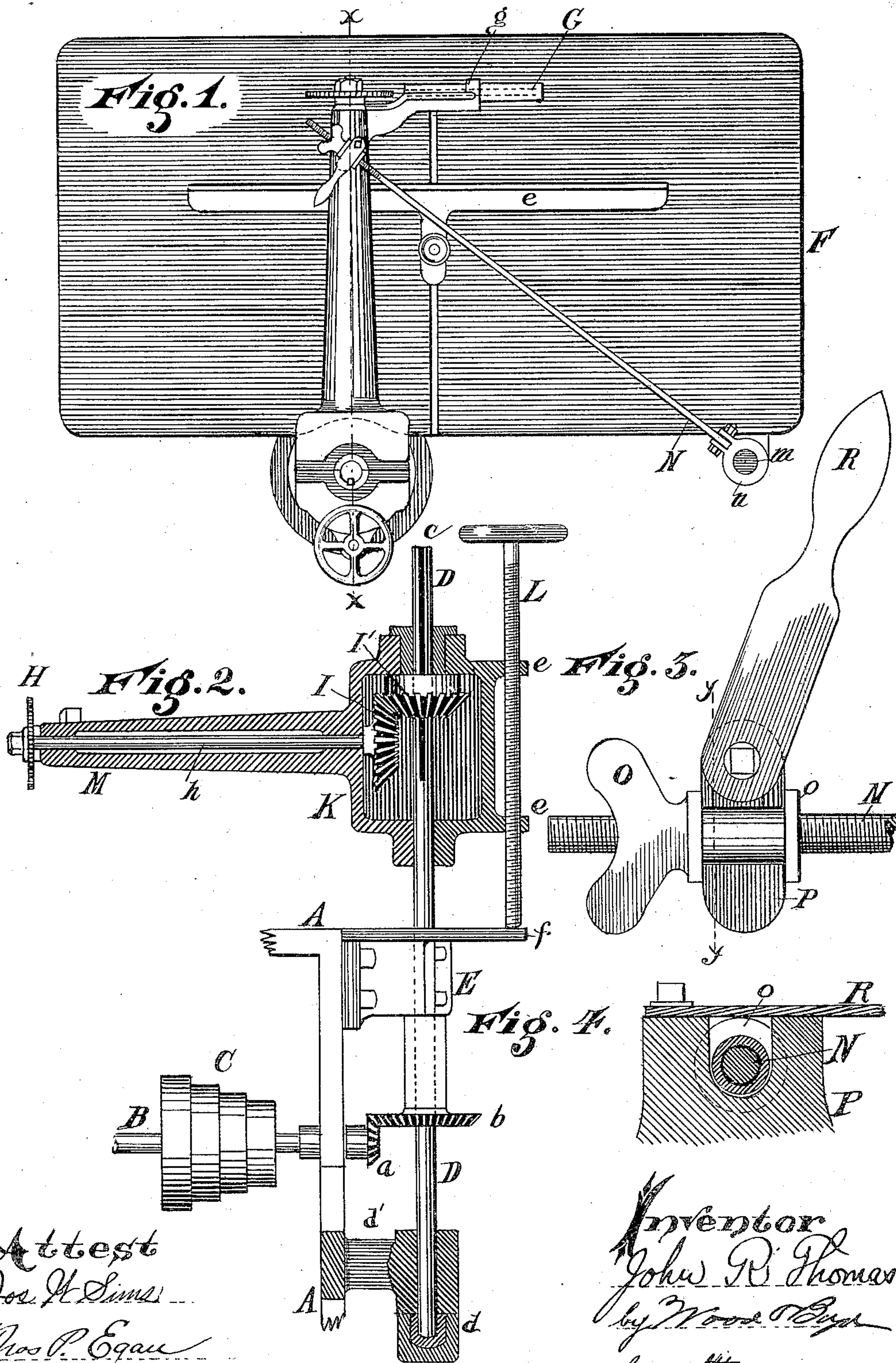


(No Model.)

J. R. THOMAS.
CIRCULAR SAWING MACHINE.

No. 307,601.

Patented Nov. 4, 1884.



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UNITED STATES PATENT OFFICE.

JOHN R. THOMAS, OF CINCINNATI, OHIO, ASSIGNOR TO THE EGAN COMPANY, OF SAME PLACE.

CIRCULAR SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 307,601, dated November 4, 1884.

Application filed August 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. THOMAS, a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Sawing-Machines, of which the following is a specification.

My invention relates to an improvement in sawing-machines, and more particularly to that class of machines which employ a feed saw or roller suspended above the table, working in conjunction with a saw projecting up through the table.

The object of my invention is to mount the upper hanging feeding device upon an axial arm, so that it can be readily turned or moved away from over the table without detaching the operative parts of the machine. Another object of my invention is to provide ready means for adjusting the overhanging feed to any desired plane with the stationary saw. Another object of my invention is to provide a detachable brace-arm for securing the feed in any desired adjusted position, all of which will be fully set forth in the description of the accompanying drawings, forming a part of this specification.

Figure 1 is a top plan view of my improvement. Fig. 2 is a sectional elevation on line *x x*, Fig. 1. Fig. 3 is a top plan view of the adjusting device. Fig. 4 is a cross-section of the same on line *y y*, Fig. 3.

A represents the frame of the sawing-machine; B, the driving-shaft for transmitting motion to the feed; C, a series of cone-pulleys for changing the speed; *a b*, bevel-gear for driving upright shaft D, which is stepped in a bracket, *d*, mounted upon the arm *d'*.

E represents a journal-bearing for the shaft D.

F represents the main saw-table; G, the main saw projecting up through said table; *e'*, the guide; *g*, the saw-guard. The table F rests upon the top of the frame A. It may be hinged or secured to it in any desired manner.

H represents the overhanging feed, which is journaled upon shaft *h*.

I represents a bevel-gear on shaft *h*.

I' represents a bevel-gear keyed upon the end of shaft D.

K represents a housing, in which the gears I I' are inclosed.

L represents a vertically-adjusting screw, passing through ears *e e* in the housing K, and resting upon the bracket *f*, so that the housing K, carrying the feeding-roller H, may be adjusted to any desired distance to or from the table. The bracket *f* is shown as an annulus, forming a segment of a circle corresponding with the circular travel of the adjusting-screw L, so that the point of the screw L will move upon the annulus *f* when the arm M is turned upon its step. Shaft *h* is journaled in sleeve M, as shown in Fig. 2. Feed H is driven by means of the cone-pulleys C, both gears *a b* and shaft D communicating motion to the shaft *h* by means of the bevels I I'. The sleeve-arm M, carrying the feed H, may be turned or rotated upon the step of the axial shaft D, bevel I' turning bevel I, while the shaft *h* will remain stationary and the feed-shaft will revolve with the lateral movement of arm M.

c represents a feather in shaft D, for securing bevel I' to shaft D, and yet allowing of its vertical movement thereon.

N represents a hinged brace rod, which is pivoted to a bracket, *n*, and journals on stud *m*, which is secured to sleeve M by means of the adjusting clamp-nut O, *o o* representing collars attached to the thumb-nut for adjusting the brace-rod N relatively to the sleeve M. By adjusting the screw O, the arm M and feed H are adjusted to the plane of saw G, so as to give the requisite lead to feed the work to the saw. It is desirable, in order to hold the stuff against the guide *e'*, to adjust the feed H at a slight angle with the plane of saw G, so as to feed in, and thereby draw the stuff against the guide *e'*. Different kinds of lumber and different conditions of saws require a different set of feed for this purpose.

By means of the devices here shown, the feed-adjustment can be quickly and accurately adjusted to any desired condition by simply turning the screw O out or in, as the case may be.

It is necessary, in order to move the arm M, to detach the brace-rod N. I have provided the following instrumentality for this

purpose: P represents a bracket secured to the arm M, provided with a recess for receiving the brace-rod N. R represents a latch pivoted to one of the flanges of bracket P, so that when latch R is turned at right angles to the brace M, as shown in Fig. 4, the brace N is fixed to arm M; and when latch R is turned, as shown in Fig. 3, the rod N may be lifted out of engagement with the seat in bracket P and the arm M turned upon its axial shaft D, as before described.

Any other well-known means for detachably securing the brace-rod N to the saw-arm M may be employed without affecting the character of my invention.

I claim—

1. In combination with the main saw G of a sawing-machine, the overhanging feed H, journaled upon the swiveling arm M and turning upon an axial shaft, D, substantially as described.

2. In combination with the saw G of a sawing-machine, the overhanging feed H, journaled upon the swiveling arm M and driven by the transmitting-gear I I', attached to the shafts h and D, substantially as described.

3. In combination with a sawing-machine,

the overhanging arm M, provided with housing K, and supported upon an adjusting-screw, L, and stepped upon the driving-shaft D, substantially as described.

4. In combination with a sawing-machine, the overhanging arm M, supported upon the shaft D, and provided with the vertically-adjusting screw L, stepped upon the bracket f, substantially as described.

5. The combination, with the main saw G, of an upright axial shaft, D, an arm, M, swiveled upon the shaft, the overhanging feed H, journaled on the arm, and the hinged brace-rod N, detachably connected with the swiveled arm, substantially as described.

6. The combination of a vertical shaft, D, an arm, M, swiveled thereon, an overhanging feed, H, journaled on the arm, the hinged brace-rod N, the adjusting-nut O on the brace-rod, a bracket, P, and a latch, R, substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN R. THOMAS.

Witnesses:

THOS. P. EGAN,
FRED. C. WEIR.