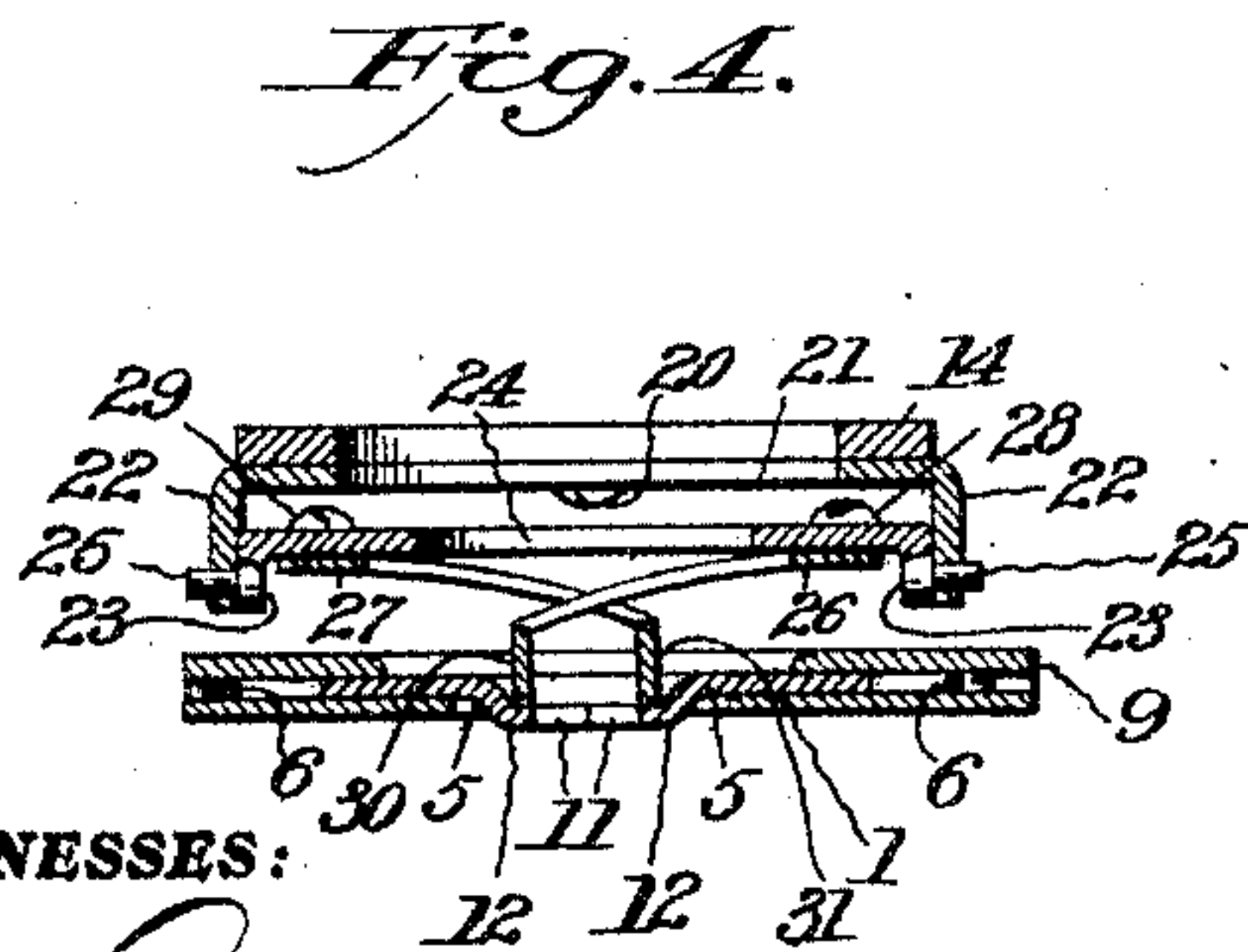
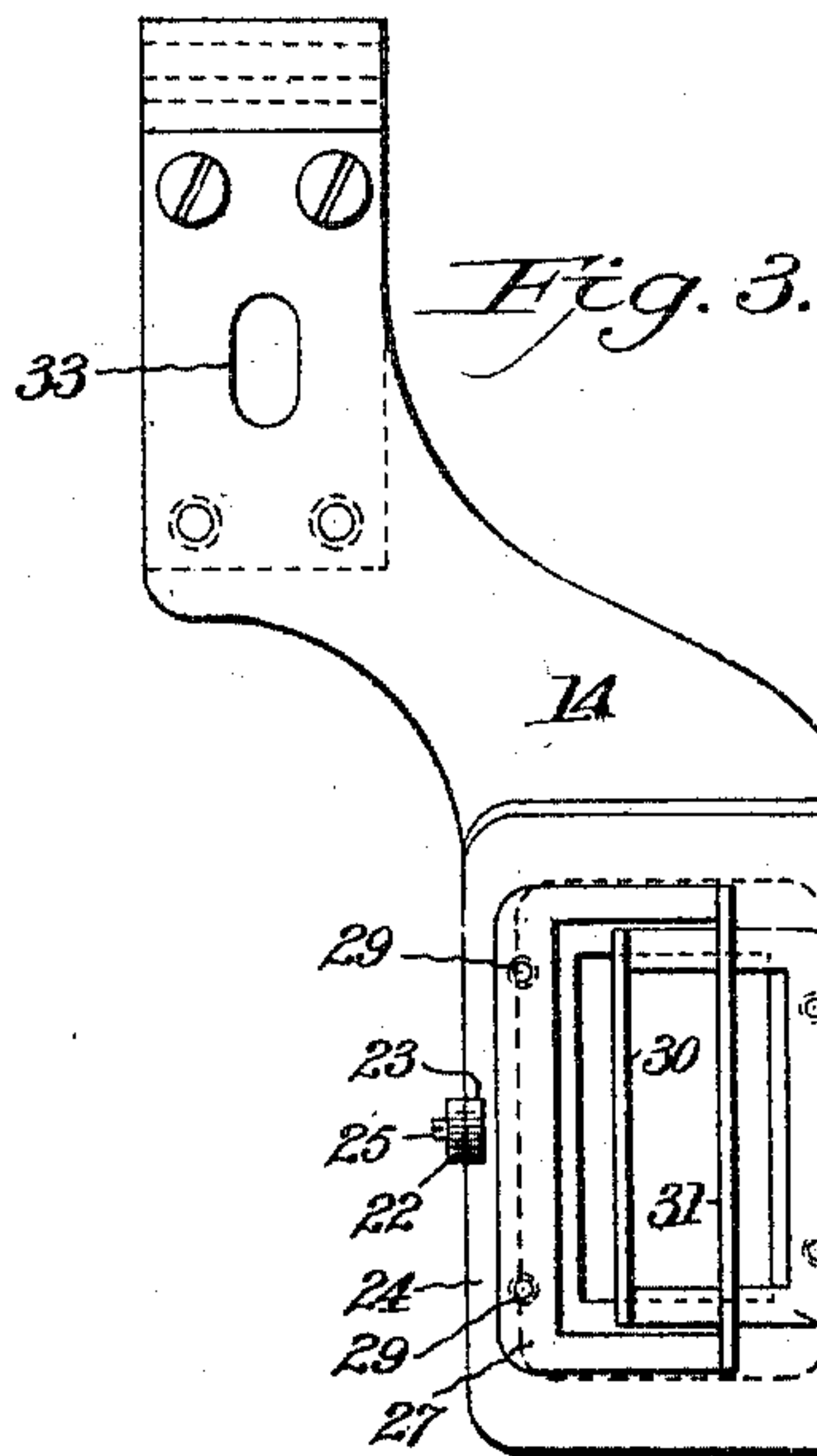
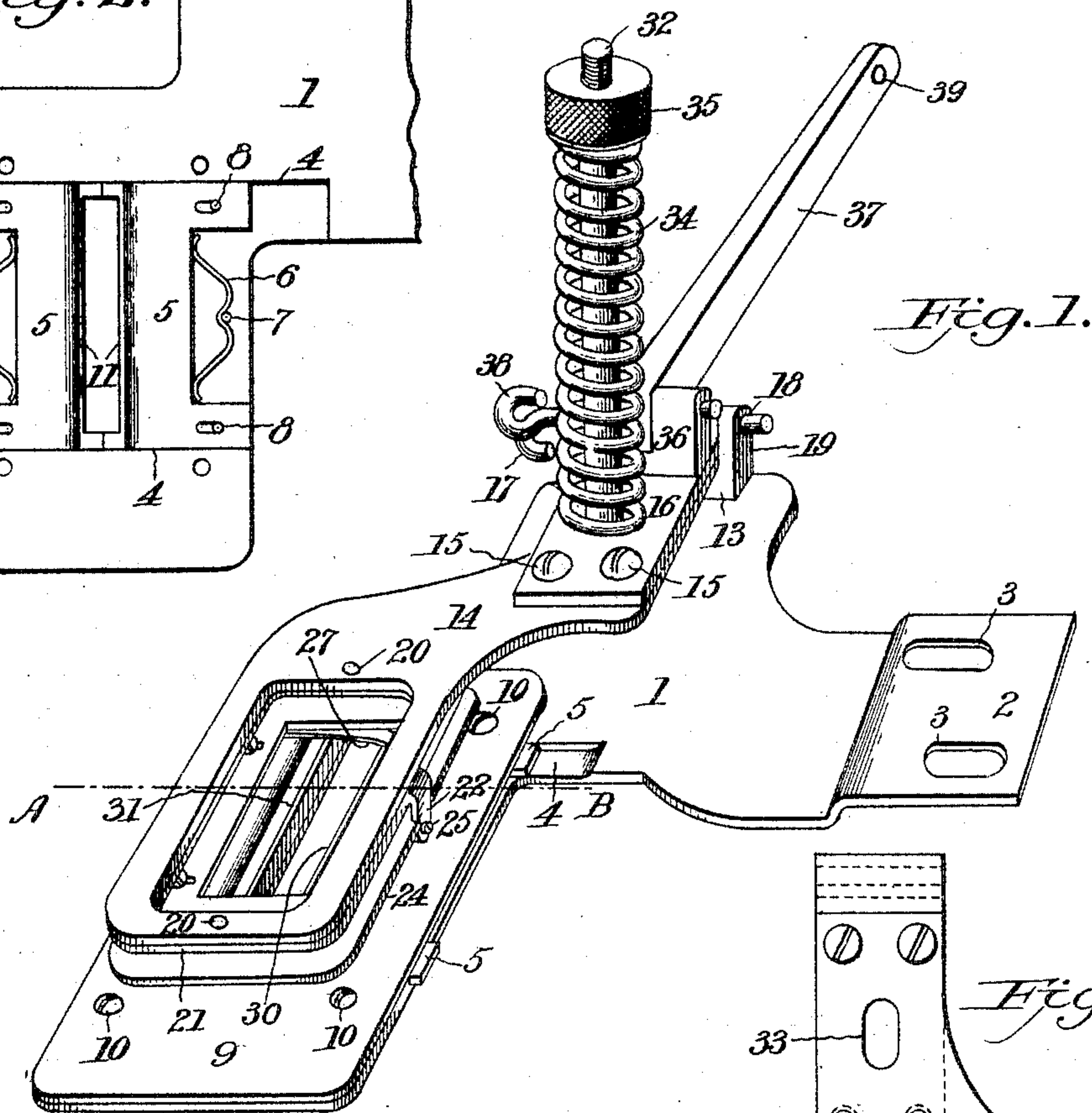
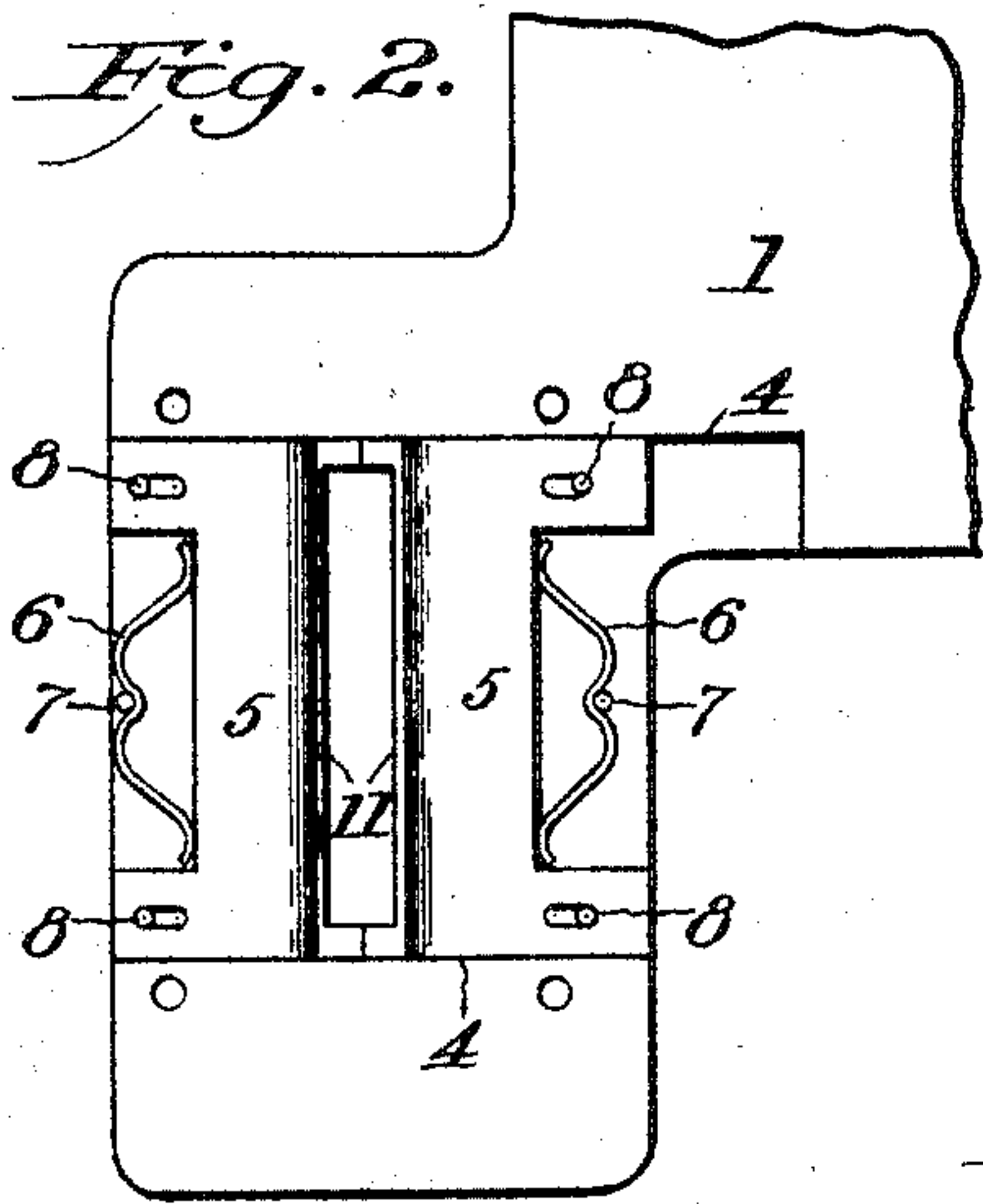


No. 776,347.

PATENTED NOV. 29, 1904.

F. W. OSTROM.
CLOTH CLAMP FOR BUTTONHOLE SEWING MACHINES.
APPLICATION FILED MAY 23, 1904.

NO MODEL.



WITNESSES:
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WHEELER & WILSON MANUFACTURING COMPANY, OF BRIDGEPORT,
CONNECTICUT, A CORPORATION OF CONNECTICUT.

CLOTH-CLAMP FOR BUTTONHOLE-SEWING MACHINES.

SPECIFICATION forming part of Letters Patent No. 776,347, dated November 29, 1904.

Application filed May 23, 1904. Serial No. 209,305. (No model.)

To all whom it may concern:

Be it known that I, FREELAND W. OSTROM, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Cloth-Clamps for Buttonhole-Sewing Machines, of which the following is a full, clear, and exact description.

The object of this invention is to provide a cloth-clamp for buttonhole-sewing machines with means for stretching the material to be operated upon while held in the clamp.

The invention consists of a cloth-clamp comprising oppositely-moving spring-pressed slides in the base-plate adjacent the throat and oppositely-moving pressers mounted upon the clamping member, so that as the clamping member bears upon the work which is between the slides and pressers the said slides and pressers are brought into forcible contact and move apart and thereby stretch the work, and especially the several plies of many-ply work, so as to present a smooth even surface for the stitching.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view of the complete clamp. Fig. 2 is a plan view of a portion of the base-plate, showing the slides mounted therein. Fig. 3 is a bottom plan view of the clamping member, showing the cloth-pressers. Fig. 4 is a cross-section taken in the plane of the line A B, Fig. 1, on a larger scale.

The invention while designed, primarily, for use in the well-known Wheeler & Wilson buttonhole-sewing machine is adaptable to other machines, and such being the case it is deemed unnecessary to show or describe parts other than those immediately connected with the improvement.

1 is the base-plate, provided with the extension 2, having slots 3, through which suitable screws pass for adjustably securing the clamp to the clamp-actuating mechanism, as in the machine referred to.

In the under side of the base-plate 1 are guides 4, in which are mounted two oppo-

sitely-arranged slides 5, held in their normal position by bow-springs 6, which in turn are resiliently held in contact with the slides 5 by pins 7, secured in the base-plate 1. Pins 8 engage slots in the spring-slides for limiting the movements of said slides. To hold the slides 5 and springs 6 in their operative positions, a cover-plate 9 is provided, which is secured to the base-plate 1 by screws 10. The adjacent edges of the slides are cut away at 11 to form a throat, and next these cut-away portions said slides are offset, as at 12, so that the said slides may be moved in opposition to the resiliency of the springs 6 when pressure is exerted against the offset portions 12.

To the base-plate 1 is secured a hinge-block 13. 14 is the clamping member, to which is secured by suitable screws 15 a hinge-plate 16, fulcrumed on a pin 17, passing through suitable holes 18 in the hinge-block 13, said hinge-block 13 being formed with opposite upright posts 19 for the reception of the hinge portion of the hinge-plate 16.

To the clamping member 14 is secured, as by suitable screws 20, a plate 21, provided with depending lugs 22, which are connected with depending lugs 23, formed on a plate 24, by screws 25, so that the plate 24 has a rocking motion relatively to the plate 21, whereby said plate 24 and the parts carried by it are adapted to conform to and evenly hold down the work upon the slides 5.

Two U-shaped downwardly-curved spring-frames 26 and 27 are secured to the under side of the plate 24, as by screws 28 and 29. These frames are of sufficient difference in size to nest one within the other, as shown in Fig. 3, their free ends crossing, and these free ends are supplied with parallel vertical blades 30 and 31, respectively, which engage the slides 5 next their offset portions 12. These frames, with their blades, constitute what is herein referred to as the "pressers" or "cloth-pressers."

When the clamp is assembled, as shown in Fig. 1 and in section, Fig. 4, a movement of the clamping member 14 downward will cause the cloth-pressers to move upward and also

laterally or horizontally away from each other, and owing to the position of the blades of the cloth-pressers relatively to the offset portions 12 of the slides 5 the said slides also
5 will be moved apart.

Mounted in the base-plate 1 is a stud 32, which passes up through a slot 33, formed in the clamping member 14 and hinge-plate 16, and above the hinge-plate 16 and encircling
10 the stud 32 is mounted a spiral spring 34, adjustably held under compression by a nut 35, threaded onto the upper end of the stud 32, whereby the tension of the cloth-clamp may be varied.

15 Mounted on the hinge-plate 16 is a hinge-block 36, to which is hinged a lever 37 by means of a pin 38, which lever at its free end is provided with a hole 39, which in practice is connected with a suitable chain or rod lead-
20 ing to a suitable treadle or knee-lever, by the operation of which the operator opens the clamp for the reception of the material.

The operation of the clamp is as follows: Through the movement of the treadle or knee-
25 lever the operator lifts the clamping member 14 and its appurtenances sufficiently to permit the material to be placed on the base-plate in position to bring the overseaming of the buttonhole substantially central with the
30 space bounded by the two cloth-pressers and the slides 5. The clamping-plate and the pressers carried by it are forced down upon the material by the action of the spring 34, and as the pressers are thus forced upward
35 they are forced apart also through the resiliency of their frames, thus effecting a stretching of the material uniformly at both the upper and under side.

While the device as illustrated and de-
40 scribed is useful for a single ply, its greater utility is in connection with the buttonholing of two or more superposed plies, wherein the plies are liable to slip upon one another unless provision be made for stretching all of
45 the plies uniformly.

What I claim is—

1. A cloth-clamp for buttonhole-sewing machines, comprising essentially understretching members, springs acting upon them to
50 cause them to approach one another, and upper spring-depressed cloth-pressers engaging said understretching members and having a lateral receding movement which is transmitted to the understretching members to cause
55 them to recede simultaneously.

2. In a buttonhole-sewing-machine cloth-clamp, a base-plate provided with spring-pressed slides, a clamping member, and ver-
60 tically and horizontally yielding cloth-pressers carried by said clamping member, combined with yielding means for forcing said pressers down upon said slides when the material is engaged between them and thereby forcing the slides apart laterally and also forc-
65 ing the pressers apart in the same direction.

3. In a buttonhole-sewing-machine cloth-clamp, a base-plate provided with slides, means for resiliently holding said slides against acci-
dental movement in a direction away from each other, a clamping member, and yielding
70 cloth-pressers detachably secured to said clamping member, in combination with yielding means for forcing said slides and pressers toward each other on opposite sides of the material.

4. In a buttonhole-sewing-machine cloth-clamp, a base-plate provided with oppositely-
arranged slides, springs for holding said slides against accidental movement, and a detach-
80 able plate secured to said base-plate for holding said slides against displacement, in combination with a clamping member hinged to said base-plate, and yielding cloth-pressers carried by said clamping member and capable
85 of rocking movements.

5. In a buttonhole-sewing-machine cloth-clamp, a base-plate provided with oppositely-
arranged slides, and a clamping member provided with yielding cloth-pressers and mount-
90 ed to swing vertically, in combination with means for controlling the movements of said clamping member to clamp the material between said yielding cloth-pressers and slides.

6. In a buttonhole-sewing-machine cloth-clamp, the combination of a base-plate pro-
95 vided with slides, a clamping member, a plate pivotally connected to said clamping member, and cloth-pressers yieldingly mounted upon said plate to move vertically and also trans-
100 versely to their vertical movements.

7. In a buttonhole-sewing-machine cloth-clamp, a base-plate having a throat, spring-
slides arranged in said base-plate adjacent said throat, a clamping member, and spring cloth-
105 pressers fixed to said clamping member, and having free edges in normal engagement with the slides.

8. In a buttonhole-sewing-machine cloth-clamp, a base-plate having a throat, spring-
slides arranged in said base-plate adjacent the
110 throat and movable in opposite directions, a clamping member having a pair of crossed spring cloth-pressers depending therefrom and movable vertically and horizontally and adapted to engage the spring-slides in the base-
115 plate and move them away from each other and thereby stretch the work in the clamp.

9. In a buttonhole-sewing-machine cloth-clamp, a base-plate having a throat, spring-
slides arranged in said base-plate adjacent the
120 throat and movable in opposite directions, a clamping member, a rocking plate attached to said clamping member, and a pair of crossed spring cloth-pressers depending from said
125 rocking plate and movable vertically and horizontally and adapted to engage the spring-slides in the base-plate and move them away from each other and thereby stretch the work in the clamp.

10. In a buttonhole-sewing-machine cloth- 130

clamp, a base-plate, spring-pressed slides mounted in said base-plate and movable in opposite directions against the tension of their springs, a clamping member arranged above said slides, and a pair of U-shaped frames connected with said clamping member, and having their free ends crossed, and provided with vertically-arranged blades normally in contact with said spring-slides.

10 11. In a buttonhole-sewing-machine cloth-clamp, a base-plate, spring-pressed slides mounted in said base-plate and movable in opposite directions against the tension of their springs, and having offset portions near their
15 adjacent ends, a clamping member arranged above said slides, and a pair of U-shaped frames connected with said clamping member, and having their free ends crossed and provided with vertically-arranged blades normally in contact with the offset portions of
20

the spring-slides, whereby the work engaged by and between said spring-slides and blades is stretched.

12. In a buttonhole-sewing-machine cloth-clamp, a base-plate, spring-pressed oppositely-
25 moving slides arranged therein, a clamping member hinged to the base-plate, a spring acting upon the clamping member to hold it in forcible contact with the base-plate, and laterally-movable cloth-pressers carried by said
30 clamping member and engaging the slides in the base-plate and imparting their lateral movement to said slides.

In testimony whereof I have hereunto set my hand this 21st day of May, A. D. 1904.

FREELAND W. OSTROM.

Witnesses:

ABBIE M. DONIHER,

ALBERT K. WILLIAMS, Jr.