

system, while the lighting is taken care of by separate three-wire circuits—240—120 volts.

Cooper Hewitt mercury vapor lamps are used in the machine shop, foundry, and boiler shop; arcs and incandescents in the other shops. The mercury lamps have



Fig. 3—General View of Power House, Floor Level.

been very satisfactory as to illumination and economy. The light is very uniformly diffused, and there is an almost total lack of sharply defined shadows. All wiring is run in iron conduits, with iron panel boxes with enclosed fuses.

Each motor is controlled from a slate panel with circuit breaker, switch, and enclosed fuses.

The power plant was installed under the direction of Mr. Chas. J. Goldmark, who is also responsible for the electric layout and the details of the power house equipment.

Power Development at Campbellford

The power development at Campbellford, Ont., is now proceeding at a rapid rate under the supervision of A. W. Ellison Fawkes, A.M.I.C.E., engineer in charge. The head race of fore bay and west concrete retaining wall are now completed.

The excavation for the power house was carried along through difficulties owing to the large amount of water that had to be dealt with, and the depth of excavations for power house foundations is 40 feet below the water level.

The building throughout will be of reinforced concrete, amounting to over 3,000 cubic yards. To get this large amount of concrete in before the water rises, a Gould, Shapley & Muir concrete mixer was installed. This machine is operated by six men and is putting in concrete at the rate of 75 to 100 cubic yards per day.

The plant will have two 750 k.w. generators and all modern appliances that will make it one of the finest electric power stations for its cost.

Engineer Fawkes estimates that the plant will be ready for running at the end of the year.

The object of the town of Campbellford in putting in this power development is to offer better facilities to manufacturers to locate there. The power scheme was designed by J. S. Fielding, C.E., Toronto.

The contractor is James Bogue, Peterboro, Ont. Estimated cost, \$100,000.

Figures 1, 2, 3 and 4 show different portions of the work.

The Wise One

"Precedent may be the whole cheese in law," said the gray-haired travelling man who had "covered" nearly every State in the Union, "but don't you bank on it in this business. Why? I'll tell you a story that's one on me, all right, but it taught me mine.

"Several years ago, when I was younger than I am now, I was travelling for a machine firm. One rainy night, the train I was on drew up at a jumping-off place in northern New York, and we were told we would be allowed time for grub. We had had nothing to eat for eight hours, and were as hungry as timber wolves in winter. We all piled out and made a general assault on the lunch counter.

"The rest of the bunch gulped down a cup of coffee, bolted a sandwich or two, and returned to the train. Did your Uncle Dudley hurry? Oh, no; not he. He was a modern Solomon. He had learned that the train would not go until the conductor did, so he watched him. This conductor was very deliberate in his eating, and made a hearty meal. I, congratulating myself on my foresight, did the same.

"After twenty minutes of it, I got rather anxious. When about ready to make inquiries, the said conductor

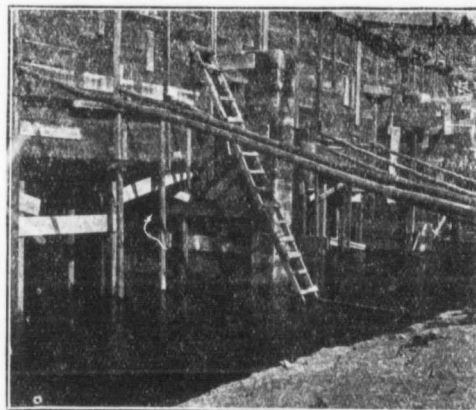


Fig. 4—Sheeting to the Arches of the Tail Race.

arose, sauntered to the platform, gazed reflectively at the glooming sky, and started off toward where the town might be. I watched him out of sight, and then looked for the train. Nothing in sight but the glistening rails.

"Dumbfounded, I returned to the station and asked the station agent where my train was. He informed me it had gone fifteen minutes ago, and that it was the last train till next day. It seems the conductor lived in that town, and was relieved there.

"There was no hotel in the town, but I finally convinced the station agent I was no post office thief, and was allowed to bunk on a bench in the station. Say, it was the hardest bed I ever had, and I've experienced some pretty bad ones in my time, too.

"I pulled out the next morning sore and stiff. My grip had gone on to Buffalo. What with telegraphing and loss of time the experience cost me, I have never been able to figure out. But I learned my lesson. Now, I bolt my grub with the rest of down-trodden travellers. No chances for mine."