J. RIDER.

Breech-Loading Fire-Arm.

No. 45,123. Patented Nov. 15. 1864

Fig. 2.

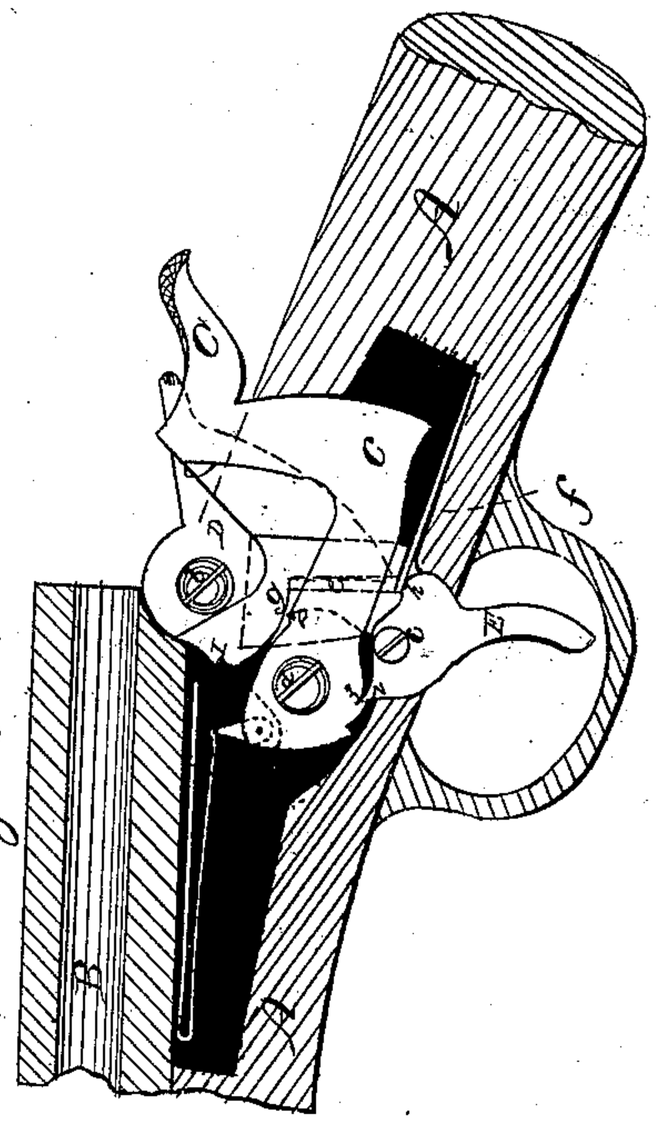


Fig. 1.

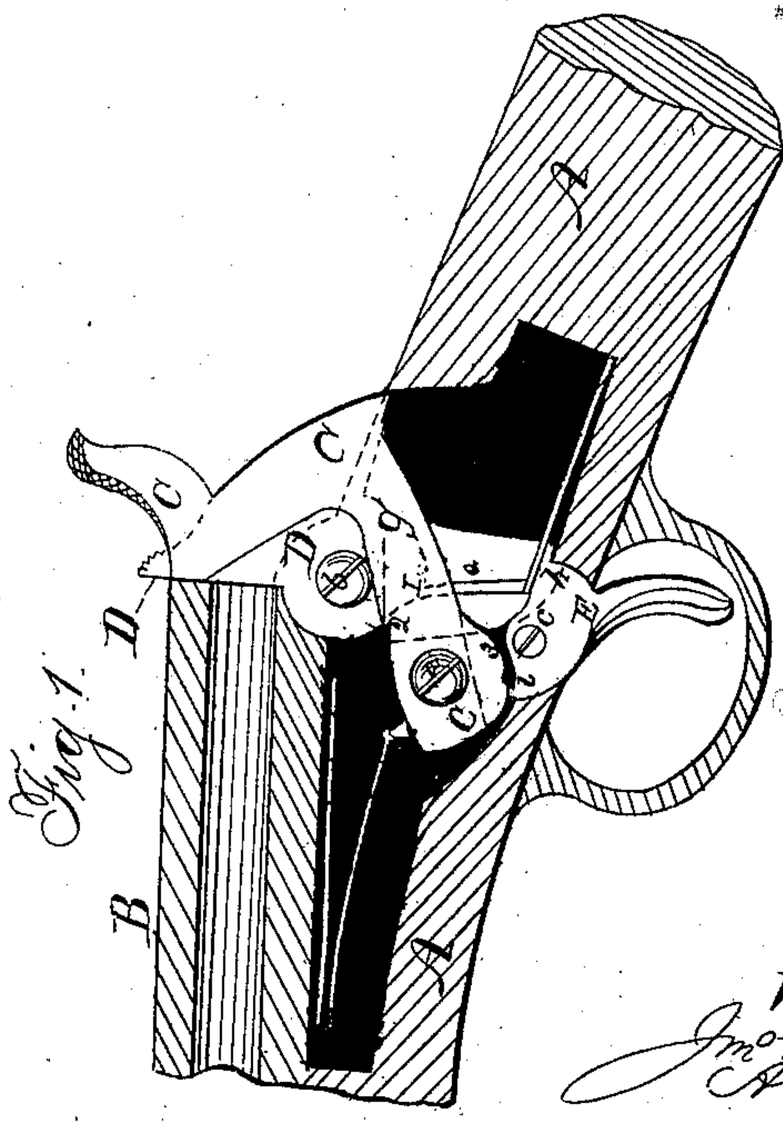
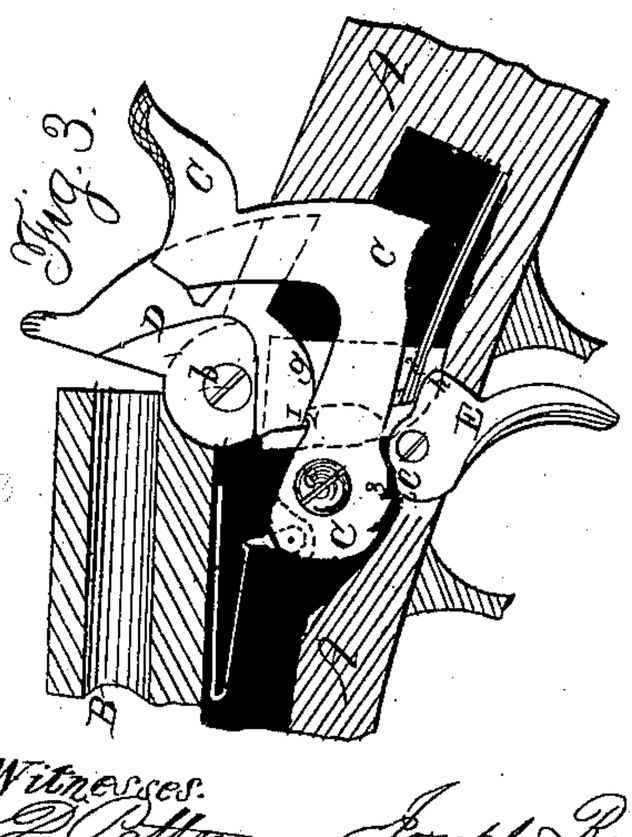


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOSEPH RIDER, OF NEWARK, OHIO, ASSIGNOR TO HIMSELF AND E. REMINGTON & SONS, OF ILION, NEW YORK.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **45,123**, dated November 15, 1864.

To all whom it may concern:

Be it known that I, JOSEPH RIDER, of Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a longitudinal section through the gun, and showing the breech-plate up against the bore of the gun and the hammer against or interlocked with the breech-plate. Fig. 2 represents a similar section showing the hammer at "full-cock" and the breech-plate as swung back to open the rear of the barrel to charge the gun, and both breech-piece and hammer as not only interlocked, but the trigger as being actually locked, so that it cannot be moved or release its sear or dog from its notch in the hammer. Fig. 3 represents a similar section showing the hammer at the full-cock and the breech-plate as nearly up against the bore of the gun, and showing an auxiliary or safely-locking mechanism which, although the trigger may be moved, will not allow the hammer to fly until the breech-plate is moved up still closer to or practically against the bore of the gun, and which latter mechanism would come into action should the trigger-locking device break or fail to act from any cause.

Similar letters of reference, where they occur in the separate figures, denote like parts of the arm in all the drawings.

In the patent granted to myself and E. Remington & Sons, No. 40,887, and dated 8th December, 1863, afterward reissued 3d May, 1864, and numbered 1,663, the interlocking of the breech-piece and the hammer, both when up as well as when down, is fully shown; but my present invention has for its object a more positive locking mechanism, which will not allow the hammer to fly up, so long as the bore of the gun is open, as in the act of charging the piece with a cartridge.

My invention consists in locking the hammer while the arm is being loaded, or, in other words, in locking the hammer while the bore is exposed or the breech-plate thrown back for the insertion of the cartridge.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A may represent the stock of the fire-arm, and B the barrel, which is bored through and through, so as to be charged at the rear.

C is the hammer, pivoted at *a*.

D is the breech-piece, hinged or pivoted at *b*, and E is the trigger, pivoted at *c*. The hammer and breech-piece are so made and arranged as to interlock with each other, as in my former invention hereinbefore referred to; and the trigger and hammer have the ordinary trigger and hammer connections with regard to each other; but I have arranged another mechanism which will lock the hammer and prevent it from flying up until the breech-plate is swung fully up against the bore of the gun, or until the trigger is pulled, as in other arms, thus preventing any premature flying of the hammer or discharging of the cartridge until the arm is to be fired. An arm, *e*, on the end of a spring-piece, *f*, stands nearly vertically under the pivot of the breech-piece D, so that when said breech-piece is swung back the portion *g* thereof will take against the top of said arm and press it and its connected portion *f* down with it uutil the part *f* rests against the heel *h* of the trigger and completely locks the trigger, so that it cannot be moved, and consequently its dog *i* cannot be drawn out of the full-cock notch, (which is clearly shown in Fig. 2,) nor can any premature flying up of the hammer occur so long as the breech-piece is drawn back, or until it is up, or nearly so, to the bore of the barrel, or, in other words, there is a positive locking of the hammer against any movement accidental or otherwise; but this locking is an automatic movement contingent upon the moving of the breech-piece, and is not a separate mechanism requiring a separate manipulation, which would render it almost impracticable as an army gun. This locking of the hammer in case the arm *e* should break or be removed can be effected in another way—viz., by means of the recess 1 in the breech-piece and the

projection 2 on the hammer—for, suppose the arm *e* to be removed or to be broken off, as shown in Fig. 3, then the trigger could be moved and its dog release the hammer; but the hammer cannot fly up until the breech-piece is swung clear up, and this cannot be done without very great force, for when the breech-plate comes up as far as shown in Fig. 3, where it still holds the hammer interlocked, its recess 1 takes upon the projection 2 on the hammer, and there stops. Now, to draw the hammer back, so as to release the breech-piece and allow it to swing clear up to the barrel, brings it within the influence of the trigger, where it is caught on the full-cock notch 3 and held. Thus under any and all circumstances there is no danger of a premature flying up of the hammer, and only when the breech-piece is up and the hammer on the full-cock can the hammer be let off, for so long as the bore of the gun is open or the breech-piece moved back from it, so long will there be a positive locking of the hammer against any accidental flying by pulling the trigger or otherwise. I have called it "locking the hammer." It may be called "locking the trigger," as the trigger controls and lets fly the hammer under varying circumstances, and when the trigger is locked and the hammer on the full-cock of course the hammer is locked too, as the trigger cannot be moved to allow it to fly.

Having thus fully described the nature, object, and purpose of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Locking the hammer while the arm is being loaded or the bore is exposed for the insertion of the cartridge, substantially as and for the purpose set forth.

2. An auxiliary locking mechanism consisting of the recess 1 in the breech-plate and the projection 2 on the hammer, as and for the purpose described.

JOSEPH RIDER.

Witnesses:
W. H. THOMAS,
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