

one stand, 72 by 100 inches for which hydraulic power is used, converter capacity being 50,000,000 pounds of copper per annum; three blowing engines, total capacity 19,700 cubic feet of air per minute, and much accessory plant and machinery.

During the earlier years of the company's smelting operations the slag was granulated by water and run to the dump by gravity, in the ordinary way. Then, as the dump filled to an extent making it difficult to maintain the grade requisite for the continuance of this method of disposal of the slag, it became necessary to substitute for it the hot slag haulage system now about to be dispensed with in favour of a return to granulation by water and disposition of slag by a method described as follows:

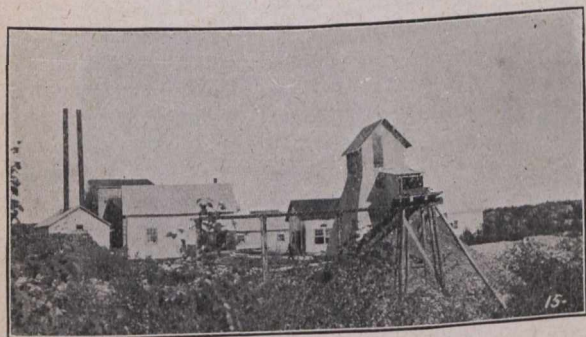
Four large receiving bins will be erected below the present level of the slag dump and at a distance of about 150 feet from the blast furnace settlers. The slag will be granulated by water immediately after its discharge from the settlers, in the ordinary way, and be conveyed thence to the receiving bins in launders. From the bins it will be distributed over the dump by a series of conveyor belts, at first up a gradual incline to a maximum height of about 100 feet, and then by a cross conveyor to the place for dumping. These belts will be ordinary 30-inch conveyors. The incline will at first be over a series of trestles, but afterwards the grade of the dumped slag will be so regulated as to give the requisite incline up to whatever height it shall be found economically practicable to carry it. The conveying belts will be operated by two electric motors.

Arrangements are being made for the supply of lumber for construction of the receiving bins, trestles, launders, etc., and the excavation of trenches for the launders from the settlers to the receiving bins is already in progress.

Two main reasons have caused the management of the company to make this change in the method of disposal of slag. One is, the excessive cost of the present hot slag haulage system, owing to the slag having to be hauled about three-quarters of a mile to the dump, together with the high cost of maintenance in good working condition of locomotives and slag cars; and a second, the increasing difficulty of disposal as the dumping room below the present level becomes more and more curtailed. The substitution of the new method of slag disposition for that long in use is expected to involve an outlay of between \$30,000 and \$40,000, but important compensating results will be lower cost of disposal of the slag, and provision of dumping room for fully 10,000,000 tons of slag. To long continue the present hot-dumping system would mean the changing of the course of the north fork of Kettle River, with resultant cost of land that would be destroyed thereby, so the change determined upon will avoid a large expenditure in that direction and at the same time bring about a substantial reduction in operating costs. It will probably be about four months—near the end of September—before it will be practicable to make the change now being prepared for; meanwhile the slag will be dumped while molten, as during several years last past.

THE ST. ANTHONY GOLD MINE.

EDITOR'S NOTE.—The following article was written at the request of the Journal. It is based upon a private report compiled by Mr. J. C. Houston. The object of appending the lengthy assay sheet is to adduce evidence of the possibilities of the region. The present owners of the St. Anthony are floating no company. Whilst we cannot, of course, assume responsibility for the accuracy of the samples and assays, we are satisfied that they have been done honestly and carefully.



General View of the Buildings

(Written for the CANADIAN MINING JOURNAL.)

The building of the new transcontinental railroad through Northern Ontario and particularly through that section of Ontario north and west of Port Arthur known as Sturgeon Lake district, has made readily accessible and brought into some prominence the gold-bearing areas in that locality. On account of the inaccessibility of this district little development work has been done in the past on the numerous prospects staked

along the shores of Sturgeon Lake, although specimens of visible gold-bearing quartz of almost incredible richness have been brought into Fort William and Port Arthur, which were reached in the old days by one hundred miles of lake and river navigation and then by the Canadian Pacific Railway from Ignace.

To those who are not familiar with the location of this gold field, it may be well to explain that the route from the east is, first to Fort William via the C.P.R.,



Office, Storehouse and General View of Harbour

this city being eleven hundred miles west from Montreal, eight hundred miles west of Toronto, and about four hundred miles east of Winnipeg. From Fort William a branch of the Grand Trunk Pacific is now open for traffic as far west as Superior Junction, one hundred and eighty miles distant. The new line of the Transcontinental Railroad is now being built east from that point, and it is inside the angle formed by the junction of the two roads that the Sturgeon Lake gold district lies. The lake itself, lying northeast and