12 ft. 2 in. wide and 14 ft. 9 in. high, with arched top. There is a 16-in. vent pipe to prevent collapsing of penstock when emptying, and an expansion joint is placed about half-way down to take care of expansion and contraction due to changes of temperature. Two 6 in x 6 in. angle iron rings are rivetted on the pipe at each end; between these angles a 3 in. x ½ in. anchor stay, ends of which are embodied with the angles in large concrete anchor piers. The upper part of the penstock is carried on cast-iron brackets, which are rivetted to the pipe, and set on concrete piers. The lower section is carried on structural steel, the saddles being carried on a trestle.

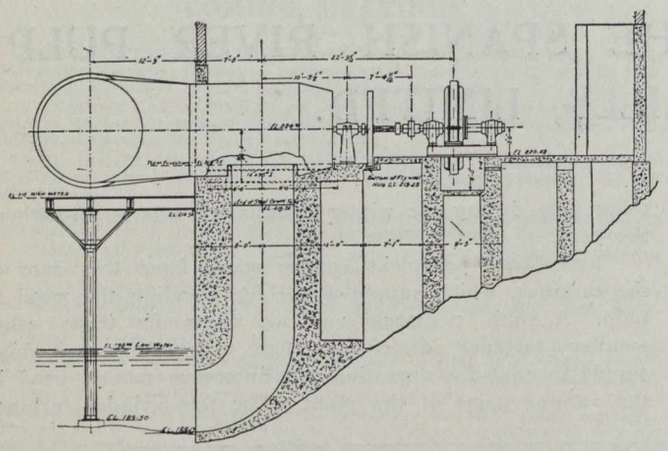

Fig. 2.

Fig. 2 gives a cross-section through the power-house, and shows the arrangement of generator, turbine, penstock and draft-tube. Fig. 1 is a plan of the power-house, showing the switchboard, the exciter layout, and the general arrangement of the turbines and generator.

The three generators are of 1,250 kv.a. capacity, revolving field, two-bearing, water-wheel type. Two exciters are installed of 40 kw. each, belt-driven. The electric generators and all electrical equipment were supplied by the Canadian Westinghouse Company. This equipment further includes about 2,500 horse-power in induction motors, about 700 horse-power in synchronous motors, a 17-panel switchboard, black marine finish, for the power-house, and a five-panel board for the sub-station.

ground can thus be covered as will ensure a sufficient supply over any desired period of time. For taking coal out of storage and placing it in the furnaces, mechanical handling has been adopted throughout. The coal is first dug from

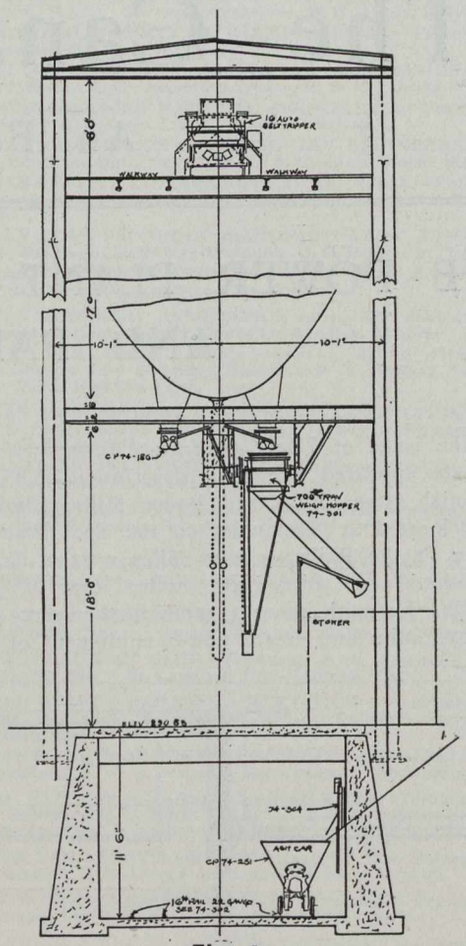

Fig. 4.

the storage pile by means of an orange peel bucket operated from a steam locomotive crane and loaded into a bottom-dumping car. The locomotive crane is then used to shunt this car to a track hopper, into which the car is discharged. Under the track hopper is arranged a crusher and feeding-

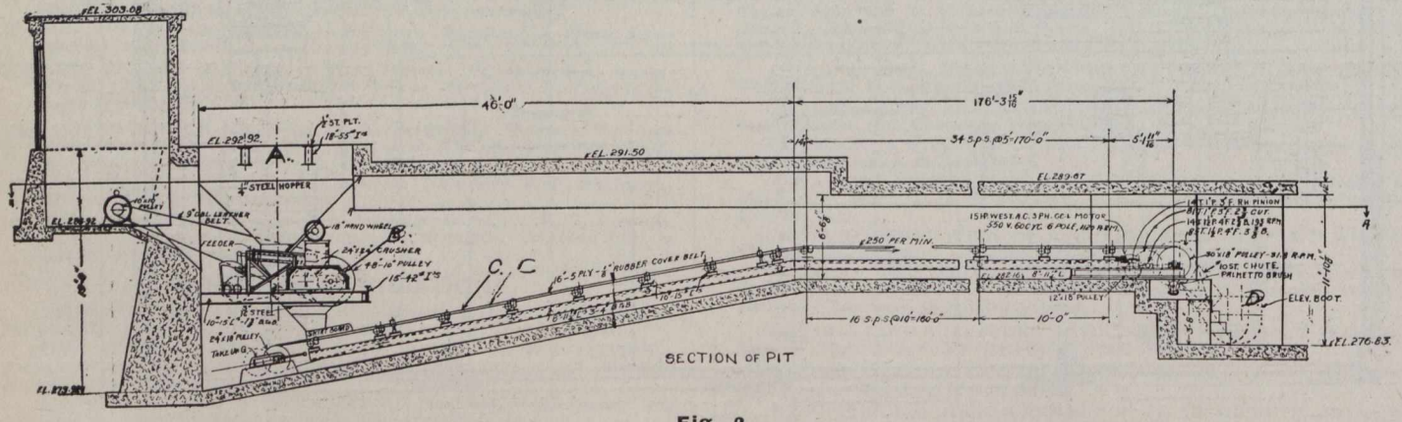

Fig. 3.

The steam plant equipment has been very carefully designed with a view to the most economical handling of the fuel and the ashes. The arrangements for handling the coal were influenced largely by the necessity of storing sufficient fuel to meet the requirements of the mill during the winter months. A convenient area of ground adjacent to the railway tracks has been taken, and a spur track laid in a manner that will permit placing this spur on top of the coal pile as fast as the pile is made. As much area of

gate, which feeds the coal to a belt conveyer. This conveyer carries the coal from the track hopper to a point at the end of the boiler-house, where it is elevated by means of a bucket elevator to a belt conveyer, which distributes it in a steel coal bunker over the boilers. Here there is capacity for storing approximately one week's supply of coal for the boilers.

The coal bunker is placed at an elevation suitable for drawing coal by gravity to the Murphy stokers attached to