

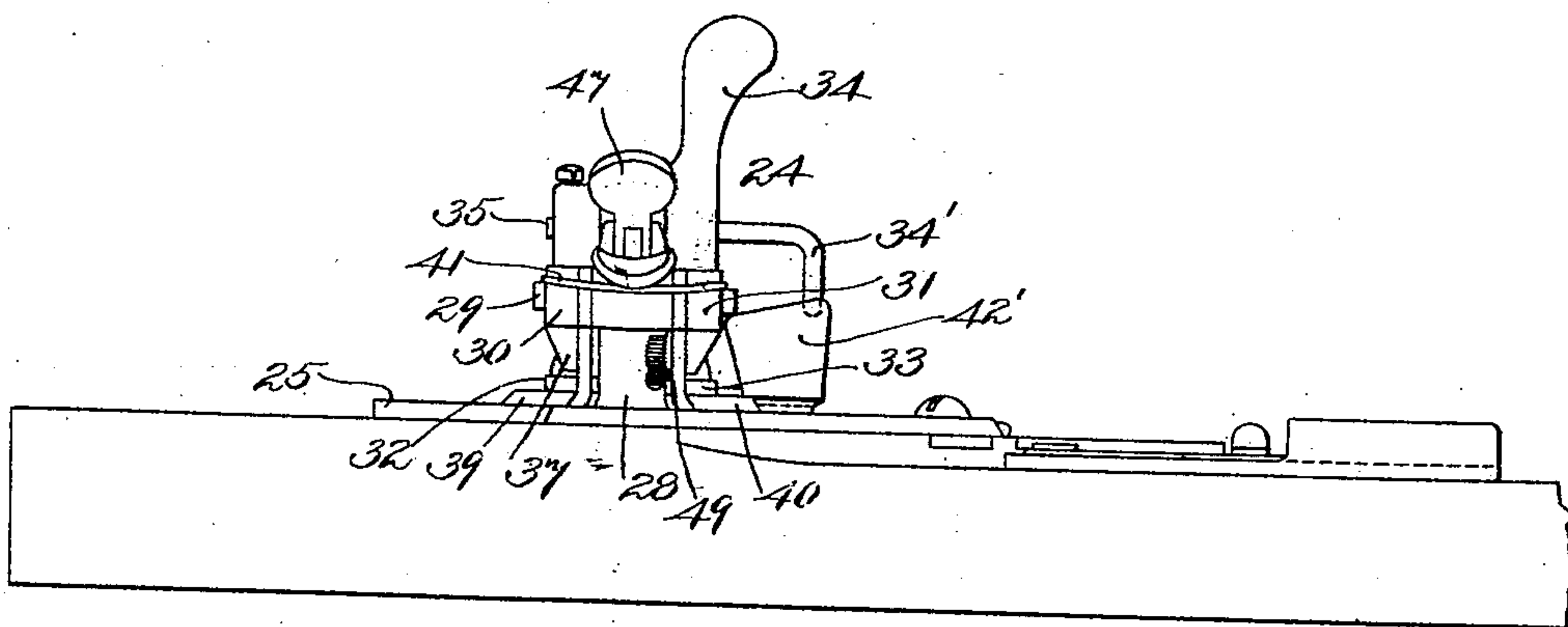
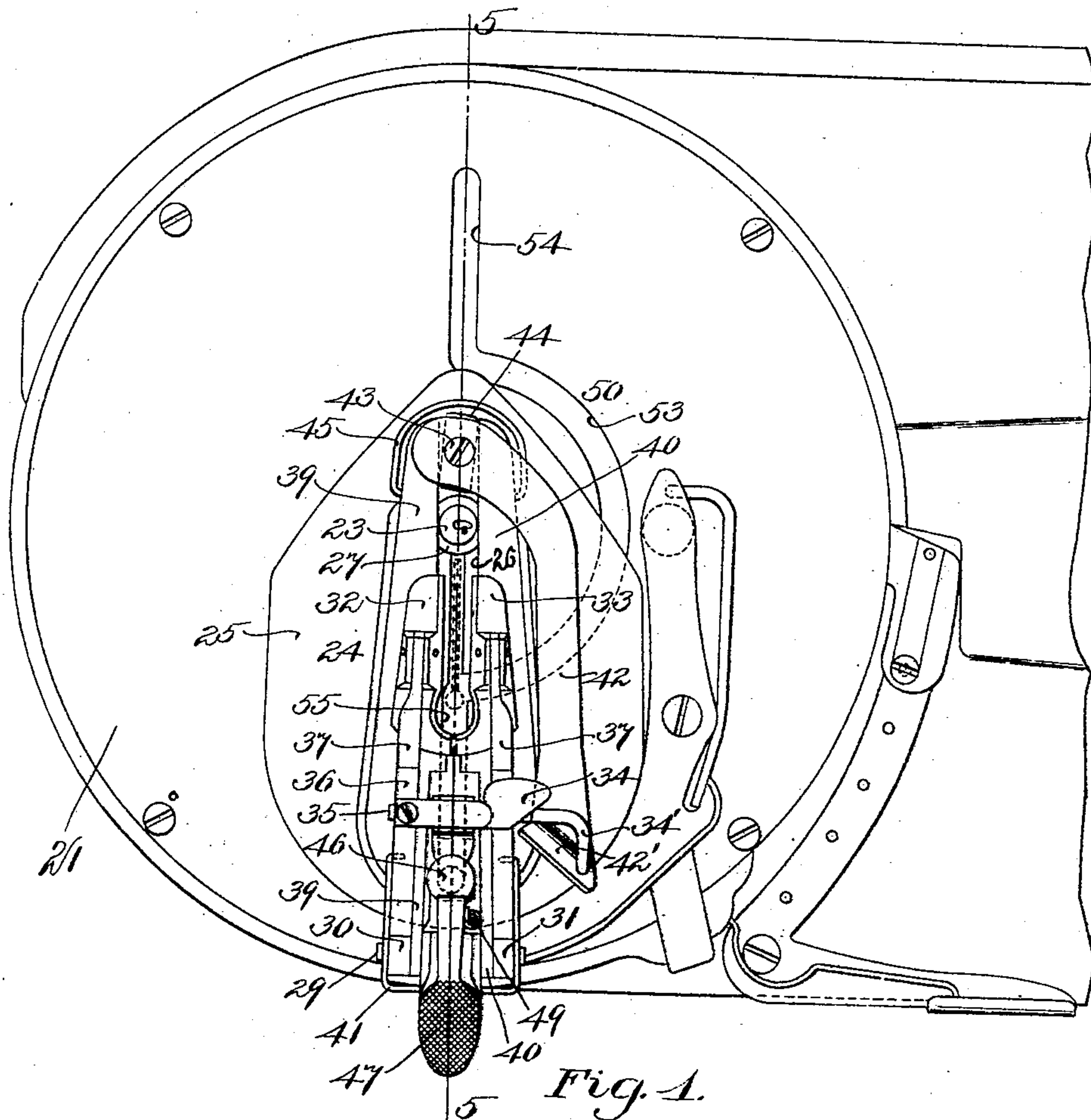
No. 814,216.

PATENTED MAR. 6, 1906.

J. KIEWICZ.
BUTTONHOLE SEWING MACHINE CLAMP.

APPLICATION FILED APR. 27, 1905.

2 SHEETS—SHEET 1.



Witnesses:

Franklin E. Low.

William C. Glass.

Fig. 2.

Inventor:

John Kiewicz,
by his attorney,
Charles S. Gooding.

No. 814,216.

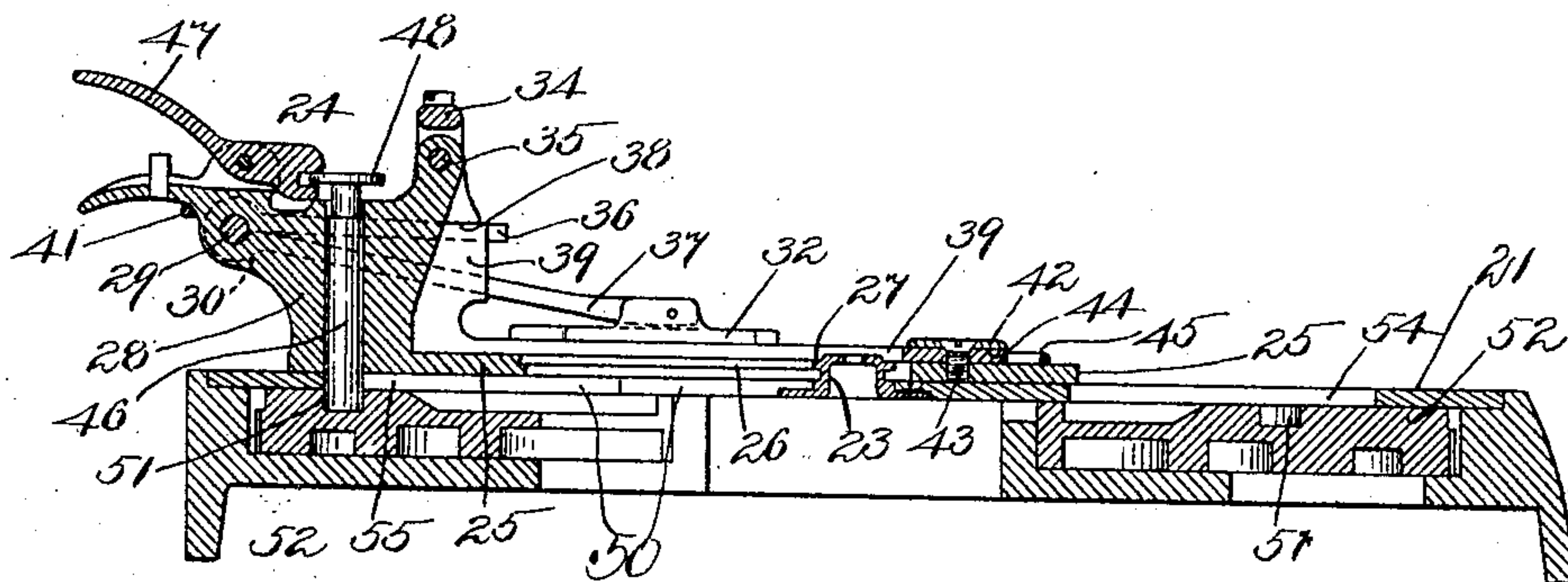
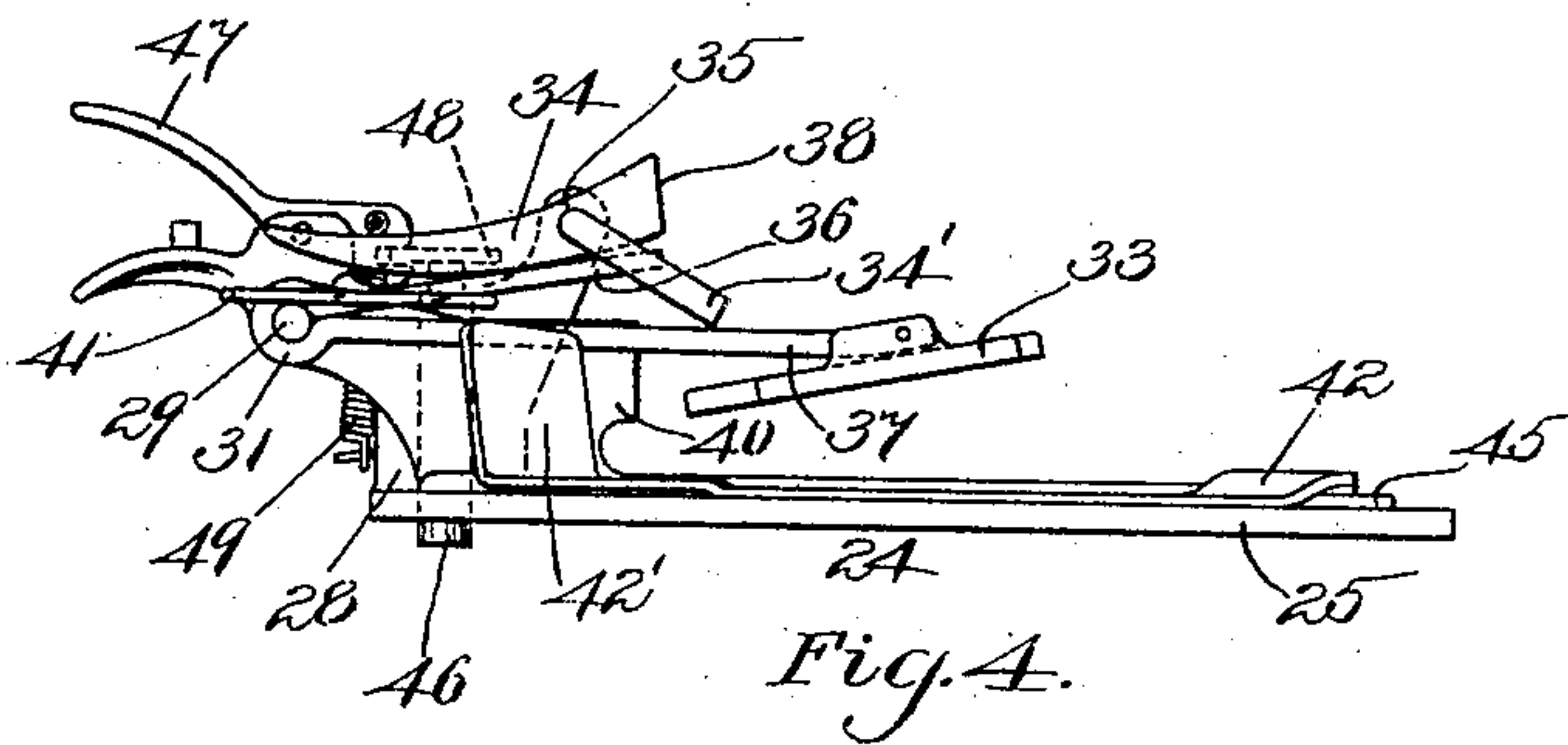
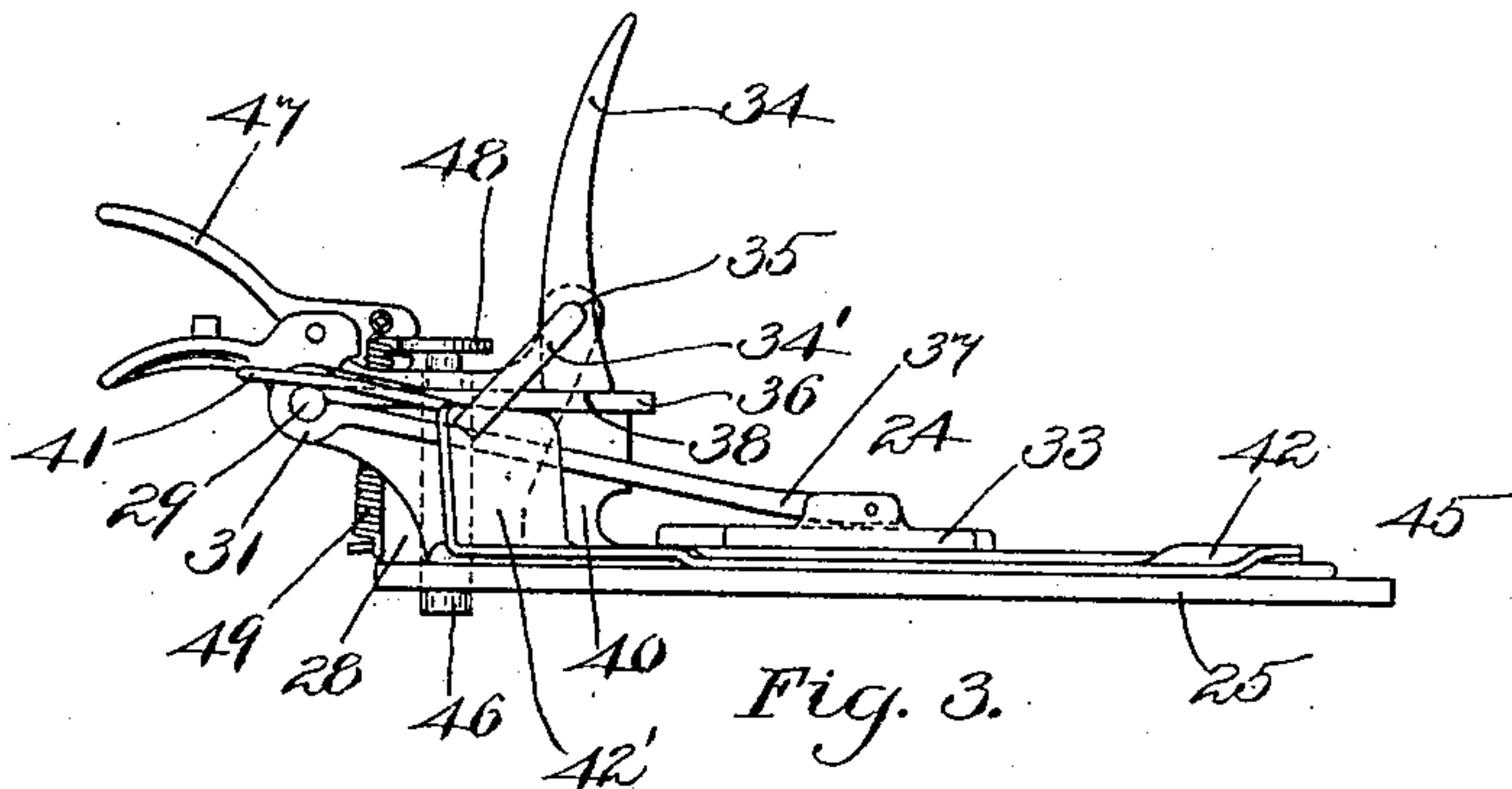
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BUTTONHOLE SEWING MACHINE CLAMP.

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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

JOHN KIEWICZ, OF HYDE PARK, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO WHEELER MANUFACTURING COMPANY, A CORPORATION OF MAINE.

BUTTONHOLE-SEWING-MACHINE CLAMP.

No. 814,216.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed April 27, 1905. Serial No. 257,683.

To all whom it may concern:

Be it known that I, JOHN KIEWICZ, a subject of the Czar of Russia, residing at Hyde Park, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Buttonhole - Sewing-Machine Clamps, of which the following is a specification.

This invention relates to a fabric-clamp for buttonhole-sewing machines, the object of the invention being to provide a simple, cheap, and conveniently and quickly operated clamp for the purpose hereinbefore set forth.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a plan view of my improved fabric - clamp, showing the same in position upon the work-plate of a buttonhole-sewing machine and in connection with a portion of the bed-plate of said machine. Fig. 2 is a front elevation of the parts illustrated in Fig. 1. Fig. 3 is a side elevation of the fabric-clamp as viewed from the right of Fig. 1, showing the presser-feet down in position to clamp the fabric. Fig. 4 is a side elevation similar to Fig. 3, illustrating the presser-feet raised. Fig. 5 is a section, partly in elevation, taken on line 5 5, Fig. 1, looking toward the left in said figure.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 24 is the fabric - clamp, which consists of a base-plate 25, having a longitudinal slot 26 extending therethrough, the edges of said slot fitting into an annular groove 27, formed in the periphery of the needle - throat 23. The base-plate 25 of said clamp has a bracket 28 extending vertically upward from the rear end thereof, and through said bracket extends a horizontal pivotal pin 29, said pivotal pin projecting longitudinally beyond the opposite sides of the bracket 28 and forming a pivot upon each side of said bracket, upon which is mounted a pair of V-springs 30 and 31. Said V-springs are pivoted at their apices to the pivotal pin 29, and two presser-feet 32 33 are pivoted at one end of the long arms, respectively, of each of said V-springs. A lever 34 is pivoted at 35 to the bracket 28 and is arranged to bear

against the short arms 36 of the V-springs 30 and 31, said lever being flattened at one end 38 in order to lock the presser-feet and the V-springs in the position illustrated in Figs. 3 and 5—that is, when the presser - feet are forced against the fabric, as hereinafter described.

Beneath the presser-feet 32 and 33 is a fabric-support in two parts 39 and 40, located upon opposite sides, respectively, of the slot 26, and these fabric-supporting parts extend upwardly at their rear ends and engage the pivot 29. A U - shaped spring 41 extends around the outer sides of the rear ends of the V-springs 30 and 31, the free ends of said U-shaped spring being bent to project between the short and long arms of said V-springs, as illustrated in Figs. 1, 3, and 4, and the action of this U-shaped spring is to hold the V-shaped springs and the parts 39 and 40 upon the pivot 29, while at the same time said parts are loosely mounted upon said pivot, so that the front ends of the parts 39 and 40 and also of the long arms 37 of the V-springs 30 and 31 may be moved laterally toward and away from each other. The front ends of the parts 39 and 40, forming the fabric-support, are moved away from each other by a cam-lever 42, pivoted to a stud 43, fast to the base-plate 25. Said cam-lever has fastened thereto a cam-plate 44, which is located between the forward free ends of the parts 39 and 40, so that when said lever is rocked upon its pivot the parts 39 and 40 will be moved at their free ends, moving horizontally upon the pivot 29, and at the same time the presser-feet 32 and 33, being clamped against the fabric and said fabric resting upon the parts 39 and 40, will move laterally away from each other, moving horizontally upon the pivot 29 during this movement. The lever 42 is rocked upon its pivot 43 by an arm 34', fast to the lever 34, said arm constituting, in effect, an extension of the pivot 35 of said lever 34. The arm 34' projects downwardly and engages an upward extension or wing 42', formed at the opposite end of the lever 42 to that at which said lever is pivoted, said wing 42' standing at an angle to the median line of the slot 26.

When the lever 42 is returned to the position illustrated in Fig. 1, the presser-feet 32 and 33 and the parts 39 and 40 of the fabric-

support will move toward each other, said parts 39 and 40 being thus actuated by a U-shaped spring 45, the free ends of which embrace and engage the free ends of the parts 39 and 40. The presser-feet 32 and 33 are drawn together, partly by the U-shaped spring 45, acting through the parts 39 and 40 and the fabric against which said presser-feet are clamped, and the U-shaped spring 41, which embraces the V-springs 30 and 31 at their rear ends, it being understood that the presser-feet 32 and 33 are supported upon said V-springs.

A vertical pin 46 is slidably mounted in the bracket 28 and is moved longitudinally thereof by means of a lever 47, pivoted to said bracket 28 and engaging the flange 48, formed upon the top of said pin 46. A spiral spring 49, fastened at one end to said lever 47 and at the other end to the base-plate 25, holds the pin 46 normally down in the position illustrated in Figs. 3, 4, and 5, the lower end of said pin projecting through a slot 50 in the work-plate 21 and into a cam-groove 51, formed in the upper face of the clamp-actuating cam 52. The slot 50 is of the usual form in machines of this class and consists of a semicircular portion 53 and two radial portions 54 and 55, arranged diametrically opposite each other at the opposite ends, respectively, of the semicircular portion 53.

The operation of my improved fabric-clamp, hereinbefore specifically described, is as follows: Assuming the parts to be in the position illustrated in Fig. 4—that is, with the presser-feet raised—the fabric is inserted beneath the presser-feet 32 and 33 and above the fabric-supporting parts 39 and 40. The lever 34 is moved from the substantially horizontal position (illustrated in Fig. 4) to the vertical position, (illustrated in Fig. 3,) thus clamping the fabric between the presser-feet 32 and 33 and the fabric-supporting parts 39 and 40, this clamping action being obtained by the short arm of the lever 34 pressing downwardly upon the short arms 36 of the V-springs 30 and 31, thus lowering the long arms 37 of said V-springs, and with them the presser-feet 32 and 33, until said presser-feet contact with the fabric and press it against the upper surface of the two parts 39 and 40 of the fabric-support. During the latter part of this movement the arm 34' engages the upwardly-extending rearward end 42' of the cam-lever 42 and rocks said lever 42 upon its pivot, spreading the free ends of the fabric-supporting parts 39 and 40 away from each other and at the same time stretching a portion of said fabric between said parts 39 and 40 and also moving the presser-feet 32 and 33 laterally away from each other, so that when the buttonhole is cut the tension on the cloth will cause the two sides of said buttonhole to be spread laterally away from each other.

The feed of the clamp during the sewing of the buttonhole is accomplished by means of the cam 52, the pin 46, and the slot 50 in the work-plate 21. This operation being well known to those skilled in the art and forming no part of the present invention, it is not necessary to specifically describe the same other than to say that the clamp is first fed forward by the movement of the cam 52 along the radial portion 55 of the slot 50, then around the circular portion 53 of said slot while the round end of the buttonhole is being sewed, and finally around the radial portion 54 of said slot while the other straight side of the buttonhole is being sewed.

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

1. A clamp for buttonhole-sewing machines comprising in its construction a base-plate provided with a slot extending there-through, a pair of V-springs pivoted at their apices to said base-plate, a presser-foot located upon each side of said slot, each of said presser-feet mounted upon one end, respectively, of said V-springs, and a lever adapted to press against the other ends of said V-springs, whereby said springs are rocked upon their pivots and said presser-feet are moved toward said base-plate.

2. A clamp for buttonhole-sewing machines comprising in its construction a base-plate provided with a slot extending there-through, a pair of V-springs pivoted at their apices to said base-plate, a presser-foot located upon each side of said slot, each of said presser-feet mounted upon one end, respectively, of said V-springs, a lever adapted to press against the other ends of said V-springs whereby said springs are rocked upon their pivots and said presser-feet are moved toward said base-plate, and a spring to rock said V-springs in the opposite direction.

3. A clamp for buttonhole-sewing machines comprising in its construction a base-plate provided with a slot extending there-through, a pair of V-springs pivoted at their apices to said base-plate, a presser-foot located upon each side of said slot, each of said presser-feet mounted upon one end, respectively, of said V-springs, a lever adapted to press against the other ends of said V-springs, whereby said springs are rocked upon their pivots and said presser-feet are moved toward said base-plate, and means to move said presser-feet laterally away from each other.

4. A clamp for buttonhole-sewing machines comprising in its construction a base-plate provided with a slot extending there-through, a pair of V-springs pivoted at their apices to said base-plate, a presser-foot located upon each side of said slot, each of said presser-feet mounted upon one end, respectively, of said V-springs, a lever adapted to press against the other ends of said V-springs, whereby

said springs are rocked upon their pivots and said presser-feet are moved toward said base-plate, a spring to rock said V-springs in the opposite direction, means to move said
5 presser-feet laterally away from each other, and a U-spring, the free ends thereof engaging said V-springs, whereby said V-springs are rocked vertically and horizontally upon their pivots.

10 5. A clamp for buttonhole-sewing machines comprising in its construction a base-plate provided with a slot extending there-
through, a fabric-support in two parts piv-
15 5 a cam pivoted to said base-plate between the
free ends of said parts, a spring engaging said
parts and holding them in engagement with
said cam, and another lever pivoted to said
20 base-plate and adapted to engage said cam-
lever and rock the same upon its pivot.

6. A clamp for buttonhole-sewing machines comprising in its construction a base-

plate provided with a slot extending there-
through, a presser-foot in two parts pivoted
to rock vertically on said base-plate, means 25
to move said presser-foot parts laterally to-
ward and away from each other, said parts
located on opposite sides, respectively, of
said slot, a fabric-support in two parts piv-
30 5 a cam pivoted to said base-plate between the
free ends of said fabric-support parts, a spring
engaging said fabric-support parts and hold-
ing them in engagement with said cam, and
35 another lever pivoted to said base-plate and
adapted to engage said cam-lever and rock
the same upon its pivot.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

JOHN KIEWICZ.

Witnesses:

CHARLES S. GOODING,
ANNIE J. DAILEY.