W. BOWMAN.

Circular Saw Mill.

No. 107,861. Patented Oct. 4, 1870.

Fig. 1.

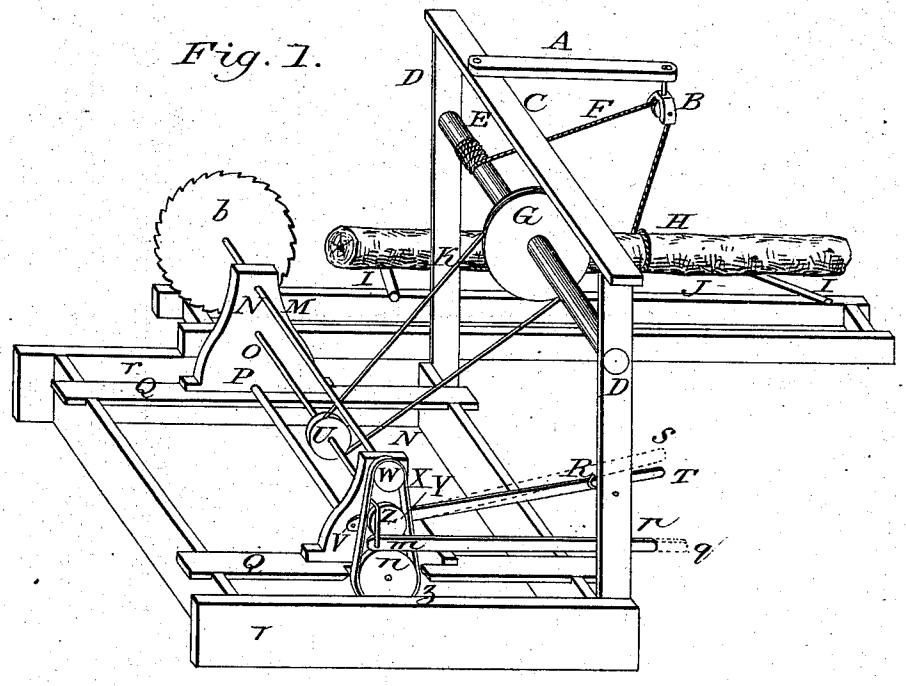

Fig. 2.

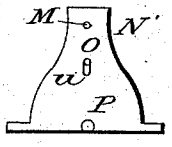

Fig. 3.

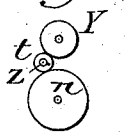

Fig. 4.

Witnesses:

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WILLIAM BOWMAN, OF ETNA GREEN, INDIANA.

Letters Patent No. 107,861, dated October 4, 1870.

IMPROVEMENT IN CIRCULAR-SAW MILLS.

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

To all whom it may concern:

Be it known that I, WILLIAM BOWMAN, of Etna Green, in the county of Kosciusko, and State of Indiana, have invented an Improvement in Circular-Saw Mills; and I do hereby declare that the following is a full and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, and letters marked thereon, making a part of this description, in which—

Figure 1 is a perspective representation of the principal parts of a circular-saw mill with my improved log-rolling device attached.

Figure 2, an elevation of one of the main standards of the mill, showing the slot in which the drive-shaft operates.

Figure 3, an elevation of the band-wheels and two friction-rollers employed in my device.

Figure 4, a lever for operating friction-wheels.

The present improvement consists in applying such mechanism to the ordinary circular-saw mill as will greatly facilitate the rolling and turning of logs on the carriage, as hereinafter fully described.

T Q N N′ represent the frame-work;

M P, the main shafts;

n W, the band-wheels; and

L, the upper saw of an ordinary circular-saw mill.

In the standards N N′ of the frame-work are formed bearings for a shaft, O, to rotate in, the bearing in standard N′ being vertically slotted, as shown at fig. 2, so that the end of the shaft running therein may be raised and lowered.

A friction-pulley, Y, is fastened to the shaft O, outside of the standard N′, and so that it may be brought in contact with the wheel *n*, or raised up from it, by means of a lever, T.

This lever is pivoted to the standard N′ at V, fig. 1, and, as shown at fig. 4, it has a slot in it, through which the shaft O passes, so that, by bearing down on the end of the lever, the wheel *n* will rotate the wheel Y, and so that the wheel Y will be removed from wheel *n* when the lever T is raised, and placed on the stop R, fig. 1.

On the shaft O is placed a pulley, U, which, in practice, should be a clutch-pulley, so that a chain may drive a wheel, G, so fixed to a drum-shaft, E, which, in practice, should have bearings in dependent bridges, fastened to the loft of the mill, instead of the standards D, as shown in fig. 1.

A rope, F, is fastened to the drum-shaft E, and put over a loose sheave-block, B, which, in practice, instead of being fastened to an adjustable arm, A, is fastened in any desired place in the loft of the mill, so that the rope F may be hitched to a log in any desired place.

To roll a log onto the carriage J, a rope, F, must first be fastened to it, and the lever T brought down, so that the friction-wheel Y will be rotated by the wheel *n*, and held there until the log is moved the proper distance. The operation is the same to turn a log on the carriage.

In order to run the rope F out, a friction-roller, *t*, fig. 3, is pivoted to a movable arm, Z, and to the arm is fixed a rod, *p*, so that, when it is desired to run the drum E, the roller Z is brought between wheels Y and *n*, by simply pulling the rod *p* forward, as shown by dotted lines *q*.

As a whole, by testing the device practically, it is found to operate in every respect satisfactorilly, and save the labor of several hands in handling logs, while, at the same time, the cost of applying it to a mill is small.

Claim.

In arranging a circular-saw mill for loading and turning logs on a carriage, the combination of the shaft O, pulleys U Y, friction-roller Z, drum E, wheel G, rod *p*, lever T, adjustable sheave-block B, and rope F, as set forth.

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Witnesses:

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