

H. UPDEGRAFF.

Improvement in Breech-Loading Fire-Arms.

No. 130,165.

Fig. 1.

Patented Aug. 6, 1872.

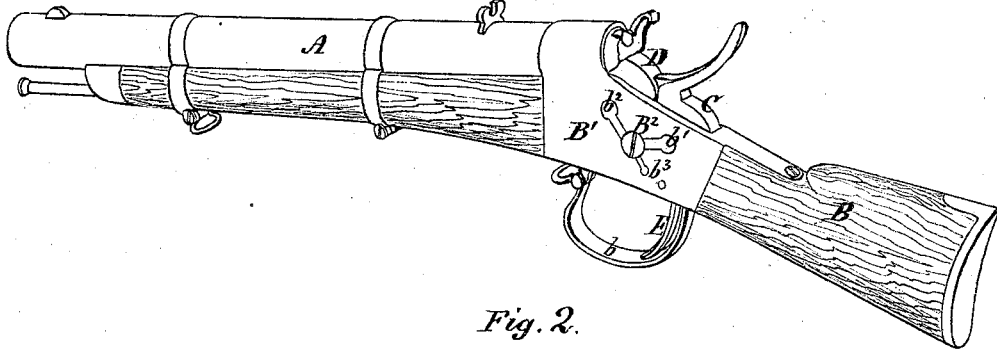


Fig. 2.

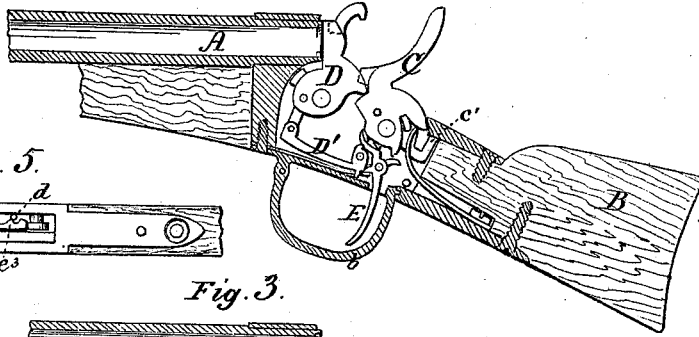


Fig. 5.

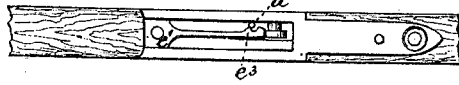


Fig. 3.

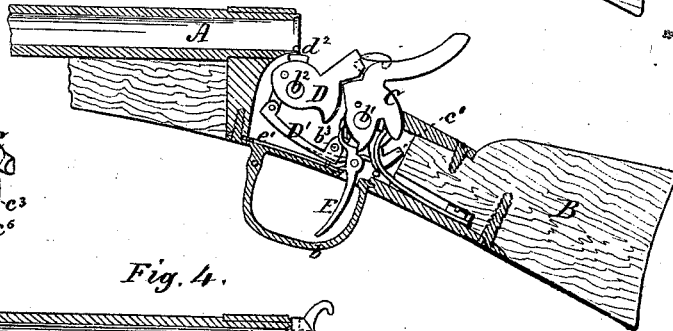


Fig. 7.

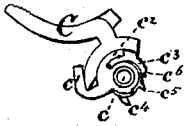


Fig. 6.

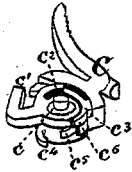


Fig. 4.

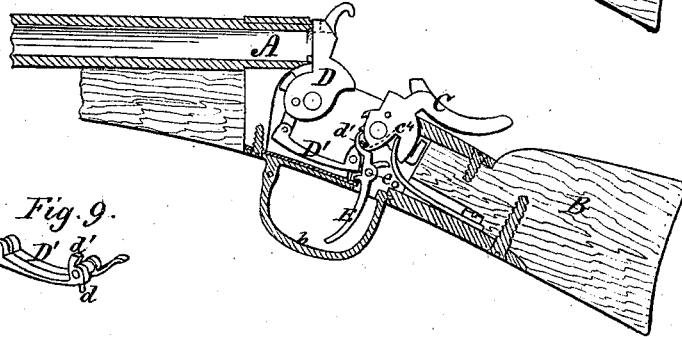


Fig. 8.



Fig. 9.



Witnesses.
Wm. Anderson
A. H. Doubleday

Inventor.
Horace Updegraff
by Stanton & King
attys

UNITED STATES PATENT OFFICE.

HORACE UPDEGRAFF, OF SMITHFIELD, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO WM. G. BULLOCK, OF FORT LARAMIE, WYOMING TERRITORY.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 130,165, dated August 6, 1872.

Specification describing certain Improvements in Breech-Loading Fire-Arms, invented by HORACE UPDEGRAFF, of Smithfield, in the county of Jefferson and State of Ohio.

The following is a description of my newly-invented fire-arm, which is so full, clear, and exact as will enable any one to make and use the same, reference being had to the drawing hereto annexed.

Figure 1 is a perspective view. Fig. 2 is a sectional view with the parts in position after firing. Fig. 3 represents the parts at half-cock. Fig. 4 shows them at full cock. Fig. 5 is a bottom view with the trigger-guard removed; and Figs. 6, 7, 8, and 9 are detached views.

In the drawing, A is the barrel. B is the stock. B¹ is the chamber in which the lock is inclosed; and b is the trigger-guard—these parts being of any usual or approved construction. C is the hammer mounted on pivot b¹, and actuated by an ordinary hammer-spring. One face of this hammer is provided with an annular chamber or recess, having a central hub or boss, c, Figs. 6 and 7, concentric with pivot b¹. c¹ is a jaw or spur, having a ring at one end which fits over hub c. The free end of the jaw is formed into a bent arm, c¹, extending around in such manner that it can overlap and pass outside of hammer, as in Fig. 7. This jaw is further provided with a shorter circular arm, c², arranged concentric with but a short distance from the ring which fits over a hub, c. c³ is a click or pawl made in an arc of a circle of a little greater diameter than hub c, and secured in close proximity to said hub by means of an inwardly-projecting pivot, which enters a socket cut for its reception in the hammer. The outer end of click c³ extends around and a little past the half-cock notch on the hammer, and is beveled as said notch is. c⁴ is a short spur projecting from the under side of the hammer. D is the breech-block mounted on pivot b², and actuated by a breech-block spring or lever, D', which is similar in its construction and operation to the one shown in an existing patent of mine, except that this one has a pin, d, projecting downward, and a hooked lug, d¹, rising from rear end of one leg of the spring, where it is pivoted, for a purpose which will

soon be explained. E is the trigger. It is pivoted at e, and is held in contact with the hammer by trigger-spring e¹ acting upon the under side of the spur e². This trigger-spring has a point, e³, (see Fig. 5,) which presses against the pin d on spring D', thereby serving to keep the breech-block in position against the end of the barrel when the hammer is at full cock, as will be explained.

The operation of my devices is as follows: If the hammer be drawn back to half-cock from the position shown in Figs. 1 and 2, the heel-end of jaw C' will be forced down against the short end of lever D', vibrating it upon pivot b³, and forcing back the breech-block, the rib d² of which will eject the cartridge. When the hammer is at half-cock, as in Fig. 3, the trigger rests not only in the half-cock notch, but also under the outer end of click c³. If, now, I draw the hammer back still further, the full-cock spur c⁴ strikes the upper end of the trigger as it (the trigger) escapes from the half-cock notch on the hammer, and forces it outward or forward, thus tripping the click c³, depressing the inner end of the click, and allowing the arm c² to pass behind the click, the jaw C' being forced around on the hub c by the spring breech-lever D', as shown in Fig. 7. The breech-block is thus left free, and may be placed against the end of the barrel by the operator, and the hammer left at half-cock, or the hammer may be carried back to full cock, in which case the spur c⁴ will engage with the upright lug d¹, thus thrusting down the front end of lever D' and returning the breech-block to its place against the end of the barrel. As the pin d is substantially on a line radial to pivot b², it is apparent that the pin will vibrate past the point e³ (see Fig. 5) on the trigger-spring; hence the spring will retain the breech-block in position after the hammer is moved forward and the spur c⁴ is withdrawn from contact with jaw d¹.

When the piece is fired, the jaw C' is carried around with the hammer until the end of arm c¹ strikes the upper wall of chamber B¹, as in Fig. 2; then the hammer goes forward, and the arm c² is drawn out from behind click c³ into the position shown in Fig. 6.

In order to readily understand the relation and position of these parts at discharge, half-

cock, and full cock, it should be kept in mind that the devices are reversed in Figs. 6 and 7—that is, they are seen from the opposite side of the lock as compared with Figs. 1, 2, 3, and 4.

As the pressure is removed from the trigger the trigger-spring e^1 presses the upper or inner end against the hub of the hammer and also against the outer end of the click at e^2 , thus throwing out the inner end of the click, as in Fig. 6. This prevents arm c^2 from passing behind the click, and compels the jaw to travel around to half-cock with the hammer, operating the breech-block and cartridge retractor d^2 , as above stated.

I have not shown the firing-pin in the breech-block, as any usual or preferred kind may be adopted.

As many of the devices employed in this fire-arm are fully shown and described in my patent No. 119,098, a more detailed description of them will not be needed here.

Each of the pivots $b^1 b^2 b^3$ is provided with short shanks or arms projecting from one end, and fitting closely in recesses or gains cut for their reception in the wall of the lock-chamber. B^2 is a screw with a tapering head, employed to secure the pivots in place, the ends of the shanks or arms being beveled to corre-

spond with the taper of the screw-head, and of course extending under it. As the screw and shanks are all let into the side of the chamber so as to be even with its surface, there is no danger of accidental displacement, and it makes a smooth and desirable finish.

I claim as new—

1. In combination with the hammer, the jaw C , click c^3 , trigger E , and trigger-spring e^1 , for actuating the breech-block lever D' , substantially as set forth.

2. The combination of the lever D' provided with the spur d^1 , and the hammer C provided with the spur c^4 , for replacing the breech-block against the end of the barrel when the hammer is moved to full cock.

3. The combination of the trigger-spring e^1 with the lever D' having the downwardly-projecting pin d , substantially as and for the purpose set forth.

4. In combination with the pivots $b^1 b^2 b^3$ having their shanks fitting into recesses in the stock or lock-chamber, the confining-screw B^2 , substantially as set forth.

HORACE UPDEGRAFF.

Witnesses:

DAVID ADRIAN,
PLUMMER P. YOUNG.