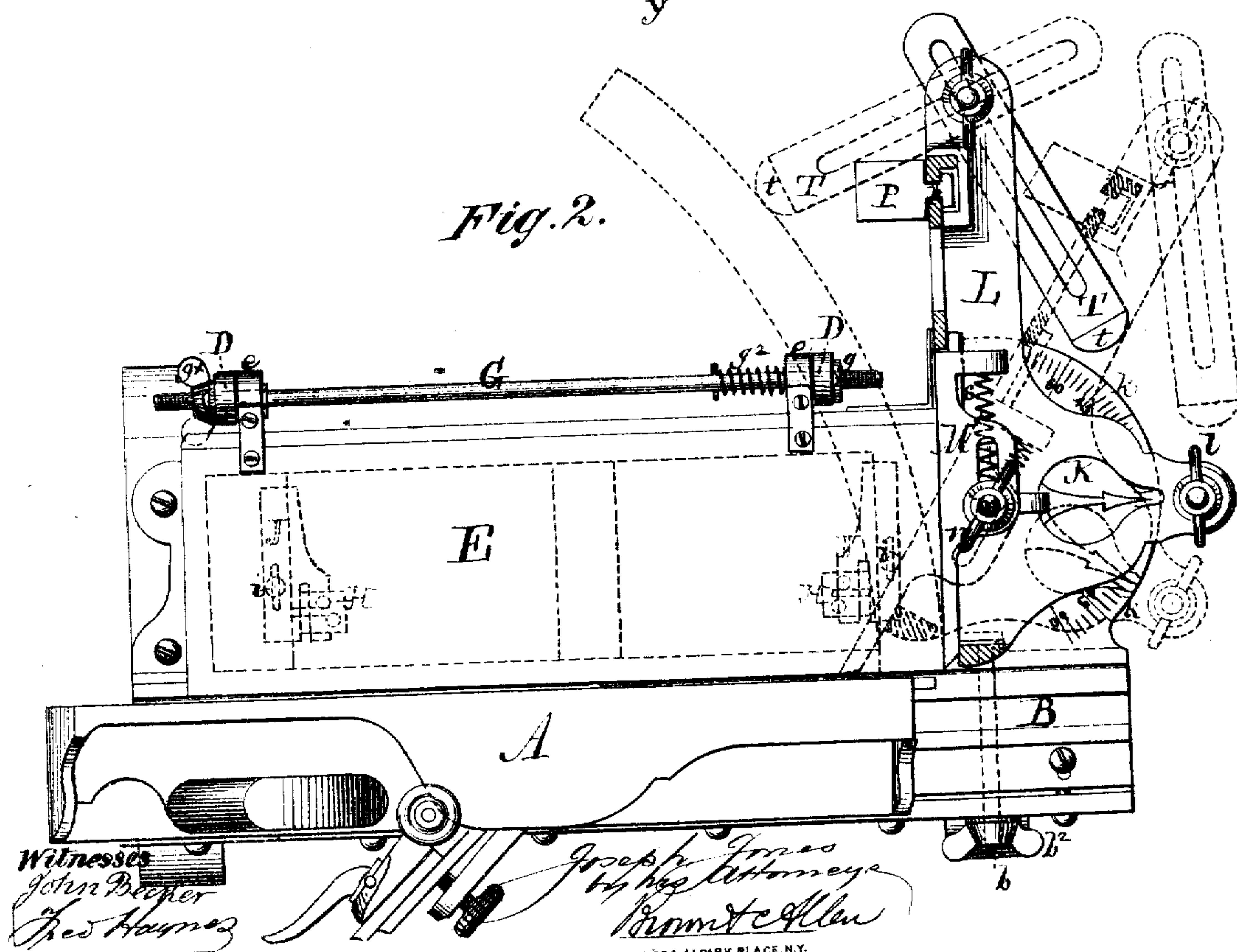
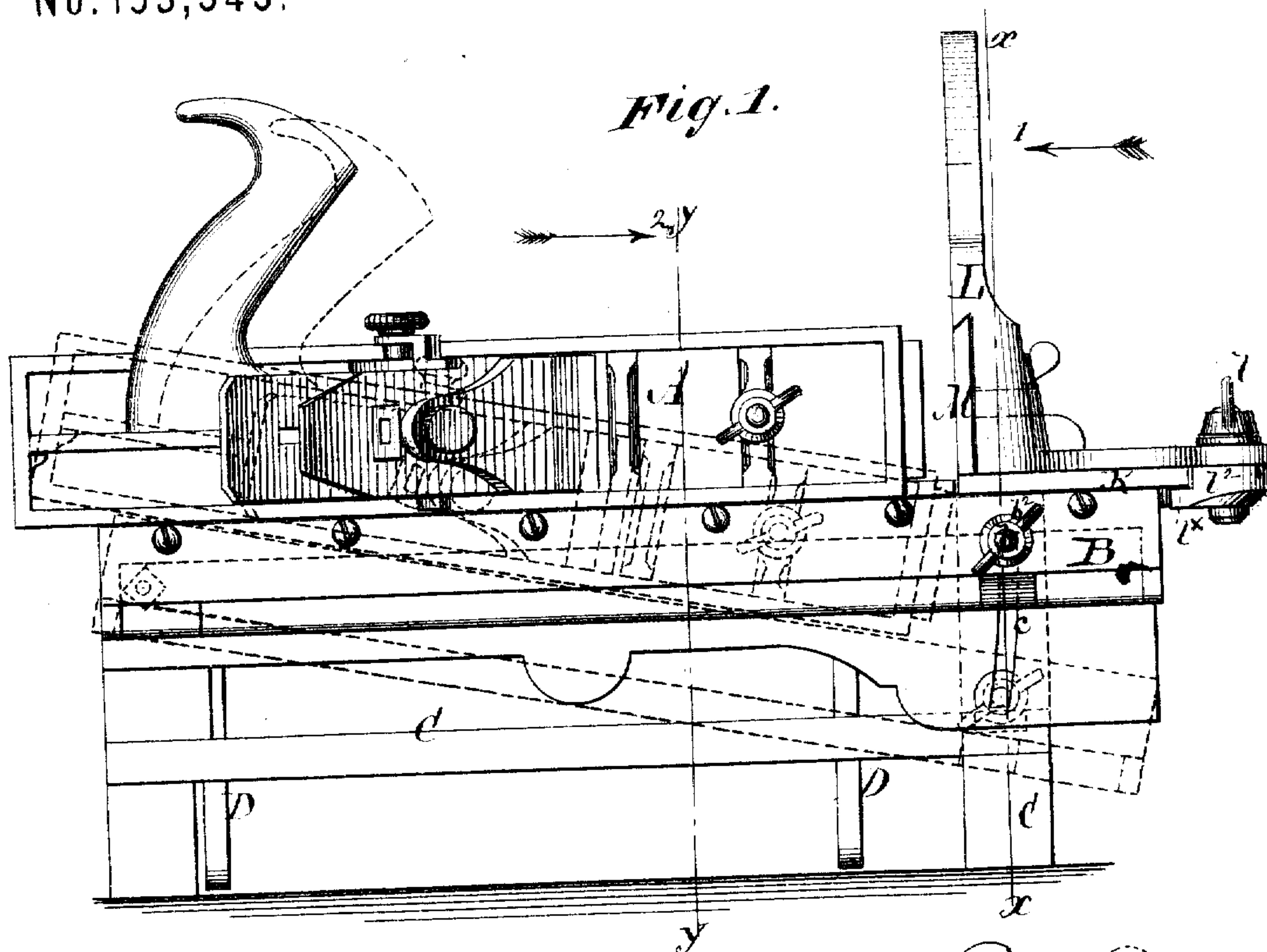


J. JONES.
Mitering-Machines.

Patented July 21, 1874.

No. 153,343.



Witnesses
John Becker
Fred Harnes

Joseph Jones
by his Attorneys
Ernest Allen

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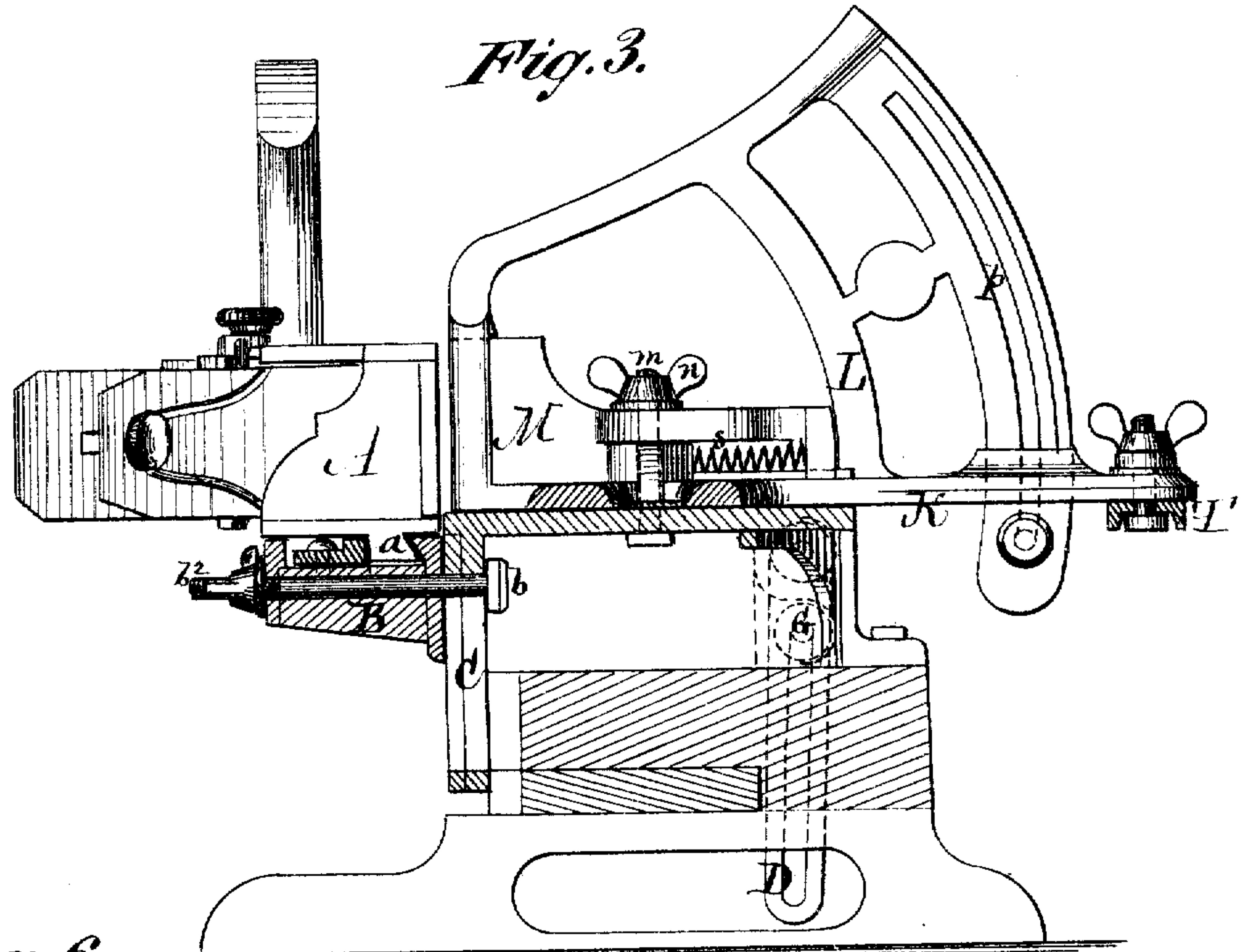


Fig. 6.

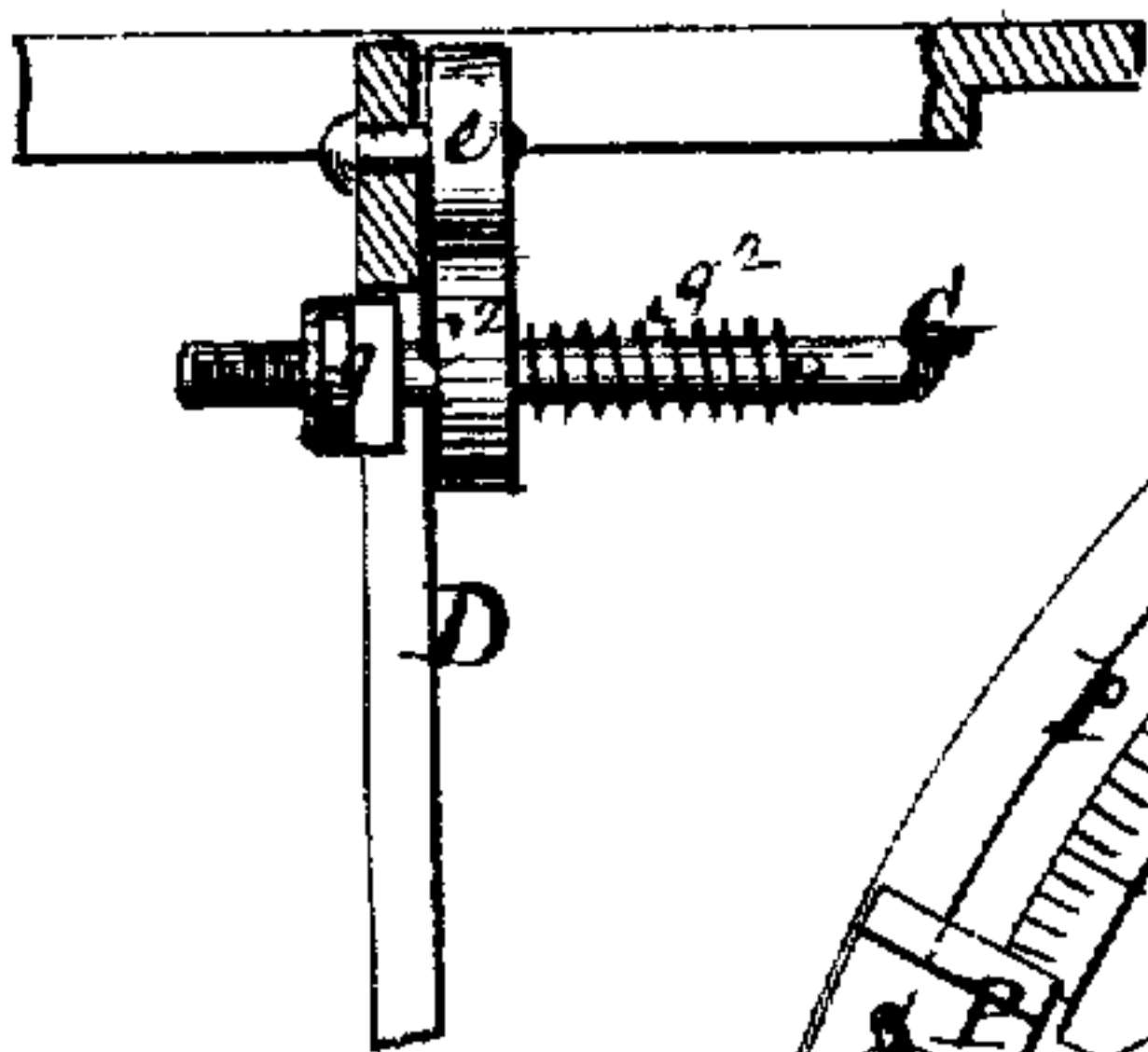


Fig. 5.

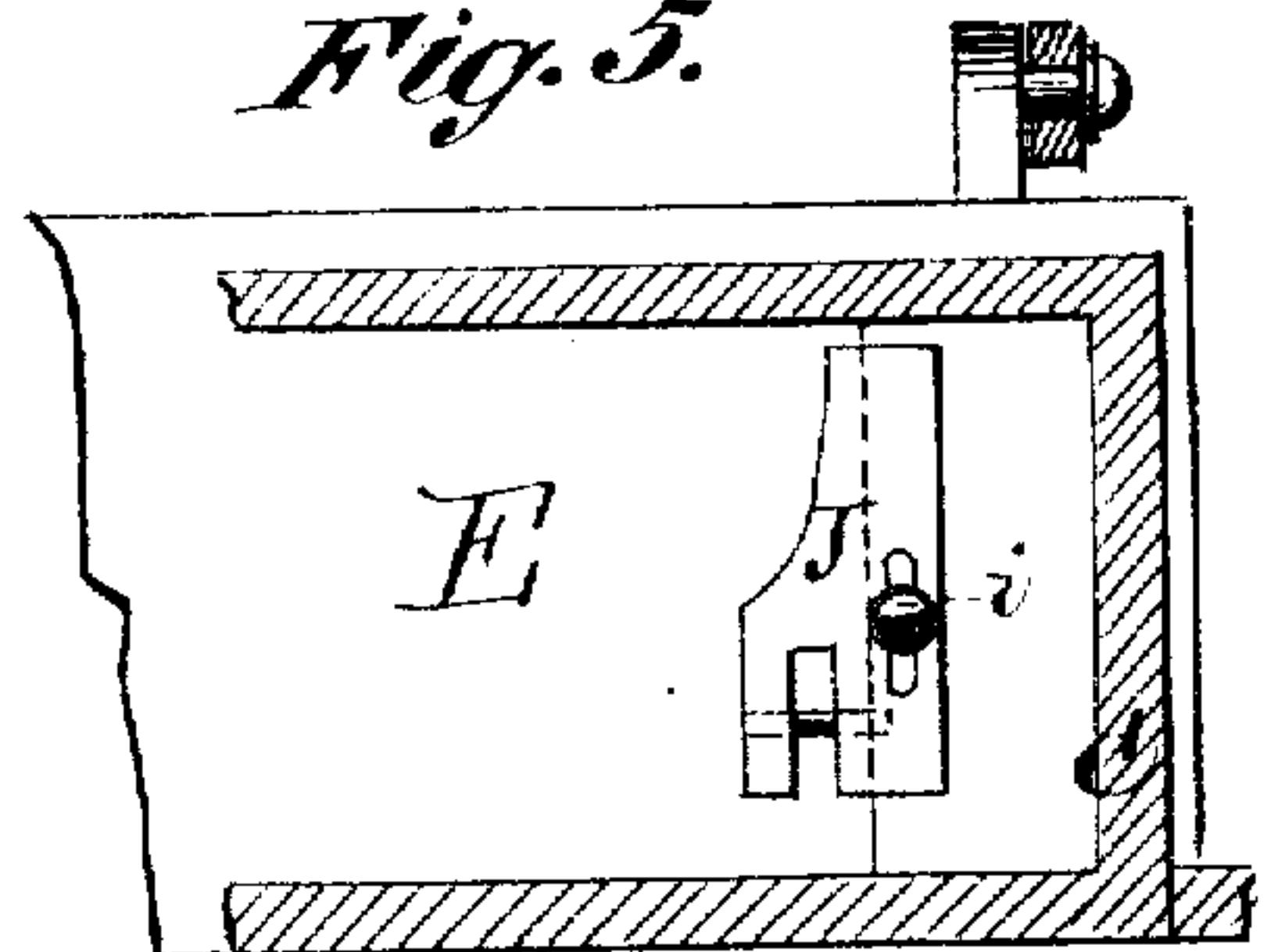
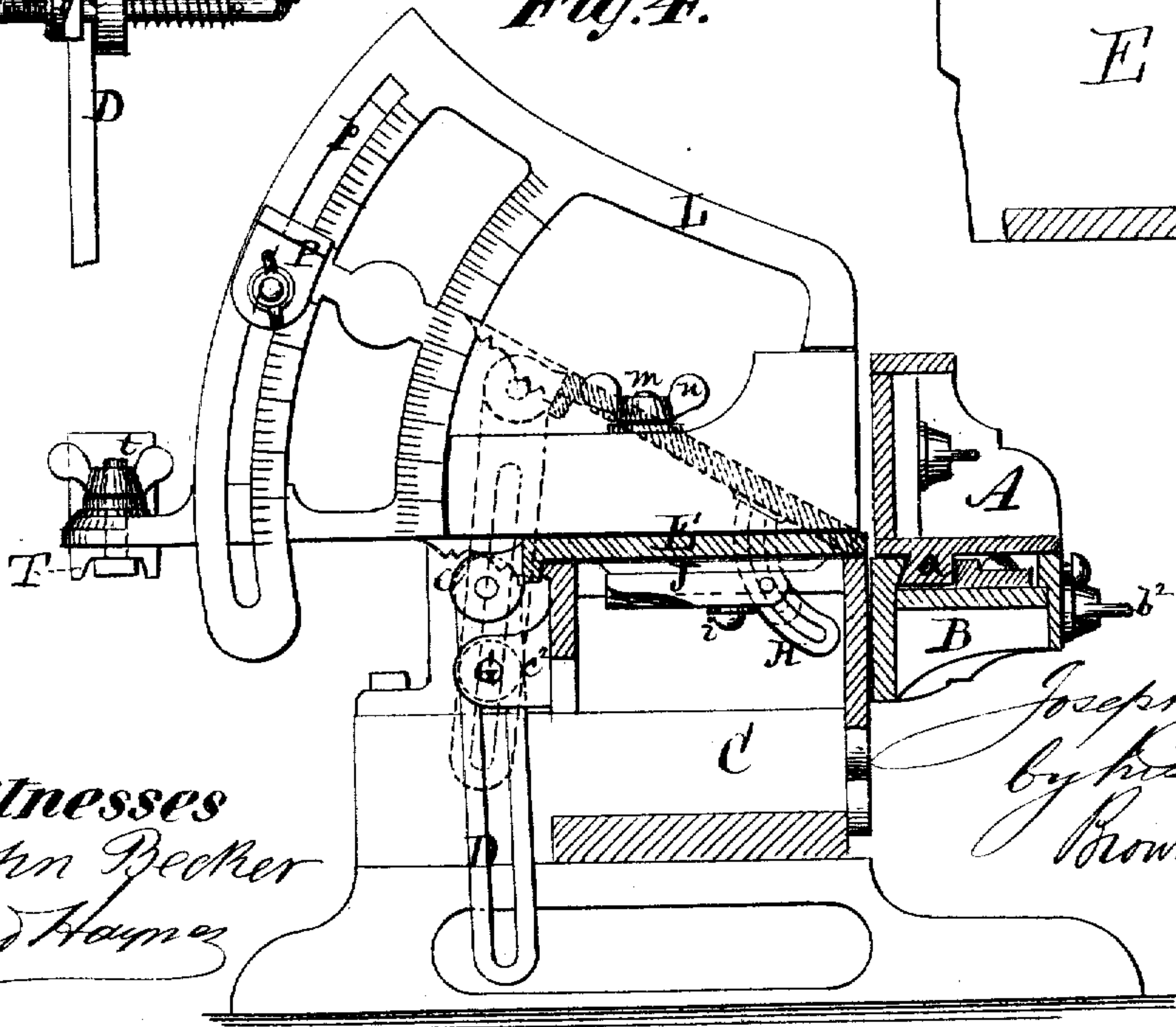


Fig. 4.



Witnesses
John Beecher
Fred Haynes

Joseph Jones
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

JOSEPH JONES, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN MITERING-MACHINES.

Specification forming part of Letters Patent No. **153,343**, dated July 21, 1874; application filed February 26, 1874.

To all whom it may concern:

Be it known that I, JOSEPH JONES, of Newark, in the county of Essex and State of New Jersey, have invented an Improvement in Mitring-Machines, of which the following is a specification:

This invention relates to the construction of mitring-machines, which may be used for shooting-boards, similar to those patented to me February 20, 1866, and January 3, 1871.

The improvements are fully hereinafter described and claimed.

In the accompanying drawing, Figure 1 is a side view of my invention. Fig. 2 is a top view of the same. Fig. 3 is a transverse vertical section taken in the line $x x$ of Fig. 1, looking in the direction of the arrow 1. Fig. 4 is a transverse vertical section taken in the line $y y$ of Fig. 1, looking in the direction of the arrow 2. Figs. 5 and 6 are detail views hereinafter particularly referred to.

The plane A has a rib or tongue, a , on its lower side, of dovetailed or other suitable form, engaging with a corresponding groove in the rest or support B, formed directly in the upper side of said rest, instead of in an intermediate plate. Instead of being stationary, the rest or support B is pivoted at the rear end, so that when in a horizontal position it is about on a level with the top of the main frame of the machine, upon which the bed-plate rests. The front end is provided with a bolt, b , the inner end of which works in a slot, c , in the side of the main frame C of the machine, and the outer portion passes through the rest or support, and is provided with a thumb-nut, b^2 , for clamping it in any desired position.

When the machine is used for dressing thin stuff, in order to render the wear upon the face and bit as uniform as possible, and prevent the formation of grooves or notches therein, the rest or support is inclined downward, as shown in dotted lines in Fig. 1, so as to cause the bit to operate upon the stuff with a shear-cut motion, and cause a uniform wear upon it and the face of the plane.

In the present invention, the bed-plate E is supported by two bars, D D, one near each end. The upper ends of the bars are pivoted to lugs e , formed on the rear edge of the bed-

plate, or attached thereto, the bars being formed with slots extending for nearly their entire length, which slots engage with a bar, G, having its bearings in lugs e^2 , formed on the rear side of the main frame C. One end of the bar has a head, g , formed with a rib or tongue, which engages with the slot, and on the inner side of the lug e^2 nearest to said head is a spring, g^2 , which serves to keep said head engaged with said slot, and also prevents the bed-plate from falling with a too sudden motion. On the outer end of the bar G is a screw-thread provided with a thumb-nut, g^x . When the bed-plate is raised to an inclined position, as shown in dotted lines in Fig. 4, it is held at the desired point by means of the rod G, with its head g and nut g^x pressing against the bars D and lugs e^2 , and clamping them in position. The front edge of the bed-plate is connected to the main frame C by means of curved slotted bars or plates H, having their upper ends rigidly attached to the under side of the bed-plate, and their curved slotted portions passing through slots in blocks J, attached to the frame C, with pins passing through the curved slots for the purpose of guiding them. The blocks J are capable of adjustment toward or from the front edge of the frame, and are held in place by means of set-screws i . By means of these devices, the bed-plate is so adjusted that when it is in an inclined position, as shown in Fig. 4, the front edge does not extend beyond the front edge of the frame, but retains its position flush with said front edge, so as not to interfere with the operation of the plane, and is thus securely locked to the bed-plate. At one end of the upper portion of the frame C is a semicircular horizontal extension, K, having a scale, k , marked on its face near its edge. This extension serves not only as a gage, but also as a support for a pivoted head or rest for the work, and a means for holding the same in position.

The head or rest for the work consists of a skeleton frame, L, with a horizontal base resting upon the semicircular extension K', and pivoted thereto so as to oscillate in a horizontal plane. The horizontal base extends beyond the edge of the extension K, and connects by a thumb-screw, l , with a block, l^2 , formed with

a tongue or rib, I^x , projecting under the extension K, by which means the head or rest is clamped and held in desired positions. It is provided with a pointer to indicate the desired degree upon the scale, and is pivoted at the center of the semicircular extension K, and is so arranged that it may oscillate in both directions, and may be adjusted at any degree within a circuit of about three-quarters of a circle, by which means the work may have its ends dressed at any desired angle with relation to its length. When the head L is adjusted at other than a right angle with the front edge of the frame and bed-plate, there is necessarily an open space between its end and the face of the plane, so that no rest is provided for the end of very thin or very narrow material. To obviate this difficulty, I have provided an auxiliary plate, M, attached to the rest L by means of tongue-and-groove joints and the bolt m , which forms the pivot for said rest, on the upper end of which bolt is a thumb-nut, n . The plate M is formed with a slot for the bolt m to work in, and provided with a spring, S, for pressing it back when not clamped down by the thumb-nut, thus allowing the head or rest to swing around without striking the plane.

In the rear or outer portion of the head or rest L is a stop, p , describing an arc of a circle drawn from the point of junction of the bed-plate with the front edge of the main frame. In this slot works a block, P, which is formed with a rib or tongue fitting the slot, and a thumb-nut and screw for clamping it at any desired point. The block P serves to support the work in an inclined position when it is too long or too wide for the bed-plate.

A graduated scale may be formed on the head L for the adjustment of the block P, and another nearer the center for the adjustment of the bed-plate. At the rear or outer end of the horizontal portion of the head L is an ex-

tension or lug, to which is pivoted a bar, T, having a longitudinal slot running nearly its entire length, through which passes a thumb-screw and nut for clamping it. This bar serves to support the work in a horizontal position, when too long or too wide for the bed-plate, and a vertical standard, t , serves as a rest for the work when dressing a long, narrow, or curved piece, as shown in dotted lines in Fig. 2.

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

1. The combination of the table or main frame with the rest or support B for the plane, pivoted at one end to said table, and adjustable up and down at its other end by means of the bolt b and nut b^2 , all constructed to operate substantially as and for the purpose described.

2. The combination of the adjustable bed-plate E with the bars D D, pivoted lugs $e e$ on the bed-plate, and having slots engaging with a bar, G, bearing in the lugs e^2 , and a spring, g^2 , on said bar for regulating the motion of the bed-plate, substantially as described.

3. The combination of the curved slotted bars or plates H H, adjustable blocks J, frame C, and bed-plate E, for the adjustment of the front edge of the bed-plate, substantially as shown and described.

4. The plate M and spring s , in combination with the adjustable oscillating pivoted head L, and clamped to the semicircular extension K of the main frame by screw m and nut n , substantially as and for the purpose set forth.

5. The combination of the adjustable bar T, head L, and the table or frame, constructed to operate substantially as described.

JOSEPH JONES.

Witnesses:

MICHAEL RYAN,

VERNON H. HARRIS.