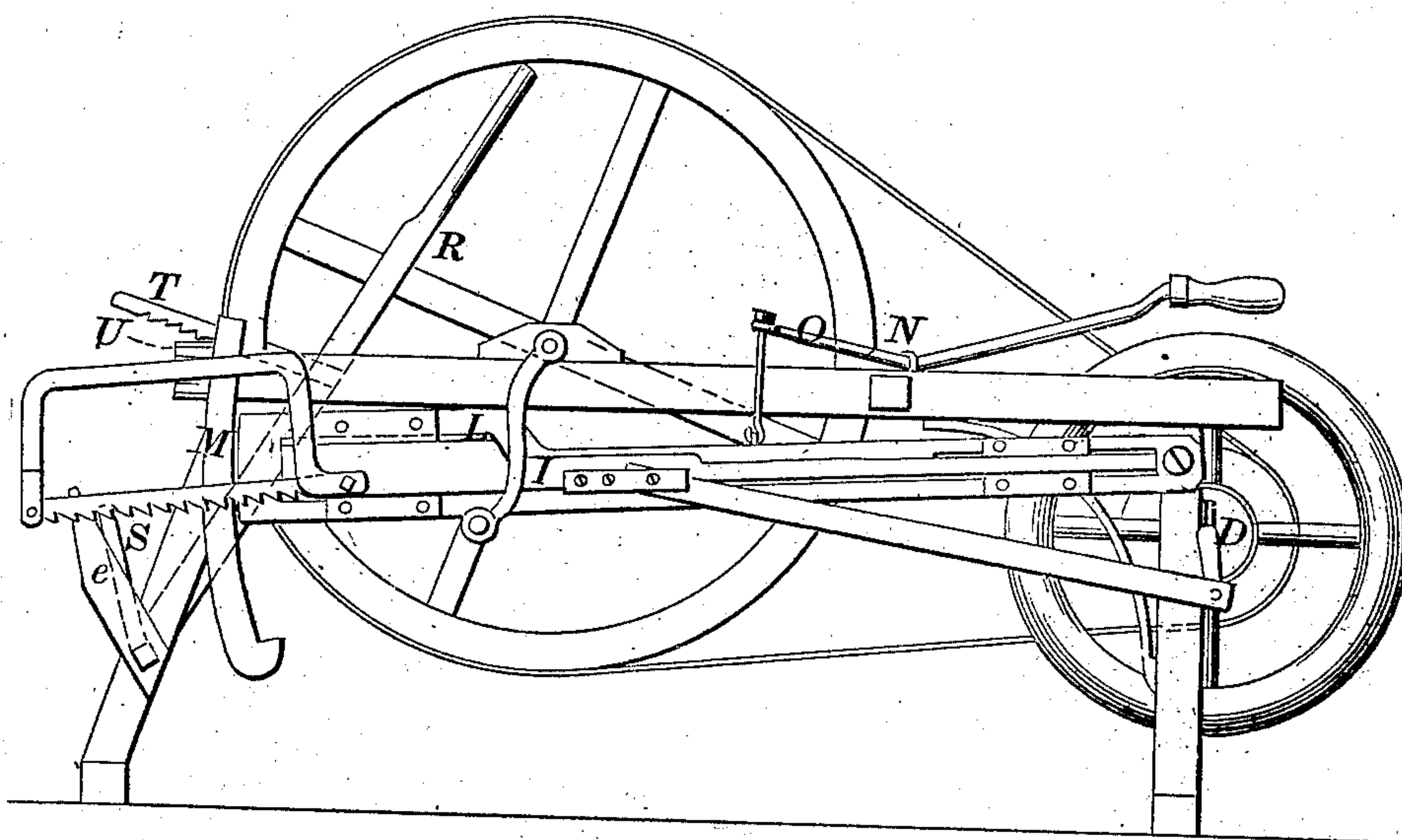


F. J. RICHMOND.
SAWING MACHINE.

No. 41,397.

PATENTED JAN. 26, 1864.



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UNITED STATES PATENT OFFICE.

F. J. RICHMOND, OF ASHFORD, CONNECTICUT.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. 41,397, dated January 26, 1864.

To all whom it may concern:

Be it known that I, F. J. RICHMOND, of Ashford, in the county of Windham and State of Connecticut, have invented a new and Improved Crosscut-Sawing Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

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

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and improved crosscut-sawing machine for sawing fire-wood, &c.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a framing, which may be constructed in any proper manner to support the working parts, and B is a driving-shaft placed in the upper part of the framing and having a band-wheel, C, upon it.

D is a shaft at one end of the framing A, having a crank, E, at each end of it, one crank having an opposite position to the other. The shaft D has a pulley, F, upon it, around which and the wheel C a belt, G, passes, said belt communicating motion from the shaft B to the shaft D.

H H represent pitmen, which are connected at one end to the cranks E E and connected at the opposite ends to slides I I, to which the saws J J are attached. These saws are fitted and strained within suitable frames, K, and the slides I I work between guides a, which are attached to swinging bars L L, the latter being secured at one end, one to each side of the framing A, by pivots or pins b, on which they are allowed to work or swing freely. The opposite ends of the bars L have tenons c formed on them, and said tenons are fitted in grooves made in segments M, which are attached to the sides of the framing, said segments being parts of circles, of which the pivots or pins b are the centers.

On the top of the framing A there is placed a shaft, N, having arms O O attached to it, the

outer ends of which are connected by rods d d to the swinging bars L L.

The shaft N has a lever, P, attached to it, by which the shaft N may be turned and the bars L and saws J raised when desired, the lever P being held by a catch, Q.

To the end of the framing A, where the saws J work, there are secured two inclined bars, e e, which, in connection with the adjoining part of the framing, form a buck to hold the log to be sawed; and R is a lever, the lower end of which is fitted loosely on a rod or bolt, f, which secures the bars e e to the framing. This lever R has a curved metal bar or jaw, S, attached to it at its lower end, and to said lever there is also attached by a pivot a notched bar, T, which catches against a plate, U, on the framing A. When a log (shown in red) is placed in the bars e e, the lever R is pressed backward, so that the curved bar or jaw S will bind against the log and hold the same firmly in position, the notched bar T and plate U holding the lever R. The saws J J feed themselves to their work by their own gravity in connection with that of the bars L, and the teeth of the saws have a raking position backward, so as to cut when drawn backward. The two saws, therefore, cut alternately as they move simultaneously in opposite directions and cut with an inclined stroke.

The crank-shaft D may be provided with a fly-wheel, D'.

This machine operates with but little friction, and performs its work rapidly and well with but a small expenditure of power.

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

The arrangement of the swinging bars L L, slides I I, crank-shaft D, shaft N, arms O O, segments M, and saws J, in combination with the curved jaw S, attached lever R, buck e e, pivoted notched bar T, and plate U, all as herein shown and described.

F. J. RICHMOND.

Witnesses:

D. THURSTON,

E. C. CARPENTER.