

J. Todd

Circular-Saw Mill.

N^o 72763

Patented Dec. 31, 1867.
Fig: 1.

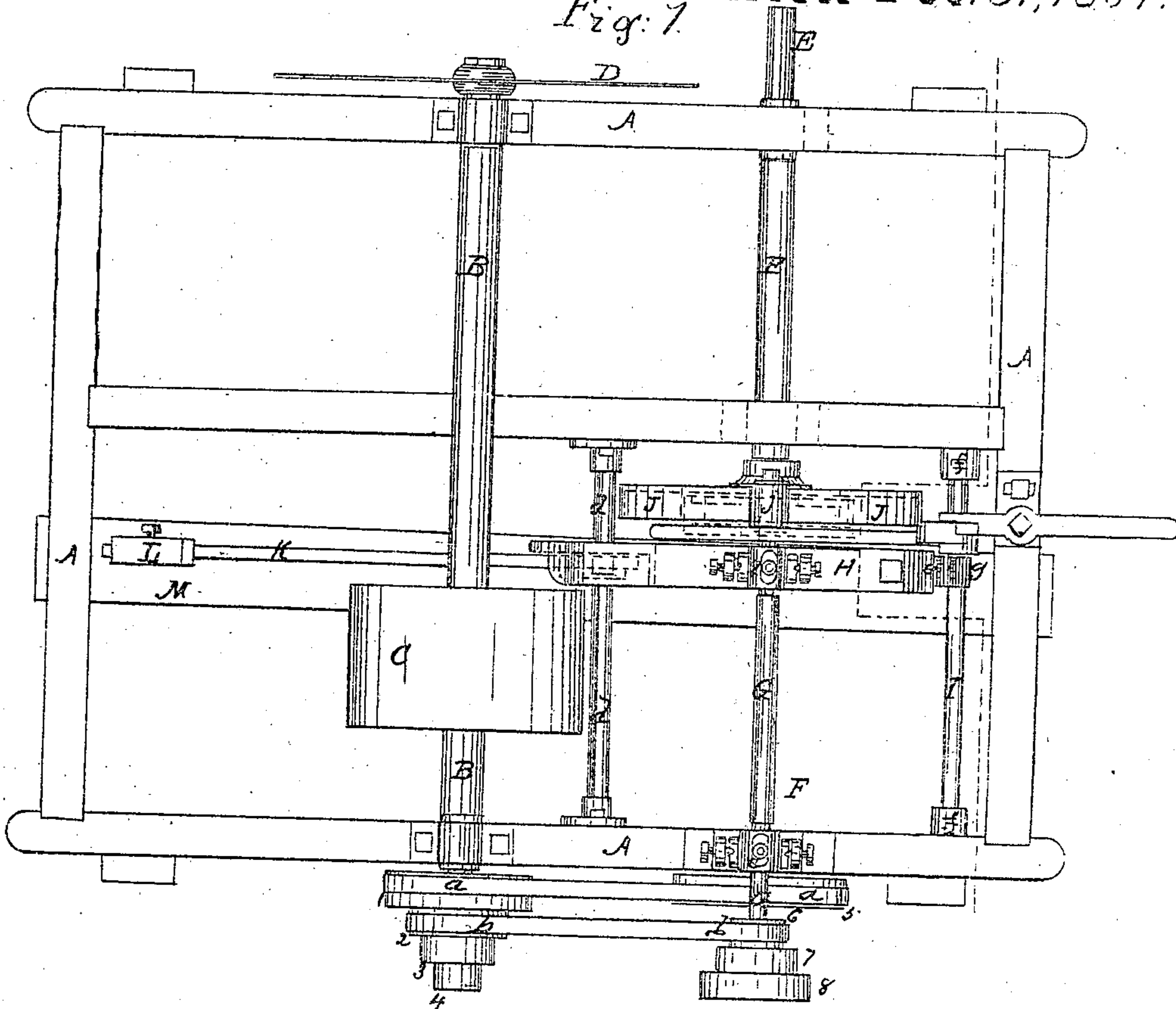
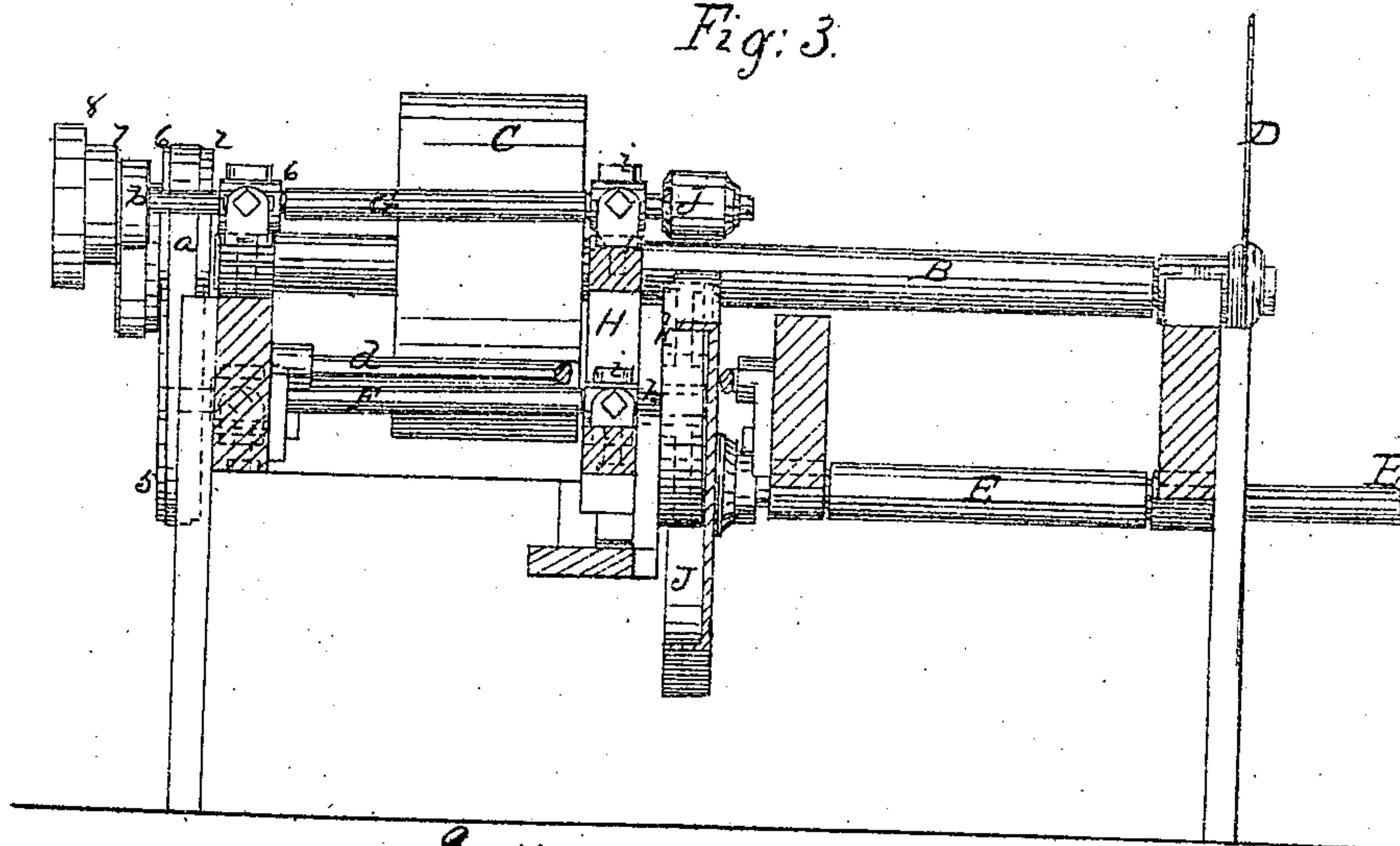


Fig: 3.



Witness

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Fig. 2

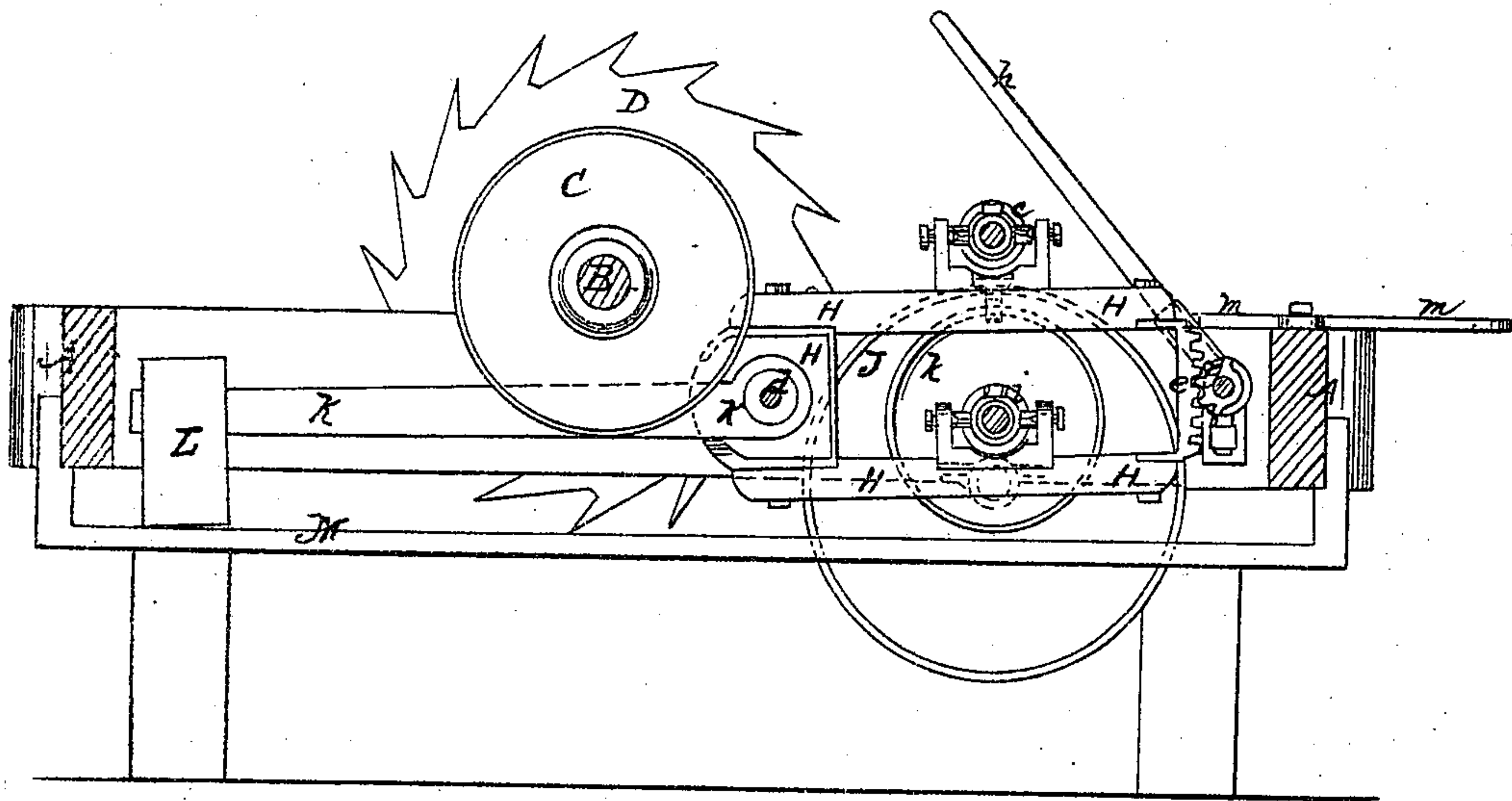


Fig. 5.

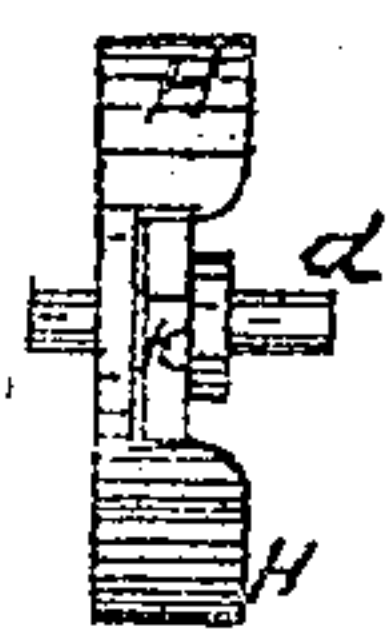
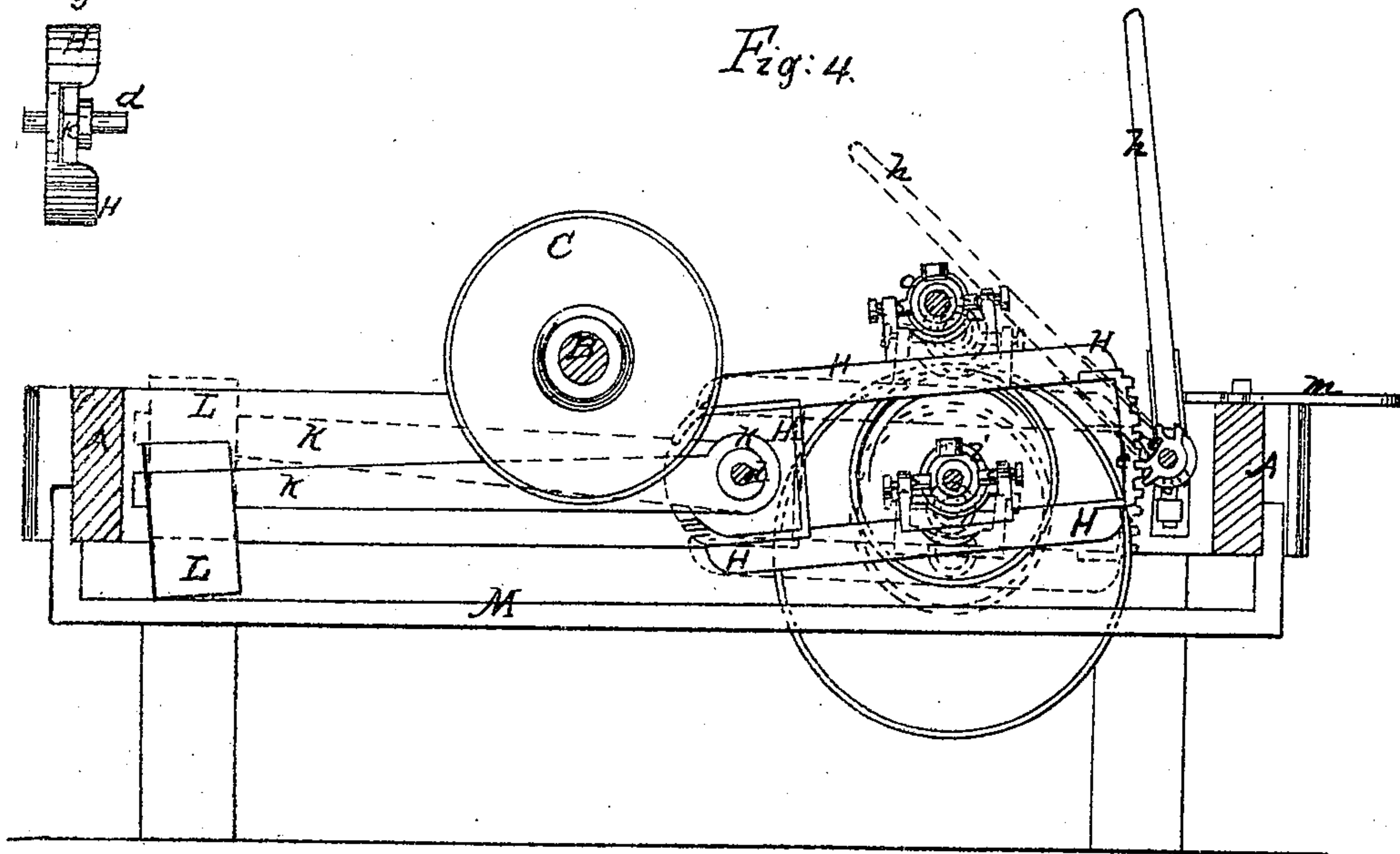


Fig. 4.



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JOHN TODD, OF BELLEFONTE, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND WILLIAM P. DUNCAN, OF SAME PLACE.

Letters Patent No. 72,763, dated December 31, 1867.

IMPROVEMENT IN CIRCULAR-SAW MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN TODD, of Bellefonte, in the county of Centre, and State of Pennsylvania, have invented certain new and useful Improvements in Sawing-Apparatus; and I do hereby declare the following to be 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 represents a top plan of a sawing-machine.

Figure 2 represents a longitudinal vertical section through the same.

Figure 3 represents a vertical transverse section.

Figure 4 represents a vertical longitudinal section, showing in black and in red lines the different positions of the working parts.

Figure 5 represents a detached view of the connection of the pivoted and weighted lever with the pivoted rack or segment-frame that supports the shafts of the frictional driving-wheels at one of their ends, the opposite ends being supported on the main frame.

Similar letters of reference, where they occur in the separate figures, denote like parts in all of the drawings.

My invention consists in the manner in which I hang, adjust, and operate the frame that supports those ends of the shafts that carry the frictional feeding and backing-wheels, so that the latter may be thrown into or out of action with the drive-wheel, at the will of the operator, whilst the weighted lever will, when not controlled by the operator, hold both friction-wheels out of action with the drive-wheel, as will be explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A represents a rectangular frame, for holding the saw, and gearing that drives it, and feeds up the log and runs back the carriage. B is the saw-shaft, on which is the pulley C, by which it is run. The saw D is placed on one of the projecting ends of the shaft, and the pulleys 1 2 3 4 on the other end. The shaft E receives the motion which feeds up the carriage, bolt, or log to the saw, and runs it back again to be set for a new kerf or "through." Any of the known ways of holding the log or bolt to the carriage, or head and tail-blocks, may be used. The saw-shaft B and the feeding and reversing-shafts E run in permanent bearings. The other revolving shafts of the apparatus run in yielding bearings, as will be explained. From the pulley 1 on the shaft B, an endless belt, *a*, extends to and passes over a pulley, 5, on a shaft, F; and from the pulley 2, on the saw-shaft, an endless belt, *b*, passes to and over a pulley, 6, on another shaft G, there being other pulleys, 7 8, on said shaft, of different diameters as are those 1 2 3 4, so as to change speed or motion in the usual way. The journals of the shafts F G, near their pulley-ends, run in pivoted or swinging boxes *c*, so that the opposite ends may rise and fall without cramping or binding the shafts. The pulley-ends of these shafts rest and rotate in journal-boxes, arranged on the main frame. Their other ends are supported and turn in swivelling boxes *i*, on a second frame, H, which is pivoted to the main frame by means of the rod or bar *d*, on which it can swing or vibrate. On the front of the hinged frame H there is a curved rack, *e*, and on a cross-rod, I, that turns in supports *f f*, connected to and adjustable on the main frame, there is a segment, *g*, that works in said rack, by turning the lever *h* so as to raise or lower the free end of said frame H, as may be required. On the feed-shaft E there is a flanged wheel, J, on or against the exterior of which the wheel or friction-pulley *j*, on the end of the shaft G, can work or run, to turn said wheel J and shaft E, and against the interior or under side of which rim or flange, the friction-wheel or pulley *k* on the shaft F can work or run, to turn said wheel and shaft in a contrary direction, the wheel *j* making the feed of the carriage, and the wheel *k* running it back. When the frame H is raised up, the wheel *k* is in action, and the carriage or log is run back. When the frame H is lowered, the wheel *j* is in action, and the carriage or log is fed up to the saw. But there is another inactive position for both of the wheels, necessary, so that neither shall work, which is obtained as follows: To the shaft *d*, and in a recess in the rear of the frame-piece H, there is pivoted a lever, K, upon which there is an adjustable counterpoise, L, and below this counterpoise or weight a support, M, so that when the weight is on the support, neither of the friction-wheels *j k* is in contact with the driven wheel J, and then there is no motion given to the shaft E. The

pivoting of the lever K to the frame H, enables the weight to raise up the frame to a fixed or given height, whilst the frame can be further raised up, independent of the lever K, by means of the lever *h*, segment *g*, and rack *e*. *m* is a brace, for holding the wheel *j* in action with the wheel J, when the operator desires to do so.

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

In combination with the hinged frame H for moving the frictional feed and backing-wheels into and out of action with the drive-wheel and its shaft, the pivoted weighted lever K, jointed to the frame as described, and its support M for holding both of said wheels out of action, substantially as and for the purpose described.

JOHN TODD.

Witnesses:

A. B. STOUGHTON,

EDM. F. BROWN.