

J. R. Logan,

Drag Sam.

N^o 51,601.

Patented Dec. 19, 1865.

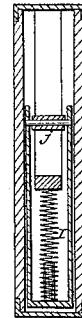


Fig. 3.

Fig. 1.

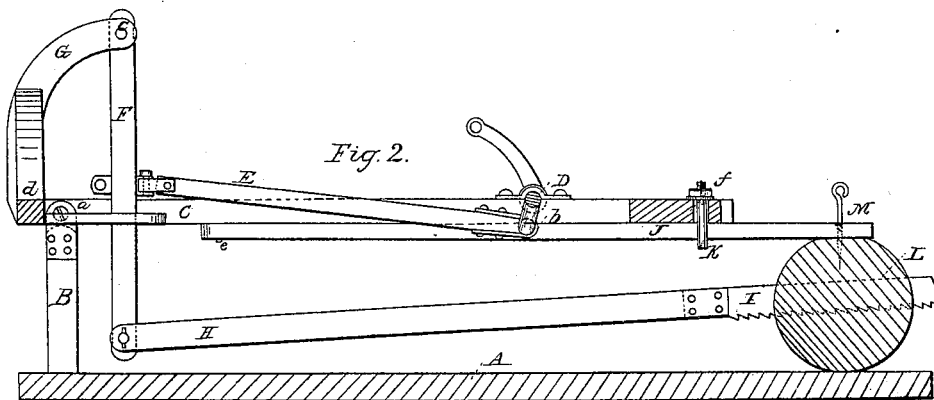
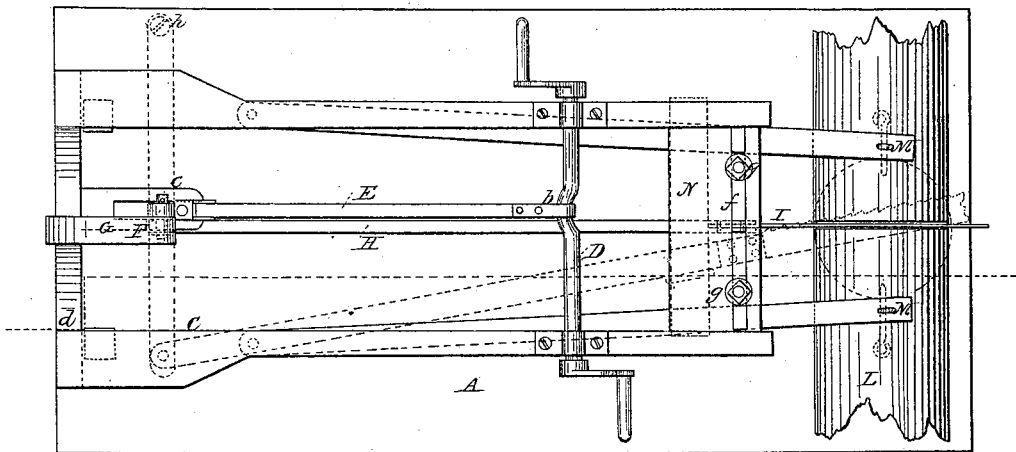


Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES R. LOGAN, OF BELLEMORE, INDIANA.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. 51,601, dated December 19, 1865.

To all whom it may concern:

Be it known that I, JAMES R. LOGAN, of Bellemore, in the county of Park and State of Indiana, have invented a new and Improved 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 plan or top view of my invention; Fig. 2, a side sectional view of the same, taken in the line *x x*, Fig. 1; Fig. 3, a detached sectional view of a portion or part pertaining to the same.

Similar letters of reference indicate like parts.

This invention relates to a new and improved crosscut-sawing machine for sawing down standing trees, and also for sawing logs into fire or cord wood.

The object of the invention is to obtain a device for the purpose specified which may be operated with facility and with but a moderate expenditure of power, and be capable of being applied to either a standing tree or to a felled one without any difficulty whatever.

A represents a base, to which two uprights, B B, are attached; and C is a rectangular frame, which is connected near one end to the uprights B B by means of pins *a*, so as to form joints to admit of said frame being raised and lowered. On this frame C there is placed transversely a shaft, D, having a crank, *b*, at its center, to which one end of a pitman, E, is attached. This pitman is connected at its opposite end to a bar, F, the upper end of which is suspended on a pin, *c*, at the top of a curved standard, G, which is attached to a cross-piece, *d*, on the uprights B B.

To the lower end of the bar F an arm, H, is attached, having the saw I secured to its outer end.

To the under side of the frame C there are secured, by pivot-bolts *e e*, two bars, J J, which extend some distance in front of the frame C, and they are secured to the outer or front part of said frame by means of hooks K K, the shanks of which pass through a transverse slot, *f*, in the frame and are secured in position

by the nuts *g*. By this arrangement the bars J J may be spread to a greater or less distance apart, as required.

In sawing logs into cord or fire wood the log L is placed underneath the bars J J and the latter secured by pins M upon the log, the pins passing vertically through bars J J into the log and the saw I resting upon the latter. By turning the shaft D the bar F will be vibrated and a reciprocating motion given the saw I, and the log will be sawed or cut through, the frame C being raised after each cut and the log shifted under it for a succeeding cut.

In sawing down standing trees the bar F is detached from the standard G and secured in a horizontal position on the frame C by a pivot-bolt, *h*, the pitman E being still connected to the bar F. In this arrangement the saw I works in a horizontal plane above the frame C, and in order to keep the saw in contact with the tree or to feed it to its work, the saw-arm H passes through a block, N, placed horizontally on the frame C, said block having a spring, *i*, (see Fig. 3,) within it, to which a pivoted bearing, *j*, is connected. This bearing *j* is drawn by the spring *i* against the back of the arm H, and the saw is thereby fed to its work. In consequence of having the bearing *j* pivoted, it is allowed to conform to the varying position of the arm H as it works or moves, and consequently always bears with its whole surface snugly against said arm.

The position of the saw and its several concomitant parts when the device is applied to a standing tree are shown in red in Fig. 1.

In this application the bars J J are placed at opposite sides of the tree and the pins M driven horizontally through the bars J J into the tree, said bars being capable of being adjusted at a greater or less distance apart, to suit the thickness or diameter of the tree by adjusting the hooks K K, as previously explained.

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

1. The block N, provided with the spring *i* and pivoted bearing *j*, to operate in connection of the saw-arm H, substantially as and for the purpose set forth.

2. The arrangement of the hinged or jointed frame C, provided with the crank-shaft D, the pitman E, pivoted or vibrating bar F, the arm H, having the saw I attached, and the adjustable bars J J, applied to the jointed frame C, substantially as and for the purpose herein set forth.

The above specification of my invention signed by me this 11th day of September, 1865.

JAMES R. LOGAN.

Witnesses:

ALLEN DARNALL,
JAMES GLASS.