

SCIENTIFIC AMERICAN

[Entered at the Post Office of New York, N. Y., as Second Class Matter.]

A WEEKLY JOURNAL OF PRACTICAL INFORMATION, ART, SCIENCE, MECHANICS, CHEMISTRY AND MANUFACTURES.

Vol. XLVIII.—No. 5.
[NEW SERIES.]

NEW YORK, FEBRUARY 3, 1883.

[\$3.20 per Annum.
[POSTAGE PREPAID.]

Clothes Pins.

Probably very few realize the extent of the manufacture of clothes pins, and the amount of capital employed in the business. Their manufacture is mostly confined to New England, and the State of Maine produces its share of the commodity.

According to the Bangor *Industrial Journal*, one of the most complete and extensive clothes pin factories is located at Vanceboro, Me. From the same source the process of manufacturing the pins, as carried on at the Vanceboro Wooden Ware Company's factory, is given.

The wood used is mainly white birch and beech. The logs are cut and hauled to the shores of the lake or the streams emptying into it, whence they are floated down to the mill. As fast as required they are hauled into the mill by a windlass and chain worked by steam power, and sawed into lengths of 16 or 22 inches—the former to be made into pins, and the latter into boards for the boxes required in packing. The 16-inch lengths are next sawed into boards of the requisite thickness by a shingle machine, then into strips of the proper size by a gang of 12 circular saws, and finally into 5-inch lengths by a gang of 3 saws.

The logs have now been cut up into blocks about five inches long and three-fourths of an inch square. Falling, as they leave the saws, on an elevator belt, they are carried into an upper story, and returning to the first floor are deposited in troughs, whence they are fed to the turning lathes, of which there are several—each being capable of turning 80 pins per minute. They are then passed to the slotting machines, in which a peculiar arrangement of knives inserted in a circular saw gives the slot the proper flange, after which they are automatically carried by elevator belts to the drying bins on the second floor, where they are subjected to a high temperature, generated by steam pipes, until thoroughly seasoned. There are several of these bins, the largest of which has a capacity of 100 boxes, 72,000 pins, and the smaller ones 50.

The pins are now ready for polishing and packing. The

polishing is accomplished by means of perforated cylinders or drums, each capable of holding forty bushels, in which the pins are placed and kept constantly revolving until they become as smooth as if polished by hand with the finest sand paper. A few minutes before this process is completed, a small amount of tallow is thrown in the drums with the pins, after which a few more revolutions gives them a beautiful glossy appearance. These polishing drums are suspended directly over the packing counter on the first floor of the mill, and being thus immediately beneath the ceiling of the floor above, are readily filled through scuttles from the drying bins on the second floor, and as easily emptied upon the counter below, where they are sorted into first and second grades, and packed in boxes of five gross each. The sorting and packing are done by girls. Two hundred and fifty boxes are packed per day.

The market for clothes pins is not confined to any special locality, but is found nearly all over the world. Ten thousand boxes have been shipped to Melbourne, Australia, within the past four months. Ten firms in London carry a stock of ten thousand boxes each, and two firms in Boston carry a like amount. One thousand boxes constitute a load.

A Famous Yacht Builder.

The death of Capt. Robert Fish, at Pamrapo, N. J., January 17, deprives the country of one of the best known and successful of our later yacht builders. The victories won by many of his yachts made his name familiar to yachtsmen on both sides of the Atlantic. He was born in this city nearly seventy years ago. In 1850 he removed to Pamrapo, to establish the yard at which so many fast vessels have been built. Among his greatest successes were the reconstruction of the famous keel schooner *Sappho*, the *Meteor*, the *Challenger*, the *Enchantress*, the *Wanderer*, and the *Vixen*. Capt. Fish was a superior sailing master, as well as a remarkably successful designer and builder of fast yachts.

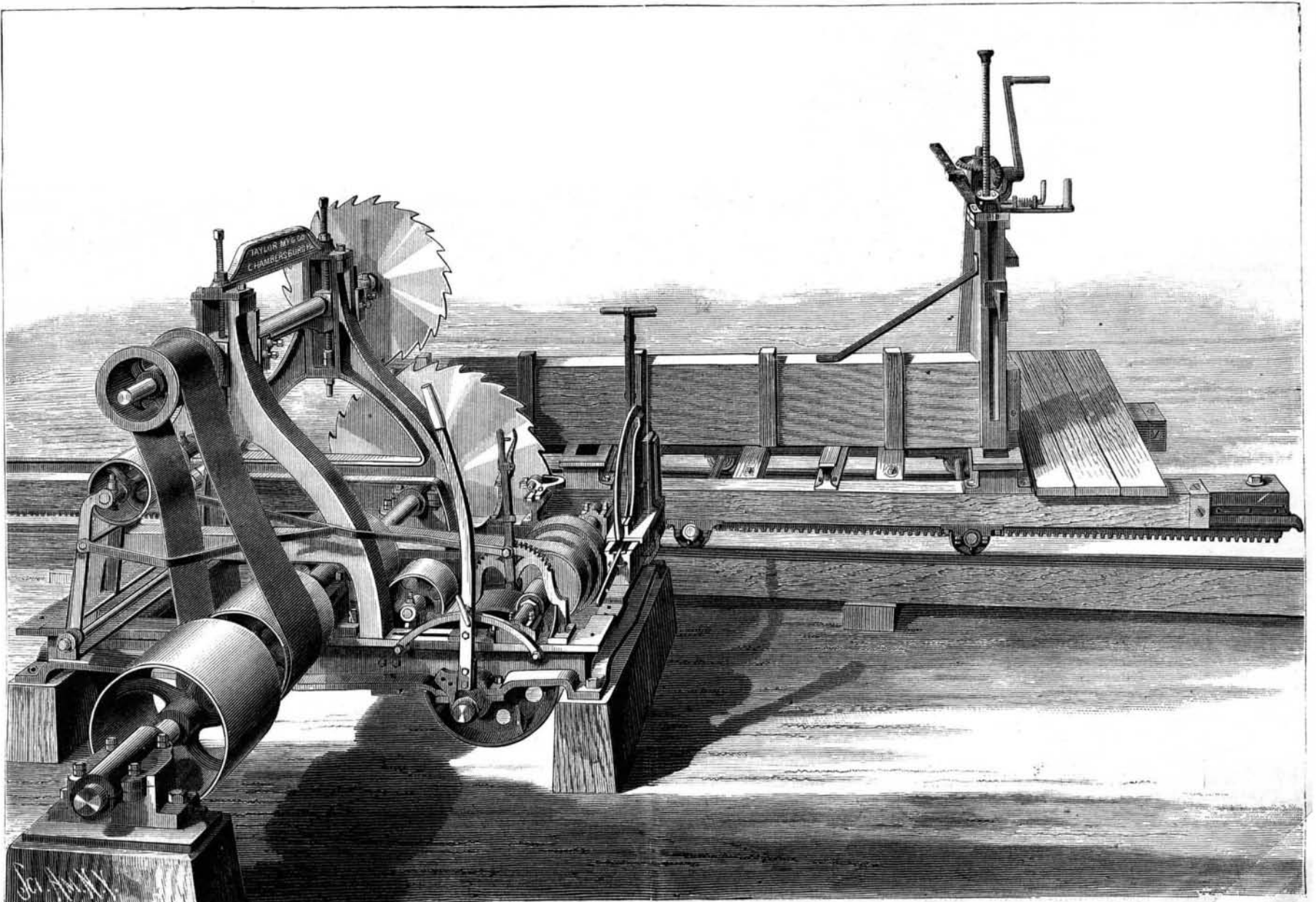
TAYLOR MANUFACTURING CO.'S PATENT SAW MILL.

We present an engraving of a circular saw mill with top saw, lately introduced by the Taylor Manufacturing Company, Chambersburg, Pa., removed from Westminster, Md., January 1st. This mill is made with the same careful excellence that distinguishes all the productions of the above establishment. The machine is very strong, and by its use the heaviest lumber can readily be handled under any power that may be applied to run it.

The set works are exceedingly simple and quickly operated. Very little time is required in dogging the log, and there is always a certainty of sawing true lumber. The set works can at all times be readily kept in adjustment and in perfect line with the saw. Owing to the construction of the log beam, it does not matter whether the track settles or is thrown out of line by the frost. If six feet of track before the saw is true, lumber will be sawed true. The simple mode of dogging the log at one end, and allowing the gauge roller to hold the log to the log beam, saves an enormous amount of time, preventing the springing of the log. This mill is arranged to set to a fraction of an inch, making lumber of any desired thickness. In this mode of dogging, a man is required to ride on the carriage, and it is claimed that in this way the man on the carriage can, as soon as the log is returned past the saw, instantly set the log to the roller and effect a great saving in time over other methods where the sawyer operates the set works from the ground.

This mill, with twenty-four feet of carriage, has two log beam blocks and one dogging block, making three blocks for twenty-four feet of carriage, the usual number being only two. The additional block gives great stiffness to the beam, and by the use of two intermediate supports between the blocks there is ample support under the log at any point of the carriage, and any length of timber can be sawed without changing the head blocks. The carriage to this mill is heavy and well stayed, and is placed on heavy axles, 2½ inches in diameter, extending across carriage and run-

(Continued on page 66.)



SAW MILL WITH TOP SAW.—MADE BY THE TAYLOR MANUFACTURING COMPANY, CHAMBERSBURG, PA.