

D. MILLIKEN.

Improvement in Machines for Splitting Wood.

No. 118,963.

Patented Sep. 12, 1871.

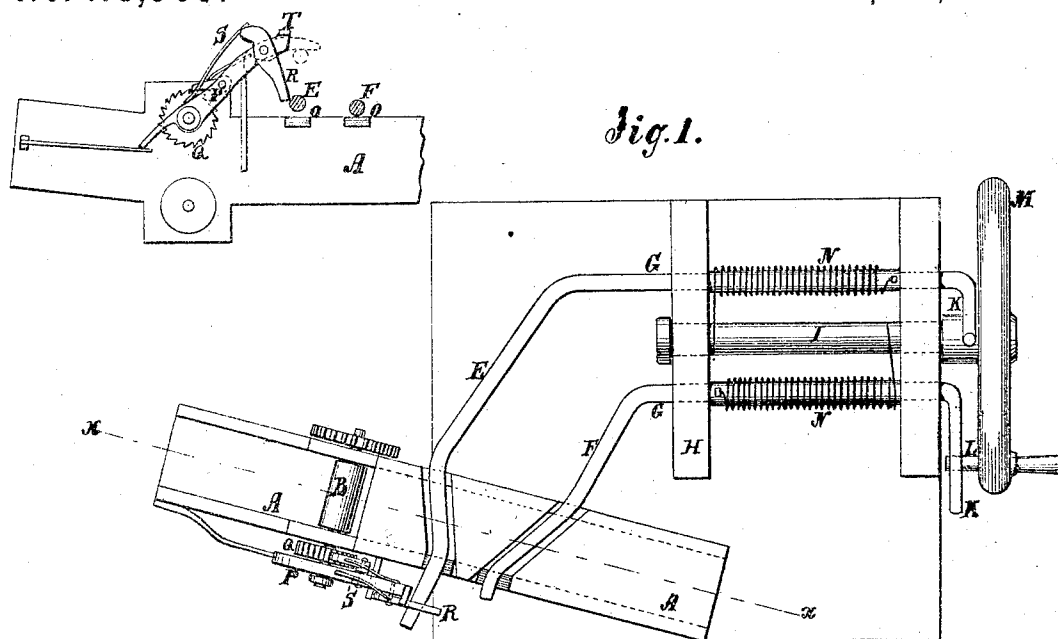


Fig. 1.

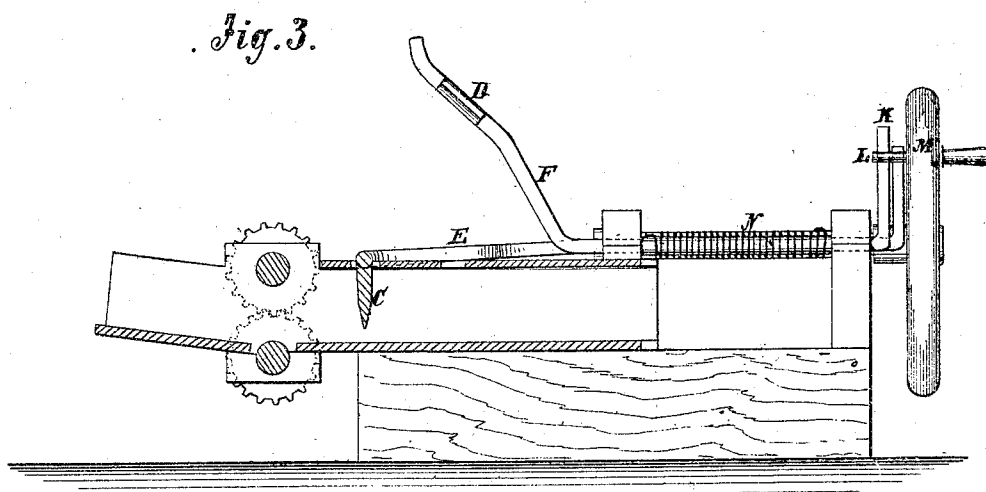


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

DAVID MILLIKEN, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR SPLITTING WOOD.

Specification forming part of Letters Patent No. 118,963, dated September 12, 1871.

To all whom it may concern:

Be it known that I, DAVID MILLIKEN, of New York city, in the county and State of New York, have invented a new and Improved Wood-Splitting Machine; 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 a part of this specification.

My invention relates to improvements in wood-splitting machines; and it consists in a novel arrangement, with a feeding-trough, of splitting-axes mounted on swinging arms, which are raised by a revolving wheel and accelerated in their fall by springs, in such manner as to be similar in action to the action of an ax wielded by hand. The invention also comprises a novel arrangement of apparatus for actuating a pair of feed-rolls by one of the ax-carrying arms, in such manner that the feed-rollers will not be actuated if the ax fails of entering the wood far enough to split it, all as hereinafter described.

Figure 1 is a plan view of my improved machine. Fig. 2 is a partial side elevation, showing the arrangement of the feed-apparatus; and Fig. 3, a sectional elevation taken on the line *x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the feeding-trough, in which the blocks of wood are set on end at the left of the rollers B, and pushed along to them in any way to be forced along to the axes C and D, which are mounted on the bent rods or arms E F, respectively, said arms being so shaped that the axes, when in the trough, will stand about perpendicular to each other, being oblique to the trough. Each arm has a straight part, G, mounted in bearings H, parallel with the shaft I, so that they can oscillate. The ends opposite the ones carrying the axes have each a cranked arm, K, which is acted upon by a pin, L, of wheel M, to raise the ax. Said pin escapes over the ends of the arms, allowing the axes to fall upon the wood. The fall is accelerated by a spring, N, on the part G of each rod. The trough will be provided with a cover to prevent the wood from being raised by the axes, said cover having a hole for each ax suited for it to drop upon the wood below,

and the edges of the trough on which the rods will sometimes fall with considerable force will have India-rubber or other elastic cushions O to lessen the shocks. To actuate the feed-rollers I employ a pawl-lever, P, and a ratchet-wheel, Q, on the upper roller, the two rollers being geared together, and to the upper end of said pawl-lever I apply a catch-dog, R, on a pivot, in such manner that when the ax-arm E goes down, it will tilt and let said arm pass, the end of the dog escaping from the rod just previous to the end of the movement of the latter, and it is thrown up by a spring, S, against the stop T, which holds the dog when the rod comes against its under side in the up movement, causing the line to be raised and the feed-wheels to be actuated. If the rod E does not fall to its lowermost position by reason of not having sufficient force to split the block, the dog R will not escape, and the feed will not take place, so that the block will remain in the same place until a sufficient number of blows have been struck to split it.

This arrangement of feed apparatus is applicable to vertically-operating axes, as well as to those operating as here shown. I propose to apply the same plan which I have shown of forcing the axes down by springs to vertically-reciprocating axes, and to raise such axes by means of a tappet-wheel.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the trough A, axes C and D, arms E F, cranked arms L, springs N, and the actuating-wheel M, all substantially as specified.

2. The combination, with the pawl-lever P and the ax-arm E, of the catch-dog R, springs S, and the stop T, substantially as specified.

3. The arrangement of the catch-dog with the ax-arm F, whereby the said dog will not escape unless the ax passes to the full extent of its downward movement, all substantially as specified.

The above specification of my invention signed by me this 2d day of August, 1871.

DAVID MILLIKEN.

Witnesses:

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(125.)