CHARLES E. LEWIS.

Improvement in Saw-Mills.

No. 114,833. Patented May 16, 1871.

Fig. 1.

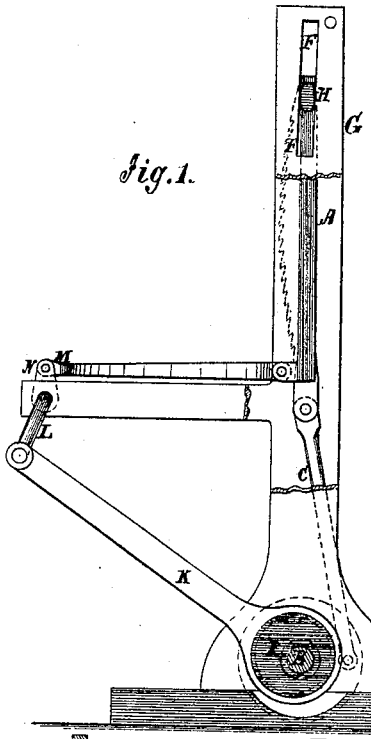
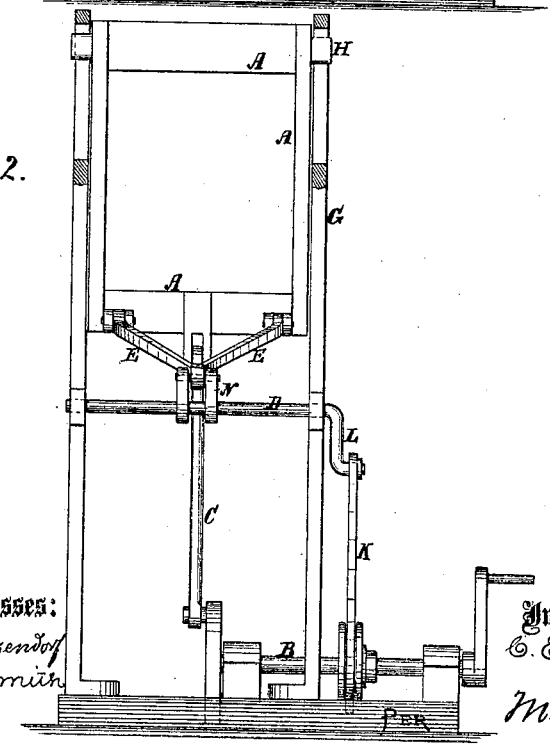


Fig. 2.



Witnesses:

A. Bennenendorf

Wm. H. C. Smith

Inventor:

C. E. Lewis.

Munn & Co

Attorneys.

United States Patent Office.

CHARLES ENOS LEWIS, OF BAY CITY, MICHIGAN.

Letters Patent No. 114,833, dated May 16, 1871.

IMPROVEMENT IN 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, CHARLES ENOS LEWIS, of Bay City, in the county of Bay and State of Michigan, have invented a new and useful Improvement in Saw-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in sash saw-mills; and

It consists in an arrangement of the eccentric on the driving-shaft, cranked rock-shaft, and connecting-rods used for vibrating the lower end of the sash toward and from the log in its downward movement to cause the said movement; also, a saw made rounding or convex in the line of the points of the cutting-teeth, to have the hereinafter-described movements, calculated to produce an even cut on the log.

Figure 1 is a sectional elevation of my improved mill, and

Figure 2 is a front elevation of the same.

Similar letters of reference indicate corresponding parts.

A is the sash, mounted, at the lower end, on the crank-shaft B by the connecting-rod C, and the rock-shaft D by the forked arm E, and at the upper end in the straight slots or guides F in the posts G by the projections H, the said slots or guides being inclined forward from the top downward as much as the saw is to move forward at the upper end during the downward movement.

The rock-shaft D is connected to the eccentric I on the driving-shaft B by the rod K and crank L.

These devices are similar to what have been used before for vibrating the saw, except in the construction of the forked arm E, which, I find, is simpler and better by being forked, and having the ends of the forked part pivoted to the sash, and the other end, M, connected to the rock-shaft D by a single crank, N.

My improvement in the arrangement of these oscillating devices for the saw is as follows:

I set the eccentric on the driving-shaft so that its greatest radius is in the line of the connecting-rod K when the said sash is half-way down in the downward movement, and adjust the cranks L and N so that from the beginning of the downward movement of the sash till it has moved about one-eighth the distance the crank N will move to the left or toward the log, drawing the lower end of the saw that way; then the sash will be moved backward until it is half-way down; then forward until it is about seven-eighths the way down; and then backward during the rest of the downward movement, by which arrangement, together with a saw which is convex in the line of the points of the teeth, I produce a more even cut on the log than can be done by any other arrangement known to me.

The forward movement of the sash, while moving from half-way to seven-eighths the way down, is caused by the swinging of the arm E below the horizontal line of its axis of motion on the crank N, although the crank N is moving toward the saw at the same time; but its movement in that direction being less than that of the end of arm E, connected to the sash in the other direction, gives the said forward movement.

Having thus described my invention,

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

A saw having its teeth forming the arc of a circle and arranged on a reciprocating sash, a bar, E, crank-shaft N D L, yoke-rod K, and eccentric I, all combined and arranged as and for the purpose specified.

CHARLES E. LEWIS.

Witnesses:

JOHN DRAKE,

SAML. W. YAWKEY.