

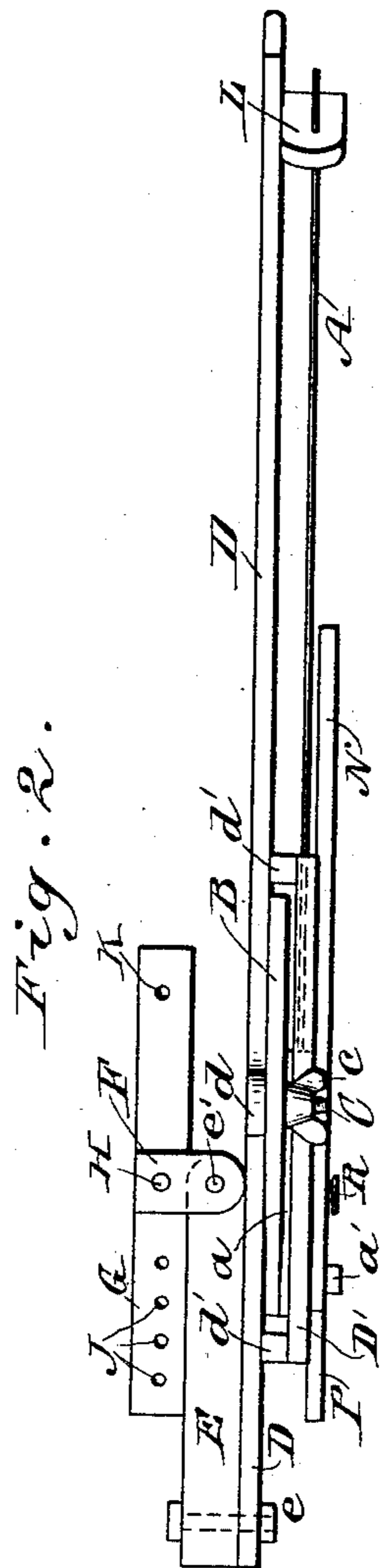
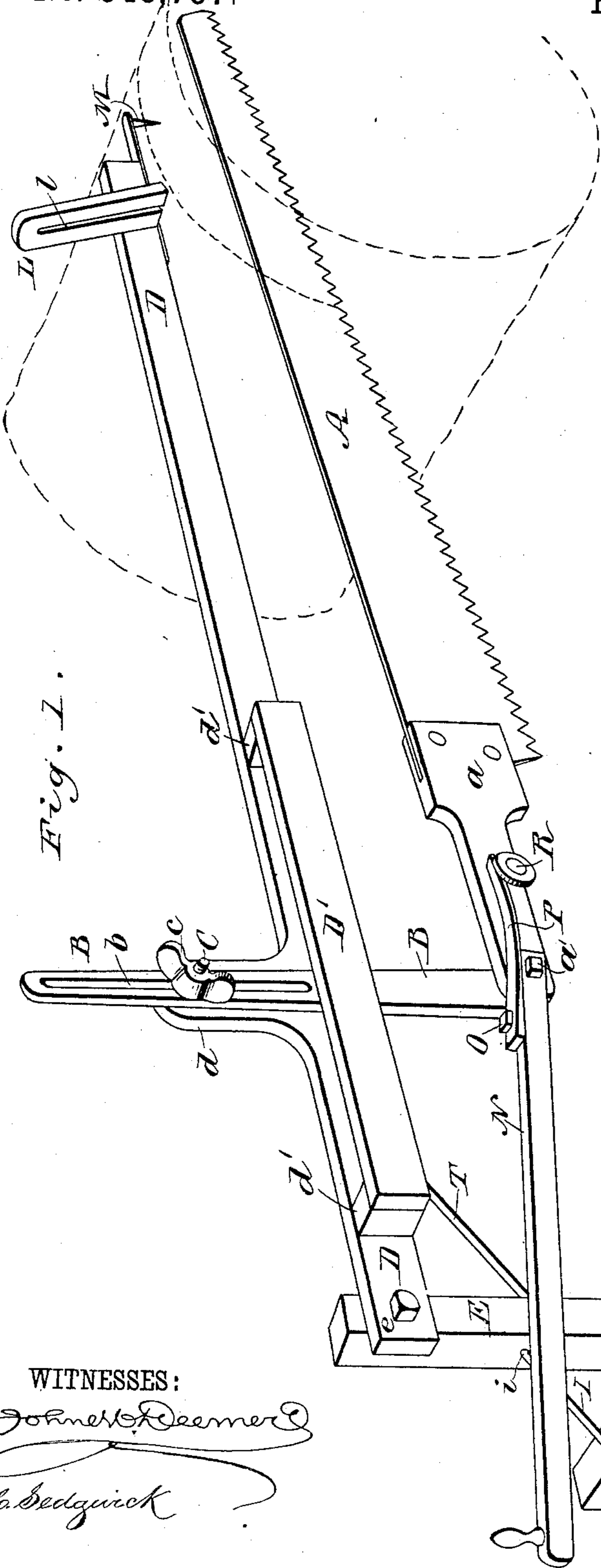
(No Model.)

E. H. GRISWOLD.

DRAG SAW.

No. 348,737.

Patented Sept. 7, 1886.



WITNESSES:

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EDWARD HARVEY GRISWOLD, OF MARTHASVILLE, MISSOURI.

DRAG-SAW.

SPECIFICATION forming part of Letters Patent No. 348,737, dated September 7, 1886.

Application filed February 27, 1886. Serial No. 193,478. (No model.)

To all whom it may concern:

Be it known that I, EDWARD HARVEY GRISWOLD, of Marthasville, in the county of Warren and State of Missouri, have invented a new and Improved Drag-Saw, of which the following is a full, clear, and exact description.

My invention relates to drag-saws operative by hand, and has for its object to provide a simple, light, strong, inexpensive, and effective machine of this class which may be used for light or heavy cutting both vertically and horizontally and at intermediate angles, and will perform its work with economy of time and labor.

The invention consists in certain novel features of construction and combinations of parts of the drag-saw, all as hereinafter fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a perspective view of my improved drag-saw as set up for use, and Fig. 2 shows the saw folded as when out of use or for transportation.

The saw-blade A is connected by a bolt, *a'*, passed through the back end of its stock *a*, with the lower end of a pendulum-bar, B, which at its upper part has a long slot, *b*, through which passes a bolt, C, having a thumb-nut, *c*, and passed through an upright lug, *d*, on the main bar D of the saw-frame, the connection by the bolt and nut C *c* being so arranged that the bar B may be held at any desired height, and will be free to swing on the bolt as the saw-blade is reciprocated. A side bar, D', connected to bar D with interposed spacing-blocks *d' d'* at the ends, forms a guide to prevent side-wise motion or shaking of the bar B. The back end of the main bar D is connected by a bolt, *e*, with the upper end of a post-bar, E, the lower end of which has a pivotal connection at *e'* with a metal yoke or frame, F, which is held to the base-bar G by a pin, H, passed through the yoke and bar G, and a brace-rod, I, having one bent end, *i*, adapted to a hole in the post-bar E, is adapted for connection by its other and lower bent end, *i'*, with any one of a series of holes, J, made transversely and horizontally in or through the base-bar G. Consequently by adjusting the end *i'* of brace-rod I in the

requisite hole J, the entire head portion of the saw-frame with the saw may be canted or inclined to cause the saw-blade A to cut at any angle, and when the yoke F is shifted toward one end of the base-bar G and secured thereto by passing the pin H through it and a hole, K, in the base-bar, the post-bar E may be swung down sidewise or flat upon the top of the base-bar for holding the saw-blade A flatwise or so as to cut in horizontal plane for felling trees or cutting off piles or posts, as the nature of the work shall require. A block, L, is fixed to the forward end of the main bar D of the saw-frame, and has slot, *l*, into which the saw-blade A passes for a guide in starting the cut, and a dog, M, also held to the forward end of the bar D, may be driven into a log, tree, or post to be cut by the saw for steadying the machine while at work.

To operate the saw-blade A in making the cut, I employ a handle-bar, N, which is pivoted to the end of the saw-stock *a*, and preferably by the same bolt *a'* which holds the stock to the pendulum-bar B, the handle N extending back far enough to be operated conveniently by a person standing over or behind the base-bar G, and to the forward end of the handle is held, by a bolt or screw, O, the spring P, which extends forward and is adapted to bear upon a pin or roller-stud, R, held to the saw-stock *a* in front of the pivot-bolt *a'*. It is evident, should the weight of the saw be insufficient to hold it well to its work, that the back end of the handle may be raised or drawn outward more or less by the operator to increase the pressure of the spring P on the stud R more or less to force the saw-blade downward or inward and cause it to do effective work for the whole length of its stroke, thereby saving the time and strength of the operator, while doing much better and smoother cutting.

To fold the saw into small space for storage or transportation, the bolt O will be slackened to allow the spring P to be swung around clear of the stud R, and the screw C will be loosened and the bar B may then be folded down at one side of the saw-blade A, while the handle N may be folded over at the other side of the blade, and by loosening the bolt *e* and brace-rod I the bars E G may be folded together, so that the entire machine takes little room and may be conveniently handled.

A brace rod or bar, T, may be used to stay the main-frame bar D to the post-bar E, as shown in Fig. 1.

The entire machine consists of few parts, and is very light and strong; hence it may be adjusted to its work easily, and will operate effectively in doing light or heavy cutting.

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

1. The combination, in a drag-saw, of the saw A *a*, pendulum-bar B, having a slot, *b*, bolt C, frame-bars D D', post-bar E, base-bar G, having holes J K, a yoke, F, held adjustably to bar G, and to which yoke the bar E is pivoted, a brace, I, connected to bar E and adjustable in any one of the series holes J, a handle, N, held to saw A *a*, and a spring, P, fixed to the handle and adapted to bear on the saw-stock or a stud thereon, substantially as herein set forth.

2. In a drag-saw, the combination, with the main saw-frame and the longitudinal reciprocating saw, of the vertical post-bar E, secured to the rear end of the frame at right angles thereto, the yoke F, pivoted to the lower end of the bar E, the base-bar G, extending through

the yoke at right angles to the bar E and the main frame and having the series of transverse holes J and the hole K at its forward end, the removable pin H, and the brace-bar I, whereby when the yoke is adjusted to the hole K and the bar E swung down upon the base-bar G the saw may be used to cut in a horizontal plane, and when the yoke is adjusted to one of the holes K and held by the brace-rod I, the saw may cut in a vertical plane or an acute angle, substantially as set forth.

3. The combination, with the longitudinal reciprocating drag-saw blade A, having a stock, *a*, at its rear end, of the handle N, pivoted to the rear end of the stock and extending in the longitudinal plane of the saw, a pin or roller-stud, R, on the stock in front of the handle-pivot, and the flat spring P, secured to the handle and bearing at its forward end upon the pin or stud R, whereby when the handle is raised the forward end of the spring will press the blade downward, substantially as set forth.

EDWARD HARVEY GRISWOLD.

Witnesses:

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