

(No Model.)

A. C. CALKINS.
SAWING MACHINE.

No. 578,625.

Patented Mar. 9, 1897.

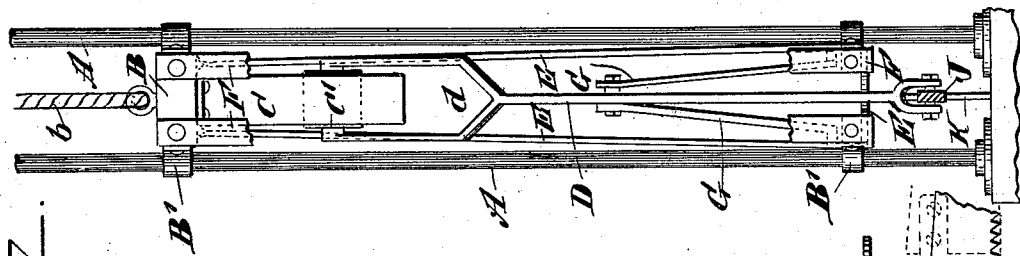
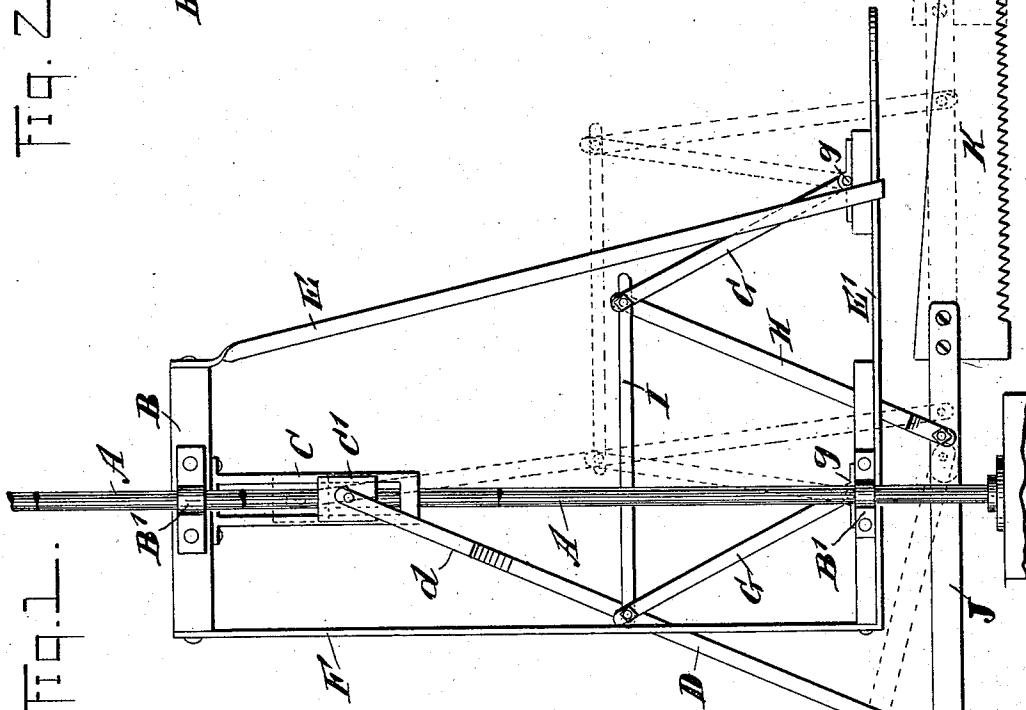
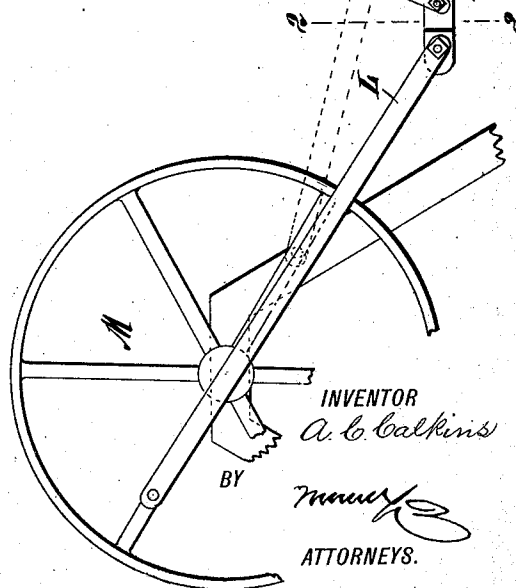


Fig. 2



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WITNESSES:

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UNITED STATES PATENT OFFICE.

ALBERT C. CALKINS, OF SANTA BARBARA, CALIFORNIA, ASSIGNOR TO
WILLIAM S. DAY, OF SAME PLACE.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 578,625, dated March 9, 1897.

Application filed December 22, 1896. Serial No. 616,620. (No model.)

To all whom it may concern:

Be it known that I, ALBERT C. CALKINS, of Santa Barbara, in the county of Santa Barbara and State of California, have invented a new and Improved Sawing-Machine, of which the following is a full, clear, and exact description.

My invention relates to an improvement in sawing-machines employing a reciprocal saw-blade; and it consists of a supporting and a guiding mechanism for the saw by which it will be positively guided in an approximately straight line.

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

Figure 1 is a side elevation of the device with one of the supporting-posts broken away at one point to better show the mechanism; and Fig. 2 is an end elevation, partly in section, upon the line 2 2 of Fig. 1.

The object of my invention is to provide a device which shall support and guide a cross-cut-saw in an approximately straight line and shall take its motion from a wheel, crank, or other power device. This device may also be used in other places for transforming a rotary motion into a straight-line motion.

Two vertical posts A are used for supporting the mechanism and as guides upon which the frame may be raised or lowered. The frame consists of the slidable upper block B and a lower yoke E', spaced apart by the upright bars E, and said yoke, which is essentially V-shaped, has the ends of its parallel members loosely secured to the vertical posts A. The block B of this frame has a guide consisting of two bars C, connected at their lower ends, which guide receives the sliding block C'. A pendulum-bar D is provided which is forked at d to embrace the block C' and is pivoted thereto, the lower end of the pendulum-bar being furcated to receive the pusher-bar J, whereon it is jointed, and one end of the pusher-bar is firmly secured to the heel of the saw K. The other end of the pusher-bar J is pivoted upon one end of the pitman L, that at its opposite end is loosely secured to the wrist-pin of a crank-wheel M, which may be actuated by any source of power and rotary motion.

Two pairs of supporting-bars G are pivoted to the yoke E' at different points in its length. The bars of each pair are pivoted to the yoke upon opposite sides, and at their upper end are pivoted to a connecting bar or rod I, which is parallel with the bar J. One of these pairs of supporting-bars G is pivoted to the pendulum-bar D at a point near its middle, as is also one end of the parallel bar I, the other pair of supporting-bars G being pivoted at their upper ends to an auxiliary suspending or pendulum bar H, which at its lower end is pivoted to the bar J. The bars H and D are so connected that they remain parallel. It will be seen that by this form of connection when the saw is moved from the position shown in full lines in Fig. 1 to that shown in dotted lines the upper end of the supporting-bars G will rise sufficiently to cause the lower ends of the pendulum-bar D and its auxiliary suspending-bar H to move in substantially a straight line, and this causes the saw K to be reciprocated in a straight line. These bars may be so proportioned that the motion of the saw shall be absolutely in a straight line.

The described supporting-frame for the saw has an eye in the block B at its upper end, to which is attached a rope b, by which the frame may be moved up and down upon the posts A, so that it may be adjusted at any height.

In using the saw for cutting off logs it should be adjusted at a point considerably above the point represented in the drawings when commencing the cuts. As the log is cut in two the frame and the saw will be dropped until they reach the lowest point. The motion of the saw at all positions will, however, be a straight-line motion, this motion being that which produces the best results in cutting off the logs.

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

In a sawing-machine, the combination with upright guides, a frame supported upon said guides and capable of vertical adjustment thereon, a yoke consisting of two parallel bars forming the lower part of said frame, a block sliding vertically in guides supported in the upper part of said frame, a pendulum-rod piv-

oted at its upper end to said block and at its lower end to the saw-frame, pairs of supporting-bars pivoted on opposite sides of the yoke and separated longitudinally thereon, the first
5 pair of said bars being pivoted at the upper end to the pendulum-rod near its middle, a horizontal connecting-bar pivoted to the upper ends of both pairs of supporting-bars, an auxiliary pendulum-rod pivoted to the upper

end of the second pair of supporting-bars and at its lower to the saw-frame, and means for reciprocating the saw, substantially as described.

ALBERT C. CALKINS.

Witnesses:

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