

J. A. TURCK.
 BUTTONHOLE CUTTING AND STITCHING ATTACHMENT FOR SEWING MACHINES.
 APPLICATION FILED DEC. 15, 1910.
 989,668. Patented Apr. 18, 1911.

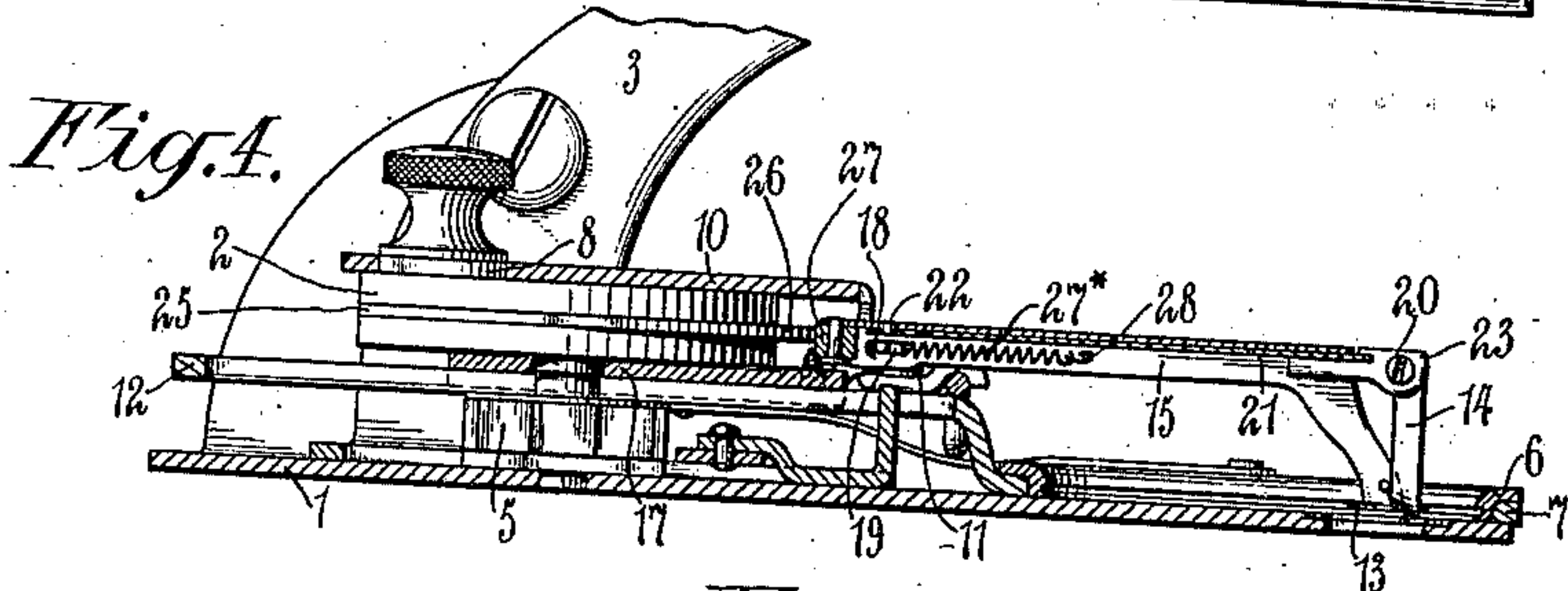
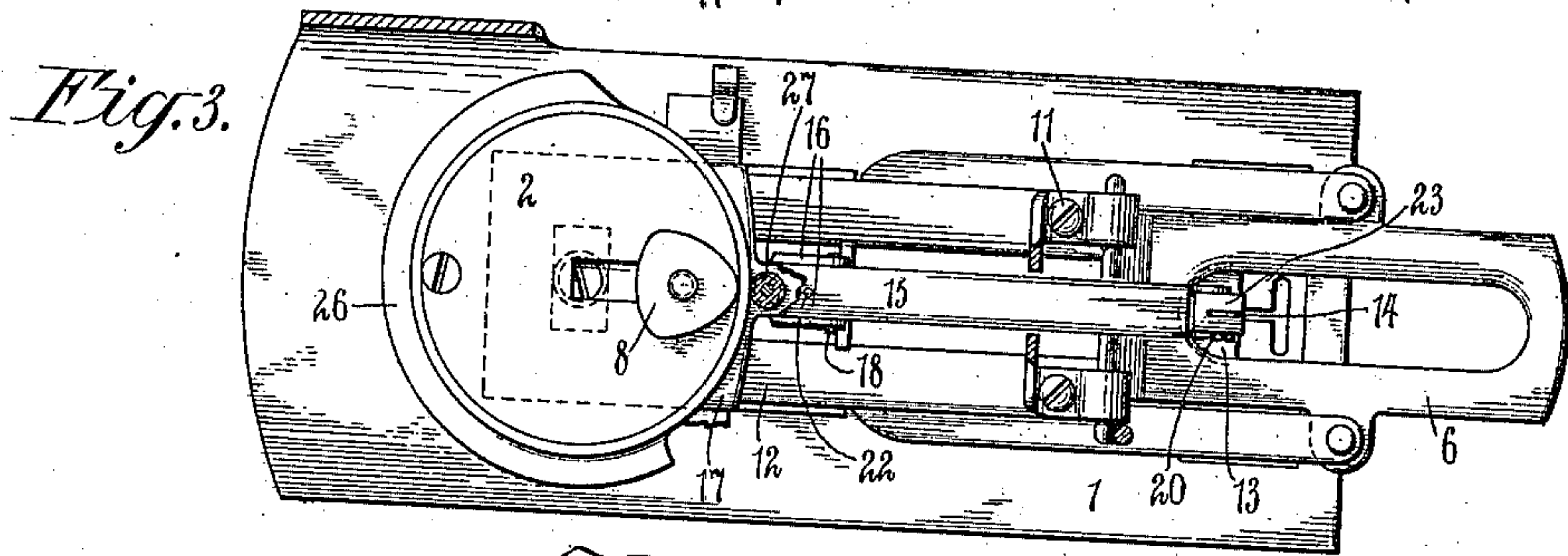
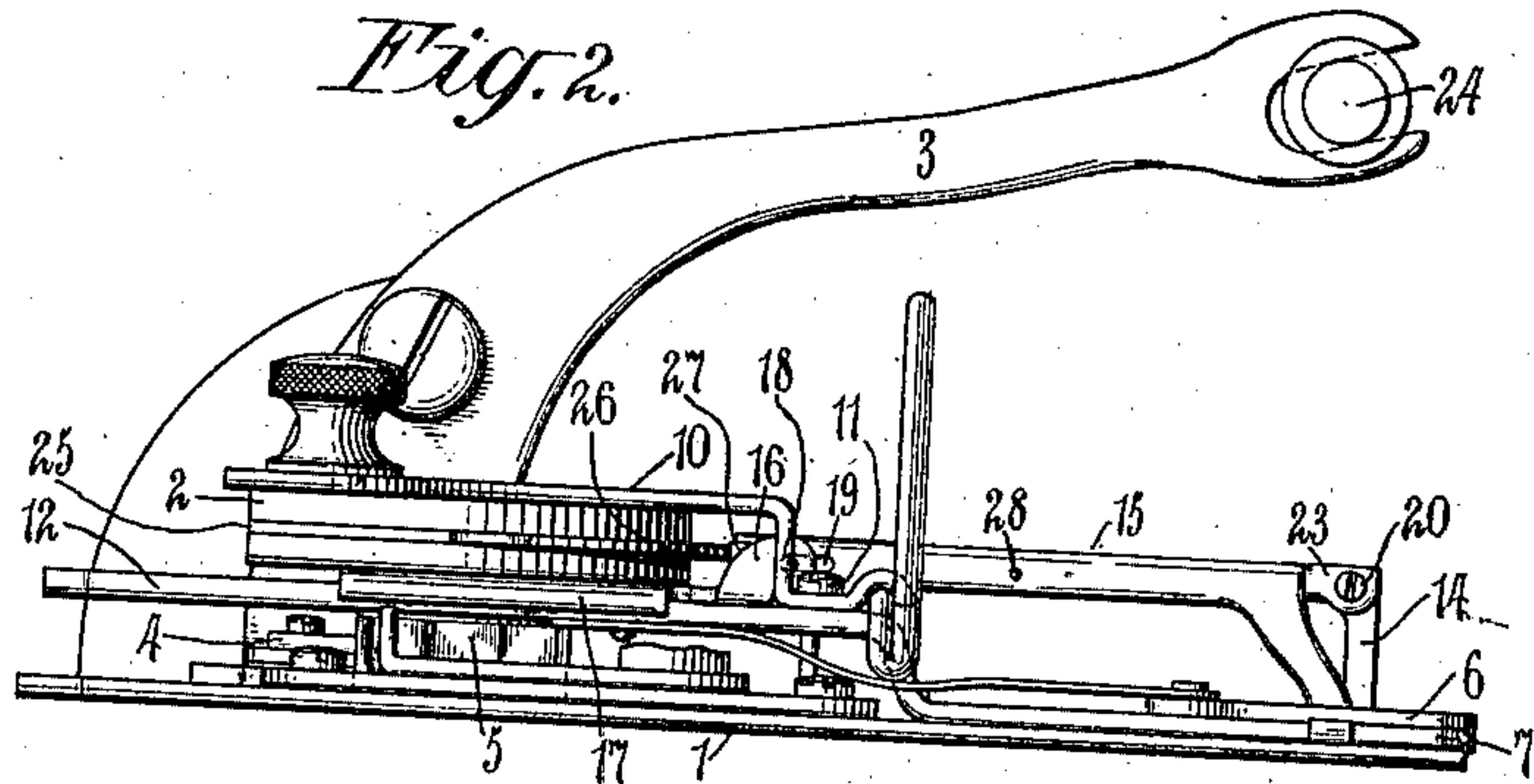
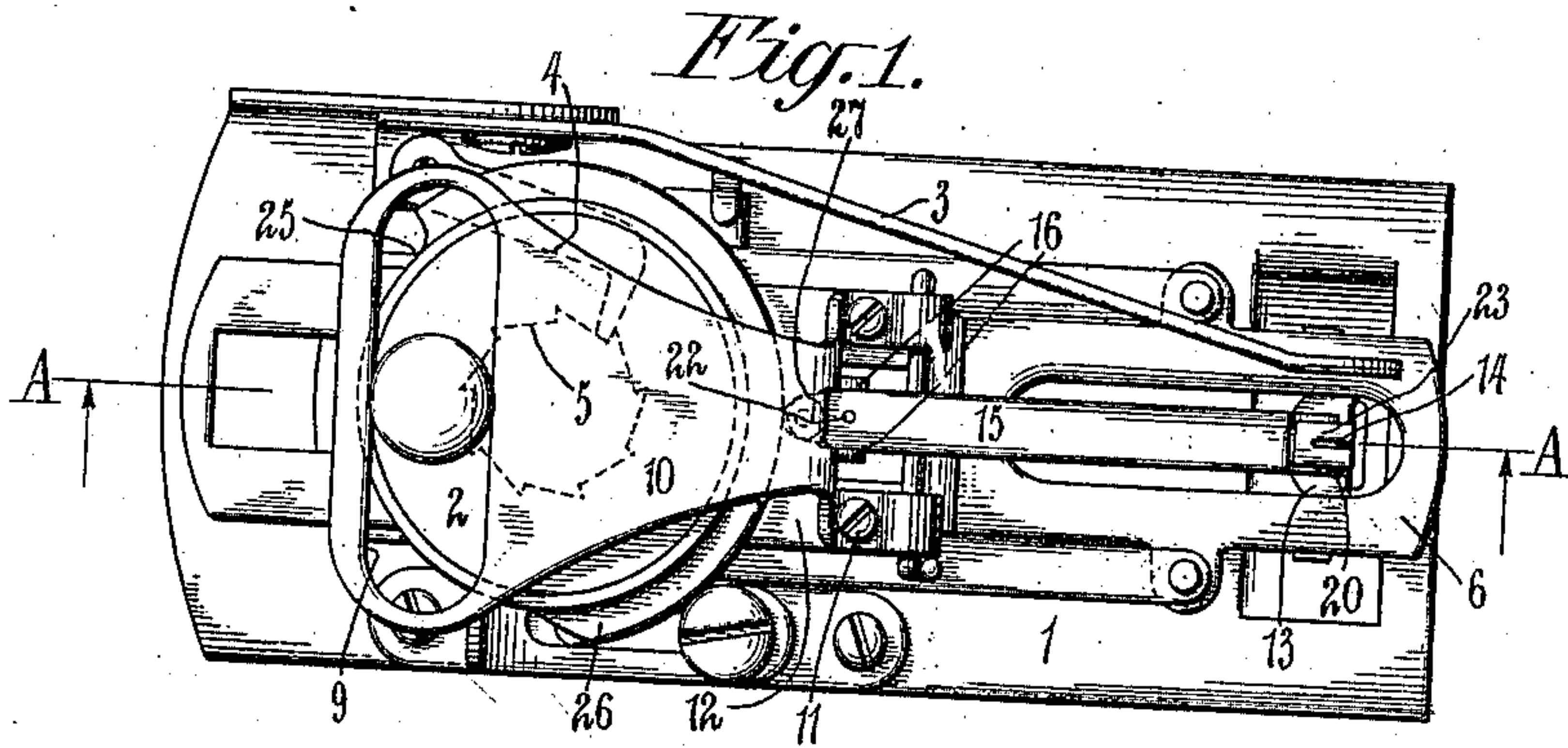
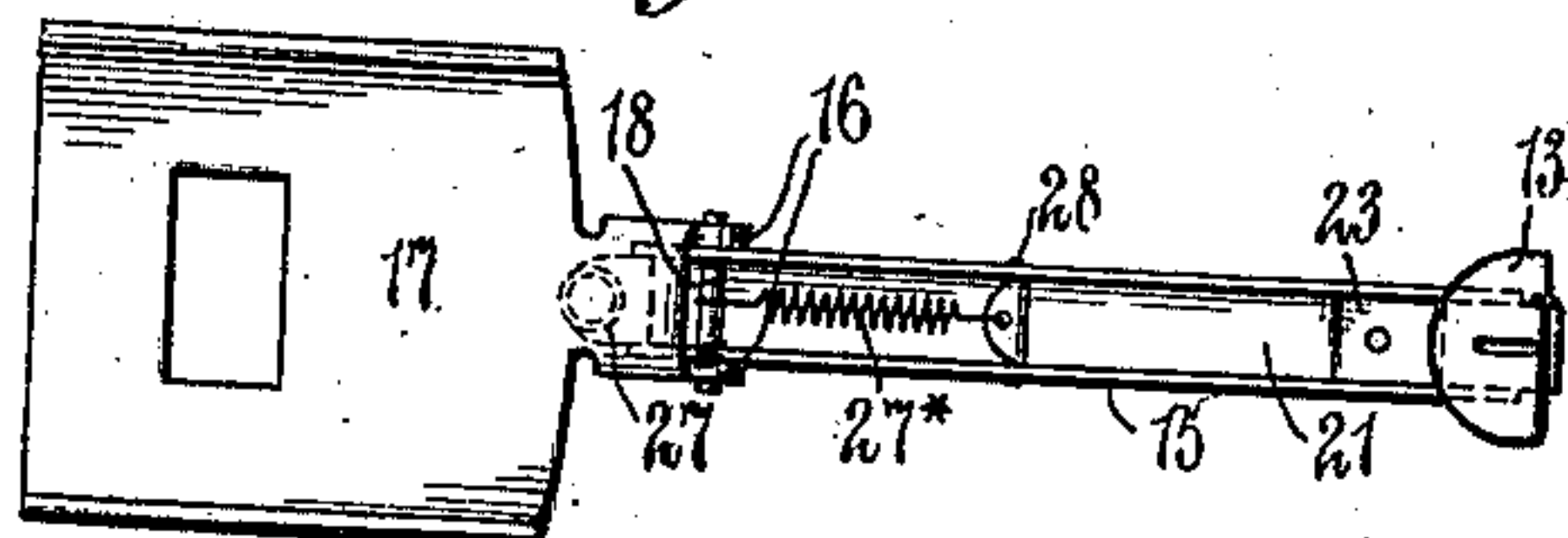


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH A. TURCK, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR, BY MESNE ASSIGNMENTS, TO BUTTONHOLES, INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

BUTTONHOLE CUTTING AND STITCHING ATTACHMENT FOR SEWING-MACHINES.

989,668.

Specification of Letters Patent.

Patented Apr. 18, 1911.

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To all whom it may concern:

Be it known that I, JOSEPH A. TURCK, a citizen of the United States, and resident of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Buttonhole Cutting and Stitching Attachments for Sewing-Machines, of which the following is a specification.

This invention relates to that class of buttonhole cutting and stitching attachments for sewing machines in which the cutting of the buttonhole and the stitching thereof are simultaneous, the cutting knife being brought into and out of cutting operation at predetermined times during the stitching operation and the cutting of the material by the knife being accomplished at a time immediately preceding the stitching operation along one side of the buttonhole.

The object of the present invention is to provide certain improvements in the construction, form and arrangement of the several parts which control the movements of the cutting device into and out of its operative position.

In the accompanying drawings, Figure 1 represents the attachment in top plan with my improvement applied thereto, the parts being in the position which they assume when the stitching and cutting operation is started. Fig. 2 is a side view of the same, Fig. 3 is a horizontal section showing more clearly the means for throwing the cutting knife and stripper therefor, into and out of operation, the parts being in the position which they assume when the cutting knife and stripper have been moved into their inoperative position. Fig. 4 is a longitudinal section taken in the plane of the line A—A of Fig. 1, and Fig. 5 is an inverted plan view of the knife, its stripper and the bridge piece to which the knife and stripper are slidably attached.

I will not describe in detail the different parts of the attachment which are well known but will only mention the same in a general way and then devote myself to a description of the parts of the attachment which form the subject-matter of the pres-

ent invention, viz: the means for bringing the cutting knife and its stripper into and out of their operative position.

The base plate of the attachment is denoted by 1, on which is rotatably mounted the usual cam disk 2. This cam disk is rotated from the lever 3, through a pawl and ratchet 4, 5. The movement of the lever 3 is controlled by the movement of the needle bar, not shown herein, in the usual manner. The work clamp, comprising the usual upper and lower jaws 6, 7, has its longitudinal movements imparted to it from the cam disk 2, in the usual manner, by the cam 8 radially adjustable along the cam disk 2, which cam 8 is located in the transverse slot 9 in the supplemental top plate 10, screwed or otherwise secured by suitable fastening devices 11, to the shank 12 of the lower jaw 7 of the work clamp. The lateral movement is imparted to the work clamp by a cam, not shown herein, located within the cam disk 2, in the usual manner.

The parts so far described are of the well known and approved form and form no part of the present invention except in so far as they assist in the operation of the parts controlling the movement of the cutting knife and its stripper.

A stripper plate 13 through which the blade 14 of the cutting knife works is guided between the jaws 6 and 7 of the work clamp. The inner end of the shank 15 of the stripper has a longitudinally sliding movement between ears 16 uprising from a front extension of the usual bridge piece 17 located between the shank 12 of the work clamp jaw 7 and the cam disk 2. In the present instance a pin 18 carried by these ears 16, passes through two longitudinally elongated slots 19 in the sides of the shank 15. The cutting blade 14 is pivoted at 20, to the outer end of a spring bar 21, the inner end of which bar is riveted or otherwise secured at 22, to the under side of the shank 15 of the stripper at a distance inwardly from the outer end of said shank. This bar 21 is provided with the usual anvil 23 arranged to be engaged by an abutment 24 carried by the lever 3, or by an attachment

on the needle bar, not shown herein, when the said anvil is located in the path of said abutment, for the purpose of depressing the blade 14 and thereby cutting the material.

5 The means which I have shown for bringing the anvil 23 into and out of the path of its operating part for rendering the cutting knife operative or inoperative, is constructed, arranged and operated as follows. A cam
10 25 rotates with the cam disk 2, and it is provided with a cam face 26 projecting beyond the cam disk 2. The inner end of the stripper shank 15 is provided with a stud or roller 27 arranged to be held in contact
15 with the face of the cam 25, by means of a spring 27*, one end of which is attached to the bridge piece 17 and the other end of which is attached to the shank 15 of the
20 stripper. In the present instance this spring is located along the under side of the shank with one end engaged with a cross-bar 28 and its other end engaged with the cross-bar 18 hereinbefore referred to.

In operation, presupposing the parts to be
25 in the position in which they are shown in Fig. 1 where the stitching and cutting of a buttonhole is about to be commenced, the anvil 23 is in position to be engaged by the abutment 24 at every downward movement
30 of the lever 3 and the needle-bar which controls the same. This will cause the blade to cut the material just in advance of the stitching along one side of the buttonhole. As the blade approaches the end of the button-
35 hole, it, together with the stripper therefor, will be withdrawn out of the path of the abutment 24 by the inward movement of the stud or roller 27, due to its rolling off from the cam face 26 of the cam 25. As the
40 material is returned to its original position during the stitching of the opposite side of the buttonhole, the cutting blade with its stripper will be automatically projected back into its original operative position with re-
45 spect to the abutment 24, by the reengagement of the stud or roller 27 with the cam face 26 of the cam 25. It will thus be seen that a very simple and effective means is provided for bringing the cutting knife and
50 its stripper into and out of their operative position.

It is evident that various changes in the construction, form and arrangement of the various parts might be resorted to without
55 departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the structure herein shown and described, but

What I claim is:

60 1. In a buttonhole cutting and stitching attachment for sewing machines, a stripper, a cutting device carried thereby and actuating mechanism separate from the stripper and engaging it for moving the cutting de-
65 vice into and out of its operative position.

2. In a buttonhole cutting and stitching attachment for sewing machines, a stripper, a cutting device carried thereby and means engaging the stripper for moving the cut-
70 ting device into and out of its operative position comprising a rotary cam and a spring for holding the stripper in engagement therewith.

3. In a buttonhole cutting and stitching attachment for sewing machines, a stripper, 75 a cutting device carried thereby and means for moving the cutting device into and out of its operative position comprising a rotary cam, a stud or roller carried by the stripper and a spring for holding the stud or roller 80 in engagement with the cam.

4. In a buttonhole cutting and stitching attachment for sewing machines, a bridge piece, a stripper slidably mounted thereon, a cutting device carried by the stripper and 85 means for moving the cutting device into and out of its operative position comprising a rotary cam, a stud or roller carried by the stripper and a spring engaging the bridge piece and stripper for holding the stud or 90 roller in engagement with the cam.

5. In a buttonhole cutting and stitching attachment for sewing machines, a work clamp, a bridge piece, a stripper having its plate guided by the work clamp and its 95 shank guided by the bridge piece, a cutting device carried by the stripper and means engaging the stripper for moving the cutting device into and out of its operative position.

6. In a buttonhole cutting and stitching 100 attachment for sewing machines, a work clamp, a bridge piece, a stripper having its plate guided by the work clamp and its shank guided by the bridge piece, a cutting device carried by the stripper and means en- 105 gaging the stripper for moving the cutting device into and out of its operative position, comprising a rotary cam, a stud or roller carried by the stripper shank and a spring connected to the bridge piece and the strip- 110 per shank for holding the stud or roller in engagement with the cam.

7. In a buttonhole cutting and stitching attachment for sewing machines, a bridge piece having ears uprising therefrom, a 115 cross-bar passing through said ears, a stripper having its shank slidably mounted on said cross-bar, a cutting device carried by the stripper and means engaging the strip- 120 per for moving the cutting device into and out of its operative position.

8. In a buttonhole cutting and stitching attachment for sewing machines, a bridge piece having ears uprising therefrom, a 125 cross-bar passing through said ears, a strip- per having its shank slidably mounted on said cross-bar, a cutting device carried by the stripper and means engaging the strip- 130 per for moving the cutting device into and out of its operative position comprising a

rotary cam, a stud or roller carried by the
stripper shank and a spring connected to
said cross-bar of the bridge piece and to the
stripper shank for holding the stud or roller
5 in engagement with said cam.

In testimony, that I claim the foregoing
as my invention, I have signed my name in

presence of two witnesses, this ninth day of
December 1910.

JOSEPH A. TURCK.

Witnesses:

HOWARD E. BARLOW,
E. I. OGDEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
