

cavations being through rock 7 ft. deep, and along the side of the roadway under the power lines of Canadian General and the Bell Telephone Co. The water was carried through a 3 ft. concrete pipe for 300 ft. and empties into the river below the new dam. The total cost of this culvert diversion complete with its inconveniences came out at an average price of \$5 per foot run of 300 ft.

The contract time for this work is not up till September, 1910, and owing to the poor nature of the rock at the river bed

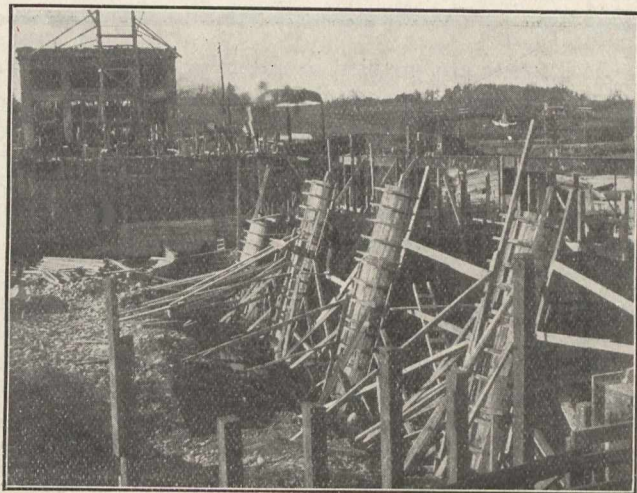


Fig. No. 6.

it entailed extra excavations, more concrete by about 1,000 yards besides the usual extra work that usually follows in this class of work, and to have accomplished the whole of this work in the short space of 24 weeks, thus being nine months ahead of contract time, it can readily be assumed that no time was lost. The work was always set out well ahead of the contractors and they took full advantage of every



Fig. No. 7.

facility held out to them with the inevitable result of a quick and speedy structure.

The following quantities will be interesting:—

Earth excavation, 4,600 cubic yards.

Rock excavation, 3,500 cubic yards.

Concrete, 7,000 cubic yards.

Steelwork, 317,907 pounds.

Cofferdam, 3,000 cubic yards.

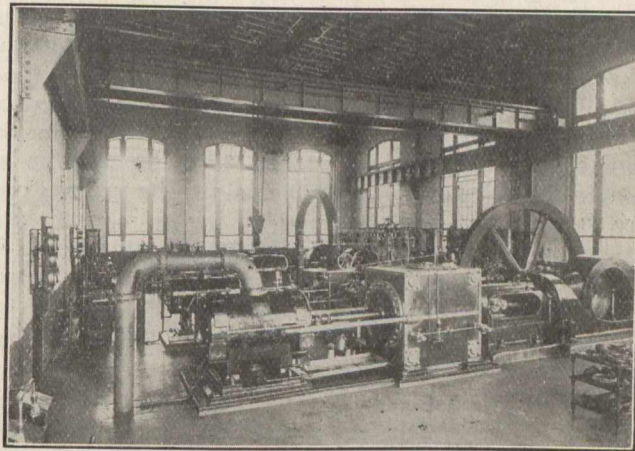
The total length of dam between abutments, 327 feet.

The commissioners decided to secure the services of one of the best authorities, and they considered themselves very fortunate in obtaining the services of an engineer of the experience and ability of Mr. Wm. Kennedy, Jr., Consulting Engineer of Montreal, by whom the plans and specifications were prepared. The whole of the work was set out and supervised by Mr. A. W. Ellson Fawkes, C.E., Mr. Kennedy's resident engineer on the works. From general observations and remarks the Water Commissioners and ratepayers are highly satisfied with the results of the expenditure of their money, and are contemplating further developments along the same basis at an early date.

THE WATER SUPPLY SYSTEM FOR THE CENTRAL OF GEORGIA RAILWAY'S MACON SHOPS.

Among the advantages peculiar to electric pumping there is the possibility of locating the delivery apparatus, practically unattended, directly at the intake site, and at any reasonable distance from the source of power, the control station and the point of delivery.

A good example of such flexibility in disposing the links of a small water supply system is the motor-driven pumping equipment for the locomotive and freight car repair shop of the Central of Georgia Railway at Macon. The installation of this plant has resulted in assuring a generous supply of water at all times for general use and fire protection service,



Interior of Power Plant of the Central of Georgia Railroad Company's Macon Shops—Pumping Motor Control Board.

besides substantially reducing the cost of each thousand gallons compared with the price when the supply was purchased.

The present private water supply system of the Macon shops comprises a motor-driven pumping station on the bank of the Ocmulgee River, nearly a mile from the shops and power plant, from which it derives its power supply, and to which in return it delivers 600,000 gallons of water per twenty-four hours against a head of 55 feet. No attendant is maintained at the pump-house, the machinery being controlled from the power plant in the shop group of buildings in accordance with automatic indicating and recording devices.

The duty required of the pumping plant is the supply of water for general use about the shops and property, fire protection for the buildings, condensing water for the power plant boilers and water for the locomotives, all aggregating about 600,000 gallons daily. Chemically, the water of the Ocmulgee River is quite good from a boiler standpoint, but

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