(No Model.) 2 Sheets—Sheet 1.

P. N. APPLEGATE.

DRAG SAW.

No. 301,787. Patented July 8, 1884.

Fig. 1.

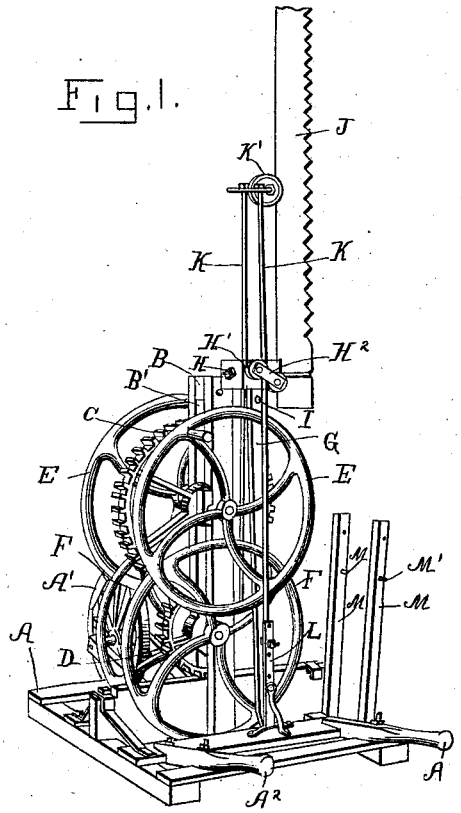
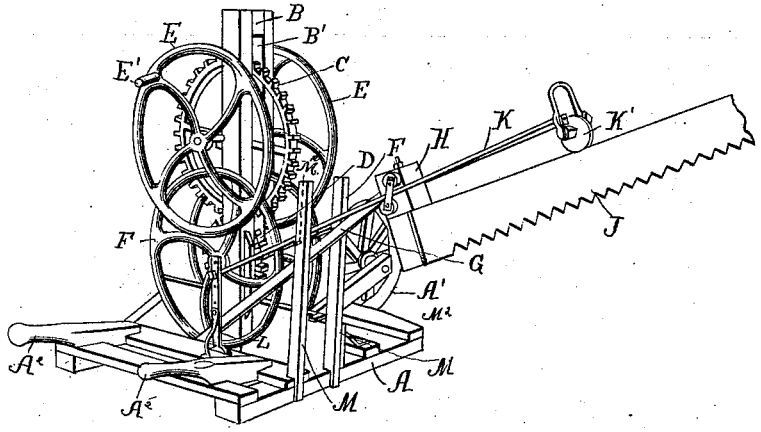


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

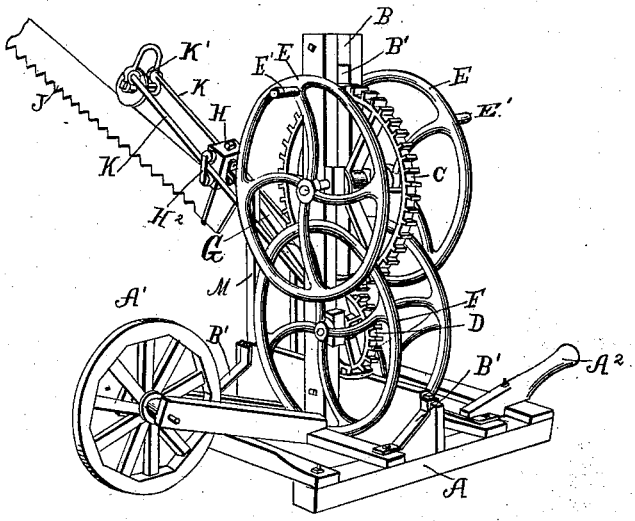


Fig. 4.

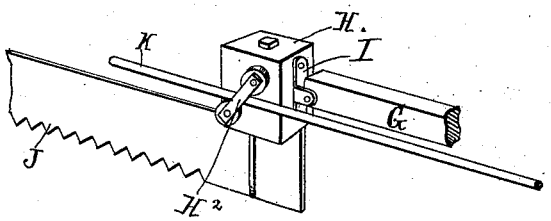
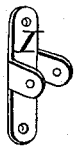


Fig. 5.



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UNITED STATES PATENT OFFICE.

PETER N. APPLEGATE, OF GOSPORT, INDIANA.

DRAG-SAW.

SPECIFICATION forming part of Letters Patent No. 301,787, dated July 8, 1884.

Application filed May 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, PETER N. APPLEGATE, a citizen of the United States, residing at Gosport, in the county of Owen and State of Indiana, have invented certain new and useful Improvements in Drag-Sawing Machines; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to "drag-saws;" and it consists in the novel construction, combination, and arrangement of the several parts, as will be hereinafter more fully described and claimed.

In the drawings, Figures 1, 2, and 3 are perspective views of my machine in different positions. Fig. 4 is a detail view showing the connection between the pitman and cross-head, as will be hereinafter described; and Fig. 5 is a detail view of the connecting-plate.

The base A is provided at one end with a wheel, A′, and at its opposite end with handles A^2, so the machine can be readily transported from point to point. The base A is adapted to support the saw-operating mechanism, and is made so when lowered to a horizontal position, as shown, it will rest flat on the ground. It will also be noticed that the wheel A′ is so supported that its lower side, when the base is lowered to a horizontal position, will be above the lower side of said base. I thus remove all rolling surface from contact with the ground when the saw is being used, the base resting flat on the ground. This it will be seen obviates the necessity of staking the machine to the ground, rendering its use and operation easier, as will be understood. On the base, about the center of same, Fig. 3, I mount on securely-braced base A the upright or bearing frame B, formed of a standard having a vertical slot, B′, formed through it from side to side. A gear-wheel, C, is journaled to the standard and operates within or through the slot B′. A pinion, D, is journaled to the standard below and meshed with the gear C. The pinion D is preferably made smaller than gear C, so as to multiply speed in the operation of the device. The shaft of the gear C is extended on both sides of the frame B, and wheels E are secured on its opposite ends. These wheels are provided with handles E′. By forming both wheels with handles the machine can be operated from either side with equal facility, the opposite wheel serving as a fly, as will be readily understood. Wheels F are secured on the shaft of pinion D, which is extended beyond the upright frame.

The pitman G is secured at one end to a suitable crank-wrist to one of these wheels G, and its other end is connected with the cross-head H, preferably by means of the plate I, as shown. This cross-head is secured to the saw-blade J. Two anti-friction rollers, H′, are secured, one above the other, on opposite sides of the cross-head, and a plate or bar, H^2, extends over said rollers, and serves to keep the journals from being bent and as a keeper for the guide-rods K. These rods are passed between the rollers H′ on opposite sides of the cross-head and under the strap or bar H^2. Their outer ends are connected in suitable manner and support a grooved pulley or wheel, K′, which bears on the upper edge of the saw-blade, and serves to steady and give cut to the same. The rods K form what I call the "guide-frame," and they are pivoted or hinged at their rear end to upright bearing-frame and the base-frame, preferably through the medium of short standards L, having a vertical series of holes, L′, so that the height of pivot of the guide-frame may be varied as desired, to avoid running the saw in the ground in cutting at the bottom of the log.

Standards M are mounted near the outer edge of the base, and have openings M′, adapted to receive a cross-bar, M^2, on which the guide-frame may be rested when desired to hold the saw-blade at an incline, as shown in Fig. 2. The operation of my machine is simple, and will be readily understood. By the system of gearing and fly-wheels the machine is rendered easy of operation, the cross-head slides back and forth on the guide-frame, and has an anti-friction bearing above and below said frame, so as to prevent binding of same.

The saw and guide-frame may be elevated to any suitable angle or to a vertical position, as shown in Fig. 1, for the purpose of sawing a limb or beam extended horizontally above the base. This vertical arrangement of the guide-frame, saw, &c., is also desirable in moving the machine from place to place, as it throws the weight of the saw, &c., directly over the base, and also reduces the width of the apparatus so but a narrow space is required for its passage, which is desirable, as will be readily understood. Heretofore drag-sawing machines have been made comprising a carriage, supporting-frame mounted thereon, and a system of geared shafts, one which is driven by hand-crank or otherwise, and the other having a crank connected by a pitman with the saw. This I do not claim, broadly.

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

1. The combination of the power mechanism having a drive-crank, the pitman secured at one end to said crank, the saw-carrying cross-head secured on the other end of the pitman, and provided on its opposite sides with upper and lower anti-friction rollers, and the guide having on its outer end a grooved roller bearing on the upper edge of the saw-blade, and having its rods extended alongside the cross-head between the rollers thereon, substantially as set forth.

2. The combination of the drive-crank, the pitman, the standard L, having a vertical series of openings, the guide-frame pivoted to said standard, the standards M, adapted to support a cross-bar, M^2, and the cross-head having anti-friction rollers H′ on its opposite sides, arranged to bear on the upper and lower sides of the rods of the guide-frame, substantially as set forth.

3. The combination of a base and the standards mounted thereon and slotted longitudinally at B′, the gears C D, meshed and journaled to the standard and operating within the slot B′, the wheels E E, secured on the shaft of gear C, the wheels F F, secured on the shaft of gear D, the pitman G, secured at one end eccentrically to wheel F, and provided at its other end with cross-head H, carrying the saw G, and guide-rods supporting and guiding said cross-head, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PETER N. APPLEGATE.

Witnesses:
JOHN VAN BUSKIRK,
WASHINGTON WATSON.