c. p. All poles are set 6 ft. into the ground, the