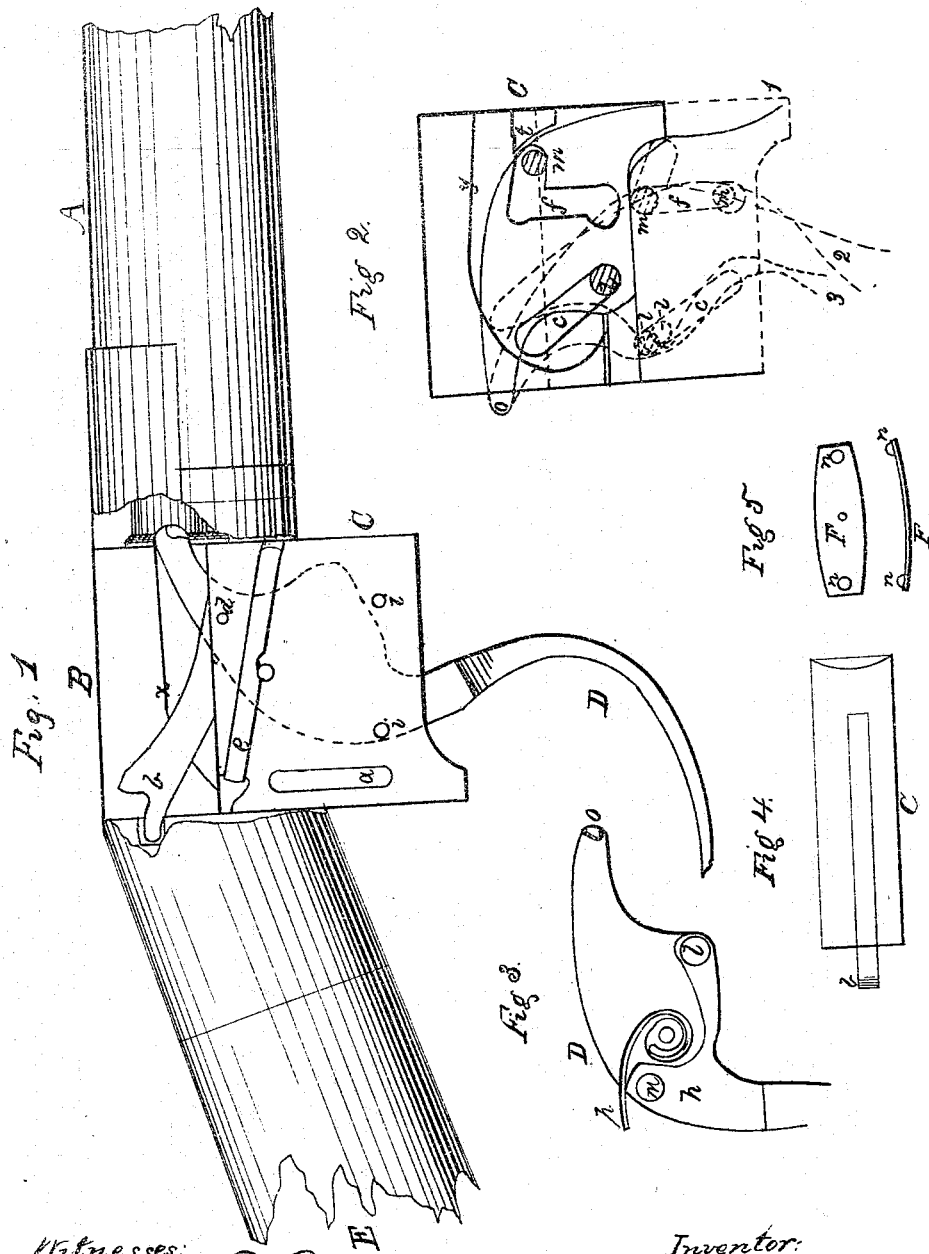


J. LEE.

Breech-Loading Fire-Arm.

Patented May 15, 1866

No. 54,744.



Witnesses:

P. T. Dodge
Thomas B. Day

Inventor:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 54,744, dated May 15, 1866.

To all whom it may concern:

Be it known that I, JAMES LEE, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side view of the breech portion of my improved gun, having a portion of the side broken away for the purpose of showing the internal arrangements. Fig. 2 is a side view of the breech-block detached; Fig. 3, a side view of the lever-guard and retractor; Fig. 4, a top-plan view of the breech-block detached; and Fig. 5 is a side view of a spring used to hold the breech-block in place.

Similar letters, wherever they occur, indicate corresponding parts.

The nature of my invention consists in a novel breech-block and lever arranged to operate in a peculiar manner; secondly, in a lever-guard of novel construction so arranged that a single movement of the same shall open the breech and eject the cartridge-shell; and, finally, in so constructing and arranging the lever-guard that it shall also act as a retractor for removing the cartridge-shell.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

In Fig. 1, A represents an ordinary gun-barrel secured to a metallic breech-frame, B, having a rectangular opening made through it vertically, of proper size to receive the breech-block C and permit the latter to be moved up and down therein, as hereinafter explained. The breech-frame B extends back in rear of the breech-block a sufficient distance to give the requisite strength and afford room for the location of the lock therein, and also afford a firm attachment to the stock E. The breech-block C consists of a solid block of iron, rectangular in its form, and of suitable size to fill the opening in the frame B.

A vertical slot, *a*, is made in the right side of the block C for the reception of the end of a screw or pin which protrudes inward from the right wall of frame B, thereby limiting the movement of the block C and preventing it from dropping out. A small metal bar, *b*, is lo-

cated in a corresponding recess or groove cut in the upper face of the block C, the front end of said piece *b* being pivoted to the block C at *d*, and its rear end having a tongue fitting loosely into a recess in the wall of the frame B immediately in the rear of block C, as shown in Fig. 1. When the block C is shoved up so as to close the rear end of the barrel this piece *b* fits down into the recess in the block; but when the block C is drawn down, as shown in Fig. 1, the rear end of *b* is held up, while its front end is carried down with the block, thereby forming an inclined way extending from the lower side of the bore up to the top of the frame B, up which the cartridge-shell slides when thrown out by the ejector.

It is obvious that a spring-bar may be substituted for the pivoted bar *b*; but I prefer the one here shown.

Two small circular recesses, *i i*, are made in the side of the block C, as shown in Fig. 1. A spring, F, Fig. 5, is located in a recess in the inner face of the right side of frame B, in such a position that when the block C is raised up into position for closing the breech the projecting points *n n* on said spring F will engage in the recesses or cavities *i i*, and thus hold the block C in place. The block C, on its reverse side, is provided with two slots or grooves, *c* and *f*, located as shown in Fig. 2.

D represents the lever-guard and ejector, consisting of a single piece, its form being shown in Figs. 1 and 3. This lever D is located within the opening in the frame B lying alongside of the breech-block C, as shown in Fig. 3, a portion of the block C below the line *y* of Fig. 2 being cut away to afford room for the thicker portion *h* of the lever, while its forward and thinner portion works in a recess in the inner face of the left wall of the frame B, as shown in Fig. 1. The lever D, instead of being pivoted upon a fixed fulcrum in the usual manner, is provided on its face adjoining the breech-block with two projecting studs or pins, *m* and *l*, so located as to fit into the slots or grooves *c* and *f* cut in the sides of the breech-block C when the two are placed together within the opening of frame B. The extreme front end of the lever D is provided with a small projection or hook, *o*, and as the front end of the lever fits into a small recess made for it in the left wall of the barrel, on its inner face, it follows that when a cartridge is inserted in the barrel the projection *o* will be

in front of the flange of said cartridge, ready to withdraw it when the lever is operated, as hereinafter described.

A spring, *p*, is attached to the lever *D*, as shown in Fig. 3, the rear end of which, resting on the projection *t* of block *C*, serves to throw the front end of the lever *D* forward into its proper position for loading the gun.

The operation is as follows: When the breech is closed the lever *D* occupies the position shown in red lines, (marked 1 in Fig. 2,) in which position the front end, *o*, of the lever forms its fulcrum, the studs *l* and *m* then occupying the positions indicated by red in the slots *e* and *f*. If, now, the rear end of the lever be thrown down to the position No. 2, (indicated by the blue lines,) the stud *m* will force the block *C* down to the position indicated by blue lines. The studs having assumed the position indicated in blue, when the stud *l* becomes the fulcrum, and as the motion of the lever is continued the stud *m* moves down in the slot *f*, throwing the front end of the lever, with its retractor *o*, backward, thereby ejecting the cartridge-shell. Thus by a single movement of the lever-guard the breech block is thrown down and the shell is ejected from the barrel.

It will be observed that the front of the

breech-block *C* is beveled at its upper portion, as shown in Fig. 4, which enables it to press or force the cartridge into the barrel in case the latter does not enter readily or easily, as is sometimes the case.

By this construction I am enabled to produce a gun having very few parts, all of which can be made solid and strong, with but few small pieces or springs to get out of order, and that can be manipulated with great rapidity and ease.

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

1. The breech-block *C*, provided with the grooves *e* and *f*, substantially as and for the purpose set forth.
2. Providing the lever *D* with the studs *m* and *l*, to operate in connection with the breech-block *C*, as shown and described.
3. The lever *D*, having its front end provided with the lip or hook *o*, and arranged to operate within the chamber of the gun, substantially as and for the purpose set forth.

JAMES LEE.

Witnesses:

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