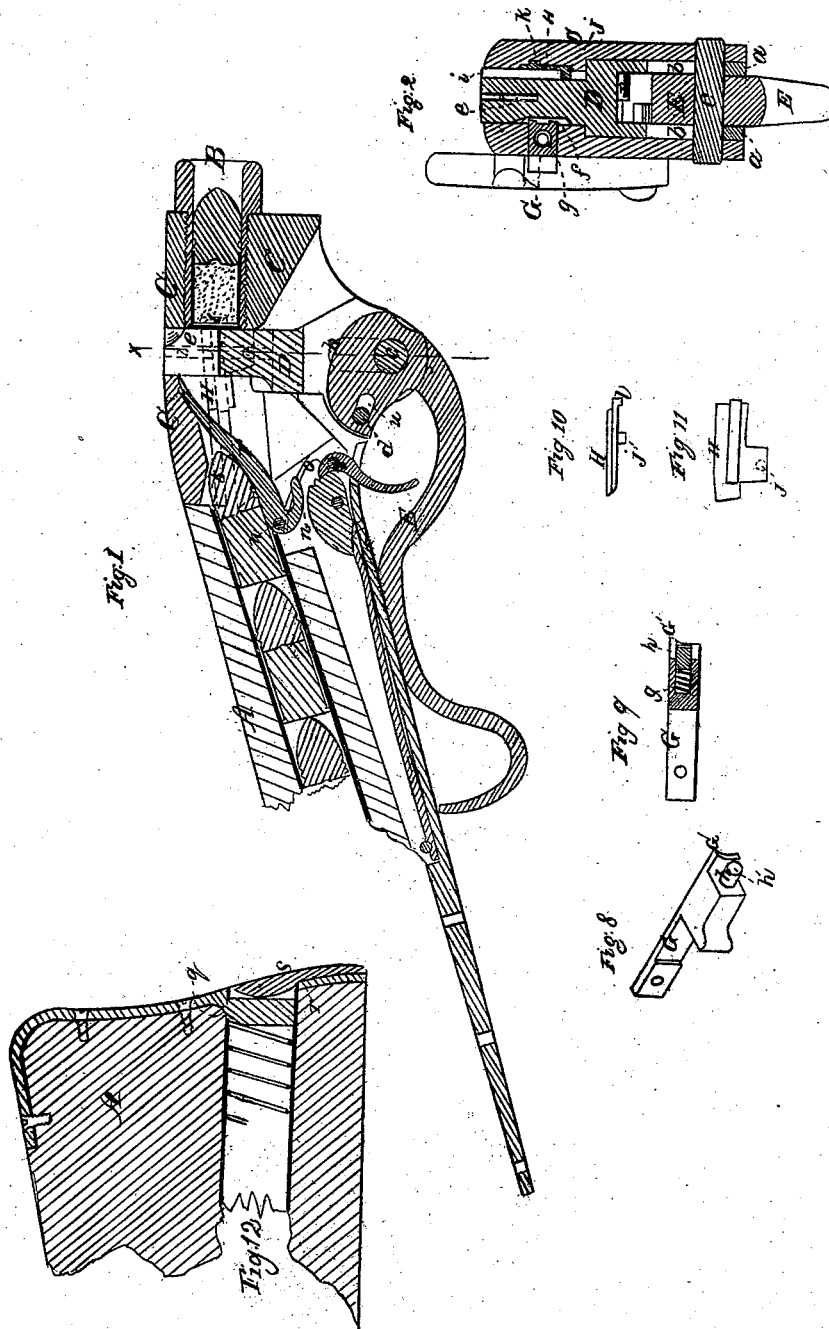


W. FITZGERALD.
Magazine Gun.

No. 45,919.

Patented Jan 17, 1865.



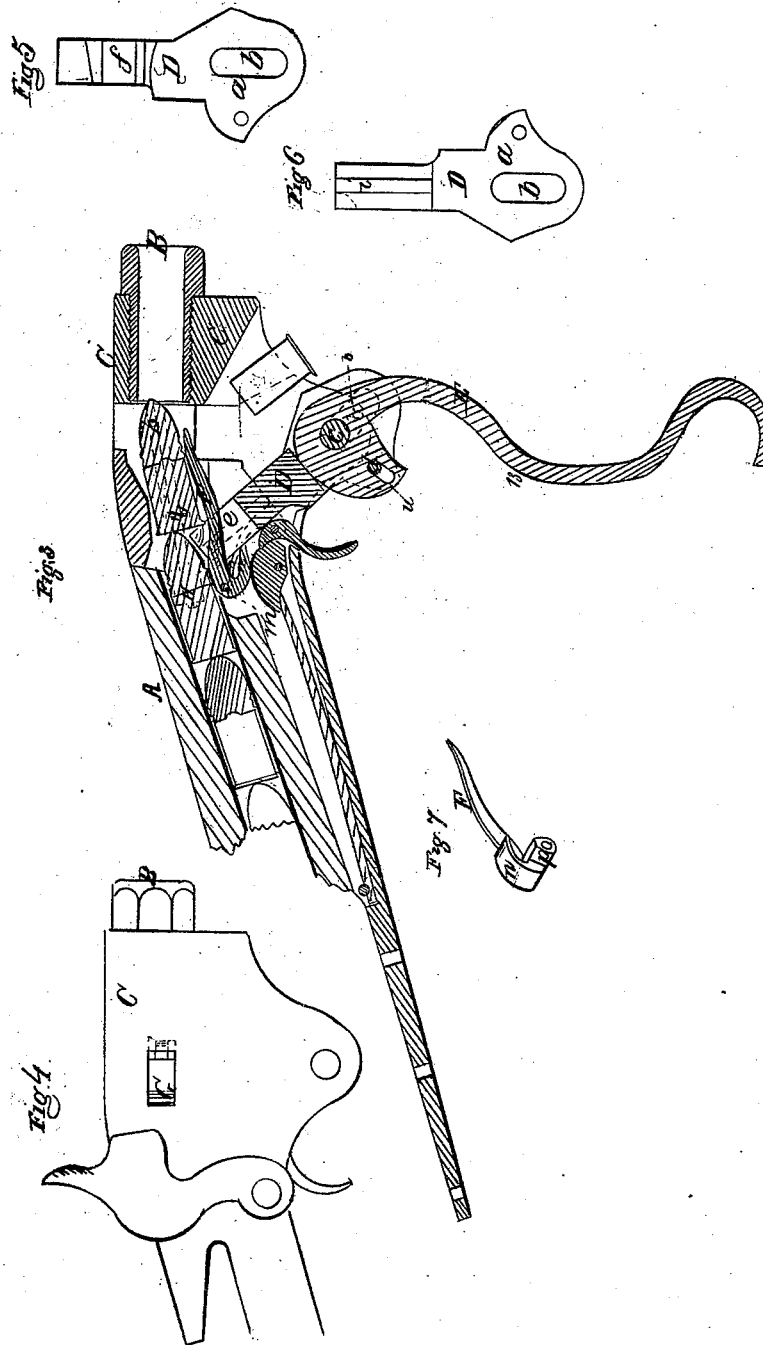
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UNITED STATES PATENT OFFICE.

WALTER FITZGERALD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MAGAZINE OR SELF-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 45,919, dated January 17, 1865.

To all whom it may concern:

Be it known that I, WALTER FITZGERALD, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Breech-Loading Fire-Arms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a longitudinal section through a gun with my improvements attached thereto, representing the position of the parts when the piece is ready to be discharged. Fig. 2 is a transverse section through the gun in the direction of the line *x x* of Fig. 1. Fig. 3 is a longitudinal section through the gun, the parts being represented in their relative position when the breech-block is thrown down after the discharge. Fig. 4 is a side view of a portion of the breech, showing the position of the percussion-rod when the hammer is drawn back. Fig. 5 is an elevation of one side of the breech-block, and Fig. 6 is an elevation of the opposite side. Fig. 7 is an inverted view of the cartridge-guide. Fig. 8 is a view of the percussion-rod, and Fig. 9 is a central longitudinal section through the same. Fig. 10 is a plan, and Fig. 11 a back elevation, of the discharger. Fig. 12 represents a vertical section through the end of the stock and magazine.

My invention relates to that class of breech-loading fire-arms provided with a magazine, from which a supply of cartridges are fed into the barrel and their empty cases discharged therefrom.

To enable others skilled in the art to understand and use my invention, I will now proceed to describe the manner in which I have carried it out.

In the said drawings, A is the stock, which is connected with the barrel B by a metallic breech, C, through which is cut a vertical slot or recess for the breech-block D to move in. This breech-block is enlarged a short distance from its top, and terminates at its lower end in two ears, *a*, through each of which is cut a slot, *b*. Between the ears *a* of the breech-block is fitted the guard-lever E, and they are both pivoted within the breech by means of the pin *c* passing through them. The guard-lever has a short narrow slot, *u*, cut in its rear

upper portion for the passage of a pin, *d*, which enters the breech-block, and it is by this arrangement of slots and pins that the movement of the breech-block is controlled by that of the guard-lever. An opening, *e*, is made in the top of the breech-block, extending through the center from front to rear, and is of sufficient depth to allow the cartridge-guide F to play within it.

In the right side of the breech-block D is cut a recess, *f*, of a wedge shape at its top, (see Figs. 2 and 5,) in which the bolt of the percussion-rod G moves, and a rectangular slot is made through the right side of the breech-plate C, to allow of the play of its head when struck by the hammer.

The percussion-rod G is of the form shown in Figs. 8 and 9, and its forward end is bored out to admit a spring, *g*, in contact with which is placed the movable pin *h*, whose forward extremity is beveled, as at *h'*, to allow of its throwing the percussion-rod G laterally into the recess in the breech-block, so that when the hammer strikes the rod its forward projection G' is first thrown out behind the shoulder of the cartridge, and then driven against it to produce its discharge, a screw passing through the rear end of said rod into a slot in the breech admitting of this movement.

In the left side of the breech-block, Figs. 2 and 6, is cut a long vertical groove, *i*, into which fits a projection, *j*, of the discharger H, which slides in guides *k* on the inside of the breech C, as seen dotted in Fig. 3.

The forward end of the discharger is furnished with a wedge-shaped projection, *l*, which presses behind the shoulder of the empty cartridge-case to eject it from the barrel.

The cartridge-guide F pivots loosely on a pin, *m*, which passes through the breech, and its lower end terminates in the elbow *n*, so that when pressed against by the breech-block D the guide will be depressed and eject the empty case. (See Fig. 3.) A spring, *o*, bears constantly against the flat portion *p*, Fig. 7, on the under side of the heel of the guide, which throws it up when relieved from the pressure of the breech-block.

The only feature which is new in the magazine is the device for locking it in the stock. The front end of the magazine is run into the stock, so that the projection *q* on its rear end

will be downward, to allow it to enter the recess *r* provided for it, after which the magazine is turned a half-revolution by means of the lever *s*, which then falls into the slot in the end of the stock, thus effectually locking it in place. (See Fig. 12.) The hammer and lock being of common construction, it will be unnecessary to describe them here.

In the accompanying drawings the top of the breech-block is represented as being cut away to facilitate the passage of the cartridge to its seat, though by pivoting the guard-lever and breech-block a little behind its present position it would be unnecessary to cut away the breech-block.

The aperture at the top of the breech, where the block *D* rises, may be closed, if desired, so as to avoid the liability of dirt falling down and preventing its free action.

Operation: The magazine being charged with cartridges, the guard-lever *E* is thrown down into the position shown in Fig. 3, when the forward cartridge in the magazine passes the upper front portion of the breech-block *D*, which is hollowed out to admit of this movement, and rests upon the cartridge-guide *F*. (See Fig. 3.) The guard-lever *E* is now brought up in the direction of the arrow 13, which causes the breech-block *D* to press the cartridge into its seat in the barrel, as shown in Fig. 1, while the cartridge next behind it is arrested by the upper part of the breech-block pressing against the rounded surface of the ball, thereby keeping it in place and preventing more than one cartridge from being fed in at a time, and as soon as the first cartridge is pressed forward by the breech-block, so as to clear the cartridge-guide *F*, the latter is thrown up by the action of the spring *o* into the position shown in Fig. 1, and retains the next cartridge behind it in the magazine.

The breech-block moves in the arc of a circle during the operation of carrying the car-

tridge to its seat in the barrel, when, after having pressed it home, it commences to rise vertically and closes the breech, where, by the arrangement of the pins *c d* and slots *b u*, it is locked in a position for firing. (See Fig. 1.) The hammer now being drawn back, the piece is ready to be discharged. On releasing the mainspring the hammer falls and strikes the percussion-rod *G*, driving it against that part of the cartridge containing the fulminate, thus discharging the piece. The guard-lever is now depressed, and the upper end of the breech-block is drawn down vertically from its seat, and the lever continuing to be depressed, the block commences to move backward in the arc of a circle, drawing with it the discharger *H*, which has hold of the empty case, which, after it is withdrawn from the barrel, is thrown down by the guide *F*, and is ejected through the opening in the bottom of the breech.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The breech-block *D* and guard-lever *E*, so connected by the pins *c d* and slots *b u* that the vibration of the lever *E* will give the breech-block the required motions in its passage within the breech *C*, substantially in the manner and for the purpose specified.

2. I claim, in combination with the breech-block *D*, the cartridge-guide *F* and cartridge-discharger *H*, when constructed and arranged to operate together, and with a magazine, substantially as herein described and represented.

3. I claim the percussion-rod *G*, constructed and operated substantially in the manner and for the purpose set forth.

4. I claim locking the magazine substantially in the manner set forth.

WALTER FITZGERALD.

Witnesses:

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