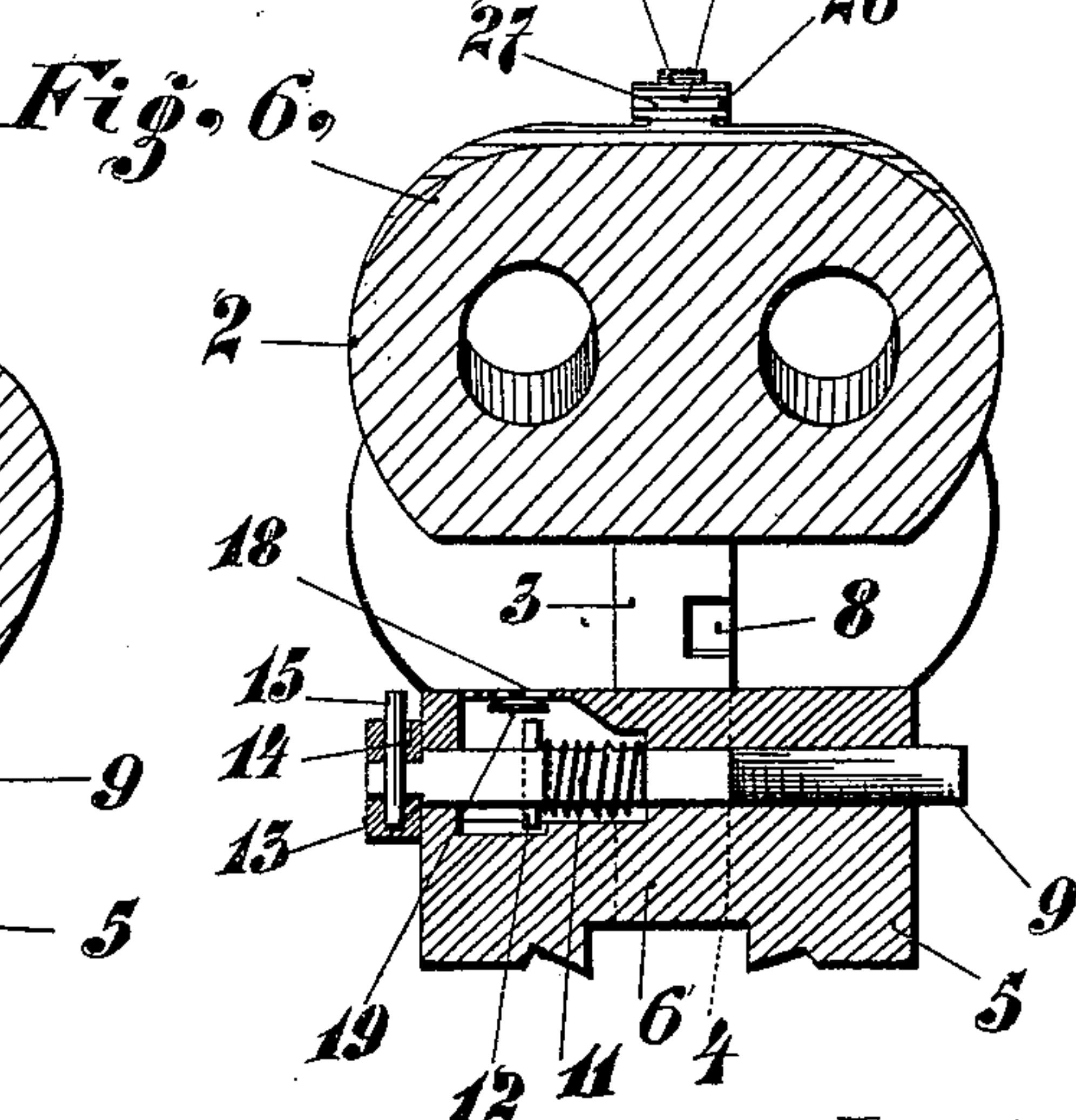
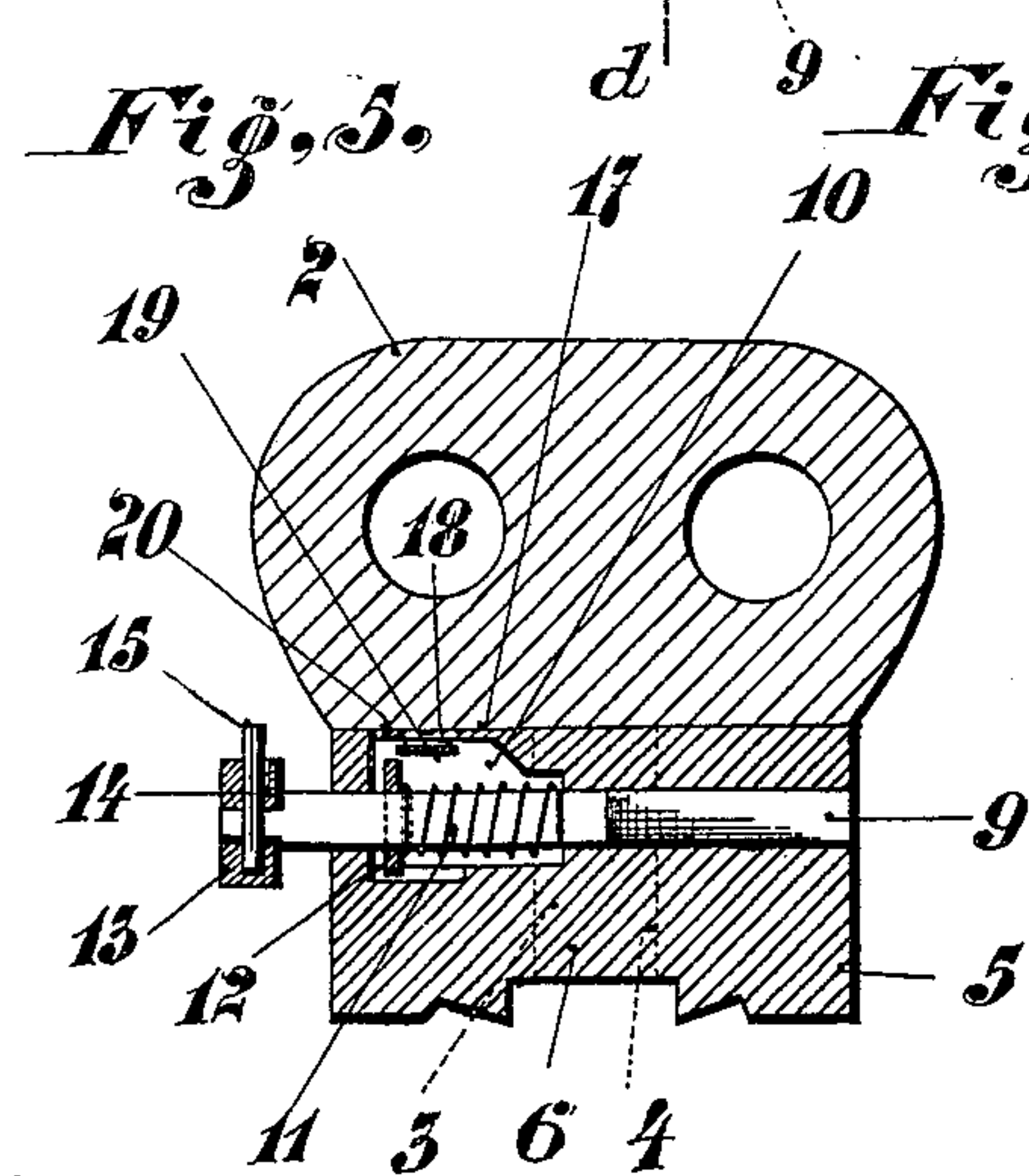
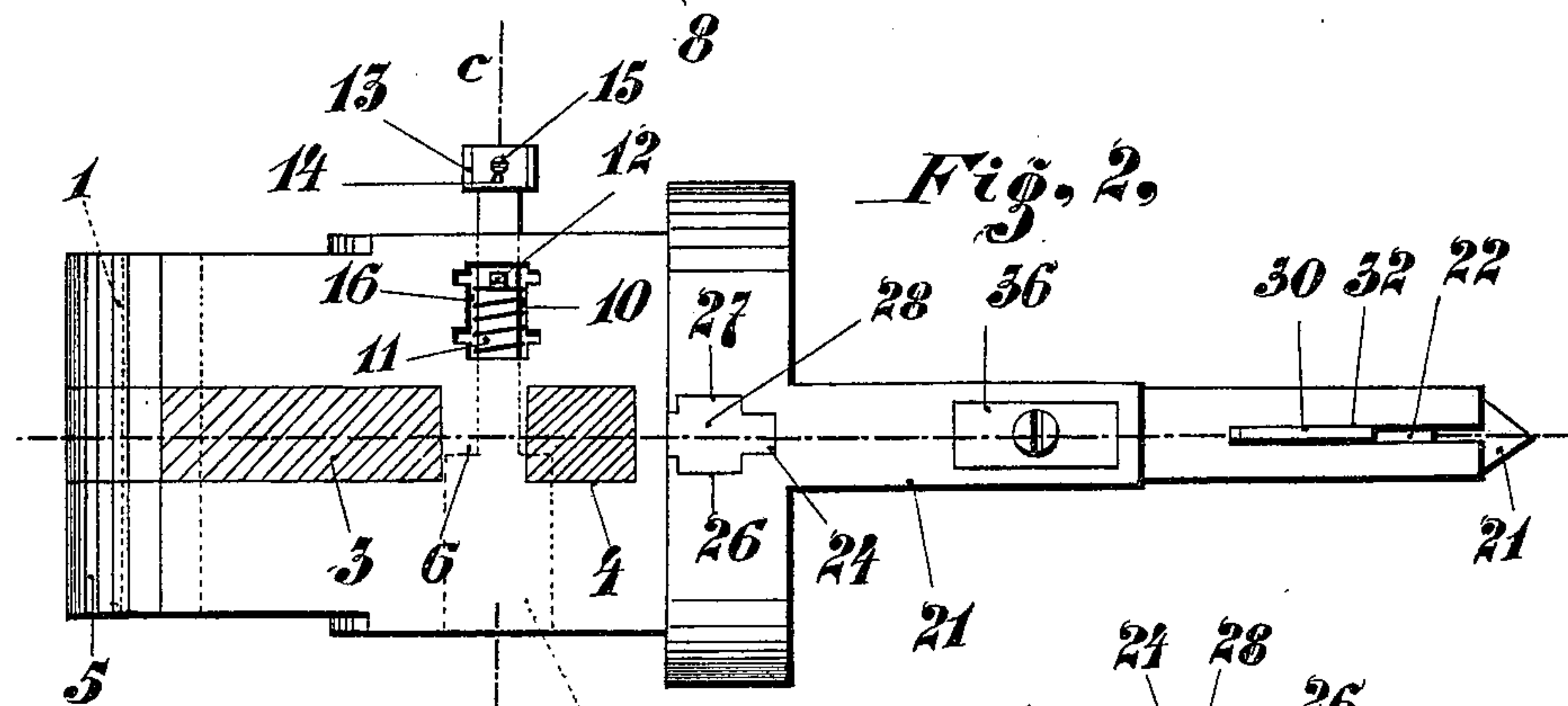
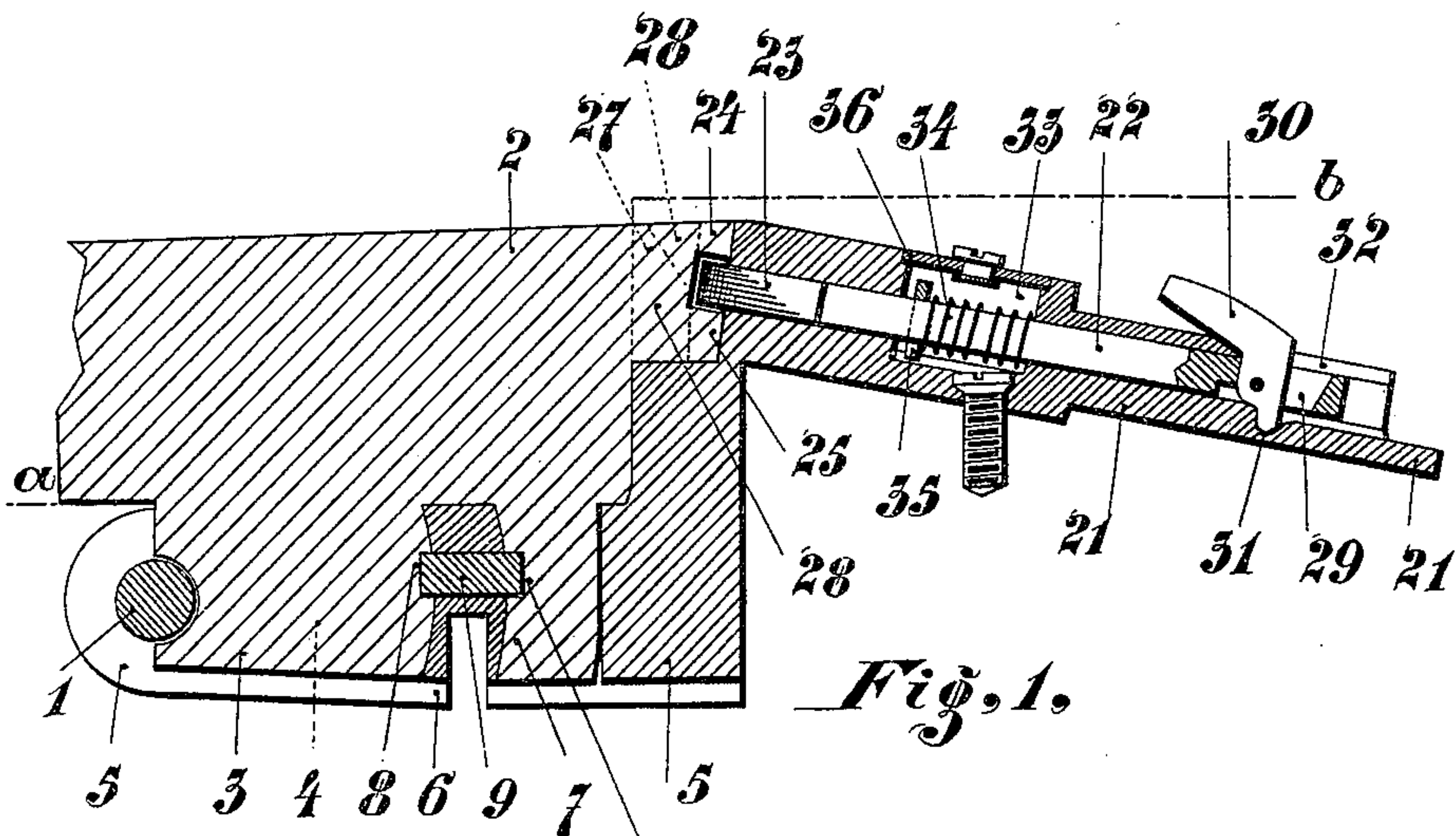


V. SOLODOVNIKOFF.
LOCKING DEVICE FOR GUN BARRELS.

No. 604,273.

Patented May 17, 1898.



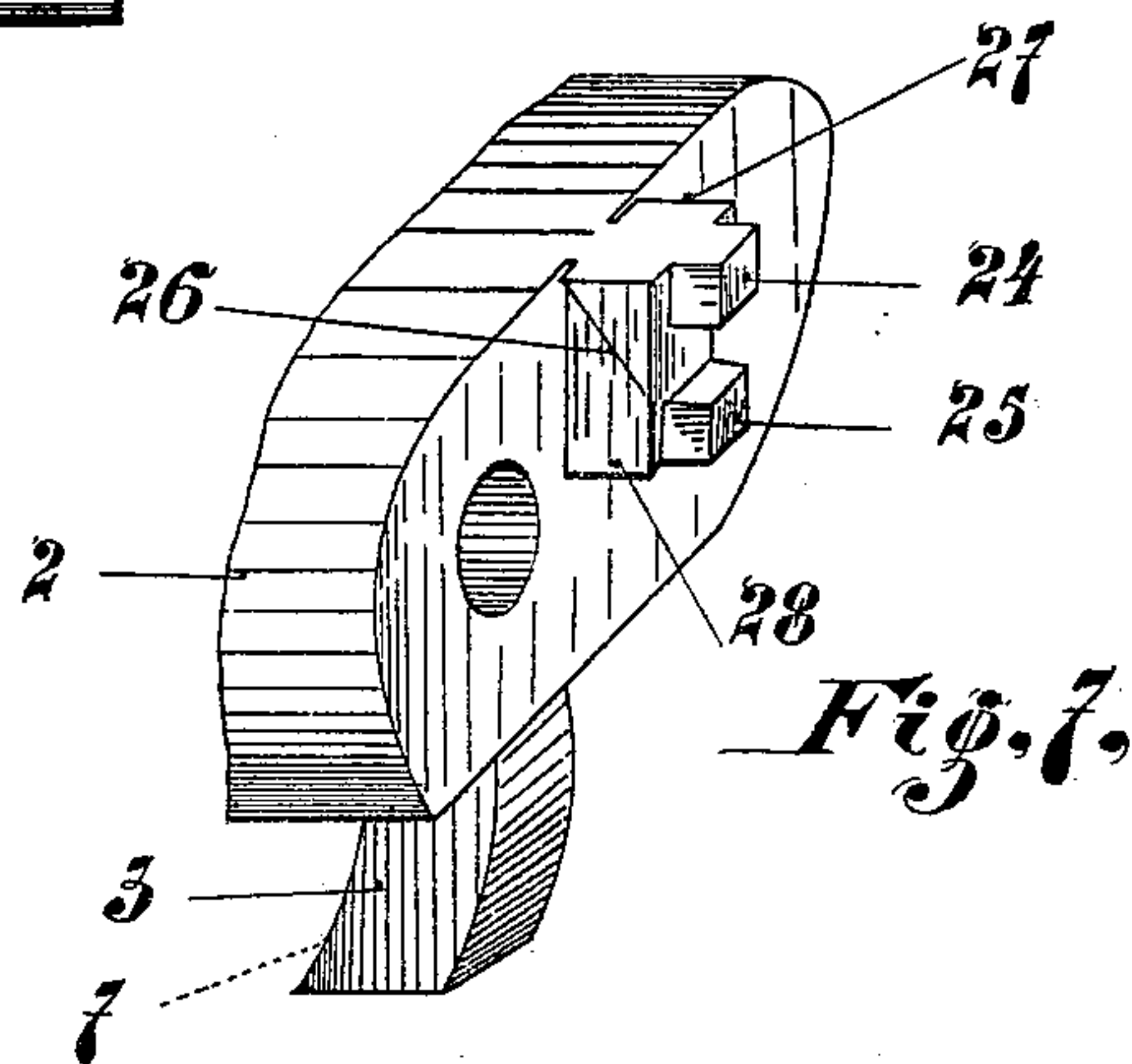
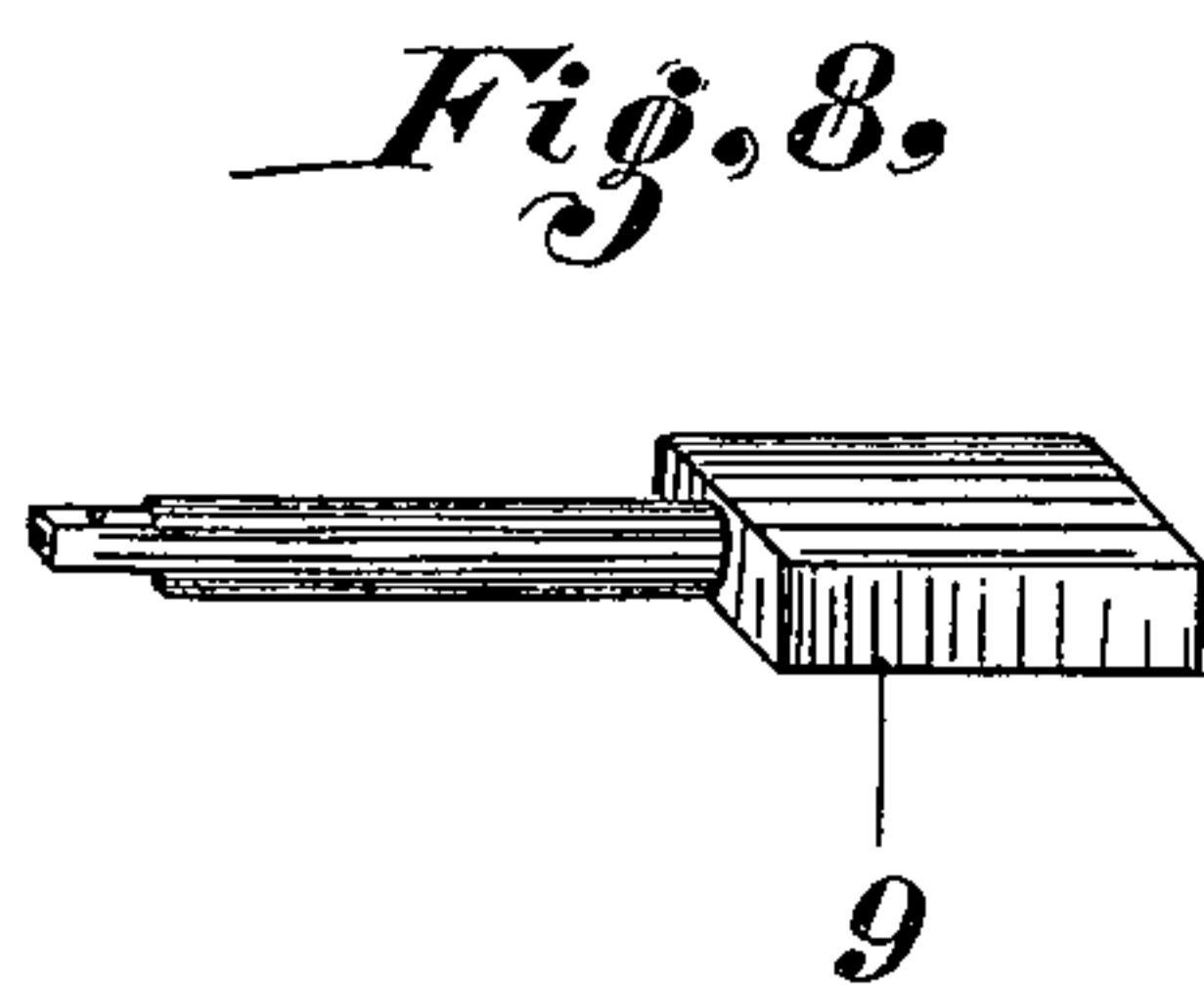
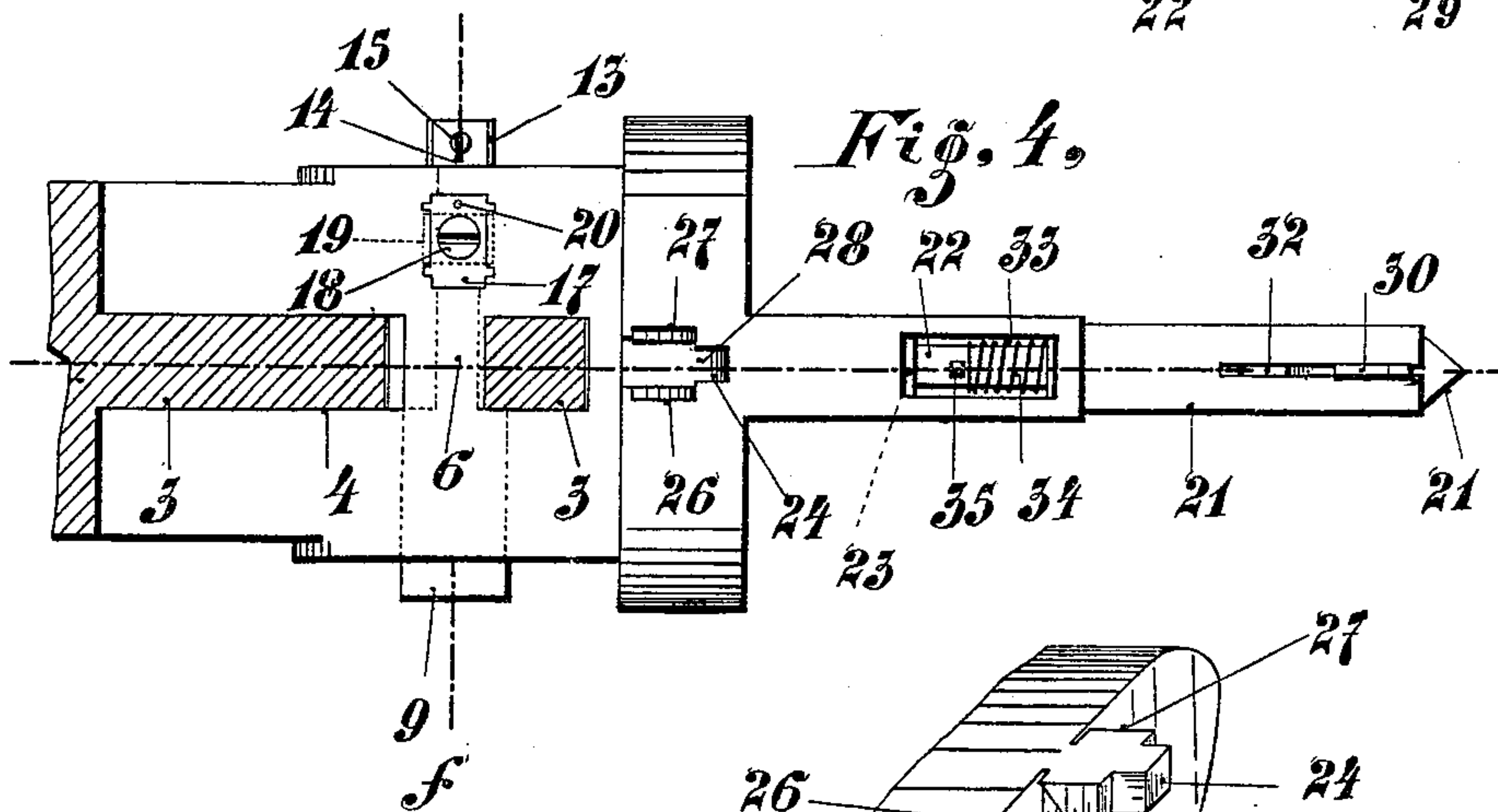
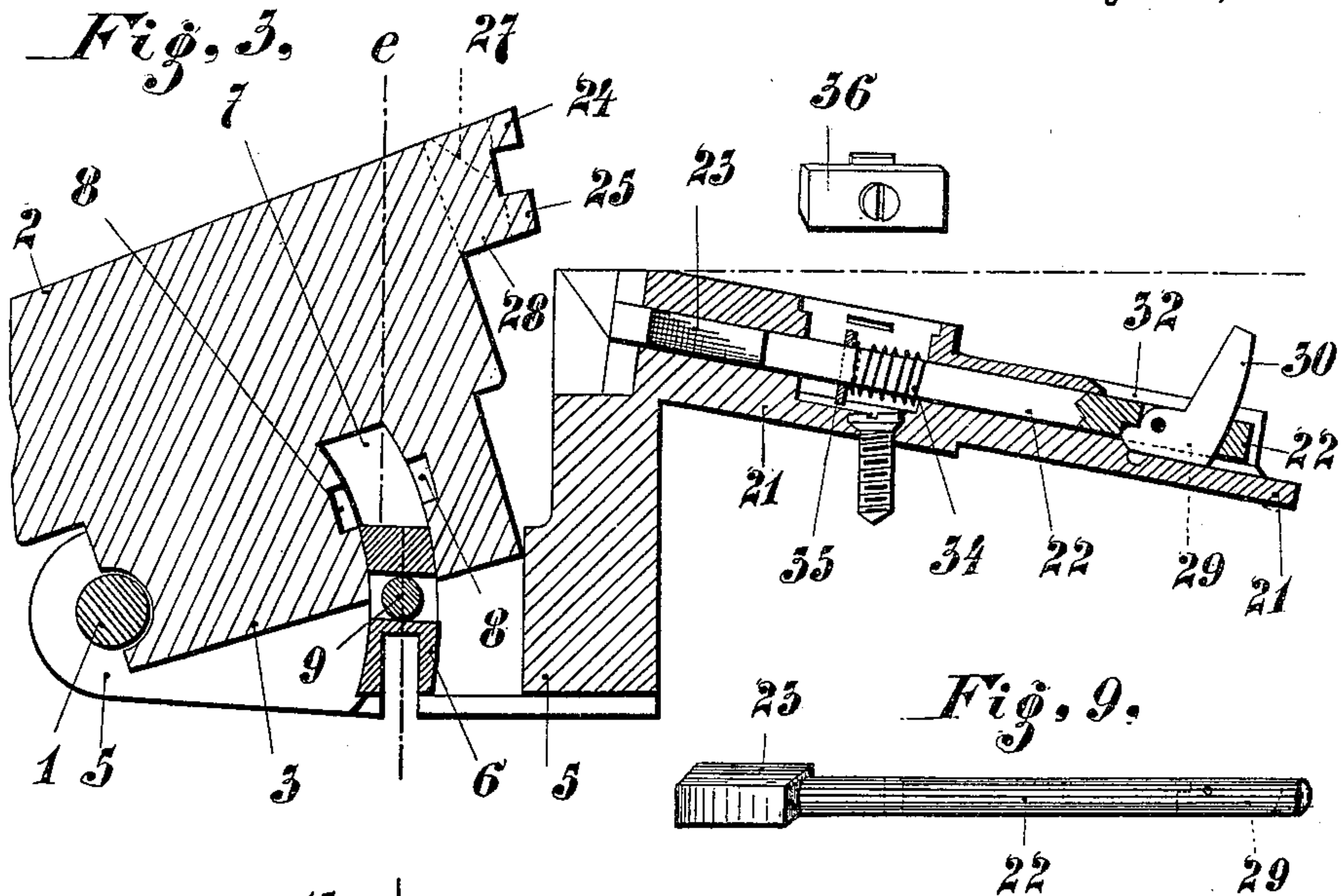
Witnesses
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Geo. W. Ren.

Inventor
Valerian Solodovnikoff
by James L. Norris
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for W. Ren.

Inventor

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UNITED STATES PATENT OFFICE.

VALERIAN SOLODOVNIKOFF, OF ST. PETERSBURG, RUSSIA.

LOCKING DEVICE FOR GUN-BARRELS.

SPECIFICATION forming part of Letters Patent No. 604,273, dated May 17, 1898.

Application filed June 1, 1897. Serial No. 639,016. (No model.) Patented in Germany April 8, 1897, No. 94,733, and in England April 20, 1897, No. 9,922.

To all whom it may concern:

Be it known that I, VALERIAN SOLODOVNIKOFF, gentleman, a subject of the Emperor of Russia, residing at St. Petersburg, in the Empire of Russia, have invented new and useful Improvements in Guns or Rifles, (for which I have obtained Letters Patent of Great Britain, No. 9,922, dated April 20, 1897, and of Germany, No. 94,733, dated April 8, 1897,) of which the following is a specification.

My invention relates to a double lock for drop-down rifles and guns which is arranged in such manner that the return of the barrel into its closed position after the gun has been loaded automatically locks a locking device, so that if the user has forgotten to push in the second locking device or if, owing to an accident, one of the locking devices becomes useless the gun can still be used with a sufficient degree of safety.

While the automatic locking device, which is operated by the thumb or index-finger of the left hand and which is hereinafter fully described, is constituted by a bolt adjustable in a transverse direction relatively to the barrel, the second locking-bolt, which is moved by the thumb of the right hand, is arranged in the longitudinal direction of the barrel.

Both locking devices are carried in the butt part of the gun, and this is shown in the accompanying drawings, together with a portion of drop-down barrel.

Figure 1 is a longitudinal section, and Fig. 2 a partial horizontal cross-section on line *a b* of Fig. 1. Both locking devices are shown in their closed positions. Figs. 3 and 4 show similar sections, the two locking devices being open, the barrel being turned down, and the gun ready to be loaded. Figs. 5 and 6 are cross-sections on the lines *c d* and *e f* of Figs. 2, 3, and 4. Fig. 5 shows the automatically-closing front locking device arranged transversely relatively to the barrel in its closed position, and Fig. 6 in its open position. Fig. 7 is a perspective view of the barrel seen from the back and showing the projections for engaging with the second non-automatically-acting locking device. Fig. 8 shows the front transverse locking-bolt in

perspective, Fig. 9 being a similar view of the rear longitudinal locking-bolt.

The construction of the new double lock is as follows: The barrel 2, pivoted about the pin 1, engages with its lower barrel-lug 3, provided with a transverse slot, with a longitudinal groove 4 of the front part 5 of the frame supporting the pivot-pin 1. The longitudinal groove 4 of the frame 5 is interrupted by a transverse bridge 6, corresponding to the transverse slot 7 in the barrel-lug 3 of the barrel 2. The slotted barrel-lug 3 has on its surface angular recesses 8, which when the barrel is closed form, together with the angular recess in the bridge 6, an angular opening for receiving the locking-bolt 9, which in this portion has the form shown in Fig. 1. The rest of the locking-bolt 9 is cylindrical and passes through the frame 5. Within the latter there is provided a small chamber 10, open at the top and serving to receive a helical spring 11, acting on the bolt 9, said spring bearing on one side against the wall of the chamber and on the other side against a cross-pin 12 of the bolt 9. The free end of the latter, projecting outside the frame 5, is provided with a knob 13, secured by a pin 15, having a projection 14. In this way an accidental separating of the parts is avoided, while at the same time the lock can be easily taken off.

The opening 16 of the chamber 10 for introducing the spring 11 and the stop-pin 12 can be closed by an easily-detachable sunk cover 17, Fig. 4. Countersunk in the cover 17 is a pin 18, on the lower end of which is fixed a latch-plate 19, which normally lies across the under side of the opening 16 and engages the under side of the upper wall of the chamber 10 to hold the cover 17 in place, as most clearly shown in dotted lines in Fig. 4; but when the pin 18 is given a quarter-turn the latch-plate registers with the opening 16, when by inserting a pointed tool in a small hole 20 in the cover the latter may be removed.

Owing to the spring 11 the lock acts automatically as soon as the barrel has been brought to its closed position—that is to say,

the prismatic portion 9 of the locking-bolt automatically engages with the similarly-shaped opening formed in the barrel-lug 2 and in the frame 5, whereby these parts are
5 locked fast together.

The second locking device is constituted, as already mentioned, by a locking-bolt 22, arranged lengthwise in the gun and the upper wall 21 of the frame. This bolt has
10 also an angular or prismatic front portion which effects the locking of the barrel, the remainder being cylindrical. The prismatic portion 23 of this locking-bolt 22 engages between the two projections 24 and 25, formed
15 one above the other on a lug 28, provided with inclined faces 26 and 27 (see Fig. 7) and arranged at the rear face of the barrel 2. Owing to the inclined faces 26 and 27 the barrel can be easily closed, it being gradually
20 and firmly pressed against the wall of the frame. The back portion of the cylindrical end of the bolt 22 carries a double-armed lever 30, pivoted in a longitudinal slot 29, said lever 30 engaging with its shorter end with a
25 recess 31 of the wall 21 of the frame and is capable of being turned by the thumb at its free end through a longitudinal slot 32 in the wall 21 in such manner that the locking-bolt 22 is caused to move either backward into its
30 open or forward into its closed position. The locking-bolt 22 is under the influence of a helical spring 34, inclosed in a chamber 33 of the wall 21 of the frame, said spring bearing on one side against the wall of the chamber 33
35 and on the other side against a cross-pin 35 of the bolt 22. The chamber 33 can be provided with a cover 36 of a construction similar to that of the cover 17 for the chamber 10.

When loading the gun, the knob 13 is
40 pressed inward by the index-finger of the left hand, the lever 30 being simultaneously thrown back into the position indicated in Fig. 3 by the thumb of the right hand. Then by means of a slight shock or jerk the barrel

is caused to drop down. After loading the 45 barrel is returned to its original position, whereupon the transverse locking-bolt 9, which meanwhile rested against the flat surface of the rib 3, is caused by the spring 11 to return automatically into its closing posi- 50 tion. Then the lever 30 is pressed by the right hand forward into the position shown in Fig. 1. In this way the gun is locked in its closed position by both the locking devices and is ready for use. The transverse bolt 9 55 may also be arranged so as to have the knob 13 on the left-hand side of the gun, as shown in Figs. 5 and 6, so that said bolt 9 can be opened by the thumb of the left hand.

If one of the locking devices has been dam- 60 aged or if it has been forgotten to lock the bolt behind the barrel by pushing forward the lever 30, the gun can nevertheless be used without danger, for one of the locking devices is sufficient to keep the barrel firmly pressed 65 against and in engagement with the lock-case.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is— 70

The combination with the mortised frame provided with the arc-shaped bridge-piece 6, of the barrel provided with the lug 3 having an arc-shaped slot 7 and having corresponding recesses 8 formed in the opposite walls of 75 said slot, the locking-bolt 9 arranged to reciprocate transversely in the frame and having a flat head adapted to engage the recesses 8 to lock the barrel, and a spring for throwing said bolt into engagement with the recesses, 80 substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

VALERIAN SOLODOVNIKOFF.

Witnesses:

NIC. M. ALLISSER,

RICHARD G. BARTT.