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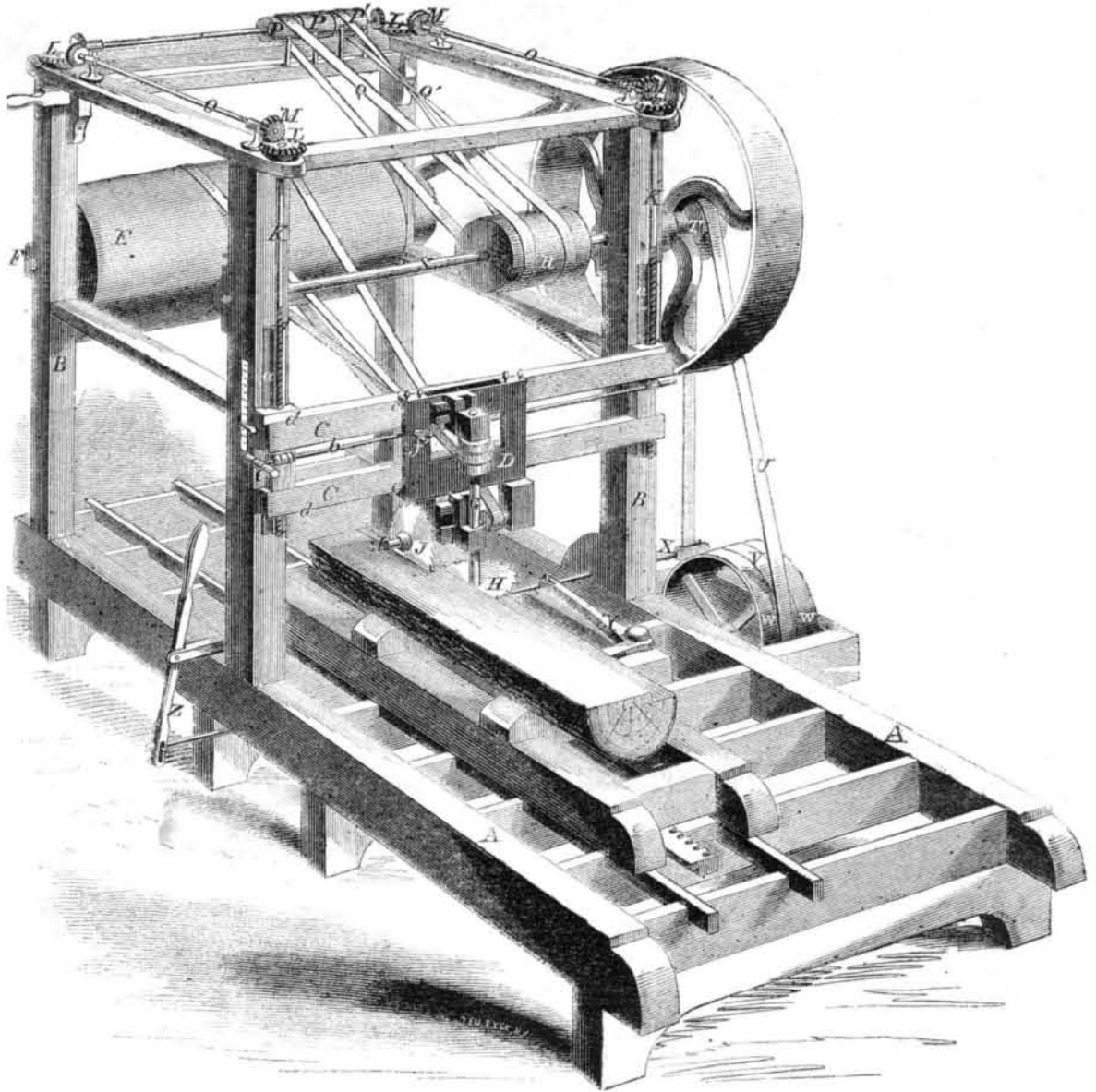
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New Circular Sawing Machine.

This invention consists in sawing rectangular pieces of timber, laths and strips for various purposes direct from the log, by arranging a pair of circular saws at right angles to each other, and operating and adjusting them in such a manner as to enable them to act together at the same time, and any desired sized strip to be cut from the log by the simple act of moving the log in either direction under the saws.

Our illustration represents a perspective view of the machine, in which A is the lower horizontal frame, on one end of which is erected another frame, B, consisting of four vertical posts secured by cap pieces at top, and having a horizontal transverse rising and falling frame, C, in front, provided with V-shaped guides, *c d*, which frame is arranged on a transversely moving frame, D. To the front part of the frame, D, are secured boxes in which is suspended the vertical shaft, G, of the horizontal circular saw, H, which receives its motion from a band passing around a pulley near the upper end of the saw shaft, and around a horizontal transverse drum, E, whose journals turn in suitable boxes, F, at the rear of the machine. Immediately below the vertical frame, D, and slightly in the rear of the saw shaft, G, is arranged a horizontal transverse shaft, I, which turns in suitable boxes secured to the lower part part of said frame, D, on the end of which horizontal shaft is secured a vertical circular saw, J, corresponding in every respect with the saw, H, but arranged at right angles to it, with the cutting edges of the two in such relation to each other as to cut out a perfect right angle from the log when operated. The saw, J, is driven by a band passing around a pulley on its shaft, and around the drum, E, at the rear of the machine, and the edge of the two saws, H J, are adjusted to the proper relation to each other, by sliding the boxes of the vertical shafts, G, in vertical grooves formed in dovetail tongued blocks, which have a horizontal movement in grooves formed in projecting pieces secured to the frame, D; suitable screws being provided to secure them at the desired positions. The horizontal frame, C, and its attachments, have an up and down movement over suitable ways or guides, *a*, by means of vertical screw rods, K, secured in suitable boxes in front of the upright front posts of the frame, B, and passing through female screws formed in or secured to the ends of the frame, G, which screw shafts, K, have bevel cog wheels, L, on their upper ends, which mesh in gear with corresponding bevel cog wheels, M, secured in the ends of horizontal shafts, O, having similar cog wheels, M, at their opposite ends which mesh in gear with similar bevel cog wheels, L, at this end,

DEWITT'S CIRCULAR SAWING MACHINE.



which also mesh in gear with the bevel cog wheels in a horizontal transverse shaft, on which is secured a pulley, P, having loose pulleys, P' P', on either side of it. Around these pulleys pass bands, Q Q', one of which is twisted, and both of which pass around a pulley or drum, R, on the main horizontal driving shaft, S, which shaft is also provided at its end with a band wheel for receiving the motive power band, and a smaller pulley, T, around which is passed a band, U, also passing around a pulley, V, turning loosely on the horizontal transverse shafts which give the required traversing movement to the log carriage, by respectively transferring it from the loose pulley to either of the pulleys, W, secured respectively upon the hollow shaft by which the carriage is moved in one direction, and upon the shaft which passes through the same for giving a reverse movement to the carriage.

The vertical frame, D, and its attachments, is moved transversely in order to regulate the width of the piece of timber to be cut, by means of a horizontal bar, *b*, passing through guide openings in ears secured to the end of the frame, C, and the back of the frame, D, and having a handle, *e*, at its end, by which with the aid of a clamp screw, *f*, a traversing movement can be given it, the distance between the shoulders secured on it, and the

guiding ear at one end arranged between said shoulders, in the following manner: Suppose it is desired to increase the width of the board or strip of timber to be cut from the log, the clamp screw is pressed upon the rod, *i*, and the said rod is drawn outward by its handle, as far as the shoulder on it between the guide ear near its end, and the frame, D, will permit, the said rod bringing with it the frame, D, circular saws and other attachments. The screw, *f*, is then unclamped, and the rod, *b*, is forced past it in a reverse direction until the shoulder on said rod, between the guide ear and handle, is again in contact with said ear, when the screw, *f*, is again clamped on the rod, *b*, and the operation repeated until the frame, D, and saws, H J, are moved the required distance when the screw *f* is firmly clamped upon the rod, *b*, to secure the frame, D.

From a careful perusal of the foregoing description, the operation will be readily understood. The motive power is applied to the shaft, S, and from it power is transmitted respectively to the wheels, V W W, as occasion may require, by the band, V, its transfer to either being effected by the bar, X, and lever, Z, so as to give a motion either way to the carriage and log or timber from which the slats are to be cut. In case it is desired to raise or lower the horizontal frame, C, and

saws, H J, and other attachments, one of the bands, Q Q, as the case may be, is transferred from the loose pulleys, P' P', to the pulley, P, until the gage bar at the end of the frame, C, indicates on the graduated plate the desired height, when both bands, Q Q', are again made to surround the loose pulleys, P' P'.

This machine, to whose efficient action we can testify from personal observation, was patented December 29, 1857, by E. H. Dewitt, of Xenia, Ohio, and any further information can be had by addressing B. N. Strong, D. B. Tiffany, and Dr. J. G. Kyle, Xenia, Ohio, or Daniel Strong, Wethersfield, Conn.

Tanneries.

According to official statistics there are 6,263 tanneries in the United States, of which the south has about one-third. Pennsylvania alone has nearly one-sixth part of the whole number, or 1,039. The southern States rank in the following order:—Tennessee has 394; Virginia, 341; Kentucky, 275; North Carolina, 151; Alabama, 149; Missouri, 148; Georgia, 140; Maryland, 116; Mississippi, 92; South Carolina, 91; Arkansas, 51; and the other southern States a less number each. The entire capital invested in all the tanneries in the land is \$18,900,557, the number of skins in them being 2,658,065, and the number of sides of leather counting up 12,257,940.