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E. P. Harr,

attys

United States Patent Office.

OLIVER C. SMITH AND THEODORE S. DOLL, OF MENALLEN, PENNSYLVANIA.

Letters Patent No. 103,250, dated May 17, 1870.

IMPROVEMENT IN SAWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that we, THEODORE S. DOLL and OLIVER C. SMITH, of Menallen, in the county of Adams and in the State of Pennsylvania, have invented certain new and useful Improvements in Wood-sawing Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon making a part of this specification.

The nature of our invention consists in the construction and arrangement of a "wood-sawing machine," as will be hereinafter fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation, and

Figure 2 is a plan view of our machine.

A represents the frame-work of our machine, constructed in any suitable manner and of the desired size.

In journal-boxes on the frame A, at or near the rear end, is mounted a shaft, B, having a crank, C, at each end, by means of which the same is turned.

On the shaft B, within the frame A, is mounted a cog-wheel, D, which gears with a pinion, *a*, upon a shaft, *b*, running parallel with the main shaft B.

At each end of the shaft *b*, outside of the frame A, is a crank or wheel, E, with wrist-pin upon which a pitman, G, is placed, the front end of each pitman being joined to a saw, H.

The center bar *d* of each saw passes through a hole or mortise in a block, I, which is provided at its ends with flanges *e e*, of the construction shown in fig. 2, so as to fit in grooves on standards J J, which rise at the front end of the frame A.

The blocks I I, moving in the grooves on the standards J J, allow the saws to be raised and lowered at will. This is done by the following means:

A rope or cord, *f*, connects the block I with the front end of a lever, L, pivoted in the center on a post, K, which rises from a cross-bar, M, between the two standards J J.

Another rope or cord, *g*, passes from the rear end of the lever L downward under a roller, N, in the

frame, then toward the rear, and is fastened to a loose pulley, O, on the main shaft B.

The pulley N may be provided with ratchet-teeth, and on the side of the cog-wheel D may be corresponding teeth, so that the pulley can be thrown in and out of gear at pleasure by the movement of a lever, P, which is pivoted on the frame A, one end encircling the pulley and the other end, at any desired point, by the ratchet-bar *h*, as shown in the drawing.

By throwing the pulley O in gear, as mentioned, the front end of the lever L will be thrown up, raising the blocks I I with the saws, and, as soon as the pulley is thrown out of gear, the saws will go down again onto the wood.

The wood is placed on supports R attached at a suitable point on the standards J, and is held down by teeth or arms *i i* projecting from a bar or roller, S, pivoted between the standards J.

From this bar or roller an arm, *k*, projects, which is, by a rod, *m*, connected with a lever, T.

This lever is pivoted to the inner side of the frame A, and is held by a ratchet-bar, *n*, so as to cause the teeth or arms *i i* to bear down upon the upper side of the wood, and hold it steady while the saws are in operation.

By attaching a belt to a pulley upon the lower shaft *b*, the machine may be run with horse-power.

Having thus fully described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of the lever L, connected by cords *f f*, with the blocks I I, the cord *g*, roller N, pulley O, lever P, and ratchet-bar *h*, for the purpose of raising and lowering the saws, substantially as herein shown and described.

2. The supports R R, in combination with the teeth *i i*, bar or roller S, arm *k*, rod *m*, lever T, and ratchet-bar *n*, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 4th day of February, 1870.

OLIVER C. SMITH.
THEODORE S. DOLL.

Witnesses:

J. C. MARKLEY,
B. F. SMITH.