B. FASOLDT.

BREECH-LOADING FIRE-ARMS.

No. 181,566. Patented Aug. 29, 1876.

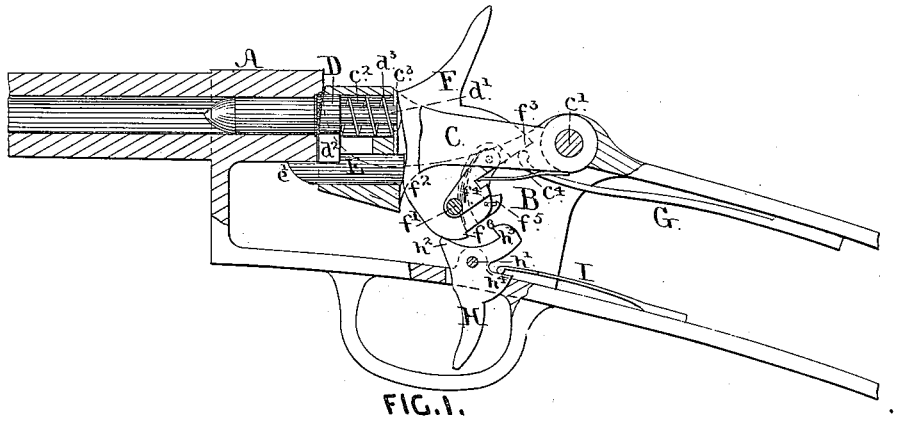

FIG. 1.

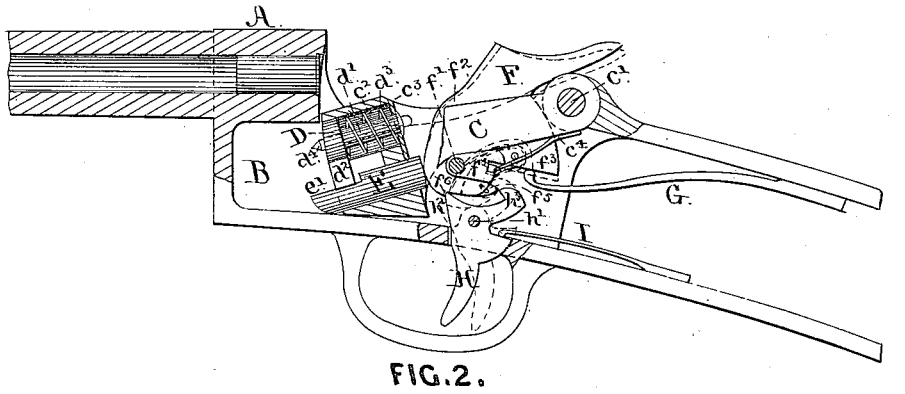

FIG. 2.

Witnesses.

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IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 181,566, dated August 29, 1876; application filed December 13, 1875.

To all whom it may concern:

Be it known that I, BERNARD FASOLDT, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements on Fire-Arms, of which the following is a full and exact description, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a longitudinal section of the breech and lock-work of a gun embracing my improvements, showing the breech-piece and the several parts of the lock in their positions at the instant preceding a discharge; and Fig. 2, the same, showing the several parts in their positions after a discharge.

My invention relates to fire-arms of the breech-loading class; and it consists in constructing and combining the several parts substantially as herein shown and described, and in such manner that the impact of the discharge will effect the resetting of the lock and the dropping of the breech-piece, so as to leave the gun in condition for reloading.

As shown in the drawing, A is the breech of the gun; B, the frame-work for connecting the barrel to the stock, as shown, (one of its side plates is removed for the purpose of exhibiting the construction more clearly;) C, the breech-piece, hinged to the frame-work B by the pin c^1, and provided with a mortise, which forms an opening, in which the hammer works. In its forward end a chamber, c^2, is made, which coincides with the bore of the barrel of the gun, and in which the head of the plunger D is fitted to slide freely. This plunger has a rod, d^1, which passes through the plate c^3, and terminates in a button-head outside of said plate. A projection, d^2, dependent from the head D, slides in a slot cut in the lower side of the chamber c^2, and engages with the shoulder of the sliding pin E. A coiled spring, d^3, surrounds the rod d^1, and, by exerting its force between the plate c^3 and head D, drives the head outward, so that its face will be flush with the end of the breech-piece. A firing-pin, d^4, passes through the axis of the plunger, and projects therefrom sufficiently to receive the stroke of the hammer, whereby it is driven with sufficient force against the cartridge to explode its fulminate.

F, the hammer of the lock, working in the mortise of the breech-piece C, and pivoted to the frame-work B by the pin f^1. On its front edge a cam-shaped projection, f^2, is formed, against which the sliding pin E bears, as hereinafter described. On its posterior edge a shoulder, f^3, is made, against which the main-spring G presses. On each of its sides it is provided with cams f^4, which bear against the side bars of the breech-piece C, for the purpose of raising it, by a positive motion, to its true position before any explosion of the cartridge can occur.

When the breech-piece C is raised, the projecting point e' of the sliding pin E bears against the under side of the breech of the barrel, and prevents it from being carried above its correct position. Bearing beneath the shoulders of the cams f^4, and secured to the pivoted end of the breech-piece C, the springs c^4 operate to depress the breech-piece when the hammer is set in a cocked position, as shown in Fig. 2.

f^5, a spring-catch, working in a recess formed in the hammer F.

H, the trigger, pivoted to the frame-work B by the pin h^1. It has a point, h^2, which catches in the notch f^6 in the hammer, for the purpose of holding the hammer in a cocked position. It is also provided with a hook, h^3, as shown in the drawing, which engages with the spring-catch f^5, for the purpose hereinafter described.

I, a spring secured to the frame-work B, which presses upon the shoulder h^4 of the trigger, for holding the point h^2 securely in the notch f^6 of the hammer.

The loading of the gun is effected by cartridges. Preferably I use those having metallic shells or cases, and having the fulminating compound in the center of its base.

To insert the cartridge, the breech-piece C is depressed, as shown in Fig. 2, by cocking the hammer of the gun, either by hand or in the manner hereinafter described, thereby giving free access to the breech of the barrel for the insertion of the cartridge.

The firing is effected by pulling the trigger H, thereby releasing its point h^2 from the notch f^6 of the hammer F, whereupon the main-spring G forces the hammer forward, which, by its cams f^4, raises the breech-piece C into its position, as shown in Fig. 1, before the

hammer strikes the firing-pin d^4 to explode the cartridge. At the instant the explosion occurs, the force of the discharge, reacting against the base of the shell of the cartridge, forces back the plunger D, the projection d^2 of which imparts to the sliding pin E a corresponding movement and force, and as the sliding pin bears against the cam-face f^2 of the hammer above the line of its pivot-pin f^1, the hammer is forced backward into the position indicated by the dotted lines in Fig. 2. As this operation is effected instantaneously, while the pressure of the finger is still retained upon the trigger H, some provision is required for catching and retaining the hammer as it is thrown backward. This I accomplish by means of the spring-catch f^5, which engages in the hook h^3 of the trigger, thereby holding the hammer until the pressure of the finger is removed from the trigger. When this pressure is removed the spring I instantly forces the point h^2 of the trigger into the notch f^6 of the hammer, thereby resetting the hammer in a cocked position.

In forcing back the plunger D the shell of the spent cartridge is driven partially into the chamber c^2, thereby preventing the breech-piece C from being carried down into its depressed position as long as the explosive force of the powder is reacting upon the shell of the cartridge. Thereby absolute security is provided against accident or injury by the cartridge being discharged rearward.

When the shell of the cartridge is relieved from the force of the explosion, the spring d^3 forces the plunger D forward, so as to restore the shell in the breech of the barrel, whereupon the springs c^4 force the breech-piece C into its depressed position, as shown in Fig. 2, when the shell can be drawn from the barrel and a new cartridge inserted, leaving the gun in condition for another discharge.

Among the many advantages arising from my improvement is the relieving of the shoulder of the person using my gun from the shock usually caused by the recoil of the gun when discharged, which in this gun is entirely expended upon the springs d^3 and G.

I claim as my invention—

1. The hinged breech-piece C, provided with a chamber, c^2, in combination with the plunger D and spring d^3, as and for the purpose specified.

2. The combination of the hinged breech-piece C, provided with a chamber, c^2, with the plunger D and sliding pin E, as and for the purpose specified.

3. The hinged breech-piece C, provided with a mortise, as herein described, in combination with the hammer F, having its pivotal center fixed to the frame work B, as and for the purpose specified.

4. The combination of the plunger D and sliding pin E, with the hammer F, when arranged to co-operate in the manner as and for the purpose herein specified.

5. The hammer F, provided with a spring-catch, f^5, in combination with the trigger H, having a hook, h^3, as and for the purpose specified.

6. The hinged breech-piece C, pivoted to the frame-work B by the pin c^1, in combination with the hammer F, having the cams f^4, for raising the breech-piece automatically when the hammer is thrown forward by the main spring G, in the manner and for the purpose herein specified.

7. The combination of the hinged breech-piece C, provided with a chamber, c^2, plunger D, and sliding pin E, with the hammer F, having cams f^4 and springs c^4, when co-operating as herein described, to effect the cocking of the hammer F, and depressing the breech-piece C, as herein specified.

8. The combination of the plunger D and firing-pin d^4 with the hammer F, as and for the purpose specified.

BERNARD FASOLDT.

Witnesses:

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