

J. E. McBETH.
 Breech-Loading Fire-Arm.

Patented Aug. 11, 1868.

No. 80,985.

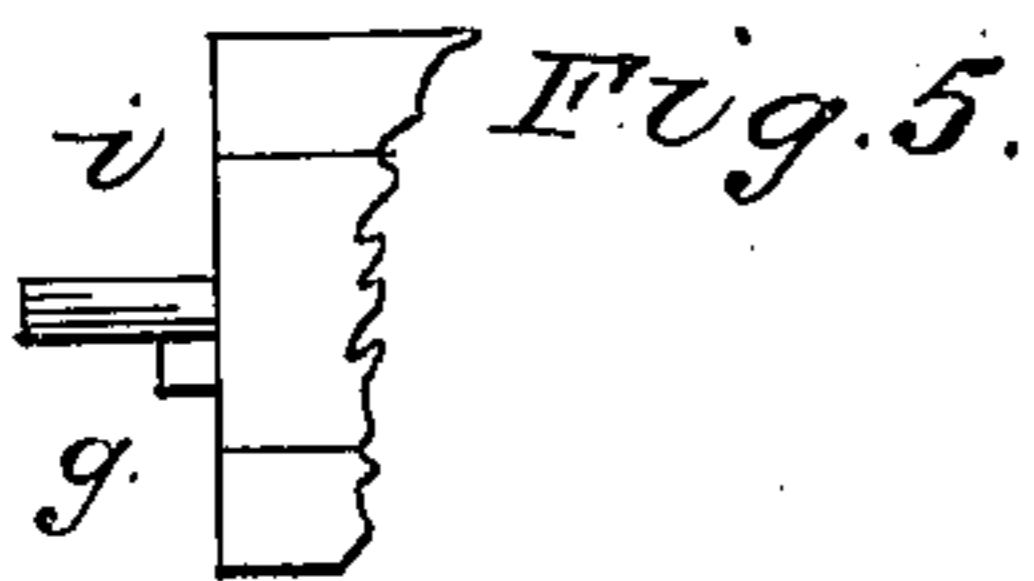
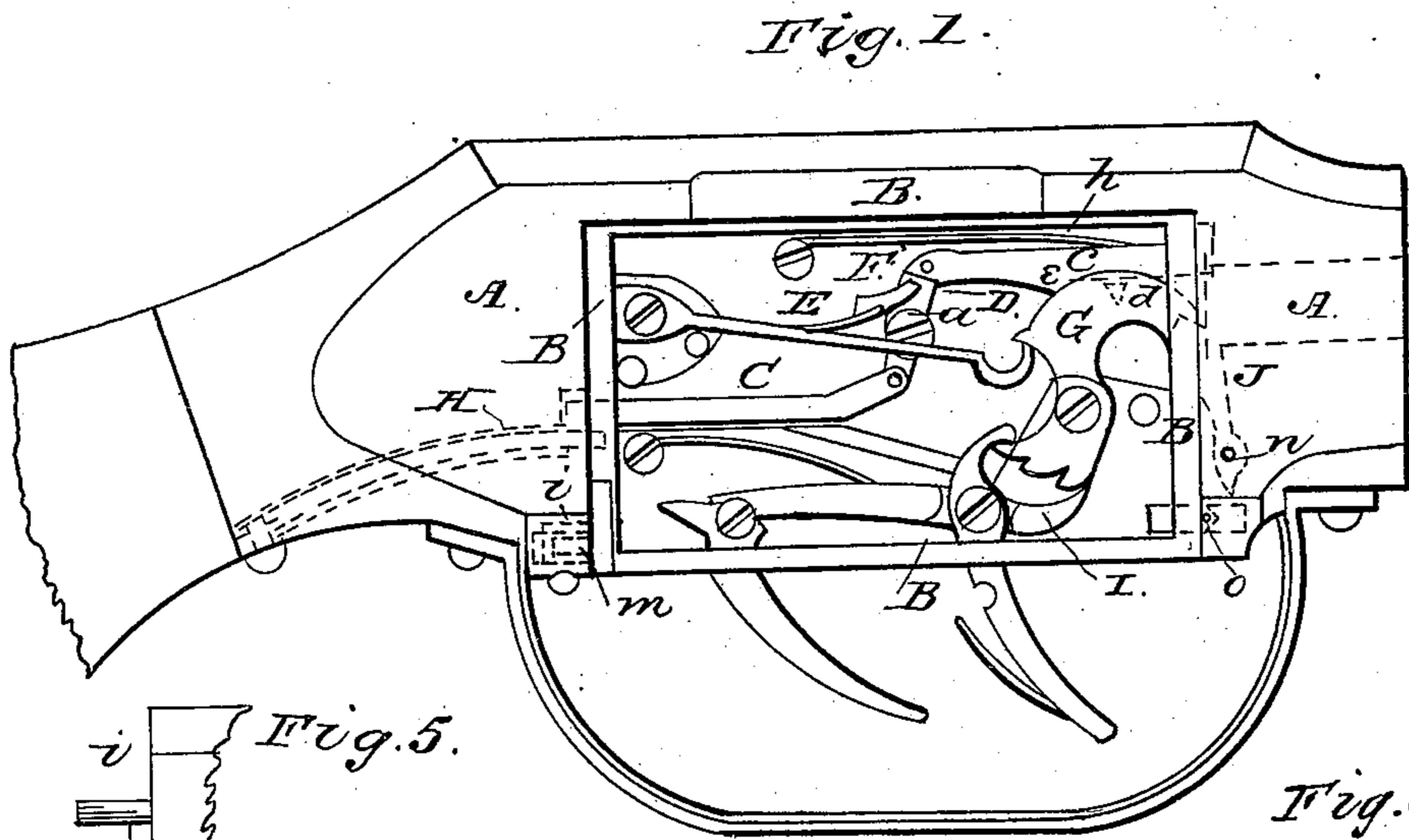


Fig. 2.

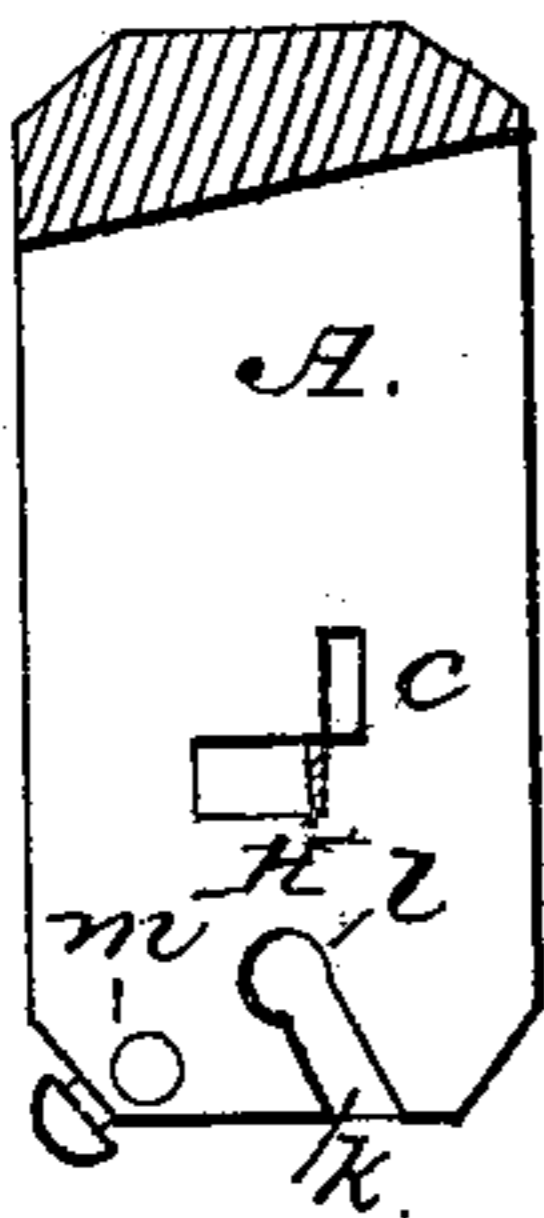


Fig. 3.

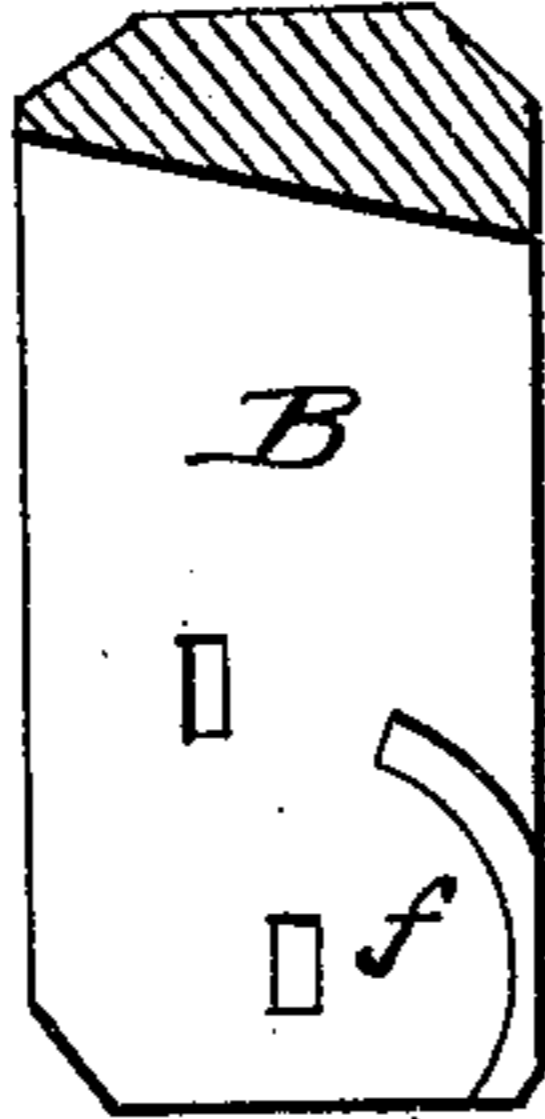
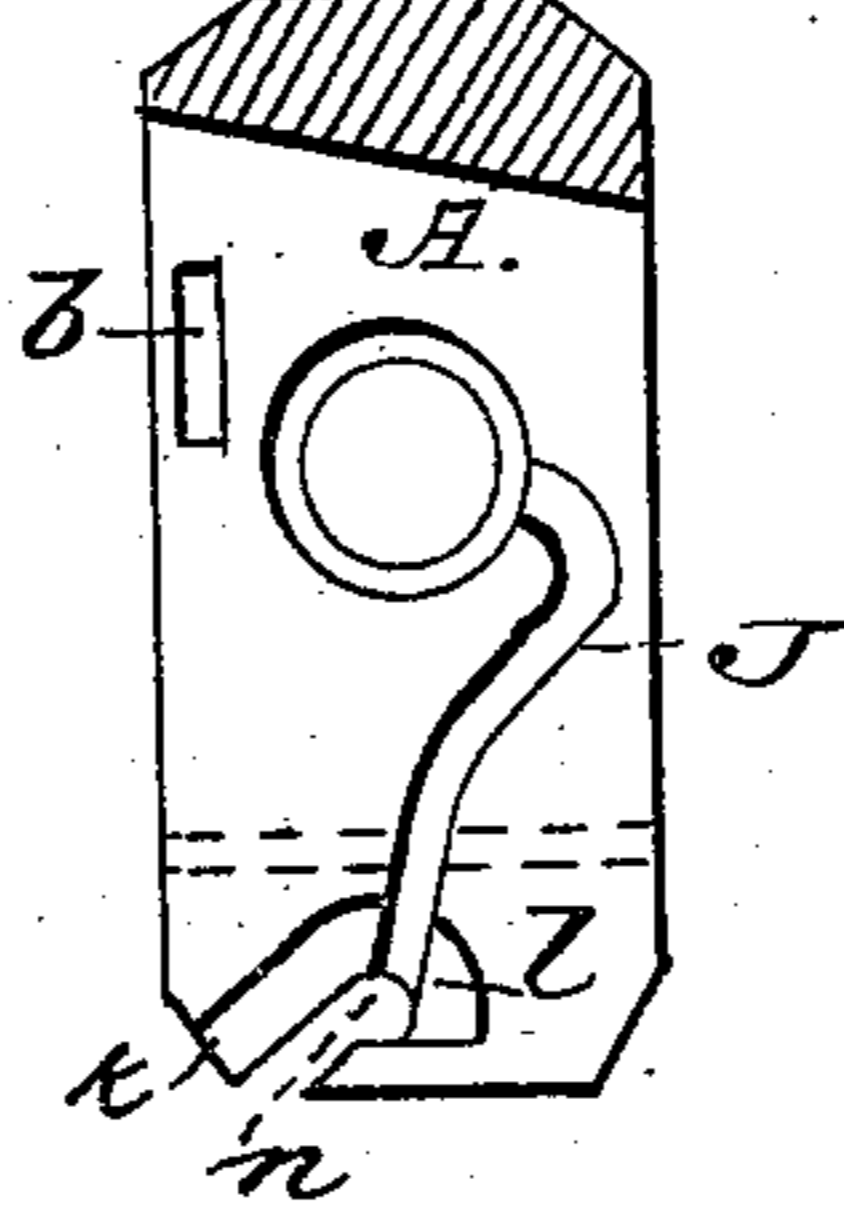


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES E. MCBETH, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 80,985, dated August 11, 1868.

To all whom it may concern:

Be it known that I, JAMES E. MCBETH, of the city of New Orleans, in the parish of Orleans, and in the State of Louisiana, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the construction and general arrangement of a breech-loading fire-arm in such a manner that the breech is opened by half-cocking the piece; that, when the lock-box is swung down on its pivots a sufficient distance, it can be entirely removed for the purposes of cleaning or rendering the piece perfectly worthless; but a spring-bolt will at the same time prevent it from disengaging itself from the piece unless so desired; also, that the shell of the old cartridge will be ejected by the opening of the lock-box.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a side view of the breech, showing the lock with the lock-plate removed. Fig. 2 is a view of the inside of the rear end of the breech. Fig. 3 is a view of the rear end of the lock-box, and Fig. 4 is a view of the inside of the front end of the breech. Fig. 5 is a plan view of the front end of the lock-box, showing the pivot with its cam or lug, which operates the cartridge-ejector; and Fig. 6 is a side view of the same.

A represents the breech of my fire-arm, with the lock box or case B inserted. This box is held in its place by the bolts C C, which are connected by the center-piece D, swinging on the center pivot *a*. This arrangement keeps one bolt thrown forward and the other backward, and the ends of both the bolts outside of the case or box B, by means of the spring E pressing upward on the projecting end F of the center-piece D, and which keeps the ends of both the bolts into slots *b* and *c*, cut into the front and back part of the breech, so that the lock box or case is held in position

when the said box is shut to in its proper place. It also keeps the ends out when the box is swung out.

The ends of said bolts C C are beveled, so that, when the box is being pressed into its proper position to close the breech, the ends striking against the solid ends of the breech will recede, after the fashion of a door lock or bolt, and fall into the proper slots *b* and *c*, as before mentioned.

There is a projection, *d*, on the upper part of the farther side of the hammer G, which fits to the projection *e* on the lower side of the upper bolt when the hammer is down on the cartridge.

In the half-cocking of the piece, the projection *d* presses against the projection *e*, and draws the upper bolt, and also the under one, by means of the center-piece D, back. The spring H, which is fastened in the rear part of the breech, and works into a circular recess, *f*, on the rear end of the lock-box, throws the box out immediately, and before the piece is fully at a half-cock. The projection on the hammer then passes the projection on the upper bolt; after the fashion of a key turning in a lock, the sear-spring I falls into the half-cock, and the spring E, pressing on the projection F, throws the bolts out into their natural position.

The upper bolt is made to move up and down, and the slots in the front part of the lock-box and breech are elongated to admit of such movement, and this bolt is constantly kept pressed down by means of the spring *h*, so that, when the hammer is down, the projection *e* on said bolt will fit against the projection on the hammer, and the bolt may again be drawn back when the lock is being half-cocked. The said bolt is so made to move up, so that, when the hammer is sprung, the projection on the hammer will pass the projection on the upper bolt, and when the lock is being full-cocked, and also when the hammer is sprung, the bolts are not withdrawn in the least, so that, in the firing of the piece, the lock-box is not moved from its proper position.

The projection *d* on the hammer is so rounded or beveled that, when the hammer is sprung, the rounded or beveled part, striking against

the projection *e* on the upper bolt, causes it to rise against the downward pressure of the spring *h*.

The front and rear sides of the breech are provided with elongated slots *k*, open at the bottom, as shown in Figs. 2 and 4, and leading up to the holes *l l*, in which the pivots *i i* of the lock-box work, these pivots being shaped so as to fit the elongated slots *k*.

The small spring-bolt *m*, at the lower right side of the back part of the breech, prevents the lock-box from swinging out more than the distance of a quarter of a circle, thereby preventing the box from disengaging itself from the breech. If this spring-bolt is withdrawn, the box will swing around nearly half a circle, and the pivots *i i* come on a line with the elongated slots *k k*, so that the box can be easily removed. It is returned to its place in the same manner.

By pulling out the lock-box a little farther than the spring *H* will throw it, and farther than is required to insert a cartridge, the shell of the old cartridge will be ejected. This I accomplish by having a shell-ejector, *J*, hung on a pivot just above the hole *l* in the front part of the breech, with a part, *n*, projecting downward from such hanging, in order to receive the passing pressure of a cam, *o*, attached to one side of the front pivot *i* on the lock-box against it when the breech is open, and pulled out, as aforesaid, to intentionally eject the cartridge. The said cam *o*, pressing on the lower part *n* of the cartridge-ejector *J* at the center of its hanging, throws the upper part forward as far as may be required, and draws out the cartridge-shell, the ejector *J* being so formed that it passes to the side of the box. This is for the purpose of drawing the cartridge-shell out the distance required before

the point which is on the rim of the cartridge passes off from said rim. This could not be done were the points of the cartridge-ejector to take hold on the rim at the bottom of the shell.

After ejecting the old shell by the left hand pulling out the lock-box, as aforesaid, and it is desired to reload the piece, the same movement back on the lock-box removes the cam *o* from the shell-ejector, and a cartridge can be put in with ease, the rim catching the ejector and carrying it forward into the recess prepared for it.

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

1. The bolts *C C*, center-piece *D*, and spring *E*, in combination with the projections *d* and *e* and spring *H*, for the purpose of opening the breech by the half-cocking of the piece, substantially as and for the purposes herein set forth and described.

2. The elongated slots *k k* and holes *l l*, in combination with the pivots *i i* and spring-bolt *m*, for the purpose of removing the lock-box from the piece and preventing it from falling out at random, substantially as herein set forth.

3. The cartridge-ejector *J*, constructed as described, in combination with the cam *o* on the front pivot *i*, for the purpose of ejecting the shell of the old cartridge, substantially as herein set forth and described.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of May, 1868.

JAMES E. McBETH.

Witnesses:

J. G. TAYLOR,
S. E. LYND.