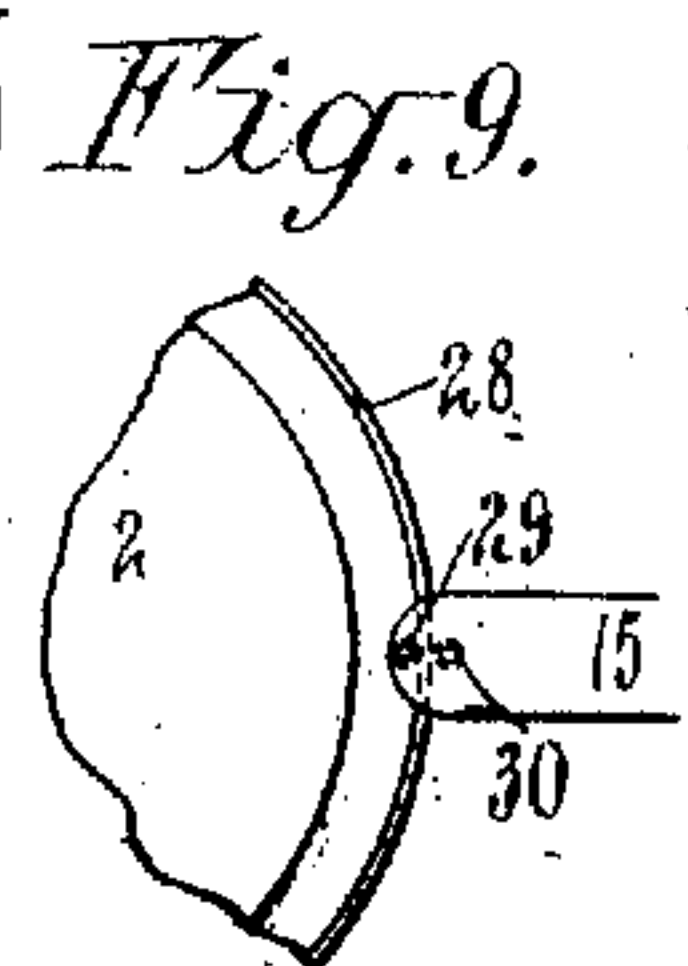
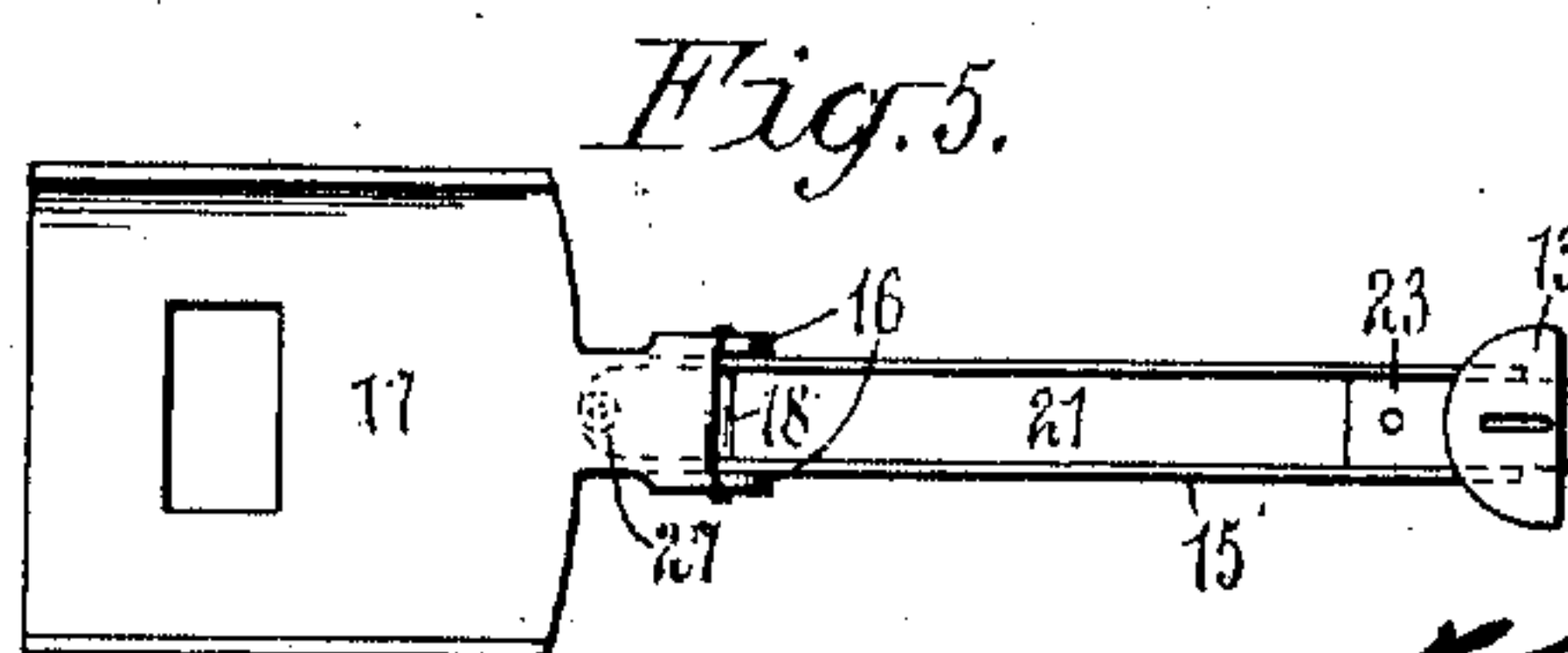
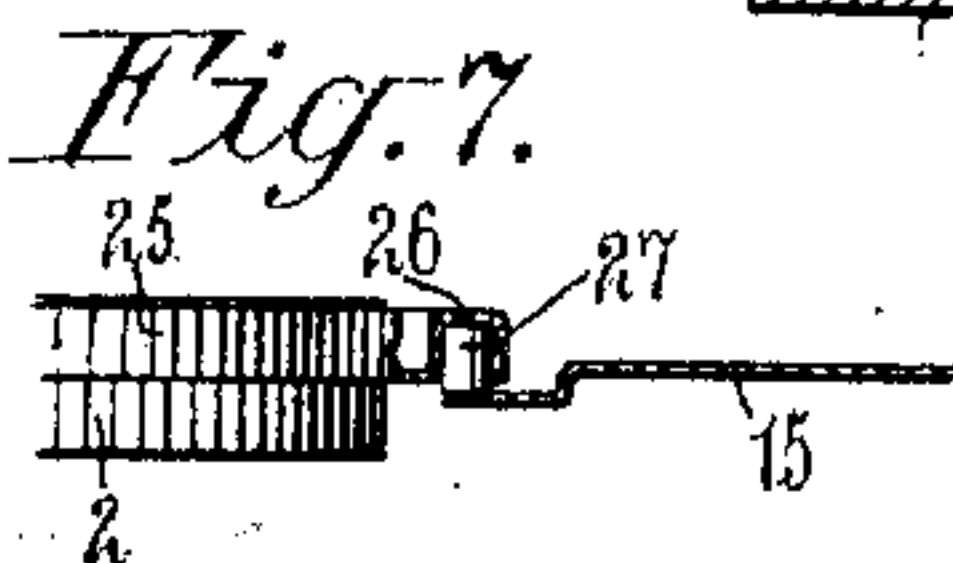
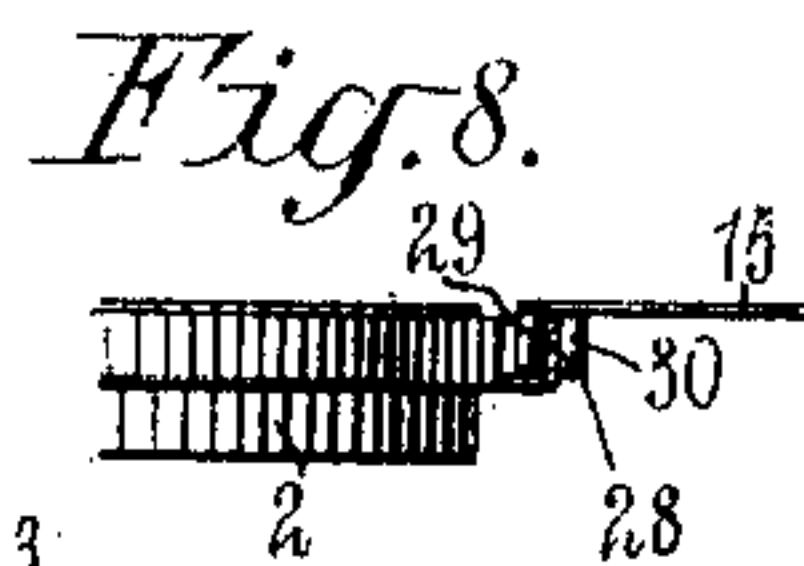
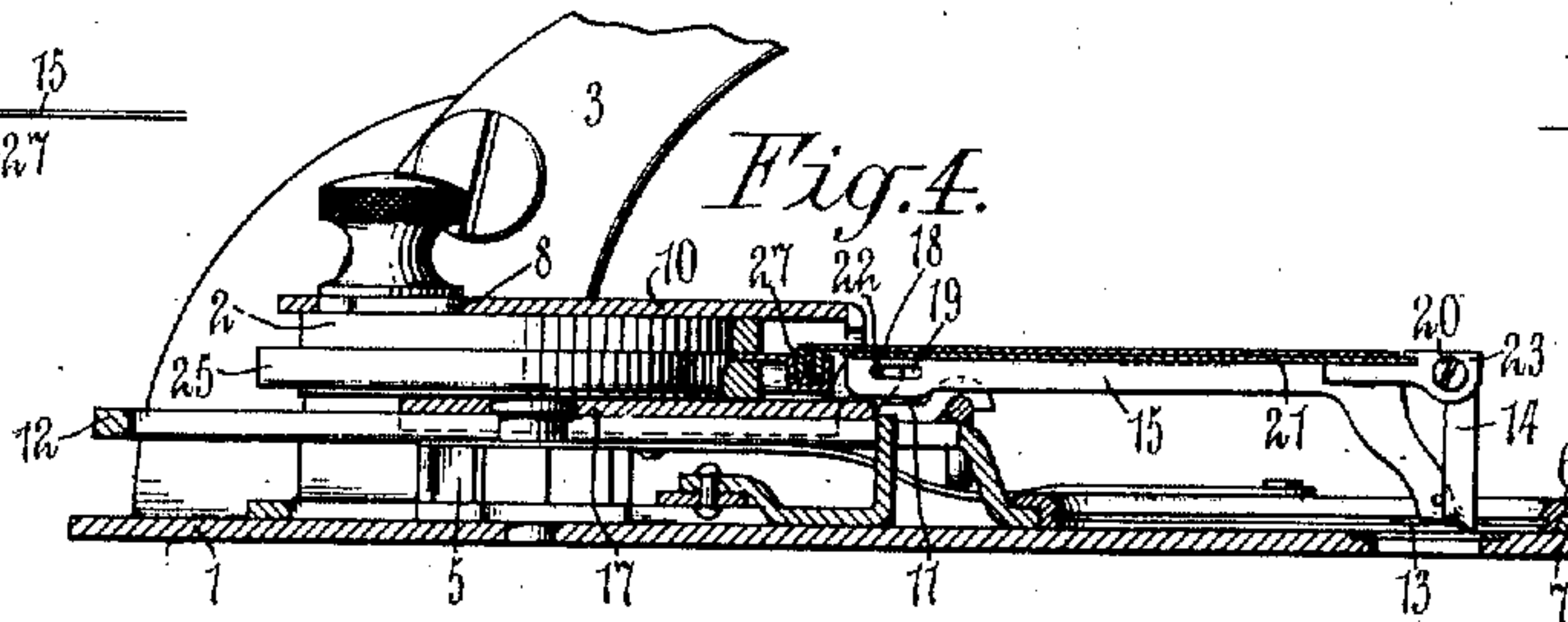
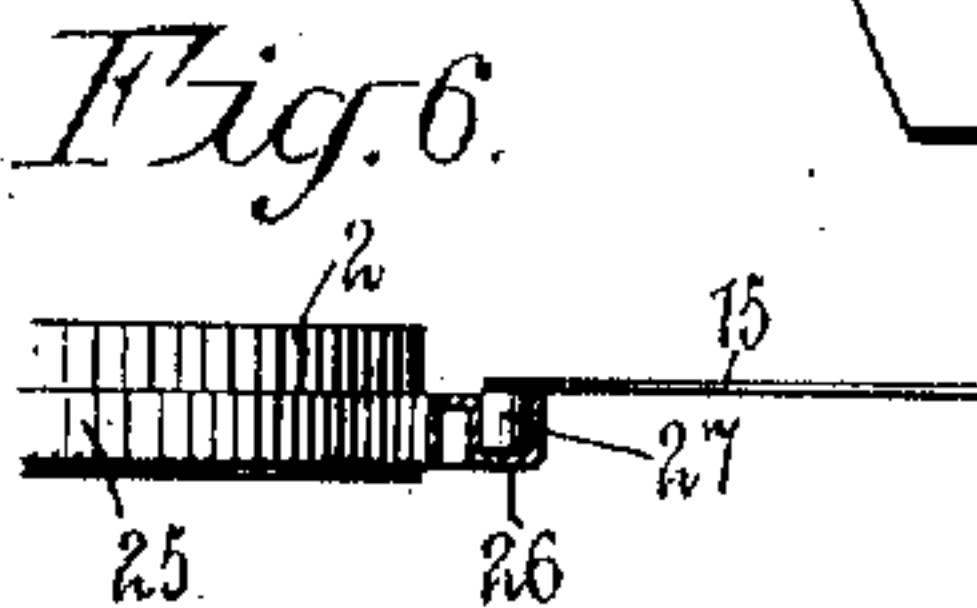
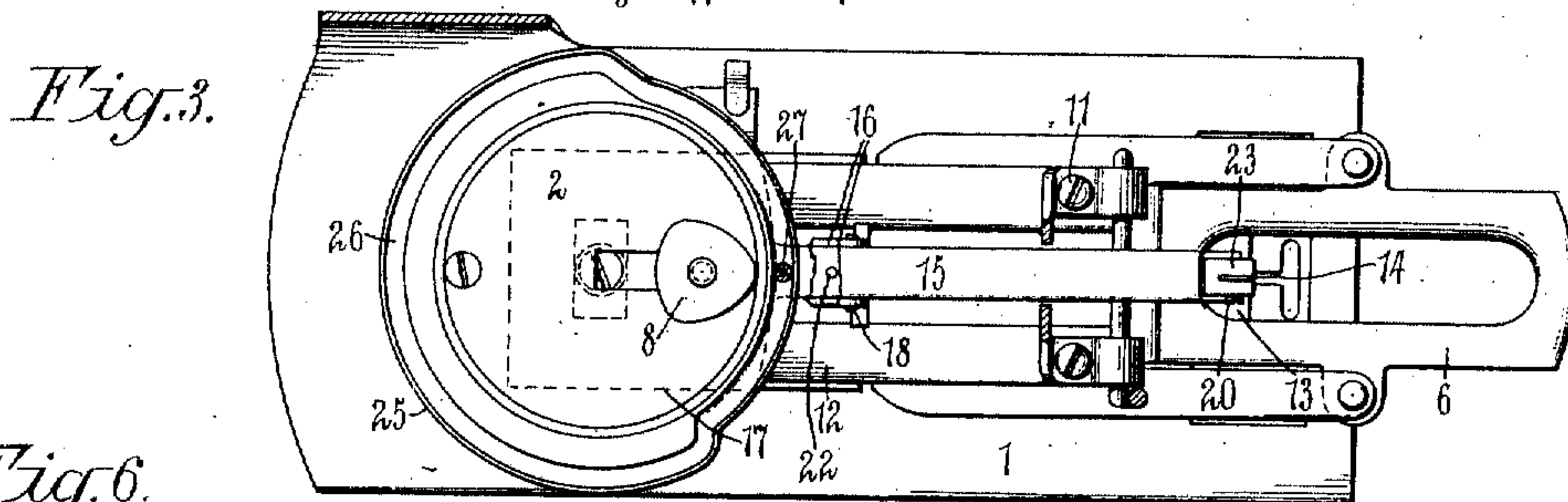
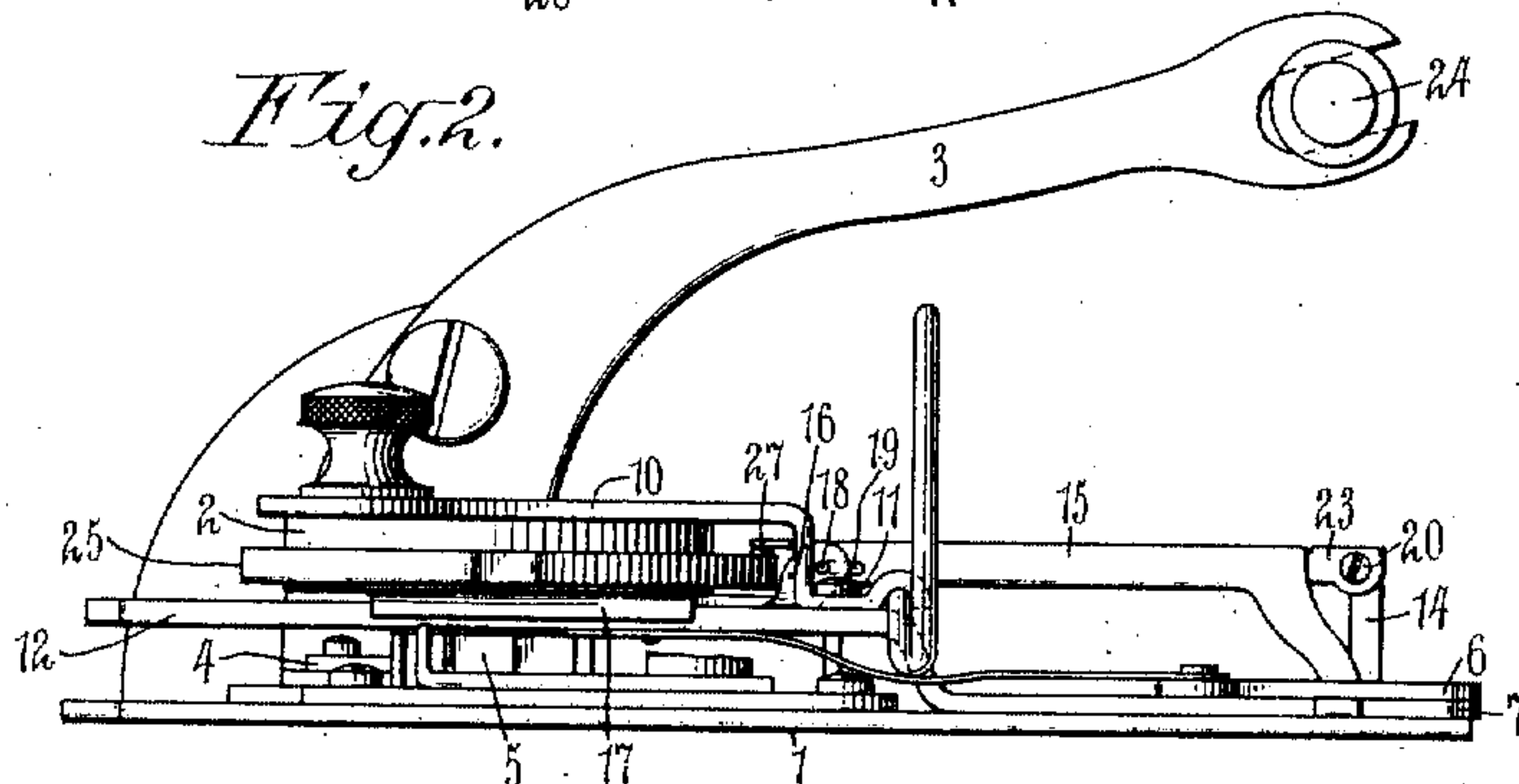
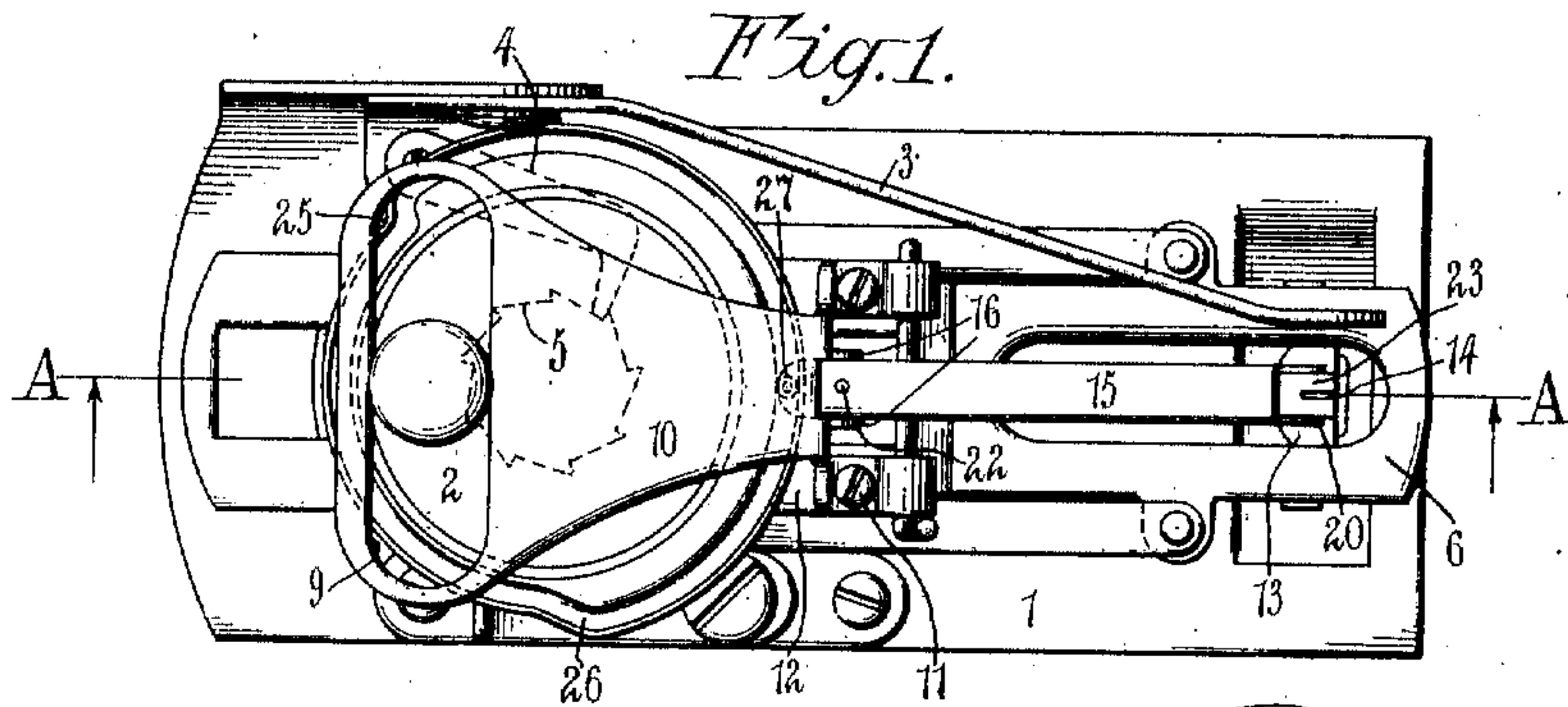


R. B. SEWARD.
 BUTTONHOLE CUTTING AND STITCHING ATTACHMENT FOR SEWING MACHINES.
 APPLICATION FILED MAR. 18, 1911.

990,601.

Patented Apr. 25, 1911.



Witnesses:
Harry S. Fleischer
F. George Bamy

Inventor:
Robert B. Seward
 by his attorney
Thurston & Seward

UNITED STATES PATENT OFFICE.

ROBERT B. SEWARD, OF NEW YORK, N. Y., 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.

990,601.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed March 18, 1911. Serial No. 615,416.

To all whom it may concern:

Be it known that I, ROBERT B. SEWARD, a citizen of the United States, and resident of the borough of Brooklyn, in the city and State of New York, have invented a new and useful Improvement in Buttonhole Cutting and Stitching Attachments for Sewing-Machines, of which the following is a specification.

10 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 is simultaneous, the cutting knife being brought
15 into and out of cutting operation at predetermined times during the stitching operation and the cutting of the material by the knife immediately preceding the stitching operation along one side of the buttonhole.

20 The object of this invention is to provide certain improvements in the construction, form and arrangement of the several parts whereby the cutting device may be positively moved into and out of its operative position
25 by a single means, thereby eliminating unnecessary parts and reducing the liability of the entire mechanism to become deranged or inoperative due to distortion or breakage of the parts.

30 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
35 started. Fig. 2 is a side view of the same. Fig. 3 is a horizontal section showing more clearly the means for positively moving the cutting device into and out of operation, the parts being in the position which they assume when the cutting knife has been moved
40 into its inoperative position. Fig. 4 is a longitudinal section taken in the plane of the line A—A of Fig. 1. Fig. 5 is an inverted plan view of the knife, its stripper and the
45 bridge-piece to which the stripper is slidably attached. Fig. 6 is a fragmentary section showing a portion of the cam disk and a portion of the stripper shank with the cam groove in the upper face of the cam disk.
50 Fig. 7 is a similar view with the cam groove in the under face of the cam disk. Fig. 8 is a similar view showing a rib or track on the

cam disk instead of a groove, and Fig. 9 is a detail plan view of the form shown in Fig. 8.

I will not describe in detail the different 55 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 present invention, viz: 60 the means for positively moving the cutting device into and out of its 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 ro- 65 tated 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 70 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 75 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 80 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 85 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 90 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 95 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. 100

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.

10 I have shown several different specific devices for positively moving the anvil 23 of the cutting device into and out of the path of its operative part for rendering the cutting knife operative or inoperative. In all 15 of the figures, I have shown a cam disk 25 which rotates with the cam disk 2. In Figs. 1 to 6 inclusive, I have shown the upper face of the cam disk 25 as provided with a cam groove 26 arranged to receive therein a stud 20 or roller 27 depending from the inner end of the stripper shank 15. In Fig. 7, I have shown the cam groove 26 in the cam disk 25, in the under face of the disk and have shown the stud or roller 27 uprising from the stripper shank 15, which is a mere reversal of the arrangement shown in Figs. 1 to 6 inclusive. In Figs. 8 and 9, I have shown the cam disk 25 as provided with a cam rib or track 28 arranged to travel between a pair of studs 30 or rollers 29, 30, carried by the shank 15 of the stripper. The above are only three of many different forms which might be used for positively moving the cutting device into and out of its operative position by a single 35 means.

In operation, presupposing the parts to be 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 40 anvil 23 is in position to be engaged by the abutment 24 at every downward movement 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 buttonhole, 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 45 roller 27, due to the shape of the cam groove 26, as shown in Figs. 1 to 7 inclusive, or the inward movement of the studs or rollers 29, 30, due to the shape of the rib or track 28, in Figs. 8 and 9. As the material is returned 50 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 respect to the abutment 24 by the outward movement of the stud or roller 27, in Figs. 1 to 7 inclusive and the outward movement of the studs or rollers 29, 30, in Figs. 8 and 9.

From the above description it will be seen 65 that a very simple and effective device is

provided for positively moving the cutting knife into and out of its operative position.

It is evident that various changes in the construction, form and arrangement of the various parts might be resorted to without 70 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:

1. In a buttonhole cutting and stitching attachment for sewing machines, a stripper, a cutting device carried thereby and a rotary cam engaging the stripper for positively moving the cutting device into and out of 80 its operative position.

2. In a buttonhole cutting and stitching attachment for sewing machines, a stripper, a cutting device carried thereby and means for positively moving the cutting device into 85 and out of its operative position comprising a rotary disk having a cam groove therein and a stud or roller carried by the stripper, located in said groove.

3. In a buttonhole cutting and stitching 90 attachment for sewing machines, a bridge-piece, a stripper slidably mounted thereon, a cutting device carried by the stripper and a rotary cam engaging the stripper for positively moving the cutting device into and 95 out of its operative position.

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 100 means for positively moving the cutting device into and out of its operative position comprising a rotary disk having a cam groove therein and a stud or roller carried by the stripper, located in said groove. 105

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 shank guided by the bridge-piece, a cutting 110 device carried by the stripper and a rotary cam engaging the stripper shank for positively moving the cutting device into and out of its operative position.

6. In a buttonhole cutting and stitching 115 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 for 120 positively moving the cutting device into and out of its operative position comprising a rotary disk having a cam groove therein and a stud or roller carried by the stripper shank, located in said groove. 125

7. In a buttonhole cutting and stitching attachment for sewing machines, a bridge-piece having ears uprising therefrom, a cross bar passing through said ears, a stripper having its shank slidably mounted on said 130

cross bar, a cutting device carried by the stripper and a single means engaging the stripper shank for moving the cutting device into and out of its operative position.

5 8. In a buttonhole cutting and stitching attachment for sewing machines, a bridge-piece having ears uprising therefrom, a cross
10 bar passing through said ears, a stripper having its shank slidably mounted on said cross bar, a cutting device carried by the
stripper and a rotary cam engaging the
stripper shank for positively moving the
cutting device into and out of its operative
position.

15 9. In a buttonhole cutting and stitching attachment for sewing machines, a bridge-piece having ears uprising therefrom, a cross-

bar passing through said ears, a stripper
having its shank slidably mounted on said
cross-bar, a cutting device carried by the 20
stripper and means for positively moving
the cutting device into and out of its opera-
tive position comprising a rotary disk hav-
ing a cam groove therein and a stud or
roller carried by the stripper shank, located 25
in said groove.

In testimony, that I claim the foregoing
as my invention, I have signed my name in
presence of two witnesses, this 17th day of
March 1911.

ROBERT B. SEWARD.

Witnesses:

F. GEORGE BARRY,
HENRY C. THIEME.

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