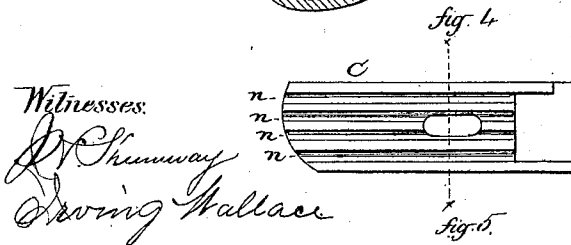
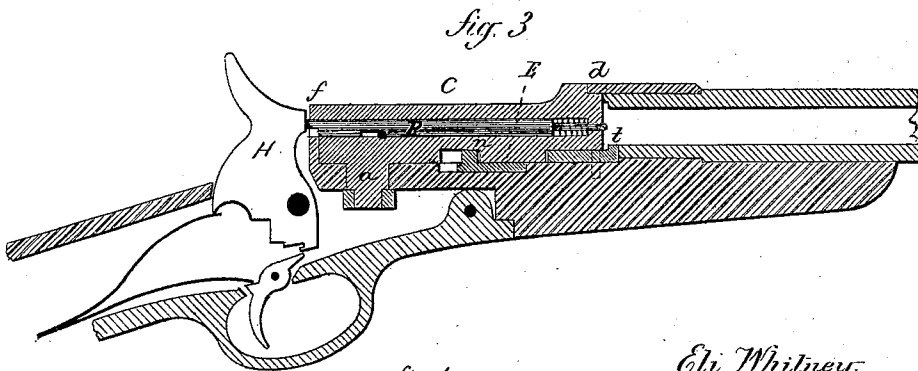
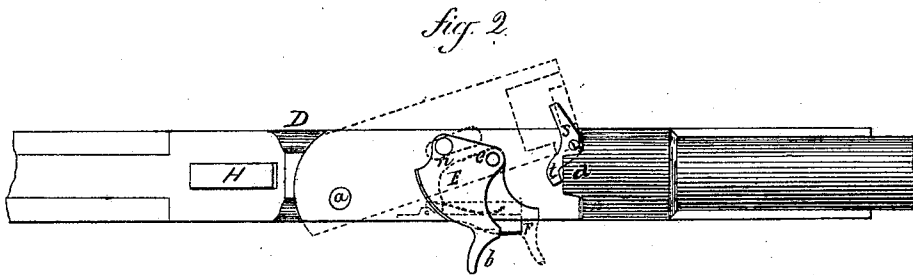
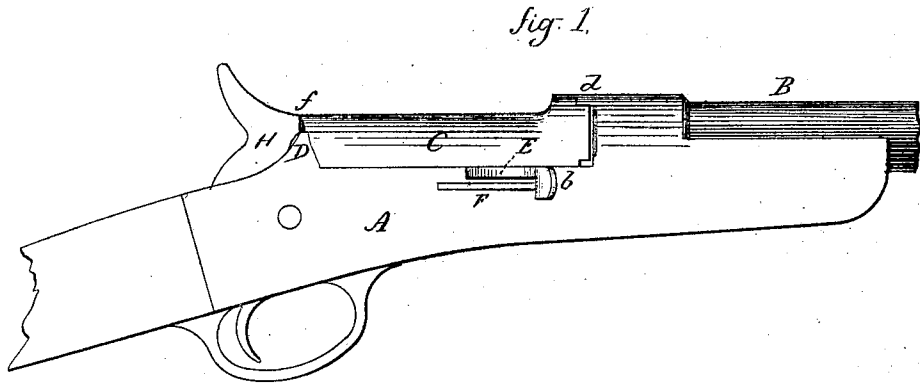


E. WHITNEY.
Breech-Loading Fire-Arms.

No. 147,457.

Patented Feb. 10, 1874.



Witnesses:
W. C. Kimball
Erving Wallace

Eli Whitney.
 Inventor

By Atty:
John O. East

UNITED STATES PATENT OFFICE.

ELI WHITNEY, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **147,457**, dated February 10, 1874; application filed July 16, 1873.

To all whom it may concern:

Be it known that I, ELI WHITNEY, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Breech-Loading Fire-Arms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a top view, the breech-piece removed, but shown in an open position in broken lines; and in Fig. 3, a longitudinal central section.

This invention relates to an improvement in that class of breech-loading fire-arms which have a breech-piece arranged to swing laterally from the barrel to open and close the breech, such as was patented to me November 8, 1864; and the invention consists, first, in the arrangement of the pivot upon which the breech-piece turns at one side of the central line, so that the movement of the breech is more directly away from the barrel than when the pivot is in a central line, as in my aforesaid patent; second, in combining with a lateral-swinging breech a lever pivoted to the frame beneath the breech-piece, and in substantially the same plane and in connection with the said breech-piece, so that a rear movement of the said lever will turn the said breech-piece from the barrel and a forward movement close the said breech-piece; third, in combining with the said breech-piece and lever a latch which holds the said lever in its forward or closed position.

A is the frame; B, the barrel; C, the breech-piece. The said breech-piece is fitted into the frame between an abutment, D, and the rear end of the barrel, and so as to swing laterally away from the barrel, as denoted in broken lines, Fig. 2. The pivot *a*, upon which the breech-piece turns, is arranged upon the side of the central line opposite that to which the breech-piece swings, as seen in Fig. 2; hence, the movement of the breech-piece in turning is more away from (rearward) the barrel than when the pivot is on a central line, as in my patent before referred to, and enables the more perfect closing of the breech and with less fric-

tion than in the former case. At the forward end a projection, *d*, from the frame extends back over the breech-piece when closed, as seen in Figs. 1 and 3. This prevents any strain upon the pivot or breech-piece tending to raise the forward end, and as a further protection, the rear end of the breech-piece extends over the abutment D, as seen at *f*.

To conveniently operate the breech-block, I arrange, in a recess in the frame, a lever, E, pivoted to the frame, at *e*, beneath the breech-piece, and in substantially the same plane. From this lever a finger-piece, *b*, extends out to one side, as seen in Fig. 2, by means of which it may be thrown back and forth. From this lever a stud, *n*, extends up into a slot in the breech-piece, as seen in Fig. 3, and in broken lines, Fig. 2; therefore, when the breech-piece is closed, by taking hold of the thumb-piece *b* and drawing it back, as seen in Fig. 2, the breech-piece will be turned laterally to one side, as denoted in broken lines, Fig. 2, and when the lever is thrown forward it will bring the breech-piece back into position, closing the barrel.

In order to lock the breech-piece when in a closed position, I arrange a latch, F, in the side of the frame, as seen in Figs. 1 and 2, which, when the lever is forward, as seen in Fig. 1, will spring out and engage the said lever to hold it in a closed position, and this latch being arranged in the rear of the finger-piece *b*, is easily operated by the thumb, the forefinger upon the forward side of the finger-piece, the thumb naturally bears upon the latch, and may, by the thumb, be depressed to allow the lever to be drawn back.

Centrally through the breech-piece a firing-pin, P, is arranged, as seen in Fig. 3, to be struck by the hammer H in substantially the manner of striking the firing-pin in other arms.

A retractor is arranged in the rear of the barrel and beneath the breech-piece, formed from two arms, *s t*, pivoted to the frame, the arm *s* actuated by the breech-piece, and the arm *t* thrown back as the breech-piece is opened, the forward end of the retractor extending up, as in Fig. 3, to engage the flange of the cartridge to draw it back.

As there is some liability to clog or for the lodgment of foreign substances between the

breech-piece and the frame, I construct the breech-piece upon the under side with numerous grooves, *n*, as seen in Figs. 4 and 5. This leaves but a small portion of the breech-piece to bear upon the surface of the frame and the edges of the grooves as the breech-piece passes over the surface of the frame and the lever. They tend to scrape and remove any substance which may tend to foul or interfere with the free working of the breech-piece.

I claim as my invention—

1. The breech-block C, arranged to open and close by a horizontal lateral-swinging movement, when the pivot, upon which the said breech-piece turns, is arranged upon one side of a central line, and that opposite to the direction in which the breech-piece swings to open the barrel, substantially as set forth.

2. In combination with the breech-piece C, pivoted to the frame and having a horizontal lateral movement, the lever E, pivoted to the frame and swinging in substantially the same plane as the breech-piece, and connected to the said breech-piece and provided with the finger-piece *b* for the purpose of operating the said lever, all substantially as set forth.

3. In combination with the breech-piece C, having a horizontal lateral movement, and the lever E, for operating the said breech-piece, the latch F, arranged to lock the said lever when in a closed position, substantially as set forth.

ELI WHITNEY.

Witnesses:

JOHN H. SHUMWAY,
JOHN E. EARLE.