(Model.) 2 Sheets—Sheet 1.

C. F. NEEDHAM.

Wood Sawing Machine.

No. 240,450. **Patented April 19, 1881.**

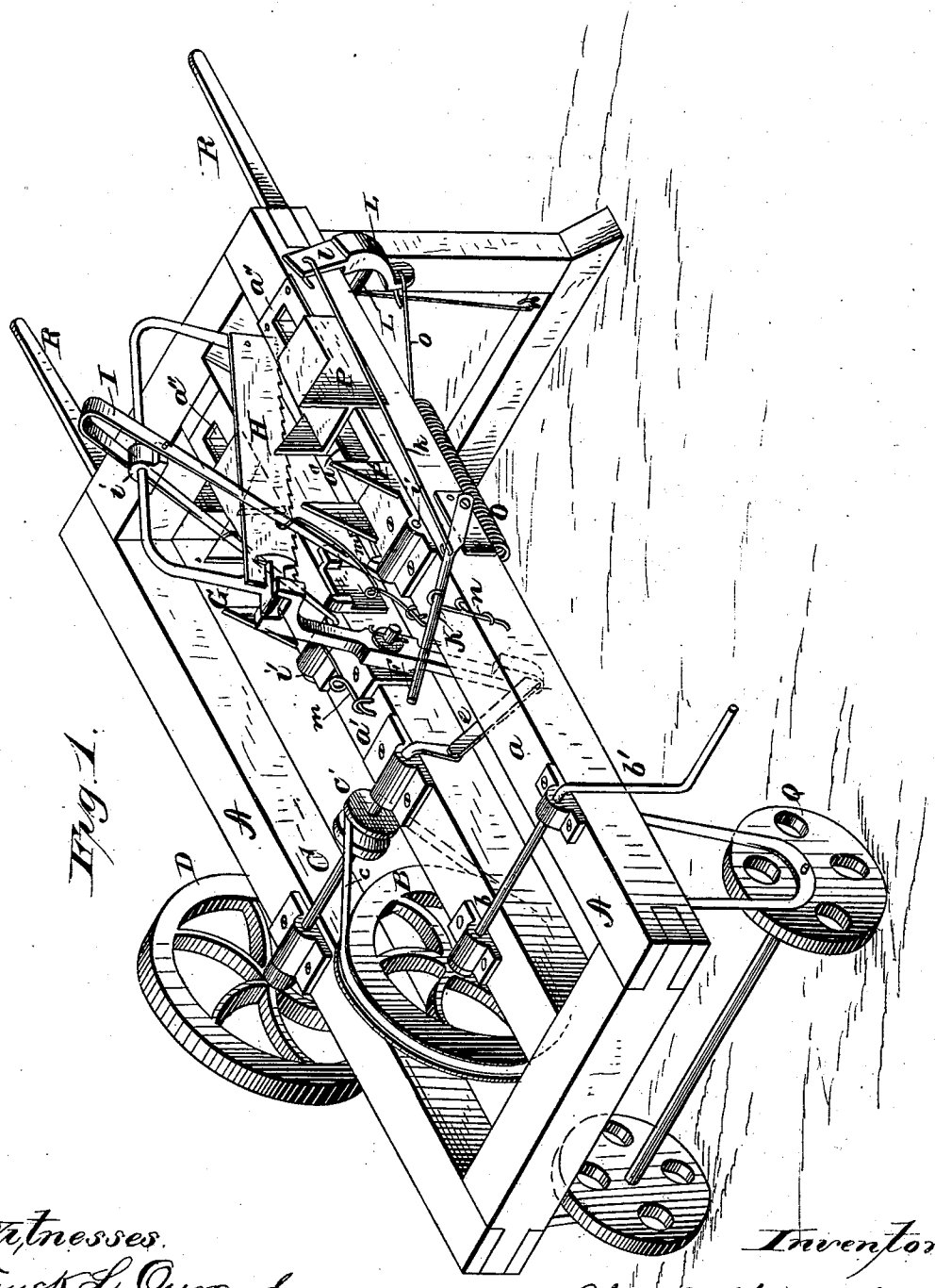


Fig. 1.

Witnesses.
Frank L. Ouand
George Connell.

Inventor.
Charles F. Needham
by L. Deane.
Atty.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

(Model.)

2 Sheets—Sheet 2.

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Wood Sawing Machine.

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Fig. 2.

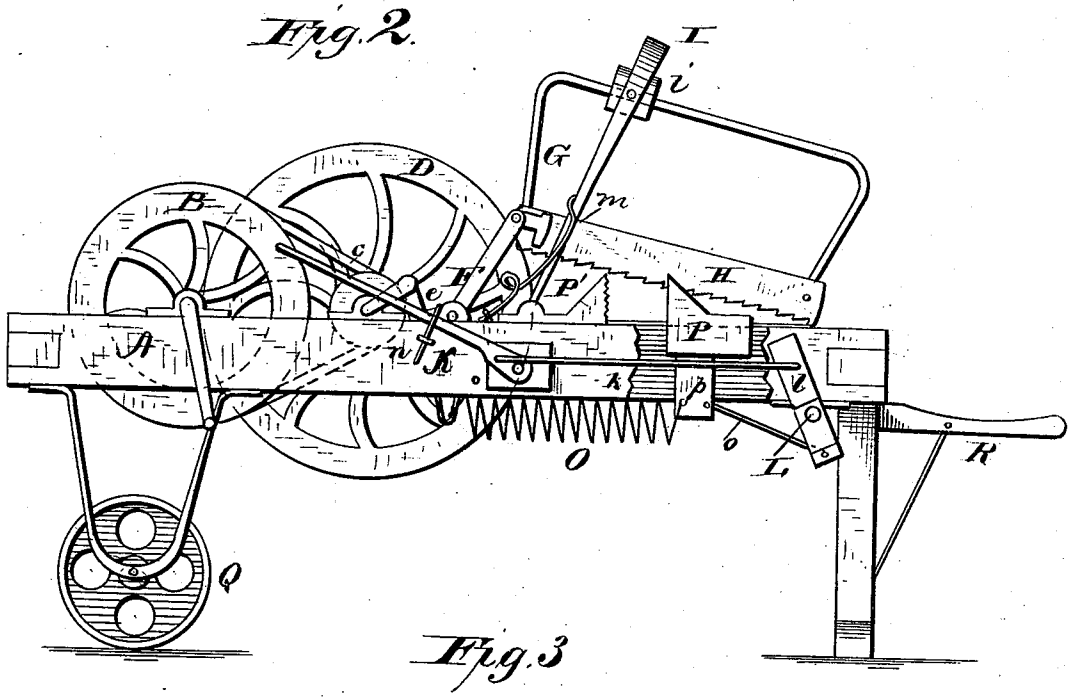
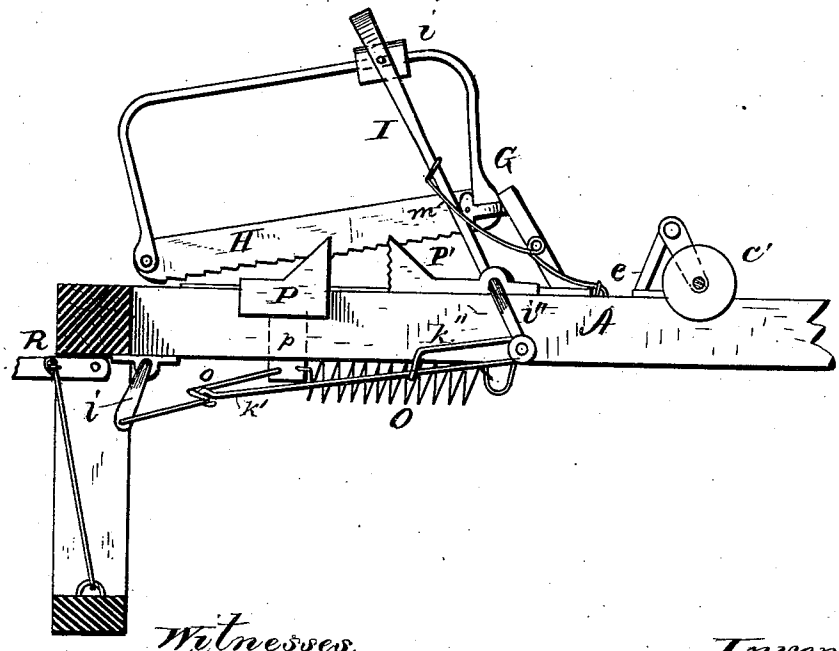


Fig. 3.



Witnesses.
Franck L. Durand
George. Connell.

Inventor.
Charles F. Needham.
by L. Deane.
Atty.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES F. NEEDHAM, OF PROPHETSTOWN, ILLINOIS, ASSIGNOR OF ONE-HALF TO GEORGE M. NEEDHAM, OF SAME PLACE.

WOOD-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 240,450, dated April 19, 1881.

Application filed August 19, 1880. (Model.)

To all whom it may concern:

Be it known that I, CHARLES F. NEEDHAM, a citizen of the United States, residing at Prophetstown, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in a Wood-Sawing Machine; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of a machine embodying the present invention. Fig. 2 is a side elevation, showing the means for raising the saw, &c. Fig. 3 is a detail in elevation from the side opposite to Fig. 2.

This invention relates to that class of devices well known as "fire-wood drag-saws;" and the novelty consists more particularly in the means used for holding the wood in place while being sawed, in the means employed for raising the saw into proper position for cutting, and holding it there while it is being worked, and in the combination with the foregoing of the operative mechanism; and, finally, in the general construction and combination of all the parts, all as will now be more fully set out and explained.

In the drawings, A denotes any suitable and proper frame. In any way conveniently mounted on said frame is the driving-wheel B, having shaft *b* and crank-arm *b'*, by which it can be operated; but, when desired, any suitable motive power can be attached to drive the said wheel. The band *c*, running over sleeve *c'* on shaft C, takes the power from said wheel B to operate the saw. A fly-wheel, D, may or may not be used, as shall be desired, on the shaft C. To the other and bent end of the shaft C is attached one end of pitman *e*, which connects with one end of the lever-arm F, centrally pivoted to the frame. In the other and upper end of the said lever the saw-frame G is pivoted. Thus, as said lever-arm F is operated by the mechanism above described, the saw-frame will be reciprocated back and forth, thereby giving the desired movements to the saw H. The arbor of the saw-frame G passes through and moves in the block *i*, pivoted in the upper end of the swinging bow I. The ends *i'* of the bow are journaled or pivoted in the beams *a a'* of the frame A, one on each side of the saw, between which beams the saw moves. It will be perceived that the end *i'* on the inner side is prolonged and bent down, for purposes to be hereinafter explained.

The bow and saw are raised by means of the lever K on the side of the frame A, connecting by link *k* with arm *l* on the end of shaft L, which is journaled under the beams *a a'* and at the fore end of the frame A. The opposite end of the shaft L may be bent or have an arm, *l'*, and it connects thence, by link *k'* and loop *k''*, with the downwardly and outwardly bent end *i''* of the bow I, so that said bow can, on occasion, be operated by means of said loop, so as to raise the saw. Thus, when the lever K is drawn down, the motion serves to raise the saw-bow I with the saw. The springs *m*, attached to beam *a'*, and through the eyes of which the sides of the bow I pass, will serve not only to press upon the bow, so as to advance the saw as shall be required in process of cutting the wood, but also to steady the movements of the saw-bow.

The saw may be held at any desired height by securing the lever K in the detent *n*, which may have notches on it for this purpose.

The springs O, located under the beams *a a'*, are connected, by links *o* or otherwise, with the arms *l l* of the shaft L, but intermediately through the legs *p* of the dogs P. These legs depend through slots *a''* in the beams *a a'* of the frame A, said slots forming the limits of the back-and-forth motion of said dogs P, and when moved out by the means above described, operating to raise the saw, they move forward on the upper face of the frame A and away from the stationary dogs P', to allow place to rest the wood or stuff to be sawed. The faces of either or both of said dogs may be serrated.

The machine, as thus described, can be operated to give the most accurate rapid cutting-power, and the parts are so adjusted relative to each other that the machine will be most convenient in all respects in use, while, for any purpose of repair or cleaning, its several parts

can easily be reached. In the mere make-up and arrangement of these parts I can, of course, make many changes without in the least departing from the aim and scope of the present invention as hereinbefore described.

The machine is preferably made movable by having wheels Q at one end and handles R at the other. The handles may be folded down under the frame A when the device is used for sawing, and the wheels blocked or trigged.

Having now described my invention, what I consider new, and desire to secure by Letters Patent, is—

1. In combination with a frame, G, carrying saw H, and the bow I and spring *m*, the lever-arm F, pitman *c*, and shaft C, mounted in frame A, and operated substantially as set forth.

2. In a wood-sawing device, substantially as described, the combination of saw-frame I, lever K, links *k k'*, and loop *k''*, and connecting mechanism operating to advance the saw upon the wood, spring O, link *o*, and shaft L, and intermediate connections, with dogs P P', whereby the wood will be clamped in position, and without any interference therewith the saw will be advanced on the wood, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES F. NEEDHAM.

Witnesses:
WILLIAM CHARTERS,
WILLIAM L. NEEDHAM.