being admitted into the supply trough, the contents of each kiln are checked by titration and corrected by the addition of whatever constituent is lacking. Three rotary kilns, 70 by 6 feet, are at present in use, but the management contemplate considerable additions to the plant. The velocity of the rotaries is controlled by a speeder, which is operated by the man in charge of the kilns. If the clinker should be discharged from the kilns insufficiently burned, the feed of slurry or the speed of the rotary can be reduced.

From the kilns the clinker is wheeled to the clinker-room to cool. No special device to accomplish this is employed. The grinding is done in Krupp ball and tube mills, after which the cement passes to the stock-house, which is provided with eight bins of three thousand barrels capacity each. These are built on the "cribbing" plan, commonly exemplified in the construction of grain elevators. Power is conveyed to the coal-grinding plant from the power-house by rope drive.

Coal for fuel is stored in bins under cover until required. Prior to grinding in the tube mill it passes through a rotary Cummer drier.

The company has two shipping connections in the Grand Valley Electric Railroad and the Grand Trunk Railway, each of which has a spur running to the works. The former of these is owned by the company. The present output is 450 barrels per day, but will be increased this coming summer to 750 by corresponding additions to the plant. "Giant" cement seems to be well received, and the directorate report the demand for their product to be very good.

The buildings are of brick, steel and Redcliffe corrugated iron, and are as nearly fireproof as possible. The company has its own fire appliances. Boarding-houses, workmen's cottages, and laboratory have also been erected by the company. The post-office of Blue Lake is for the present in the company's office.

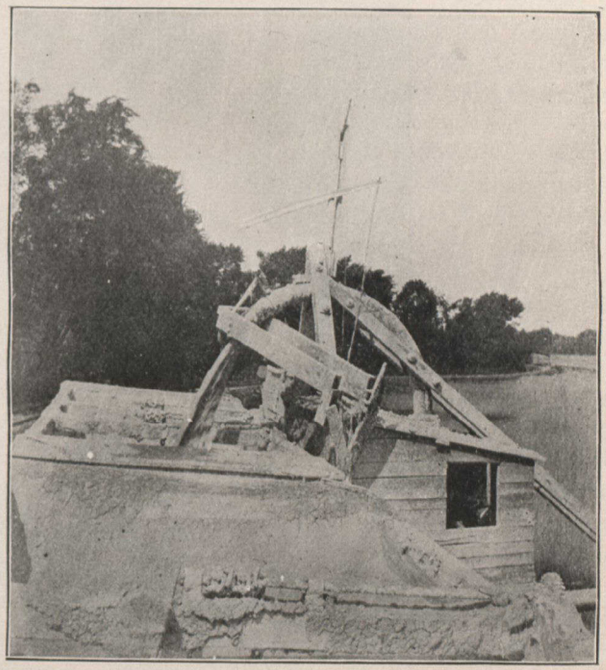
The Owen Sound Portland Cement Company.

President	J. E. Murphy.
Vice-president	W. H. Pearson.
Secretary-treasurer	G. S. Kilbourn.
Works	Shallow Lake.
Brand	"Samson."

Away back in 1889 the North American Chemical, Mining and Manufacturing Company was organized at Owen Sound for the purpose of manufacturing Portland cement. Its capital was $100,000. A large building of mansonry walls was constructed at Shallow Lake in that year, and a plant subsequently installed. A Ransome cylinder was used in which to burn the cement, but proved unsatisfactory, and was abandoned. This industry was the forerunner of the Owen Sound Portland Cement Company, which to-day carries on a very extensive manufacturing business.

Shallow Lake occupies lots 6, 7, 8 and part of 9 in the seventh concession of the township of Keppel. The area is nearly 600 acres, including several small islands, and about 500 acres are under water for half of the year. "Two streams flow into the lake, and in the dry season they unite near the works on the northern side, the channel continuing about 800 yards farther in a north-westerly direction towards the margin of the lake, where the waters disappear with a loud, rumbling noise through a series of sinkholes in the bottom." The bottom of the lake is covered with marl to a depth of four feet, underneath which lies the clay, running to ten feet in places. A narrow gauge track has been constructed from the works out into the lake, and a locomotive and train of cars are employed to bring the clay and marl from the steam dredge to the plant. A contract was lately entered into with the James Cooper Company to erect tall towers and equip a system of cable transportation for the raw materials, but the new method has not yet been put into working shape.

The ingredients are mixed in a rotary wash-mill, the clay having been first put through a disintegrator. A Ferris wheel is used to elevate the slurry to a pair of Sturtevant emery stones. Nine large storage tanks have been constructed, into which the material is next pumped, and in which it is agitated by compressed air.



PNEUMATIC SYSTEM OF PUMPING MARL.

The Harris Pneumatic System is employed by the National Portland Cement Co.

The burning is done in nine Batchelor kilns, each having two drying arches, and in two rotary kilns, each 100 feet long. These rotaries were orignally 65 feet long, and the additional 35 feet were added to act as a drier for the slurry. They have a capacity of 120 barrels each per day. The Batchelor kilns are intermittent, it being the usual custom to get 14 kilns of clinker from the nine furnaces each week. They are charged with alternate layers of dried slurry and coke, there being a 10-inch layer of the former to a 3-inch layer of the latter.

The clinker from the Batchelor kilns is first crushed before going to the ball and tube mills; that from the rotaries is first passed through a rotary cooler. The final grinding plant consists of two Krupp ball mills and three tube mills. The output of the plant is 700 barrels per day.