

No. 684,500.

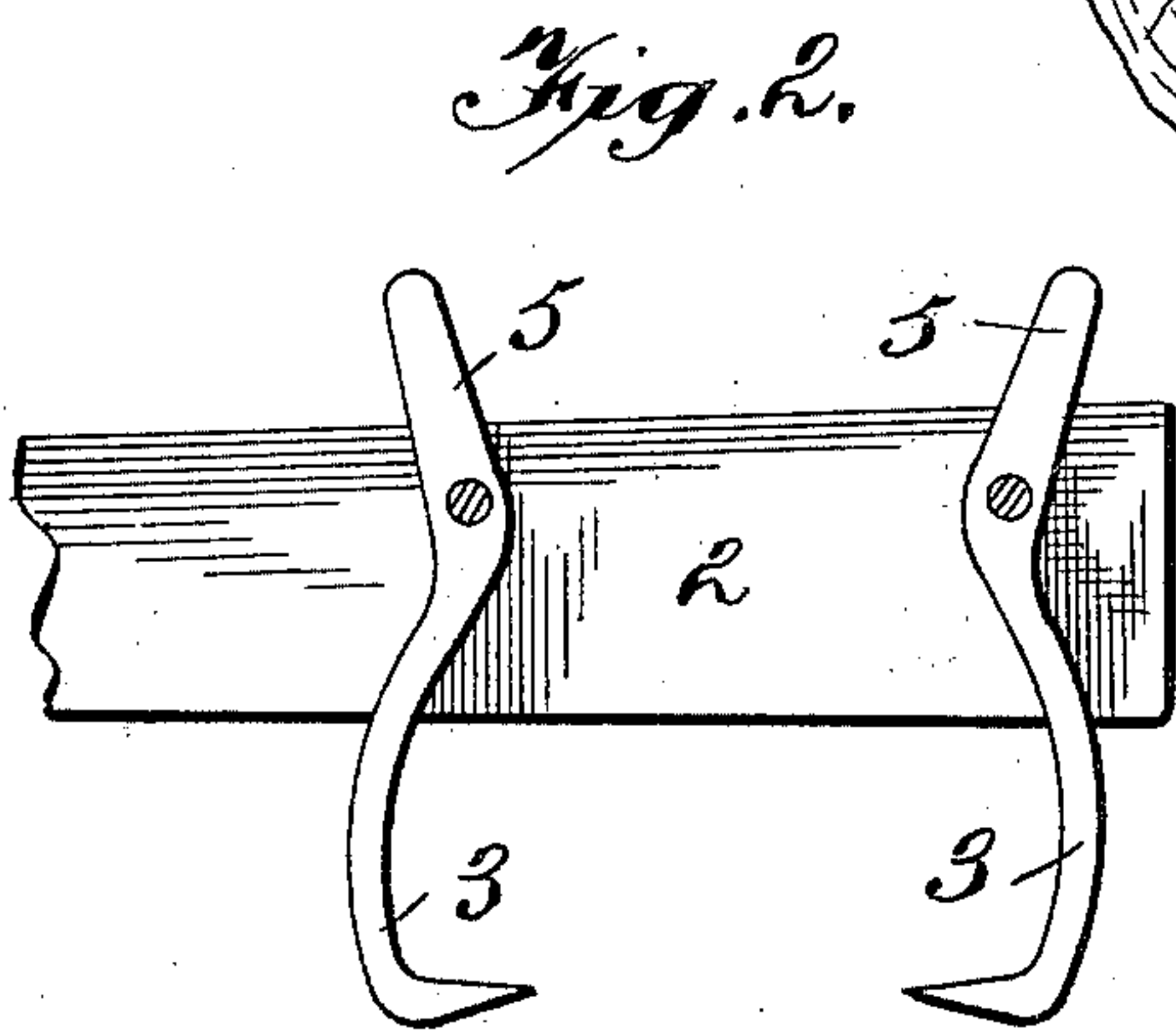
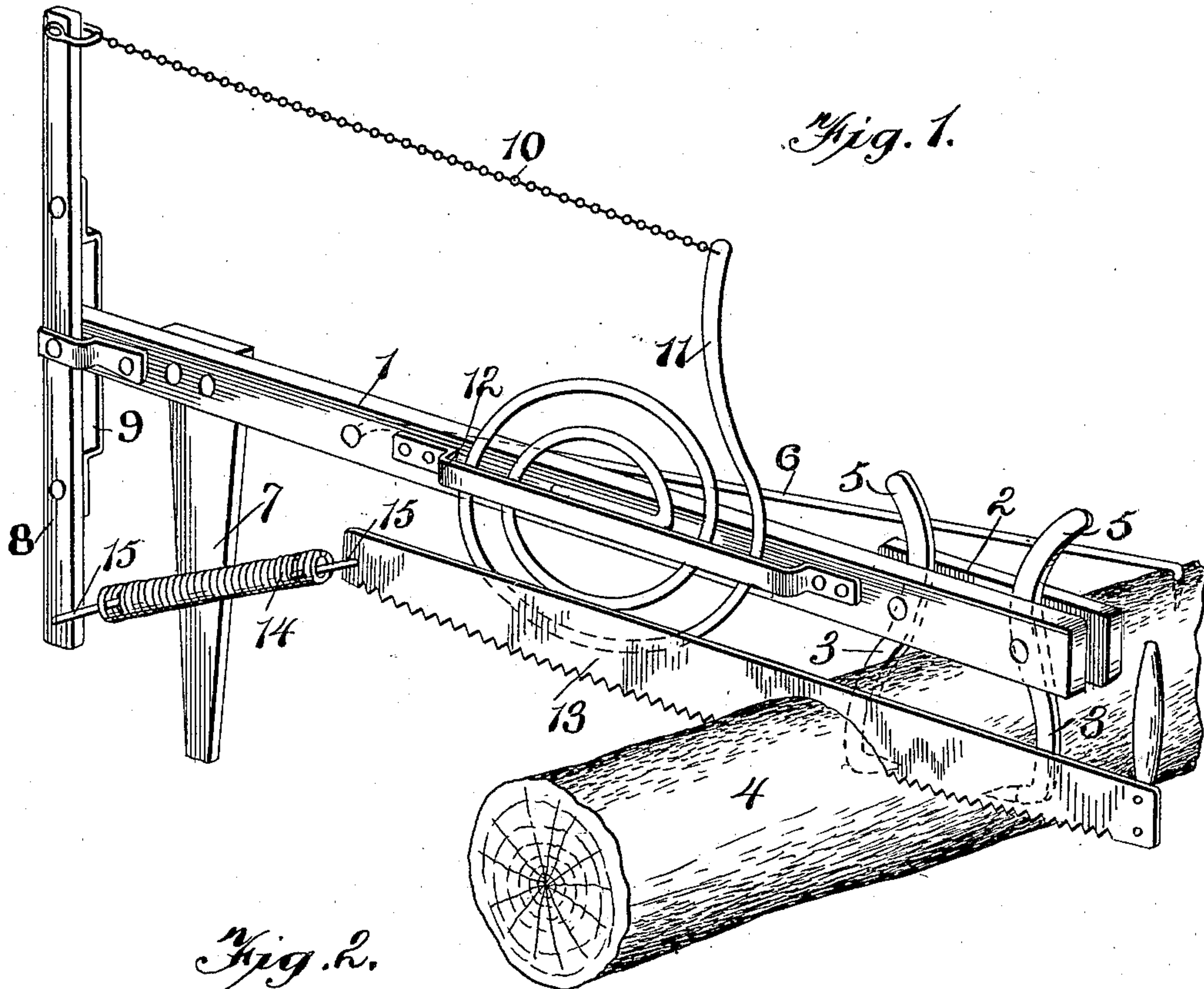
Patented Oct. 15, 1901.

G. S. ELGIN & D. ADKINS.

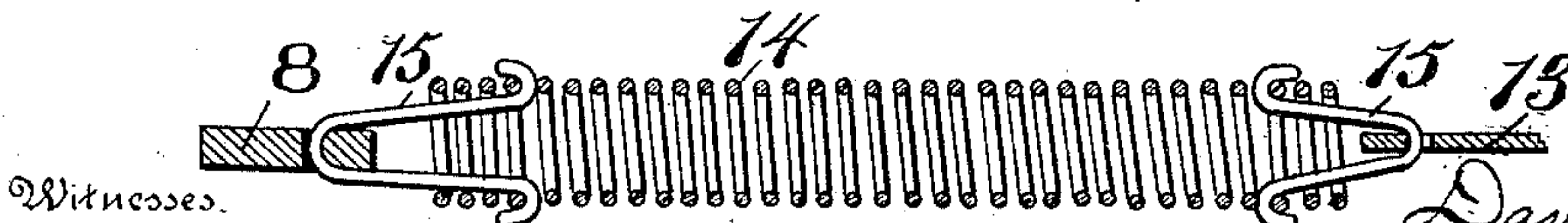
DRAG SAW.

(Application filed July 6, 1901.)

(No Model.)



*Fig. 3*



Witnesses.

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# UNITED STATES PATENT OFFICE.

GUSTAVUS S. ELGIN, OF PLATTE CITY, AND DAVID ADKINS, OF NEW-MARKET, MISSOURI.

## DRAG-SAW.

SPECIFICATION forming part of Letters Patent No. 684,500, dated October 15, 1901.

Application filed July 6, 1901. Serial No. 67,266. (No model.)

*To all whom it may concern:*

Be it known that we, GUSTAVUS S. ELGIN, residing at Platte City, and DAVID ADKINS, residing at Newmarket, in the county of Platte and State of Missouri, citizens of the United States, have invented certain new and useful Improvements in Drag-Saws, of which the following is a specification.

Our invention relates to improvements in drag-saws, and pertains to means by which the spring-actuating mechanism as described in Letters Patent No. 660,077, granted October 23, 1900, is adapted to actuate the saw in one direction, thus enabling one operator to perform the work usually requiring two.

The object of our present invention consists of means for readily attaching and detaching the saw from the machine and also to permit the operator to set the saw to cut at different angles and when felling trees to permit the saw to cut on either side of the tree, all of which will be fully described hereinafter, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of our invention. Fig. 2 is a detail view of the hooks or dogs for attaching the machine to a log. Fig. 3 is a longitudinal sectional view of the spiral spring, showing the connecting loops or hooks.

Referring now to the drawings, the numeral 1 indicates a beam provided on its inner end with a longitudinal block 2, attached thereto by two bolts. 3 indicates two depending hooks pivoted between the beam 1 and the block 2, their lower ends extending inward and adapted to be driven into a log 4, the upwardly-extending curved arms 5 serving as a means for releasing the hooks, as will be presently explained. Connected to the beam 1, near its outer end, is a rod or arm 6, the free end of which is turned down and provided with a sharp point adapted to be driven into the log. This rod serves as a further means of connecting the outer end of the beam with the log and braces the frame in a manner to prevent lateral movement while the saw is being operated. On the outer end of the beam we provide a supporting-leg 7, which is rigidly attached thereto, the lower

end resting on the ground and adapted to support the beam.

Intermediately pivoted to the outer end of the beam 1 and on the side opposite the depending leg 7 is a lever 8, provided with a guide-plate 9, each end of which is rigidly connected to the lever 8 at points intermediate the beam 1 and the free ends of the lever 8. The shouldered plate 9, which passes over the end of the beam 1, serves to guide and steady the lever 8, as will be readily understood.

The upper end of the lever 8 is connected by means of a chain, cable, or rope 10 with the free end of a coil or convolute spring 11, the said spring having one end rigidly connected with the beam and its opposite end, as before stated, connected with the upper end of the intermediately-pivoted lever 8. As a further means of steadying the frame and preventing the hooks from working loose, we provide a bail or shouldered plate 12, which is rigidly attached to the beam 1 and passes over the coil of the spring 11 to prevent the coils from overlapping or vibrating while the saw is being reciprocated.

The lower end of the lever 8 is connected with an ordinary drag-saw 13 by a coil-spring 14. The connecting links or loops 15 are substantially U-shaped and the free ends turned to form hooks, which are adapted to engage and screw into the free ends of the coil-spring 14, as illustrated in Fig. 3.

Particular attention is called to the fact that by means of the links 15 the saw can be turned to cut at different angles or turned over for the purpose of filing or easily releasing it from the spring for sharpening, whereas in the usual manner of forming a hook of the free ends of the coil-spring the hook is necessarily made at right angles to the coils, which not only holds the saw in one position, but constitutes a connecting-hook which is easily broken, necessitating a new spring. Each hook 15 engages the coil in two places, so that the strain is greatly reduced, and should the hook wear out or break it will only be necessary to replace the hook, thus obviating the necessity of getting a new spring.



In operating our machine the inner end of the beam is connected with the log by means of the hooks 3 and braced by the rod 6. The saw being connected with the spring 14, the operator draws the saw toward him and the spring 11 serves to draw it in the opposite direction, while the spring 14 serves to give the saw a downward pull, which is the natural movement when operated by two men. The upwardly-extending arms 5 of the locking-dogs 3 serve as a means for easily releasing the hooks after the log has been sawed, the operator driving them inward, as will be readily understood.

Our saw is adapted for felling or cutting down trees, in which case the beam is attached to the tree in the same manner, the saw being in a horizontal position. In this connection it will be seen that the connecting-links 15 will permit the operator to turn the saw, so as to cut the tree from both sides should the saw begin to bind and for the purpose of felling the tree in the desired direction, the usual method being to first saw and then cut or chop the opposite side with an ax.

A machine of the above construction enables one man to operate a drag-saw and perform the work which usually requires two.

Having thus described our invention, what

we claim, and desire to secure by Letters Patent, is—

In a drag-saw comprising a beam, depending hooks for attaching the beam to the object to be sawed, the upwardly-extending arms adapted to release the said hooks, the transverse lever 8, plate or bail 9 for holding the said lever against lateral movement, the spring 11 connected to the upper end of the lever 8, and a bail 12 adapted to prevent the lateral movement or vibration of the spring 11, a downwardly-extending spring detachably connected to one end of the drag-saw, and the opposite end with the lower portion of the lever 8, the members 15 provided with a U-shaped portion adapted to engage the eyes in the saw and in the lower end of the lever 8 respectively and having outwardly-extending hooks adapted to engage and screw into each end of the coil-spring 14, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

GUSTAVUS S. ELGIN.  
DAVID ADKINS.

Witnesses:

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