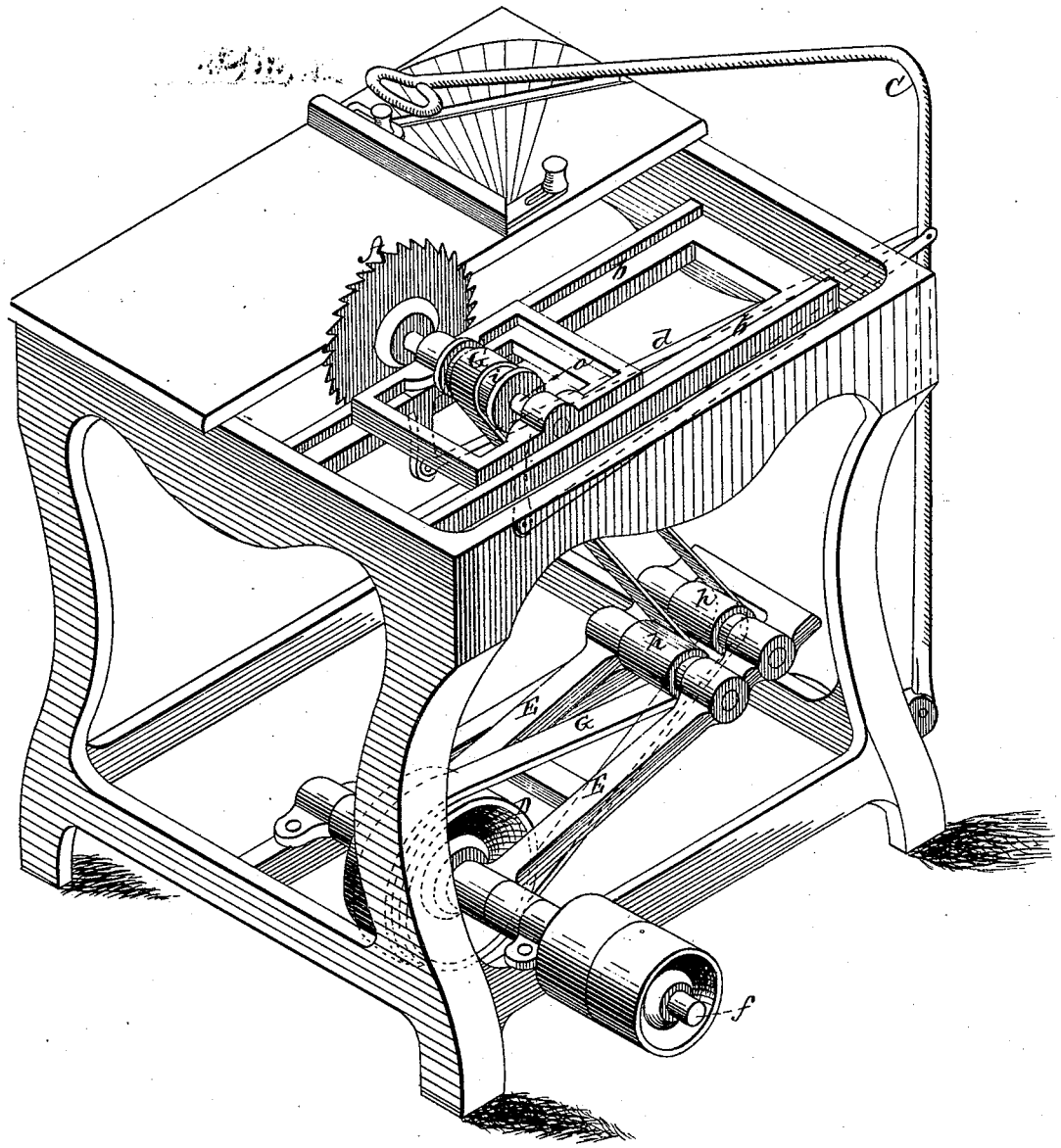
A. T. NICHOLS.

Sawing-Machine.

No. 166,887. Patented Aug. 17, 1875.



WITNESSES

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ALBERT T. NICHOLS, OF WILLIAMSPORT, PENNSYLVANIA.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. **166,887**, dated August 17, 1875; application filed June 8, 1875.

To all whom it may concern:

Be it known that I, ALBERT T. NICHOLS, of Williamsport, in the county of Lycoming and in the State of Pennsylvania, have invented certain new and useful Improvements in Sawing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a belt-strainer or self-tightener for that class of sawing-machines in which the saw-arbor is mounted upon a movable carriage or a stationary arbor, but more particularly for the movable carriage, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a perspective view of a sawing-machine embodying my invention.

A represents the circular saw mounted upon the arbor *a*, which has its bearings in a carriage, B, movable back and forth upon slides *b b*. The carriage B is moved by means of a lever, C, connected with the carriage by a rod, *d*, as shown. *f* is the driving-shaft, having its bearings in the frame of the machine, or they may be placed on or under the floor, and receiving its motion from the engine by a belt in any suitable manner.

On the shaft is a pulley, D, secured thereto, and on each side of this pulley is an arm, E, placed loosely on the shaft. The outer ends of the two arms are rigidly connected together, and two pulleys, *h h*, are arranged between said arms, with their journal-bearings in them near the outer ends.

G represents an endless belt passing around the pulley D, then under the two pulleys *h h*, and up around a pulley, *i*, on the saw-arbor *a*.

It will readily be seen that the weight of the pulleys *h h* and arms E E always keeps the belt at the proper tension to rotate the saw, and the belt-strainer thus constructed adjusts itself to correspond with the movement of the saw-carriage.

This device is simple, cheap, and effective for the purpose for which it is intended, and it is not liable to get out of order. If necessary, weights may be placed on the outer ends of the arms E.

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

The arms E E, hinged to the shaft *f*, free at their outer ends, and having pulleys *h h*, and acting as a guide and a tightener for the belt G, in combination with the device for moving the saw-frame, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 28th day of May, 1875.

ALBERT T. NICHOLS.

Witnesses:

C. L. EVERT,

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