F. D. GREEN.

BELT-TIGHTENER.

No. 176,624. Patented April 25, 1876.

*Fig. 1.*

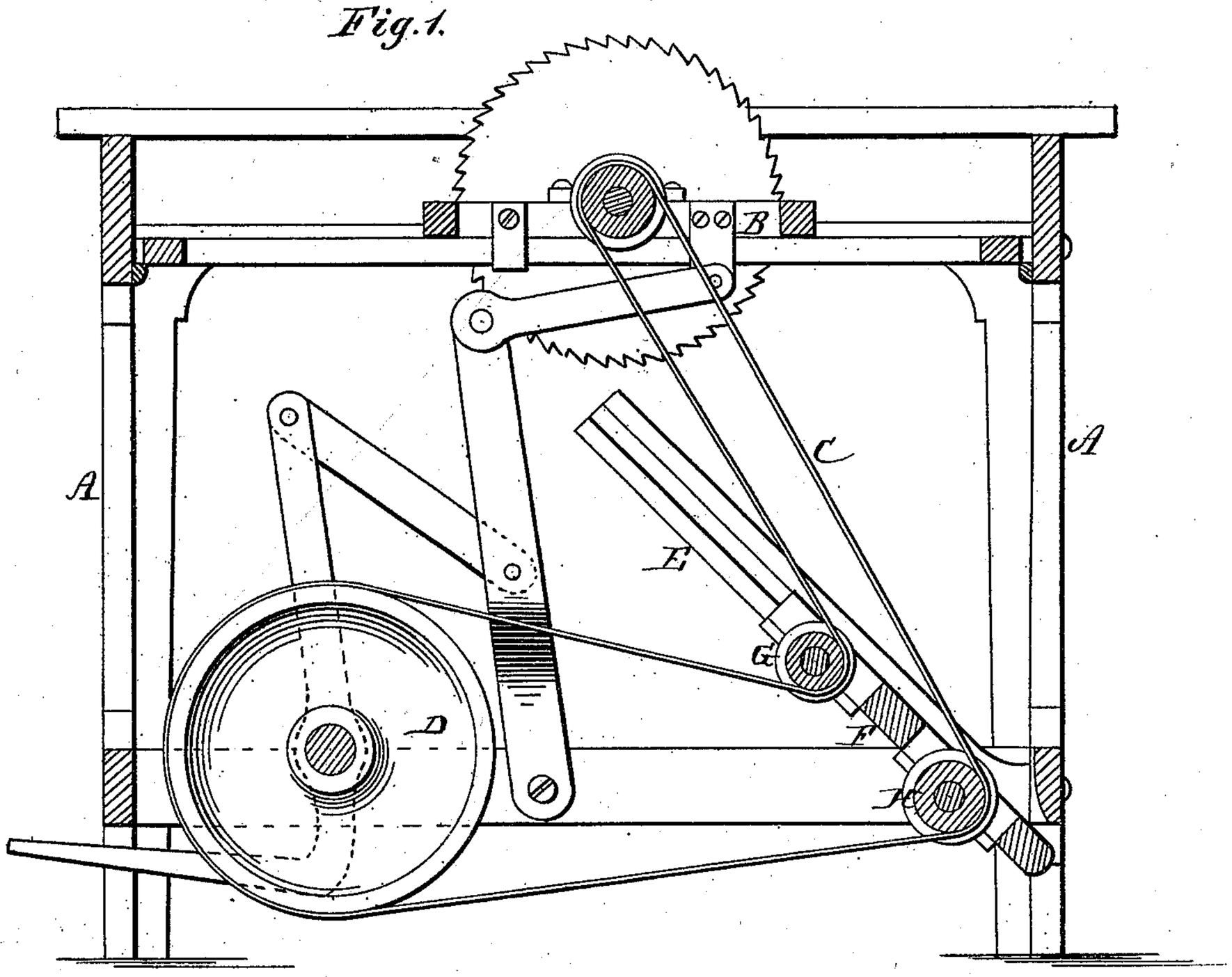
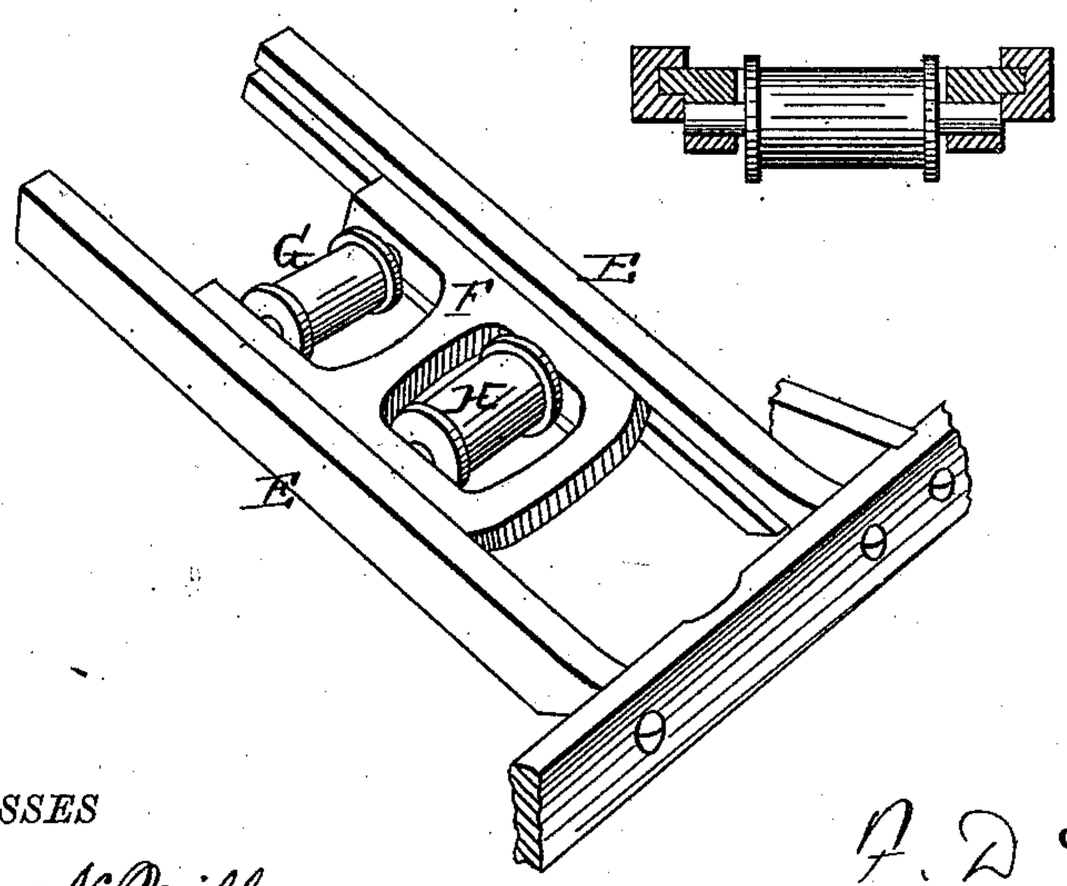



*Fig. 2.*




*WITNESSES*

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# UNITED STATES PATENT OFFICE.

FRANCIS D. GREEN, OF WILLIAMSPORT, PENNSYLVANIA.

## IMPROVEMENT IN BELT-TIGHTENERS.

Specification forming part of Letters Patent No. **176,624**, dated April 25, 1876; application filed September 2, 1875.

*To all whom it may concern:*

Be it known that I, FRANCIS D. GREEN, of Williamsport, in the county of Lycoming, and in the State of Pennsylvania, have invented certain new and useful improvements in machine for transmitting and supplying power to circular saws or other rotating tools; 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 sliding pulley-carriage to take up the slack in belts for transmitting and supplying power to circular saws and other rotating tools, the carriages of which move reciprocally upon ways.

In the annexed drawings, making part of this specification, Figure 1 represents a longitudinal section of my machine, and Fig. 2 a detached view of the pulley-carriage and its ways.

In the figures, A represents the saw-table, which may be made in any of the known and usual ways, where the saw moves in a reciprocating carriage, B, from one end of the table to the other. C represents the band which drives the saw, said band passing over the adjusting-pulleys G H in the pulley-frame, and then around a stationary drum or band-wheel D. The pulley-frame is simply a frame, F, having two pulleys secured in it so that they will revolve readily, and having rabbets on its sides which enter and slide in grooves in the ways E E. These ways, having grooves in their inner faces, are secured to the saw-table at an inclination of about forty-five degrees. The pulley-carriage has sufficient weight, so that it has a constant tendency to drop down the ways, and thus keep the belt tight and at an even tension at all times, obviating the necessity of taking up the slack in the ordinary way, and when used to drive reciprocating machinery maintains a uniform tension of the belt at all changes of position.

It will readily be seen that the outside of the belt presses against the lower side of the upper pulley, and that inside of the belt presses against the lower side of the lower pulley.

The levers for shifting the saw from one end of the table to the other are such as are in general use, and consequently are not claimed.

My invention can be used for any kind of machinery where it requires that the slack in the belt is to be overcome; hence I do not wish to be understood as confining myself to its application to sawing-machines.

My invention can be used in a horizontal or vertical position, as desired.

What I claim as new, and desire to secure by Letters Patent, is—

The sliding carriage F, having the adjusting-pulleys G H, in combination with the grooved frame E, belt C, band-wheel D, and an arbor-pulley, all constructed substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of August, 1875.

FRANCIS D. GREEN.

Witnesses:
H. T. AMES,
H. H. HETZEL.