A. C. VREDENBURGH.

Breech-Loading Fire-Arm.

No. 203,799. Patented May 14, 1878.

Fig. 1.

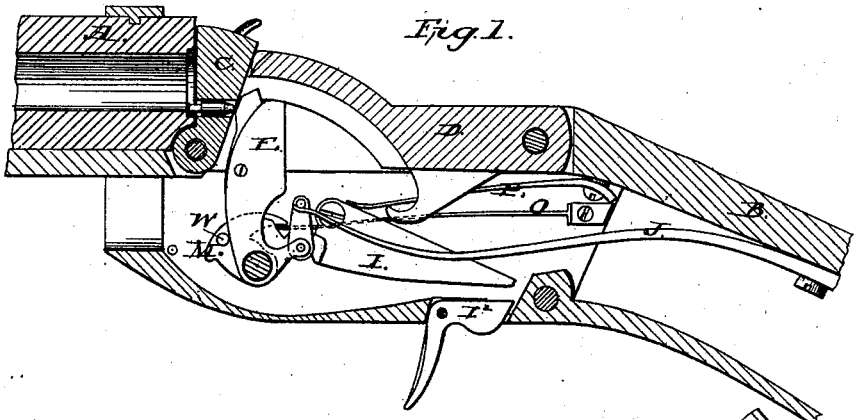


Fig. 2.

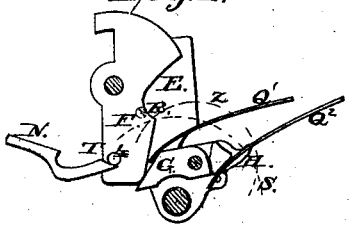


Fig. 3.

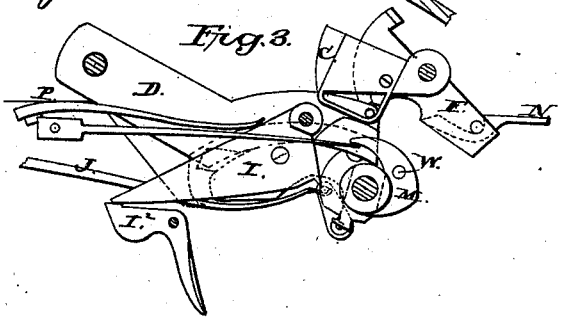


Fig. 4.

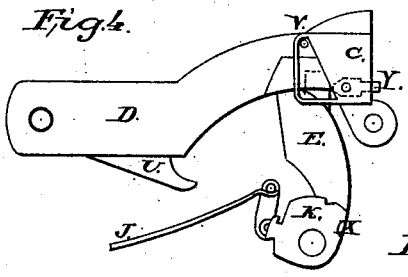


Fig. 5.

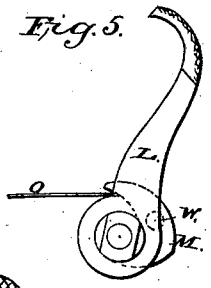
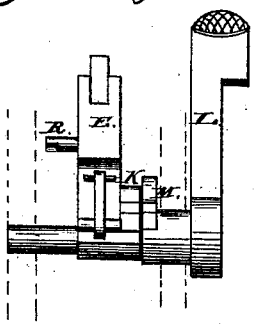


Fig. 6.



Attest:

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UNITED STATES PATENT OFFICE.

ALBERT C. VREDENBURGH, OF KINGSTON, NEW YORK.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **203,799**, dated May 14, 1878; application filed June 29, 1877.

To all whom it may concern:

Be it known that I, ALBERT C. VREDENBURGH, of the city of Kingston, in the county of Ulster, in the State of New York, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying plate of drawings, and to the letters of reference marked thereon.

The feature which distinguishes my invention from all others consists in so constructing the mechanism of the lock that the act of cocking the gun opens the breech and causes the empty shell to be discharged or extracted from the barrel after firing it. A new shell is then placed in the barrel, and the trigger is pulled, which act closes the breech and then fires the gun.

After reloading the hammer can be let down to the half-cock, which also closes the breech. Now, when the gun is brought to the full-cock the extractor is inoperative, and will not extract the shell. It will be seen that very few motions are required to load and fire this gun.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawings, Figure 1 is a transverse or longitudinal view, showing the positions of the various working parts of the lock. Fig. 2 is a sectional view, showing the extracting parts of the lock. Fig. 3 is a sectional view, which shows the parts in their relative positions, as when the gun is at full-cock, with the extractor down. Fig. 4 shows the breech-block, breech-block brace, and hammer in their relative positions to each other. Fig. 5 is a view of the cocking lever and spring which carries it back after cocking. Fig. 6 is a view, showing the cocking-lever and its relative position with the hammer.

Similar letters of reference indicate like parts.

In the drawings, A represents a rifle-barrel; B, the breech-piece for holding the barrel, which can be attached in any suitable manner. It also contains the lock-works. C is the breech-block, which closes the breech end of the barrel. This block has at one side a separate piece or projection, in which there is a triangular slot. A pin, V, on the breech-block brace works in this slot, to turn back the breech-block when the brace D is drawn down. D is the breech-block brace, which closes up against and holds the breech-block firm against the barrel. E is the hammer of the lock. This also holds up the brace in its position. C, D, and E combined securely close and firmly hold and lock the breech until the hammer is drawn down, which releases all. F is the piece which extracts the shell after it has been fired. N is a spring, which discharges the shell from the barrel. I is a lever, which holds the hammer when it is cocked. K, Fig. 4, shows the cocking-catches on the hammer into which the lever I catches. I^2 is the trigger which acts against the lever I. P is a spring, which presses the lever I into the catches on K.

J is the mainspring, which is screwed fast to the breech-piece B at one end. The other end is connected to the hammer with a link in the manner as shown in Fig. 4 at K. The hammer is drawn down with the lever L, Fig. 5. This lever is placed upon the piece M, and acts upon the same axis with the hammer, as shown in Fig. 6. Into the piece M, and projecting toward the hammer at K, is placed a pin, which pin catches against K at X as the lever L is drawn back. The pin is shown in Fig. 5 at W in dotted lines. This pin hauls the hammer down when the lever L is drawn back. When the lever L is released, the spring O, which rests upon the hook, as seen in Figs. 3 and 5, causes the lever to fly back to the starting-point, leaving the hammer cocked until discharged by a pull upon the trigger.

The extractor F is placed upon the same axis with the breech-piece C, and close beside it. A hook upon it catches the head of the shell to haul it out. Upon one side of the hammer, as seen in Fig. 2, and at R, Fig. 6, is a stud. This stud catches against one end of a jointed lever, G H, Fig. 2. One end of this lever, at G, is placed against the extractor F. The pointed end H moves around, as shown by the dotted line at Z. The stud R moves as shown by the dotted line S. The springs Q^1 Q^2 keep the lever H at the point marked Z when the stud R is not in contact with it.

When the hammer is drawn down the stud R comes in contact with the lever H, and carries it along freely with it until it reaches the position as shown in Fig. 2, when the joint in the levers G and H closes and the two act as one lever. Now, as the hammer is drawn down it moves the point G, which presses against the end of extractor F, and starts it along with it until the pin (seen at 4, Fig. 2,) slides off the end of the spring N and is caught by the incline at T, when the spring N acts with a sudden force and throws the extractor back, as seen in Fig. 3. Just before the hammer reaches the full-cock the stud R reaches the point where the dotted lines Z and S cross each other, at which point the lever H is released, and the spring Q^2 carries it back to the point of repose at Z. When the hammer is carried home the stud R again catches the lever H and carries it along with it to the point where the dotted lines again cross, where the lever is released, and spring Q^1 again brings it to the point of rest at Z.

As the hammer is brought down it hauls down the breech-block brace with it by coming in contact with the hook U, Fig. 4. This also acts to draw back the breech-block. The pin V, working against the edges of the triangular opening on the breech-block, draws it back, as fully shown in Figs. 3 and 4.

The gun is fired by the hammer striking the firing-pin Y.

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

1. The breech-block C, having the slotted projection at one side, the breech-block brace D, having the pin V engaging said slot, and the hammer E, the whole constructed and arranged substantially as shown and specified.

2. The stud R, the jointed levers G and H, and extractor N, when arranged and combined in the manner shown, and for the purpose set forth.

3. The cocking-lever L and cocking-piece M and pin W, operating to open the breech and cock the piece, and the spring O engaging said lever, substantially as specified.

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Witnesses:
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