

(No Model.)

3 Sheets—Sheet 1.

R. SCHMIDT.
BREECH LOADING FIREARM.

No. 471,362.

Patented Mar. 22, 1892.

Fig. 1.

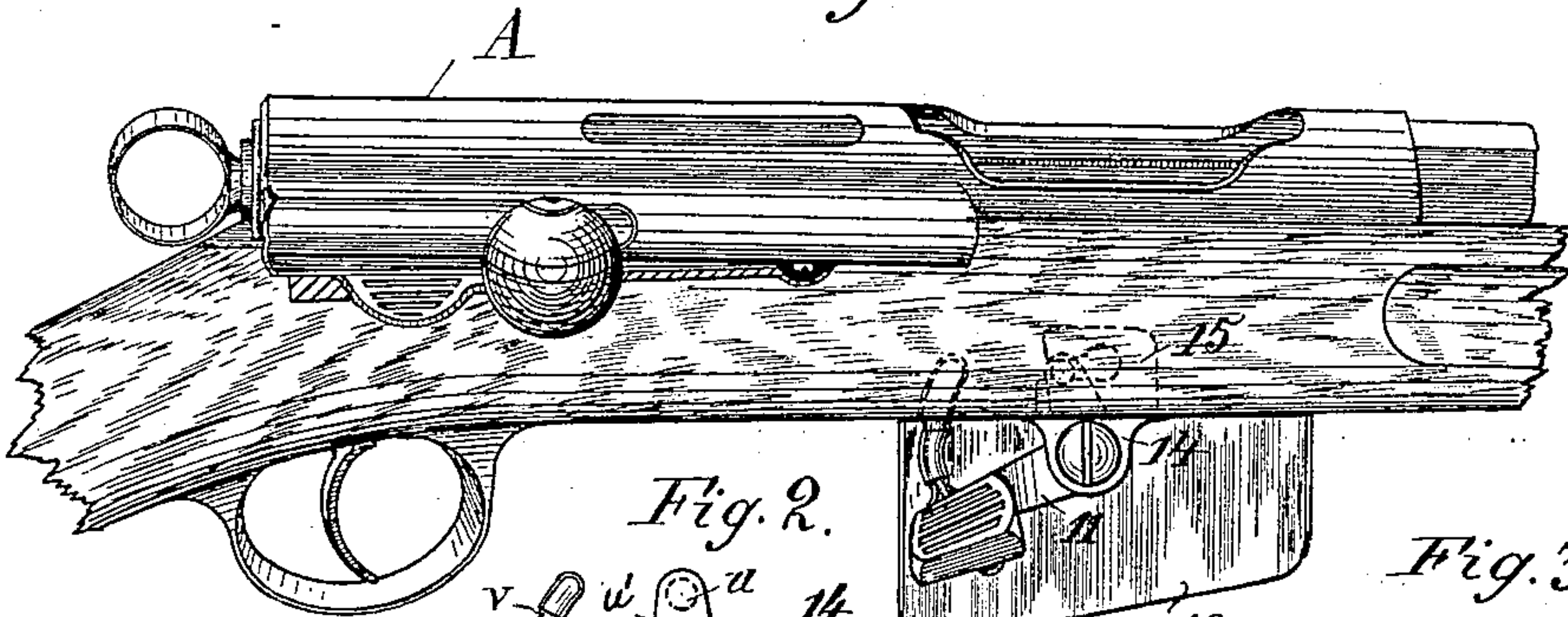


Fig. 2.

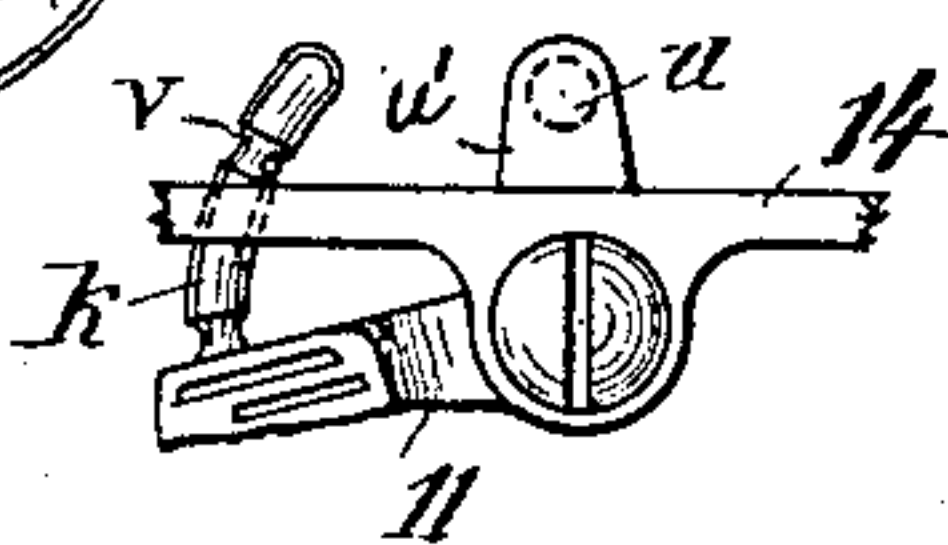


Fig. 3.

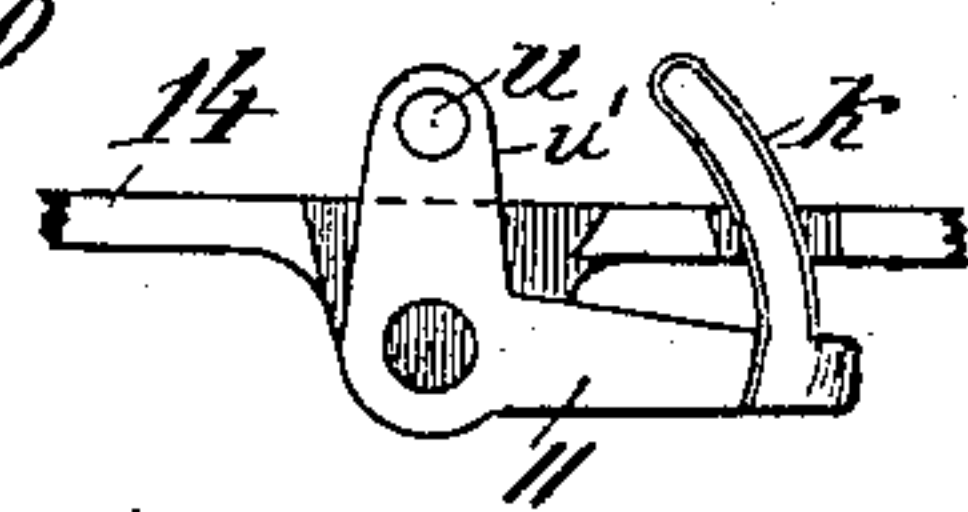


Fig. 4.

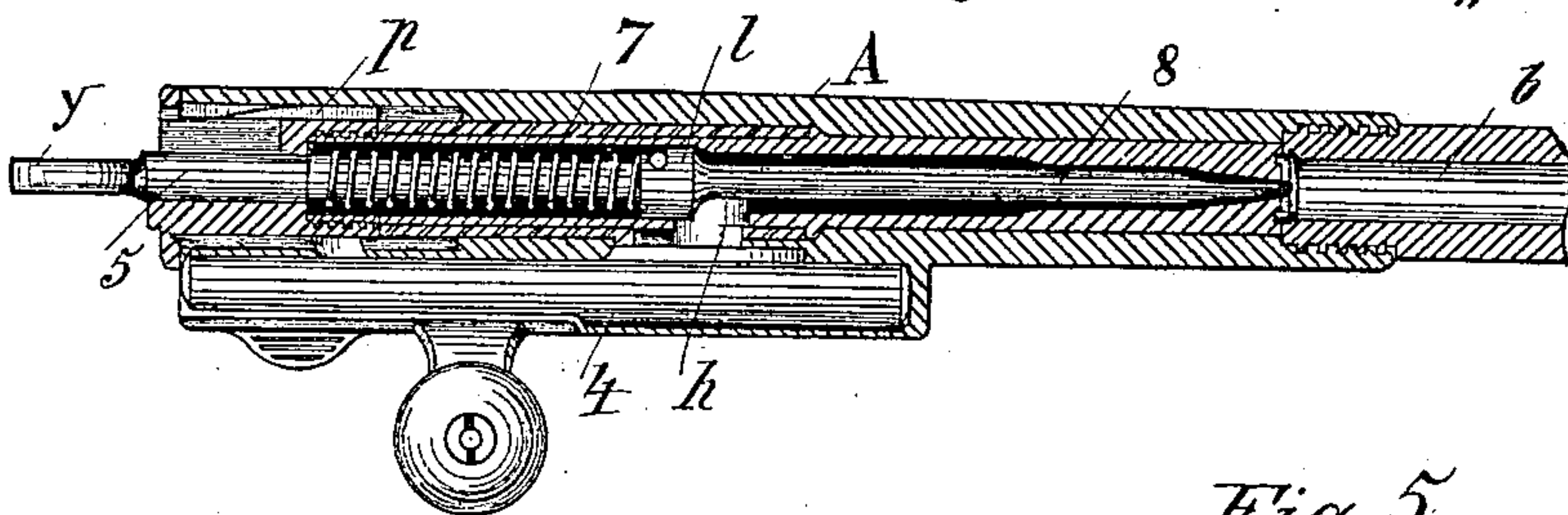


Fig. 5.

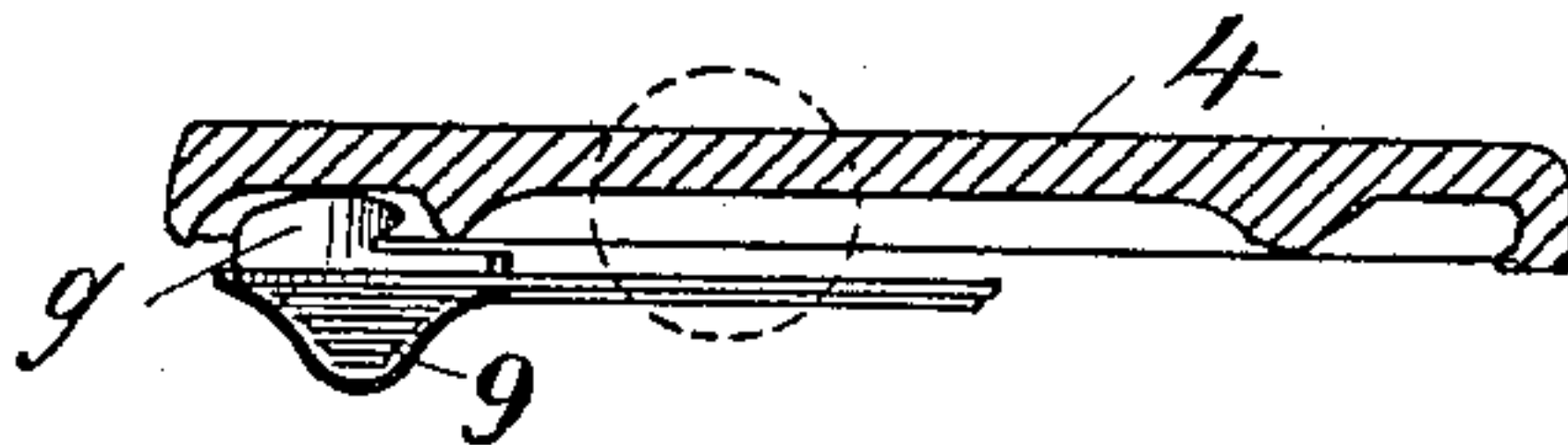


Fig. 6.

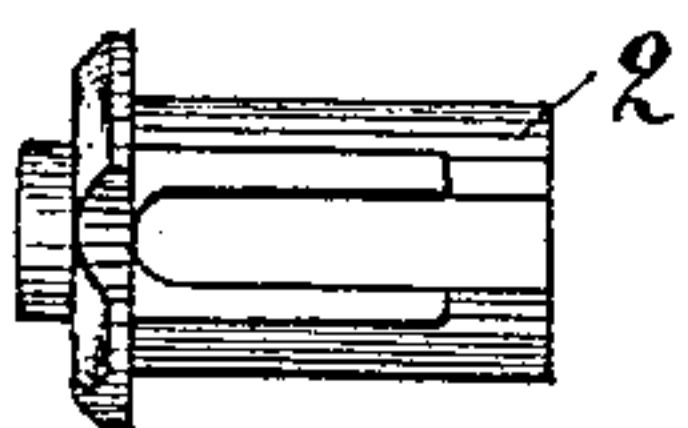


Fig. 14.

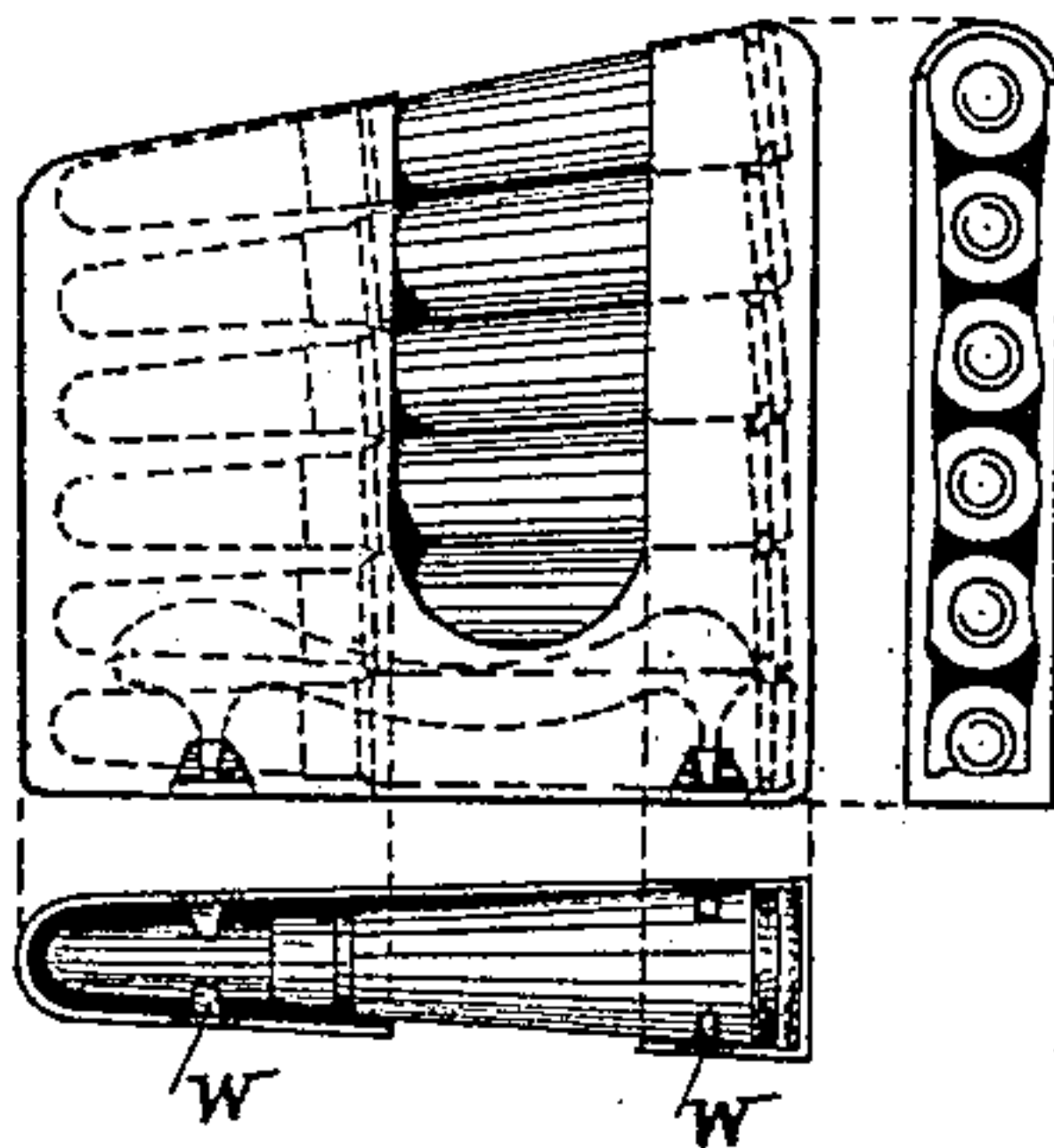


Fig. 8.

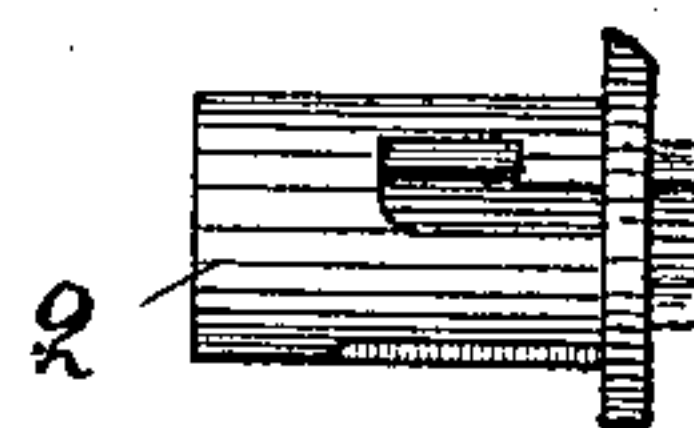


Fig. 7.

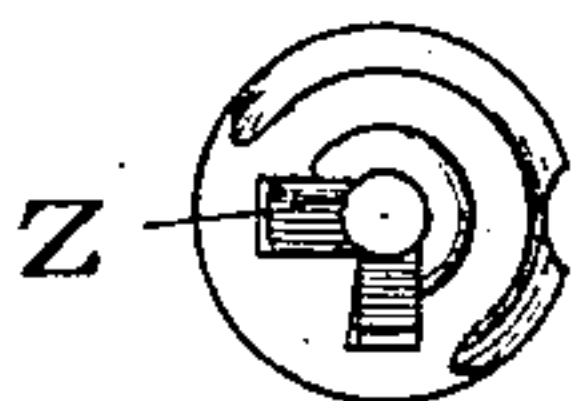
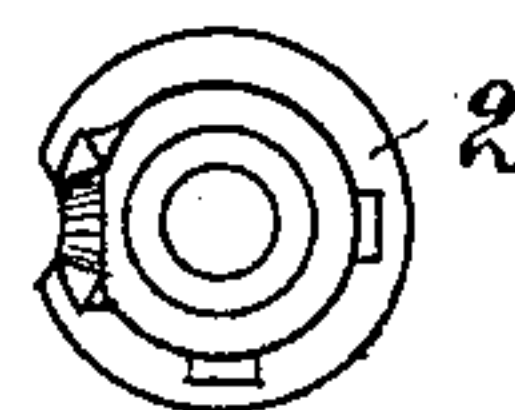


Fig. 9.



Witnesses
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Fig. 11.

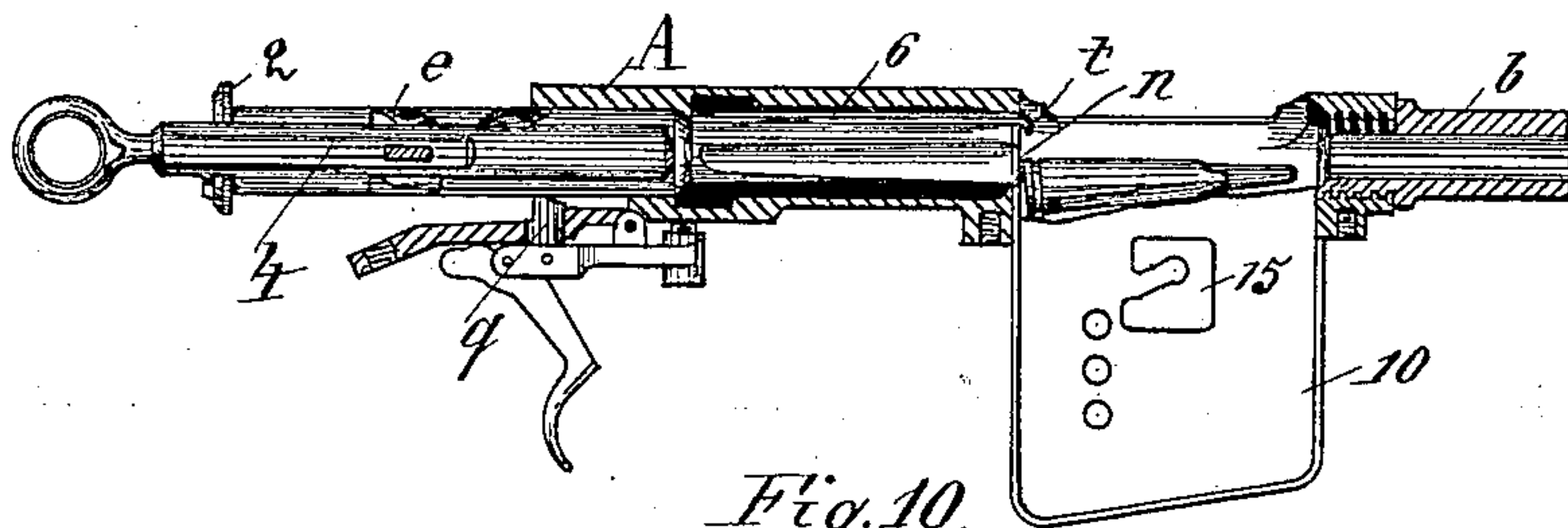


Fig. 10.

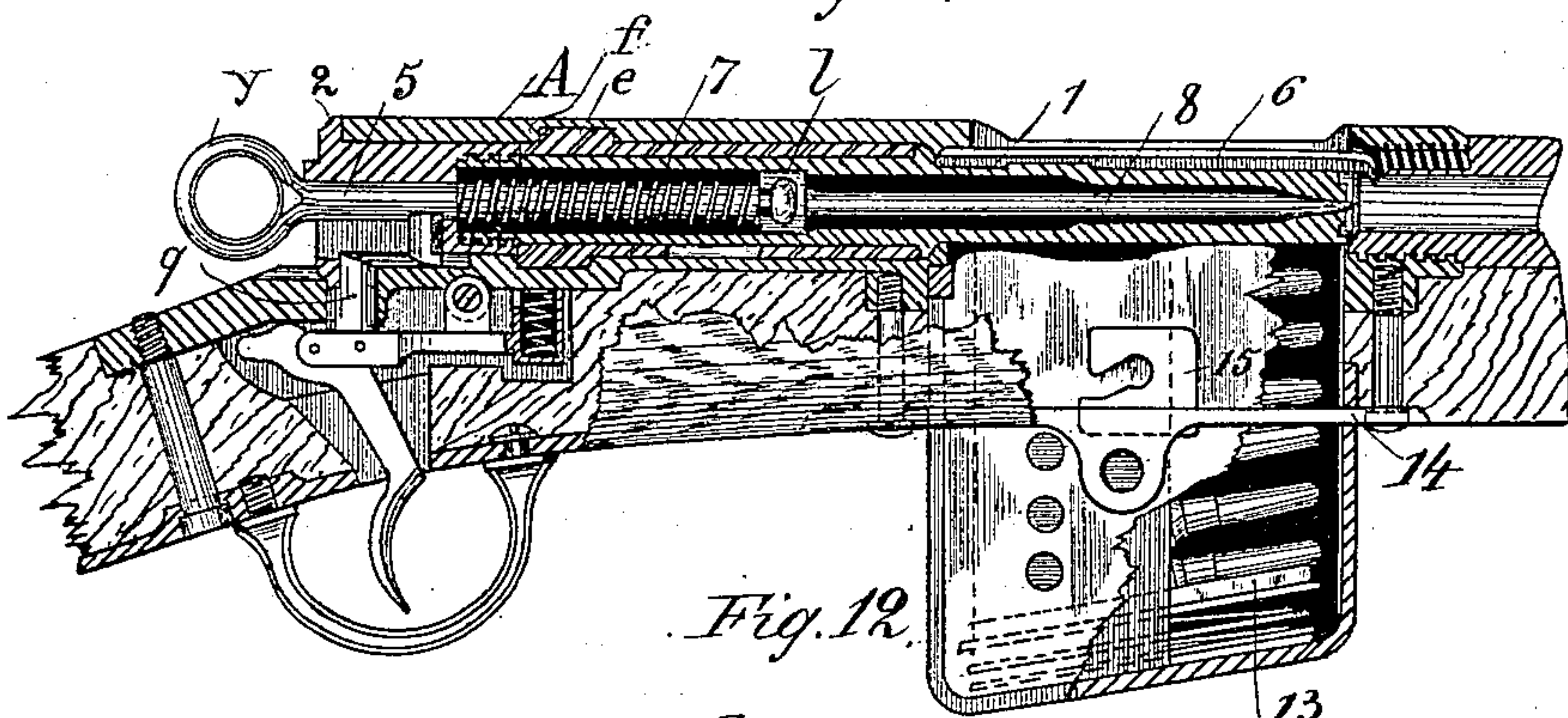


Fig. 12.

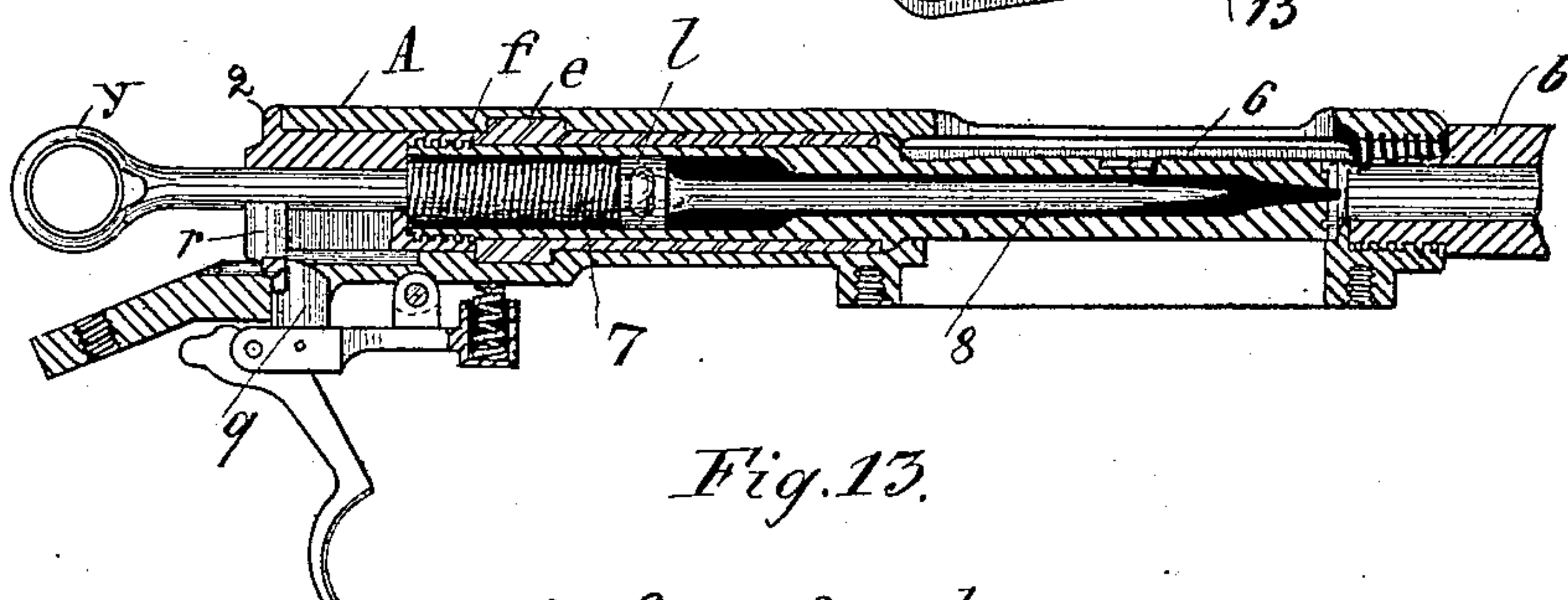
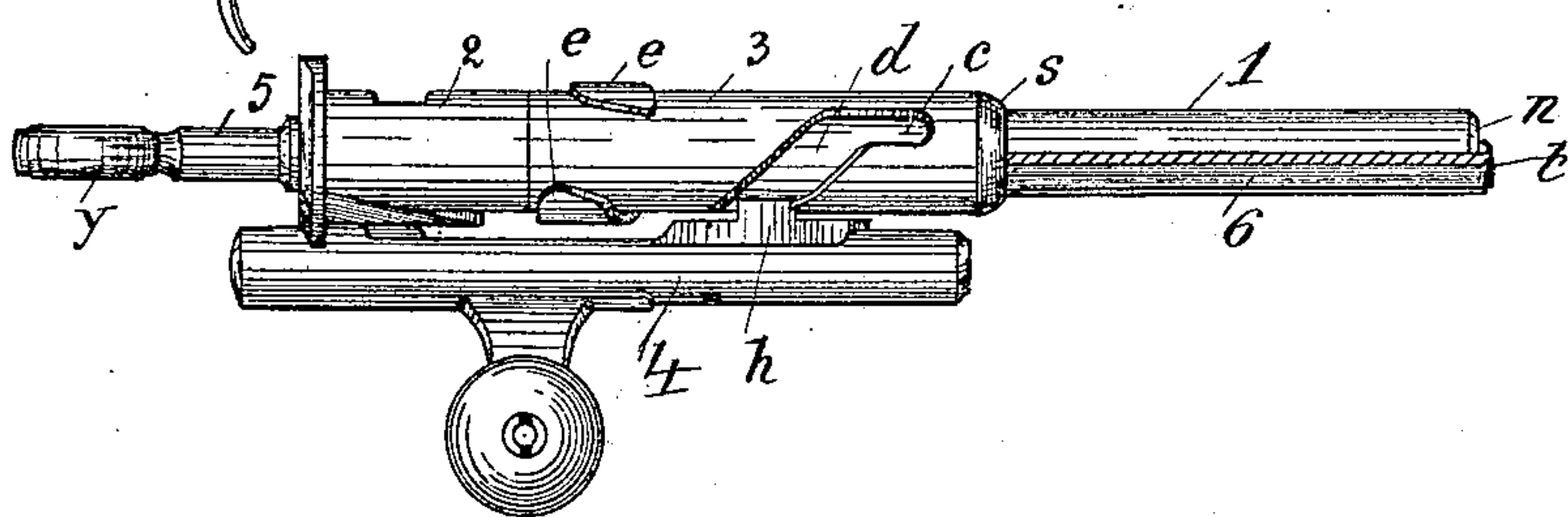


Fig. 13.



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Fig:15.

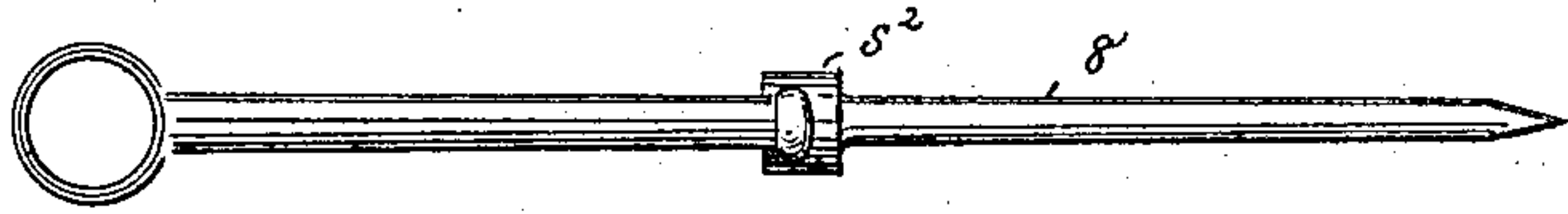


Fig:16.

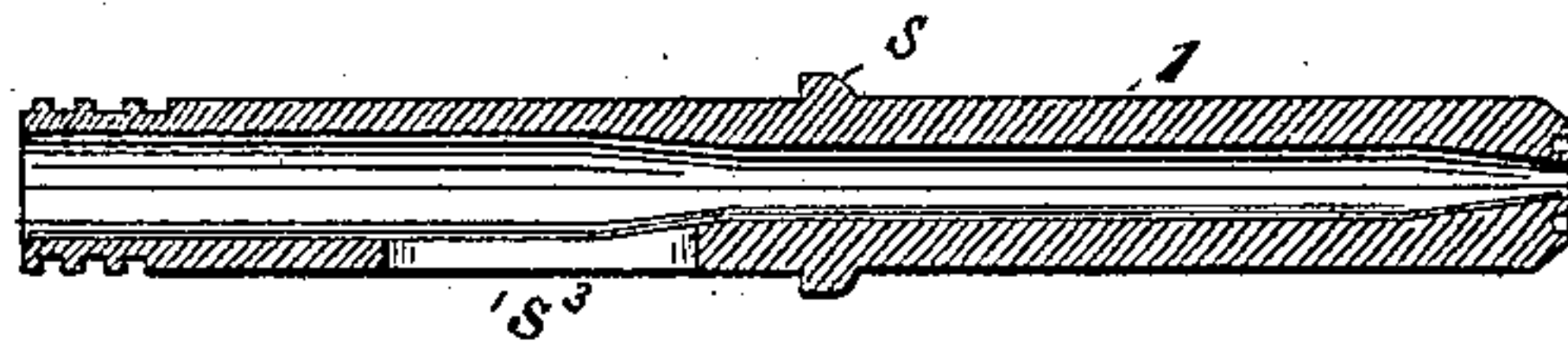


Fig:17.



Fig:18.

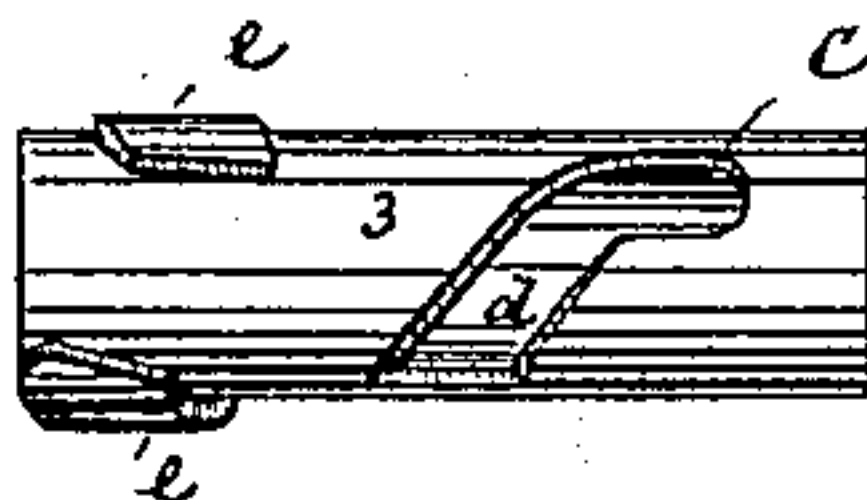
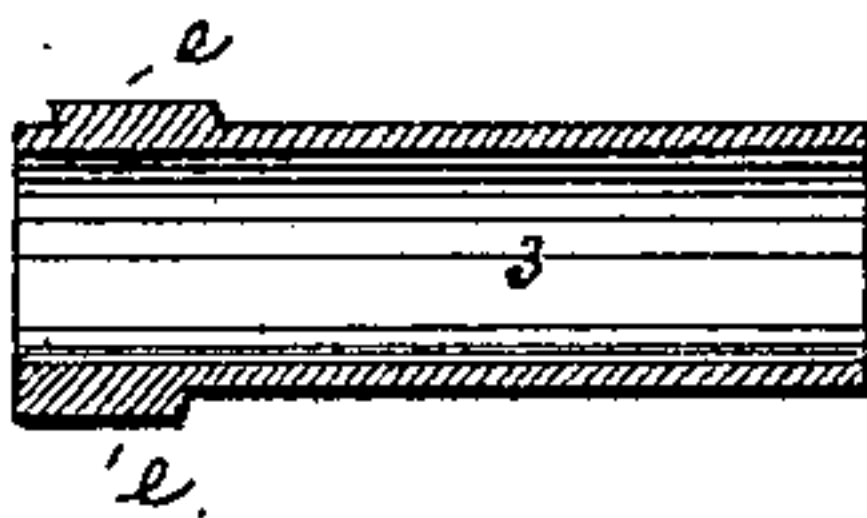


Fig:19.



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

RUDOLF SCHMIDT, OF BERNE, SWITZERLAND.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 471,362, dated March 22, 1892.

Application filed October 8, 1889. Serial No. 326,343. (No model.)

To all whom it may concern:

Be it known that I, RUDOLF SCHMIDT, a citizen of Switzerland, residing at Berne, Switzerland, have invented new and useful Improvements in Breech-Loading Fire-Arms, of which the following is a specification.

This invention relates to a breech-loading fire-arms, in which the breech-block has an exclusively horizontal motion which permits a rapid manipulation of the gun.

The invention consists in the various features of improvements more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation of the breech, showing it closed. Figs. 2 and 3 are outer and inner side views of the magazine-lever 11; Fig. 4, a horizontal longitudinal section of the breech; Fig. 5, a longitudinal section through the slide 4. Figs. 6 to 9 are details of the nut 2 of the breech-closing case; Fig. 10, a longitudinal section of the breech with the magazine in place. Figs. 11 and 12 are longitudinal sections through the locking mechanism, showing it open and closed. Fig. 13 is a top view of the breech-block; Fig. 14, an elevation and horizontal section through the magazine. Fig. 15 is an elevation of the firing-pin; Fig. 16, a longitudinal section through cylinder 1; Fig. 17, an elevation of the same; Fig. 18, an elevation of breech-block 3, and Fig. 19 a longitudinal section thereof.

The letter A represents the breech-closing case that contains the breech-block 3. This block is provided with a continuous groove, which is straight in front, as at *c*, and of helical shape in the rear, as at *d*. The groove *c* *d* is engaged by a lug *h* on a slide 4, that may be reciprocated in the usual manner by means of a suitable finger-piece.

The block 3 is provided at its rear end with the locking-tenons *e*, that are adapted to engage inclined grooves *p* and stops *f* on the breech-case A. The rearward motion of the breech-block is limited by a projection *g* on the tumbler-spring 9, Fig. 5. 8 is the firing-pin having a socket *l* back of projection *h*. To the firing-pin there is intimately connected by the socket *l* the striking-pin 5, surrounded by mainspring 7. The forward end *n* of the breech-block is adapted to engage the cartridge on its forward motion and push the

same out of the magazine into the barrel *b*, as will be readily understood. The trigger is provided with a nose *q*, that engages a projection *r* of the striking-pin 5 to hold the same back.

1 is the locking-cylinder, having an annular collar *s*, Fig. 13, that abuts against the breech-block 3 and prevents the cylinder from retreating. The cylinder 1 is of tubular form to receive the firing-pin 8. At its rear end the cylinder is threaded to engage the nut 2, and at its center it is provided with the collar *s*. The breech-block 3 is slipped over the cylinder and then the nut is secured in place, so that the block embraces and is free to turn on the cylinder. A perforation *s*³ in the rear part of cylinder 1 permits the lug *h*, passing through groove *c* *d*, to engage a projection *s*³ on the firing-pin 8.

6 is the extractor, having a claw *t*, that is adapted to enter the cartridge-shell to extract the same after the shot has been fired.

The striking-pin 5 is provided with a ring *y*, by which the pin may be moved back when the gun is to be cocked. Here it may be locked in a safety position by engaging a lateral slot *z* of a nut 2 entering the end of the breech-case.

To adapt the breech to repeating-rifles, I employ a magazine 10, having a false bottom 13, upon which the cartridges are supported. The magazine is made in the form of a sheet-metal box of a size to hold any desired number of cartridges and adapted to be readily attached and removed. The cartridges are introduced either one after another or in a bunch. The breech-case is provided with a strap 14, to which there is pivoted a lever 11, that engages the magazine and holds it in place. The lever is provided with an arc *k*, having notches *v*, adapted to be engaged by strap 14. To the magazine there is riveted a slotted guide 15, that receives a trunnion *u* on a shorter arm *u'* of lever 11. When the arc *k* is pressed down, the strap 14 and the guide 15 will be released to release the magazine.

Fig. 14 illustrates a bunch of cartridges adapted to be introduced into the magazine and retained in place by spring-claws *w* within the same.

The operation of the device is as follows: In opening the gun the slide 4 is drawn back

to cause the breech-block to turn by the engagement of the lug *h* with the groove *c d*. The shell will be loosened and moved back about two millimeters. The further rearward motion of the slide will cause the block to turn until the locking-tenons *e* have cleared the stops *f*. The breech-block 3, with cylinder 1, nut 2, and slide 4, can now be drawn backward, which will cause the cylinder 1 to clear the cartridge-case. A cartridge is now introduced into the barrel from the magazine or by hand. When the forward end *n* of cylinder 1 has arrived at the rear end of the barrel, the block 3 has turned ninety degrees, so that the lugs *e* cause the gun to be locked in its cocked position. When the gun is fired, the cylinder 1 receives directly the pressure from the explosion. This pressure is by collar *s* transmitted to breech-block 3 and thence by lugs *e* to case A. During the forward motion of the breech-block its forward end engages the cartridge and pushes it into the barrel. During this forward motion the tenons *e*, engaging the grooves *p*, will first disengage the breech-block from the projection *h*. The nose *q* of the trigger will engage the projection *r* of the striking-pin 5 to hold the same back. When the breech-block has moved forward up to about two millimeters, the barrel

will be entirely closed, as the projection *h* will travel in the helical groove *d* and will cause the breech-block 3 to revolve around the locking-cylinder 1. When the projection *h* has entered the straight part *c* of the groove, the block is effectively prevented from revolving any farther.

It will be seen that my improved gun may be quickly put into firing order, avoids premature discharge, and may be readily set to rest. The breech may be taken apart and put together again without difficulty and without the use of tools. The device may be either used with a single charge or with a magazine.

What I claim is—

The combination of lock-case A and slide 4, having projection *h*, with revolving breech-block 3, having projection *e* and groove *c d*, that is engaged by projection *h*, and with locking-cylinder 1, that supports the breech-block and is provided with collar *s*, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RUD. SCHMIDT.

Witnesses:

R. LIPS,

B. KETTLER.