specifications for the hydraulic portion of the plant. Fig. 2 shows the general layout of the development, and Fig. 3 is a cross-section illustrating the power-house arrangement.

Tenders for the construction of the dam and power-house and for the hydraulic equipment were called for in

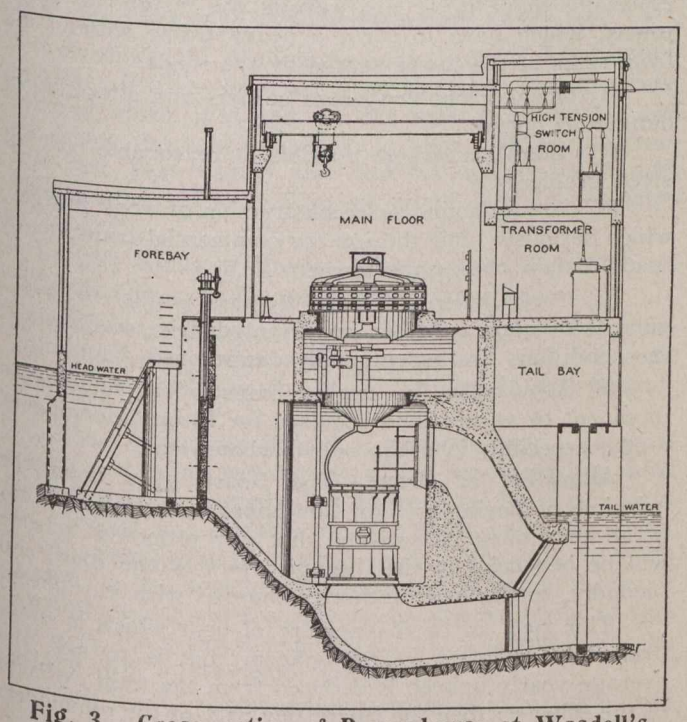

Fig. 3.—Cross-section of Power-house at Wasdell's Falls.

June, 1913. The various contracts awarded were dam and power-house, Galbraith & Cate, Montreal; turbines, Boving Company of Canada, Limited, Toronto; stop-log winch and head-gate lifting mechanism, Wm. Kennedy & Sons, Owen Sound; crane, W. D. Beath & Son, Limited, Toronto.

As regards the dam and power-house contract, the greater portion of the month of July was taken up by

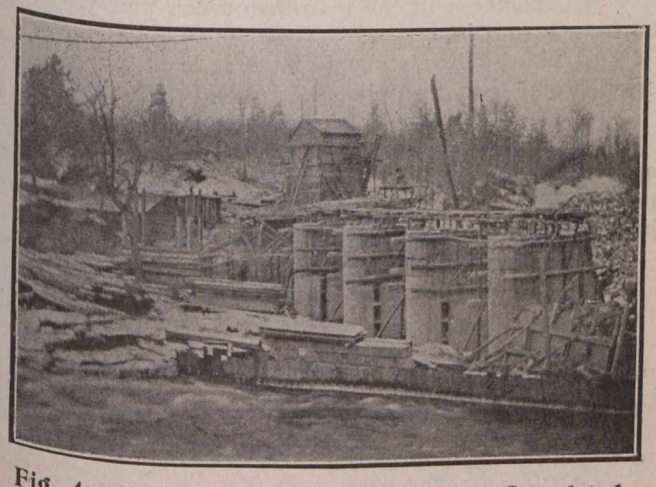

Fig. 4.—Erection of Power Plant, Piers Completed.

the contractor in the purchase of plant and the installation of same at the site of work, and it was not until the middle of August that construction work was well under way. Since that time, however, good progress has been made, and there is every reason to anticipate that under the worst conditions likely to obtain the work will be beyond the reach of the high water of 1914, and with reasonable working conditions the entire works will be completed in May, 1914. Fig. 4 is a progress view of the main dam, showing the piers completed.

The contracts entered into with the above municipalities do not by any means represent the extent of the market which the Wasdell's Falls development will serve. It is confidently expected that a large rural load will be developed in the agricultural townships of Mara, Thorah and Brock, and that the demands of these townships will practically double the present contracted load.

Apart from the low head, the topographical conditions at Wasdell's Falls are favorable for development purposes, and the value of the site as a source of power will be doubled when the dams incidental to the Trent Canal construction are built across the outlets of Lake Simcoe at Washago, which is less than three miles above the plant, making the immense storage capacity of Lake Simcoe during available low-water periods.

FOREST PRODUCTS' LABORATORIES EXPAND.

The Forest Products' Laboratories, instituted last autumn by the Dominion Government in conjunction with McGill University, contemplates the enlargement of the department, and has applied to the university for the use of another building. The McGill authorities are quite agreeable provided that the Forest Products' Service is able to repair the building in such a way as to make it a safe place for the headquarters of the new department, until the extensive plans are carried into effect when the various exhibits and staff of the service would then be housed in one of the new buildings which may be erected.

The trouble with the building is that it is sinking in the same manner as the McGill Union buildng sank some time ago. At present it is propped up with large wooden beams and as it is erected either on the bed of the old Molson Creek or on the shifting clay or sand that has been found to be very prevalent in this locality, it would be a big job to dig down to rock bottom and put a new foundation under the building.

PORTABLE METAL BUILDINGS.

Metal buildings have always been much better than wood structures for contractors on railroad and other engineering work, owing to safety, convenience and other favorable factors which their use assures. The new all-steel and metal-clad buildings now being made by the Pedlar People of Oshawa, Ont., make it possible for contractors and others to equip themselves with metal buildings with the maximum of convenience and ease of erection. They are made of Toncan metal, and are portable. They are very handy, and are especially in demand for railway work, as tool houses, shelters, oil stations, freight and wharf sheds, lamp and storage houses, etc. A very favorable feature of these buildings is that they can be added to in 8-ft. lengths at any time. They resist fire, corrosion, thieves, vermin, etc., with reliability and assurance.

QUICK COMPUTATION OF WEIGHTS OF BARS.

To find the weight of square or flat iron or steel bars, "Iron Age" suggest's multiplying the sectional area of the bar by 10/3, which will give the weight in pounds per lineal foot. Add 2 per cent. for steel. For example, in the case of an iron bar 1½ x ½ inches:—

3/2 × ½ × 10/3=5/2 or 2½ lb. per lineal foot.
For steel, add 5/100=2.55 lb. per lineal foot.

In the case of round steel bars, to find the weight per lineal foot, divide the square of the number of quarters of an inch in diameter by 6. For example, in the case of a steel bar ¾ inch in diameter:—

3 squared (three being 3 quarters)=9 divided by 6=1½ lb. per lineal foot.