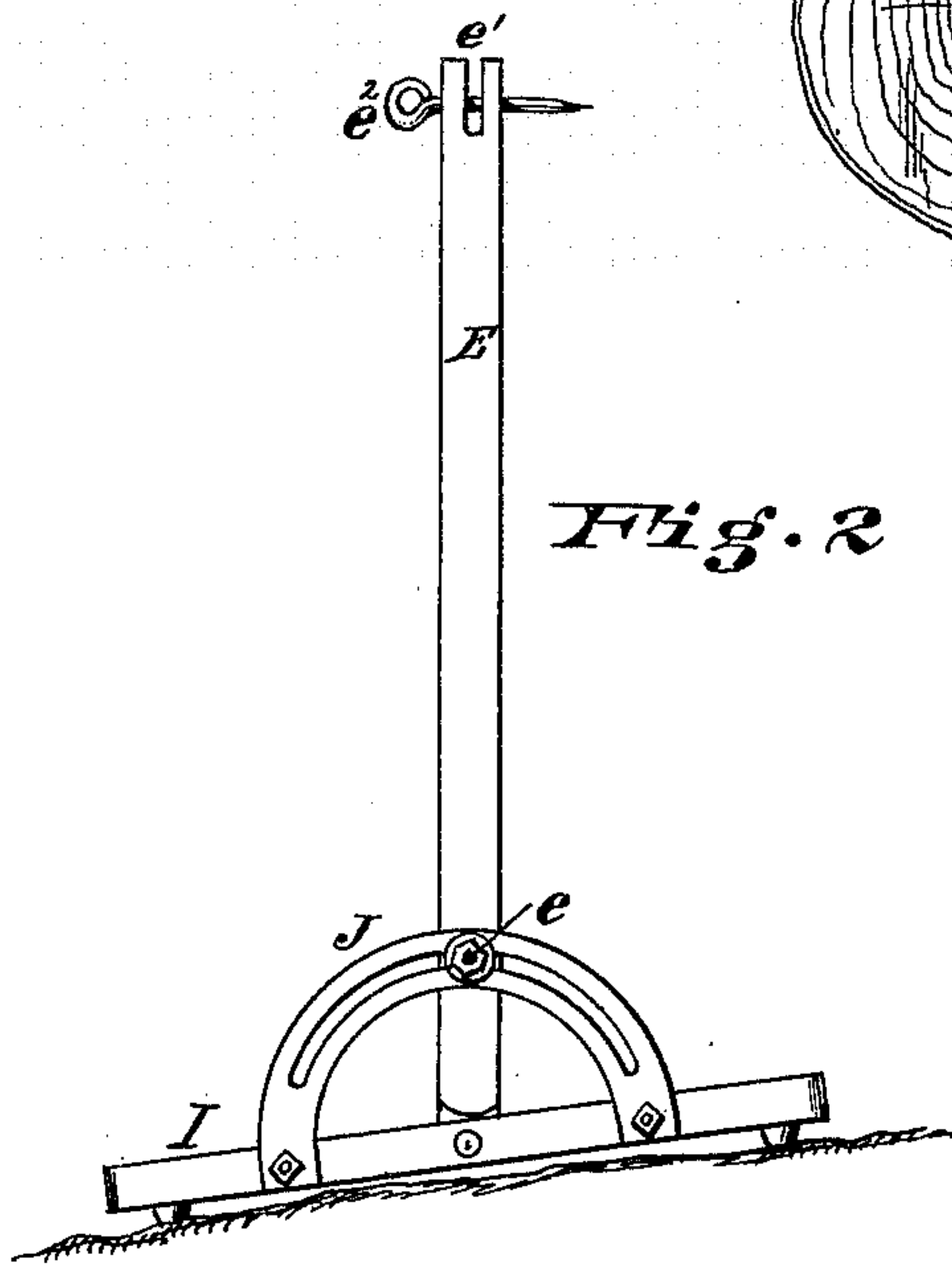
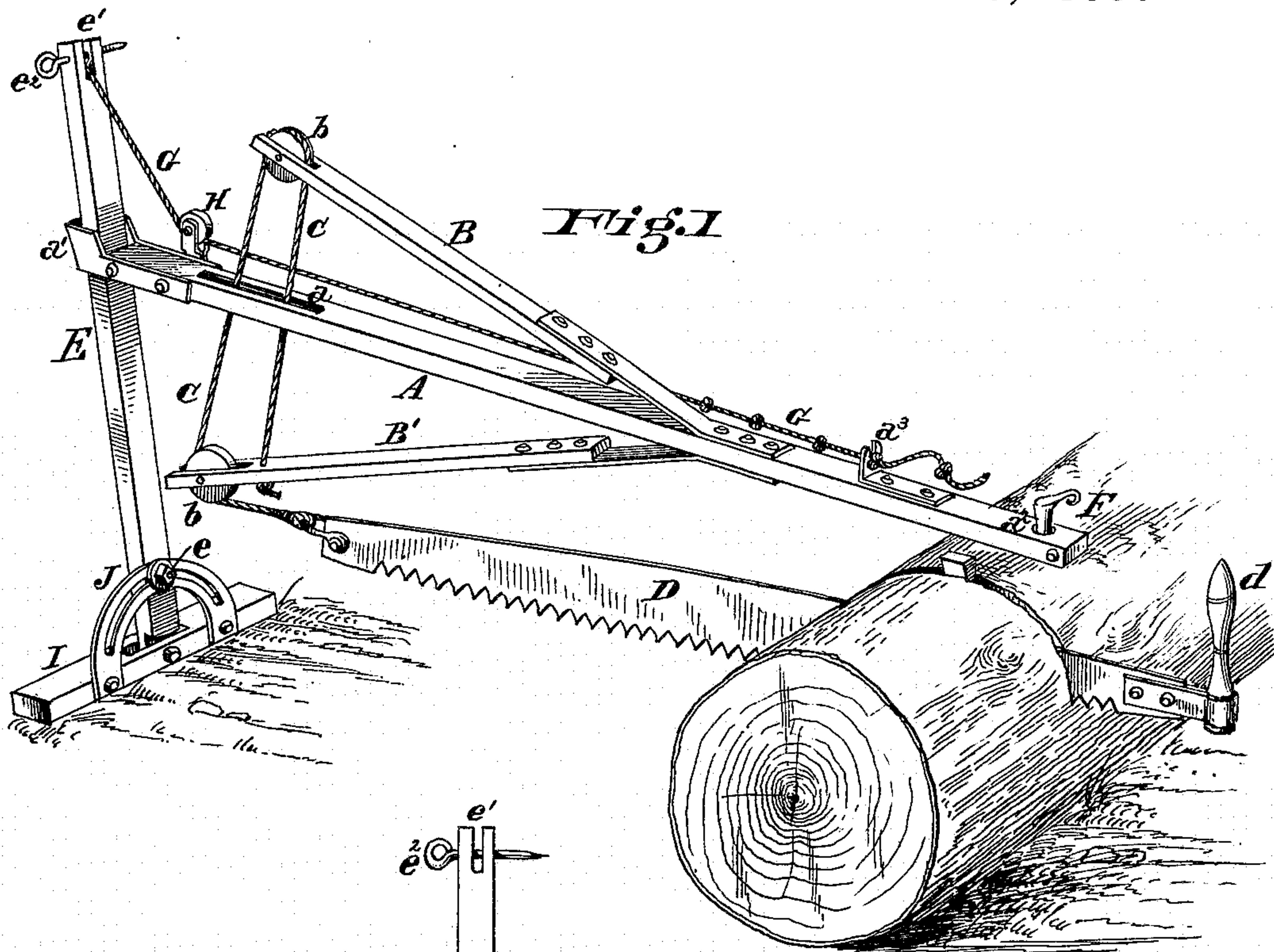


J. AUGSPURGER & J. NEIMEYER.
 Drag-Saw.

No. 220,565.

Patented Oct. 14, 1879.



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UNITED STATES PATENT OFFICE

JOHN AUGSPURGER AND JOHN NEIMEYER, OF TRENTON, OHIO.

IMPROVEMENT IN DRAG-SAWS.

Specification forming part of Letters Patent No. **220,565**, dated October 14, 1879; application filed August 25, 1879.

To all whom it may concern:

Be it known that we, JOHN AUGSPURGER and JOHN NEIMEYER, both of Trenton, Butler county, State of Ohio, have jointly invented certain new and useful Improvements in Drag-Saws, of which the following is a specification.

Our invention relates to devices for operating a crosscut-saw, whereby a single person may be enabled to do the work which ordinarily requires two persons to perform, and has for its object to provide means for storing and utilizing a surplus of power exerted in driving the saw in one direction to aid its movement in the other.

To such end the invention consists of a horizontal beam provided on opposite sides with springs rigidly attached at one end, and their free ends connected by a cord which is attached to the saw, whereby the springs are compressed together in the movement of the saw in one direction, and at the end of such movement are permitted to react for reversing the movement of the saw. The invention embodies other features, all of which will be fully hereinafter described, and pointed out in the claims.

In the drawings herewith, Figure 1 is a perspective view of our invention in position for operation. Fig. 2 is an elevation of the supporting and adjustable standard.

B B' are the two springs, secured rigidly to the upper and under sides, respectively, of a horizontal supporting-beam, A, their free ends being provided with idler-pulleys *b b*, over which passes a cord, C, by means of which the springs B B' are compressed and their reaction transmitted to the saw, as hereinafter described.

The cord C is secured at one end to the member B', passes over the pulleys *b b*, and is attached at the other end by means of a link to one end of the saw D. The springs B B' are preferably made of short pieces of spring-steel, provided with stiff wooden extensions to support the pulleys *b b*, and are of sufficient length to enable their combined movement to provide for a full stroke of the saw.

The beam A is provided with a slot, *a*, through which the cord C plays, and a metal or wooden loop, *a*¹, at one end to embrace an

upright supporting-post, E, while its other end has a perforation, *a*², through which a pin, F, may be driven into the log to be sawed, so as to hold said beam rigidly to its place.

The end of the beam which embraces the post E is secured thereto and adjusted for different heights thereupon by a cord, G, secured to the post and passing under a pulley, H, and to a binding-post, *a*³, both upon the beam.

The supporting-post E is provided with a hinged base, I, having a slotted arc, J, and an engaging bolt, *e*, through arc and post, by which device the post may be set in an upright position upon inclined and uneven ground.

The cord G is secured to the post by being provided with a knot and slipped into a slot, *e*¹, in the post, where it is secured by a pin, *e*².

When placed in position for operation the beam A is secured by one end to the log by means of the spike F, the expanding springs B B' opening to the opposite end, which embraces the supporting-post E, and is supported therefrom by the cord G, after being adjusted to such a height from the ground as will enable the springs to be compressed and react in a vertical path during the movement of the saw.

The beam A is lowered from time to time by paying out part of the cord G and again securing it to the binding-post *a*³. The binding-post *a*³ is slotted, and the cord G provided with knots at various points, which, when the cord is slipped into the slot in the post, engage therewith to secure the beam A in position.

The operator, grasping the saw by the handle *d*, operates it by pulling it toward him, and at the same time, by means of the cord C, compresses the spring B B'. When the stroke is completed the spring which is under compression begins to expand and acts to draw the saw from the operator, who may also assist by slightly pushing upon it.

There are, of course, various forms of strains which may be employed to operate the saw; but we have chosen the one described on account of its simplicity, cheapness, and durability, as well as its superior efficiency in action, due to its great range of motion, which will permit a long stroke of the saw under uniform strain.

When not in use, the post E and timber A

may be disengaged and laid side by side to facilitate shipping and handling.

Having thus described our invention, we claim—

1. In a drag-saw, the combination of a horizontal beam, A, a vertical supporting frame or post, E, two springs, B B', secured rigidly at their ends to the upper and lower sides of the beam, respectively, a cord, C, connecting the free ends of the springs and connected with the saw for compressing the springs in one direction of the movement of the saw, and mechanism for adjusting the beam vertically to accommodate the progress of the saw, substantially as described.

2. In a drag-saw, the combination of a horizontal beam, A, a vertical supporting frame or post, E, two springs, B B', rigidly attached at one end to the opposite sides of the beam, and having their free ends provided with means for compressing the springs in one direction of the movement of the saw to permit their vertical reaction to reverse the movement of the saw, substantially as described.

3. The combination, with a horizontal beam, A, a vertical supporting frame or post, E, to which the beam is adjustably connected, and two springs, B B', rigidly attached to the upper and lower sides of the beam, respectively, of means for adjusting the beam vertically to accommodate the saw to the work as it progresses, and means for automatically compress-

ing the free ends of the springs in a vertical plane by the movement of the saw in one direction, and permitting the springs to react at the return movement of the saw, all substantially as and for the purpose described.

4. The combination of the vertical post E and the beam A, connected therewith by a loop embracing the post, with the two springs B B', connected on opposite sides of the beam, the cord C, connecting the free ends of the springs with the saw, and the cord G, attached to the vertical post and passing under a pulley, H, attached to the beam, and connected with the latter by a binding-post, a^3 , all substantially as and for the purpose described.

5. In a drag-saw machine, the springs B B', supported on the beam A, and carrying idler-pulleys $b b$, and the compressing-cord C and saw D, substantially as and for the purpose described.

6. In combination with the springs B B' and cord C, the horizontal supporting-beam A, slotted at a to accommodate the passage of the cord, and the saw D, substantially as and for the purpose specified.

In testimony whereof we have hereunto set our hands this 19th day of August, 1879.

JOHN AUGSPURGER.
JOHN NEIMEYER.

Witnesses:

NELSON WILLIAMS,
C. K. SLONNEGER.