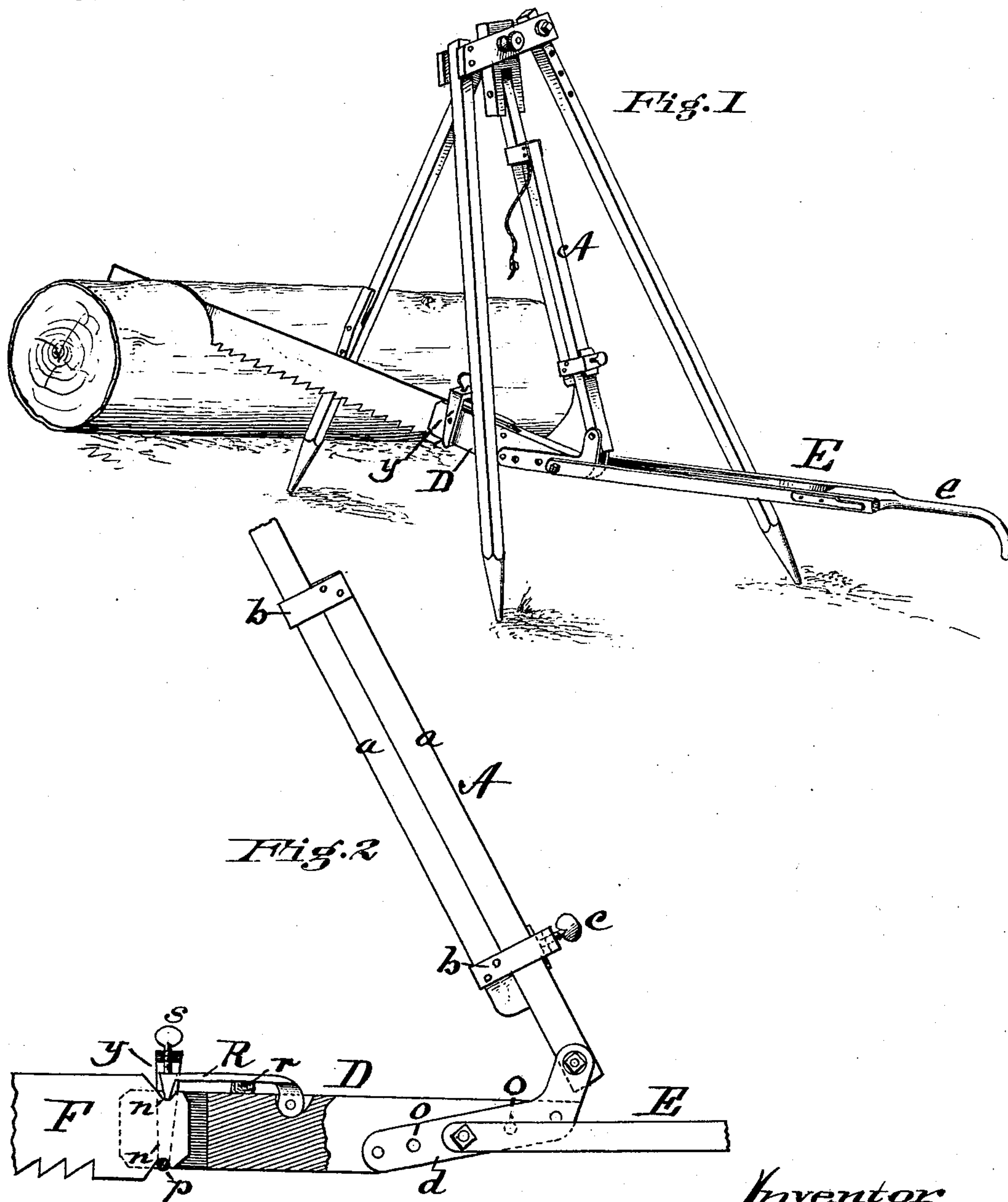


(No Model.)

J. AUGSPURGER.  
Drag Saw.

No. 233,907.

Patented Nov. 2, 1880.



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# UNITED STATES PATENT OFFICE.

JOHN AUGSPURGER, OF TRENTON, OHIO.

## DRAG-SAW.

SPECIFICATION forming part of Letters Patent No. 233,907, dated November 2, 1880.

Application filed April 22, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN AUGSPURGER, a citizen of the United States, residing at Trenton, Butler county, Ohio, have invented new and useful Improvements in Drag-Sawing Machines, of which the following is a specification.

My invention relates to that class of sawing-machines in which the saw is suspended in a supporting-frame upon a pendulous lever and driven by the muscular power of the operator standing upon the ground behind it, and is in the nature of an improvement upon that for which Letters Patent No. 226,590 were granted to me April 20, 1880; and its object is to improve the construction and efficiency of such machines.

To this end my invention consists, first, in an improved construction of the extensible lever supporting the saw-pitman; second, in an improved construction of the saw-pitman and the connection of the operating-handle therewith, whereby the cutting force of the saw may be regulated; and, third, in an improved construction of the saw and devices connecting it with the pitman.

My invention is embodied in mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved sawing-machine in position for operating; and Fig. 2 a detail view, on an enlarged scale, of the extensible saw-lever, pitman, and saw-connections.

Similar letters of reference indicate similar parts throughout the drawings.

The general features of the sawing-machine to which my present improvements are applied, and which is fully shown in Fig. 1 of these drawings, having been fully set forth and described in the Letters Patent to which reference has been made, a repetition of such description in detail will be unnecessary.

In said former patent the saw-lever was shown to consist of two parts slotted longitudinally and held adjustably together by set-screws. My improvement in this respect consists in constructing said lever (designated in the present drawings by the letter A) in two integral portions, *a a*, sliding one upon the other, held in proper relative position with

respect to each other by two yokes, *b*, one upon each inclosing the other. One of them is provided with a set-screw, *c*, by which the parts are secured in the desired position. This construction is more economical and produces a lighter and stronger lever.

I form the connection between the saw-lever A and pitman D by pivoting the lever between two iron cleats, *d d*, screwed to the sides of the pitman and projecting to the rear, preferably of the form shown in the drawings. Two or more holes, *o*, are made transversely through the pitman at horizontal intervals, by which the handle E may be adjustably secured thereto at any desired distance from the suspending-lever A, and for convenience of attachment the handle E is provided with an open slot, or else is made, as shown, of two pieces united by the hand-piece *e* at the rear. By connecting the handle E at points forward of the lever-connection a downward pressure is brought to bear upon the saw, greater or less according to the distance from the point of suspension at which the handle E is connected.

Instead of connecting the saw to the pitman in the usual manner by bolts passing through both pitman and saw, I provide connection as follows: The rear end of the saw F is notched above and below, as shown at *n n'*, and is placed within the slotted end of the pitman, with the lower notch, *n'*, resting over and retained by a pin, *p*, permanently located in the pitman across the slotted opening. A dog, R, is pivoted in the slot of the pitman above and held up by a spring or piece of elastic rubber, *r*, and so arranged that the head of the dog rests in the upper notch, *n*, of the saw. A yoke, *y*, is employed, which embraces the end of the pitman and dog, and provided with a set-screw, *s*, by which the dog is clamped down securely between the head of the dog and the lower pin, *p*.

It will be seen that by loosening the set-screw the saw can be easily and quickly removed and reinstated.

The dog may be dispensed with and the set-screw of the yoke arranged to rest directly upon the saw; but I prefer to use the dog, as affording a better and more secure connection.

Having described my invention, I claim and desire to secure by Letters Patent—



1. In combination with the supporting-frame and the movable head, the pendulous saw-lever A, composed of two sections, *a a*, arranged to slide one upon the other, the two yokes, *b b*, one secured to each of the lever-sections *a a* and embracing and guiding the other section, and the set-screw *c*, passing through one of the yokes and adapted to bind the parts of the saw-lever together, all as herein shown and described.

2. The combination, with the pendulous saw-lever A and the saw-pitman D, having a pivotal connection with the lower end of said lever, of the horizontal operating-handle E, adjustably connected with the pitman by a pivot arranged in front of and beneath the pivotal connection of the saw pitman and lever, all substantially as and for the purpose described.

3. In combination with the pendulous saw-lever, the pitman D, provided with spaced perforations *o* in front of and in line with its pivoted connection, and the bifurcated handle E, adapted to be adjustably connected with the pitman by a removable bolt or pin passed through said apertures, substantially as and for the purpose specified.

4. The combination, with a pendulous saw-

lever, A, and a saw-pitman, D, having a series of spaced transverse holes, *o*, of the cleats *d*, attached to the pitman and pivoted to the lower end of the saw-lever, and also provided with spaced holes, and the bifurcated horizontal handle E, embracing the said cleats and adapted to be adjustably connected therewith by a transverse removable bolt or pin, all as herein shown and described.

5. The combination of the saw-pitman D, the dog R, pivoted thereto, the yoke *y*, the set-screw *s*, the pin *p*, and the saw F, having end notches, *n n'*, into which the said dog and pin are adapted to be secured, as shown and described.

6. In combination with saw F, having notches *n n'*, and the pitman provided with yoke and set-screw, the dog R, pivoted to the pitman, and operating, in conjunction with pin *p*, to retain the saw removably, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN AUGSPURGER.

Witnesses:

L. M. HOSEA,  
C. F. HESSER.