E. Coogan,

Splitting Wood.

No. 108,883. Patented Nov. 1. 1870.

Fig. 1.

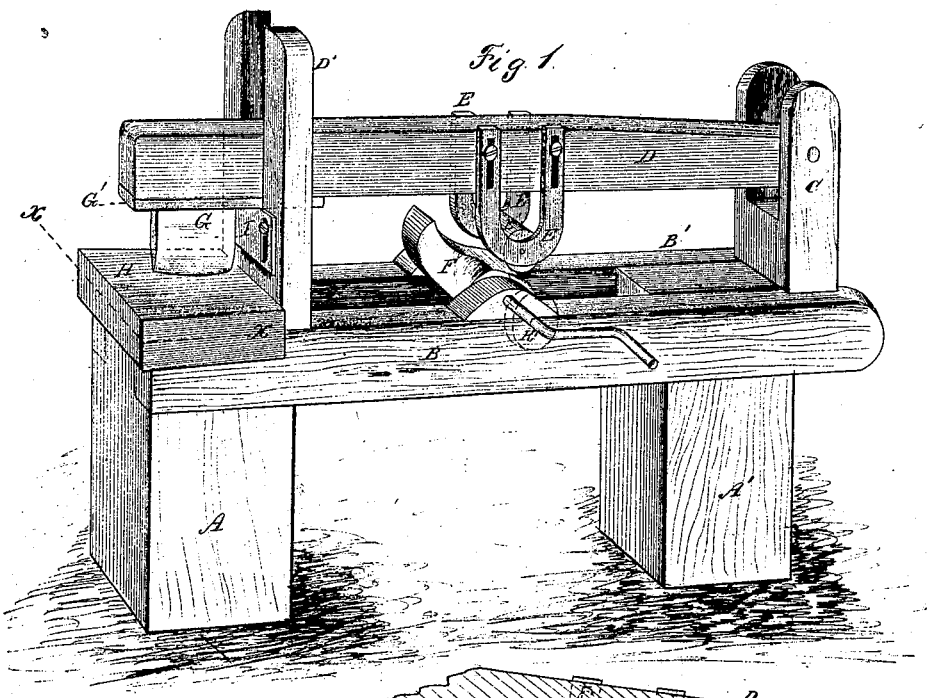


Fig. 2.

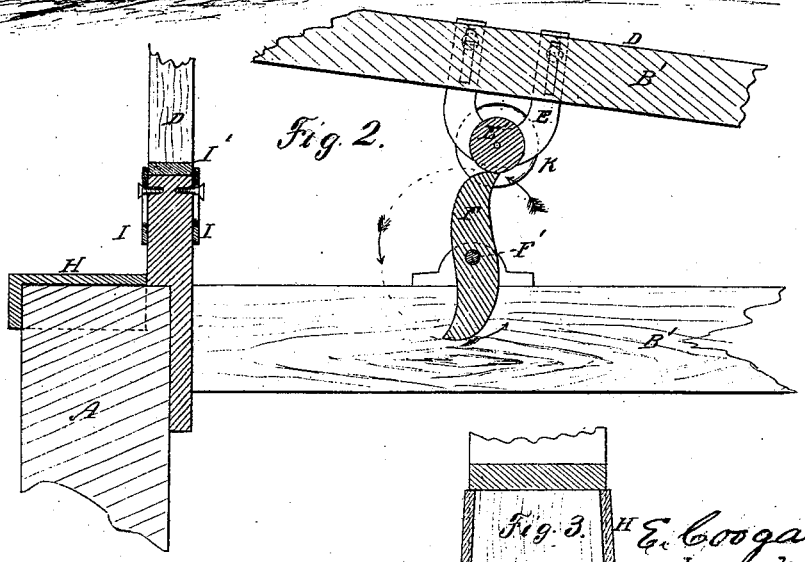
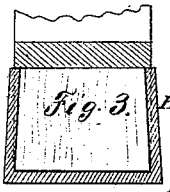


Fig. 3.



Witnesses.
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EDWARD COOGAN, OF WASHINGTON, ASSIGNOR TO HIMSELF AND JOSEPH L. SIMONS, OF GEORGETOWN, DISTRICT OF COLUMBIA.

Letters Patent No. 108,883, dated November 1, 1870.

IMPROVEMENT IN WOOD-SPLITTING 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, EDWARD COOGAN, of Washington, in the District of Columbia, have invented certain Improvements in Wood-Splitting Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing, in which—

Figure 1 is a perspective view of my improved machine, showing the frame thereof, the adjustable block upon which the wood lays while being split, the ax which splits it, and the adjustable roller against which the cam strikes which raises the helve, and the relation of the cam thereto.

Figure 2 is a central section of a portion of the frame-work and of the helve, in connection with which are shown the adjustable block, the adjustable stop, which limits the distance the ax may fall, and the construction of the cam which raises the helve.

Figure 3 is a sectional elevation on line x x of fig. 1, showing the dovetailed form of the splitting-block.

Corresponding letters refer to corresponding parts in the several figures.

This invention relates to that class of machines which is used for splitting wood; and

It consists in the construction, combination, and arrangement of its parts, as will be more fully explained hereinafter.

A in the drawing refers to posts which constitute a portion of the frame-work of the machine. They are to be made of strong timbers, say, twelve inches square, or of such size as to give permanency to the machine.

The lower ends of these posts are to be bedded firmly in the earth, their length being such as to give the proper height to the block upon which the wood is split.

B B′ refer to the side pieces of the frame-timbers, which extend from one post to the other, and rest upon shoulders formed upon the upper ends of such posts, to which they are bolted.

C refers to a standard which rises from the side timbers of the frame at or near their rear ends. The upper end of this standard is bifurcated so as to receive the outer end of the helve, which is pivoted thereto.

D refers to the helve, which may be made of wood or of any other suitable material, its rear end being pivoted to the standard C, as above described, from which point it extends forward to or nearly to the front end of the frame.

D′ refers to a slotted standard, the forks of which embrace the standard near its forward end, serving as a guide and support for the same. This standard is mounted upon the frame near the block upon which the wood is split, and rests upon the horizontal timber, in part above the post A, so that, should the under side of the helve come in contact with the bridge of the standard before the force of the blow is expended, the blow will be taken up by said post.

E E refer to yokes or hangers, one of which is attached upon each side of the helve D, at a point midway between its fulcrum and the ax, or thereabout.

The hangers are of horse-shoe form with the curved ends down, in which suitable bearings are formed for the support of the journals of the anti-friction roller E′.

The legs of the hangers are slotted, as shown, to allow of vertical adjustment upon the helve.

The helve is operated by means of a double-winged cam, F, which is mounted upon a transverse shaft, F′.

The latter is arranged in bearings upon the side timbers of the frame, and provided with a crank or pulley, K′, to which the power is applied in revolving the shaft, in doing which each wing of the cam will alternately come in contact with the anti-friction roller E′, turning the helve on its fulcrum.

The helve is made of sufficient length and weight that the ax G will be caused by the descending stroke to enter and split the block of wood placed under it.

The length of stroke of the helv can be regulated according to the nature of the work by adjusting the anti-friction roller E′ vertically by means of its slotted hangers.

The ax G I prefer to make of cast-iron, with an elongated broad flange, G′, at its butt end, by means of which it is firmly secured to the under edge of the outer end of the helve in any approved manner.

H refers to the block upon which the wood is placed to be split by the ax. It is constructed with downwardly-projecting flanges upon three sides, which are to fit over the top of the forward end of the frame so that its rear edge comes in contact, or nearly so, with the face of the standard D′. This flanged block is made slightly tapering from its front to its rear edge, and the top of the frame is tapered correspondingly, so that the block to remove it must be lifted vertically, and is prevented to move horizontally.

By inserting pieces of boards under it, the block may be adjusted vertically.

I I refer to slotted plates of metal attached to the standard D′, one upon each side, near where the fork terminates.

They are of sufficient width to extend across the slot in the standard, and are intended as keepers to hold in place elastic cushions I′, placed in the slot upon the bridge of the standard to relieve the concussion of the helve in falling upon it.

The plates are made adjustable, to adapt them to

hold in place varying thicknesses of cushions without projecting above the same.

K refers to a pulley hung upon the end of the shaft F, which may carry an endless belt to be run horizontally along the side of the block H just a little below the level of the latter. By this arrangement the split wood may be carried away and delivered at any convenient point.

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

1. The adjustable block H, constructed with flanges and tapering from front to rear, substantially as set forth.

2. The combination of the adjustable block H, constructed as described, and frame A B, substantially as set forth.

3. The elastic cushion I', in combination with the helve and ax, substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD COOGAN.

Witnesses:
D. P. HOLLOWAY,
B. EDW. J. EILS.