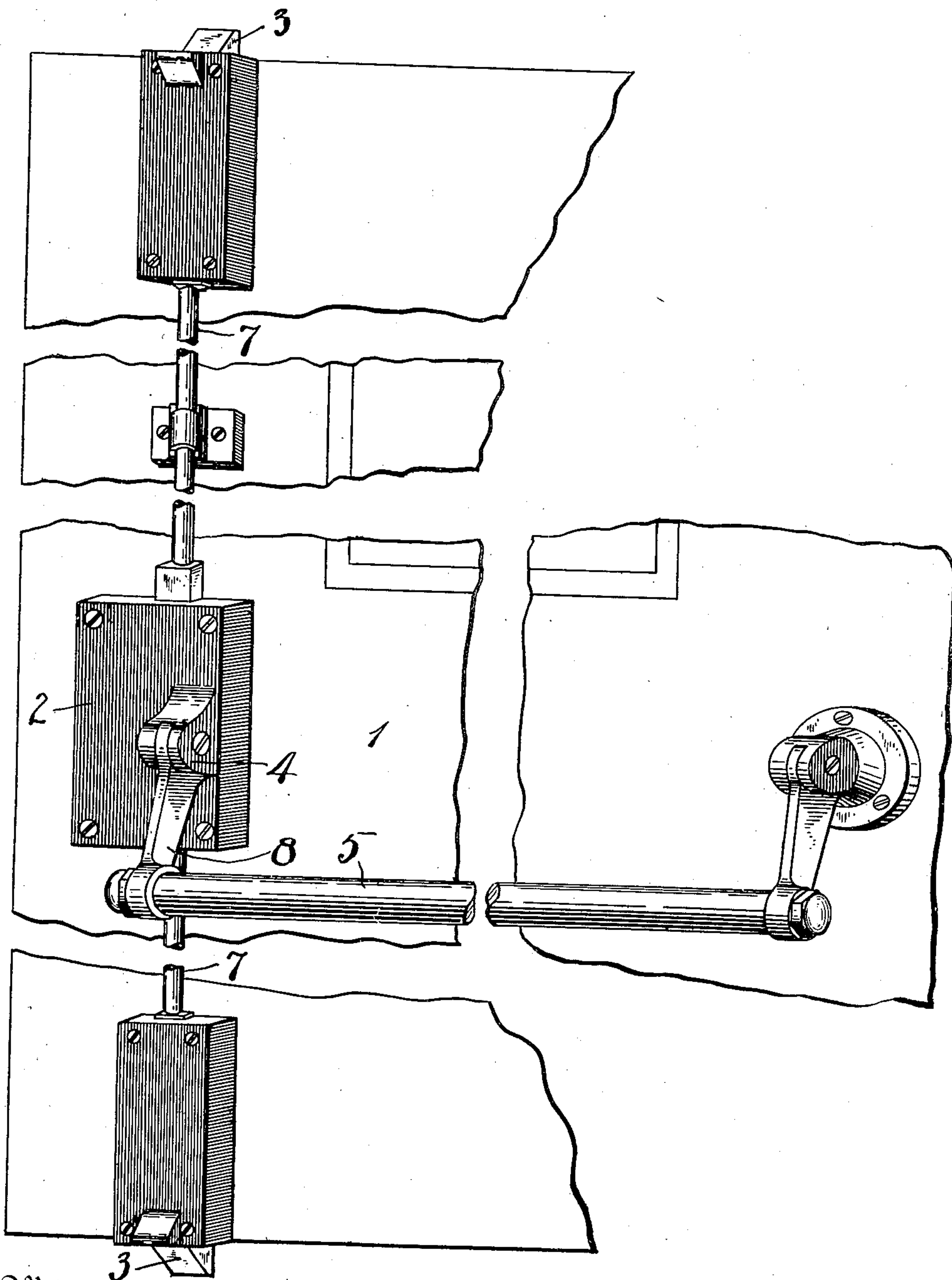


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4 SHEETS—SHEET 1.

Fig. 1



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Fig. 2.

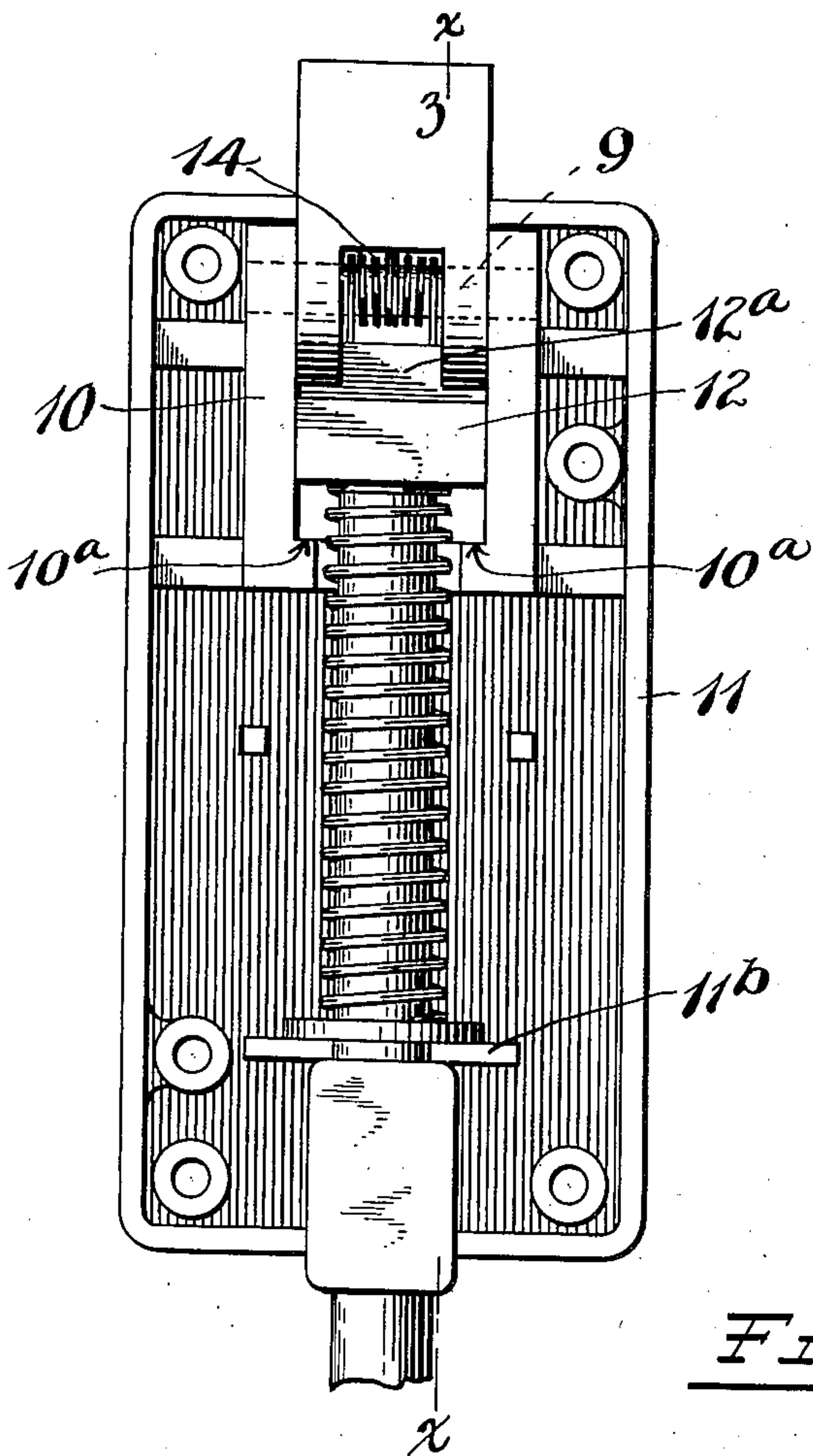


Fig. 3.

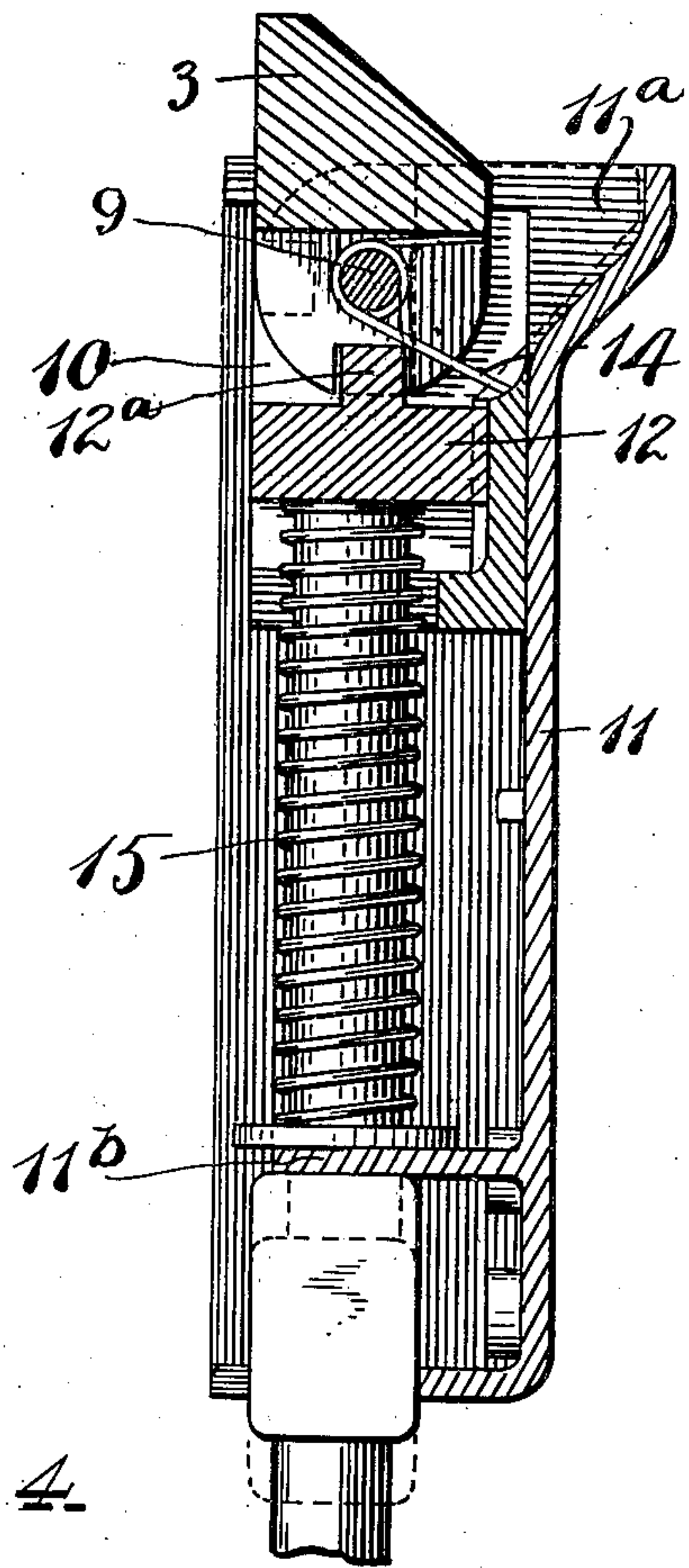
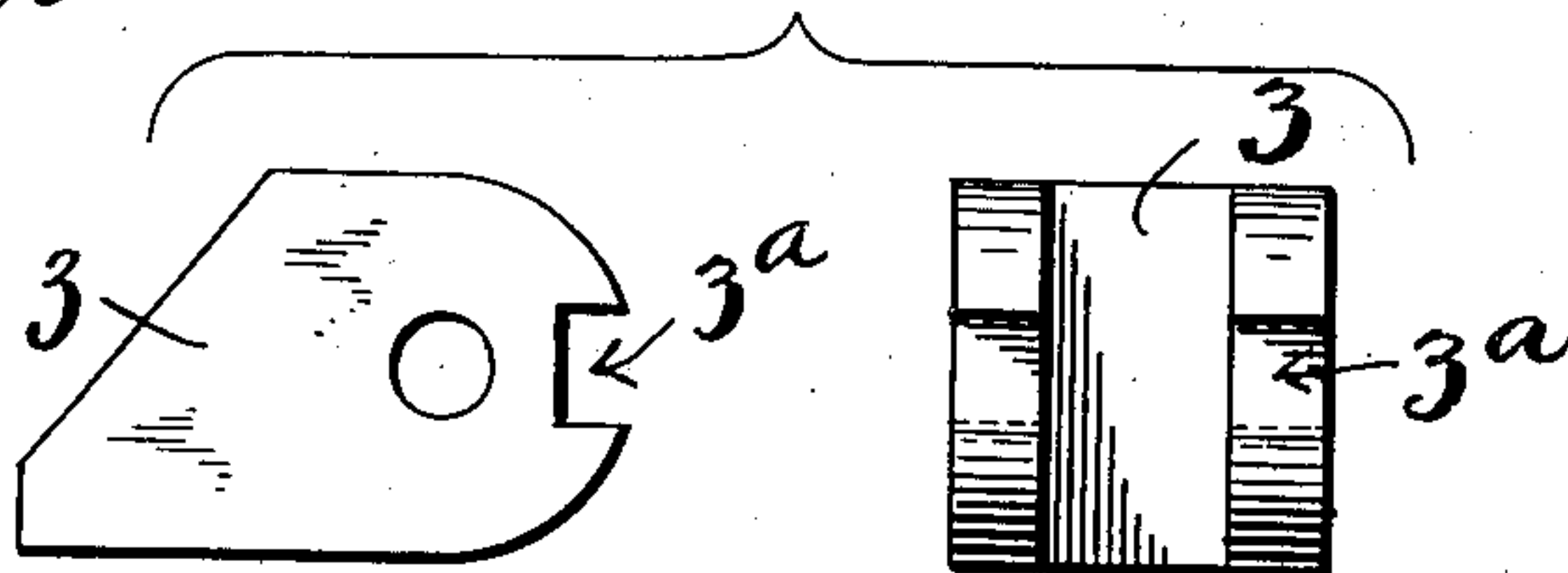


Fig. 4.



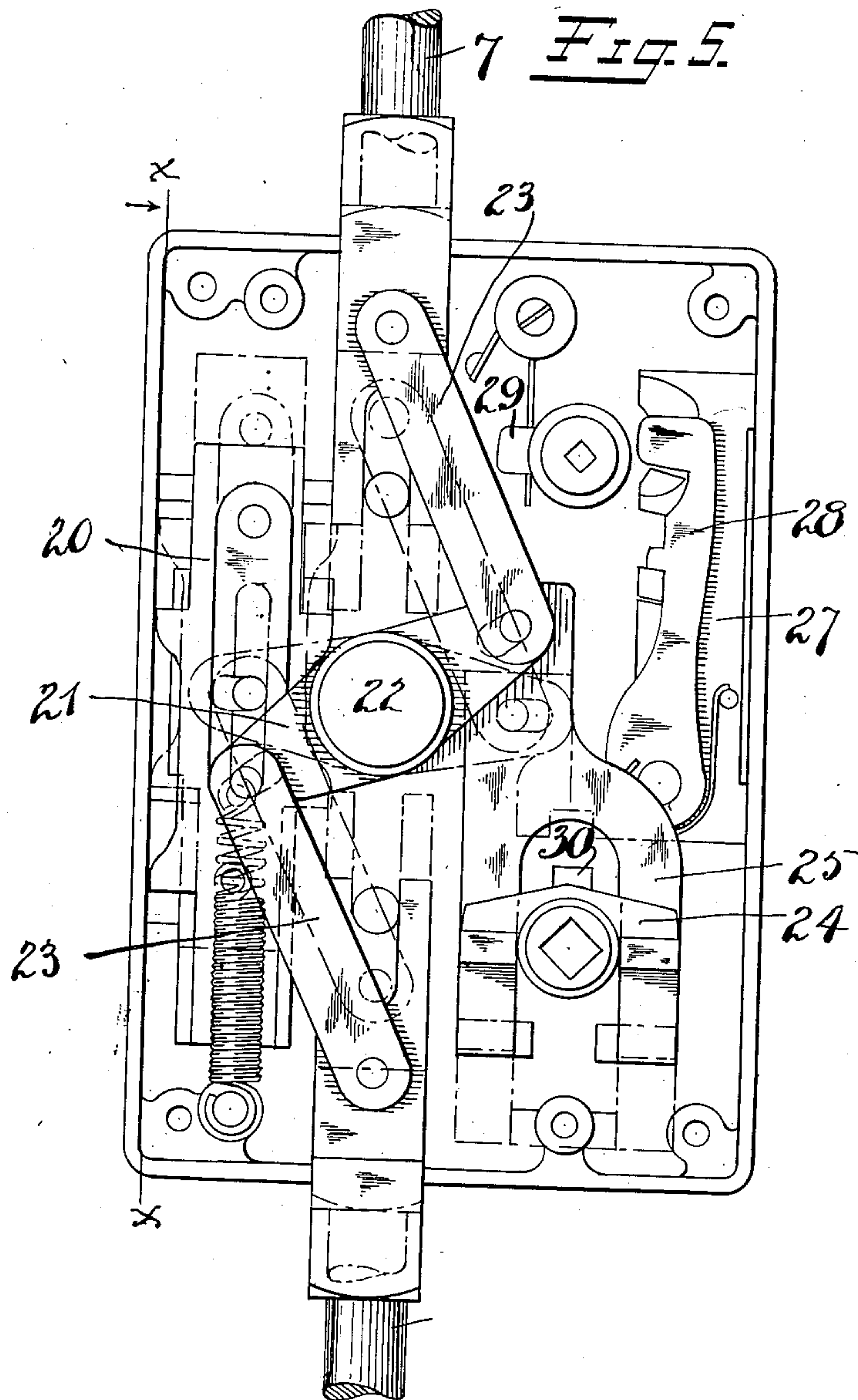
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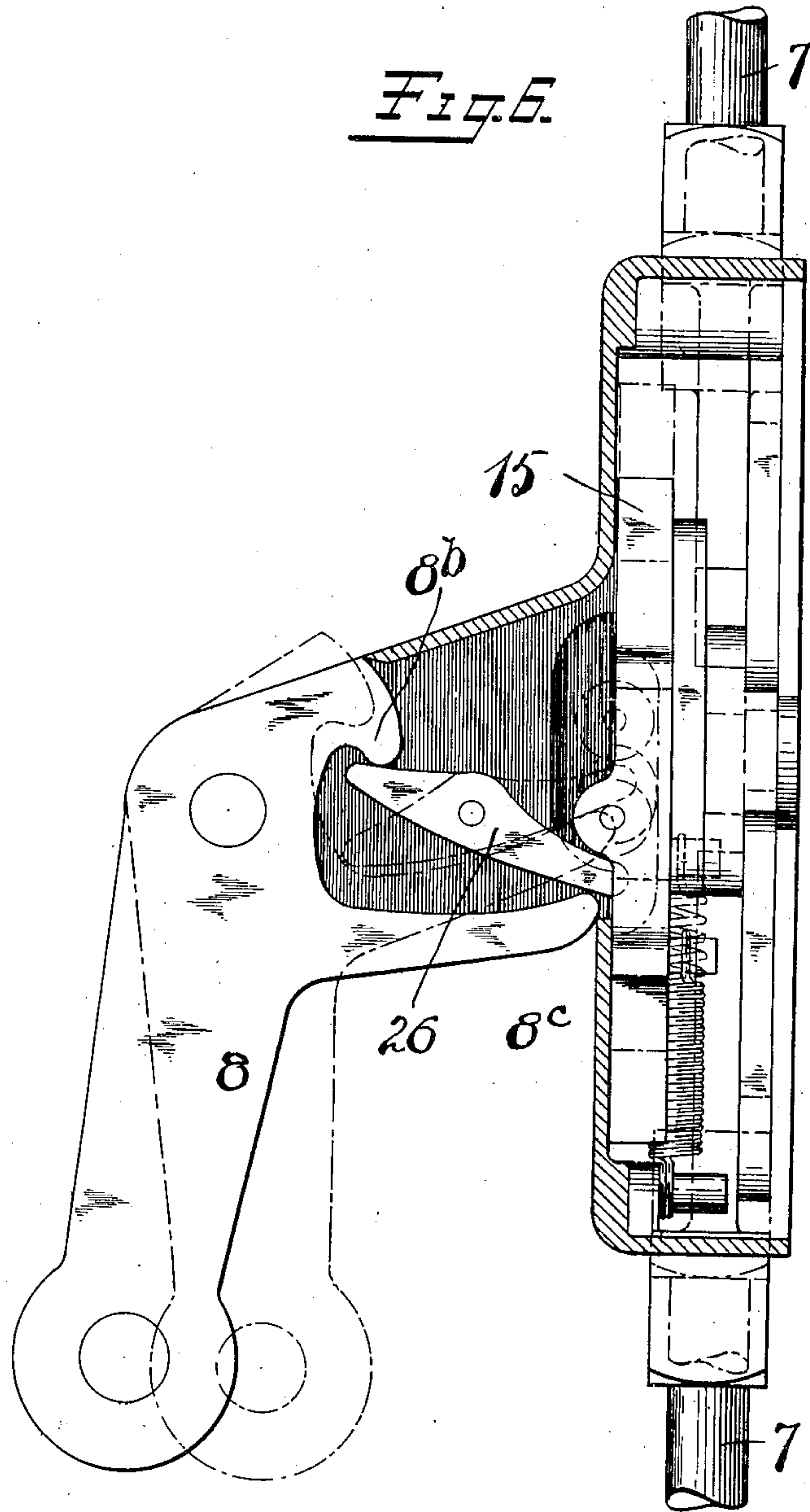
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PANIC-BOLT.

938,526.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed April 7, 1909. Serial No. 488,423.

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Panic-Bolts, of which the following is a full, clear, and exact description.

This invention relates to improvements in panic door bolts, particularly of the type illustrated in my companion applications Serial No. 480,297 and No. 447,074.

The object of the present invention is to provide an additional safety device which relates particularly to the bolt construction.

In the accompanying drawings Figure 1 is a perspective view of a door, broken away and contracted and bearing on the inner face thereof my improved panic bolt. Fig. 2 is a relatively enlarged view of the inner side of the bolt proper and holder or case therefor. Fig. 3 is a section on the line $x-x$ of Fig. 2. Fig. 4 shows a side and inner end elevation of the latch bolt, detached. Fig. 5 is a relatively enlarged view of the inner side of the lock case showing the interior mechanism. Fig. 6 is a section on the line $x-x$ looking in the direction of the arrow Fig. 5.

1 represents a door, 2 is the lock case, 3—3 are spring-projected latch-bolts arranged in the preferred form at the upper and lower edge of the door.

4 is a bracket carried by the lock case.

5 is an operating bar extending across the inner surface of the door and arranged to move to and from the door, said bar being connected to the mechanism within the case 2 through the medium of an arm 8 pivoted on the bracket 4.

The mechanism in lock case 2 may be of any suitable form to project the rods 7—7, which are suitably connected with the latch-bolts 3—3, whereby the latch-bolts may be retracted by the movement of the bar 5 toward the door. One suitable form of such mechanism is found in my companion application above referred to, but since no claim of novelty is based thereon in the present application, it is unnecessary to describe the same herein.

Referring now particularly to Figs. 2 to 4, it will be seen that the latch-bolt 3 is provided with one substantially square side and an opposite beveled side. The square side

of the latch-bolt 3 is intended to encounter the strike-plate (not shown) to resist the opening of the door at the proper time, whereas the beveled side of the latch-bolt is intended to encounter said strike-plate as the door is closing, whereby said latch bolt is forced back in the usual manner. The latch-bolt 3 is pivoted at 9 to a frame 10 slidably mounted in the case 11. The upper end of the rod 7 is provided with a head 12 slidable in the frame 10. The head 12 has a key 12^a arranged to encounter the tail of the latch 3. In the particular form shown, this key 12^a is in the form of a single projection or rib extending across the end of the head and arranged to enter a notch 3^a in the tail of the latch 3 so as to prevent said latch from turning on its pivot 9. When the rod 7 is retracted, the key 12^a is first withdrawn from the notch 3^a, freeing the latch 3 so that if pressure is applied to the square face of the latch bolt, as would be the case were pressure applied against the inner side of the door to which the lock is applied, the said latch-bolt would swing back into the position indicated in dotted lines, Fig. 3, instantly freeing the door. If for any reason the latch 3 should hang, continued retraction of the rod 7 would cause the head 12 to engage the shoulders 10^a of the slide frame 10, drawing back the latter and drawing the latch 3 bodily in the same direction. A spring 14 of any suitable form may be provided to cause the latch-bolt 3 to normally assume the position indicated in Figs. 1 to 3. Where it is desired to make the case 11 very compact, as shown in the drawings, a clearance offset 11^a may be provided to permit the bolt 3 to swing back into a horizontal position so as to clear the door casing.

15 is a spring for normally advancing the latch-bolt and latch-bolt support, said spring in the present construction bearing at one end against an abutment 11^b within the case 11 and at the other end against the under side of the head 12. The body of the head 12 acts as a means to retract the latch carrying frame 10, while the nose of key 12^a performs a separate function and acts as a means to lock the latch-bolt 3 against rotation upon its support 9. These means 12 and 12^a are preferably integrally united, although obviously not necessarily so. In various respects, the construction shown herein is susceptible of modification, and it should

be understood that I contemplate that the following claims cover and include such modifications as operate to achieve the purposes herein pointed out.

5 As will be seen, the lever 8 is arranged through an intermediate lever 26 to operate the bolt-retracting mechanism by a movement either toward or from the door. To accomplish this, the lever 26 is pivoted intermediate its length and its two ends are oppositely engaged by horns 8^b—8^c on the operating lever 8. One end of the lever 26 engages with the slide 20, which latter in turn is connected with a walking beam 21 pivoted at 22 and connected by links 23—23 to the bolt stems 7—7.

24 is a roll-rack engaging slide 25, which latter is also connected with the walking beam 21 in such manner that when it is retracted by a suitable spindle operating independently of the lever 8, it will retract the bolts 3—3.

27 is a dogging slide carrying a tumbler 28 and operated by a roll-back 29 to engage or disengage a lug 30 on the roll-back 24. By this means, the roll-back 24 may be held against operation. The operating means for the roll-back would naturally be located on the opposite side of the door from the lever 8. Since in devices of this character the object is to guarantee an exit in case of an emergency or panic, it follows that the operating lever 8 would be arranged on the inside of the door; hence the roll-back 24 would be arranged for operation from the outer side of the door. The roll-back 29 may be arranged to be operated from either or both sides of the door whereby the dogging slide 27 may be actuated. As will be seen, when the roll-back 24 is dogged, the apparatus may still be operated from the inside by the lever 8.

A detailed description of the parts last described will be found in my companion application first above referred to, and since no specific claim is predicated herein, a further description of these parts is unnecessary.

I do not claim, broadly, in this case the operative connection of the transverse bar with the lock mechanism as this forms the subject matter of my application No. 504,472, filed June 26, 1909, which is a division of this application.

55 What I claim is;

1. In a panic door bolt, a pivotally mounted latch-bolt, a support therefor, means for locking the latch-bolt against rotation upon its pivotal support, means for releasing said latch bolt from said locking means and means for retracting the latch bolt.

2. In a panic door bolt, a pivotally mounted latch bolt, a support therefor, means for locking the latch bolt against rotation on its pivotal support, means for releasing said

latch bolt from said locking means, and means for retracting said latch bolt, all of said means being dependently connected.

3. In a panic door bolt, a pivotally mounted latch-bolt, a support therefor, means for locking the latch-bolt against rotation upon its pivotal support, means adapted to retract said latch-bolt support and latch-bolt, both of said means being dependently connected, and a single operating rod for unlocking said latch bolt and actuating in one direction said latch-bolt support and latch-bolt.

4. In a panic door bolt, a pivotally mounted latch-bolt, a support therefor, means for locking the latch-bolt against rotation upon its pivotal support, means adapted to retract the support for the latch-bolt, both of said means being dependently connected, a single operating rod for unlocking said latch bolt and actuating in one direction said latch-bolt support and latch-bolt, and a spring for actuating in one direction said latch bolt and support.

5. In a panic door bolt, a pivotally mounted latch-bolt, a slide support therefor, a support for the slide, means for locking the latch-bolt against rotation upon its pivotal support, and means located on the face of the door and operatively connected with said support for retracting the support for the latch bolt by a movement of the same toward or from the door.

6. In a panic door bolt, a pivotally mounted latch-bolt, a support therefor, means for locking the latch-bolt against rotation upon its pivotal support, means for releasing said latch bolt from said locking means, means for retracting the support for the latch bolt, a second means for retracting the support for the latch bolt from the opposite side of the door, and a dogging means for the last mentioned retracting means, said parts being arranged so that said bolt may be retracted by the first mentioned retracting means even though the second is dogged.

7. In a panic door bolt, a latch arranged to tilt or be retracted to unlock the door, actuating mechanism therefor including two independent bolt-retracting devices, and a dead-locking means for one of said retracting devices the other retracting device being located on the face of the door and comprising a bar arranged cross-wise of the door, and means operatively connecting said bar with said tilting latch, said latch being arranged to be retracted by a movement of said bar toward said door.

8. In a panic door bolt, a tilting latch, actuating mechanism therefor including two independent bolt-retracting devices, one of said retracting devices being located on the face of the door and comprising a bar arranged cross-wise of the door, and means operatively connecting said bar with said tilting latch, said latch being arranged to be

retracted by a movement of said bar toward or from said door.

9. In a panic door bolt, a latch bolt arranged to tilt or be retracted to unlock the door, means for locking the latch bolt against rotation and to release the same, and means to retract said latch bolt.

10. In a panic door bolt, a latch bolt arranged to tilt or be retracted to unlock

the door, means for locking the latch bolt against rotation, and means for releasing said locking means and thereafter retracting said latch bolt.

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