

Fig. 3.—No. 1 Dam (reinforced concrete) and Reservoir.

stream, will allow of the use of about one second-foot per square mile of run-off throughout the year. The maximum flood run-off as recorded during the past five years is only about 7 second-feet per square mile, while the minimum recorded run-off is .27 second-feet per square mile. The reader is referred to the issues of *The Canadian Engineer* for April 16, 1914, and May 6, 1915, for articles relating to the stream flow and run-off investigations carried out on the Beaver River and its drainage area.

A 50-horse-power water power plant which had been used previously for lighting the villages of Eugenia and Flesherton, was renovated and put in working shape. This plant supplied power for lighting and electrical energy for the construction of the dams and work on the canal.

The development consists essentially of a storage dam on the Beaver River about one-half mile above the Falls. From the reservoir thus formed a canal 5,000 feet

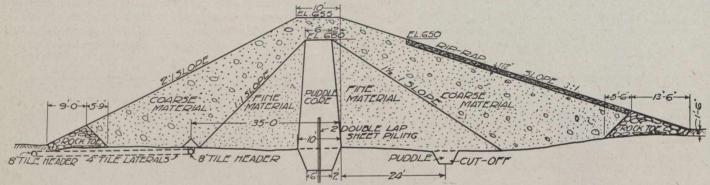


Fig. 4.—Section of No. 2 Dam as Constructed.

The purpose of the development is to supply power to the territory lying to the north of the Niagara power district and to the west of the Severn power district, including Owen Sound, Markdale, Flesherton, Mount Forest, Durham and a number of other municipalities.

All material used in the construction of the plant was shipped to Flesherton and Markdale, towns on the Owen Sound branch of the Canadian Pacific Railway, located about 6½ miles from the development, and teamed in to the work.

long carries the water to a forebay or settling basin, thence through a wood-stave pipe and steel penstock to the power house.

A description of the construction features of the plant can be most easily followed by taking each part in its order, beginning at the reservoir and proceeding down to the power house.

No. 1 Dam.—The main storage dam, or No. 1 dam, is a reinforced concrete structure of the Ambursen type, designed and built by the Ambursen Hydraulic Construc-



Fig. 5.—No. 2 Dam (earth filled) and Forebay.