

J. V. MEIGS.

Breech-Loading Fire-Arm.

No. 54,934

Patented May 22, 1866.

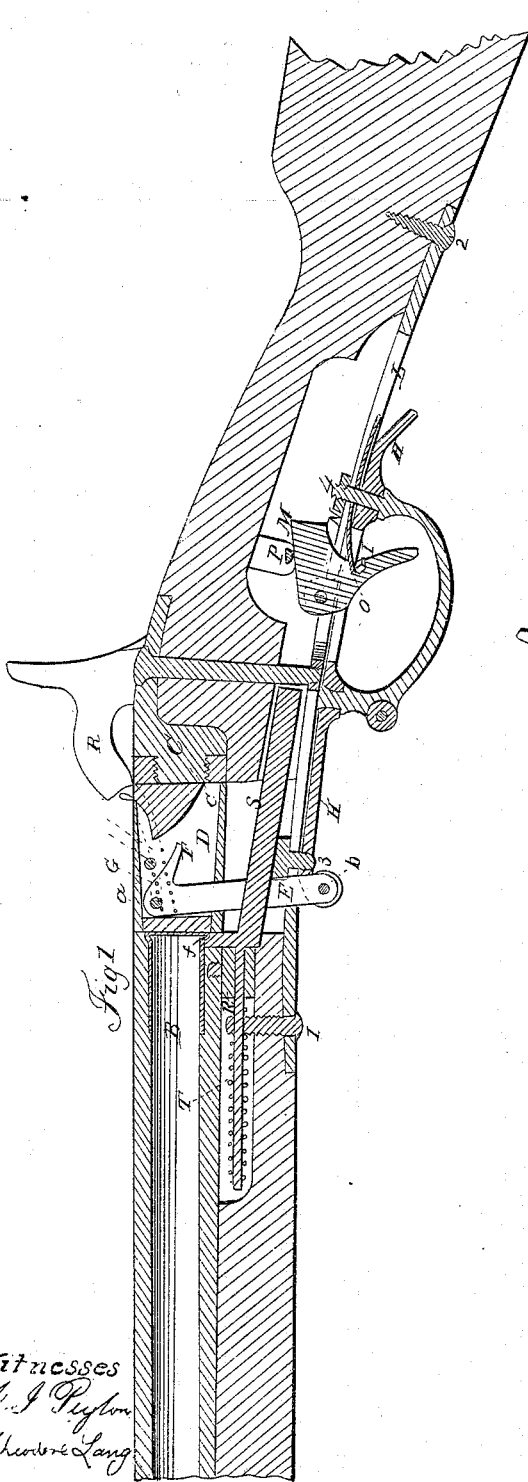


Fig. 1

Witnesses
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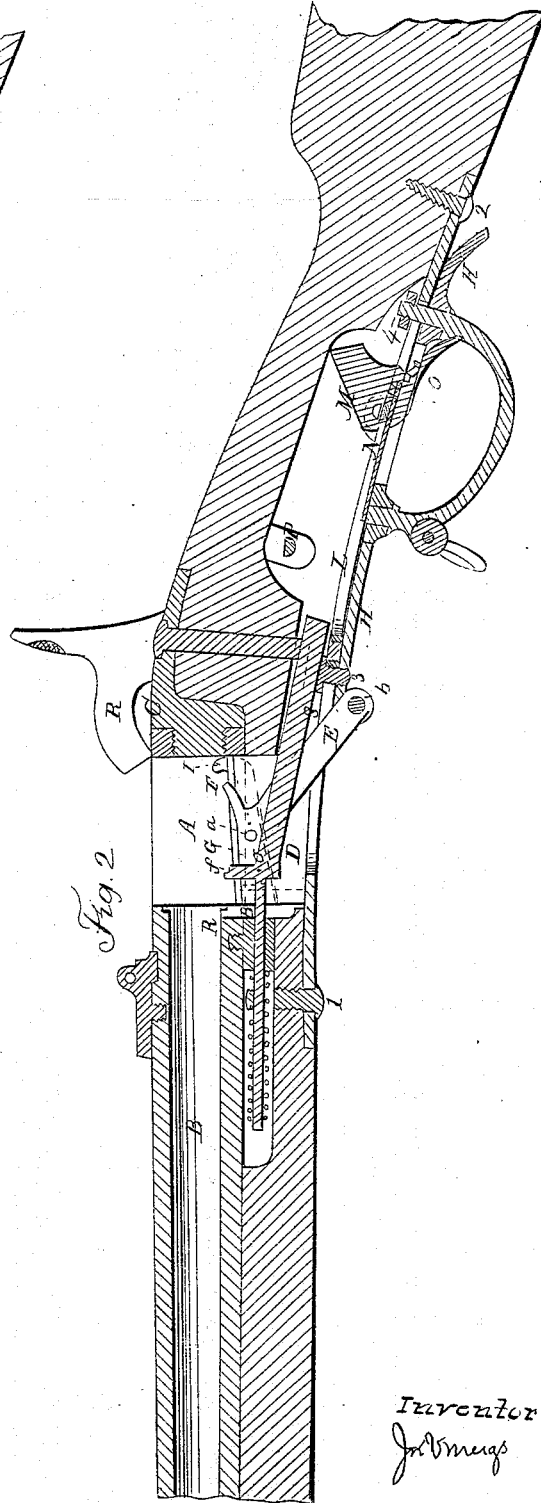


Fig. 2

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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. 54,934, dated May 22, 1866.

To all whom it may concern:

Be it known that I, J. V. MEIGS, of the city and county of Washington, in the District of Columbia, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a longitudinal vertical section through a musket to which my invention is applied; and Fig. 2 is a like section, showing the parts in a different position.

It is the object of my invention to render breech-loading small-arms perfectly effective by devices that may be economically applied to muzzle-loading fire-arms to change them to breech-loaders; and to this end my invention consists in, first, slotting the barrel close to the breech and inserting a sliding breech-block that shall be removed from the bore in a right line by a pull on the guard or trigger in the direction of the stock; second, so constructing the trigger that it shall lock the block before the bore, release the guard to remove the block, and release the hammer to explode the cap; third, removing the discharged cartridge-case from the barrel by a blow on the front of its flange.

To carry out the objects of my invention I cut a slot, A, in the barrel of the gun B, extending forward from the front of the breech-pin C the distance required to insert a cartridge, and at right angles to the bore, finishing the slot with its sides slightly converging. A sliding breech-block, D, is formed to move with a neat fit in the slot A, but with a slight taper, that its widest edge may not pass through the converging edges of the slot. The breech-block D is centrally slotted longitudinally far enough to permit the retraction of a link or rod, E, that carries a lip or tongue, F, projecting rearward on its upper end. The breech-block has, near its front top side, a curved slot, G, which passes through it to permit the movement back and forth of a pin, a, to which the upper end of the link E is fastened, the lower end of the link being secured by a screw or pin to the forward end of the guard H at b. The block D is also slotted for a short distance on the top, to permit the tongue F to pass above the plane of the breech-block without

obstructing the vibrations of the link E. The breech-block also carries a rod, I, (shown in dotted lines in the drawings,) the front end of which extends to the cartridge, and the rear end is fitted to receive the blow of the hammer K, which, in striking the rod I, explodes the fulminate in the cartridge-case. A guard-plate, L, is let into the under side of the small of the stock, and secured thereto by the screws 1 and 2, being curved to correspond with its bend. The guard H moves freely forward and back upon the under side of the plate L, to which it is secured by screws 3 and 4, both of which pass through and vibrate in slots in the guard-plate, an additional slot being placed in this plate to permit the traverse back and forth of the trigger M, which is secured to and reciprocates with the guard. A spring, N, (shown in red in the drawings,) attached to the guard-plate L at one end, has its opposite end resting in a depression in rear of the trigger upon a block, O, and when the breech-block D is in position to hold the cartridge in place, as in Fig. 1, this spring N holds the guard forward and prevents the displacement of the breech-block; and when the breech-block is in this position the trigger is immediately beneath and pressing on the dog P of the lock. A rod, Q, is held in a recess in the stock in front of the breech-block by a spiral spring, the rod passing through a guide-block, R, screwed into the barrel. This rod Q is secured to a sliding bar, S, the forward end of which is bent up and terminates in a rabbet, f, that corresponds with the recess in the rear of the barrel to receive the flange of the cartridge-case, the barrel also being recessed or notched to receive the bent portion of the bar to permit its rabbet to rest behind the flange of the cartridge. The bar S passes back in an inclined position until its rear end receives the head of screw 3, which moves in a slot in the bar for a short distance.

In the example shown in the drawings, my invention is applied to a breech-loader in which the cartridge is inserted in and the case withdrawn from the top of the slot in the barrel, and, of course, for this purpose the breech-block must be drawn down into a suitably-provided recess in the stock, until the upper surface of the breech-block is below the line of the bore; but when applied to an automatic magazine breech-loader, which I contemplate, the breech-

block may be raised above the bore by my mechanism to permit the introduction of the cartridge to the bore beneath the block, and this with but slight modifications, not affecting the principle of my invention.

The operation is as follows: When the cartridge is in place and the parts in the position shown in Fig. 1, the hammer is drawn to a full-cock and the gun is fired, like the common musket or fowling-piece, by simply pulling the trigger, when the hammer strikes the rod I, which explodes the cartridge. Now a continued pull upon the trigger compresses the spring N into a recess in the guard-plate, where it is held by the trigger-block O, and the guard is then free to slide back on its plate. Continuing to pull upon the trigger the link-rod is drawn down in the direction shown in Fig. 2, and pulls the breech-block with it until the block rests in its recess in the stock and the pin *a* has passed to the rear end of the slot G. Simultaneously with the retreating movement of the guard the head of the screw 3 strikes the tail or rear of the slot in the bar S with a blow that, in retracting the bar against the coiled spring, causes its rabbeted lip to catch the flange of the cartridge and force it out of the bore into the slot, whence it may be thrown by the tail F of the link-bar E, or removed by the finger. A new cartridge being now inserted, the guard is pressed or pushed forward, and the parts assume the position shown in Fig. 1, the front end of the spring N entering its notch in the rear of the trigger and holding the breech-block securely in position, the spiral spring retaining, by its contraction, the rabbeted lip of the bar S back to its proper

position in line with the recess in the barrel for the cartridge-flange to occupy.

It is obvious that my invention is as applicable to double as to single barrel small-arms; that but slight modifications would be required to withdraw the breech-block horizontally if desired, and that other modifications for operating the discharging-rabbit beneath the flange could be advantageously used by merely varying the form of the spring, without departing from the spirit of my invention. It is also manifest that my invention can be applied with marked economy to muzzle-loading fire-arms without impairing their efficiency in changing them to breech-loaders.

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

1. Reciprocating the breech-block vertically by reciprocating the guard or its equivalent horizontally.

2. The combination of the trigger with the dog and sliding guard to fire the gun and lock or release the breech-block, substantially in the manner described.

3. The combination of the reciprocating guard and vertically-sliding breech-block with the bar carrying a rabbet to correspond with the recess of the barrel, for the purpose of removing the cartridge-case, substantially as described.

In testimony whereof I have hereunto subscribed my name.

JOSIAH V. MEIGS.

Witnesses:

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J. I. PEYTON.