

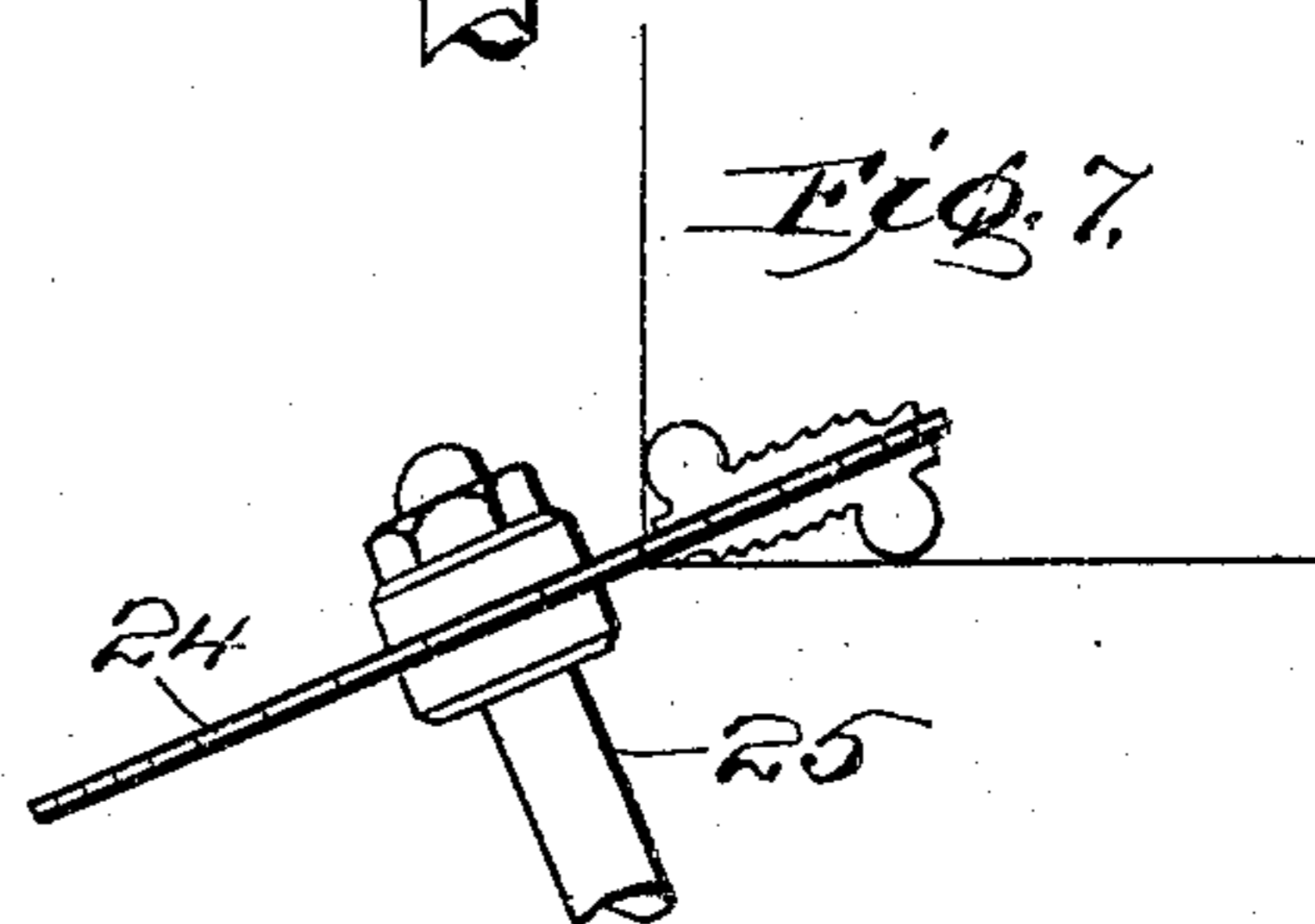
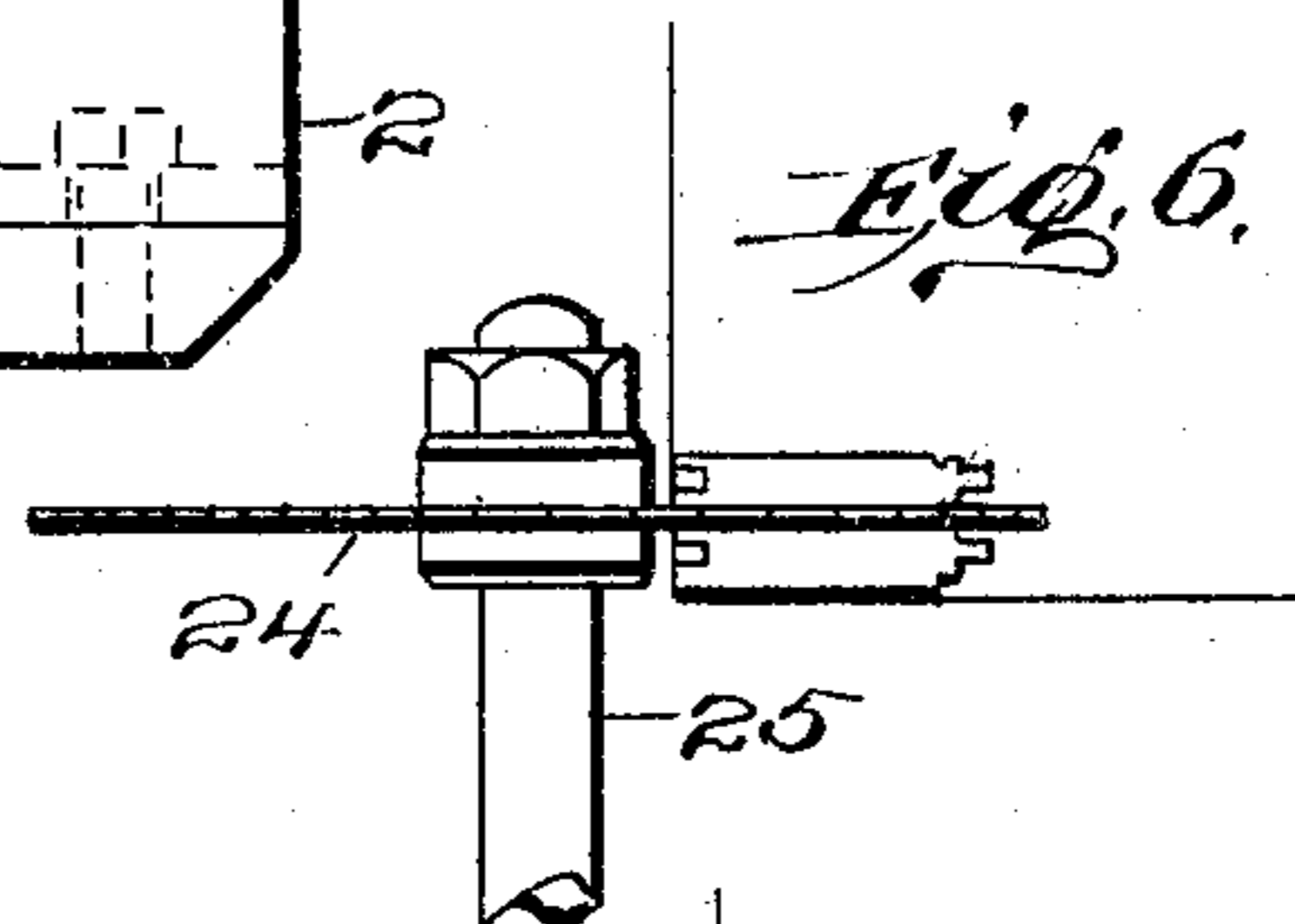
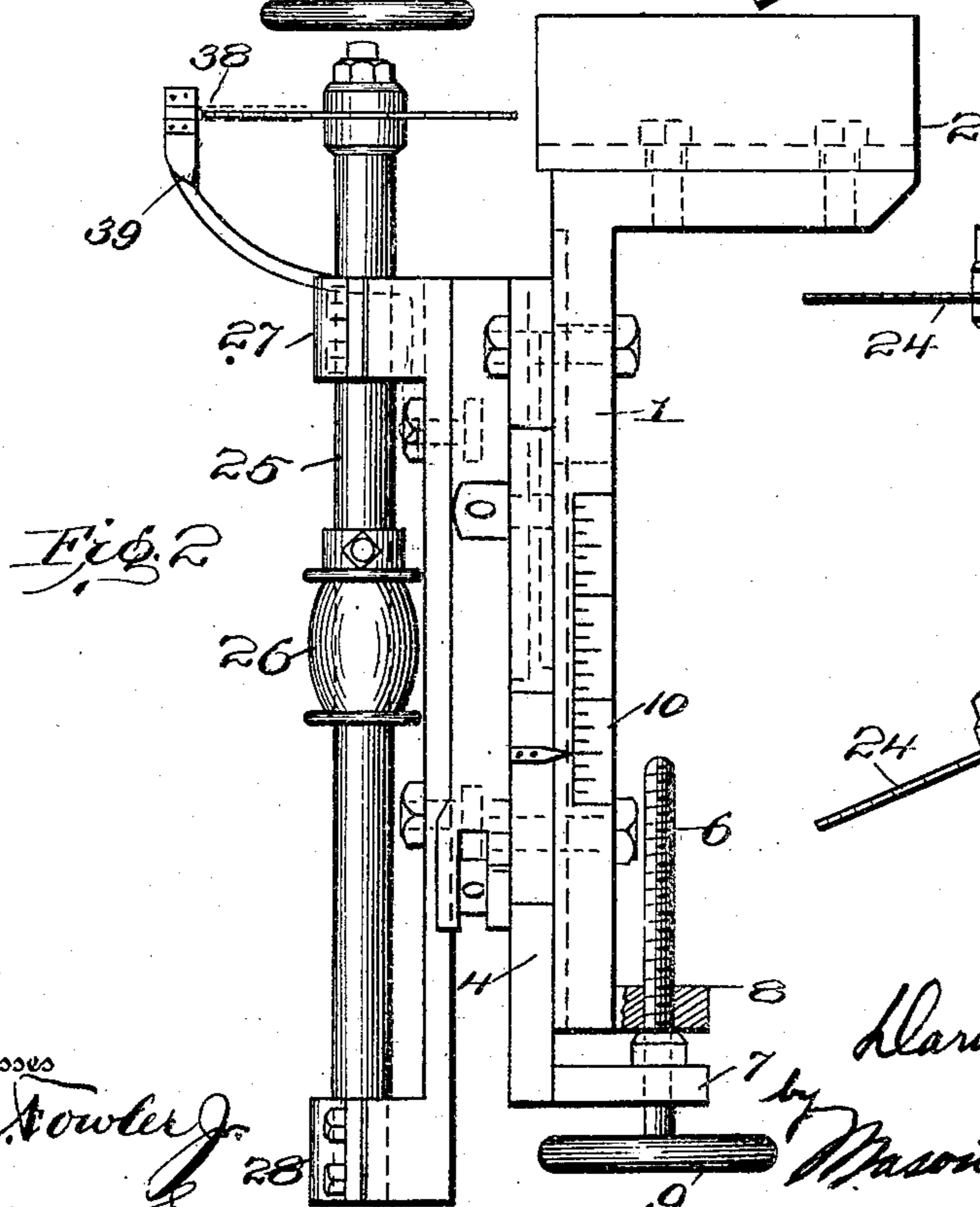
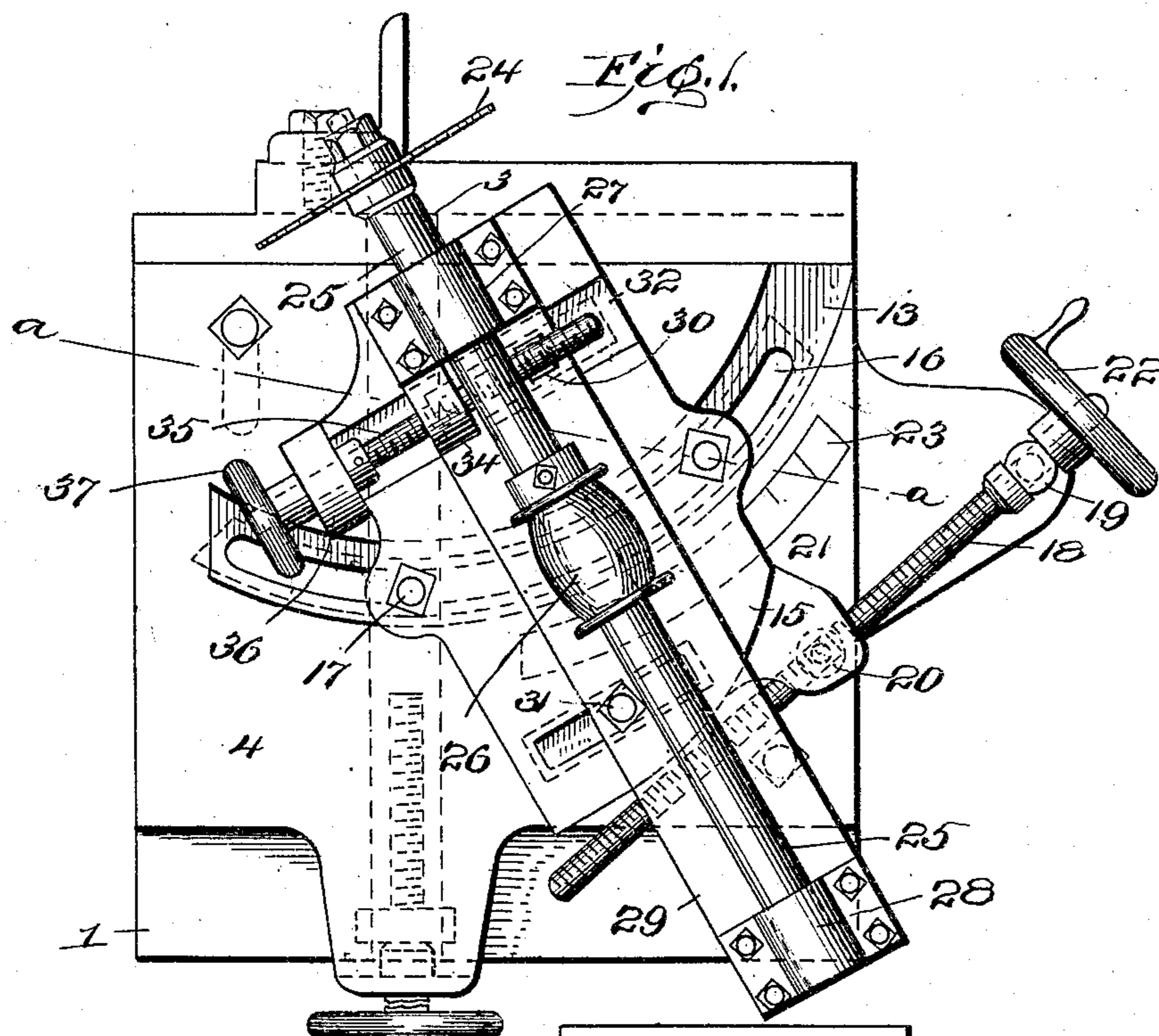
No. 788,434.

PATENTED APR. 25, 1905.

D. W. SHOLLENBERGER.
ATTACHMENT FOR WOODWORKING MACHINES.

APPLICATION FILED MAY 10, 1904.

2 SHEETS—SHEET 1.



Witnesses

J. M. Fowler
Casell Severance

Inventor

Harold H. Shollenberger

by Mason F. Lawrence
Attorney S.

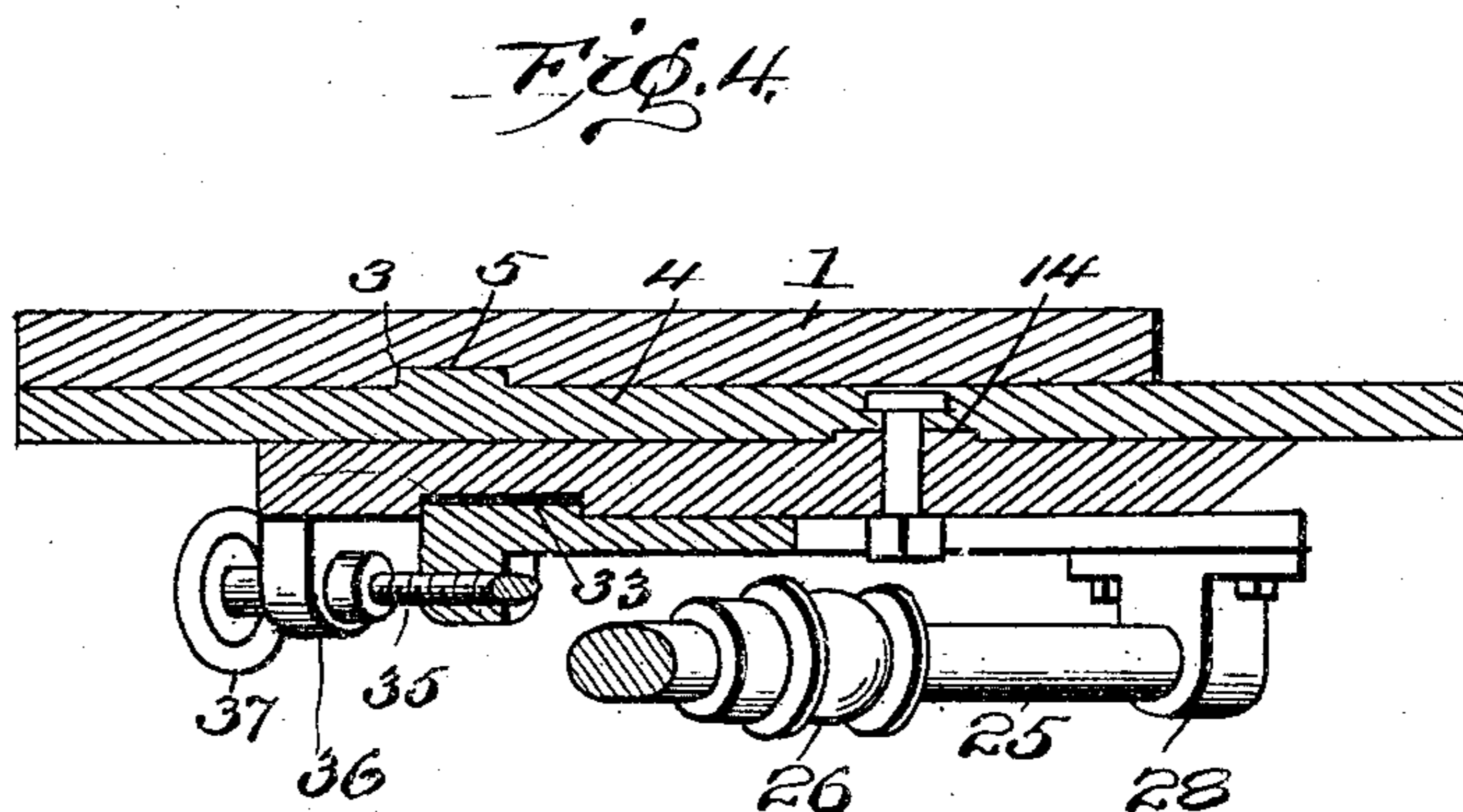
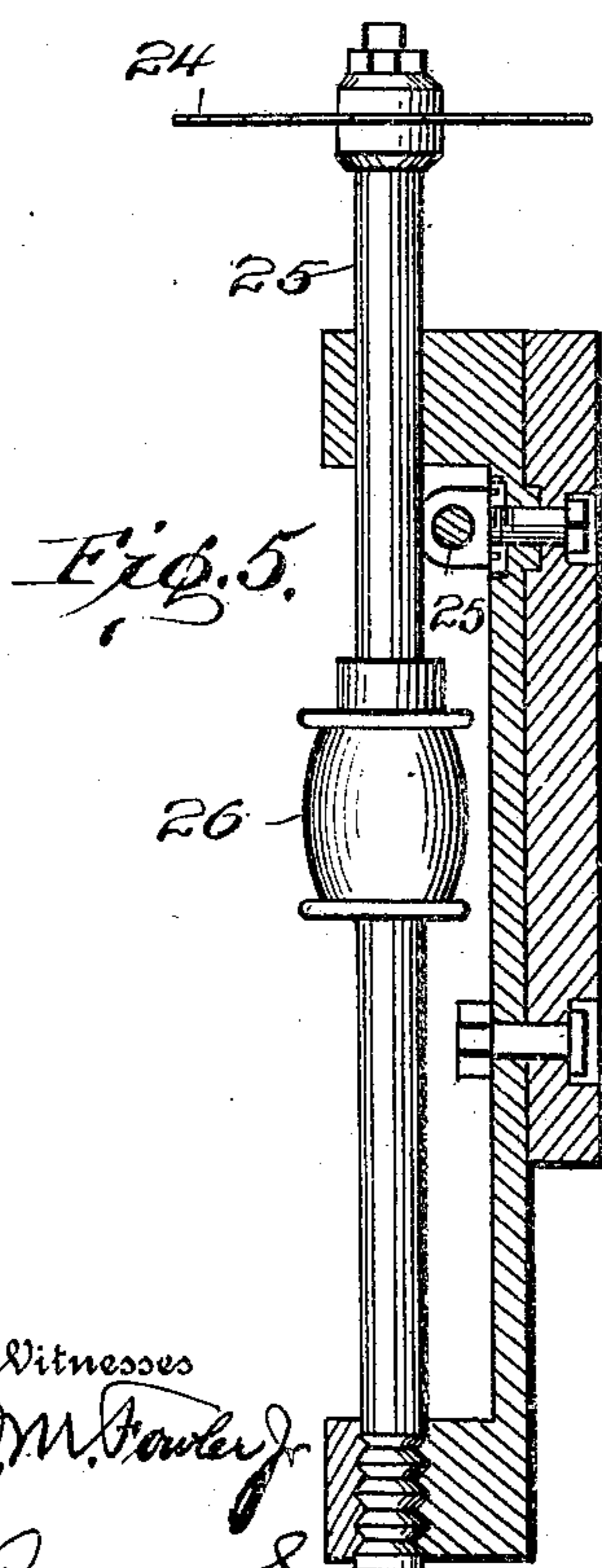
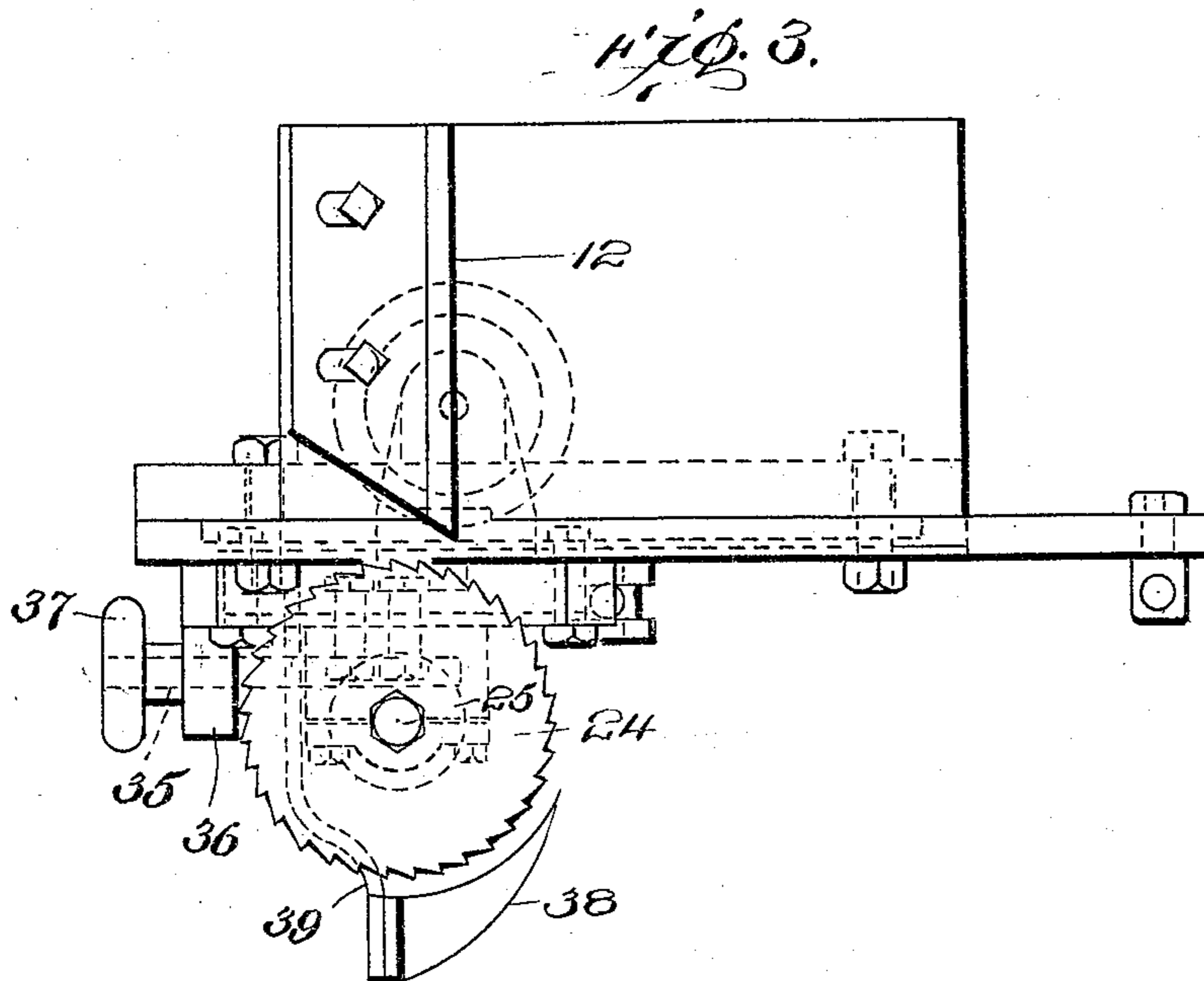
No. 788,434.

PATENTED APR. 25, 1905.

D. W. SHOLLENBERGER.
ATTACHMENT FOR WOODWORKING MACHINES.

APPLICATION FILED MAY 10, 1904.

2 SHEETS—SHEET 2.



Witnesses
J. M. Fowler Jr.
Cassell Severance.

Inventor
Darius St. Shollenberger,
By *Mason, Fennel & Lawrence*
Attorneys.

UNITED STATES PATENT OFFICE.

DARIUS W. SHOLLENBERGER, OF MONTGOMERY, PENNSYLVANIA, ASSIGNOR TO THE AMERICAN WOOD WORKING MACHINERY CO., OF NEW YORK, N. Y., A CORPORATION OF PENNSYLVANIA.

ATTACHMENT FOR WOODWORKING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 788,434, dated April 25, 1905.

Application filed May 10, 1904. Serial No. 207,273.

To all whom it may concern:

Be it known that I, DARIUS W. SHOLLENBERGER, a citizen of the United States, residing at Montgomery, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Attachments for Woodworking-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in a resawing mechanism, and it is especially adapted for use in connection with molding-machines, matching-machines, and surfacing or sawing machines.

The invention consists in an attachment for woodworking-machines comprising a vertically-adjustable member, a swinging adjustable member, and a laterally-adjustable member, the said members carrying and controlling one or more saws.

The invention further consists in a vertically-adjustable plate capable of attachment to a woodworking-machine, a pivotally-moving plate carried thereon, and a laterally-moving yoke mounted on the plate having a sliding action, together with a cutter-arbor and one or more cutters carried thereby.

The invention also consists in certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 is an end elevation of the frame of a woodworking-machine, my improved sawing mechanism being secured thereto and shown in elevation. Fig. 2 is an edge elevation of the said sawing mechanism. Fig. 3 is a top plan view of a portion of a woodworking-machine, showing the resawing mechanism mounted thereon. Fig. 4 is a horizontal sectional view taken upon the line *a a* of Fig. 1. Fig. 5 is a detail sectional view taken longitudinally through the saw-bracket and plate holding the same, the section being taken longitudinally of said bracket and the saw-arbor being shown in elevation. Fig. 6 is an enlarged detail view of a saw held in position for resawing flooring. Fig. 7 is a similar view, but

showing the saw held at an angle and in readiness for resawing moldings.

The present invention is designed for providing a simple and easily-adapted mechanism for the resawing of moldings, flooring, wainscoting, siding, or ceilings of various patterns to produce duplicates at a single operation of the machine. The attachment is capable of being mounted upon molding-machines, matching-machines, surfacing-machines, or various kinds of sawing-machines.

In the accompanying drawings I have illustrated the invention as applied to a bed or frame of a woodworking-machine, the attachment being carried by a depending apron 1, secured to the work-bed 2 at one end thereof. The apron 1 is so formed as to adjustably support the resawing mechanism, and in order to hold the same in proper position when adjusted the apron is formed in its outer face with a vertical groove or recess 3. Movably mounted upon the apron 1 is a vertically-adjustable plate 4, which is formed with a rearwardly-projecting rib or tongue 5, which fits into said groove 3. A simple means of adjusting the plate 4 upon the apron 1 is illustrated in the drawings and consists in a vertically-arranged screw 6, which is carried at its lower end by an intumed lug 7, formed at the lower end of the plate 4. The screw 6 engages a screw-threaded aperture formed in a rearwardly-projecting lug 8. The lug 8 is carried by the apron 1 and is of course held in a fixed position. By rotating the screw 6 by means of the hand-wheel 9 the plate 4 may be raised or lowered with respect to the apron. The extent of movement of the plate with respect to the apron can be accurately discerned by means of a scale 10, formed upon the edge of the apron 1, and a pointer 11, carried by the plate 4. If it is desired to raise the plate 4 a half-inch or an inch, it is only necessary to turn the screw 6 until the pointer 11 shows the desired lifting of the plate with respect to the scale 10. The adjustment of the plate 4 forms the means for attaining the different heights desired for the resawing-cutter.

It is often necessary to set the cutter of the resawing mechanism at various angles with respect to the work-bed 2 and its guide 12,

which is mounted thereon. The face of the guide 12 stands perpendicular to the top surface of the work-bed 2. In order to secure the desired angles, the saw-carrying mechanism is so mounted upon the outer face of the plate 4 that it may be moved upon the arc of a circle the center of which lies in the intersection of the plan of the guide with the upper surface of the work-bed. With this point as a center a segmental groove 13 is formed, the said groove being adapted to receive a corresponding segmental rib or projection 14, carried upon the back of a plate 15. The groove 13 is also provided with a segmental slot 16, which extends through the material of the plate 4, and bolts or screws 17, secured to the said plate 15, engage the said slot 16, so as to prevent the segmental rib from being accidentally displaced. These bolts are sufficiently loose to permit of the adjustment of the plate with respect to a vertically-adjustable plate 4 beneath it. To render the adjustment of the plate 15 easy of accomplishment, a screw-rod 18 is employed, one end of which has a bearing in a swivel-stud 19, carried by a projection upon the plate 4, while the other end, which is screw-threaded, engages a swivel-nut 20, carried in a bifurcated portion 21 of the plate 15. The screw-rod 18 is also provided with a hand-wheel 22, by which it may be easily and quickly rotated in changing the angle of the plate 15. To properly gage the angle of said plate, a segmental scale 23 is placed upon the plate 4 adjacent to the segmental groove 13.

The cutter employed is preferably a saw 24, secured to an arbor 25, which arbor is provided with an actuating-pulley 26. The arbor is mounted in bearings 27 and 28, which are secured to the bracket 29. The engagement of the arbor with the bearings is such that the arbor may be rotated, but cannot move longitudinally with respect to the bracket. The arbor is so mounted upon the bracket that the saw can be brought in alignment with the angle formed by the guide 12 with the surface of the bed 2, as shown in Figs. 1 and 7. In order to be able to adjust the arbor laterally upon the swinging plate 15, the bracket is movably held thereon by means of bolts 30 and 31, which engage slots formed transversely of the plate 15. In order to prevent the bracket from assuming different angles with respect to the plate 15 and yet to permit the same to be adjustable across the plate 15, the plate is provided with a transverse groove 32, which is engaged by the transverse projection or rib 33, formed upon the back of the bracket 29. The bracket is formed with an apertured lug 34 opposite the groove 32, which is engaged by the threaded rod 35, so that by turning the rod the bracket may be moved back and forth with respect to the plate 15. The screw-rod 35 is held in proper position by its engagement with the

bearing formed in a standard 36, which is turned outwardly from the face of the plate 15. A hand-wheel 37 is secured to the end of the screw-rod 35 to rotate the same. The screw 35 is arranged parallel with the groove 32, so that in turning the screw the bracket is moved so that its rib or guiding projection 33 may move back and forth in the said groove. In this manner a lateral adjustment of the resawing-cutter can be effected. The various adjustments of the plates and the bracket, as above described, are independent of each other, so that one adjustment can be made without affecting another. The pulley 26 is adjustably fixed to the arbor 25, so that it may be secured at any point along the length thereof to adapt it to connection by means of belting with any suitable power mechanism.

In using the resawing mechanism for forming molding the saw is preferably set at such an angle that it will divide the molding evenly, forming duplicate pieces upon each side of the saw. A saw is brought to such a position that it will cut in a plane intersecting the angle made by the guide 12 with the bed-plate 2, as clearly shown in Figs. 1 and 7. If, however, the saw is to be employed for resawing flooring, the plate 15 is so adjusted as to bring the arbor 25 in a vertical plane. The plate 4 is then elevated upon the face of the apron, so that the saw is lifted to a plane parallel with the surface of the bed 2 and in proper relation to split the flooring, as shown in Fig. 6. The adjustment of the saw vertically is operated with reference to the scale 10, so that the cut in resawing can be made accurately at the point desired. The adjustment of the saw at the different angles for operating upon different materials is quickly effected by rotating the screw-rod 18 and moving the bracket-supporting plate 15 upon the arc of a circle with reference to the scale 23.

In order to keep the parts which have been sawed by the cutter a suitable distance from each other and to prevent the upper piece from dropping and resting upon the saw, I provide a plate or arm 38 at a point opposite the edge of the saw, the said plate being mounted upon the end of the arm 39, which is secured to the arbor-bracket 29.

It will be observed that the resawing attachment is of such a character that it may be readily applied to various kinds of wood-working-machines, and mechanism is simple and easily operated and yet very effective for the purpose desired. It is possessed of advantage also in that the various movements of the parts to their adjusted positions may be independent of each other.

From the fact that the arc of a circle upon which the angular adjustments of the saw are obtained has for its center the point at the intersection of the guide with the working bed it follows that the saw or cutter may be set to any desired angle with respect either to the

guide or the bed-plate. After the angle desired has thus been obtained a horizontal adjustment as well as a vertical adjustment may be effected without disturbing the angle with relation to the bed-plate and the guide. It will be evident that the saw or cutter may be set to any vertical distance from the face of the bed-plate and then changed to any required angle, after which it may be adjusted horizontally without disturbing the obtained vertical distance with relation to the bed-plate. It will also be evident that the saw may be set to any horizontal position in relation to the guide, and then the angle of the saw may be altered to a proper position in relation to said guide and bed, or any desired vertical position may be obtained in regard to the bed and the angle with respect thereto afterward obtained, the cutting-line of the saw always retaining its relation to the center of the arc of the circle on which the angular adjustment is made. The center of the arc of the circle located at the intersection of the guide and the face of the bed-plate is not lost by any vertical, horizontal, or angular adjustment which may be made.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

30 1. A resawing mechanism comprising a vertically-movable support, a pivotally-mounted support carried thereon, a laterally-moving bracket upon the pivoted support and a saw carried by the said bracket, the pivotal mounting of the pivotal support being such that the center of movement for said pivoted support shall lie in the plane of the cut made by the saw.

40 2. A resawing mechanism comprising a saw, means for adjusting the saw vertically, means for adjusting it horizontally, and means pivotally mounted for carrying the saw to different angles with respect to the work-bed of the machine, the saw always lying in the plane of the pivotal center of the pivot mechanism.

45 3. A sawing mechanism comprising a work-support, a saw, a swinging support therefor, the saw always extending across the pivotal center of movement of the said swinging support, and means for adjusting the swinging support to bring the center of movement above or below the plane of support for the material to be operated upon.

55 4. A sawing attachment for woodworking-machines, comprising a work-bed, a swinging plate having movement about a given center, a saw mounted thereon and held so as to always lie across the center of movement of said plate, means for adjusting the swinging plate to bring the said center of movement to different heights above or below the work-bed of the machine the adjustment of the plate not affecting the position of the saw with respect to the center of movement of said plate.

65 5. In combination with a support for mate-

rial to be sawed, a sawing mechanism comprising a saw, a swinging plate carrying the same, the said plate having a pivotal movement about an axial line which is always in the plane of the saw, means for adjustably holding the saw in its own plane upon the plate, and means for adjusting the swinging plate vertically to bring the saw above or below the support for the material to be operated upon.

6. A sawing mechanism, comprising a material-support, a saw, a plate carrying the same having a pivotal movement about a given point, which point lies in the plane of the saw, means for adjusting the saw in its plane upon the said plate, and a vertically-adjustable support carrying the pivoted plate and capable of moving the saw to different heights both above and below the support for the material to be operated upon.

7. A resawing mechanism for woodworking-machines comprising a vertically-adjustable supporting-plate, a swinging plate mounted thereon and engaging a segmental guide formed upon the supporting-plate, a bracket adjustably mounted on the swinging plate and a saw carried by the said bracket, the saw always crossing the pivotal center of the swinging plate.

8. A resawing attachment for woodworking-machines, comprising a vertically-adjustable supporting-plate, a swinging plate mounted thereon and provided with a segmental projecting tongue, the supporting-plate having a segmental groove for receiving and guiding the said tongue, a saw-arbor, a saw carried thereby and extending across the center of pivotal movement of the swinging plate, and a bracket carrying the said arbor and adjustably secured to the swinging plate, the adjustment of said bracket being at right angles to the axis of the arbor.

9. A sawing attachment for woodworking-machines comprising a plate mounted upon the apron of the machine, said plate having a guiding-rib formed thereon, the said rib engaging a groove in the apron of the machine, a screw engaging the apron and carried by the said plate for adjusting the plate, a swinging cutter-carrying plate mounted on the supporting-plate and a cutter mounted upon the swinging plate so that its axis of movement extends approximately in a radial direction with respect to the center of movement of the swinging plate.

10. A sawing mechanism comprising a supporting-plate having a segmental groove formed therein, a swinging plate having a segmental rib for engaging the said groove, a screw carried by the supporting-plate and engaging the swinging plate for adjusting it to different angles, a bracket mounted upon the swinging plate, guiding means interposed between the bracket and the plate, an adjusting-screw carried by the swinging plate and engaging the bracket for moving it laterally,

and a saw or cutter carried by the said bracket and extending radially with respect to the segmental slot of the supporting-plate.

11. A sawing mechanism comprising a vertically-adjustable supporting-plate, a swinging adjustable plate mounted thereon, a segmental guiding means interposed between the two plates, a saw and arbor carrying the same, a bracket carrying said arbor mounted upon the swinging plate and provided with a guide-rod extending parallel with the saw, a groove extending transversely of the swinging plate,

and means for adjusting the plates with respect to each other, and means for adjusting the bracket laterally upon the swinging plate, the saw being thus maintained always in the same plane with respect to the swinging plate. 15

In testimony whereof I hereunto affix my signature in presence of two witnesses.

DARIUS W. SHOLLENBERGER.

Witnesses:

L. P. ANDREWS,
S. J. LEONARD.