(No Model.)

D. BERRY.

SAWING MACHINE.

No. 250,191. Patented Nov. 29, 1881.

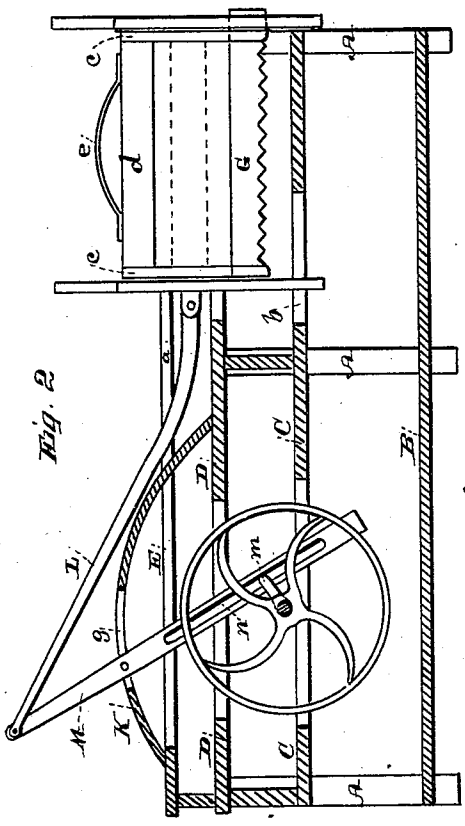

Fig. 2

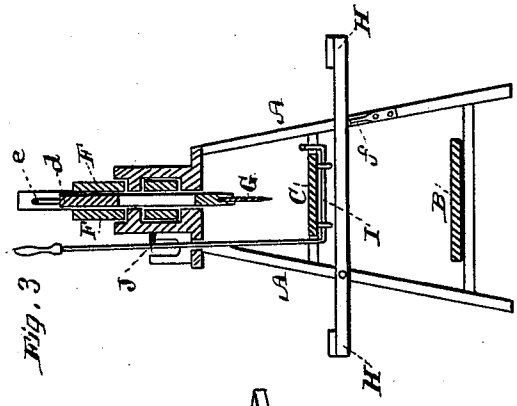

Fig. 3

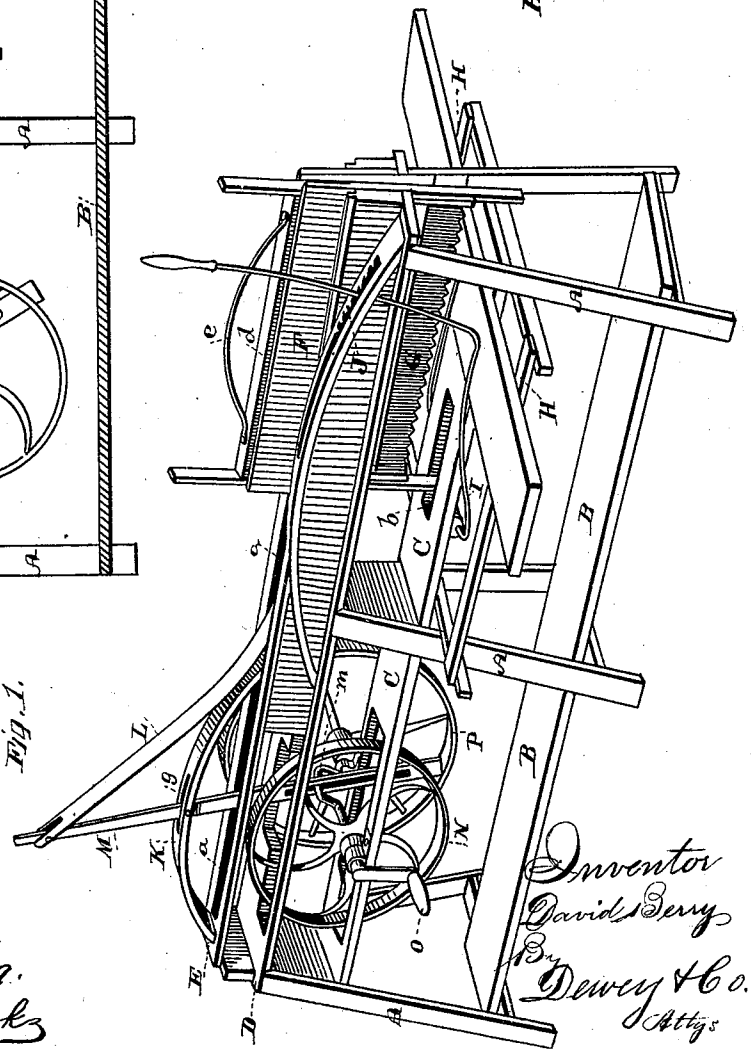

Fig. 1

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UNITED STATES PATENT OFFICE.

DAVID BERRY, OF BOLINAS, CALIFORNIA.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 250,191, dated November 29, 1881.

Application filed August 30, 1881. (No model.)

To all whom it may concern:

Be it known that I, DAVID BERRY, of Bolinas, county of Marin, State of California, have invented an Improved Sawing-Machine; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful device for sawing wood; and it consists of a main frame having a supplementary sliding frame containing a saw, which, by being moved back and forth with rapidity by means of a crank-wheel, is caused by its own weight to cut through a piece of wood held suitably under it. There are minor details of construction for the complete operation of the device, all of which will hereinafter more fully appear in the course of the following description, and by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a longitudinal vertical section. Fig. 3 is a transverse vertical section.

Let A represent the main or supporting frame of the device, preferably constructed as here shown, having a base-piece, B, a platform, C, and a top, D. Upon the top is a frame, E, having a slot, *a*, its entire length. At the forward end of the frame is a vertical supplemental frame, F, consisting of side pieces secured to the vertical end strips. The frame fits down through the top of the main frame, and one of its end strips passes down through an elongated slot, *b*, in the platform C, whereby it is guided. It has enough space in the top to allow it to move forth and back. The other end strip of the frame F extends down beyond the end of the main frame. Within the frame F is the saw G. This is secured to end pieces, *c*, which are attached at their tops to a cross-head, *d*, having a bail or handle, *e*, for convenience. The ends of the saw G project and fit through slots in the end strips of the frame F, so that said saw may be guided while still having a vertical play. The saw G being thus secured within the sliding frame is adapted to move forth and back therewith and have also a vertical play. It is set in the frame just tightly enough to remain where placed when the machine is at rest, but to fall down when jarred. It is made heavy enough, with its frame, to cut the wood when drawn over it.

The platform C is the support for the wood, and as a further support I have the side frame, H, which is pivoted to the legs of the main frame under the platform C. When in position it lies horizontally and extends on each side to serve as a support for the wood. It is adapted to swing down toward a vertical position to be out of the way. It is held in position when horizontal by springs *f* set in the legs of the frame A.

Under the platform C is journaled a rod, I, the ends of which extend up on each side of the platform. This is a means for securing the wood to be cut, and I here call it a "holding device." One arm is bent and extends upward through a curved rack, J, and is provided with a handle, as shown. When the piece of wood is laid transversely upon the platform C under the saw, which is raised up, the holding device I is pushed forward, its arms pressing down upon the wood, and is secured by the curved rack. The under sides of the arms may be corrugated, or provided with teeth, for better security in holding the wood. Having the wood in position my object is to move the supplementary frame F back and forth, and by shaking or jarring it cause the saw G to descend and be drawn across the wood. This I accomplish as follows: Upon the rear of the top frame, E, is a curved piece, K, having an extended slot, *g*, in its top. One end of this piece passes down through the slot *a* in the top frame, E, and is secured to the top D of the main frame, directly in the line of the sliding frame F.

Hinged or pivoted to the rear end of the sliding frame F is a connecting rod or pitman, L, the rear end of which is pivoted to an oscillating arm, M. This arm passes down through the slot *g* in the curved piece K, and is pivoted therein. It passes down through the frame E and through the top of the frame A.

N represents a driving-wheel provided with a crank-handle, O. It is journaled in the platform C, and its axle is bent in the form of a crank, as shown by *m*. The other end of the crank-axle has a balance-wheel, P. The end of the oscillating arm M has a slot, *n*, through which the crank-axle *m* passes. By revolving the wheel N the crank-axle *m* moves up and down in the slot of the arm M and causes said arm to oscillate. In doing this it draws the pitman L back and pushes it forth, thus caus-

ing the frame F, with its saw, to slide as intended. The pitman L is so curved that when it is drawn back it strikes the forward end of the curved piece K and thus jars the saw-containing frame F and causes the saw to slip down. By moving the wheel rapidly the jar is rapid and forcible and the saw will go down at once, when it will by its own weight penetrate the wood as it is drawn back and forth.

The jar which I have just explained is simply for the purpose of causing the saw to go down upon the wood at first. When once down there is no more necessity for the jar.

I could, if I found it desirable, multiply speed by intermediate gearing.

The device may be constructed of any suitable material and may be driven by any power.

I am aware that a saw-frame has been constructed consisting of the frame having side bars provided with ratchet-teeth and carrying also a ratchet-lever adaped to be tripped at the end of its throw by striking the end of the groove in which it works; but my device is a materially different construction.

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

The frame A, in combination with the sliding frame F and saw G, said frame having a movement forth and back by means of the pitman L, connected with the driving-power, as shown, and the piece or stop K, against which the pitman strikes and jars the frame F, substantially as and for the purpose herein described.

In witness whereof I have hereunto set my hand.

DAVID BERRY.

Witnesses:
WM. F. BOOTH,
S. H. NOURSE.