W. THOMPSON, J. DICKEY & N. P. WATTS.

Circular-Saw Mills.

No. 205,924. **Patented July 9, 1878.**

Fig. 1.

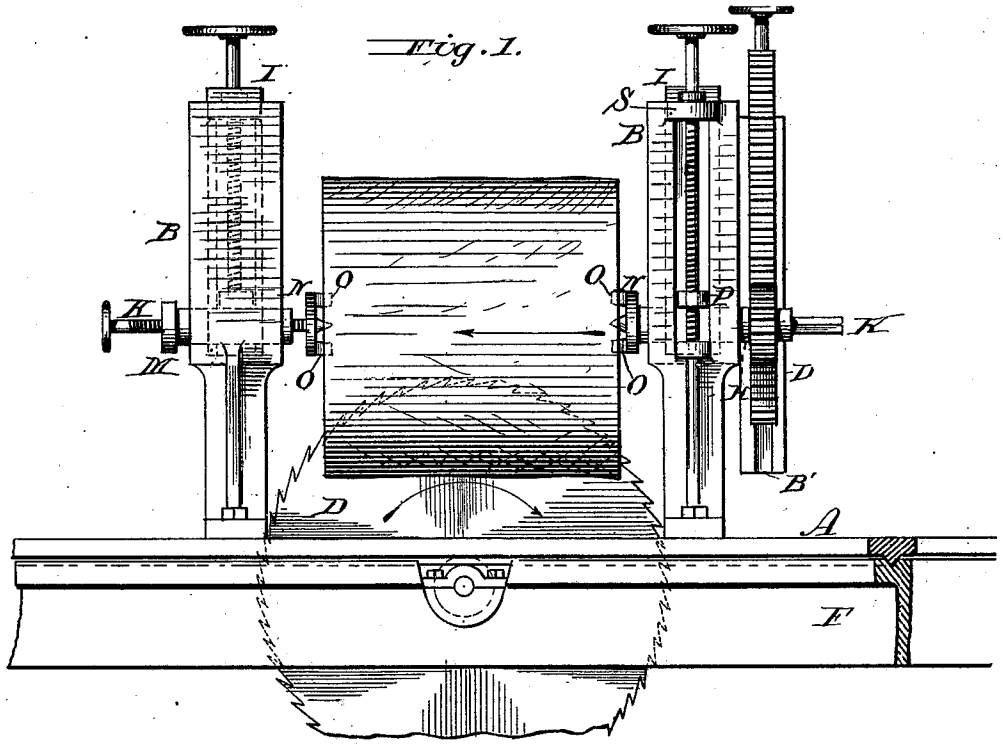


Fig. 2.

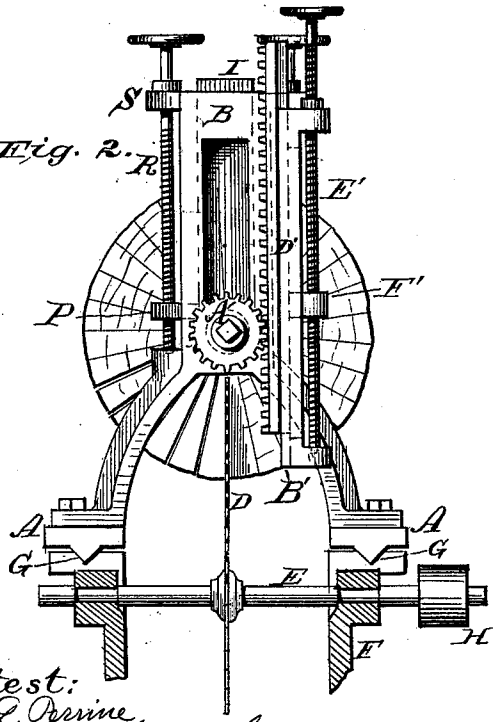
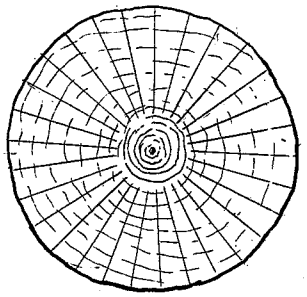


Fig. 3.



Attest:
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UNITED STATES PATENT OFFICE.

WILLIAM THOMPSON, JONATHAN DICKEY, AND NOAH P. WATTS, OF HOLTON, INDIANA.

IMPROVEMENT IN CIRCULAR-SAW MILLS.

Specification forming part of Letters Patent No. **205,924**, dated July 9, 1878; application filed June 20, 1878.

To all whom it may concern:

Be it known that we, WILLIAM THOMPSON, JONATHAN DICKEY, and NOAH P. WATTS, of Holton, in the county of Ripley and State of Indiana, have invented certain new and useful Improvements in Machines for Making Barrel-Heads, of which the following is a specification:

This invention relates to an apparatus for cutting out lumber from which to make barrel-heads; and the invention consists in a novel combination and arrangement of parts, which will be fully hereinafter described, and pointed out in the claim, whereby the log may be conveniently rotated at intervals to present new surfaces.

In the drawing, Figure 1 represents a side elevation of our improved apparatus, and Fig. 2 represents an end elevation of the same. Fig. 3 is an end view of the log, showing the manner in which it is cut up.

The letter A represents the base of a sliding frame or carriage composed of two parallel beams, upon which are mounted the standards B B, which are bifurcated below in order to straddle the rotary saw D, which is mounted on a horizontal shaft, E, journaled in bearings in a stationary frame, F. Said frame is provided with V-shaped ways G, and the beams of the base A are provided with similar-shaped ridges and set on said ways, suitable mechanism being provided for traversing said base upon the ways.

The shaft E is provided with a pulley, H, or other means, by means of which the proper rotary motion may be imparted to the saw.

The upper portions of the standards B B are formed with ways, which are fitted and adapted to the blocks I I, in which the rotating mandrels K K are mounted. Said mandrels are each journaled in a hollow sleeve, M, which is screw-threaded externally and fitted in a horizontal screw-threaded aperture in the blocks, whereby the mandrels may be advanced or receded from each other in order to secure the log to be cut between the same, and have at their inner ends a disk, N, provided with spurs O, which enter and hold the log. The blocks are each provided with a horizontal lug, P, extending through a slot in the standard, through which passes a leading-screw, R, journaled in a lug, S, projecting from the upper part of the standard, by means of which the blocks may be shifted to adapt the machine to logs of different diameters.

One of the mandrels is provided with a pinion, which intermeshes with a vertical rack secured and adapted to travel in ways B′ in a frame, D′, on the upright standard. In said frame is journaled a vertical leading-screw, E′, which passes through a horizontal lug, F′, projecting from the rear of the rack through a slot in the frame D′, by means of which the log may be rotated as required.

The operation of our apparatus is as follows: The log is centered between the mandrels and the mandrels are forced toward each other by means of the threaded collars, forcing the spurs into and securing the log in place. Previous to securing the log the traveling carriage is shifted to the front of the saw, and when the log is in place the carriage is advanced, the saw put in motion, and a longitudinal radial cut made in the log. The carriage is then brought back into position, the log rotated slightly by means of the rack and leading-screw, and another radial cut is made, forming, with the first cut, a wedge-shaped board, and the operation is continued until the log is cut up.

By means of the leading-screws and sliding blocks the log may be elevated or depressed in order to adjust it to the saw.

The wedge-shaped boards thus formed are taken, and the thick edges of the same placed together, and a circular barrel-head sawed out by means of a jig-saw; or the boards may be sawed into semicircular form, and the thick edges placed together, forming a circular head.

What we claim is—

The combination, with the sliding blocks I and rotating mandrels K, adapted to be raised

and lowered by the leading-screws R, of the vertically-arranged rack adapted to be raised and lowered by the leading-screw E′, and the pinion on one of the rotating mandrels meshing with the vertical rack for rotating the log in the mandrels, substantially as and for the purpose described.

In testimony that we claim the foregoing we have hereunto set our hands in the presence of the subscribing witnesses.

WILLIAM THOMPSON.
JONATHAN DICKEY.
NOAH P. WATTS.

Witnesses:
JEREMIAH ROBERTS,
JEREMIAH D. SHOCK.