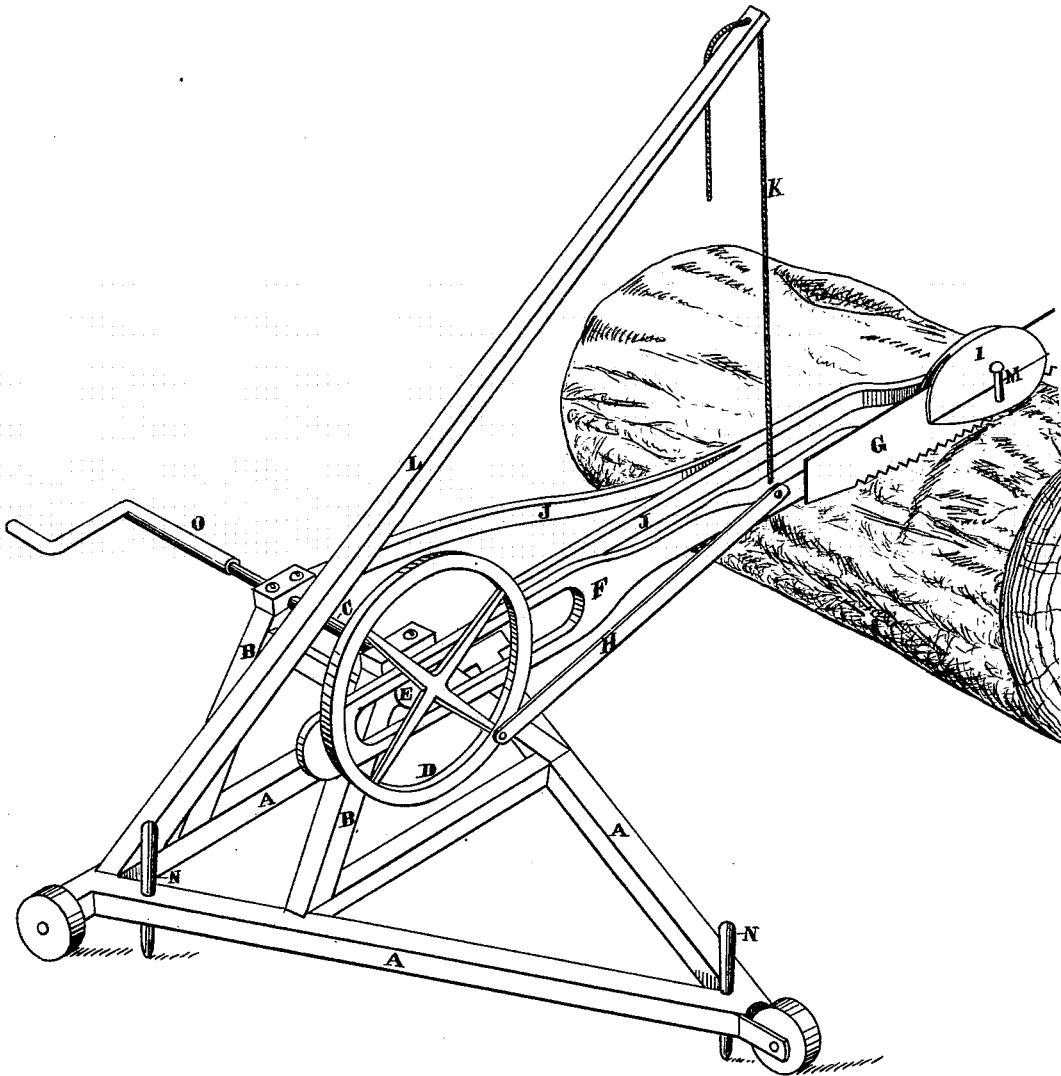


F. W. KROGH.
SAWING-MACHINE.

No. 188,152.

Patented March 6, 1877.



Witnesses
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UNITED STATES PATENT OFFICE.

FERDINAND W. KROGH, OF TULARE, CALIFORNIA.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. **188,152**, dated March 6, 1877; application filed December 2, 1876.

To all whom it may concern:

Be it known that I, FERDINAND W. KROGH, of Tulare city, county of Tulare, and State of California, have invented an Improvement in Sawing-Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to a novel portable device for sawing logs and heavy timber, and working upon uneven ground, and in places which are difficult of access.

The details of my invention will be completely described by reference to the accompanying drawings, in which—

A is a triangular frame, mounted upon suitable wheels, so that it can be easily drawn from place to place. It is made to rest upon the three wheels, in order to accommodate it to uneven surfaces in such places as are most likely to be occupied by fallen trees. The standards or supports B are mounted transversely upon the frame A to carry the shaft C. This shaft has a balance and crank wheel, D, secured to one end, and is made extensible at the other end, as will be more fully described hereafter. Upon the shaft C, just inside of the wheel D, is secured an eccentric, E; and the pitman F, which has the saw G attached to its outer end, is slotted so as to fit over this eccentric, as shown.

The connecting-rod H extends from the crank upon the wheel D to the pitman, where it is attached, as shown, and by its motion gives the pitman and saw the necessary throw. The slot in the pitman is made long enough to accommodate the throw of the crank, and by the action of the cam the pitman will be alternately elevated and depressed, so as to give a rocking motion to the saw in its alternate strokes, similar to that employed in hand sawing. A guide, I, clasps the saw-back, so that it slides easily through it, but is prevented from tipping to one side or the other. This guide is secured to arms J, which extend to and clasp the shaft, and by means of a rope, K, passing over the arm L, I am enabled to

raise the saw and guide at any time, so as to be clear of the log while the device is moved to another point.

When in use the guide is secured to the log by a spike, M, and the frame A is held stationary by means of pins N, driven into the ground. The shaft C is flattened or otherwise fitted to receive an extension, O, with the crank or other driving power, so that it may be driven from any distance rendered necessary by obstruction, while a universal joint near the journal allows of a change of direction for the same purpose.

The operation will be as follows: The saw and pitman being raised by the rope, the frame is moved forward on its wheels parallel with the log or tree to be cut, and when the proper point is reached the frame is secured by the pins N. The saw pitman and guides being next lowered to the log, the guide is secured by driving the pin or spike M into the log, and this steadies the whole and prevents vibration.

By this construction the sawing-frame can always be supported solidly at any point upon inclined or uneven ground, the motion of the saw itself will be steady, and by the action of the cam the most favorable movement for rapid cutting will be given it.

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

The frame A, with its fastening-pins N, mounted upon three wheels, having the saw G so mounted as to be operated at right angles with the line of travel by means of the pitman F, crank wheel and connecting-rod, and guide I, connected with the shaft C by means of the arms J, all constructed to operate substantially as described.

In witness whereof I have hereunto set my hand and seal.

FERDINAND W. KROGH. [L. S.]

Witnesses:

O. T. STACY,
FRANK A. BROOKS.