## CONCRETE DAM CONSTRUCTION NEAR TRENTON, ONTARIO.

A NEW concrete dam, recently completed on the Trent River, near Trenton, Ont., has some features that may be of interest both in the matter of design and difficulties encountered during its construction. Work was commenced in September of 1912,

and the structure was completed early in July of this year, covering a total period of about 10 months. Owing to the taining sufficient head during the construction of the new dam to keep the mill in continuous operation. This feature was successfully carried out, although it increased the cost of construction somewhat on account of the required extra height of coffer-dams required. The extra outlay was fully justified, however, as otherwise the prospective loss that the mill would have sustained, had it been obliged either to close down operations or to install steam machinery and equipment for the power, would have amounted to many times the sum.



Fig. 1.-Plan of Concrete Dam Across Trent River.

mildness of the winter of 1912-13 in that locality the Trent River did not decline to its usual minimum flow for this period, and was, in fact, at flood stage several times during the winter months. This naturally caused difficulty which was unexpected, the most acute being in the last closure of the dam.





The new structure replaces an old wooden dam that had furnished power for running a paper-box mill at the site. One of the construction problems was that of main-



Fig. 3.—Showing Cofferdam After Pumping.

also extended into the main still-way section. The design is such that stop-logs can be used between the piers to regulate the head as required.