(No Model.)

C. W. WRIGHT.

DRAG SAW MACHINE.

No. 373,260. Patented Nov. 15, 1887.

Fig. 1.

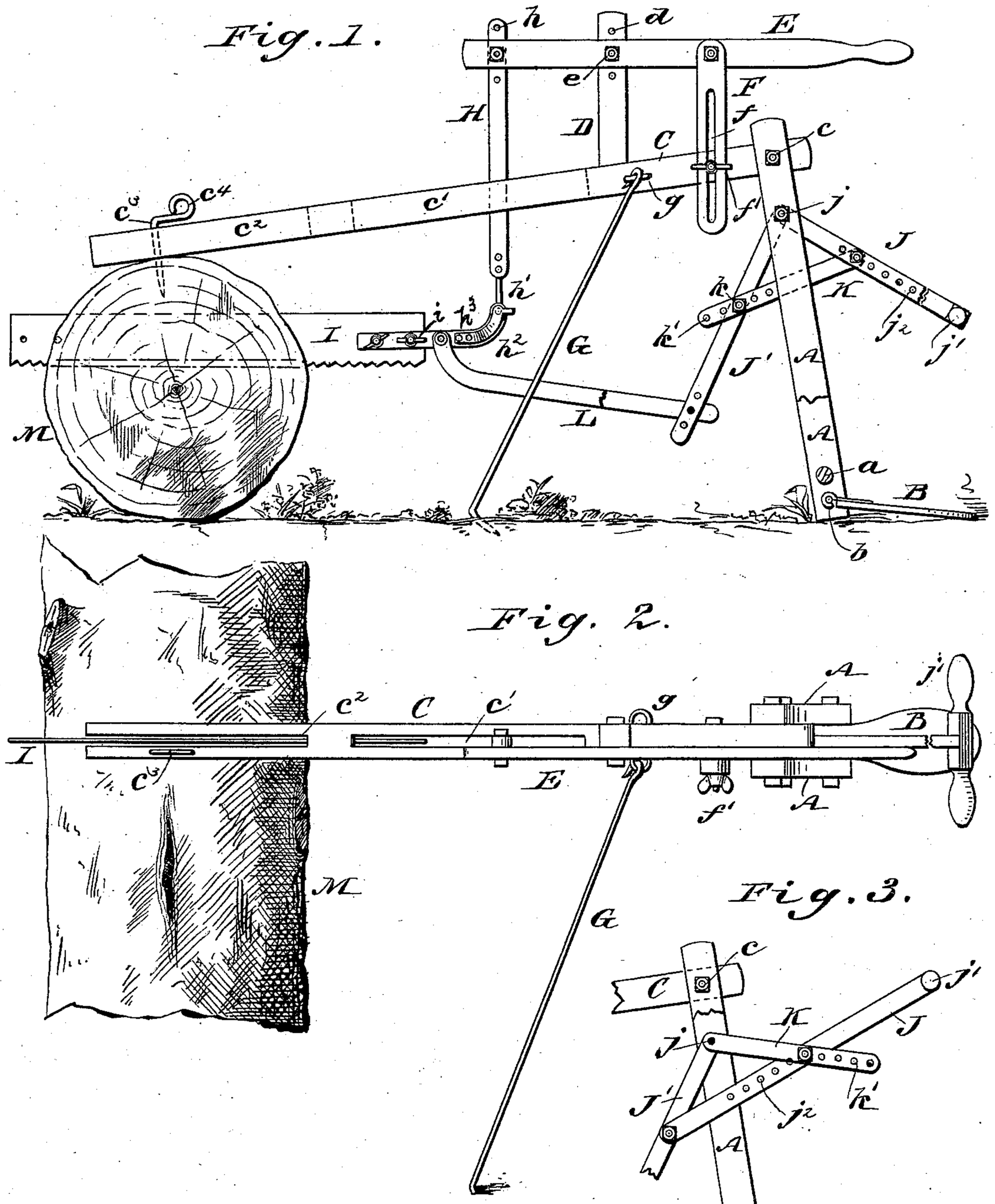

Fig. 2.

Fig. 3.

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DRAG-SAW MACHINE.

SPECIFICATION forming part of Letters Patent No. 373,260, dated November 15, 1887.

Application filed May 24, 1887. Serial No. 239,227. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS WILLIAM WRIGHT, of Democracy, in the county of Knox and State of Ohio, have invented a new and useful Improvement in Drag-Saw Machines, of which the following is a full, clear, and exact description.

My invention relates to machines for operating drag-saws; and it consists in the construction and arrangement of the parts of the drag-saw machine, as hereinafter particularly described, and pointed out in the claims, its object being to provide a strong, simple, and easily-operated machine of this character adapted for use upon any kind of ground, sidling or otherwise.

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 all the figures.

Figure 1 is a side elevation of my improved drag-saw machine, parts being broken away. Fig. 2 is a plan view of the same; and Fig. 3 is a side elevation of the operating mechanism, parts being broken away, showing a modified arrangement thereof.

In carrying my invention into effect I provide the machine with two legs or supports, A A, of any suitable height and width, spaced apart parallel with each other and connected near their bases by a brace, *a*. A foot-board, B, having its inner end reduced to permit of its insertion between said legs and its outer end broadened, is provided at its reduced end with a hook or other suitable device, by which it is detachably connected to a bolt, *b*, passed through said legs below the brace *a*. The said foot-board, when extended with its broad end resting upon the ground, affords a platform upon which the sawyer may stand while operating the machine, the weight of his body serving to steady said legs and keep them in proper position.

The upper ends of the legs A are pivotally connected by a bolt, *c*, to the rear end of a longitudinal beam, C, having formed in it, about midway of its length, a vertical mortise, *c'*, and a vertical slot, c^2, extending inward from its outer end to within a short distance of said mortise. A pin, c^3, bent at a right angle, having one end sharpened and the other end bent upward to form an eye, c^4, is passed through a proper aperture in said beam at one side of said slot to engage the log M to be sawed. Said slot c^2 is adapted to serve as a guide for the saw as it first attacks the log, and the pin c^3, being turned so that its horizontal portion extends across said slot, will prevent the saw from riding up from the log, and said pin when so turned may also serve as a rest for the saw while the log is being adjusted or another one is being placed in position.

Upon the beam C, near the inner end of the mortise *c'*, is mounted a post, D, provided with a series of transverse apertures, *d*, and to said post is fulcrumed, upon a bolt, *e*, entering one of said apertures, a lifting-lever, E. To the arm of said lever is bolted a standard, F, having formed therein an elongated slot, *f*. Said standard is adapted to be held against the side of said beam by a thumb-screw, *f'*, passed through said slot into the beam, and to be vertically adjusted thereon. On either side of said beam is attached an eye or staple, *g*, adapted to be engaged by one of the oppositely-bent hooked ends of a stay-rod, G, the other end of which rod enters the log to be sawed or into the ground to contribute to the steadiness of the frame of the machine and prevent backward movement of the same during operation.

To the outer end of the lever E is pivotally connected a bar, H, provided at its upper end with a series of transverse apertures, *h*, and having loosely connected to its lower end a hook-rod, *h'*, attached by a spring-key, h^2, to the upwardly-curved end of an arm, h^3, which is slotted at its outer extremity to receive the butt of an ordinary straight-back saw slightly wider at its center than at its ends. Said saw is provided at each end with proper apertures to receive thumb screws *i*, passed through the arm h^3, thus permitting the saw to be reversed end for end, if desired.

Upon a bolt, *j*, passed through the legs A below the heel of the beam C, are pivoted a lever, J, provided with a suitable cross-handle, *j'*, and a series of transverse apertures, j^2, and another lever, J', said levers meeting side by

side upon said bolt and projecting therefrom in opposite directions. A brace, K, is connected by bolts *k* to said levers, and is provided with a series of transverse apertures, *k'*, whereby the outer ends of said levers may be adjusted at a close or wide distance from each other, as circumstances may require.

To the lower extremity of the lever J' are freely bolted parallel arms L, which curve upward at their outer ends and converge against and are bolted to the sides of the arm h^3, the curve of said arms L preventing their collision with the bar H during the operation of the machine.

For ordinary light sawing the arrangement of the levers J J' and brace K shown in Fig. 1 may be adopted. When heavier work is to be conducted, it may be expedited and rendered easier by connecting the lever J to the lever J' and arranging the brace K in connection with said lever J and the bolt *j* as shown in Fig. 3, thus raising the handle *j'* and enabling the operator to grasp said handle with both hands without stooping.

The butt of the saw I may be raised or lowered, as desired, by changing the fulcrum-point of the lever E and raising or depressing its arm, or by changing the location of the bolt connecting the bar H and said lever. In either case the standard F may be adjusted vertically to allow the arm of said lever to be raised or lowered by simply loosening its thumb-screw, the latter being again tightened when the required inclination has been given to the saw.

In operation the outer end of the beam C is rested upon the log, the saw entering the slot c^2 in said beam, and the pin c^3 having been turned so that its horizontal portion extends across said slot, said pin is forced into the log. The rod G is then attached to the staple *g*, and its free end is either set into the log M or into the ground, as shown in Fig. 1. As the operator pushes and pulls the levers J J' backward and forward, the saw swings freely by its arm h^3 on the hook-rod of the arm H, which plays in the mortise *c'* of the beam C, said saw being guided by the slot in said beam until it gains entrance to the log. After the log is severed the pin c^3 may be swung outward, so that the saw may be lifted and then swung inward, to be rested upon by the saw until the log is again adjusted or another one substituted, when the saw is again rested upon the log and confined to place by the pin c^3, and the sawing is repeated.

The pivotal connection of the legs A and beam C and of the working parts enables the legs to be so disposed as to accommodate the machine to uneven or sidling ground, as well as to that which is level and even, and the operation of the machine is conducted with ease and rapidity, and the construction and arrangement of its parts are such that it is light and strong, and may readily be packed in small compass for transportation.

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

1. In a portable drag-saw machine, the combination, with the longitudinal beam C, the parallel legs A, pivoted to the heel of said beam, and the foot-board B, hinged between the bases of said legs, of the operating-levers J J', pivoted between the upper ends of said beam, connected by the adjustable brace K, and arms L, pivoted to the lever J' and to an arm, h^3, which embraces the butt of the saw, substantially as shown and described, for the purpose herein set forth.

2. In a portable drag-saw machine, the combination, with the longitudinal beam C, provided with a mortise, *c'*, the parallel legs A, pivotally connected to the heel of said beam, the foot-board B, hinged between the bases of said legs, and the operating-levers J J', pivoted between said legs below the heel of said beam and connected by an adjustable brace, K, of a lifting-lever, E, mounted and vertically adjustable upon said beam, and an arm, H, connected to said lever E and playing in the mortise in said beam and attached by a hook and spring-key connection, h' h^2, to an arm, h^3, which embraces the butt of the saw, which arm is connected with the lever J' by the arms L, substantially as shown and described, for the purpose set forth.

3. In a portable drag-saw machine, the combination, with the longitudinal beam C, provided with the mortise *c'*, a slot, c^2, and a pin, c^3, the parallel legs A, pivotally connected to the heel of said beam, the foot-board B, hinged between the bases of said legs, the operating-levers J J', pivoted between said legs below the heel of said beam and connected by an adjustable brace, K, the lifting-lever E, mounted and vertically adjustable upon said beam, and the arm H, connected to said lever E and playing in the mortise in said beam and attached by the hook and spring-key connection h' h^2 to an arm, h^3, which embraces the butt of the saw, of parallel arms L, connected at one end to the operating-lever J' and at the other to the arm h^3, which embraces the butt of the saw, substantially as shown and described, for the purposes set forth.

4. An improvement in portable drag-saw machines, consisting of a longitudinal beam, C, slotted at its outer end to receive and guide the saw, and provided with means for holding said saw in said slot, and mortised to receive and guide the bar upon which the saw is suspended, parallel legs pivoted to the heel of said beam, a foot-board hinged between the bases of said legs, operating-levers pivoted between said legs and below said beam and connected by an adjustable brace, a lifting-lever mounted and adapted to be adjusted vertically on said beam, the bar on which the saw is suspended connected to said lever and playing in said mortise and con-

nected by a hook and spring-key with a slotted arm which embraces the butt of the saw, parallel arms connecting the operating-levers with the arm which embraces the butt of said saw, and means, substantially as shown and described, for holding the log to be sawed in place and steadying the frame of the machine, all constructed, arranged, and adapted to operate substantially as shown and described.

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Witnesses:
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