H. A. Daniels,

Drag Saw.

No. 59,368. Patented Nov. 6, 1866.

Fig 2

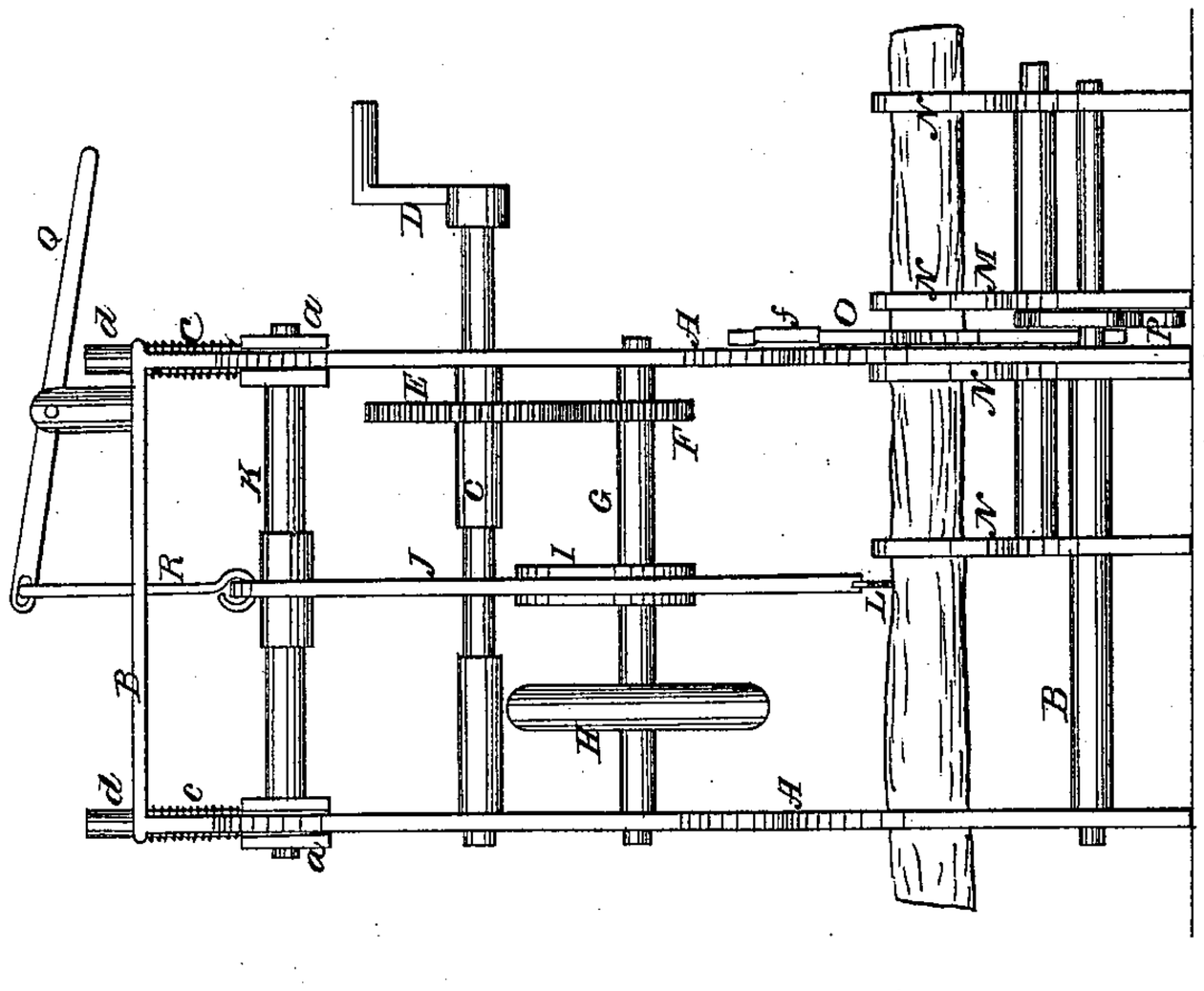
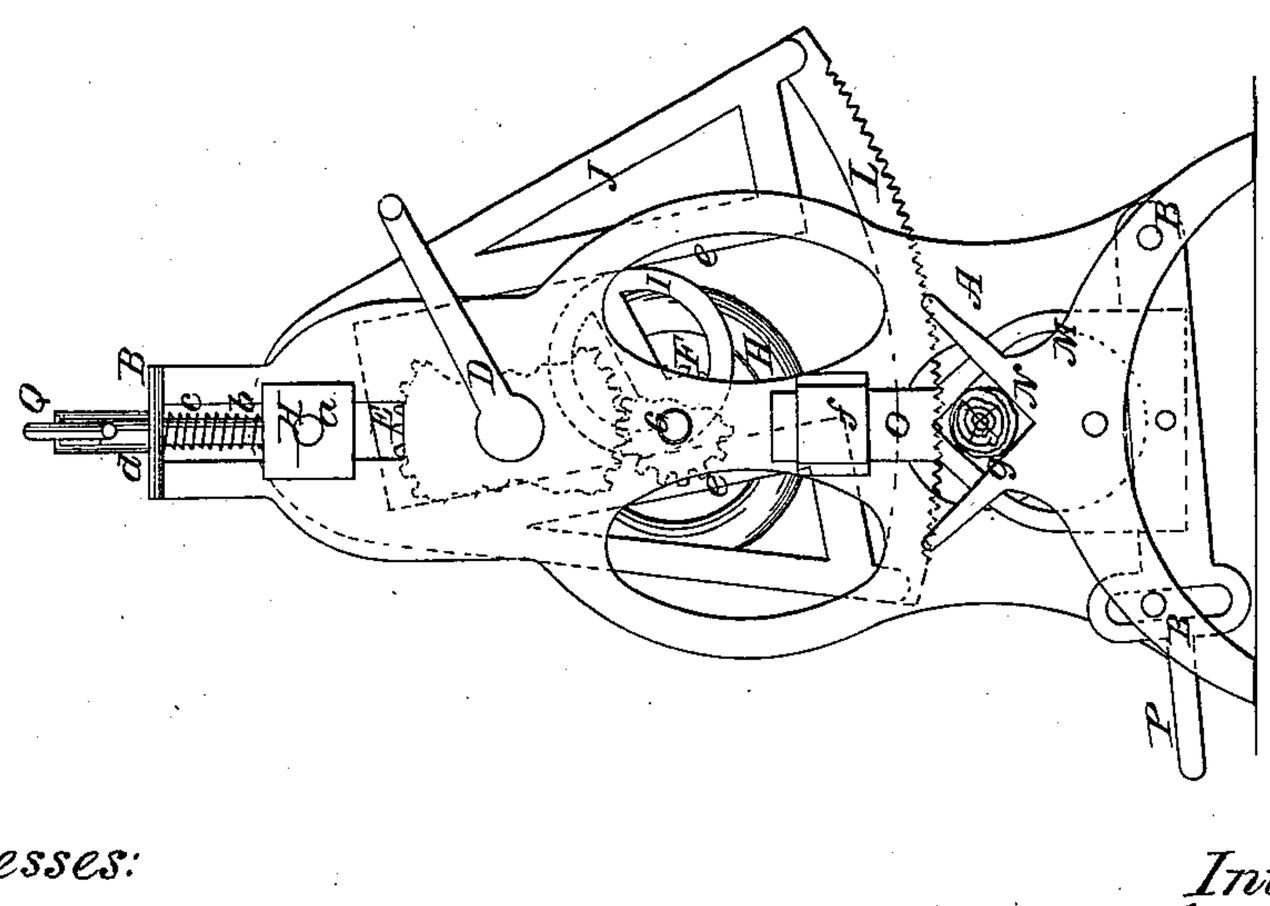


Fig 1



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UNITED STATES PATENT OFFICE.

HENRY A. DANIELS, OF THOMASTON, CONNECTICUT.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. **59,368**, dated November 6, 1866.

To all whom it may concern:

Be it known that I, HENRY A. DANIELS, of Thomaston, Hartford county, State of Connecticut, have invented a new and Improved Wood-Sawing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a front view of the same.

Similar letters of reference indicate like parts.

This invention relates to a new and improved crosscut-sawing machine, designed more especially for sawing sticks into short lengths for fuel.

The invention consists of a pendent swinging frame, provided with a curved saw, and operated through the medium of a cam or its equivalent, substantially as hereinafter described.

The invention also consists in the means employed for holding the sticks while being sawed, whereby the sticks may be adjusted in position and clamped for being sawed with the greatest facility.

A A represent two upright plates or side pieces, connected by transverse rods or bars B. These parts comprise the framing of the machine.

C represents a horizontal driving-shaft having its bearings in the plates A A, with a crank, D, at one end of it and a toothed wheel, E, upon it, which gears into a pinion, F, on a shaft, G, which is parallel with shaft C.

On the shaft G there is placed a fly-wheel, H, and an eccentric or cam, I, which works within a suspended frame, J. This frame J is suspended from a horizontal shaft K in the upper part of the framing, said shaft K having its journals in rising and falling bearings *a*, which are fitted in slots *b* in the upper ends of the side pieces A A. These bearings have springs *c* pressing upon them, said springs being on rods *d*, fitted loosely in the upper part of the framing, and serving as guides for the springs, which springs have a tendency to feed the saw to its work.

The saw (designated by L) is secured to the lower end of the frame J, and is bent or curved, forming a part of a circle of which the shaft K is the center, the teeth of the saw having an upright pitch, so that they will cut while the saw is moving in either direction.

The eccentric or cam I works between parallel bars *e e* in the frame J, (see Fig. 1,) and it will be seen that by turning the shaft C a swinging motion will be given the frame J, and consequently the saw L.

The sticks of wood to be sawed are placed in a horse or buck, M, at the lower part of the framing. This horse is composed of V-shaped rests N, four, (more or less,) in which the sticks are placed horizontally, one at a time, unless they be very small, and the sticks are held firmly in these rests N by means of a clamp composed of a vertical-sliding plate, O, which is fitted in a guide, *f*, at the outer side of one of the side pieces, A, and has an opening, *g*, made in it for the stick of wood to pass through, the upper part of said opening being of inverted-V form, and made to bear or press upon the upper surface of the stick by means of a treadle, P, connected to the lower end of the slide, as shown in Fig. 1, the operator pressing upon the treadle by means of his foot.

The stick being fitted in the horse or buck, the operator presses down the treadle P and turns the crank D, which may be turned by other power than human, if necessary or desired. The eccentric or cam I gives a swinging motion to the frame J and saw L, while the springs *c* feed the saw to its work.

After the cut is completed the saw is raised by means of a lever, Q, on the top of the framing, connected with the upper end of the frame J by a link, R. The stick is then adjusted for a second cut, the plate O pressed down, the lever Q released, and the crank D again turned.

This machine has been practically tested, and it operates well, performing the work expeditiously and with but a moderate expenditure of power.

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

1. The swinging saw-frame, suspended from shaft K, working in sliding boxes having pressure-springs over them, in combination with and driven by the eccentric I, all constructed to operate substantially as described.

2. The horse or buck M, constructed substantially as shown and described, in connection with the plate O and the treadle P, or its equivalent, for the purpose specified.

HENRY A. DANIELS.

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