(No Model.)

F. H. TAYLOR.

DRAG SAW.

No. 342,234. Patented May 18, 1886.

Fig. 1.

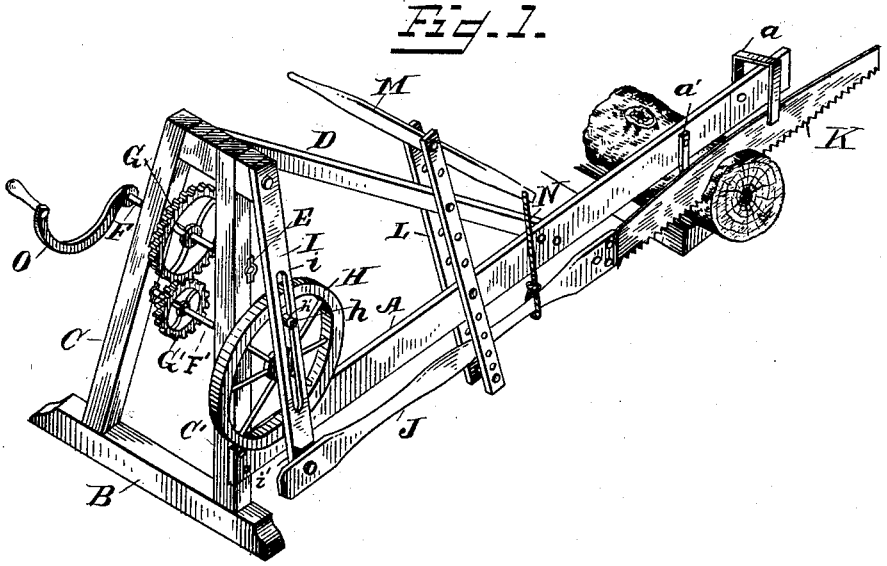
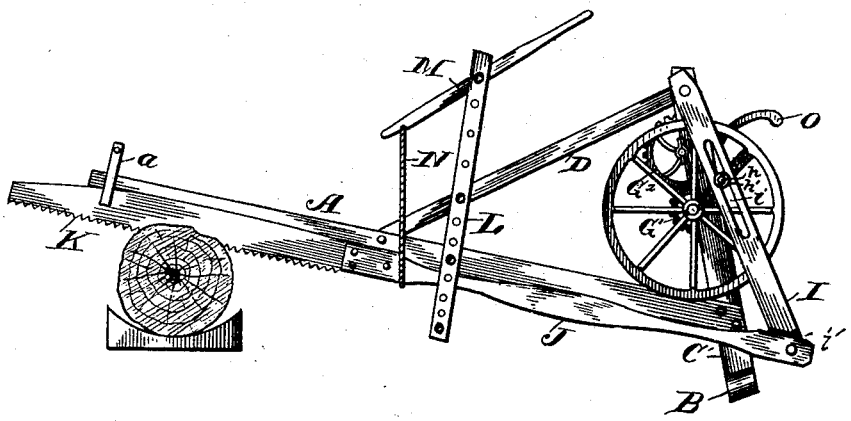


Fig. 2.



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UNITED STATES PATENT OFFICE.

FRANCIS H. TAYLOR, OF ST. JOSEPH, MICHIGAN.

DRAG-SAW.

SPECIFICATION forming part of Letters Patent No. 342,234, dated May 18, 1886.

Application filed September 10, 1885. Serial No. 176,691. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS H. TAYLOR, a citizen of the United States, residing at St. Joseph, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Hand Drag-Sawing Machines; 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 appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to that class of hand drag-sawing machines which are intended to be operated by a single individual, and is so constructed that while one hand of the operator is used in working the gearing that moves the saw the other hand is free and in position to handle a lever that is connected with the pitman in such a manner as to enable the saw to be raised and lowered to regulate the cut to make it light or heavy, as may be desired, and also to decrease the frictional contact between the gearing or direct operating-power and the saw, thereby enabling any person with ordinary strength to run the machine with ease; and it consists in the construction hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 represents a perspective view of my device in position for operation, and Fig. 2 a side view of the same.

A represents a beam adapted at one end to rest upon and hold the log or other timber being sawed in position, and the other end to be rigidly secured to one of the uprights that supports the gearing.

B represents the foot or base, resting upon the ground or other support, and into which the uprights or standards C C′ are fastened near its ends. As the uprights extend upward they converge to each other, and between their upper ends a brace, D, is rigidly secured at one end, while its opposite end is fastened to the beam, the above-described parts thus forming a rigidly-braced frame. On the front or saw side of the upright is secured bearing-boxes E, for holding journals F and F′.

Upon the journal F, and between the uprights C C′, is fastened the gear-wheel G, which meshes with a pinion, G′, on the journal F′. To the outer end of the journal F′, which projects beyond the uprights, is securely attached a balance-wheel, H, having in one of its spokes a slot holding a wrist-pin, *h*, which is adjustable in the spoke to and from the hub to regulate the length of the cut of the saw. Near the outer end of the wrist-pin a friction-roller, *h′*, is placed thereon and held in position by a cross-pin in the end of the wrist-pin.

At the upper end and upon the outer side of the upright C′ is pivoted an arm, I, having a slot, *i*, in its body, adapted to fit over and work upon the friction-roller of the wrist-pin *h*, and at the lower end of the arm a recessed hinge-joint, *i′*, is formed with one end of the pitman J, which has rigidly secured to its opposite end the saw K, which it operates upon the log. At or near the outer end of the beam A is secured a guide, *a*, to give direction to the saw while it is being started in the log, and also a securing-pin, *a′*, for holding the log in position while it is being operated upon.

Upon each side of the beam and opposite to each other is bolted or otherwise fastened standards L, which extend below the beam to form a guide for the pitman, and project above the brace D, and are fastened thereto. Between the upper ends of these standards is pivoted a lever, M, one end of which is fastened to the pitman by a flexible or other connection, N, thus enabling the operator to raise and lower the saw at will.

On the end of the journal F, which projects beyond and to the outer side of the upright C, is fastened a crank, O, by means of which the machine is operated.

To work the machine, the operator takes his position at the side with one hand upon the crank O and the other upon the lever M. As he turns the crank, motion is given to the balance-wheel, and the wrist-pin therein works up and down, revolving the friction-roller in the slot of the pivoted arm I, thereby giving a lateral motion to the pitman and saw. At the same time one hand of the operator is on the crank. The other is on the lever, and he is thereby enabled to regulate the cut of the saw to make it light or heavy, to conform to the strength of the operator while the machine is in motion.

I am aware that hand drag-saw machines

have heretofore been made with the shaft or pitman sliding in ways on a beam or arm-support, but such I do not claim; but

What do I claim, and desire to secure by Letters Patent, is—

1. In a hand drag-sawing machine, uprights secured to a base and converging to each other as they extend upward and supporting the gearing between them, with a balance-wheel outside the supports having one of its spokes slotted with a wrist-pin adjustably secured therein and adapted to be moved to and from the hub, with a friction-roller near the end of the wrist-pin, one of said supports having a beam extending from near its lower end and adapted to rest upon and hold the log in position, with a brace from between the tops of the supports to the beam, and a slotted arm pivoted at its upper end to the uprights and its lower end to a pitman, which is connected directly with the saw, the friction-roller being adapted to revolve on the wrist-pin as it works up and down in the slotted arm to reciprocate the saw, substantially as and for the purpose set forth.

2. The combination, with a hand drag-saw having uprights supporting the gearing and a beam extending from the top of the supports and to hold the log, with a balance-wheel having in one of its spokes an adjustable wrist-pin with a friction-roller on its outer end adapted to revolve as it moves up and down in a slotted pivoted arm attached to the uprights and to the pitman of the saw, of a lever pivoted to standards on the beam and attached to the pitman, by which the operator can raise and lower the saw with the hand while the machine is in motion, substantially as set forth.

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

FRANCIS H. TAYLOR.

Witnesses:
C. H. MOULTON,
W. S. WITHERELL.