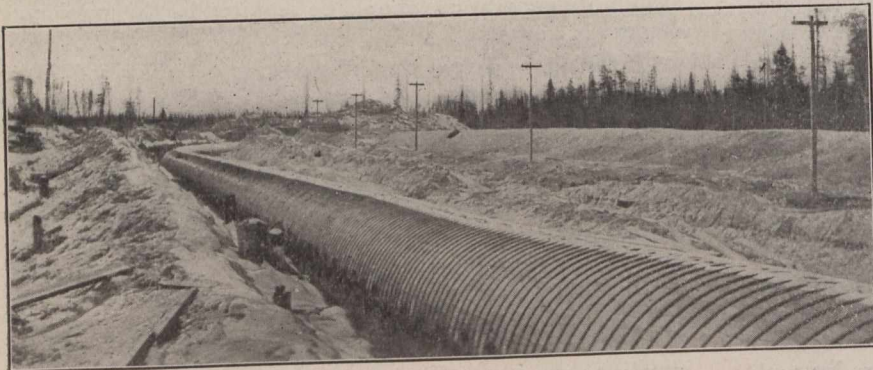


Health for approval and following such approval the contract for the work should be advertised and awarded according to law. The duty of the village authorities does not cease at this point and during the construction of the work a competent engineer should be retained to protect the interests of the village and see that plans are strictly adhered to. When the works have finally been installed according to the plans and specifications the village authorities must assume the duty of properly maintaining them. Too much emphasis cannot be placed upon the necessity for proper maintenance of water supply and sewerage improvements. In small villages the authorities are likely to become lax in this duty, especially if political considerations govern the selection of men employed in public service. The beneficial effects of public water supplies and sewerage systems are largely dependent upon the care with which they are managed and operated. Aside from the financial considerations the beneficial effect upon the public health may be impaired if works of this character are carelessly maintained and operated.

PIER CONSTRUCTION AT VICTORIA.

In connection with the construction, by the Department of Public Works of British Columbia, of several piers at Victoria, B.C., eighteen concrete cribs are being constructed. All of them, with the exception of two, are



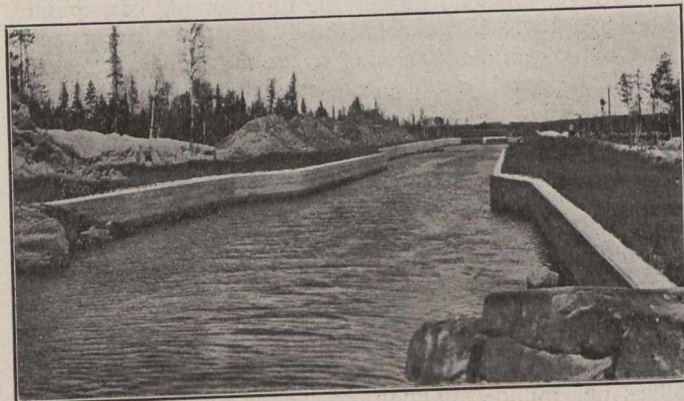
Wood Stave Pipe, 1,550 ft. Long, 9 ft. Diameter, at Wawaiten Falls.

being built with the aid of a large, floating dry dock, recently leased by the contractors, Grant, Smith and Co. and McDonnell, from the Seattle Dry Dock and Construction Co. The dock, although not a new one, has a capacity of 8,000 tons. It is 325 ft. in length, with a 102-ft. beam, and towers 32 ft. 6 in. above the deck of the pontoon or scow. Its sides are 40 ft. in height.

The dry dock was delivered to the contractors on May 28th, and will shortly proceed to Esquimalt, where the concrete cribs will be constructed and floated, one by one, to the dock site upon completion. These cribs will be 100 ft. in length, 39 ft. in width, and have a height of 39 ft. Each will weigh 3,500 tons, and two of them will be built simultaneously on the dry dock. The first two cribs are being constructed by the method first adopted, that of building them on marine ways and launching them with rollers. This method is being abandoned, however, for the remaining 16 cribs, it having been found uneconomical.

THE WAWAITEN FALLS AND SANDY FALLS HYDRO-ELECTRIC POWER PLANTS.

THE Northern Canada Power Company, Limited, operates two hydro-electric plants on the Mattagami River, namely, Wawaiten Falls, twelve miles southwest, and Sandy Falls, six miles northwest from the town of Timmins, Ontario. It is from these two

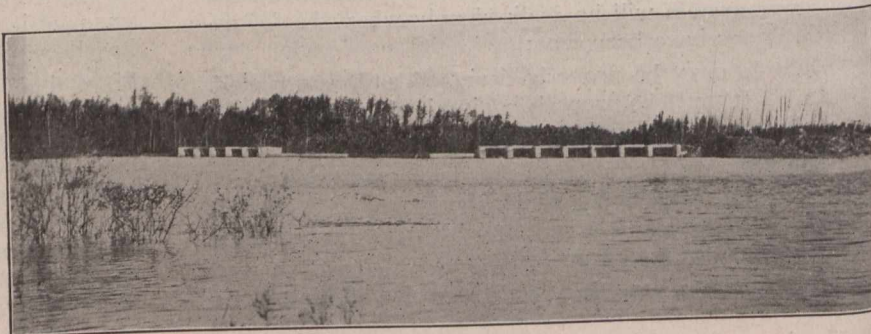


Headgate and Canal Leading to 12-ft. Iron Pipe Line, Wawaiten Falls.

plants that the gold mines of Porcupine derive their power. The following data concerning them are from the recent report of the Timiskaming and Northern Ontario Railway Commission, prepared by Mr. A. A. Cole, its mining engineer.

Wawaiten Falls plant is located in the township of Thornloe at the foot of Lake Kenogamisee. A concrete dam 1,000 feet long at this point, diverts the water into a 1,200-foot canal. From the intake at the foot of the canal, water is carried by 1,500 feet of 12-foot iron pipe to a 40-foot diameter surge tank on top of the hill overlooking the power house. Two 8-foot iron pipes, 1,300 feet long, lead from this surge tank down the side of hill direct to the wheels in the power house.

The power house is of reinforced concrete and contains two 3,300 horse-power Morgan-Smith water-wheels operating under a head of 125 feet, direct connected to two 2,500 k.v.a., 3-phase, 12,000-volt Canadian Westinghouse alternators; two 70 kilowatt exciter sets driven by independent water-wheels and



View of Wawaiten Falls Dam from Lake Kenogamisee.

Westinghouse switching and switchboard apparatus. During the summer and autumn of 1913, the power company installed 1,500 feet of 9-foot wood stave pipe line from the intake of canal to surge tank, duplicating the