# G. W. Braymer.

## Sawing Mach.

No. 112,682. Patented Mar. 14, 1871.

Fig. 2

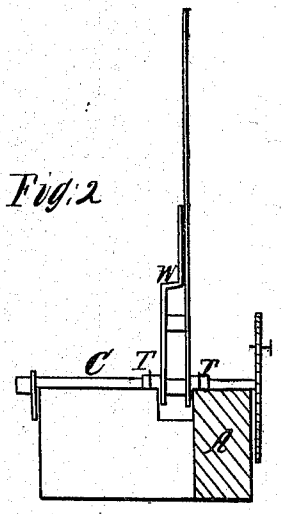



Fig. 3

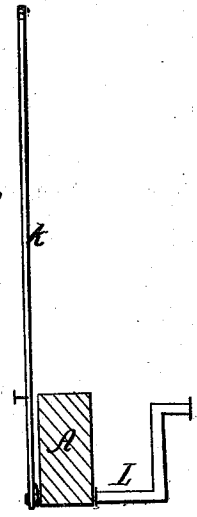
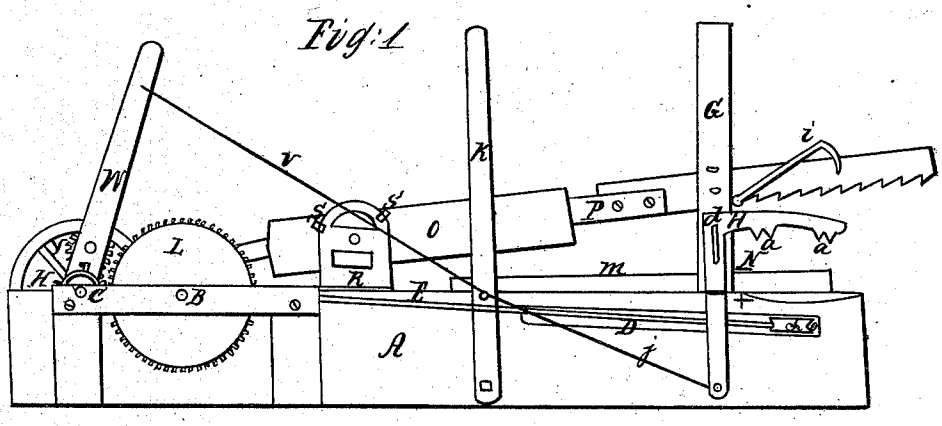



Fig. 1




Witnesses
H. Michael
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Inventor
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# United States Patent Office.

GEORGE W. BRAYMER, OF PENN TOWNSHIP, MICHIGAN.

Letters Patent No. 112,682, dated March 14, 1871.

## 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 I, GEORGE W. BRAYMER, of Penn Township, in the county of Cass and State of Michigan, have invented a new and useful Improvement in Wood-sawing Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1 is a side view, and

Figures 2 and 3 are detached sections.

My invention relates to the particular combination and arrangement of a wood-sawing machine as hereinafter described, the object being to save time and labor and secure better results.

In the annexed drawings making a part of this specification—

A represents the frame of a wood-sawing machine of that class in which drag-saws are used, and in its general construction is similar to some now in use; but my improvement in the frame consists in providing suitable bearings for the windlass-shaft in close proximity to the crank-shaft, and in grooving the sill, as seen at D, for the passage of the windlass-chain to the sheave F; this sheave works on a pivot in the end of said groove at a point vertically under the center of the log to be sawn.

From this sheave the chain extends at right-angles to the sill along the under side of the log, and is firmly fastened to the rear end of said log; and I also provide the post G, to which is pivoted the elbow-shaped lever H.

A guide, to steady the middle of the saw when starting into the cut, is attached to post G by any suitable hinge, as seen at *i*.

I also use the ordinary guide near the outer end of the saw, but do not claim nor show it.

The object of lever H is to hold the log steady while being sawed, for which purpose the horizontal arm of said lever is supplied with the teeth *a a*.

The vertical arm of this lever is attached by the rod *j* to the hand-lever *k*.

The pivot or pin *d*, on which the lever H hangs, is bent at one end to form a handle. The other end is provided with a shoulder on one side, which makes it self-locking, when passed through the slot in post G, by turning the handle down, the wide way of said slot, being cut crosswise of the grain in post G.

Several slots are cut at different heights, to make the lever H adjustable to different-sized logs.

The lever K is permanently attached to one end of the rock-shaft L. Said shaft passes through the lower edge of the sill, and is provided with a crank-arm at the other end, set in line with the hand-lever K.

A sliding-bar, *m*, is attached by one end to the wrist of this crank, the other end slides in the stirrup N.

The sleeves T T, through which the crank-shaft C passes, have stationary bearings in the wood-work of the frame, and serve as pivots for the lower end of the forked-lever W.

A pinion is fastened to the crank-shaft C, between the forks of lever W, and partly seen at *x*; an auxilary pinion, *y*, is also pivoted between the forks of lever W; the teeth of said pinions engage with each other.

A large cog-wheel, L, is attached to the shaft of the windlass, in line with pinions *x* and *y*, but not in contact with either of said pinions when lever W is in a vertical position, but may be put in gear with pinion *y* by moving lever W.

The rod *v* connects the hand-lever K with lever W. The bar *m* is used to measure the length of the stick to be cut off, and may be varied by drawing up or lengthening out the long arm of the stirrup N, which passes through the upper part of the sill near the post G, and has several pin-holes for that purpose.

To operate this machine the crank-shaft C is set in motion by any power now in use for that purpose. Motion is given to the saw, and it is raised, and lowered, and guided at the outer end by old devices. The log to be sawn is rolled onto suitable ways, the chain C is attached as described, when the lever K is moved in the direction of the log until pinion *y* comes in contact with the windlass-wheel L, giving motion to the windlass and drawing the log up to bar *m*, when the lever K is instantly thrown in the opposite direction, drawing the bar *m* from before the log, disengaging the windlass and bringing down the toothed arm of lever H upon the log, by which it is held until cut off, when the saw is again raised and the lever K thrown in the direction first described, putting the windlass again in gear, replacing the bar *m* to gauge the length of the next cut, and lifting the toothed arm of lever H out of the way of the log.

The saw-guide *i* will steady the middle of the saw, and prevent fluttering while starting into the top of the log.

It will be seen that one person, with my machine, can hold the log, measure the length of the cut, and start or stop the windlass by handling a single lever, and accomplish the same work for which two men are usually required.

Having thus fully described my machine—

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

The combination of the grooved-sill D, chain E, sheave F, post G, lever H, sliding-bar *m*, stirrup N, saw-guide *i*, and hand-lever K, when constructed, arranged, combined, and operated as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of March, 1869.

GEORGE W. BRAYMER.

Witnesses:

S. H. WHEELER,

H. MICHAEL.