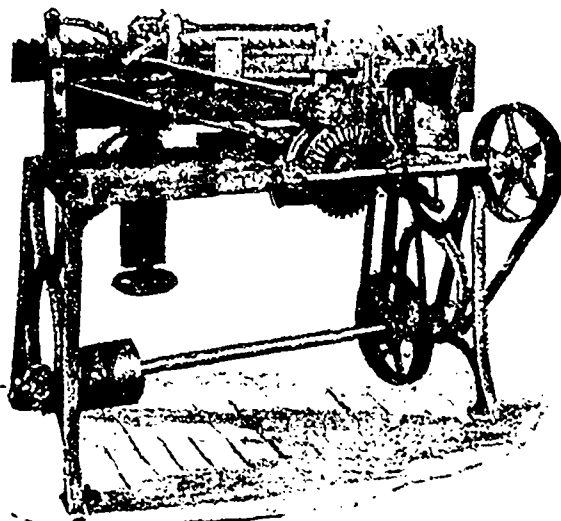


**JONES' PERFECT SWAGING MACHINE.**

THERE has recently been placed upon the Canadian market an improved machine for swaging band-saws, known as the Jones' Perfect Swaging Machine, illustrations of which are shown on this page. It is constructed on entirely new lines, adapting the hand swage exactly as it is to be worked by power. The swage and exact mode of operation are the same as if worked by hand, but with the accuracy and precision of a machine making every tooth alike. As a combined machine an emery wheel side dresser follows the swage, making each tooth exactly the counterpart of each other. The following points of merit are claimed for the machine:

To automatically swage and side-dress from 20 to 60 teeth per minute; by simply adjusting the saw in this machine and shifting the belt, it will itself, without further aid, swage a band saw in 8 to 12 minutes; it automatically adjusts each tooth, swages and side-dresses it accurately; it has an oscillating movement of  $\frac{1}{2}$  inch, enabling it to overcome any irregularity in space between teeth, and also plays up or down to accommodate either a high or low tooth; short teeth are not missed, as are likely to be in hand swaging, which necessitates extra time to fit the swage; each tooth is swaged and dressed perfectly even, (insuring uniform lumber) which by hand requires time, special care and skill; long or uneven teeth are equally brought into line, and under no circumstances will this machine break, bend or crush a tooth.

It is further claimed that by swaging and dressing the saw automatically, it cuts the lumber evenly, and that the life of a saw is greatly lengthened by its use. By being enabled to keep the saws well and evenly matched, a



JONES' PERFECT SINGLE SWAGING MACHINE.

Kennedy, law clerk, and Mr. Taylor, the accountant of the Timber Branch, were appointed as referees. The complainants were the Whaley Lumber Company, of Huntsville, and the Brennan Lumber Co., of Hamilton, while the Improvement Company were represented by Heath & Turnbull, of Huntsville. Among other interested persons present were Wm. Martin, John McGear, Hugh Trainor, Philip Hinds and Harry Heath, all of Huntsville; James Campbell and Wm. Webster, of Bracebridge; Wm. Marshall, of Bethune, and James Johnston, of Sinclair.

The first-named parties claimed that the tolls charged were in fair proportion to the alleged cost of the improvements, but asserted that the alleged cost was much greater than the actual.

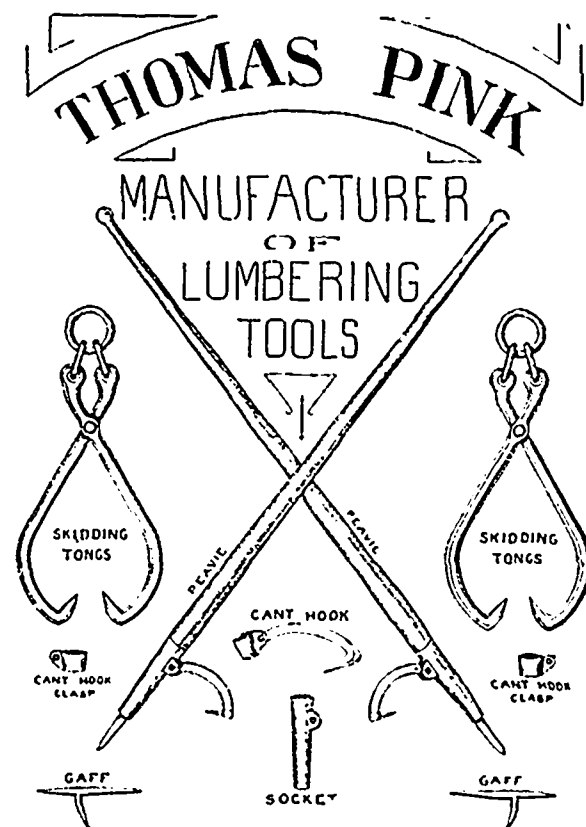
An examination of the books of the East River Improvement Company will be made, after which the referees will arbitrate in the matter.

**STRENGTH OF BELTING.**

THERE is no more friction between a wide belt and a pulley than between a narrow belt and the same pulley, other things being equal, says a writer to an engineering paper. A wide belt will pull more than a narrow belt when, and only when, it is stretched tighter. For instance, take an en-

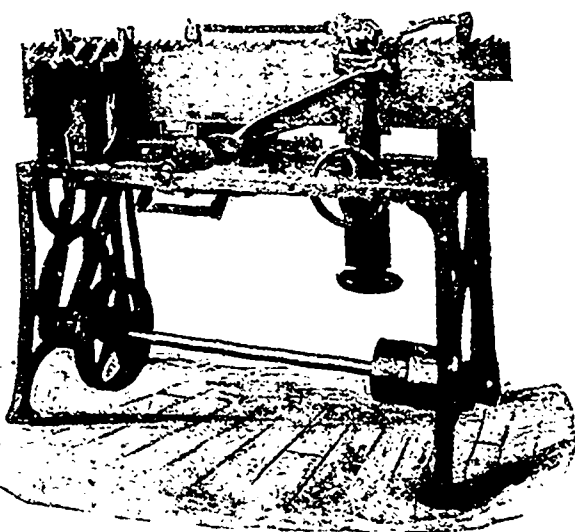
gine properly designed to run a belt 12 inches wide; if it were possible to make from some new material a belt one inch wide that would be as strong as the 12-inch belt, the engine would furnish just as much power to the line shaft as if the 12-inch belt were used. When we once realize that the driving power of a belt is in its strength rather than in its width, it is easy to see why a round belt will often pull more than a flat one. For instance, a common size of belt on feed pulleys is 1 inch wide, and if  $\frac{1}{8}$ -inch thick, which is about the average of 1 inch wide belt, the "area of cross-section" is evidently  $\frac{1}{8}$  of 1 square inch, or in decimals .125, whereas the area of a round belt  $\frac{1}{2}$  inch diameter is .196, or a little more than  $1\frac{1}{2}$  times as much as the 1 inch wide belt, and will pull a little more than  $1\frac{1}{2}$  times as much without stretching.

Do you think of adding to the equipment of your mill this winter so as to be in the best possible shape for business next spring? Then you should see what our advertisement pages offer in the way of machinery and supplies. You will oblige the advertiser and the publisher if in your correspondence you mention THE LUMBERMAN.



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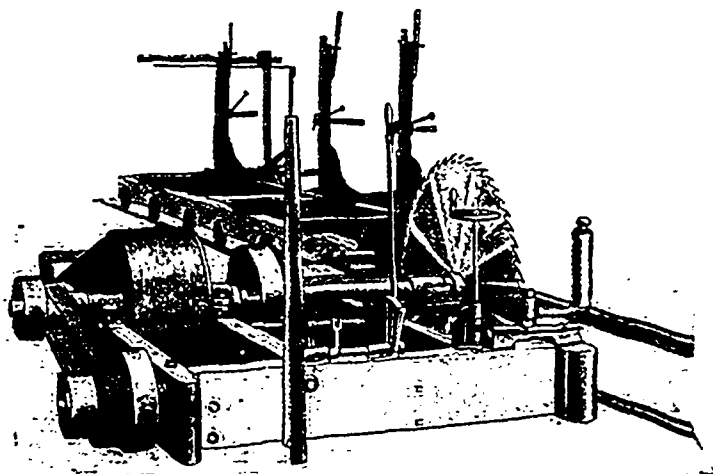


JONES' COMBINED SWAGING MACHINE, SIDE DRESSER AND JOINTER.

larger and better output can be accomplished. The machine is 36 inches long, 18 inches wide, 40 inches high and weighs 330 lbs.

The Canadian patent was taken out on the 1st of April, 1896, the manufacturers being the Waterous Engine Works Company, of Brantford, Ont., who will be pleased to supply any further information desired.

## BELL'S No. 2 SAW MILL



The accompanying cut shows our No. 2 mill with wood frame and feed works in the frame. We build this mill with either wood or iron frames as desired. The carriage has any desired number of head blocks, either ratchet or friction set works. We also put on an elevated scale, which is a great convenience to the sawyer, and a newly designed roller gauge to set up to. Lumber cut on these carriages is uniform in thickness and can be made any desired thickness by adjusting roller, which is at the sawyer's hand.

We also build a No. 0 mill for light portable work, and a No. 1 mill, which is a good general mill for either portable or stationary use. Also Edgers, Slab Slashers, Cut-off Saws, Log Haul-ups, Friction Niggers, Lath Trimmers, Lumber Trimmers, Bolting Saws, Saw Benches.

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