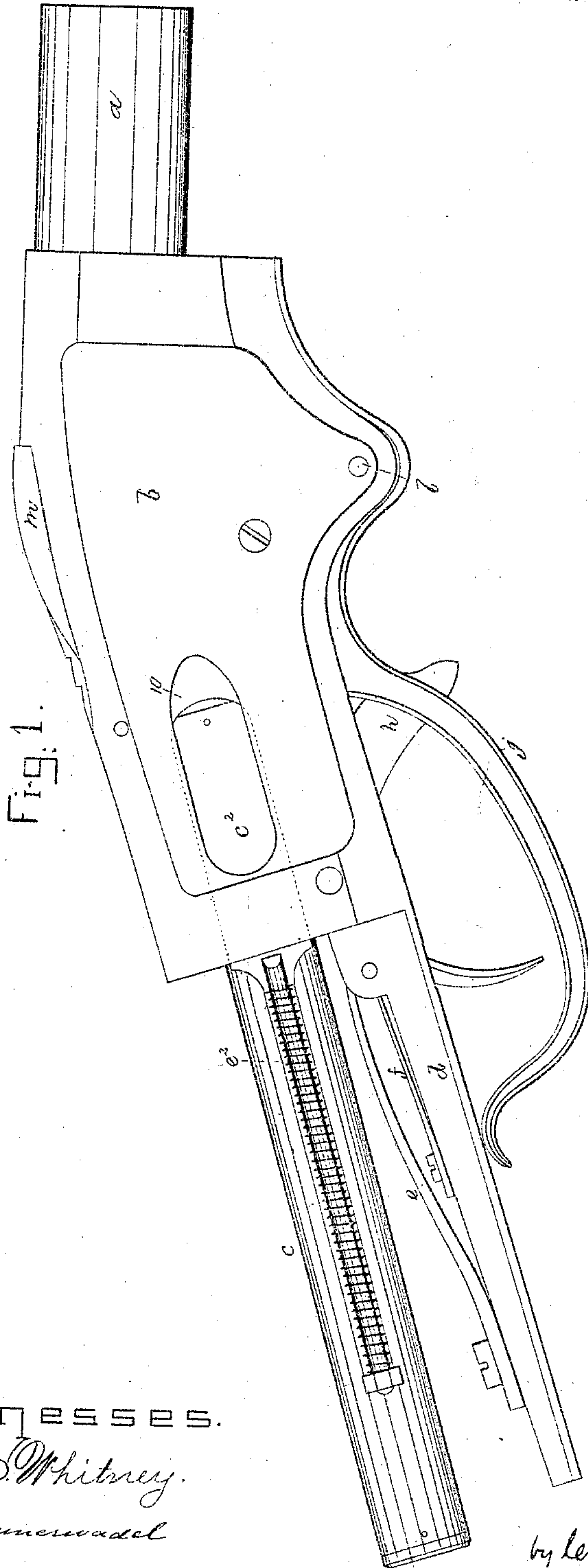


J. M. MARLIN.
Magazine Fire-Arm.

No. 222,064.

Patented Nov. 25, 1879.



Witnesses.

N. E. Whitney.

A. Hunsvedel

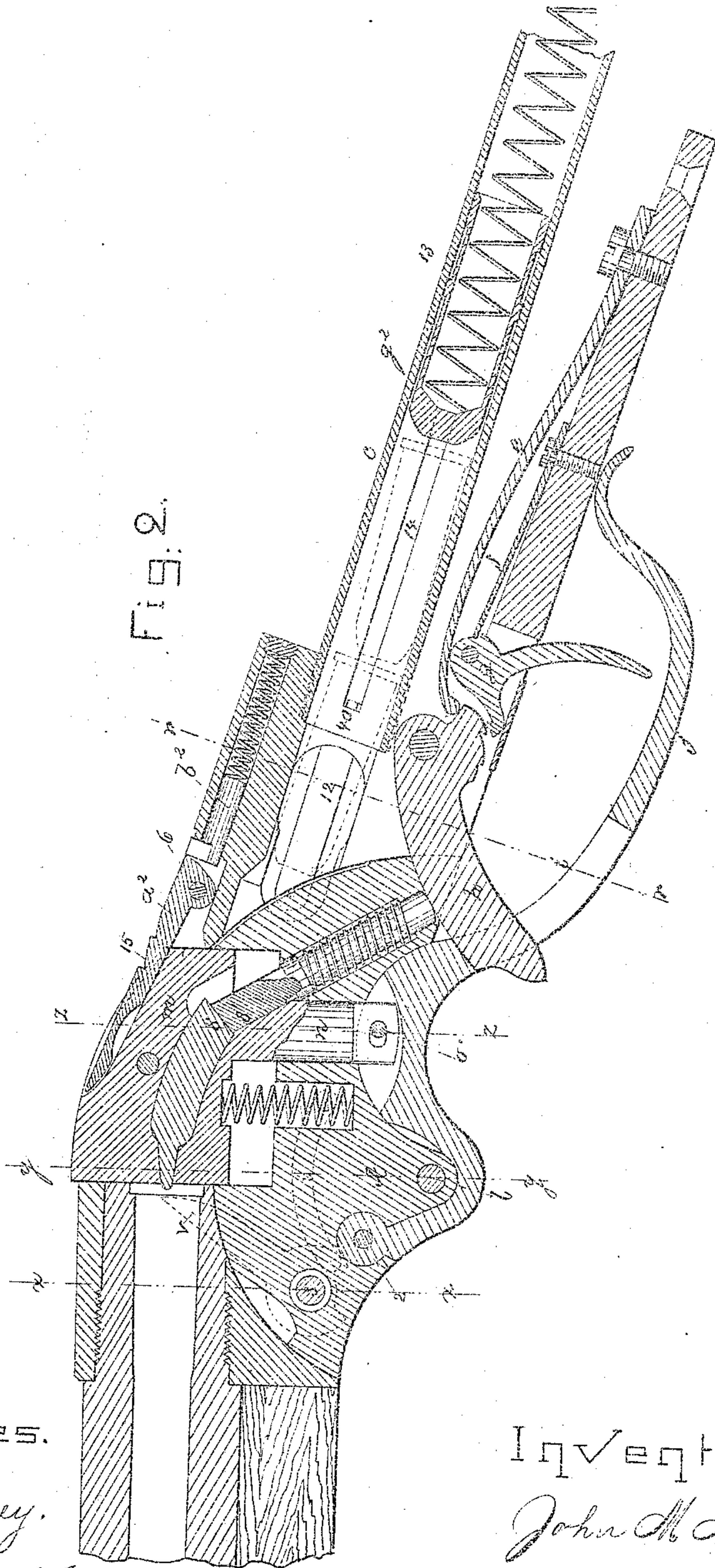
Inventory.

John M. Merwin.

by Leroy Gregory

Atty's

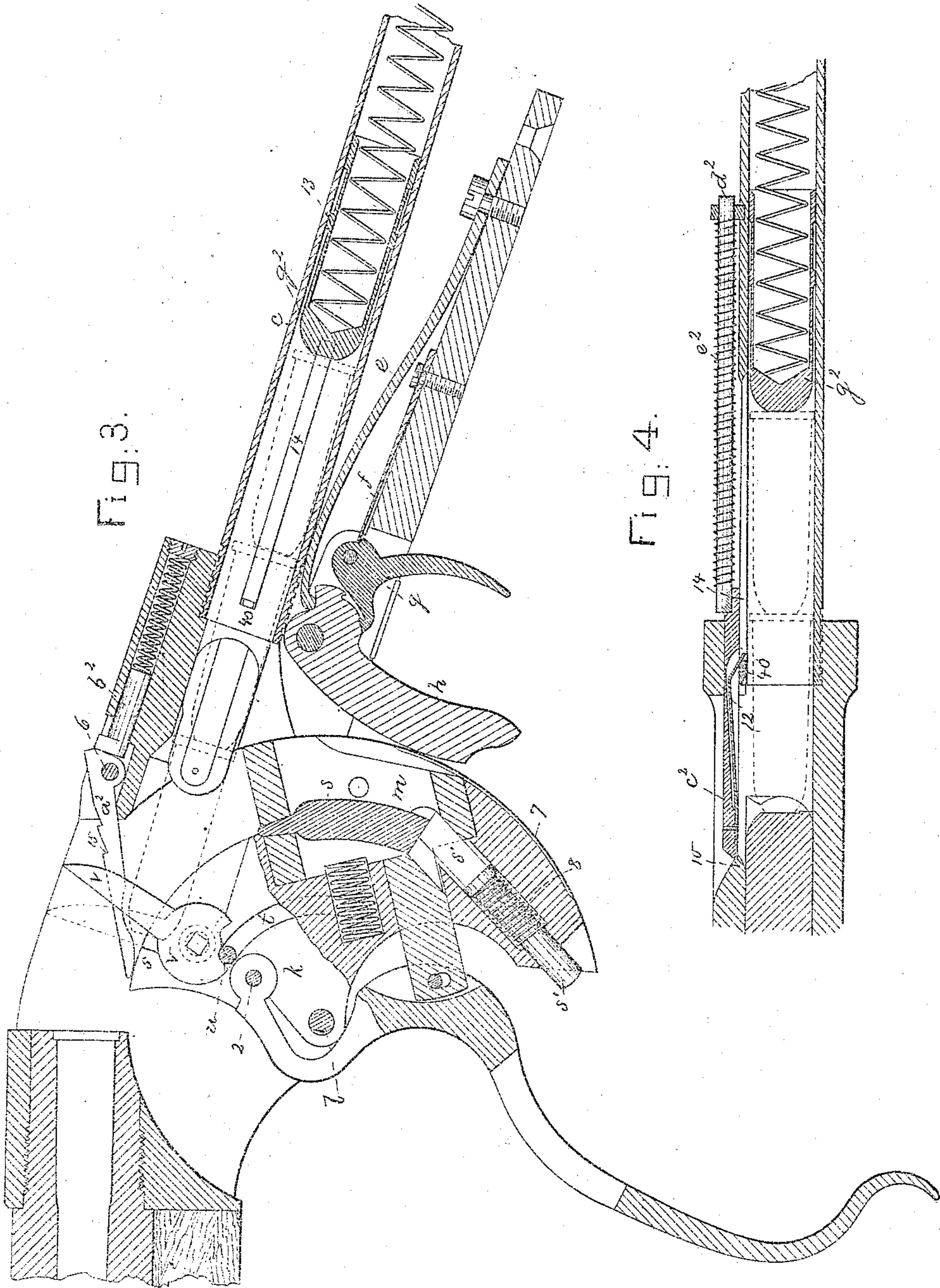
J. M. MARLIN.
Magazine Fire-Arm.
No. 222,064. Patented Nov. 25, 1879.



Witnesses.
A. E. Whitney.
A. H. Woodward

Inventor.
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J. M. MARLIN.
Magazine Fire-Arm.
No. 222,064. Patented Nov. 25, 1879.



Witnesses.
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J. M. MARLIN.
Magazine Fire-Arm.
No. 222,064. Patented Nov. 25, 1879.

Fig. 5.

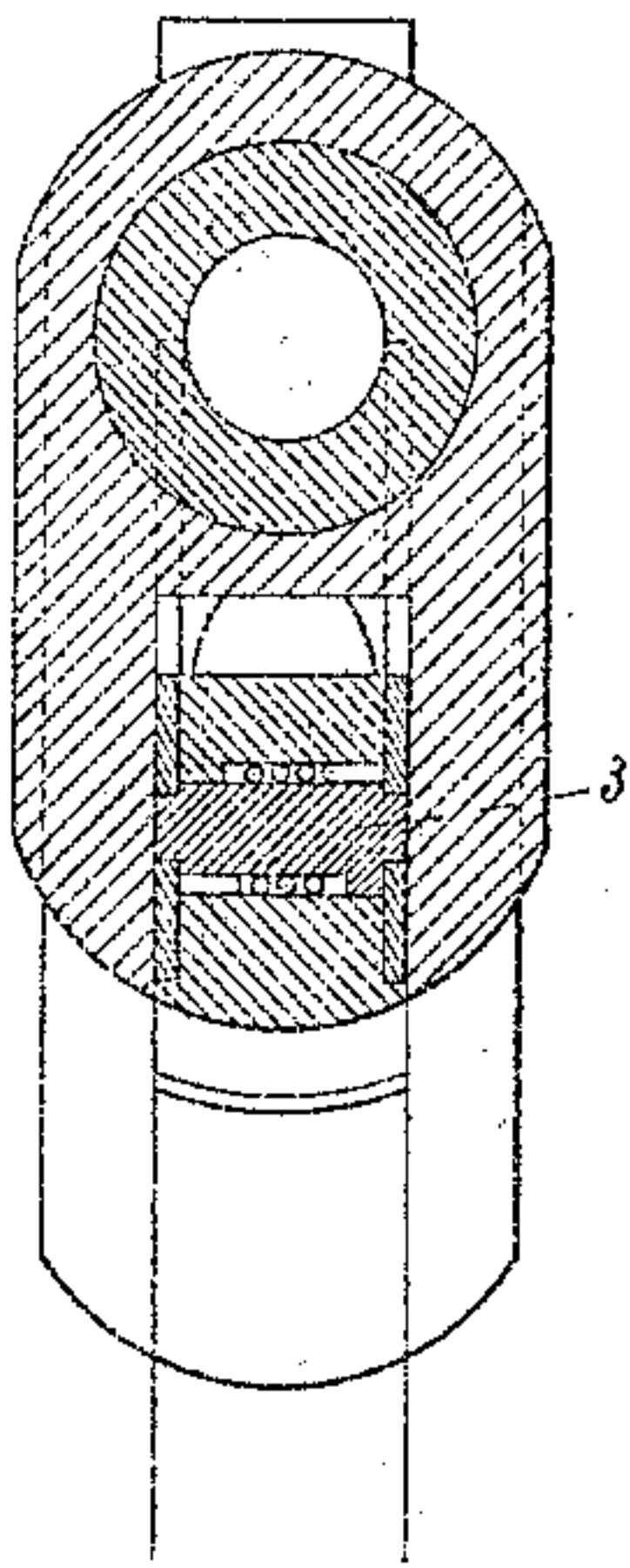


Fig. 6.

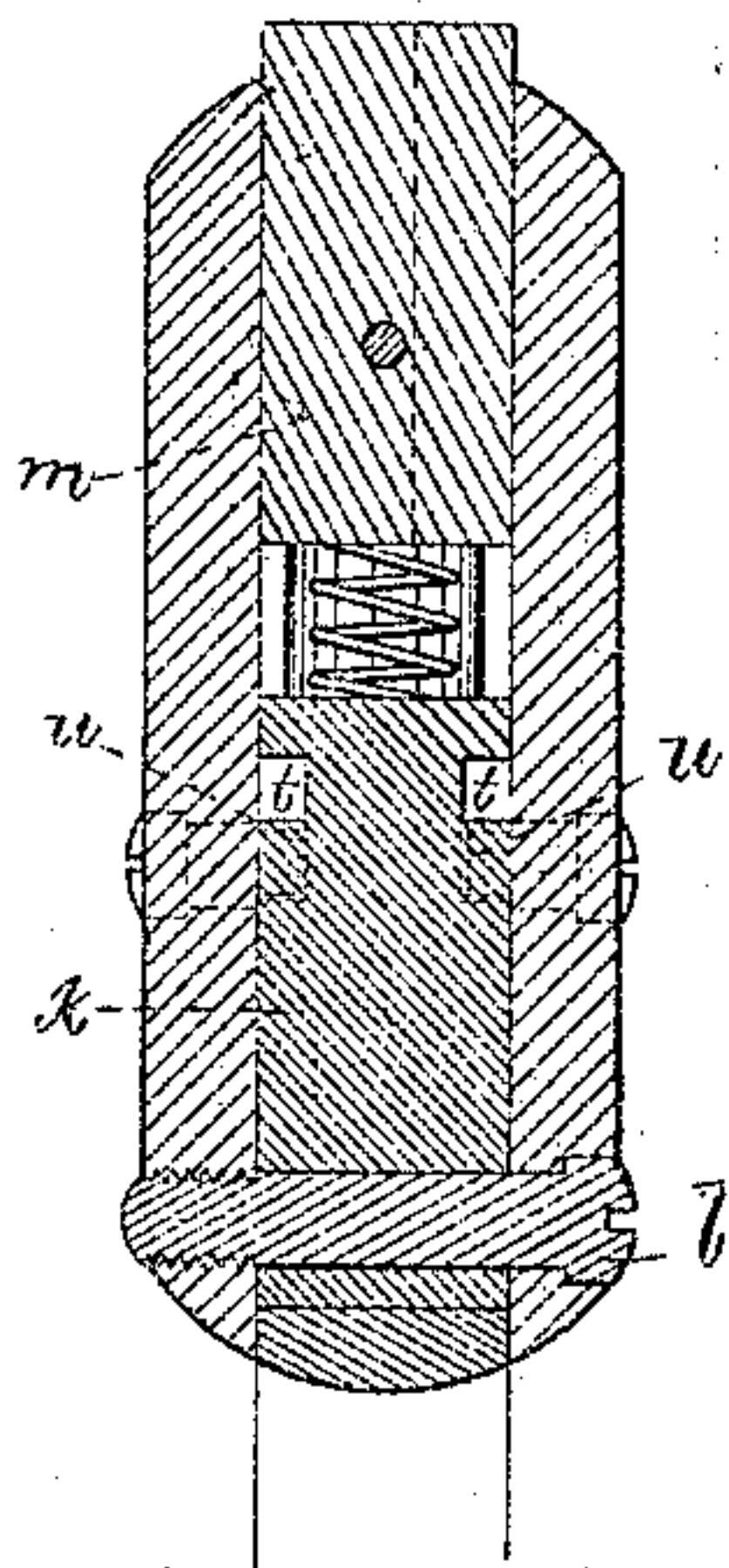


Fig. 7.

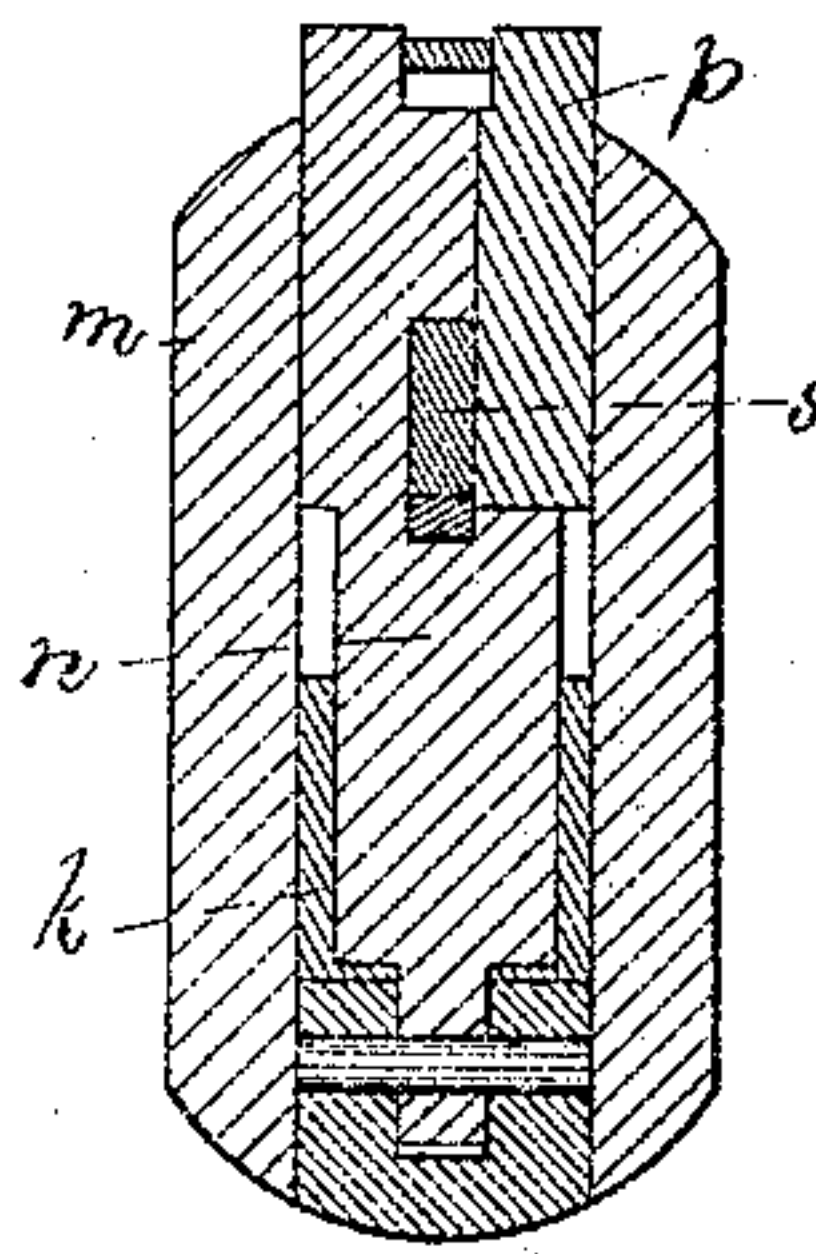


Fig. 8.

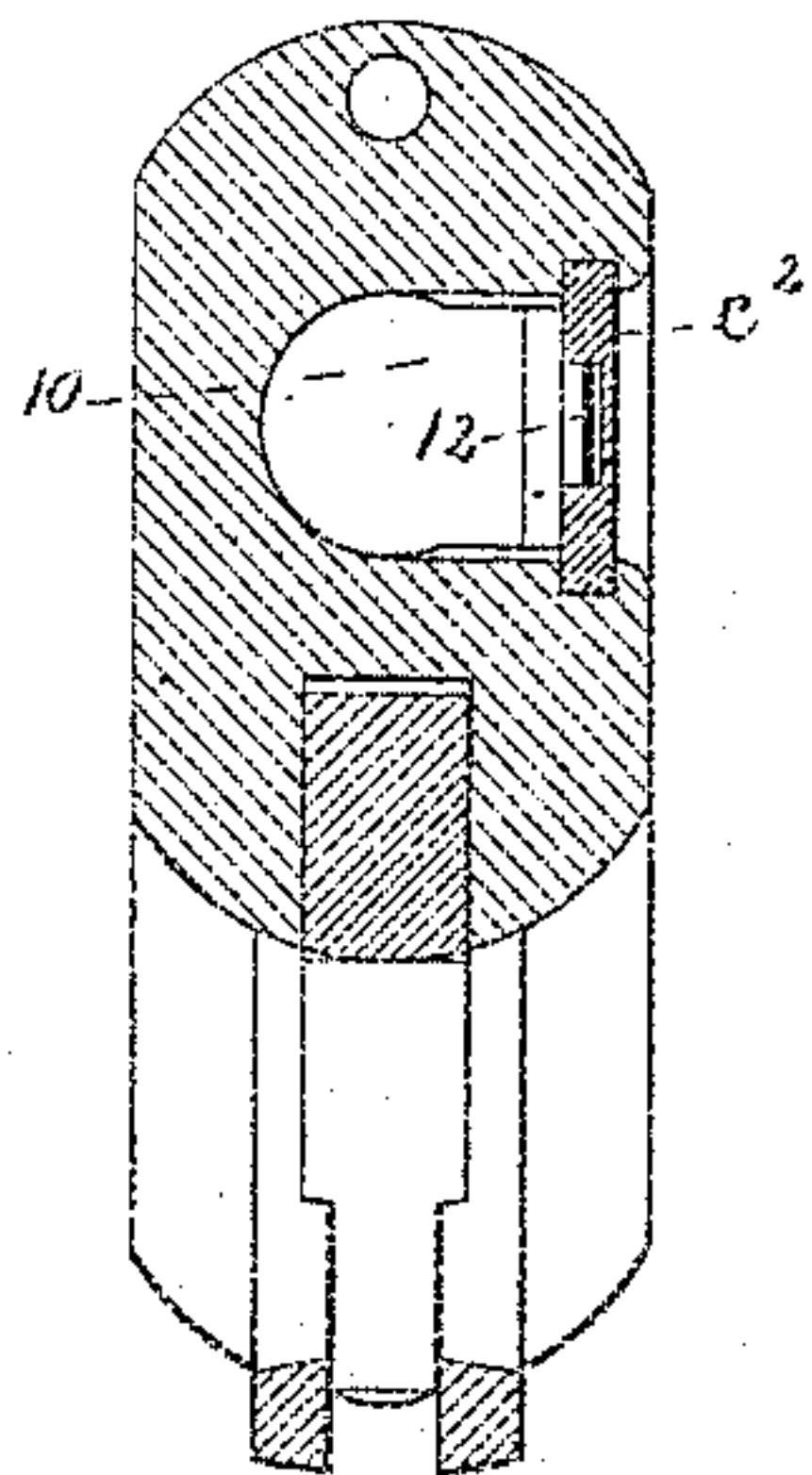


Fig. 9.

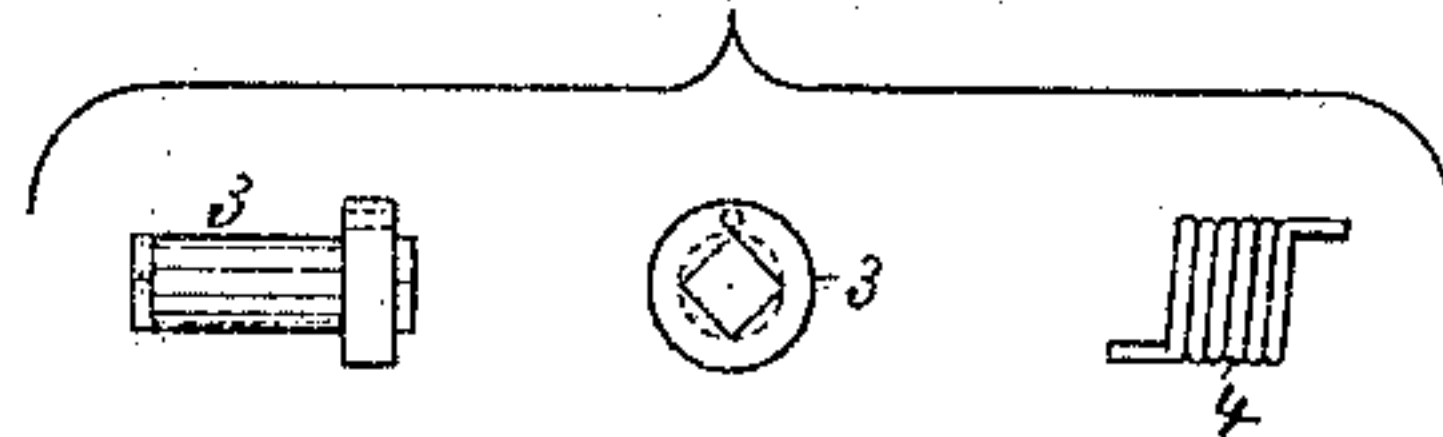
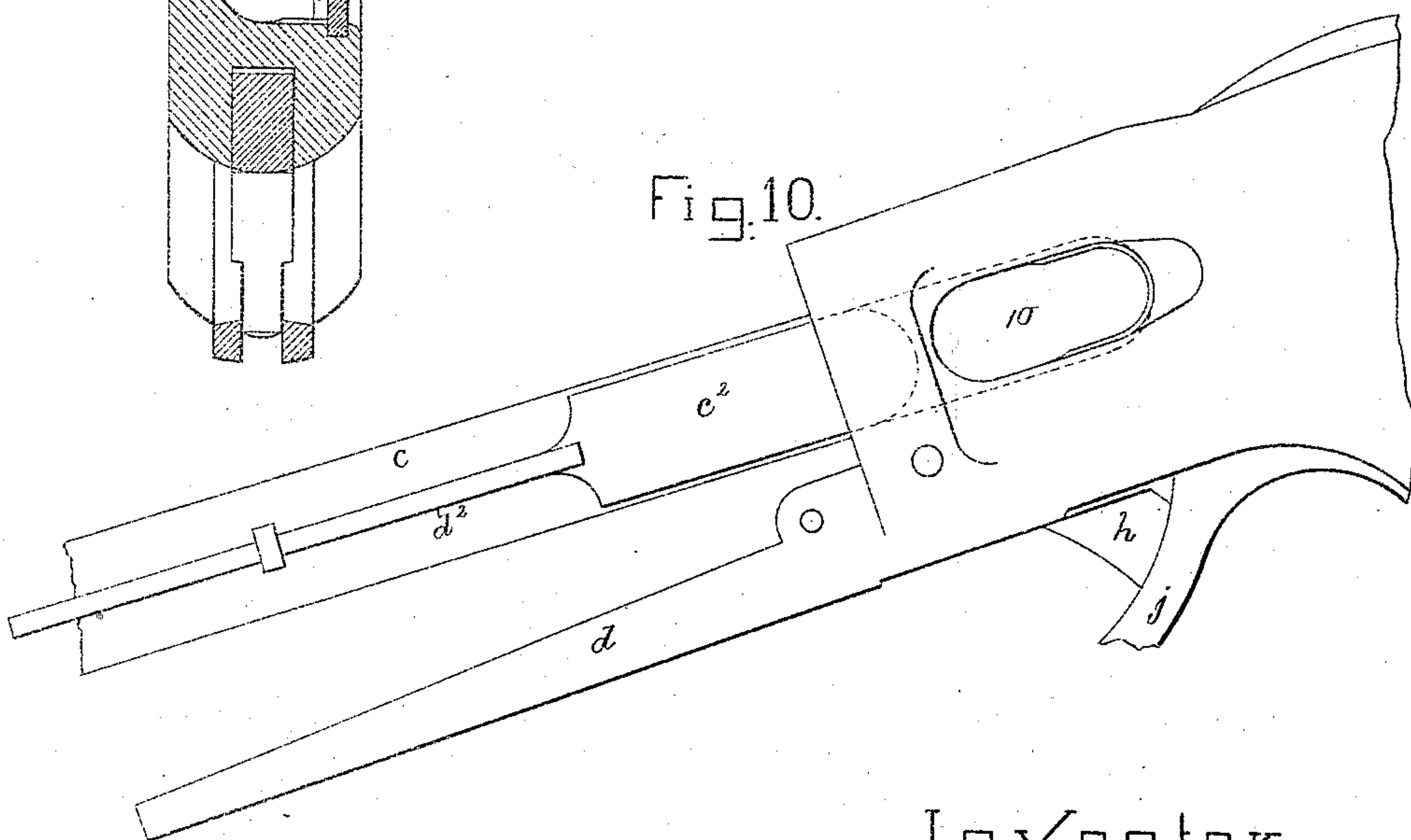


Fig. 10.



Witnesses.

N. E. Whitney
A. Hunsmadel

Inventor.

John M. Marlin.
by Crosby & Morgan

UNITED STATES PATENT OFFICE.

JOHN M. MARLIN, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. 222,065, dated November 25, 1879; application filed July 15, 1879.

To all whom it may concern:

Be it known that I, JOHN M. MARLIN, of New Haven, county of New Haven, State of Connecticut, have invented an Improvement in Magazine-Guns, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to magazine-guns, and has for its object to provide for the proper insertion of the cartridges, and to retain the cartridges then in the magazine back in such position as to leave a free or unobstructed space for the insertion of each additional cartridge into the magazine.

My invention is shown as engrafted upon that class of gun represented in United States patents heretofore granted to C. M. Spencer, wherein is employed a carrier and locking-block which are adapted to transfer the cartridges from the magazine to the gun-barrel.

In this my invention I have pivoted the hammer upon a pin upon the lower side of the receiver and at the rear of the downwardly-rotating carrier, rather than pivoting it directly upon the carrier, as heretofore, so that in this my invention the carrier itself strikes and cocks the hammer, which greatly simplifies the construction of the parts.

Figure 1 represents, in side elevation, a sufficient part of a magazine-gun to illustrate my invention; Fig. 2, a central longitudinal section thereof; Fig. 3, a longitudinal section of a part of the gun with the extractor in elevation, and with the breech mechanism thrown open ready to receive a cartridge, the hammer being at full-cock; Fig. 4, a sectional detail of the magazine with the magazine-slide closed; Figs. 5, 6, 7, and 8, sections on the lines *xx*, *yy*, *zz*, and *rr*; Fig. 9, a detail of the extractor shaft and spring; and Fig. 10, a detail of the opening in the side of the receiver, through which to introduce the cartridges into the magazine.

The barrel *a* is attached to the receiver *b*, and the latter has connected with it the magazine *c*, all as usual. The receiver has projecting backwardly from it a tang, *d*, to which is attached the mainspring *e* and the sear-spring *f*, the combined trigger and sear *g*, and the hammer *h*, the outer end of the hammer being herein shown as extended far enough to pass

through a slot, *i*, in the lever *j*, such construction enabling the hammer to be cocked or moved by hand should it be desired to do so. The carrier-block *k*, pivoted in the receiver by the screw *l*, has suitable openings made therein to guide the locking-block *m*, which carries the firing-pin, which locking-block, in the closed position of the breech mechanism, as in Fig. 2, acts as the breech proper to close the rear of the barrel. This locking-block has a stem, *n*, connected by pin *o* with the hand-lever *j*, the latter being pivoted at one end upon the carrier-block, at *2*, so as to move the carrier and locking blocks at the proper times.

The locking-block has a removable cap, *p*, (see Fig. 7,) which bears against one side of the main part *s* of the firing-pin, which, in this instance of my invention, is shown as composed of two parts, *s* and *s'*, the latter part, *s'*, being shown as a rod with a beveled face to contact with the beveled rear end of the main part *s*, the part *s* being curved and working in a curved path, while the part *s'* is straight and works in a straight line. This division of the firing-pin into two parts, one of which is curved, as shown, obviates cutting away and weakening the carrier-block as much as would be necessary if the firing-pin were in one long curved piece.

It is, of course, obvious that I may, if desired, make the firing-pin in one long curved piece, its rear end extending to the hammer.

The rear end of the part *s'* extends through the carrier-block in position to be struck by the hammer *h* when released to fire a cartridge.

The carrier-block *k* is grooved at its outer sides, as at *t*, to receive the ends of stops *u*, which serve to stop the outward movement of the said block, and also to operate the extractor *v* quickly to give it a sudden jerk just before the carrier-block reaches its outermost position, to thereby cause the extractor to eject the shell from the space in or between the sides of the receiver at the rear of the barrel. This extractor is shown as composed of two fingers, *v*, one at each side the carrier-block, both fingers being attached to a bolt or connecting-shaft, *3*, surrounded by a spring, *4*, one end of which is fixed with relation to the said bolt, while the other end of the spring is fixed to the

carrier-block, the said spring acting to retain the extractor pressed forward against the shoulders 5 of the receiver, the extractor being thereby prevented from dropping back into the cartridge-receiving space in the receiver. This extractor is shown in Fig. 2 in dotted lines in the position it will occupy when the breech mechanism is closed, and in Fig. 3 in full lines in the position it will occupy when the breech mechanism is fully open, the dotted lines in Fig. 3 showing the position of the extractor just before it was jerked into the full-line position to eject the cartridge-shell.

The cartridge-guide a^2 is pivoted to the receiver at 6, and is acted upon by a spring-pressed bolt, b^2 , the bolt and pivot being so arranged that the said guide may be turned completely out of the receiver, if desired, in order that a cartridge or cartridges may be received from the magazine without being first passed into the barrel and then out, as in the Spencer gun of July 29, 1862. The under side of this cartridge-guide a^2 rests upon the locking-block when the carrier-block commences to move outward and downward; and it will be noticed that the locking-block m , when passing from the position shown in Fig. 2 to that in Fig. 3, gradually moves away from contact with the under side of the said guide, which, operated upon by the spring-pressed bolt b^2 , causes an acceleration of the motion of the said guide. The guide a^2 , having descended quickly to its lowest position, rests just before the extractor acts to draw the shell, thereby avoiding all chance of such an interference in the movements of the parts as would obstruct the speedy extraction of the cartridge-shell.

The notches 15 in the guide prevent a shell or cartridge resting thereon from slipping forward into the open rear end of the barrel.

The carrier-block is grooved at 7 to obviate friction between it and the hammer h after it has been brought to full-cock by the outward movement of the said block.

The spring 8 of the part s' of the firing-pin is only strong enough to keep the said part pressed against part s . The magazine c is herein shown as located in the stock of the gun at the rear of the receiver, and it has the usual spring to act upon the follower q^2 , provided with an annular rim or projection, for purposes hereinafter described.

The cartridges are inserted into the said magazine through an opening, 10, at the side of the receiver, the said opening being shaped as shown in Fig. 10, where it will be noticed that the said opening is narrower at its front than at its rear end, so as to make it impossible to insert a cartridge except with its head in the proper direction. This opening is closed by a slide-plate, c^2 . (Shown as having attached to it a rod, d^2 , surrounded by a spiral spring, e^2 , to keep the slide-plate pressed forward.) This plate c^2 has attached to it at its under side a spring, 12, the free end of which is bent or turned downward or inward, as shown in

Fig. 4, so that when the said slide-plate is moved backward the free end of the said spring, which then descends into a slot, 14, in the side of the magazine, will act against the flange or rim of a cartridge already in the said magazine and force it backward, thereby leaving an unobstructed space for the insertion of another cartridge into the opening which leads to the magazine.

The free end of the spring is acted upon by a bridge-piece, 40, which permits the spring to descend and engage a cartridge as the slide-plate is moved backward, and as the said plate is moved forward the bridge-piece lifts the spring, so that its free end cannot obstruct the forward passage of the cartridges into position to be transferred by the carrier-block to the barrel to be fired, all as usual.

When the first cartridge is inserted into the magazine the spring acts upon an annular flange or suitable projection, 13, of the follower and pushes the follower back out of the way of the cartridge.

The carrier-block in its outward movement (see Fig. 3) acts upon and lifts the hammer h to full-cock, after which the hammer is engaged and held by the sear having the trigger attached to and forming part of it, while the carrier-block is again returned into position between the side plates of the receiver, such movement of the said block being produced by the lever j , the block then inserting a cartridge into the barrel ready to be fired when the trigger is pulled.

I claim—

1. In a magazine-gun, the slide-plate c^2 , provided with a spring guide-rod, d^2 , in combination with the spring 12, adapted to engage the flange of and carry back with it a cartridge, substantially as described.

2. The slide-plate and its attached spring to engage a cartridge-flange, combined with the bridge-piece to operate the said spring, substantially as described.

3. The slide-plate and its spring, combined with the magazine-tube, slotted at its side for the reception of the end of the said spring, and having a bridge, 40, substantially as described.

4. The cartridge-guide having a beveled rear shoulder and the spring-pressed holding-pin, combined with the receiver, as described, whereby the guide is adapted to be turned out from between the side plates of the receiver, substantially as described.

5. The pivoted cartridge-guide a^2 , provided with notches 15 to prevent the cartridge or its shell entering the barrel, substantially as described.

6. The carrier-block, the described extractor, and the pin or projection adapted to meet the extractor and cause it, by the further movement of the carrier-block, to be jerked suddenly backward, as shown, to eject a cartridge-shell, combined with the cartridge-guide, operated in one direction by a spring, and the carrier

and locking block, whereby the guide has imparted to it an accelerated motion, substantially as set forth.

7. The receiver and downwardly-rotating carrier-block, combined with the hammer pivoted to the receiver at the rear of the carrier-block underneath the magazine, whereby the carrier, as it is turned out from the receiver, is made to act upon and cock the hammer, substantially as described.

8. The carrier-block, to transfer a cartridge from the magazine to the barrel, and the locking-block arranged in and moved by the carrier-block, combined with the two-part firing-pin, guided, one part, by each of the said blocks, to operate substantially as described.

9. The extractor composed of the two fingers, adapted to bear against the cartridge-flange at each side, near its center, and of the rocking-shaft 3 and spring, combined with the carrier-block and a pin in the receiver adapted to engage the lower end of the extractor-fingers and operate the extractor suddenly to throw out the cartridge-shell, substantially as described.

10. The downwardly-moving pivoted carrier-block and connected locking-block and the lever pivoted to the carrier-block and connected with the stem of the locking-block, combined

with the hammer pivoted to the receiver at the rear of the carrier-block below the magazine, and with the two-part firing-pin, one part guided, as described, by each of the two blocks, the contacting ends of the firing-pin being beveled, the combination being and operating substantially as described.

11. In combination, the receiver, the pivoted carrier-block, the locking-block, the lever to operate the two blocks, the firing-pin, the hammer pivoted to the receiver at the rear of the carrier-block below the magazine, and the sear, and sear and hammer springs, also connected with the receiver, or to an extended part thereof at the rear of the pivot of the hammer, to operate substantially as described.

12. The combination, with the receiver, of the hammer and sear and their operating-springs, all connected directly with the receiver, or an extended part thereof below the magazine, and at the rear of the carrier-block, substantially as described.

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

JOHN M. MARLIN.

Witnesses:

JAMES REYNOLDS,
WM. H. WARD.