

Sheet 1.

PATENTED JUN 20 1871

G. W. Schofield.

Improvement in Breech-Loading Fire Arms.

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Fig. I.

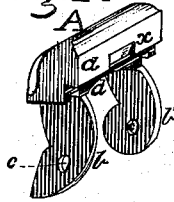


Fig. II.

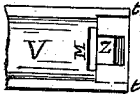
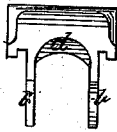


Fig. VIII.

Fig. III.

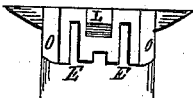


Fig. V.

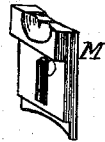


Fig. IV.

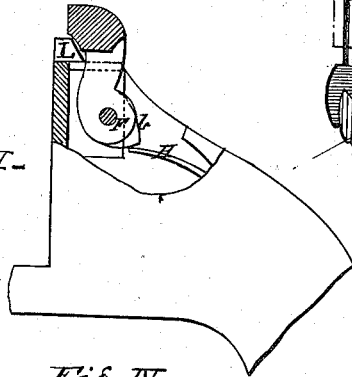
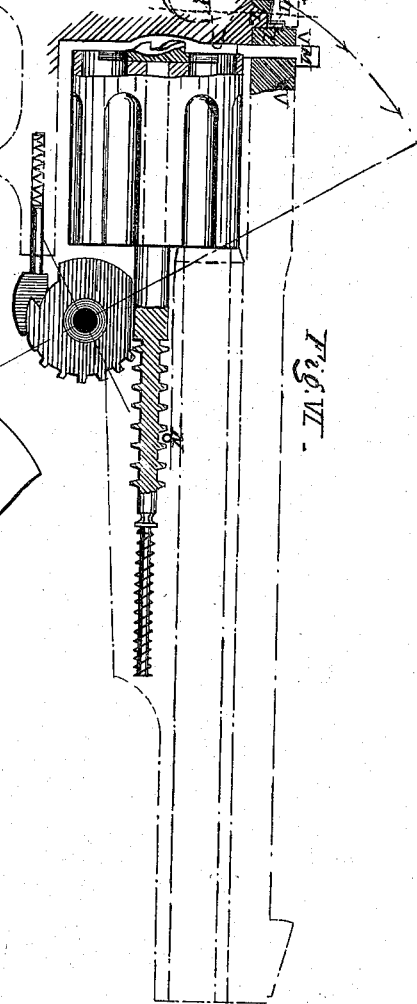


Fig. VII.



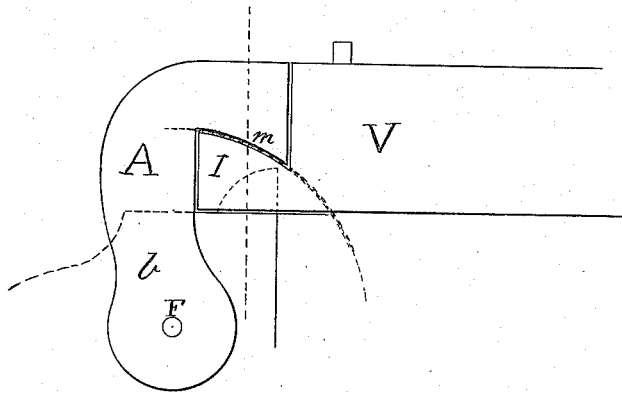
Witnesses :-
Geo. H. Howard.
John C. Cox

Inventor :-
George W. Schofield
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Sheet II.

George W. Schofield
Impt in Breech-Loading
Fire Arms

FIG. 9.



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UNITED STATES PATENT OFFICE.

GEORGE W. SCHOFIELD, OF THE UNITED STATES ARMY.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 116,225, dated June 20, 1871.

To all whom it may concern:

Be it known that I, GEORGE W. SCHOFIELD, of the United States Army, have invented a new and useful Improvement in Breech-Loading Fire-Arms, of which the following is a specification, reference being had to the accompanying drawing.

Nature and Objects of the Invention.

The invention relates to that class of fire-arms which open for loading by turning on a pivot, which pivot connects the barrel and frame. The objects of this invention are, first, to provide a lock-fast for such weapons, which shall hold the barrel securely in the position for firing; second, to provide a cylinder-stay for holding the cylinder in position when the weapon is opened for loading or ejecting discharged cartridge-cases; third, to provide a simple and effective ejector-spring stop.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of the barrel-latch or hook A. Fig. 2 is a view of the back of same. Fig. 3 is a view showing the manner of inserting the latch. Fig. 4 is a perspective view, showing the latch A inserted, a portion of the recoil-shield broken out. Fig. 5 is a perspective view of the cylinder-stay and sight. Fig. 6 is a sectional view, showing the relation of the latch A, lug L, and adjacent parts; also the ejector-spring stop, and its relation to the ejector-spring. Fig. 7 is a perspective view of the ejector-spring stop. Fig. 8 is a view of the lower surface of tail of barrel V. Fig. 9 is a view showing the relation of the hook A to the shoulder I on the tail V of the barrel, being an enlarged section.

General Description.

A in the accompanying drawing is the barrel-latch or hook, which is composed of one piece of metal. *a* is the body of the latch. *b b'* are the legs; *c*, the pivot holes; *d*, the arch; *x*, the notch or recess. The hammer passes under the arch *d*, impinging its surface, and fixing the latch immovably in its locked position. When the hook or latch A is thus locked, the hammer being down, it is impossible to close the barrel, since the surface of

the rear part of the shoulder I would come in contact with the upper part of the latch A, hence preventing a premature discharge by bringing the cartridges in contact with the firing-point of the hammer in closing the piece. Two slots, E, are cut vertically in the recoil-shield, on either side of the hammer-shoulder, to receive the legs *b b'* of the hook or latch A, which is held in position by a screw, F, upon which it pivots. The pivot F, on which the latch A moves, is placed in rear of the vertical plane, midway between the rear vertical face of the convex shoulder I, on the tail of the barrel, and the junction of this shoulder with the barrel, so that the concave locking-notch *m* of the latch A, when in its locked position, is in front of a perpendicular line drawn through the center of the axis on which the latch A is pivoted, which center is likewise the center of the circumference of which the curved horizontal faces of the latch-notch *m* and shoulder I are a segment at the moment when, in locking the piece, the planes of the cords of said faces impinge; and when the barrel is closed the concavity of the latch-notch *m* accurately fits upon the whole surface convexity of the shoulder I on the tail of the barrel. A spring, H, serves to press the latch forward by acting under the heel of one of the legs, or against the rear edge of the same, making the arm self-locking. I is a convex shoulder, curving downward from rear to front, on the tail V of the barrel, upon which shoulder the latch of hook A locks. L is a lug, being an elevation of the recoil-shield, its rear surface being the segment of a circle centering in the center of the pivot on which the barrel turns; the other sides of the lug are vertical, its front being in the vertical plane of the recoil-shield. There is a mortise, Z, in the under part of the tail of the barrel, into which the lug L enters when the weapon is closed, and is of such shape and construction as that the lug L fits into it snugly on the sides and rear when the weapon is locked, the rear surface of the mortise Z being curved to correspond with the curved surface of the lug L. The tail of the barrel is also provided with the shoulders *t*, which fit into the recesses *o* in the recoil-shield when the barrel is locked. The cylinder-stay M combines in one piece the rear

sight, with the stay projecting vertically downward through the rib of the barrel, so as to pass over the edge of the rear end of the cylinder and prevent its being moved with the ejector when the piece is opened. This piece M is held in a fixed position by any suitable means. The ejector-spring stop, Fig. 7, is a combined pin, N, and spring-lever T. The pin passes through the cylindrical cavity which receives the shank of the ejector-shank and spring; it has a groove, R, so placed that when the lever T is turned to a position at or nearly at right angles with the axis of the bore the spring is freed so that the cylinder and ejector can be removed.

When the lever is turned to a position parallel to the axis of the bore the convexity of the pin fits into a groove in the collar of the ejector-spring, thus holding the spring and causing it to act upon and retract the ejector.

Claims.

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

1. The hook or latch A, having the legs *bb'* working in the slots E, and pivoted in rear of the vertical plane midway of the convex shoulder I on the tail of the barrel V, and provided with the concave locking-notch *m*, arch *d*, notch *x*, and spring H, as and for the uses shown and described.

2. The combination of the hammer with the latch or hook A, when the front face of the hammer impinges upon the arch in the latch, thereby fixing the latch immovably in its

locked position, and preventing the opening or closing of the piece when the hammer is down, substantially as shown and described.

3. The combination and relative arrangement of the latch or hook A, tail of barrel V, and hammer, whereby the possibility of the discharge of the piece by the hammer is prevented until the barrel is securely locked and held down; also preventing premature discharge by the closing of the piece when loaded, as shown and described.

4. The combination of the lug L and tail V of barrel, provided with the mortise Z, and shoulders *t*, fitting into corresponding recesses *o* in the recoil-shield, whereby the barrel is held against lateral and longitudinal strains, as shown and set forth.

5. The combination of a latch or hook, A, hammer, lug L, and tail V of barrel, provided with the mortise Z, whereby the piece is locked, as shown and described.

6. The sight and cylinder-stay M, constructed of one piece, and operating as shown and described.

7. The ejector-spring stop, as shown and described.

In testimony that I claim the foregoing improvements in breech-loading fire-arms, as above described, I have hereunto set my hand and seal this 8th day of May, 1871.

GEORGE W. SCHOFIELD. [L. s.]

Witnesses:

EDM. F. BROWN,
JOHN C. COX.