

(No Model.)

2 Sheets—Sheet 1.

M. L. TOWLE.

WOOD MOLDING MACHINE.

No. 300,412.

Patented June 17, 1884.

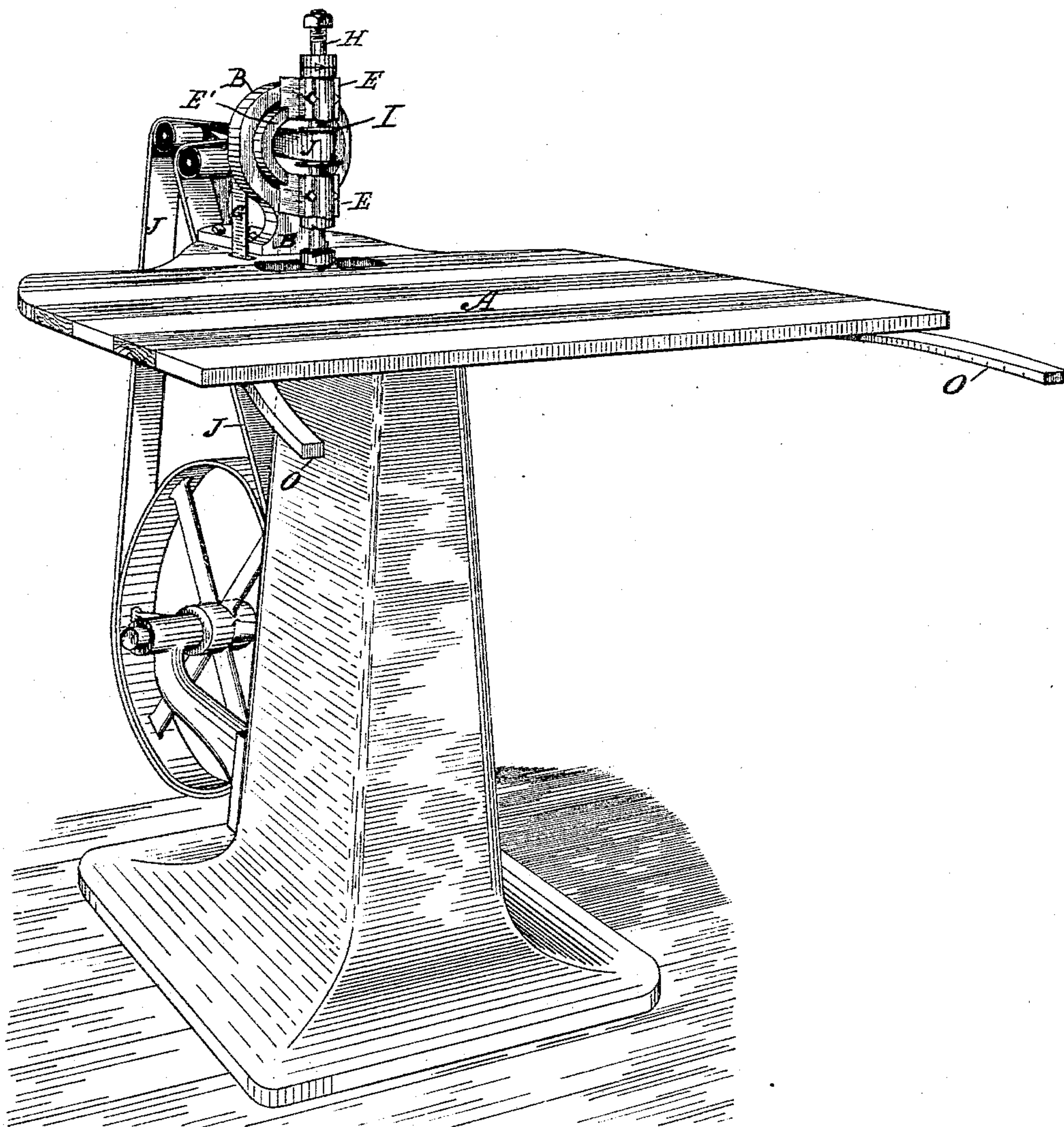


Fig. 1.

Witnesses

F. A. Merrill
C. Hutchins

Inventor

M. L. Towle.

per. *J. B. Thurston*
Attorney

(No Model.)

2 Sheets—Sheet 2.

M. L. TOWLE.
WOOD MOLDING MACHINE.

No. 300,412.

Patented June 17, 1884.

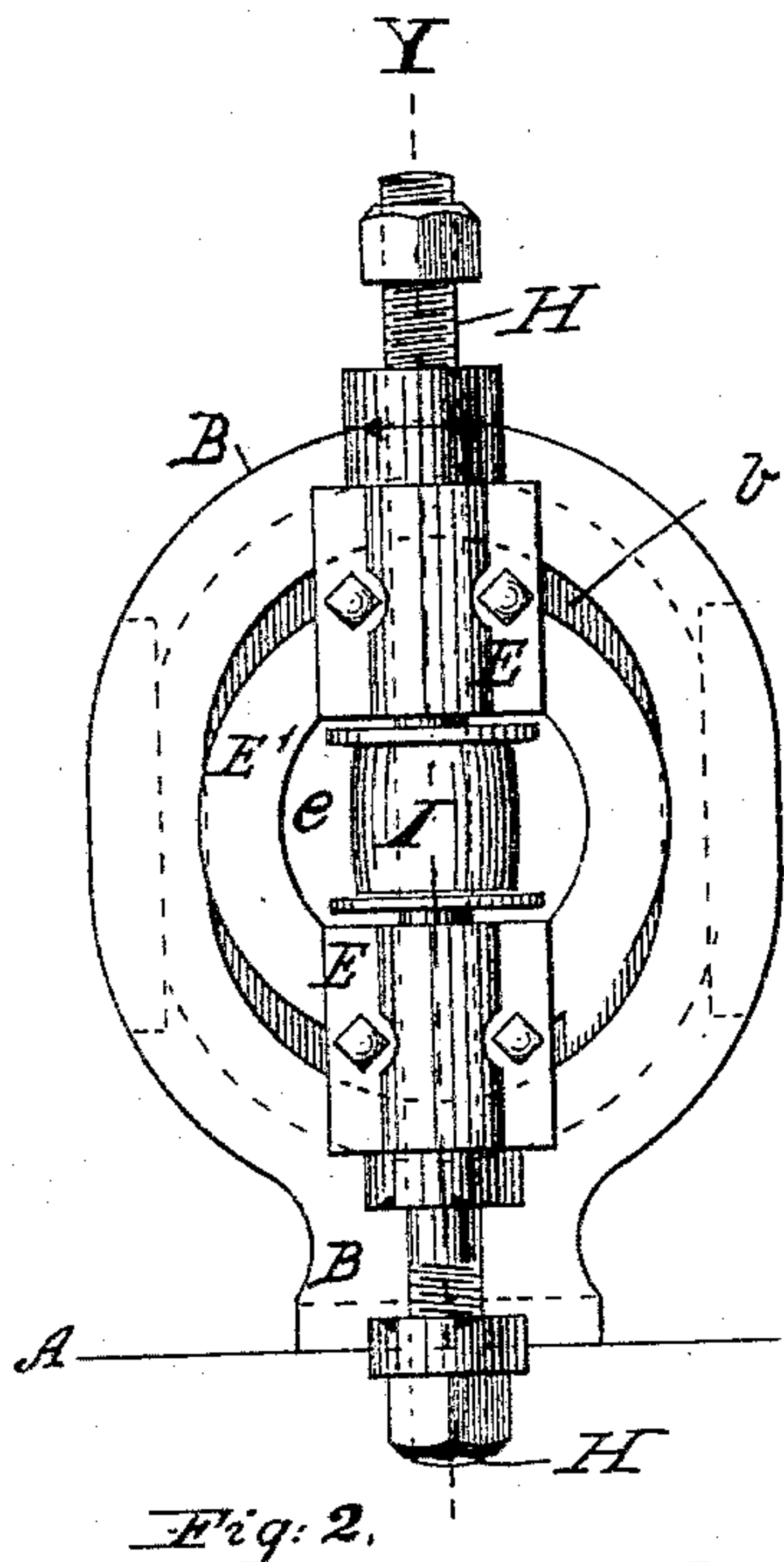


Fig. 2.

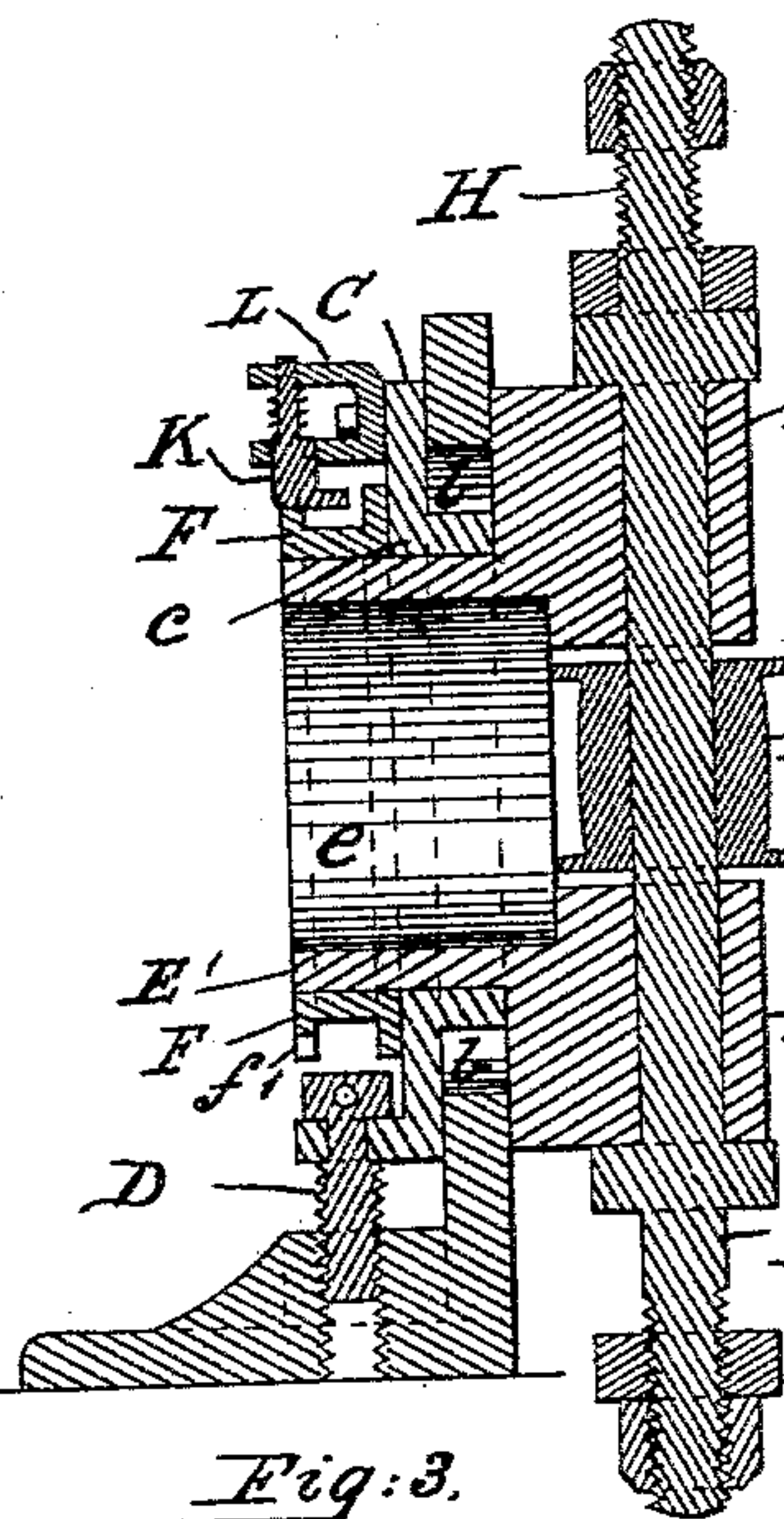


Fig. 3.

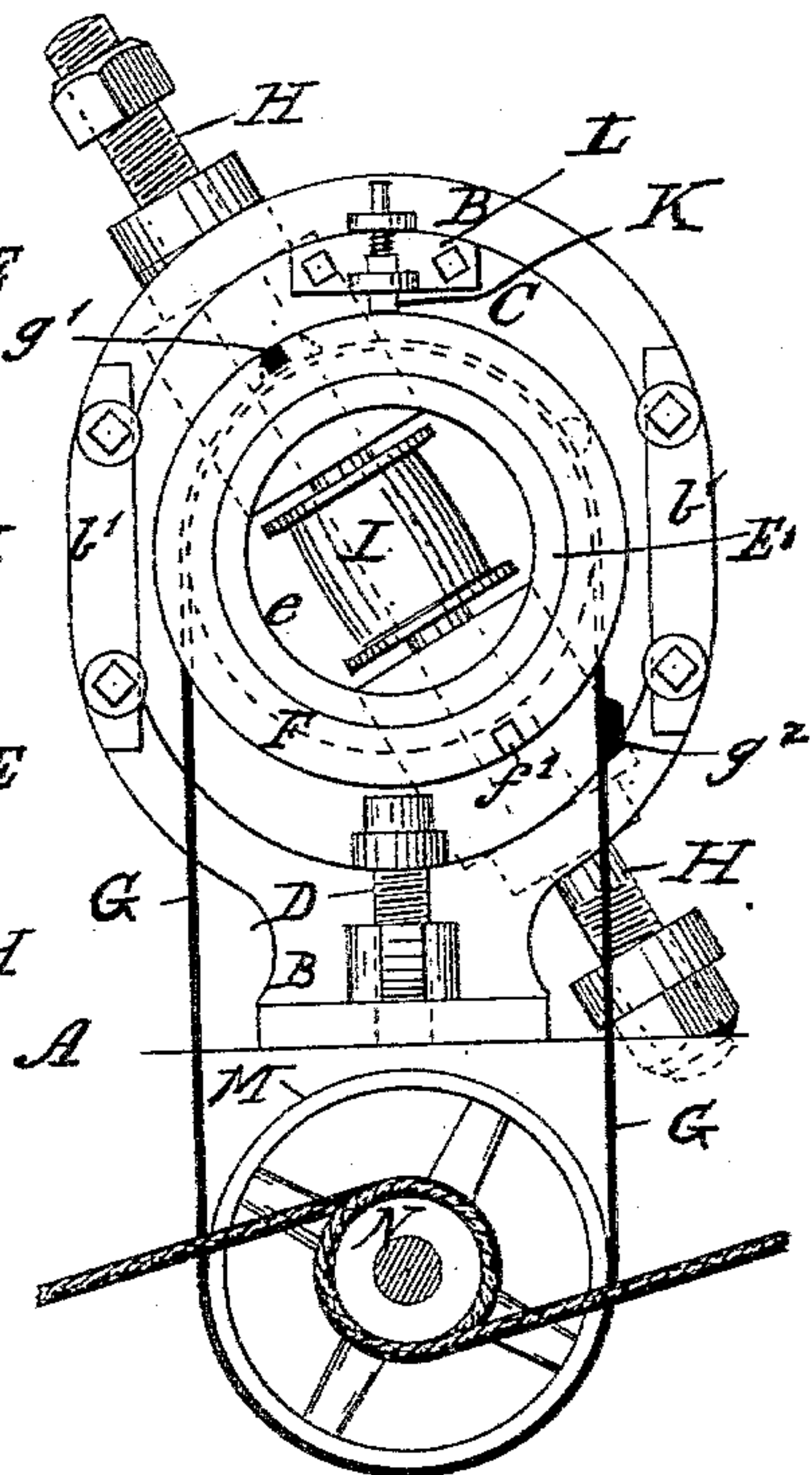


Fig. 4.

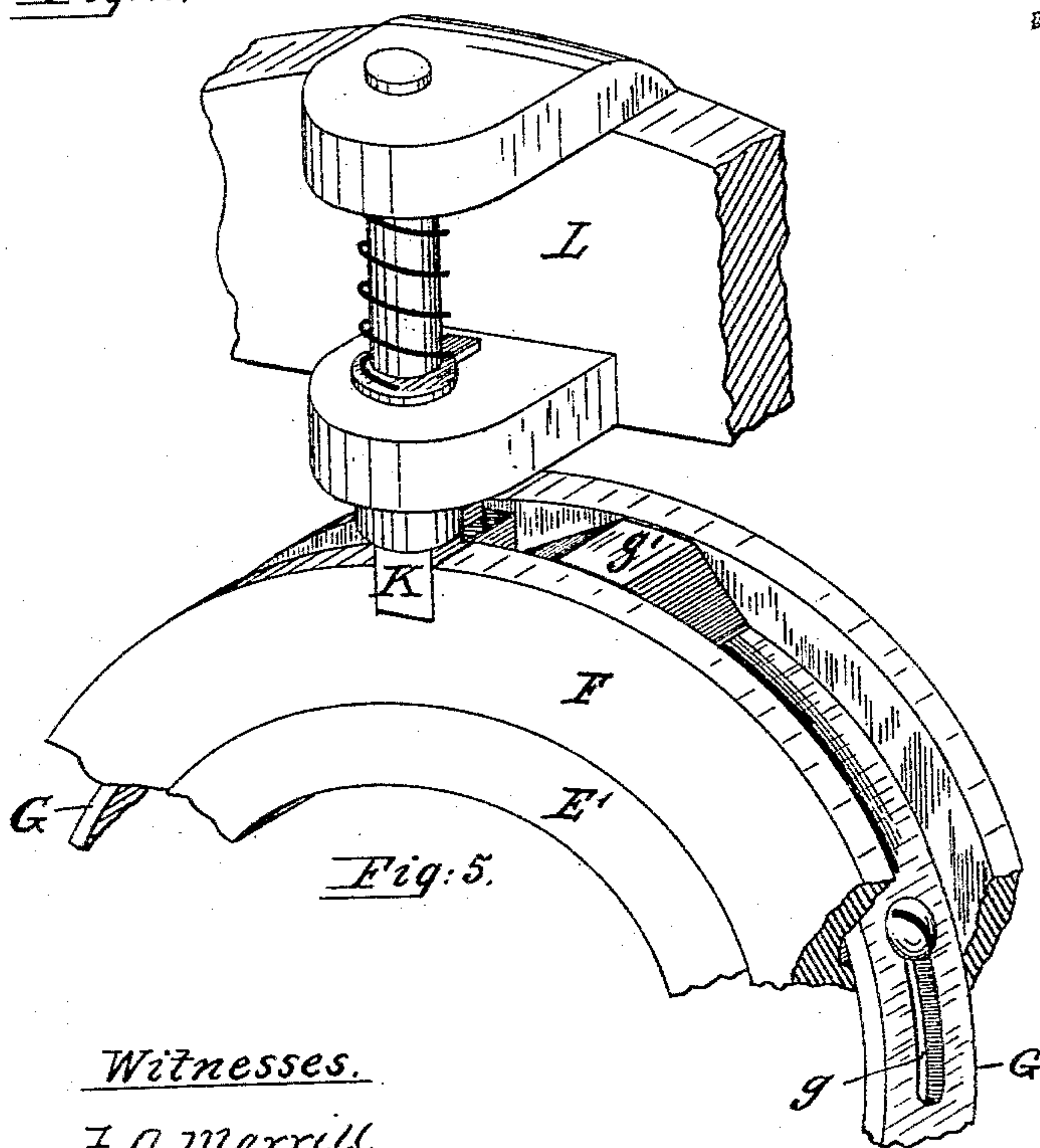


Fig. 5.

Witnesses.
F. A. Merrill
C. Hutchins

Inventor.
M. L. Towle
per J. B. Thurston
Attorney.

UNITED STATES PATENT OFFICE.

MELVIN L. TOWLE, OF CONCORD, NEW HAMPSHIRE.

WOOD-MOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 300,412, dated June 17, 1884.

Application filed April 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, MELVIN L. TOWLE, a citizen of the United States, residing at Concord, in the county of Merrimac and State of New Hampshire, have invented certain new and useful Improvements in Friezing or Shaping Machines, of which the following is the specification.

My improvements apply to a single-spindle machine, and relate to the frame carrying the bearings for the same, which is so constructed as to be capable of oscillation, so as to turn the spindle over end for end, said spindle being provided with the accustomed collars, cutters, and nuts for securing them upon both ends, and a driving-pulley located midway from either end thereof between the bearings. The frame carrying the spindle may be hung from the lower side of the operating-table, or be secured to the frame-work of the machine, if desired, and either end of the spindle allowed to project up through a slot in the operating-table; or the frame may be bolted to the top side of said table, and a supplemental table be provided of the proper height for use in doing inside molding and other work, which could not be accomplished upon the table proper.

In the drawings accompanying this specification, and forming part thereof, in which similar letters of reference indicate corresponding parts in all the figures, I have represented the frame carrying the spindle as applied to the top side of the operating-table.

I will here refer to the drawings, of which Figure 1 represents a machine complete, having my improvements attached. Fig. 2 is a detached front elevation of my improved frame supporting the oscillating bearings and the spindle ready to be applied to a machine. Fig. 3 is a cross-sectional elevation of the same at line Y. Fig. 4 represents a back view showing the spindle partly turned and the means by which said movement is accomplished. Fig. 5 is an enlarged sectional view in perspective of those parts of my device which oscillate the spindle and hold the same when in the proper position for use.

A represents the top of the operating-table,

and B the spindle-frame, which is slightly oblong in form, and provided with an opening, *b*, of like form, through which the cylindrical portion *c* of the adjustable frame C passes. The contacting surfaces of the parts B and C should be planed and the part C fitted between the flanges *b'*, which project from the sides and upon the back of the frame B, two or more cap-screws and washers being sufficient to hold said frames in contact, as seen in Fig. 4. The frame C is rendered adjustable up and down upon the frame B by aid of the screw D. (Shown best in Figs. 3 and 4.) The spindle-bearings E have a cylindrical projection, *E'*, extending out from the back of said bearings four inches, more or less, which should be turned perfectly round, and the part *c* of the adjustable frame C should be bored to fit said part *E'*. The flanged ring F is secured in some suitable manner to the part *E'*, and serves to hold said part *E'* from working out of the part *c*, and also acts as a pulley for the adjusting-belt G, by which the bearings E, carrying the spindle H, may be reversed. The spindle H is provided with pulley I between its bearings, by which it is driven by the belt J, passing through the opening *e*, left in the part *E'* for this purpose, as shown best in Figs. 1 and 3. The adjusting-belt G is provided with a slot, *g*, running lengthwise of the same, through which a screw is passed and threaded to the flanged ring F, for a purpose hereinafter described. A suitable spring-latch, K, plays in the casting L, which is bolted to the upper back side of the frame C, and by engaging in the slots *f f'*, formed in one of the flanges of the ring F, in opposite sides thereof, as shown in Figs. 3 and 4, the spindle H is held firmly in a vertical position.

For the purpose of disengaging the spring-latch K, so as to reverse the spindle, the adjusting-belt G is provided with beveled cleat-blocks *g' g''*, which are so placed upon said belt either side of the slot *g* as that when one of said cleat-blocks is opposite to one of the slots *f f'* the other will have passed a little to one side of the other slot and between said slots *f* and *f'*. This is illustrated in Fig. 4 of the drawings, which shows the spindle H as when be-

ing rotated from right to left, a portion of the cleat-block g' being visible through the slot f of the flanged ring F, and the cleat-block g^2 being in such a position upon the belt G as to pass the spring-latch K just before the slot f' reaches it. When the spring-latch K is engaged in either of the slots $f f'$, the cleat-blocks $g' g^2$ are both upon either one or the other side thereof. For instance, if in Fig. 4 the spindle H were returned to its vertical position, the latch K would be seen in the slot f of the flanged ring F, and the cleat-block g' would be just at the right of it, as seen in Fig. 5, and to reverse the spindle end for end force must be applied to the belt G, which will slip upon the ring F the extent of the slot g and force the cleat-block g' gradually underneath the latch K until said latch is disengaged from the slot f , whereupon the flanged ring F will be revolved, and with it the spindle and its bearings, until the spring-latch K (which is bearing and sliding meanwhile upon the flanged ring) engages in the slot f' .

Various means may be employed for operating the adjusting-belt G, to wit: It may pass from the flanged ring F to a pulley, M, and said pulley be rotated by means of a foot-treadle attached to a cord passing around a smaller pulley, N, on same shaft with pulley M; or the levers O may be fulcrumed underneath the table A, as in Fig. 1, and connected to said cord, and said levers be moved by the operator's body; or the pulleys M N and the belt G and cleat-blocks $g' g^2$ may be dispensed with, and the spring-latch K be released by the hand of the operator at the same time he may reverse the spindle.

Having thus clearly described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a wood-molding machine, a spindle

having cutters upon both ends thereof driven by an ordinary belt-pulley, and hung in suitable bearings, which are swiveled, substantially as shown, to a suitable frame attached to the operating-table, for the purpose of reversing and using either end of said spindle, all constructed and operating as herein described and set forth.

2. In a wood-molding machine, a spindle having cutters upon both ends thereof driven by an ordinary belt-pulley, and hung in suitable bearings, which are swiveled, substantially as shown, to a vertically-adjustable frame carried upon a stationary frame attached to the operating-table, all constructed and operating substantially as described, for the purpose of reversing said spindle, as set forth.

3. In a wood-molding machine, the combination, with the spindle H and the spindle bearings E, having a cylindrical projection, E', by which they are swiveled to and supported in a suitable adjustable or stationary frame secured to the operating-table, of the flanged ring F, having slots $f f'$, and a suitable spring-latch, K, attached to said adjustable or stationary frame, for the purpose of maintaining said spindle in a vertical position, substantially as described and set forth.

4. In a wood-molding machine, the combination, with the spindle-bearings E, having cylindrical projection E', of the flanged ring F, having slots $f f'$, a suitable latch, K, and means, substantially as described, whereby said latch is released from said slots and said spindle is reversed, as and for the purpose specified.

MELVIN L. TOWLE.

Witnesses:

J. B. THURSTON,
C. HUTCHINS.