

**THE MASTERMAN PULP MILL.**

The new Masterman pulp mill, which has recently been put in operation at Mill Cove, N. B., is one of the most complete establishments of its kind in America. The site is on the banks of the Miramichi river, at the mouth of a large brook which empties into the river. From this brook water power is obtained for operating the mill, there being two dams, the larger for reserve, covering 200 acres.

Seven large buildings, with one or two smaller ones, contain the plant in its entirety. All are built on stone foundations. The walls of the digesting building, which is 84 x 32 ft. in size, are built up of stone to a height of 30 feet, with a thickness of from four to two feet. The walls above that are of wood, making a height of 60 feet. The other buildings are of wood, sheathed with iron. The store-room is 100 x 50 ft. and the paper mill of the same size. To the rear of these is the engine and boiler rooms, 100 x 40 ft. Two other buildings through which the pulp passes in different stages of its manufacture are 20 x 100 ft. and 50 x 40 ft. The large digester building, 84 x 32, has a tank-house adjoining of one storey, 84 x 30, while at the back of these is the sulphur burning and acid building, 60 x 70, and the wood-cutting building, 40 x 70.

Into this latter structure the slip, 240 feet long, leads from the water. The logs when raised to the top of this are carried against saws, which cut them into lengths. These pieces are then stripped of their bark by machines similar to those used in shingle mills, and the knots are then bored out by other machinery. The sections are then thrown into the grinders, which cut them into small chips of three-fourths of an inch across. All sawdust and fine particles having been shaken out, these chips are carried down to the digesting building, situate on a 40

or 50 foot lower level. Here the stuff is stored in immense bins till it passes below to the digestors, six in number, where it is cooked for 12 or 15 hours, and after going through different operations, passes on to the buildings containing the paper mills, which reduce it into the sheet form and leave it in rolls ready for shipment.

The acid, which amounts to 76,000 gallons a day, is run by gravitation into the digesters. Throughout the whole plant gravitation is made use of in the conveyance of materials to a large extent, thereby effecting a great saving in machinery for pumping.

The mill is lighted throughout by an electric light plant placed in the building. The equipment is almost entirely of Canadian manufacture, the fittings being supplied by McAvity & Sons, of St. John, and the boilers and engines and most of the machinery by E. Leonard & Son, of London. The water power is also an important factor in cheapness of operation. A raceway 1,700 feet in length carries the water from the lower dam with a 25-foot head on the wheel, which is a 240 horse power turbine of the improved Leffel pattern, made by Paxton & Tait, of Port Perry, Ont.

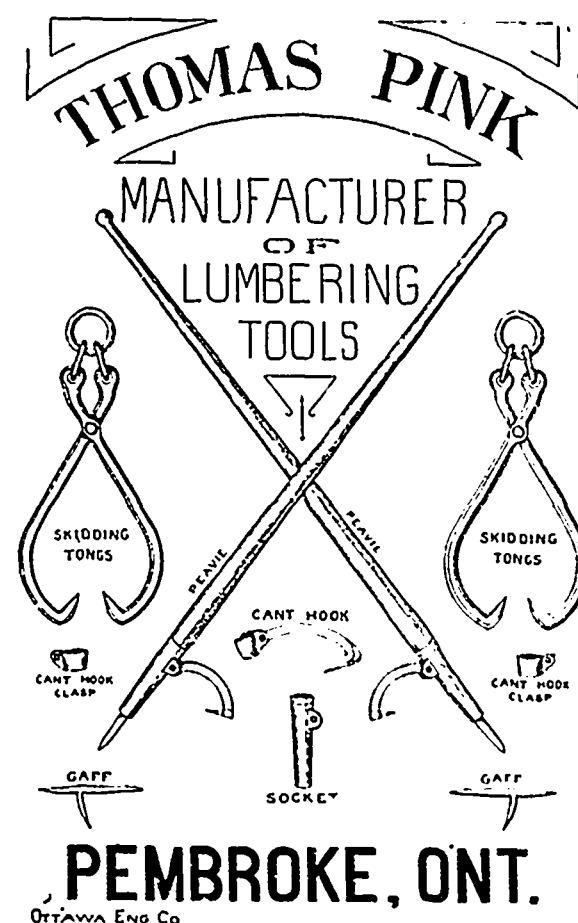
The capacity of the mill will be thirty tons of dry pulp per day, while the largest mill in the United States only turns out fifty tons of wet pulp in the same time, wet pulp being 30 to 40 per cent. moisture. Upwards of 80 cords of wood per day will be converted into pulp, for which from \$2.50 to \$2.75 per cord is generally paid.

A cubic foot of logwood weighs 57.07 pounds.

Satinwood weighs 55.31 pounds per cubic foot.

Lancewood, without knots and well dried, weighs 45 pounds to the cubic foot.

**AN HISTORIC TREE.** An historic elm tree at Plymouth, Pa., was cut down recently for fear it would collapse during a heavy blow and cause damage. The elm was voted on March 2, 1774, by the town meeting as a place of public rendezvous, and was then referred to as "the noble tree upon which our ancestors have gazed." Subsequently to 1774 it served as an auction mart, village market, and whipping-post. A count of the rings upon it showed that the tree was 372 years old.



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