

No. 875,622.

PATENTED DEC. 31, 1907.

W. N. PARKES.

WORK CLAMP MECHANISM FOR SEWING MACHINES.

APPLICATION FILED DEC. 26, 1903.

4 SHEETS—SHEET 1.

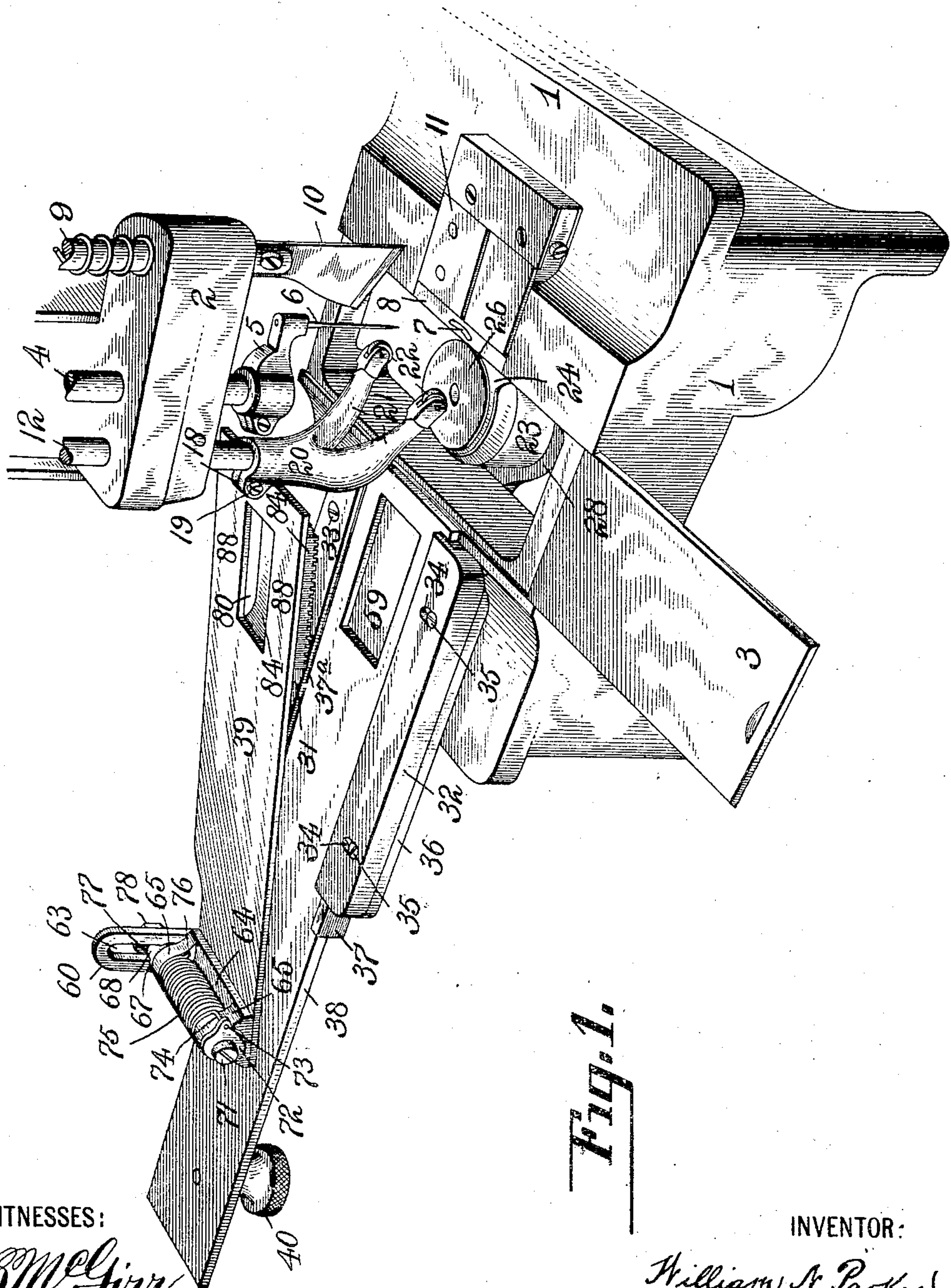


Fig. 1.

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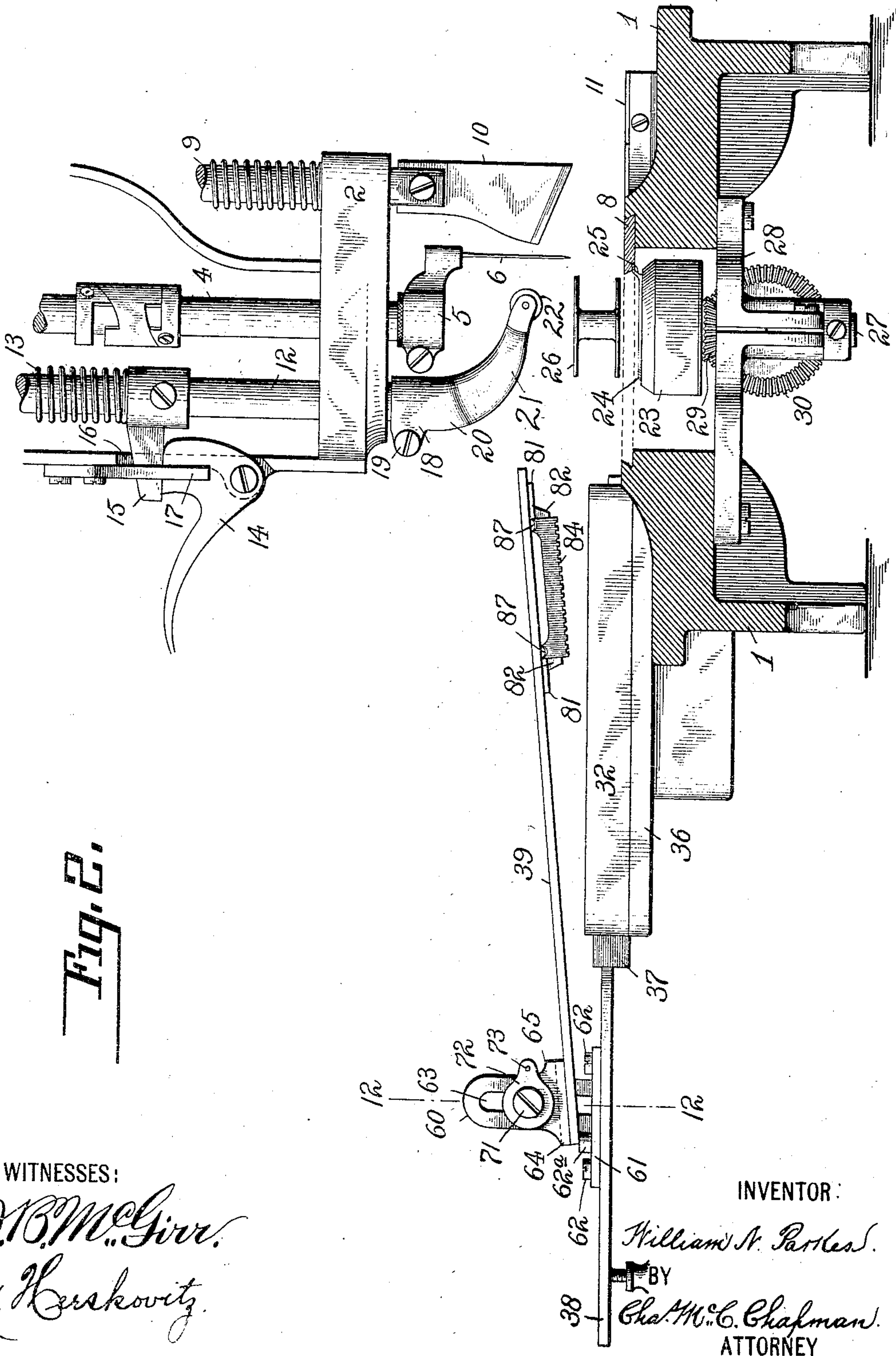
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4 SHEETS—SHEET 3.

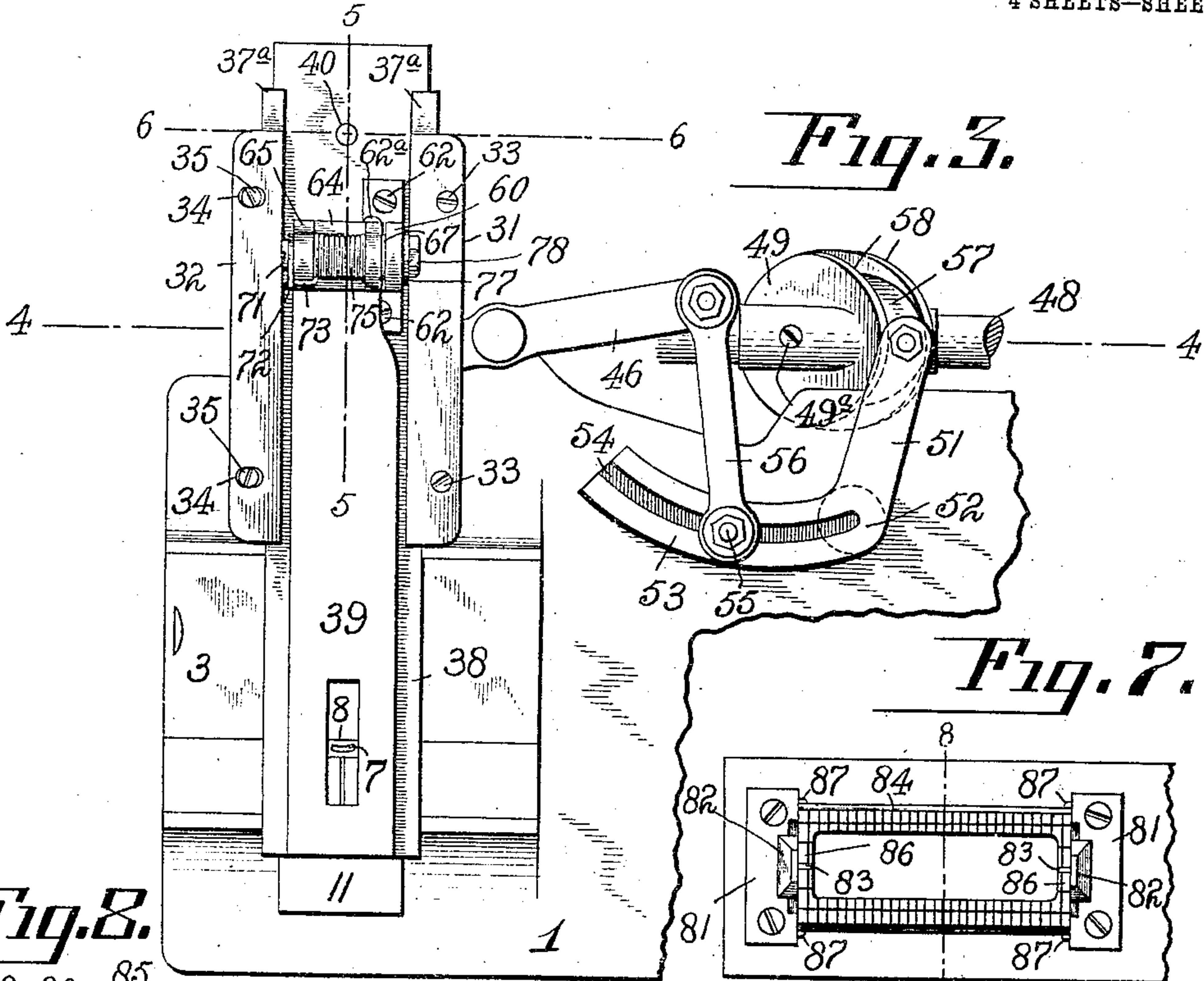


Fig. 3.

Fig. 7.

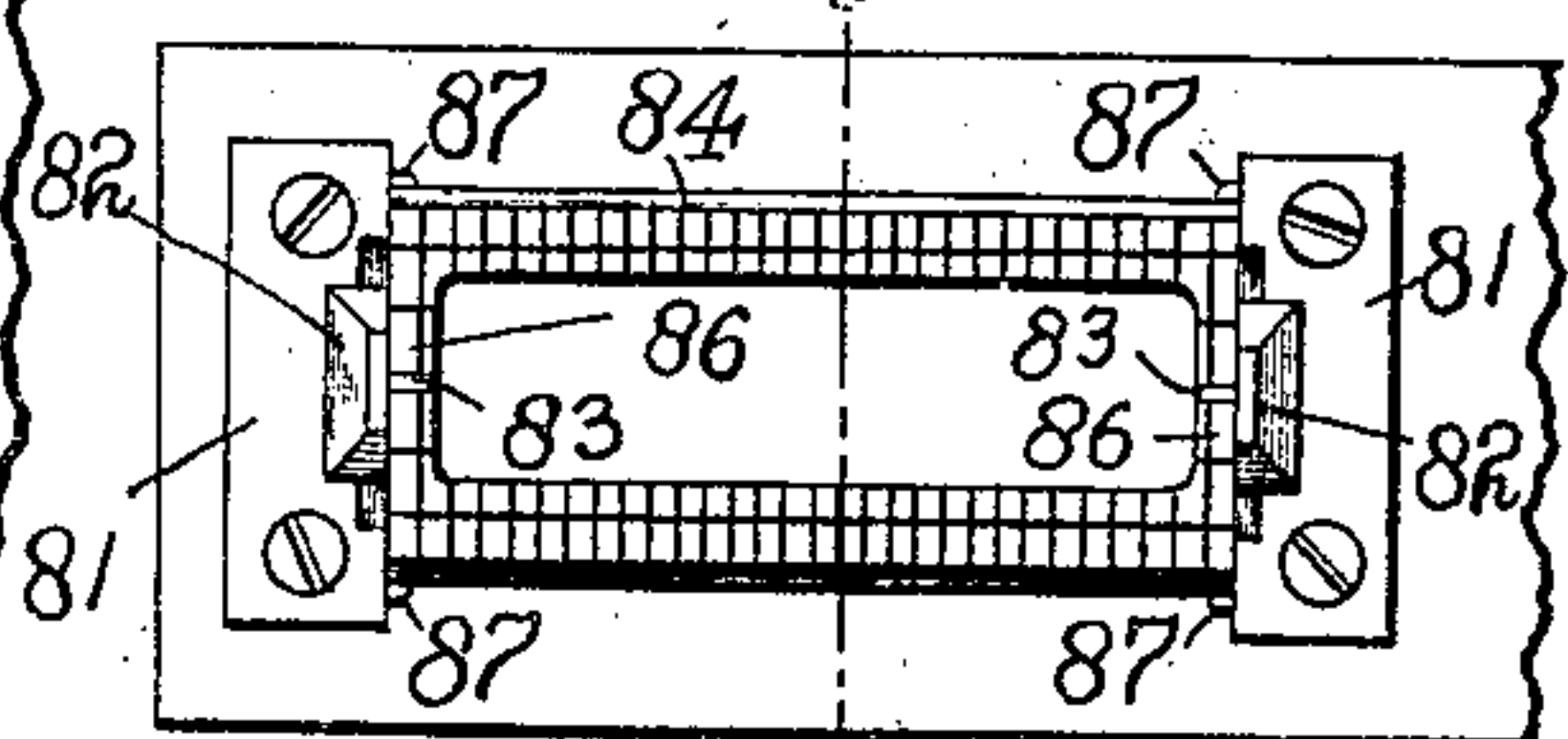


Fig. 4.

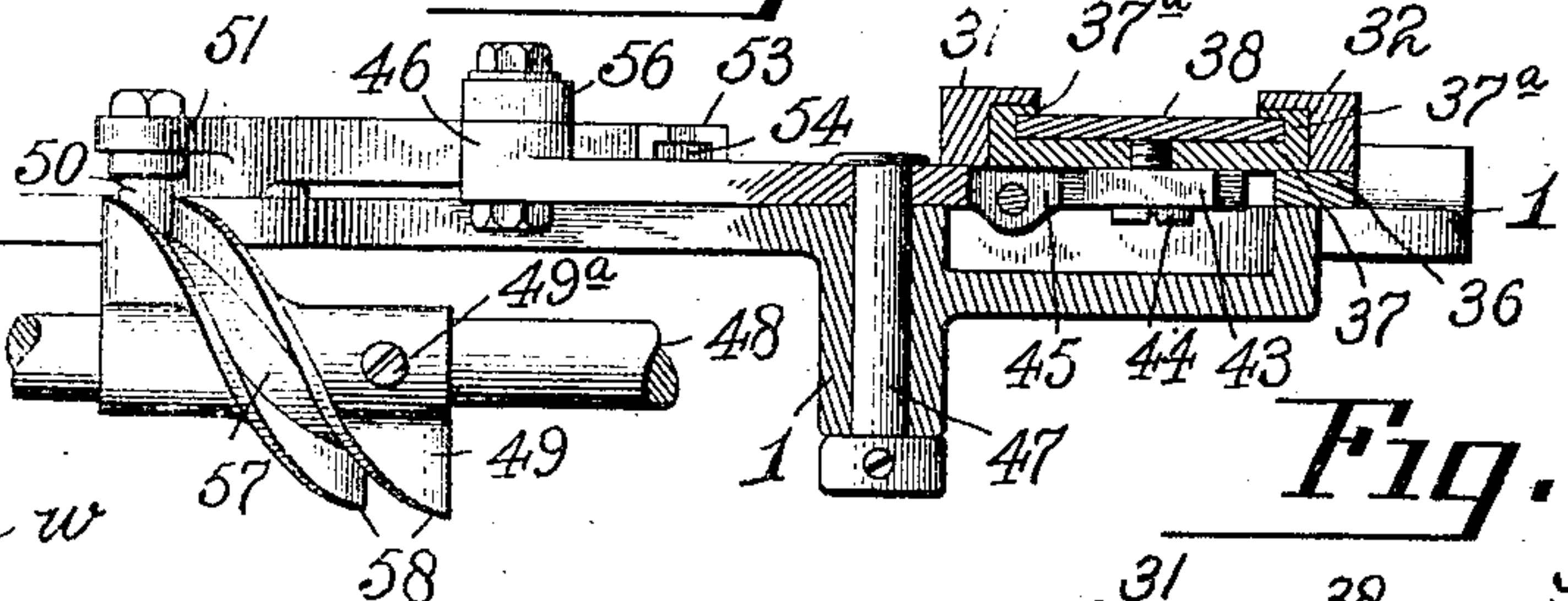


Fig. 6.

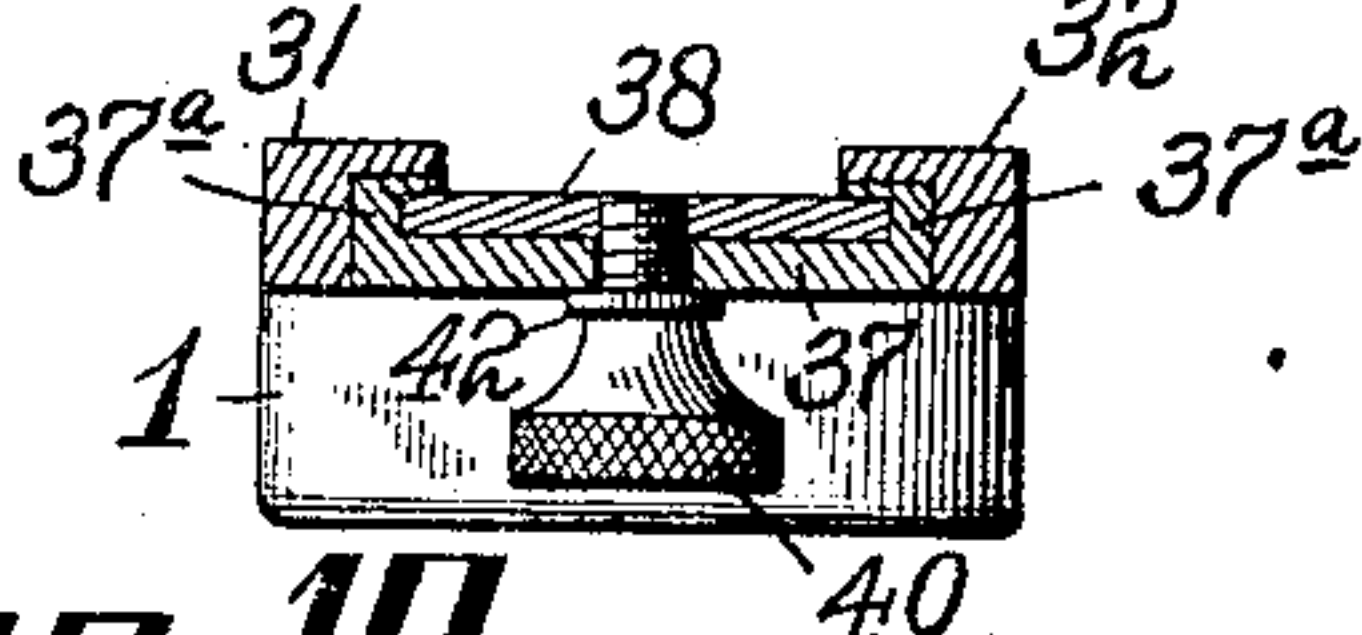


Fig. 10.

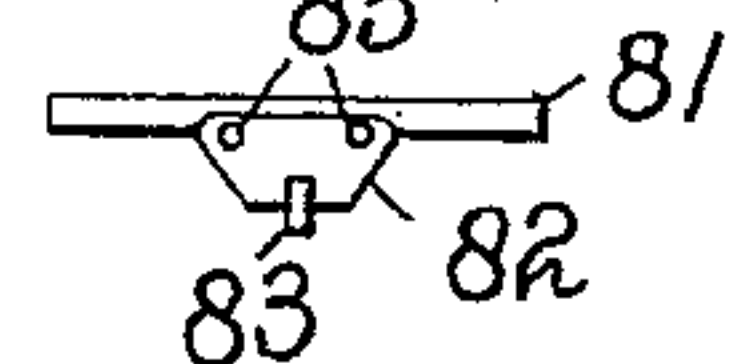


Fig. 8.

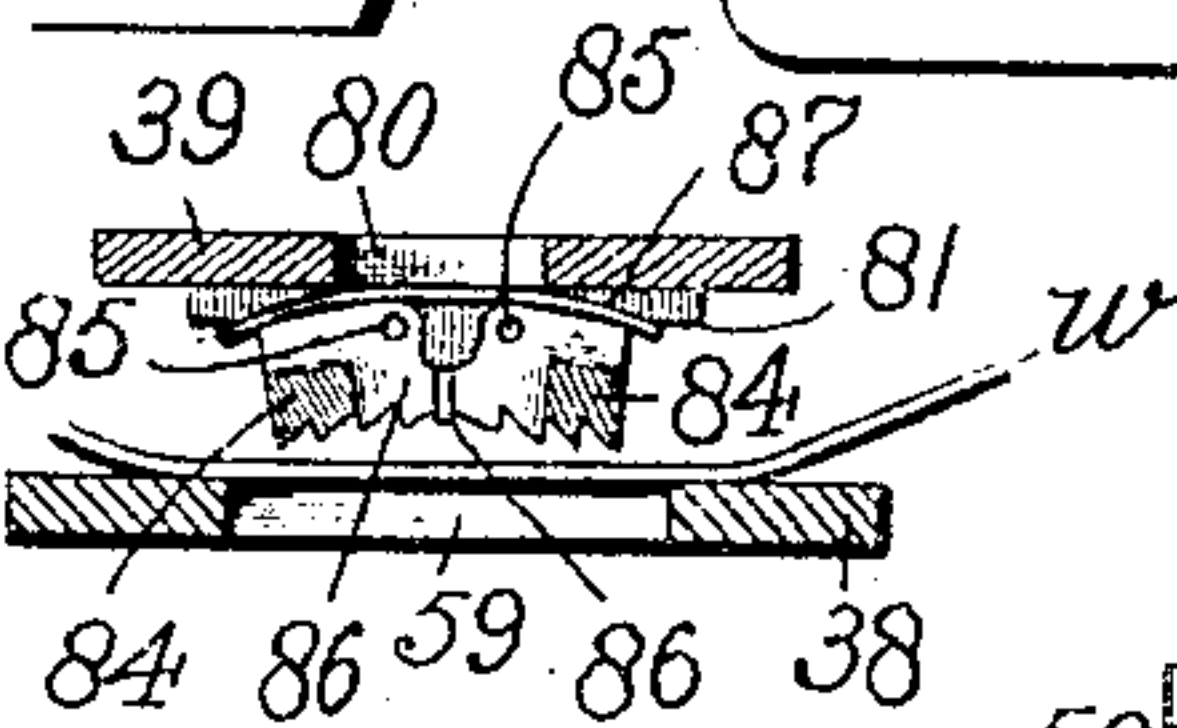


Fig. 9.

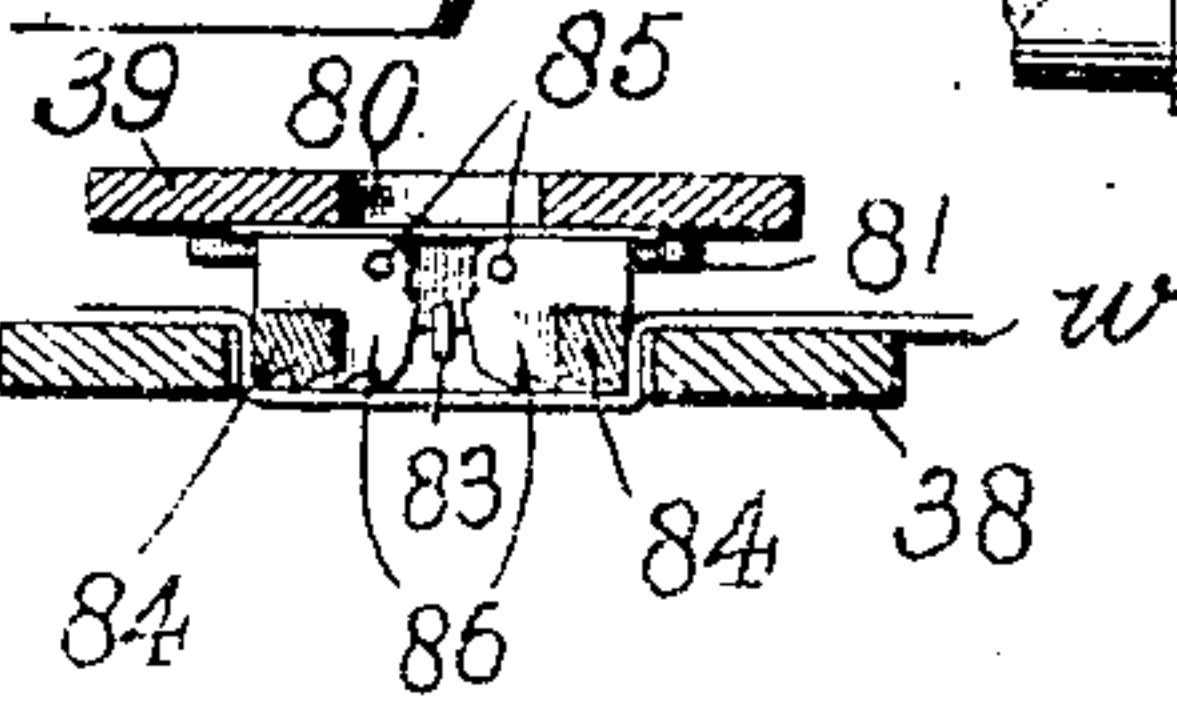
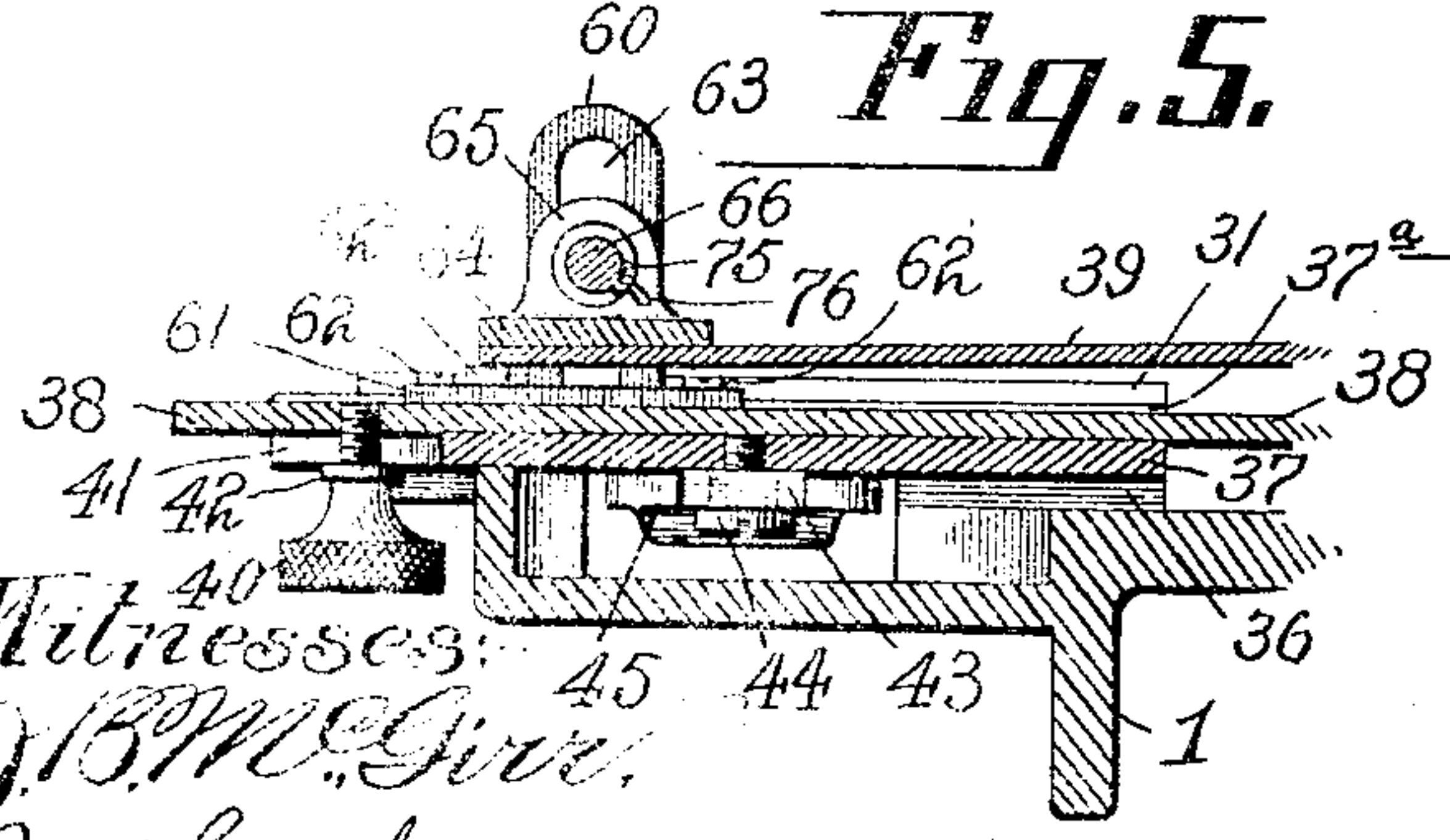


Fig. 5.



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4 SHEETS—SHEET 4.

Fig. 11.

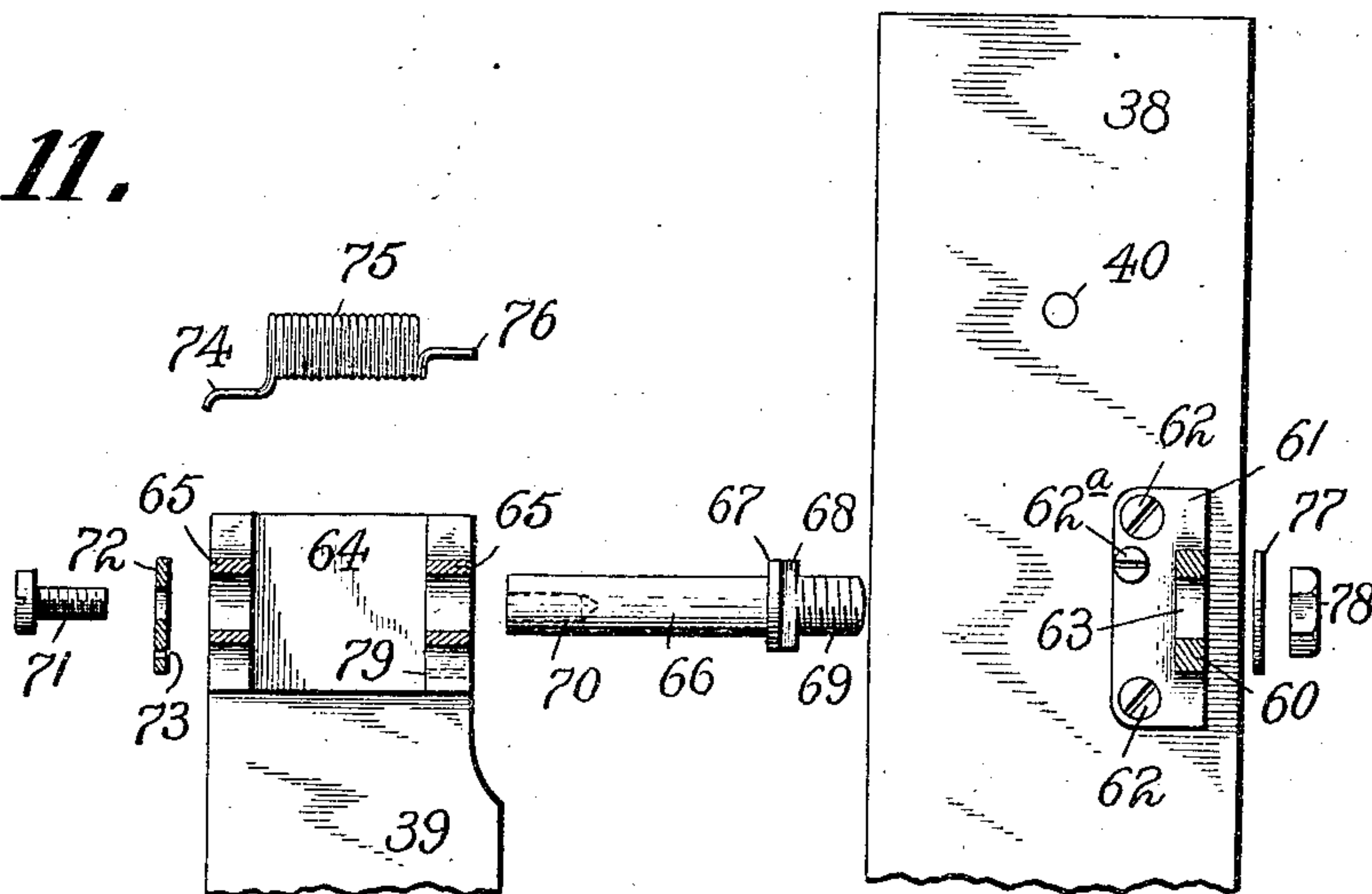


Fig. 12.

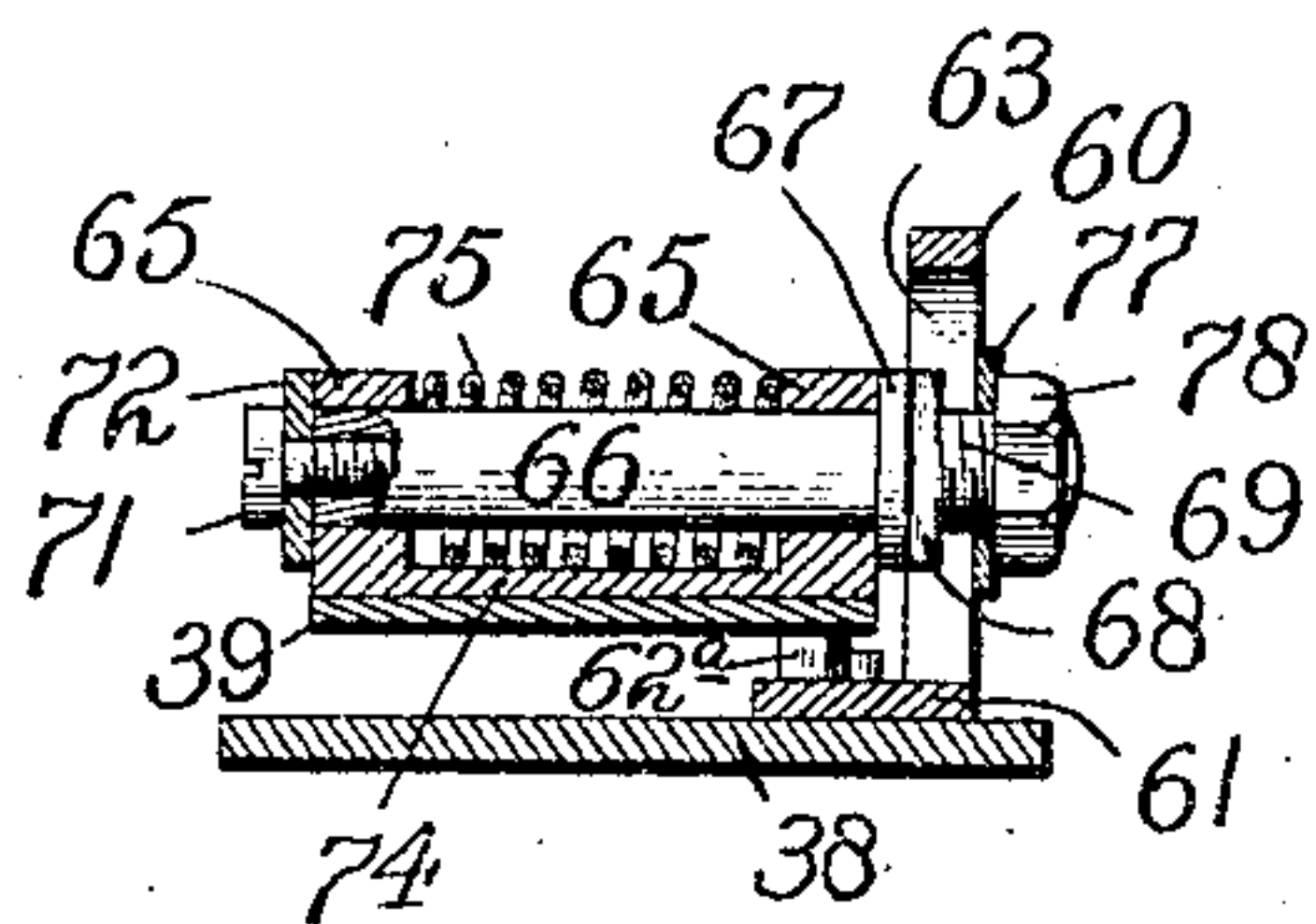
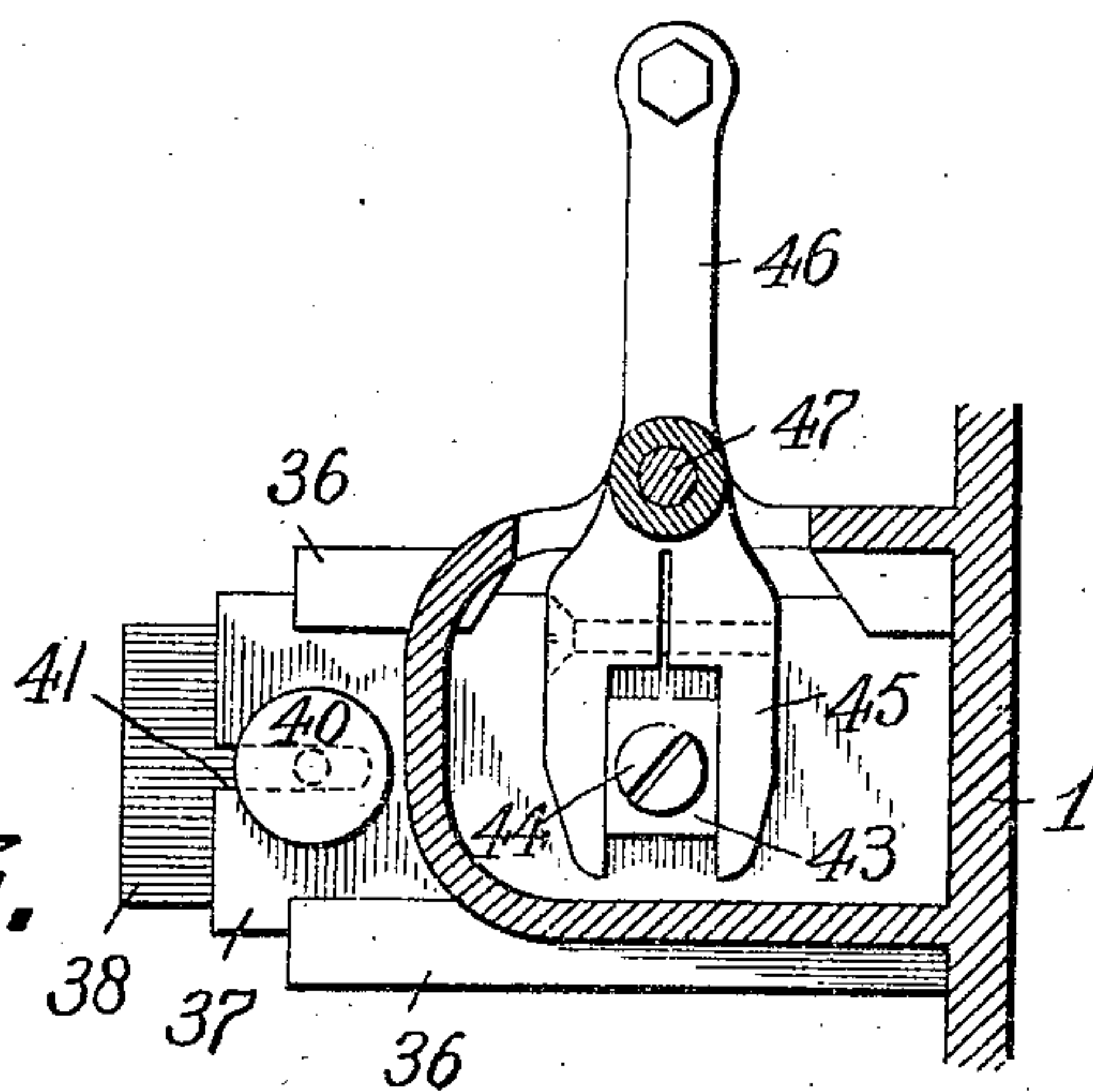


Fig. 13.



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WORK-CLAMP MECHANISM FOR SEWING-MACHINES.

No. 875,622.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed December 26, 1903. Serial No. 186,589.

To all whom it may concern:

Be it known that I, WILLIAM N. PARKES, a citizen of the United States, residing in Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Work-Clamp Mechanism for Sewing-Machines, of which the following is a description.

This invention relates to sewing machines and particularly to machines of the character adapted for stitching buttonholes, or to any machine in which work-clamps are used.

In buttonhole, eyelet, tacking, or like machines, a work-clamp is used which operates directly over the under-stitching mechanism; and in these machines the loopers are usually rotated or oscillated in a vertical plane and the bobbins or cops removed therefrom sideways so that the work-clamps do not have to be disturbed.

In sewing machines in which the looper operates in a horizontal plane and a bobbin or cop is carried by the looper, it is desirable to remove the bobbin or cop from the top of the looper and through the work-plate. And in my stitch forming mechanism, covered by Patent No. 730,692, dated June 9, 1903, and also as shown in my application Sr. No. 93,037, filed February 7, 1902, I have found it advantageous to use a stitch forming mechanism in which the looper rotates and the bobbin-case is disposed in a horizontal plane, and the bobbin is removed from the top of the case. As the work-clamp is usually directly over the under-stitching mechanism, it becomes desirable to have a clamp that may be readily removed, if the looper is to be disposed in a horizontal plane, or if it is desired for any purpose to remove the bobbin from the looper through the cloth-plate and the space occupied by the clamp.

Therefore, it is the main object of my invention to provide a work-clamp, of such character that the same may be readily withdrawn from its operative position, for the purpose of ready access to the looper mechanism or other parts located below the work-plate.

Another object of my invention is to provide a work-clamp so constructed that when the parts are brought into engagement with the work the latter will be stretched or distended so as to be held taut for the reception of the stitching and the cutting of the hole.

Another object of my invention is to provide a work-clamp which normally will remain open for the reception and removal of the work and which is caused to engage the work by the simple depression of a presser-bar which is mounted separately from the clamp.

Other objects will be set forth during the course of this description, and with them all in view my invention consists in the parts, features and combinations of elements hereinafter described and claimed.

Referring to the drawings: Figure 1 is a perspective view of so much of the front end of a buttonhole sewing machine as is deemed necessary to illustrate my invention, the work-clamp being shown withdrawn and open, the slide-plate withdrawn, needle-bar and cutter-bar elevated, the parts being thus disposed for the ready removal of, or access to, the looper mechanism; Fig. 2 is an end elevation, partly in transverse section, of the parts shown in Fig. 1, the position and relation of the parts being the same with the exception that the bobbin is shown elevated from the bobbin-case to indicate the facility with which it may be removed; Fig. 3 is a top plan view of so much of the cloth-clamp and its actuating mechanism as is deemed necessary to illustrate my invention; Fig. 4 is a vertical section taken on the line 4—4 of Fig. 3; Fig. 5 is a vertical section taken on the line 5—5 of Fig. 3; Fig. 6 is a vertical section taken on the line 6—6 of Fig. 3; Fig. 7 is a bottom plan of the forward end of the upper clamp-plate; Fig. 8 is a vertical section on the line 8—8 of Fig. 7, said figure including a representation of the lower clamp-plate with a piece of fabric laid between the two plates, the latter being separated; Fig. 9 is a view similar to Fig. 8, the parts being shown, however, in closed relation; Fig. 10 is a front elevation of one of the brackets or pivotal supports for the jaws of the upper clamp-plate; Fig. 11 is a detail plan view of the rear end of the work-clamp, showing portions only of the two clamp-plates and the various parts, constituting the hinge support for the upper clamp-plate, being shown detached and partially in section; Fig. 12 is a vertical section on the line 12—12 of Fig. 2; and Fig. 13 is a bottom plan view of the rear end of the work-clamp and supporting portion of the cloth-plate, showing the means by which the work-clamp is actuated from the driving cam.

Primarily, it may be observed that my cloth-clamp mechanism is specially constructed and adapted for use in combination with a stitch-forming mechanism which includes
 5 a horizontally disposed, circularly moving looper as shown in Figs. 1 and 2, this type of looper mechanism being preferable for reasons specified in my patent and in my application above mentioned. Hence, my invention
 10 is shown illustrated in connection with this type of machine, although it is to be distinctly understood that a looper mechanism of any other type may be used or, on the other hand, my invention may be applied to
 15 any other type of machine. For example it may be used in connection with my button-hole machine shown and described in U. S. Patent No. 658,578 issued to me September 25, 1900, and in such a machine many of its
 20 functions are available as will be seen from the illustrations and description.

In the drawings the work-plate of the machine is indicated by 1, the head of the machine by 2, the slide-plate by 3, the needle-bar by 4, which is caused to reciprocate and
 25 vibrate in the head in any usual manner, or as shown and described in my application above referred to. To the lower end of the needle-bar is clamped the needle-holder 5, which carries the needle 6, which works
 30 through the elongated slot 7, in the throat-plate 8, suitably retained in the work-plate 1. A cutter-bar 9, carrying at its lower end the buttonhole cutter 10, is shown as capable of
 35 reciprocating, by any suitable means, in the head 2. The work-plate supports in any suitable manner a complementary device 11, for coöperating with the cutter-blade 10. As shown, this cutting mechanism is located
 40 in advance of the stitch-forming mechanism, and disposed in the center of the line of feed, and is intended to be operated so as to cut the slit in the work after or before the stitches have been laid which constitute the binding
 45 and barring for the buttonhole, as described in the said application. This cutter may be operated by any well known means. Its location relative to the stitch forming mechanism and the work clamp mechanism is to be
 50 noted for in this respect it will be claimed in this application.

The presser-bar 12, may be of ordinary character, normally depressed by means of the spring 13, and capable of being elevated
 55 by any suitable means or by a pivoted cam-lever 14, which operates upon the under-side of the guide-arm 15, secured to the presser-bar and operating within the slot 16, formed by the guide-bracket 17, and head of the machine, and secured to the head by suitable
 60 means. These parts secure the proper depression and elevation of the presser-bar, prevent any turning or twisting movement of the bar in the head, and provide sufficient
 65 power for holding the members of the work-

clamp together for the purpose of holding and stretching the work for the reception of the stitches.

The presser-bar has secured to its lower end, by means of the clamping portion 18, and screw 19, a presser-foot 20, which is bifurcated and of the form shown in Figs. 1 and 2. This foot is not conventional, on the contrary having two straddled and depending legs 21, extending approximately from
 75 the clamping portion 18. Each leg, at its lower end, is bifurcated and has journaled in such bifurcation an anti-friction roll 22, adapted to engage the surface of the upper clamp-member, as hereinafter noted. 80

The looper mechanism is disposed directly beneath the needle and the presser-foot, as shown in Figs. 1 and 2, and consists of the looper 23, which carries a bobbin-case 24, held from turning with the looper by means
 85 of the finger 25, which engages a notch in the bottom of the throat-plate 8. The bobbin-case receives the bobbin 26, or a mass of thread in any other form. The looper is disposed, and has circular movement, in a horizontal plane, being connected to the shaft 27,
 90 suitably held and journaled in the bracket 28, secured to the bottom of the work-plate, and said shaft carrying a bevel-pinion 29, which engages and is driven by the bevel-gear 30, the shaft of which is suitably journaled on the bottom of the work-plate and
 95 may be driven in any approved manner, or as disclosed by me in the application or patent above referred to. 100

The slide 3 is maintained in the work-plate in usual manner and closes the opening in the bed-plate as shown in Figs. 1 and 2, the surface of said slide being flush with the surface of the throat-plate. 105

To the work-plate, in rear of the stitch forming mechanism are, disposed two guide-plates 31 and 32, the former being rigidly held to the work-plate or a supplemental plate 36, carried thereby, by means of the
 110 screws 33. The guide-plate 32 is laterally adjustable by means of the slots 34, therein, and the screws 35, the latter extending through the slots and entering the work-plate or said supplemental plate 36. This
 115 construction provides for the regulation of the width of the way between the two guide-plates 31 and 32, enabling said way to be narrowed or broadened for the reception of different sizes of work-clamps or carrier-plates, or for the purpose of taking up wear
 120 or relieving any binding which may occur between the guide-plates and the carrier-plate.

A carrier-plate 37, slides between the ways 125 31 and 32, and upon the work-plate, or upon the supplemental plate 36, as the case may be, and said plate 37, is provided with the overhanging flanges 37^a, between and under which the lower clamp-plate 38, is confined 130

and held. The flanges 37^a, engage the ways 31 and 32, and prevent any friction between the latter and the lower clamp-plate. This avoids binding that might be caused in the operation of the machine by lint thread or dust getting between the plates 37 and 38, or by the long plate 38 not being absolutely straight. It is obvious that by this construction a better bearing is provided for the operating plate 37, than if this plate did not have flanges extending over the plate 38. These flanges also prevent the plate 38 from canting when the thumb nut 40 is tightened and thereby causing binding. The lower clamp-plate 38, is free to slide upon the carrier-plate 37, between its flanges 37^a, but the two plates are rigidly held together by means of the clamp-screw 40, which passes through an elongated, open-end slot 41, in the rear end of said plate 37, and screws into the plate 38, the flange 42, on said screw, engaging the bottom of the plate 37, thus securely binding the two together so that they may move as one. The form of the parts, which I have shown in this embodiment of my invention, involves the provision of overhanging flanges 37^a, on the plate 37, between which the plate 38, is received, and which flanges travel in the way between the guide-plates 31 and 32. It is to be understood, however, that the portions of my invention so far described are not confined to the particular structure set forth, inasmuch as different means or forms may be provided for securing the function of my invention and be within the scope and spirit thereof.

The plate 37, has secured to its bottom a pivotal guide-block 43, held by means of the screw 44, said block engaging the bifurcated end 45, of the traversing lever 46, pivoted at 47, to any convenient portion of the work-plate. The traversing lever 46, may be actuated for the purpose of giving to the work-clamp a progressive continuous, or progressive intermittent movement. Whatever may be the primary actuating means, the immediate actuating means for the traversing lever will, in its preferred form, consist of the shaft 48 carrying the cam 49, in which runs the anti-friction roll 50, secured to an arm 51, of a bell crank lever pivoted at 52, to any adjacent portion of the work-plate and having a segmental arm 53, provided with a longitudinal, segmental groove or slot 54, in which is adjustably secured by means of a usual clamping device 55 one end of the link 56, which link is pivoted at its other end to the lever 46. The cam 49, is secured to the shaft 48, by means of the screw 49^a, and is constructed to provide a driving groove 57, between the flanges 58.

The adjustment of the end of the connection 56 in the way 54 is for the purpose of adjusting the length of the reciprocating movement of the work carrier and thereby the

length of the button-hole. When the end of said connection is over the pivot of the bell crank lever at 52 the work carrier will of course receive no movement from the action of said lever. But as the said end is adjusted away from said pivot the extent of the reciprocating movement of the work carrier is increased.

The shaft 48 and through it the cam 49 may be operated by any suitable means. For example said shaft may be revolved by the ratchet mechanism shown and described in my aforesaid Patent No. 658,578, for button-hole machine. The cam groove 57 is so constructed that the work carrier receives from the same a uniform progressive reciprocating movement as the shaft 48 is given the usual intermittent revolving movement.

In connection with the curved groove 54 it is to be noted that it is formed about the axis of the pivot between the lever 46 and the link 56 when the cam 49 is in one of its extreme positions as shown in Fig. 3. By observing said figure it will be seen that under this construction the cam 49 may be adjusted longitudinally of the shaft 48 so the work carrier will always start from a given point no matter what the extent of the reciprocation of the same may be.

By observing Fig. 1 it will be noticed that the button-hole must be completed when the clamp is in its extreme position towards the front of the machine or towards the operator in order that the hole may be in position for the cutter 10 to cut the same. And this is so whether the hole is cut before or after the stitches have been deposited. Obviously with the cutter located before the stitching mechanism, as in this machine, the work must first be moved towards the stitch forming mechanism and then back again under the cutter so as to be in position to be cut by said cutter when said hole is finished, or in a position to cut the hole before the stitching of the same is commenced. This position of the cutter is better than it would be back of the needle, because the looper is not located in its path as it would be in said position back of the needle.

Referring again to the curved groove 54 being concentric with the pivot of the connection between parts 56 and 46, it is noted that the cam 49 may be adjusted longitudinally, on the shaft 48, by loosening the screws 49 (only one of which is shown) and moving said cam along said shaft, and then securing it again to the shaft. It is obvious that by this adjustment the cam can be located so the curved way 54 will be concentric with the axis of the pivot between the parts 56 and 46, when the work carrier is in one of its extreme positions of reciprocations, or when it is in any other of its positions. By having it located as stated, so the said way is concentric with the said pivot when the work car-

rier is in its extreme position towards the operator, it is seen that the end of the hole next to the needle slot is always in the same position relative to the work clamp no matter what the length of the hole being stitched may be. And thus it is seen that the beginning of the hole may always be in the same position relative to the work clamp. This is of course not essential but is advantageous in making button-holes in certain kinds of garments.

The lower clamp-plate 38, is provided at its forward end with the angular slot 59, into which the work is depressed as herein-
 15 after described. Said plate 38, at any suitable point along its length, is provided with the bracket 60, having the supporting base 61, through which screws 62, extend into the plate 37, for rigidly securing the same together. The bracket 60, is provided with the slot 63. The upper clamp-plate 39, is provided at its rear end with the bracket 64, having the apertured bearings 65, for the reception of the journal-pin 66, which extends through said bearings and on which the upper clamp-plate 39, pivots or is jour-
 20 naled. The pin 66, is provided with the circular flange 67, across which extends the angular feather or rib 68. The outer end of the pin adjacent the rib 68, is screw-threaded as indicated by 69. The other end of the pin is provided with the screw-threaded bore 70, for the reception of the screw 71, the head of which is adapted to rigidly bind the washer
 25 72, against the end of the pin 66, the washer being provided with the aperture 73, for the reception of the end 74, of the coiled-spring 75, which surrounds the pin 66, between the journal bearings 65, of the bracket 64. The
 30 flange 67, on the pin 66, engages the inside of the bracket 60, on the lower clamp-plate 38, the rib 68, fits in the slot 63, to restrain the pin 66, from axial movement, and washer 77, engages the outside of said bracket 60, sur-
 35 rounds the screw-threaded end 69, of the pin 66, and a nut 78, screws on the end 69, in order to clamp the pin 66, in any position desired along the bracket 60. The end 76, of the coiled-spring 75, enters an aperture 79,
 40 in one of the bearings 65, see Figs. 3 and 11. It will be seen from the construction above described that the pin 66, is clamped in any position desired along the bracket 60, by means of the flange 67, washer 70, and the
 45 binding nut 78, the feather or rib 68, preventing axial movement of the pin 66; and that the upper clamp-plate 39, pivots upon said pin 66, and is prevented from movement longitudinally of the pin 66, by means
 50 of the flange 67, and the washer 72, which latter is held in place on the end of the pin 66, by means of the screw 71, which enters the bore 70, of the pin 66. The coiled-spring is so wound as to normally hold the upper
 55 clamping plate 39, open and substantially in

the position shown in Figs. 1 and 2, one end of the spring being held in the bracket of the clamp-plate 39, and the other end being held in the washer 72, secured to the end of the pin 66.

As one end of the spring 75 enters the aperture 79, and its other end in the aperture 73 in the collar 72 it is seen that said collar serves the double purpose of properly retaining the bracket 64 on the stud pin 66, and also regulating the tension of said spring 75 on the upper member 39 of the work clamp. By adjusting the collar around on the screw 71 it of course carries with it the end of this spring 75 that is in the aperture 73 and thereby regulates the tension of said spring and the screw 71 clamps the collar and holds it in place. The vertical adjustment of the bearing pin 66 serves as means for adjusting vertically the rear or pivoted end of the upper member 39 of the work clamp to accommodate it to different thicknesses of work. When button-holes are being made in heavy work it is advantageous to adjust the pivoted end of said member upwardly until a point is reached where the said member 39 is parallel with the surface of the work when the clamp is closed. This adjustment is especially advantageous when button-holes are being made in thin material as it enables the part 39 to be so located that the jaws 84 will press evenly all around the button-hole. And when holes are being made in thin material the same does not fill the opening 59 as does the thick material therefore it is more important that the said jaws press the material more uniformly to prevent it from puckering and also to prevent it from lifting with the needle and thereby causing the machine to skip stitches.

The forward end of the clamp-plate 39, is provided with the slot 80, which is of sufficient size for the operation of the needle in making a button-hole. The opening 59 in the lower member of the clamp is of sufficient size to allow the jaws 84 to press the work through the same into engagement with the needle and cutter plates. The bottom of the upper clamp-plate 39, is provided with two supports or bracket pieces 81, the same being situated at opposite ends of the slot 80, and each being provided with a depending lug 82, which in turn is provided with a stop-pin or lug 83, extending from the inside thereof. The supports 81, have pivoted thereto the clamping jaws 84, the bottom of each of which is serrated as shown in Figs. 7, 8 and 9. As shown in Figs. 8 and 9, the pivotal pins 85, for the support of the jaws 84, are disposed near the top and inner or adjacent edges thereof, thus throwing the weight of the jaws outside of their pivotal points and causing them to normally tend to rest against the stop-lug 83, as shown in Fig. 8.

To enable the parts to assume the posi-

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tion shown in Fig. 8 normally, the jaws are provided with the lateral end extensions 86, which engage the said lug 83. Flat springs 87 are disposed between the jaws 84, at their ends and the bottom of the clamp-plate 39, said springs being normally curved so as to create pressure upon the jaws and maintain them in their normal inoperative position shown in Fig. 8. As shown in Fig. 9, when the upper clamp-plate 39 is depressed, and the jaws 84, engage the work *w*, the latter is depressed within the opening 59, in the clamp-plate 38, and the jaws 84, are caused to swing on their pivots and distend or stretch the work and hold the same thus for the reception of the stitches. The springs 87, will permit the jaws to yield to any unevenness which may occur in the work. It will thus be seen that when the work-clamp is in proper position under the presser-foot and the latter is caused to descend so as to bring the rolls 22, into engagement with the portions 88, of the clamp 39, the latter will be depressed into engagement with the work, which in turn will be stretched by the jaws 84, and be depressed into the opening 59, in the lower plate 38, these operations, functions and effects being produced upon releasing the presser-bar by manipulating the lever 14. The tension of the spring 75 is just sufficient to normally lift the member 39 of the clamp and the tension of the spring 13 is sufficiently stronger than the said spring 75 to firmly press the jaws 84 into the position shown in Fig. 9.

From the above description the mode of operation of the different parts of my mechanism will be apparent, but it may be well to suggest that when it is desired to replenish the bobbin, the presser-bar is elevated by manipulating the lever 14, which will permit the upper clamp-plate 39, to instantly assume its inoperative position through the medium of the coiled-spring 75, said plate being limited in its upward movement by reason of its rear end engaging the adjustable screw 62^a, Figs. 2, 5, 11 and 12, carried by the bracket base 61; then the clamping screw 40, is manipulated to release the clamp-plate 38, from the carrying plate 37, which done, the plate 38, together with the upper clamping plate 39, is retracted or slid upon the carrying plate 37, the shank of the screw 40, passing out of the slot 41, in the end of the plate 37, until the parts are in the position indicated in Figs. 1 and 2. It is assumed, of course, that the needle and the cutter are elevated. The slide-plate 3, will then be moved to the position shown in Fig. 1, access to the bobbin and looper mechanism becomes convenient, and the bobbin may be removed, as well as the other parts of the looper mechanism, from the top of the work-plate; and any other operation,

such as cleaning or examination of the parts may be carried on conveniently and readily.

Mounting the means for depressing the work clamp in the arm of the machine and separately from the work carrier secures a number of advantages. For example it leaves the work carrier free from such means thereby permitting the upper member of said clamp to be readily adjusted vertically as has been described. Also it leaves the space between the upper and lower member free from such obstruction so the garment may be readily inserted between the members of the clamp, and longitudinally of the same when the holes are to be made parallel with the edge of the garment. Furthermore when the presser bar is separate from the clamp the presser spring 13 may be of any desired length, and a better pressure thereby secured. But it is obvious that ordinary means may be carried by the clamp for depressing it.

It will be noted that the separate adjustment of the plate 38 relative to the carrier 37 permits of the clamp being adjusted relative to the stitch forming mechanism, and the hole being thereby located relative to the opening 59 and 80 as may be desired.

It should be understood that my invention consists not only in the particular work-clamping and holding mechanism shown and described, but also in the actuating mechanism, and in the disposition of parts or relative arrangement of the stitch-forming mechanism, cutter and presser-bars shown and described.

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

1. A sewing machine comprising a work-carrier having a clamping device, said clamping device adapted to engage the work so that no movement takes place between the clamp and the work, means for normally holding said clamping device open, and means mounted in a stationary part of the machine for holding said clamping device closed during the stitching operation.

2. A sewing machine the work-plate of which is provided with an opening for access to the looper mechanism; a carrier supported on the work-plate to move adjacent the opening; a work-clamp supported on the carrier and operating over said opening; means for actuating said carrier; and means whereby the clamp may be moved away from said opening and the carrier be undisturbed.

3. A sewing machine comprising stitch-forming mechanism; a work-clamp; means for actuating the clamp; means for regulating the extent of travel of the clamp; and means whereby the initial position of the clamp may be established irrespective of adjustments of the extent of its travel.

4. A sewing machine comprising stitch-forming mechanism; a work-clamp; means for actuating the parts relatively for stitching a buttonhole; and means whereby the working position of the clamp may be adjusted.

5. A sewing machine comprising stitch-forming mechanism; a work-clamp; a carrier for said clamp; means for actuating the parts relatively for stitching a buttonhole; and means whereby the clamp and carrier may be adjusted relatively for determining the working position of the clamp.

6. A sewing machine comprising a stitch-forming mechanism; a work-clamp; means for actuating the parts relatively for stitching a buttonhole; means for regulating the length of the buttonhole; and means for adjusting the clamp relatively to its actuating mechanism whereby the beginning end of the buttonhole may be established irrespective of the length of said hole.

7. A sewing machine comprising stitch-forming mechanism; a work-clamp; means for actuating the parts relatively for stitching a buttonhole; means for regulating the length of the buttonhole; and means whereby a common or initial cooperative relation between the stitch-forming mechanism and the clamp may be maintained irrespective of the length of the buttonhole.

8. A sewing machine comprising stitch-forming mechanism including a looper horizontally disposed; a cloth-plate having an opening above said looper; a work-clamp operating above the looper; a carrier for said clamp; means for actuating said carrier; and means whereby the clamp may be moved from above said looper and its carrier be undisturbed, thus enabling the looper to be reached through said opening.

9. A sewing machine comprising a work carrier having a clamping device, said clamping device adapted to engage the work so that no movement takes place between the clamp and the work, a presser part that is mounted separately from said work carrier adapted to close said clamp into engagement with the work, yielding means for normally depressing said presser part, means for lifting said presser part, and means for opening said clamp.

10. A sewing machine comprising a reciprocating needle and complementary stitch-forming mechanism; a work-clamp; means for actuating the clamp; means permitting the needle to reciprocate through the clamp; and means for engaging the clamp on opposite sides of and adjacent the path of reciprocation of the needle for holding said clamp in operative position.

11. A work-holding mechanism for sewing machines comprising a suitable supporting frame; guide-plates carried thereby; a carrier disposed between the guide-plates; a

work-clamp movably supported by the carrier; and means for detachably connecting the work-clamp to the carrier, whereby the work-clamp may be moved independently of the carrier.

12. A work-holding mechanism comprising a supporting frame; guide-plates secured thereto providing a guide-way; means for regulating the width of the guide-way; and a work-clamp guided within the way.

13. A work-holding mechanism for sewing machines comprising a work-clamp including two members; means for pivotally supporting one of said members upon the other; and means for adjusting the pivotal support relatively to the other member.

14. A work-holding mechanism for sewing machines comprising two members; means for pivotally supporting one member upon the other; means at the pivotal support for normally elevating the pivotal member; and means for regulating the position of the pivot.

15. A work-holding mechanism for sewing machines comprising a work-clamp including two relatively movable members; one of said members carrying pivoted jaws; a stop-lug interposed between said jaws; and means whereby said jaws are normally held in engagement with said lug.

16. A sewing machine comprising stitch-forming mechanism; a work-clamp; a carrier for said clamp; means for actuating said carrier; and means whereby said clamp may be moved relatively to said carrier and actuating means without disturbing the latter either as to function or operation.

17. A sewing machine comprising stitch-forming mechanism; a work-clamp; a carrier for said clamp; means operating upon the carrier for traversing the clamp relatively to the stitch-forming mechanism; and means whereby the clamp may be retracted from stitching position on the carrier and put out of action.

18. A sewing machine comprising stitch-forming mechanism; a work-clamp; a carrier for said clamp; means for operating the carrier for traversing the clamp relatively to the stitch-forming mechanism; and means whereby the clamp may be retracted from stitching position without disturbing the connection between the carrier and its operating means.

19. A sewing machine comprising stitch-forming mechanism; a work-clamp; and means for actuating the same relatively for stitching a buttonhole; a presser-bar carrying a foot having two legs between which the needle of the stitch-forming mechanism operates; and said clamp having a member provided with an opening through which said needle operates and with which member said foot cooperates by engagement of its legs therewith on opposite sides of said opening.

20. A work-holding mechanism for sewing

machines comprising a work-clamp; a carrier for said clamp having overhanging flanges for confining the same; and a support for said carrier comprising guide-ways cooperating with the overhanging flanges.

21. A work-holding mechanism for sewing machines comprising a work-clamp including two members; means for pivotally supporting one member upon the other; means for adjusting the position of said pivotal support; and means for normally holding said pivoted member elevated.

22. A work-holding mechanism for sewing machines comprising a work-clamp, one of

the members of which includes a plurality of pivotally supported serrated bars, springs cooperating with said bars and said member for pressing the bars together, and a lug interposed between said bars for determining their normal position.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM N. PARKES.

Witnesses:

CHAS. MCC. CHAPMAN,
M. HERSKOVITZ.