(No Model.)

4 Sheets—Sheet 1.

G. G. SEEGER.

DRAG SAW MACHINE.

No. 256,601. Patented Apr. 18, 1882.

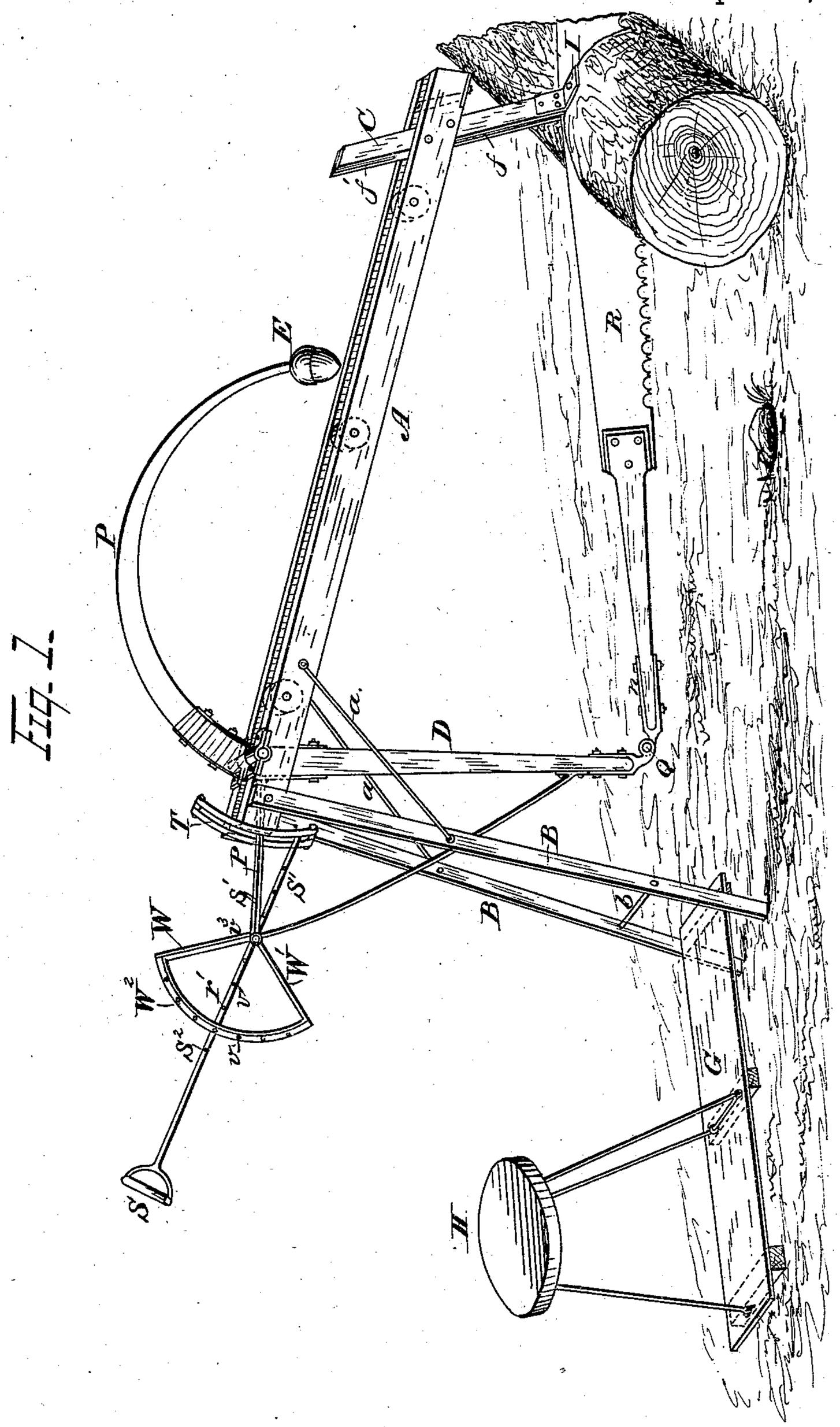


Fig. 1.

WITNESSES

Geo. S. Seymour

Albert L. Lawrence.

INVENTOR

Georg G. Seeger

by H. A. Seymour

ATTORNEY

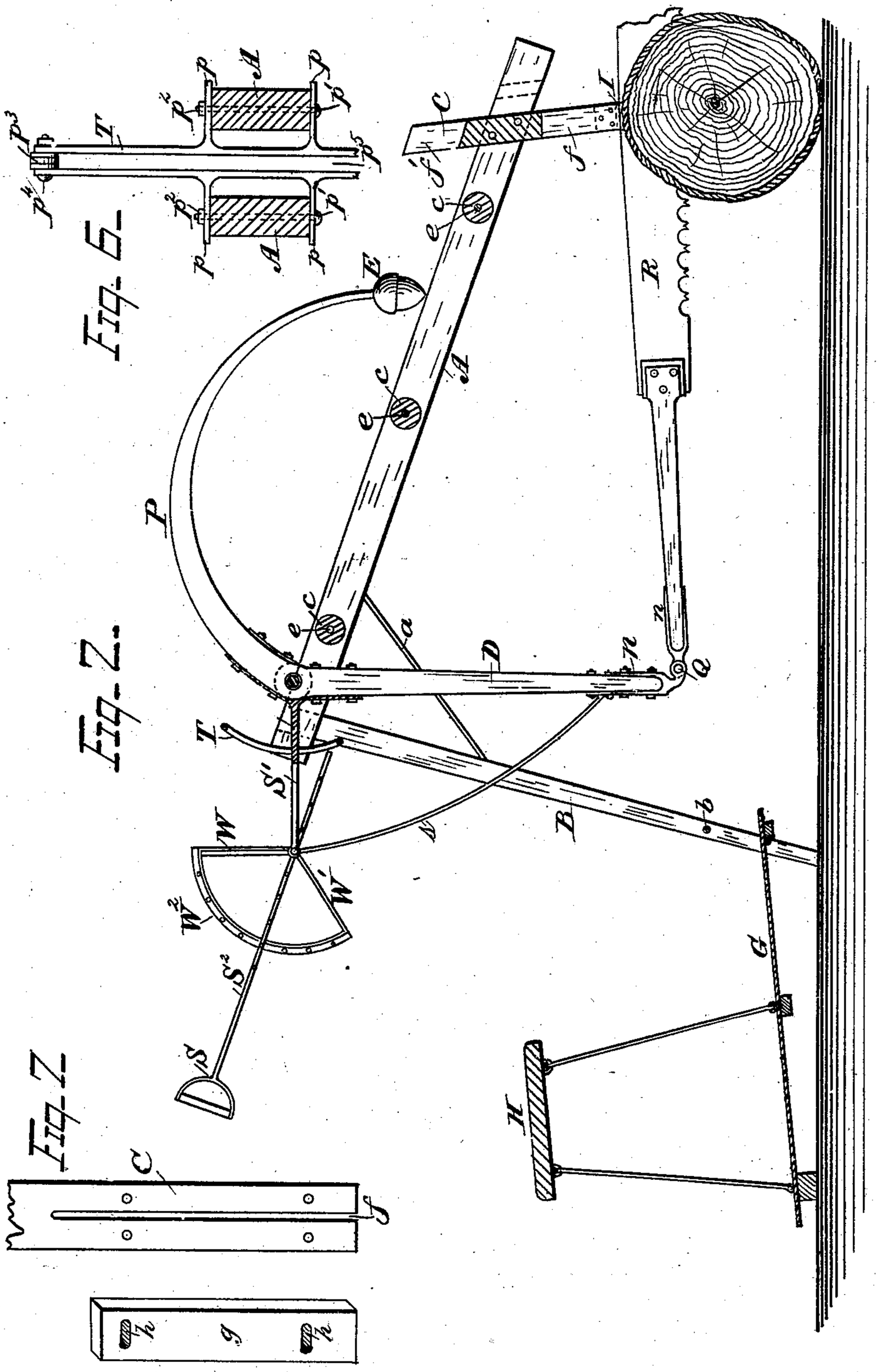
(No Model.)

4 Sheets—Sheet 2.

G. G. SEEGER.

DRAG SAW MACHINE.

No. 256,601. Patented Apr. 18, 1882.



(No Model.)

4 Sheets—Sheet 3.

G. G. SEEGER.

DRAG SAW MACHINE.

No. 256,601.

Patented Apr. 18, 1882.

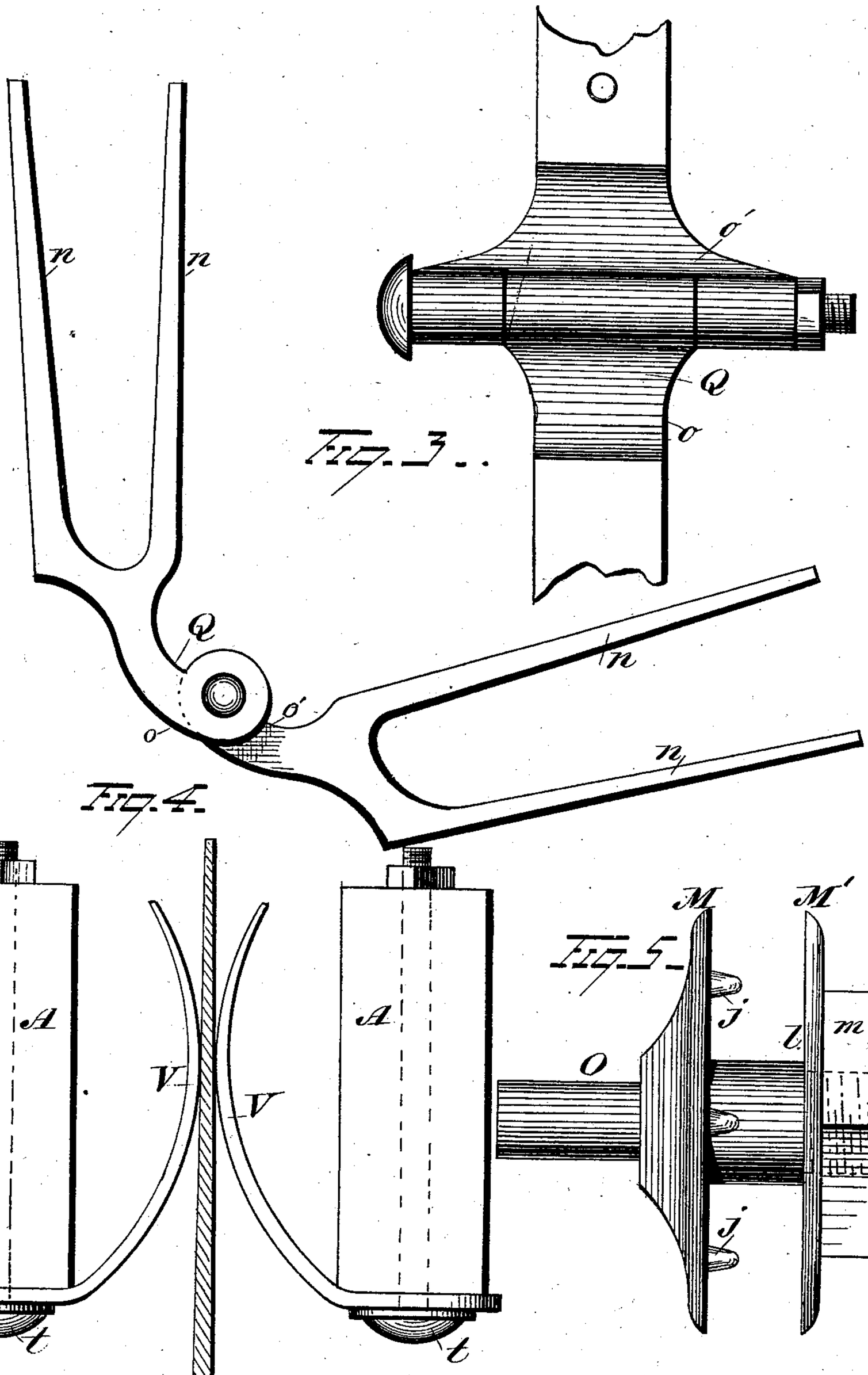


Fig. 3.

Fig. 4.

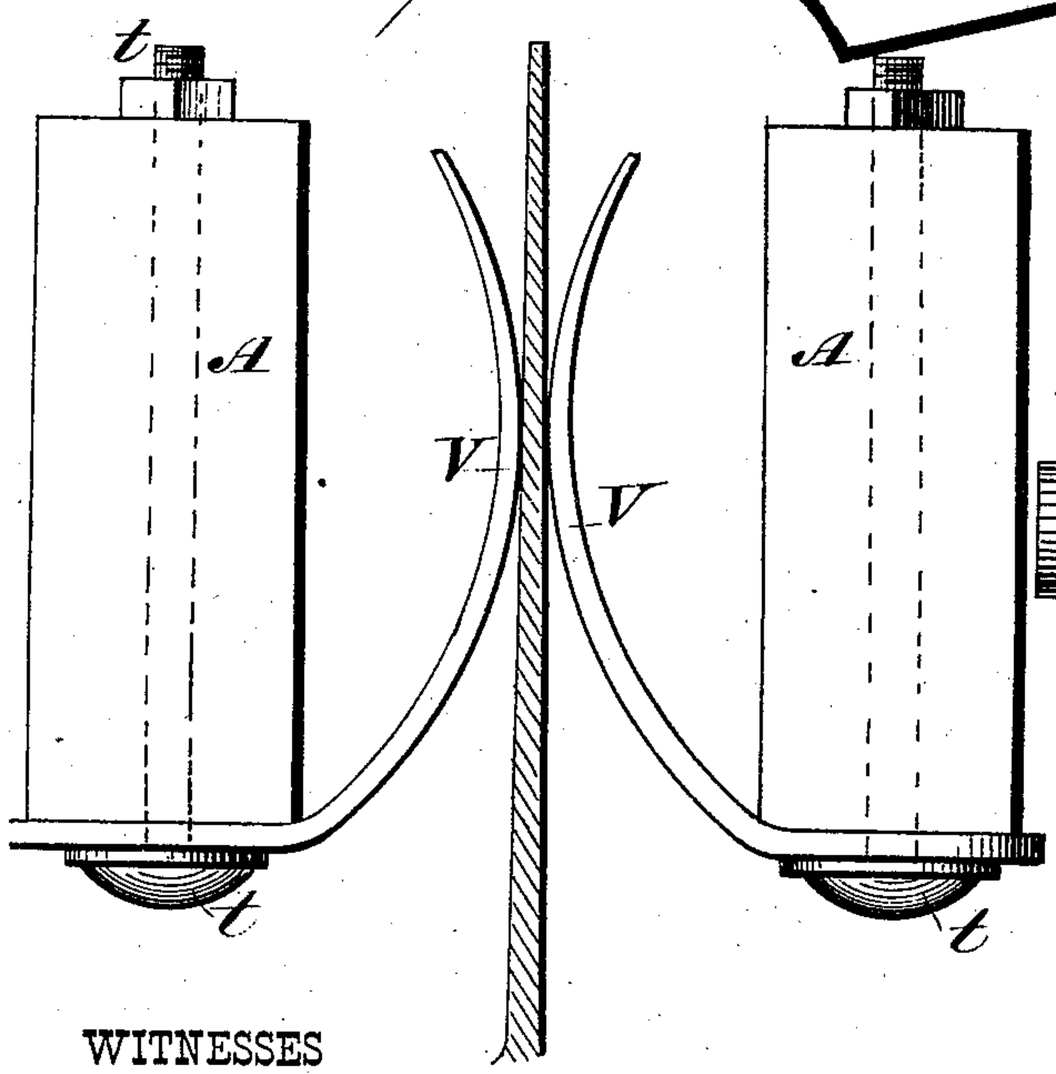
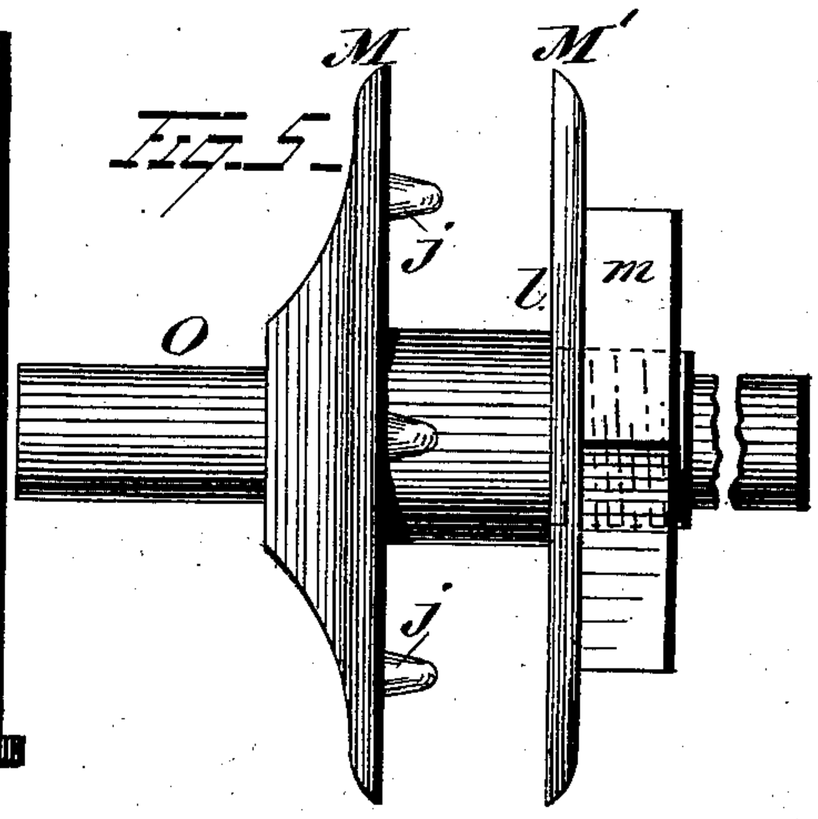


Fig. 5.



WITNESSES

Geo. O. Seymour

A. M. Bright

INVENTOR

Geo. G. Seeger

by H. A. Seymour

ATTORNEY

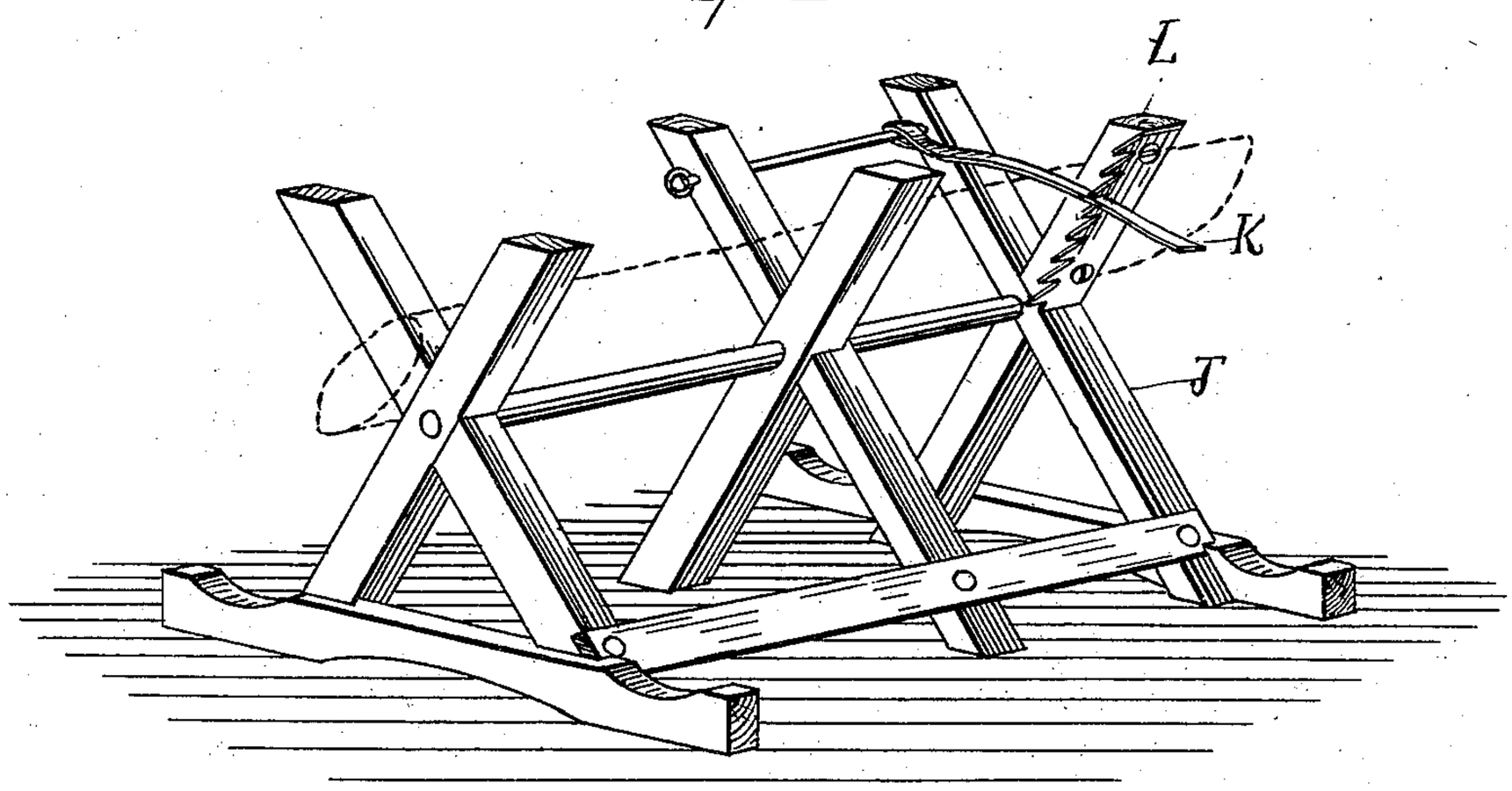
(No Model.) 4 Sheets—Sheet 4.

G. G. SEEGER.

DRAG SAW MACHINE.

No. 256,601. Patented Apr. 18, 1882.

Fig. 8.



WITNESSES

Geo. O. Seymour.

A. M. Bright.

INVENTOR

Geo. G. Seeger.

by H. G. Seymour

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORG G. SEEGER, OF HILLSDALE, IOWA.

DRAG-SAW MACHINE.

SPECIFICATION forming part of Letters Patent No. 256,601, dated April 18, 1882.

Application filed August 2, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORG GUSTAV SEEGER, of Hillsdale, in the county of Mills and State of Iowa, have invented certain new and useful Improvements in Drag-Saws; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in drag-saws, the object of the same being to provide a machine one end of which rests on the ground, while the other end is adapted to rest on and dog the saw-buck or the log being sawed, and also form a guide for the saw, which prevents it from leaving the kerf first formed, the said machine being designed to combine economy of material and manufacture with efficiency of operation.

In the accompanying drawings, Figure 1 is a perspective view of my improved machine. Fig. 2 is a vertical sectional view. Fig. 3 is an enlarged view of the hinge for connecting the saw with the saw-lever. Fig. 4 is a sectional view, showing the spring-holders for holding the saw up when not in use. Fig. 5 is an enlarged view of the saw-lever axis. Fig. 6 is an enlarged view of the handle-guide. Fig. 7 is an enlarged view of the saw-guide with an adjustable cheek, and Fig. 8 is a view of the saw-buck.

The frame of the machine is composed of the parallel bars A, legs or standards B, and the slitted extension C, which forms the guide and rest, secured together by corner-irons, or in any other suitable manner, the said bars and legs being strengthened by the braces *a* and the legs by the round or bar *b*. The parallel bars A, composing the upper part of the frame, are separated sufficiently to allow the saw-lever D to be introduced and move freely between them, and also far enough apart for the counterbalance-weight E to pass below the level of the bars, if desired. These bars are held in this position by the blocks *c* and the bolts *e*, the latter passing through the bars and blocks, and secured therein by nuts.

The legs or standards B are secured to the bars A at their rear ends and extend down in a backwardly-inclined direction to afford a firm base for the machine. These legs are also adapted to afford a bearing for the folding stand G, the latter being provided with the folding seat H, on which the operator sits. The weight of the operator, when sitting on the stool or standing on the stand, bears directly on the legs B and assists in holding them firmly on the ground.

C is the saw guide and rest, secured between the bars A at the front end of the machine at any suitable angle, and is provided with a long slit, *f*, between and beneath the bars A, in which the saw moves when in operation, and a short slit, *f'*, above the bars A, in which the saw rests while the machine is being transported. By constant sawing the slit *f* becomes enlarged, so that when the saw is started to make a new cut it has too much play, and will make an angling or diagonal cut across the log, which will, as the frame is bolted to log or saw-buck and not allowed any lateral movement, cause the saw to pinch. To overcome this difficulty I make the slit *f* of greater width than that required for the free movement of the saw, and provide one or two adjustable side pieces or cheeks, *g*, having the oblong openings *h* cut therein, by which they are adjustably secured to the front face of the guide. As the opposing faces of the cheeks are cut away they can, if desired, be smoothed off and be brought nearer together, thereby overcoming the objections above noted by preventing any lateral movement of the saw.

The lower end of the saw-guide C is provided with the angle-iron I, one end of which is rigidly secured to the lower end of the guide and the other end provided with a bolt-hole, by which it is securely fastened to the log or saw-buck, as desired, thereby dogging the same. This saw-buck J is provided with a spring metal bar, K, bolted to one arm of the buck and adapted to extend over the wood and be locked under the serrated or toothed plate L, which firmly holds the wood in position, while the bar K is capable of any desired adjustment to accommodate different sizes of logs.

The saw-lever D is journaled in the bearing near the rear end of the bars A and firmly clamped between the jaws M and M'. The

jaw M is provided with a collar, which forms the boxing for the lever, and is also provided with lugs or projections *j*, adapted to enter the side of the lever and prevent its working independently of the jaw. The other jaw, M′, is composed of a washer, *l*, and the nut *m*, the latter adapted to be screwed onto the free end of the collar and hold the parts firmly in position. The collar is centrally bored throughout its entire length for the passage of the pivot-bolt O, which latter is rigidly secured in the bars A.

Instead of the above construction of parts, the jaw M, collar, and pivot-bolt O can be cast in one piece and the washer and nut screwed thereon, as above described. In this case, however, the pivot-bolt will have to move with the saw-lever. The upper end of the saw-lever D, beginning at the pivotal point thereof, is slightly curved to receive the oval steel casting P, which is secured thereto by suitable bolts. This casting is provided at its outer end with the counterbalance-weight E, which assists the operator in bringing the saw into position for making another outward stroke. It is much easier for a man to exert a given force by a downward pressure than by lifting upward, and the surplus power used by lifting the weight in forcing the saw outward is utilized in returning the saw to its original position.

The connection between the saw and saw-lever is made by the hinge Q. This hinge is provided with the arms *n*, between which the lower end of the saw-lever and the rear end of the saw-shank fit, and they are secured when in this position by bolts running through the arms and lever and shank.

The leaves of the hinge *o o′* are adapted to fit closely and snugly at their point of connection, so as to prevent as much as possible all lateral movement to the saw, which movement has a tendency to disarrange the parts and cause the saw to work sidewise and pinch, as has heretofore been referred to.

The saw R and saw-lever D are operated by the adjustable handle S, which latter is composed of the parts S′ and S², the part S′ adapted at its inner end to be secured to the outer or convex side of the saw-lever, while its outer end, or that portion outside of the bars A, is centrally slitted or open, which allows the hand-piece S² to be moved freely and set at any desired inclination to suit the operator. The portion S′ of the hand-lever works in the guide T. This guide-piece is composed of two steel castings similar in shape, each piece of which is provided with the arms *p*, which overlap the top and bottom faces of the bars A, and are secured thereto by the bolts *p′* and nuts *p*². The space at the upper and lower ends of the guide is filled by washers *p*³ and secured by the bolts *p*⁴, by means of which the guide-space *p*⁵ can be increased or diminished, as desired. The outer end of the piece S′ of the hand-lever terminates in the arms W and W′, which support between them the arc-shaped pieces W², the said arms and arc-shaped piece being centrally slitted, like the piece S′, so as to allow the hand-piece to rest and move between them.

The arc-shaped piece W² is provided with holes *v* throughout its entire length, and the hand-piece is also provided with holes *v′*, which register with the holes *v* in the piece W² and the hole *v*³. By this arrangement of parts the hand-piece can be so adjusted that the operator (of small or large build) can have a vertical stroke while sitting and a curved or horizontal stroke while standing. This hand-piece S′ is strengthened in this position by the brace *s*, which extends from the hole *v*³ to near the lower end of the saw-lever.

V are spring metal clamping-pieces, placed between the bars A beyond the guide-pieces. These pieces V are secured to the under side of the bars A by bolts *t*, and are curved inward and upward where they meet and press against each other. When it is desired to remove the log or shift its position the saw is lifted up until it enters between the faces of the clamping-pieces, where it is securely held until relieved.

My improved machine is simple in construction, compact in form, and neat in appearance, and can be manufactured at a less cost than most of the machines ordinarily employed, while its ease of operation adapts it for sawing heavy logs as well as light fire-wood.

It is evident that numerous changes in the construction and arrangement of the different parts might be resorted to without departing from the spirit of my invention, and hence I would have it understood that I do not limit myself to the exact construction of parts shown and described, but consider myself at liberty to make such changes as come within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a drag-saw, the combination, with the inclined legs and parallel bars, of a saw-lever journaled between said bars and projecting slightly above them to receive a counterbalance-weight, while the lower end of said lever is provided with hinges, by which it is connected with the shank of the saw, and a saw-handle having the perforated segmental portion and adapted to move within the semicircular guide secured to the rear ends of the parallel bars, substantially as set forth.

2. In a drag-saw, the combination, with the parallel bars and legs and a saw operated by suitable means, of spring-holders situated between the bars and adapted to hold the saw elevated above the wood, substantially as set forth.

3. In a drag-saw, the combination, with the saw-lever, of a two-part handle, one portion being secured to the lever and provided with a sector-bar at its outer end, and the other por-

tion being constructed to be adjustably secured to the sector-bar, substantially as set forth.

4. In a drag-saw, the combination, with the saw-frame, lever, weight, saw, and guide T, of a handle secured to the saw-lever and provided with the segmental portion W^2, as and for the purpose described.

5. In a drag-saw, the combination, with the saw-frame, lever, weight, and saw, of an adjustable handle having the perforated segmental portion W^2, and moving within an arc-shaped guide, T, secured to the parallel bars, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

GEORG GUSTAV SEEGER.

Witnesses:
W. M. COATS,
W. J. ANDERSON.