J BURKE.

Breech-loading Fire-arm.

No. 54,680. Patented May 15, 1866.

Fig. 1.

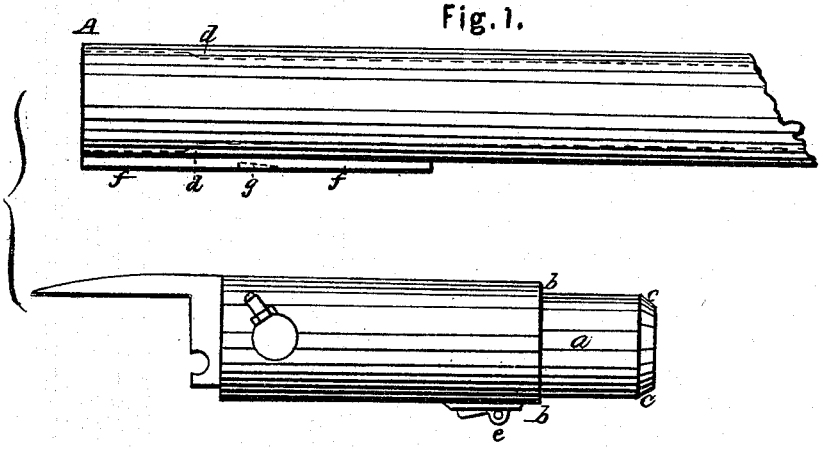
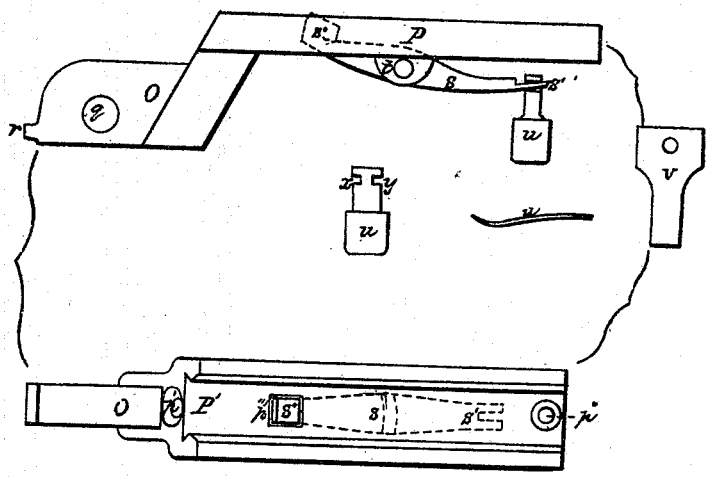


Fig. 2.



Witnesses:

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J. B. Turchin

Inventor:

John Burke

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Fig. 3.

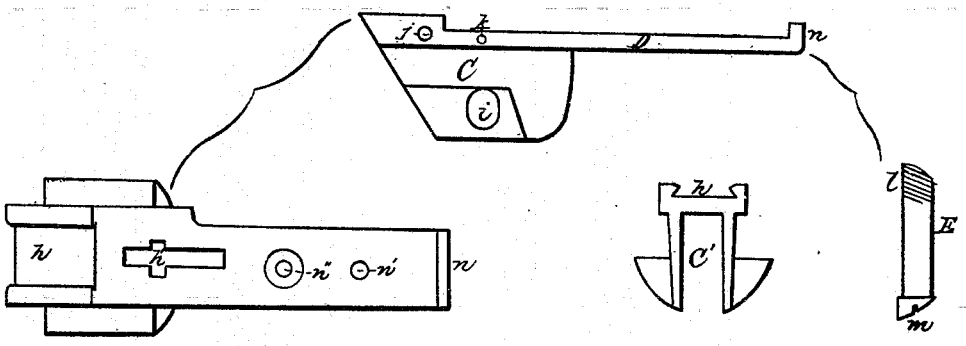


Fig. 5.

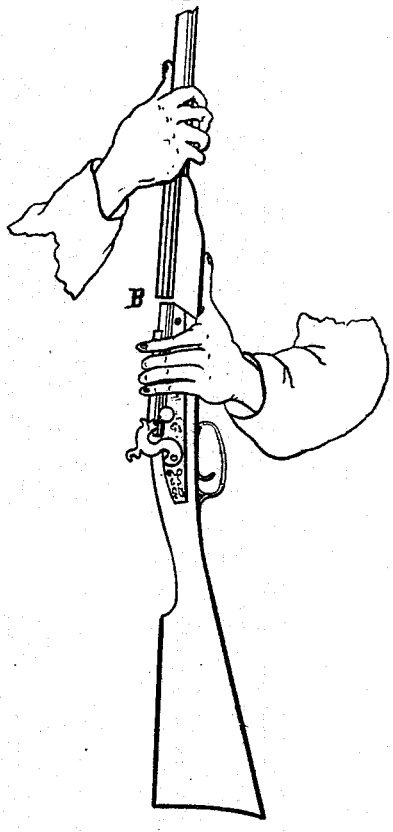
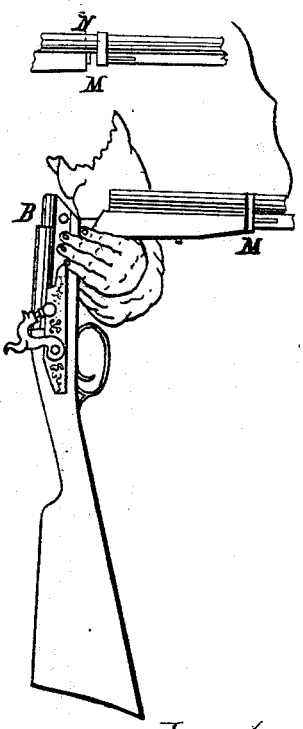


Fig. 6.



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3 Sheets—Sheet 3.

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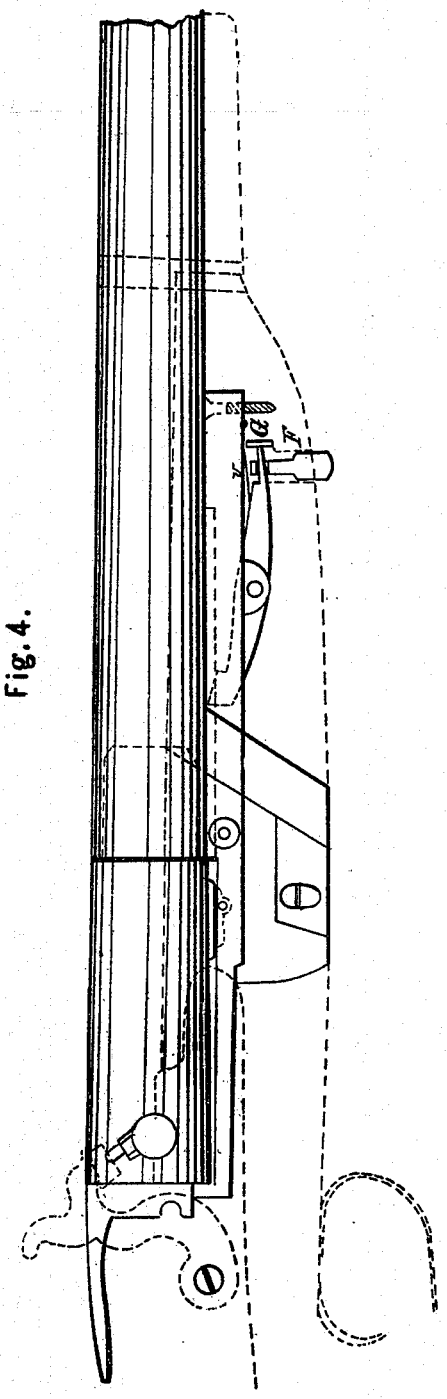
Fig. 4.



Witnesses:

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J. B. Turchin

Inventor:

John Burke

UNITED STATES PATENT OFFICE.

JOHN BURKE, OF COURTLAND, ILLINOIS.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **54,680**, dated May 15, 1866.

To all whom it may concern:

Be it known that I, JOHN BURKE, of Courtland, in the county of De Kalb and State of Illinois, 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 accompanying drawings, making a part of this specification, in which—

Figure 1 represents a longitudinal elevation of a breech and part of a gun-barrel. Fig. 2 represents an elevation and plan view of the front portion of my hinge, with views of some of the parts in detail. Fig. 3 represents an elevation, plan, and end view of the rear portion of the hinge, with the hinge-pin or screw. Fig. 4 represents, in elevation, a portion of the lock, stock, and barrel of a shot-gun with my improvement applied. Fig. 5 is a vertical elevation of a shot-gun with the joint in the barrel open previous to being turned; and Fig. 6 is a view, in elevation, of a musket with the barrel turned out of the way that the gun may be loaded.

It is the object of my invention to render breech-loading fire-arms simple, that any one can use them without being experts, and efficient, that they may be loaded and fired rapidly, and this by devices of easy adaptation to sporting-guns or small-arms for military service, that they may be changed with economy from muzzle-loading to breech-loading arms without materially altering their appearance; and to this end my invention consists in securing the barrel forward of the charge-chamber, leaving the breech rigidly attached to the stock, while the front part of the barrel slides back and forth in the stock, and fits the charge-chamber with a telescopic joint that is gas-tight when in position to be fired, and detached when the arm is to be loaded, and hinging the stock near the mouth of the charge-chamber so that both it and the barrel may be turned upon the hinge out of the way, to permit the arm to be loaded at the breech, and when loaded turn back and the barrel slid into position and held rigidly to be fired.

In the construction of my invention I cut the barrel in two on the line A, Fig. 1, leaving a portion attached to the breech long enough to receive the maximum charge of powder and ball, or powder and shot, for the caliber of the arm, and this I call the "charge-chamber," which, with the breech-pin, is rigidly attached to the stock, as in Figs. 4, 5, and 6. I now turn down or reduce the top of the charge-chamber *a* to about one-half the thickness of the barrel for about one inch in length, with a slight taper from the square shoulder *b b* to the beveled edge *c c*, which may be at an angle of about forty degrees. The rear of the barrel now has its bore reamed out to match precisely over and upon the reduced end of the charge-chamber, as shown in dotted lines from A to *d*, Fig. 1, so that when the edge of the barrel A rests against the collar *b* of the charge-chamber the beveled portion *c* and *d* will fit with a gas-tight joint. The outer diameters of the chamber and barrel, at the joint *b*, being reduced to a uniform plane, will leave the whole barrel unchanged in appearace from what it was before being cut.

Beneath the charge-chamber and near the joint *b*, I attach a staple or eye-piece, *e*, so that a screw through the tail of the breech-pin and a bolt or pin through the piece *e* will hold the charge-chamber firmly in the stock.

To the center of the bottom of the barrel I attach securely, by screws or solder, a flat bar, *f*, with dovetailed edges and an angular depression, *g*, near its center, and its rear end on a line with the rear end of the barrel.

The barrel may now be stocked in the usual way, and the stock severed by a diagonal transverse cut from the front end of the charge-chamber, as shown at B in Figs. 5 and 6, or the stock may be made in two pieces, to be united by a hinge, the one portion constituting the breech of the arm and supporting the charge-chamber, lock, guard, and trigger, and the other to support the sliding barrel. The hinge which unites the charge-chamber and barrel is formed of two parts, that shown in Fig. 2 being attached to the front portion of the stock, and that secured to the breech in Fig. 3, and these are connected at the joint by a screw or pin, E.

The breech portion of the hinge consists of a metal box, C′, being a cross-section, having a bar, D, secured on its top, and having its end turned up at *n* to receive the rear end of the charge-chamber and aid the breech to resist the recoil. The lower side of the box is furnished with curved ears to match the curve of the outside of the stock, and the bar D is

dovetailed at its front end, as at *h*, to receive the bar *f*, fastened to the under side of the barrel, while slots *h'*, Fig. 3, are cut in it to receive and stop the projection *r* on the front portion of the hinge and hold the parts at a right angle to each other.

The front part of the hinge consists of a grooved plate, P, carrying a projection, O, dropped from its back end to match in the box C' and form the moving portion of the hinge, attached to the forward portion of the stock.

The groove in the plate P is dovetailed to receive the bar *f* on the barrel and permit it a longitudinal movement to an extent limited by the trigger or catch-lever *s*, which has a block, *s''*, on its rear end, and is pivoted at *t* and bifurcated at *s'*, that its ends may pass into notches *x y* of a thumb-bolt, *u*, that projects from beneath the stock. The trigger *s* is depressed in front by a spring, *v*. (Shown in plan and side view in Fig. 2.) The parts of the hinge are secured properly to the stock by screws conveniently placed.

The operation of loading my arm is effected with ease by holding the gun with one hand and pressing the thumb-bolt, which will withdraw the catch-lever from the angular depression in the bar on the under side of the barrel. This will permit the barrel to be slid from the charge-chamber, when the turn of the hinge removes the barrel away from the charge-chamber, and leaves the arm free to be loaded at the open breech either by a prepared cartridge or loose ammunition and proper wadding, when the hinge is closed and the barrel slid down on the charge-chamber, and the detent-catch falls in place to permit the gun to be fired. The dovetailed bar of the barrel having passed into the dovetailed groove of the rear portion of the hinge, the barrel will be securely held in line with the breech, and the detent-catch will effectually resist the longitudinal pressure of the explosion of the charge; and, moreover, the gas-tight joint between the barrel and charge-chamber will prevent any residuum from the ammunition getting between these parts, while the facility with which the joint can be opened gives ample opportunity for cleaning all parts of the joint and keeping the arm in good order.

It is obvious that my invention can be effectually applied to muzzle-loading small-arms with the single effect only of shortening the barrel of the changed arm the length of the joint on the charge-chamber.

Where a long stock is used, as in the United States regulation small-arms, the stock can be secured beneath one of the bands, as shown at *m* in Fig. 6, so that when the hinge is locked this end of the stock will be held secure beneath the band.

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

1. The combination of a telescopic joint in the barrel with a hinged joint in the stock, when the barrel slides in the forward portion of the stock, substantially as and for the purpose set forth.

2. The combination of the sliding barrel with the dovetailed bar and front portion of the hinge, substantially as and for the purpose set forth.

3. The combination of the barrel with the front and rear portions of the hinge, substantially as and for the purposes set forth.

4. The combination of the projection *r* on the front part of the hinge with the slot *h'* in the rear part of the hinge to hold the barrel at an angle when loading, substantially as described.

5. The combination of the catch-lever *s*, thumb-bolt *n*, and bar *f*, substantially as and for the purpose set forth.

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Witnesses:

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