

2 Sheets—Sheet 1.

Patented Oct. 27, 1891.



(No Model.)

2 Sheets—Sheet 2.

P. B. CLARK.
MACHINE FOR CUTTING BUTTON FLIES.

No. 462,205.

Patented Oct. 27, 1891.

Fig: 3.

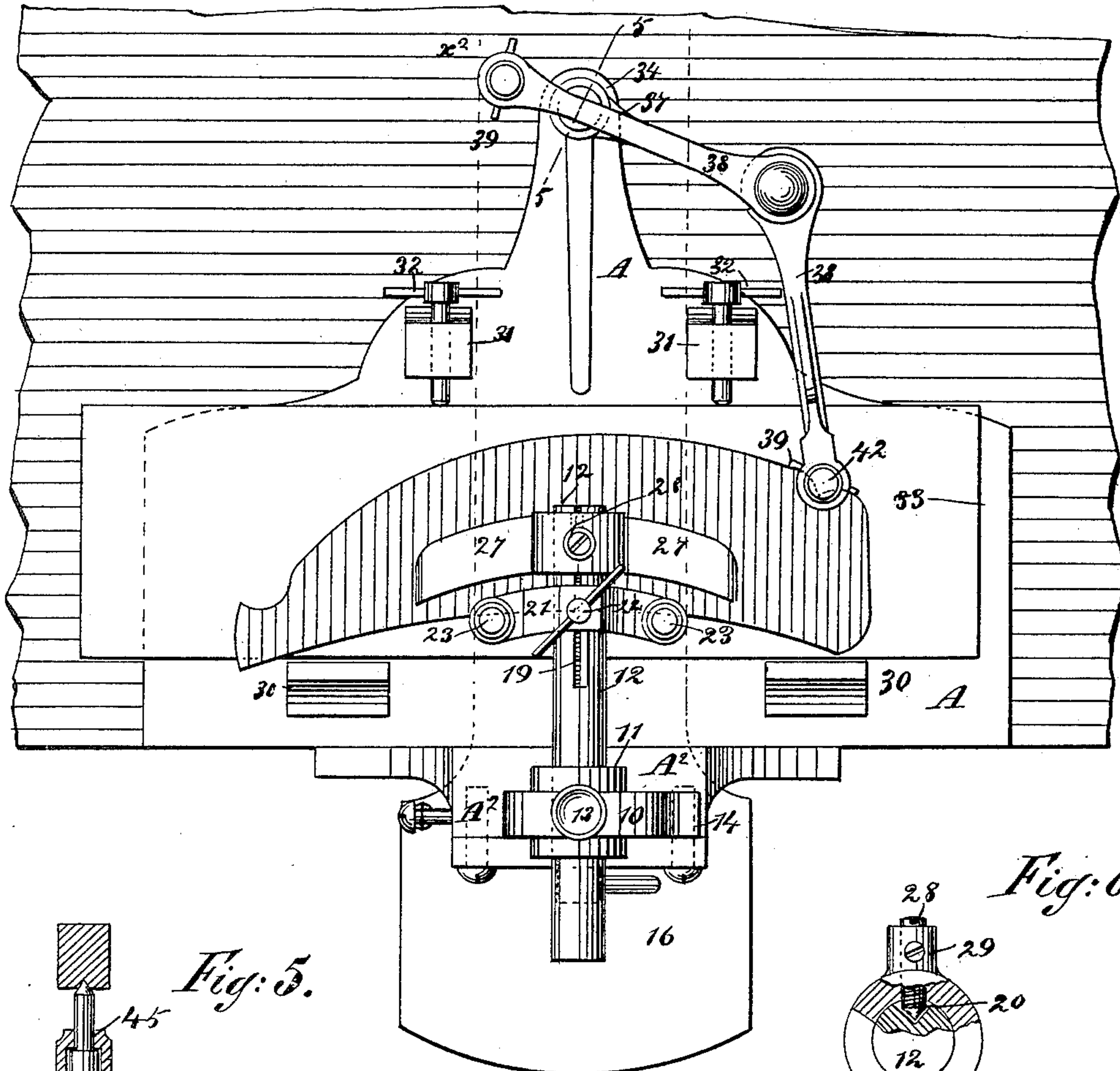


Fig: 5.

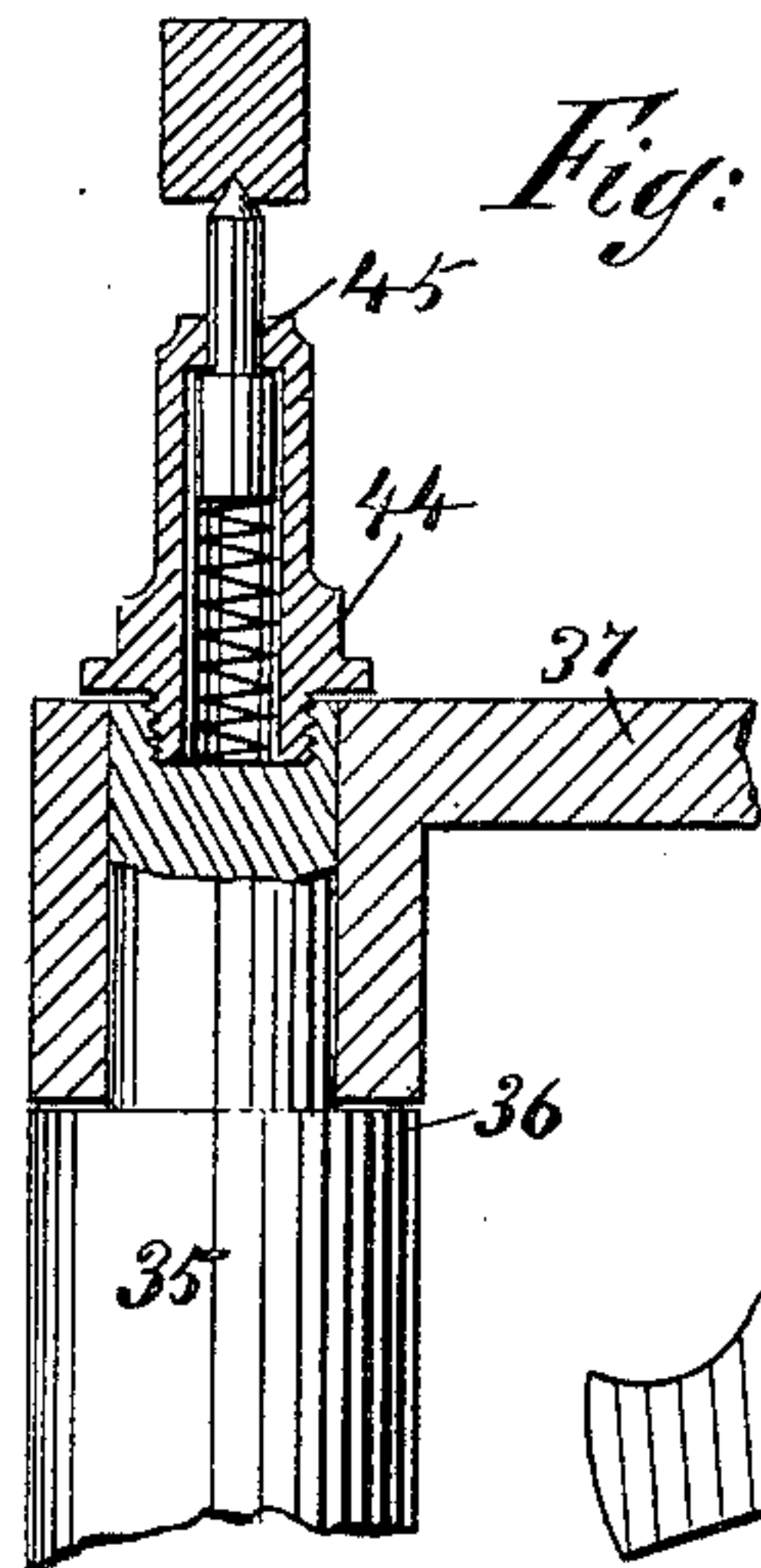


Fig: 4.

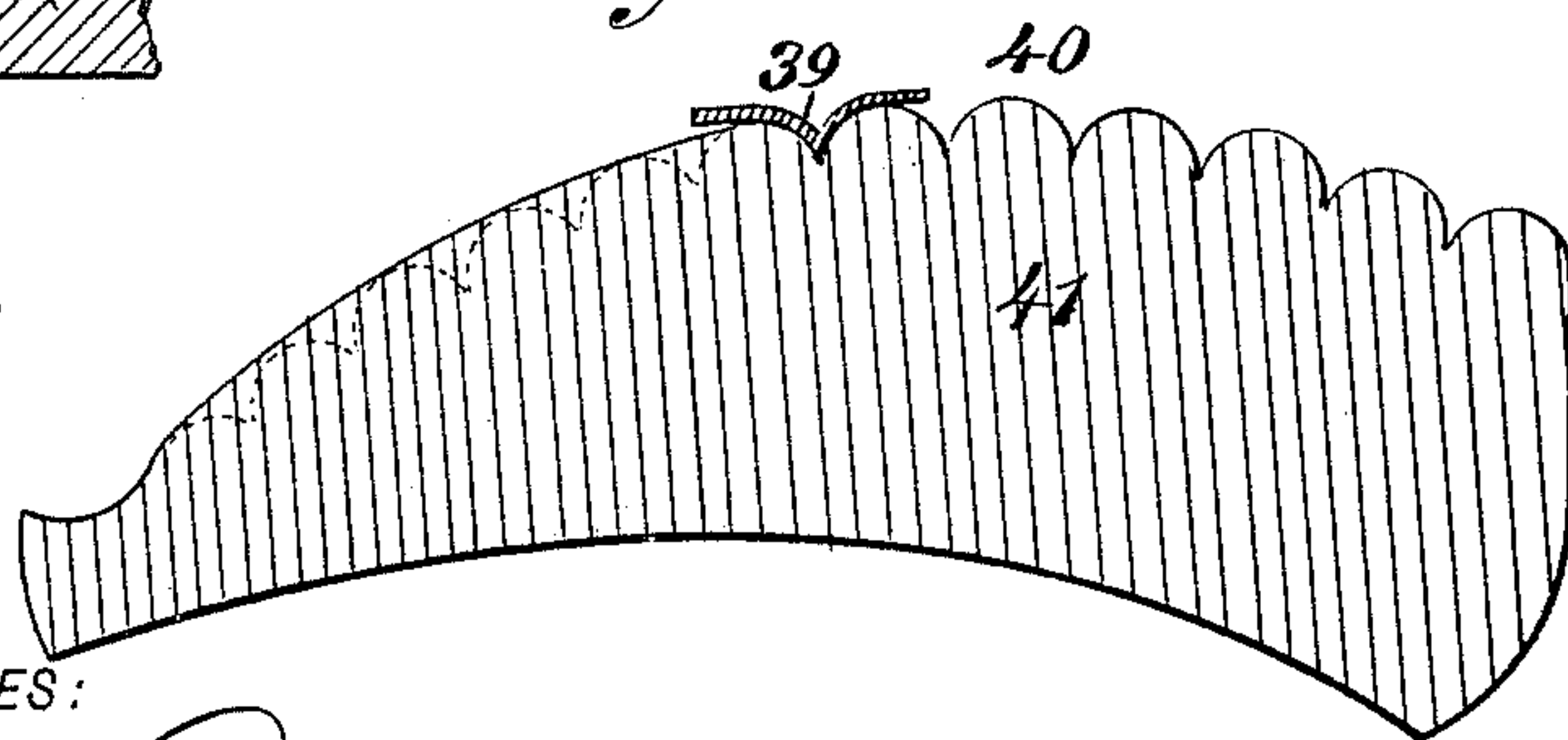


Fig: 6.

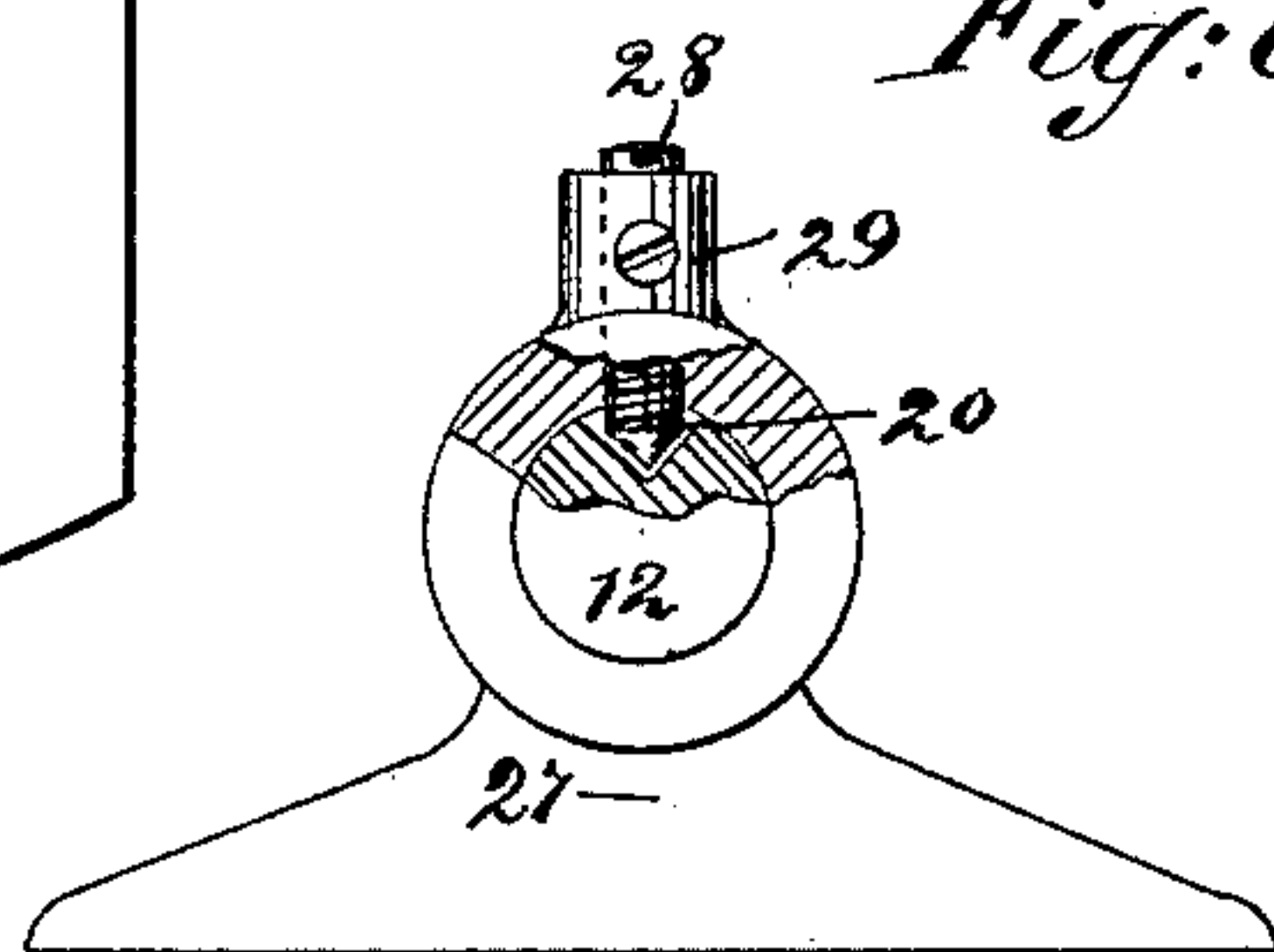
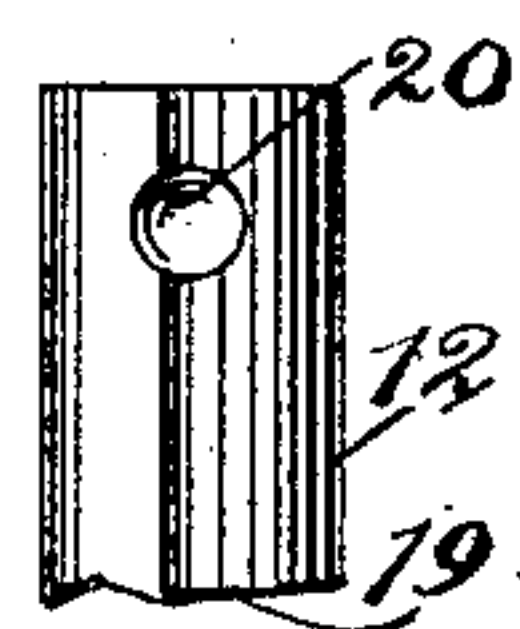


Fig: 7.



WITNESSES:

Chas. Nida.
C. Sedgewick

INVENTOR.

P. B. Clark
BY *Munn & Co*
ATTORNEYS

UNITED STATES PATENT OFFICE.

PHILO B. CLARK, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO
JAMES E. KING, OF SAME PLACE.

MACHINE FOR CUTTING BUTTON-FLIES.

SPECIFICATION forming part of Letters Patent No. 462,205, dated October 27, 1891.

Application filed March 11, 1891. Serial No. 384,525. (No model.)

To all whom it may concern:

Be it known that I, PHILO B. CLARK, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Machine for Cutting Button-Fly Scallops for Shoes, of which the following is a full, clear, and exact description.

My invention relates to an improved machine for cutting button-fly scallops for shoes, and has for its object to provide a machine of simple and durable construction having two or more swing-cutters attached, and to so construct the machine that the clamping-head may be expeditiously adjusted to engage with and bind upon an anvil-block a greater or a less number of flies, including the pattern, and whereby also the anvil-block may be reduced in thickness as its surface becomes marred and adjusted to a proper position to receive the flies.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is an end view of the machine. Fig. 2 is a rear elevation thereof. Fig. 3 is a plan view. Fig. 4 is a plan view of the flies, illustrating scallops produced thereon and a cutter in position, the said cutter being in transverse section. Fig. 5 is a section taken on the line 5 5 of Fig. 3. Fig. 6 is a partial front elevation and partial sectional view of the spindle and the clamping-head connected therewith, and Fig. 7 is a plan view of the inner end of the clamping-head spindle.

The base-plate A of the machine is preferably rectangular, and is provided with an extension A' integral with its inner side edge and a vertical post A² integral with or attached to the central portion of its outer edge. The post A² is provided with an opening extending through from top to bottom, and a slide 10 is located in the said opening, extending beyond the top and bottom of the post, the upper end of which slide is provided with a journal-box 11, in which a horizontal spin-

dle 12 is adjustably held, being provided with a suitable fastener. The adjustment is effected through the medium of a set-screw 13, which passes through the box at the top and has a bearing upon the spindle.

The slide 10 has formed near its upper end upon one side an ear 14, which defines the limit of its downward movement, and its upward movement is defined through the medium of an angled bar 15, adjustably attached to the outer face of the slide below the post A², as shown in Fig. 2. The slide is operated through the medium of a treadle 16 or its equivalent connected by a link or pitman 17 to the lower end of the slide. The slide is supported in the post through the medium of a spring 18, attached at one end to the post and at its opposite end to the slide below the post. In the upper surface of the spindle 12, at the inner end thereof, a longitudinal groove 19 is produced, and at the end of the groove an aperture or recess 20 is formed. A gage-arm 21 is held to slide upon the spindle, which arm is provided in its upper central surface with a set-screw 22, the lower end of which screw enters the groove or channel 19. At or near each end of the gage-arm a vertical tubular section 23 is located, usually closed at the upper end by a cap 24. Within each tubular extension a spring 25 is located, bearing at its upper end against the cap, and to the lower end of the spring a vertical finger 26 is attached, which extends below the tubular section 23, as is best shown in Fig. 2. A clamping-head 27 is located upon the inner end of the spindle, and the said clamping-head is preferably curved laterally in the direction of the front, as shown in Fig. 3, and is held in adjustable engagement with the spindle by means of an adjusting-screw 28, passed through its upper portion into the aperture 20 of the spindle. The adjusting-screw 28 does not extend to the bottom of the aperture or recess 20, as shown in Fig. 6, in order that the clamping-head may have a slight lateral movement and adjust itself to any inequalities in the thickness of the pile of flies to be operated upon. The adjusting-screw is prevented from leaving the fixed position by means of an engaging set-screw 29. Upon the base, near the outer edge, two or

more guide-standards 30 are located, and near the inner edge of the base two or more similar standards 31 are placed, the standards 31 each being provided with a horizontal set-screw 32. An anvil-block 33 is located between the guide-standards 30 and 31 and is held rigidly in place by causing the set-screws 32 to engage therewith, as shown in Fig. 3. The anvil-block is preferably made of wood, and its upper face becomes very quickly lacerated by engagement with the cutting-tool employed to form the scallops. It is therefore necessary that the marred face should be planed down or otherwise rendered smooth, and in so doing the thickness of the block is lessened; but by employing the set-screws 32 the block may be elevated as high as necessary and held in such elevated position by the frictional contact with the set-screws and with the guide-posts 30.

A post or standard 34 is located upon the extension A' of the base, preferably at its center near the edge. This post 34 is preferably provided with a socket, in which the lower end of a pillar 35 is inserted and secured. The upper end of the pillar is reduced, forming a shoulder 36, and upon the reduced end a horizontal arm 37 is pivoted, while upon the outer end of the arm two or more auxiliary arms 38 are pivotally attached, the outer ends of the auxiliary arms being provided with spring-pressed cutters 39. The cutters in cross-section represent reverse concaved surfaces at their inner faces, and when employed shape practically the contour of two scallops 40 upon the fly 41, as illustrated in Fig. 4. The shanks of the cutters pass up through the ends of the auxiliary arms 38, and the shanks at their upper ends are provided with heads 42 and are surrounded by springs 43 between the heads and the upper surfaces of the arms.

One cutter only is employed during the operation of producing the scallops, and the cutters are preferably of different sizes. As two or more cutters are located upon each machine, it is necessary that the cutter not in use should be held out of the way of the operator. This is ordinarily accomplished by screwing into the top of the pillar 35 a ferrule 44, containing a spring-pressed vertically-movable pin 45, and the said pin is adapted to enter a recess in the under side of the auxiliary cutter-arm not needed.

In operation the flies are placed in suitable quantities, one upon the other, upon the anvil-block and against the guide-pins 26 as the said pins are brought to an engagement with the anvil-block prior to placing the flies in position and serve to define the rearward position of the flies. The treadle 16 is then pressed downward, which causes the clamping-head to engage with the flies and adjust itself thereto, and the cutter is swung over and manipulated to produce scallops in one edge of the flies corresponding to the scallops of a pattern

placed on top of the pile of flies. By producing the channel 19 in the spindle both of the fingers 26 are compelled to engage with the anvil-block at the same time, as the guide-arm cannot slip upon the spindle.

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

1. The combination, with an adjustable anvil-block, a slide, and means for operating said slide, of a spindle adjustably connected with the slide, a guide-arm adjustable upon the spindle and provided with spring-pressed guide-fingers adapted for engagement with the anvil-block, and a clamping-head adjustable upon the spindle, as and for the purpose specified.

2. The combination, with an adjustable and removable anvil-block, a spring-controlled slide located at one side of the block, and an adjustable spindle having a bearing at one end in the slide, of a guide-arm adjustable upon the spindle and provided with spring-pressed guide-fingers adapted for engagement with the anvil-block, and a clamping-head also adjustable upon the spindle located over the anvil-block, the said clamping-head being capable of slight rotary movement, as and for the purpose specified.

3. The combination, with an adjustable and removable anvil-block, a spring-controlled slide, and an adjustable spindle having one end inserted in the slide and provided with a longitudinal groove and an aperture near one end of the groove, of a guide-arm held to slide upon the spindle, a set-screw passing through the guide-arm into the groove of the spindle, spring-pressed fingers carried by the guide-arm and adapted for engagement with the anvil-block, a clamping-head loosely mounted upon the spindle over the anvil-block, and an adjusting-screw passed through a portion of the clamping-head into the aperture in the spindle, as and for the purpose specified.

4. The combination, with a vertical adjustable and removable anvil-block, a slide located near one side of the block, a spindle having one end supported by the slide and adjustable in the slide, a guide-arm adjustable upon the spindle, spring-pressed fingers located in the guide-arm, and a clamping-head adjustably located upon the spindle over the anvil-block and capable of a compensating or slight rotary movement, of a pivoted bracket-arm located near one side of the anvil-block, auxiliary arms pivoted upon the bracket-arm, spring-pressed cutting-tools carried by the auxiliary arms, and means, substantially as described, for locking one of the auxiliary arms, as and for the purpose set forth.

PHILO B. CLARK.

Witnesses:

THOMAS P. KING,
A. A. VAN KLEECK.