

S. D. W. FIX.
MAGAZINE FIREARM.
APPLICATION FILED APR. 19, 1909.

977,859.

Patented Dec. 6. 1910

Fig. 1.

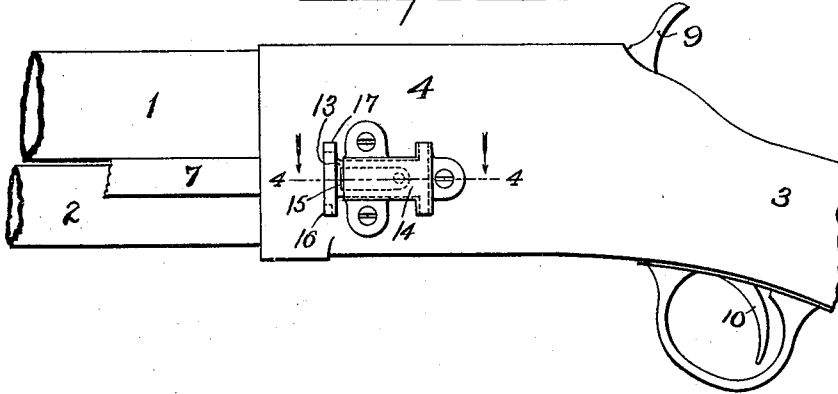


Fig. 2.

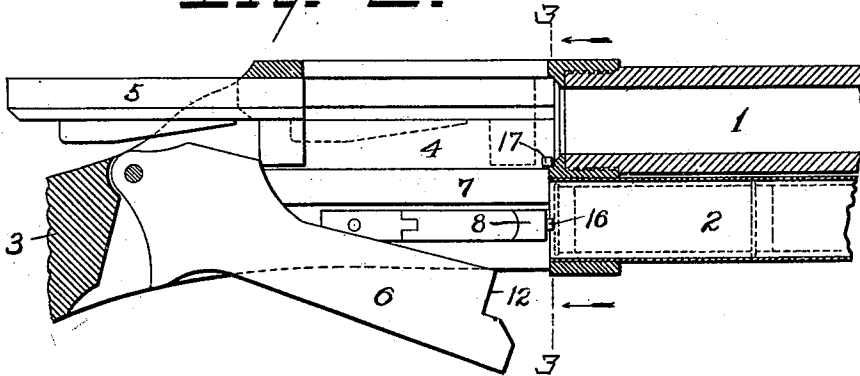


Fig. 3.

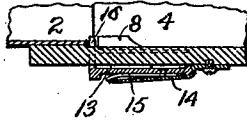
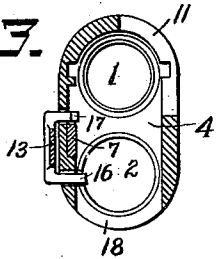


Fig. 4.

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Witnesses
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By

[Signature]

Attorney

UNITED STATES PATENT OFFICE.

SAMUEL D. W. FIX, OF AMITY TOWNSHIP, BERKS COUNTY, PENNSYLVANIA.

MAGAZINE-FIREARM.

977,859.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed April 19, 1909. Serial No. 490,708.

To all whom it may concern:

Be it known that I, SAMUEL D. W. FIX, a citizen of the United States, and a resident of Amity township, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Magazine-Firearms, of which the following is a specification.

My invention relates to magazine firearms of the type in which the magazine is in the form of a tube lying beneath and parallel with the barrel portion, and in which a breech-piece and cooperating carrier are actuated to automatically transfer a cartridge from the magazine to the barrel and to discharge the exploded shell. And my object is to provide an improved escapement mechanism for controlling the discharge of the cartridges from the magazine, as fully described in connection with the accompanying drawing, the novel features being particularly pointed out in the subjoined claims.

Figure 1 is a side elevation of a portion of a fire-arm having my improvements applied thereto. Fig. 2 is a longitudinal section of the same looking in the reverse direction. Fig. 3 is a cross-section on the line 3—3 of Fig. 2. Fig. 4 is a fragmentary section on the line 4—4 of Fig. 1.

Referring to the general construction indicated in the drawing, 1 is the barrel and 2 the magazine lying parallel therewith and beneath the same.

3 is the stock having a receiver 4 in the forward portion thereof into which the barrel and magazine open. Within this receiver is the breech-piece 5 sliding back and forth in suitable guide-ways, as shown, in line with the barrel; and beneath said breech-piece is the carrier 6 coacting with the former to transfer a cartridge delivered thereon from the magazine and present it to the bore of the barrel in front of the opened breech. 7 is the slide-bar for actuating said breech-piece and carrier, the handle thereof on the magazine tube not being shown. And 8 is an escapement located at the mouth of the magazine and adapted to retain the cartridges therein against the discharging tension of the usual magazine spring not shown. This escapement is operated by the carrier 6 depressing same out of contact with the cartridges in its downward movement in the receiver.

A hammer 9 and trigger 10 are indicated for exploding the shell in the barrel through

well known trigger-releasing mechanism and firing pin not shown. The operation of this well known mechanism need be but briefly described: The slide-bar 7 is operated by its attached handle on the magazine tube to lower the carrier 6 in the receiver to a position below the magazine 2, the breech-piece 5 being simultaneously opened by cooperating mechanism sliding same backward in the receiver 4. This downward movement of the carrier 6 over the escapement 8 depresses the latter and permits the discharge of one cartridge upon the lowered carrier; while the reverse movement of the slide-bar 7 raises the carrier to present the cartridge carried thereon to the barrel 1 in front of the breech-piece, the further forward movement of the latter sending it home into the bore. The breech-piece in its backward movement sets the hammer in full cocked position and discards the exploded shell withdrawn from the bore through a side opening 11 in the receiver through well known mechanism not shown. And the upward movement of the carrier contacts with the next shell in the magazine long enough to permit the escapement 8 to project and retain the same therein. So that repeated movements of the slide-bar may transfer the cartridges one at a time into the bore of the barrel and discharge the used shell through the side opening in the receiver. I have found in practice however that should the breech-piece 5 not be fully closed so as to permit the carrier to rise to its highest position where its shoulder 12 serves to lock the breech piece, a partial backward movement of the latter will lower the carrier sufficiently to receive a second cartridge from the magazine and choke the receiver. My invention prevents this delivering of a second cartridge to the receiver until the breech-mechanism has been locked, and I accomplish this by providing an additional escapement for the cartridges in the magazine, located forward of the carrier-operated escapement, and released by the breech-piece at the end of its forward movement.

As shown in the drawings, my improvement consists of a plate 13 secured to the outside of the receiver 4 by a casing 14, and trunnioned therein, as shown, so as to have a limited pivotal movement, a spring 15 secured to said plate bearing against the casing to normally press the plate against the outer face of the receiver. The forward

end of this plate is provided, as shown, with U-shaped projections 16 and 17 extending through the wall of said receiver, the former, 16, entering forward of the escapement 8 and extending into the path of the cartridges in the magazine 2 and forming an additional escapement to prevent their discharge therefrom; and the latter, 17, entering into the path of the breech-piece 5 at the end of its forward movement. This projection 17 is beveled to form a cam surface against which the breech-piece contacts in its final closing movement, to depress the plate 13 outward against the tension of the spring 15, such outward movement withdrawing the projection 16 from the path of the cartridge and permitting the latter to move rearward against the carrier-operated escapement.

The operation is as follows: The cartridges are placed in the magazine 2 through the usual bottom opening 18 in the receiver and are held therein against the tension of the magazine spring by the escapement 8. Upon the backward movement of the slide-bar 7 the breech-piece is opened and the carrier lowered to receive the last entered cartridge from the magazine. This backward movement of the breech-piece immediately releases the projection 17 and permits the spring 15 to move the plate 13 inward, the projection 16 thereof entering into the path of and retaining the second cartridge in the magazine. The breech-piece and carrier may now be partially operated any number of times without effecting the release of the second cartridge. When, however, the breech-piece 5 is moved to the end of its forward movement and is in locked position, the projection 17 is again depressed and projection 16 withdrawn from contact with the second cartridge, permitting the latter to move rearward against the carrier-operated escapement 8, ready to be delivered to the carrier upon its next downward movement. It will thus be seen that the breech-piece must be moved to the limit of its forward movement before a second cartridge can be transferred from the magazine, preventing any interference with the automatic action of the fire-arm.

The plate 13 may obviously be made of spring metal and the spring and casing 15 omitted, and other modifications will readily

suggest themselves, and I do not therefore desire to limit myself to the specific construction shown and described, but:

What I claim is:—

1. In a magazine fire-arm having the magazine arranged beneath and parallel with the barrel, a breech-piece and cooperating carrier in the receiver to the rear thereof, and a carrier-operated escapement for said magazine, of a U-shaped lever, one prong of which extends into the magazine forward of said escapement, and the other prong lying in the path of the breech-piece.

2. In a magazine fire-arm having the magazine arranged beneath and parallel with the barrel, a breech-piece and cooperating carrier in the receiver to the rear thereof, and a carrier-operated escapement for said magazine, of a U-shaped lever, one prong of which extends into the magazine forward of said escapement, and the other prong lying in the path of the breech-piece at the end of the forward movement thereof.

3. In a magazine fire-arm having the magazine arranged beneath and parallel with the barrel, a breech-piece and cooperating carrier in the receiver to the rear thereof, and a carrier-operated escapement for said magazine, of a second escapement pivoted on the outside of the receiver and having projections extending into the receiver, one of which enters forward of said carrier-operated escapement, and the other into the path of the breech-piece.

4. In a magazine fire-arm having the magazine arranged beneath and parallel with the barrel, a breech-piece and cooperating carrier in the receiver to the rear thereof, and a carrier-operated escapement for said magazine, of a second escapement pivoted on the outside of the receiver and having projections extending into the receiver, one of which enters forward of said carrier-operated escapement, and the other into the path of the breech-piece at the end of the forward movement thereof, and a spring to normally press said projections into the receiver.

In testimony whereof, I affix my signature, in the presence of two witnesses.

SAMUEL D. W. FIX.

Witnesses:

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