

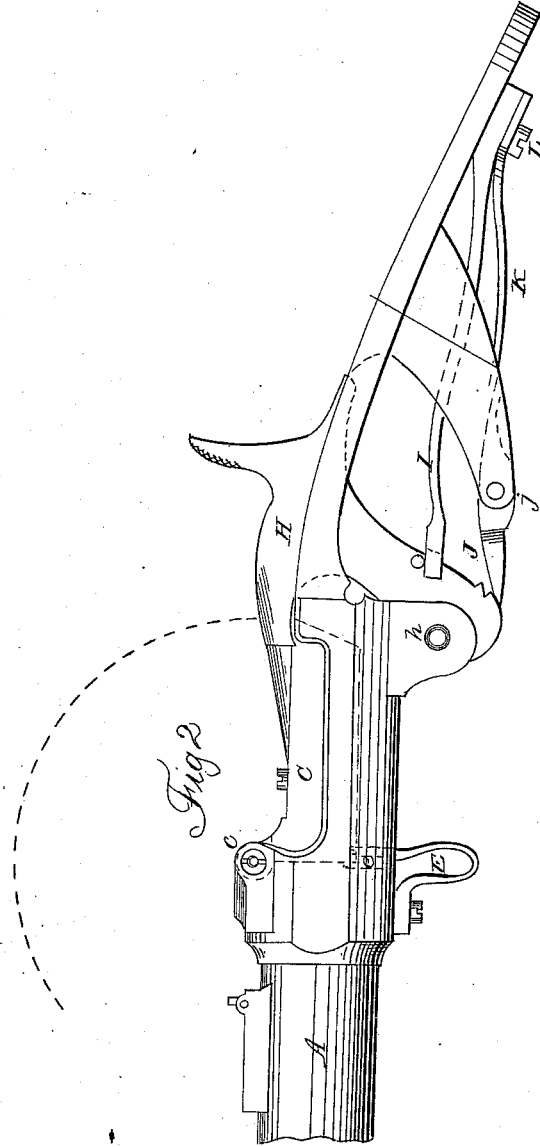
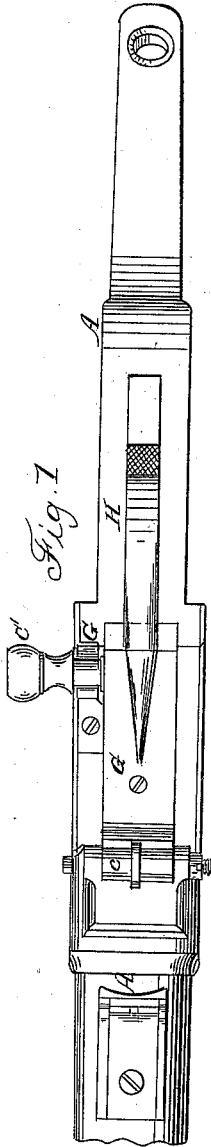
E. S. WRIGHT.

2 Sheets—Sheet 1.

Breech-Loading Fire-Arm.

No 45,126.

Patented Nov. 15, 1864.



Witnesses.

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EDWARD S. WRIGHT, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND
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IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **45,126**, dated November 15, 1864; antedated
November 13, 1864.

To all whom it may concern:

Be it known that I, EDWARD S. WRIGHT, of the city and county of New York, in the State of New York, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full and exact description of the same.

The accompanying drawings form a part of this specification.

Figure 1 is a plan view of the arm with the breech closed. Fig. 2 is a side view. Fig. 3 is a longitudinal section on the line S S in Fig. 1, but with the breech open. Fig. 4 is a cross-section on the line S S in Fig. 3.

The several figures exhibit the novel parts, with so much of the other parts as is required to show their relation thereto.

Similar letters of reference indicate like parts in all the figures.

My invention is intended to be used with metallic cartridges which carry their own fulminate. It involves novel means of removing the metal after a cartridge has been fired, novel means of holding the parts at the moment of the discharge and at all times, and a novel arrangement of the springs and of their fastenings.

To enable others skilled in the art to make and use my invention, I will proceed to describe it by the aid of the drawings and of the letters of reference marked thereon.

A A represent the barrel and the parts fixed thereto. These parts are firmly secured in a suitable stock, (not represented,) and adapted to be used as a musket or carbine or other arm, as may be required.

B is a metallic cartridge made in the usual form, with a flange at the rear. These cartridges may be procured in quantities at any dealers in such articles, and do not require description. They are to be introduced one by one as required.

C is a stout hinged part turning on a slight hinge, *e*, and adapted to sink into and fill the rear chamber in A A, as represented in dotted lines in Fig. 2. The rear face, A', of this chamber is beveled, as indicated, and the rear end of C is correspondingly formed, so that when C is depressed into its place it bears

fairly thereon. The forward end of C' is then bearing fairly against the whole rear end of the cartridge B, pressing it very tightly at the edges, so as to resist the force of the explosion. One small point on the rear face of the flange is acted on by the sliding pin D, which is mounted in the hinged piece C, and adapted to convey the force of the blow of the hammer to induce the explosion in a manner closely analogous to that in common arms intended for such cartridges.

E is a spring mounted in a slot, *e*, in the base of the chamber, and adapted to press against the front of the flange of the cartridge. The slot *e* extends just far enough forward to allow the cartridge to be moved forward to its place, carrying the spring E with it. When all the parts are ready to fire, the spring E completely fills and closes the forward part of the slot *e*.

G is a spring fixed at the side of A, and bent in such form as to hold C with considerable force by the aid of its knob C' when the same is pressed down; but the means of retaining such part depend entirely on the slight angle or mere friction of the surface, there being no shoulder to form a positive stop. It follows that the strength of the hand is sufficient to release it by simply pulling upward on the knob C' whenever it is desired to elevate C.

H is a stout hammer, formed as represented, and adapted to turn on the pivot *h* directly below the rear end of C. The front of H is adapted not only to strike the sliding pin D and move it forward slightly by the blow, but also to take hold on the upper surface of C at the rear end and prevent its being lifted either by the force of the explosion or by any other cause, so long as the hammer is in its forward position.

I is the mainspring, acting on the hammer H through the aid of the pin represented. J is the sear, turning on a fixed center at *j*, which is carried on arms extending downward from and forming a part of A. The sear-spring K acts on one end of the sear J. The other end of J performs its usual function by catching and releasing the hammer. It is operated by the trigger (not represented) in the usual manner.

This mechanism may be adapted for the employment of hair-triggers and all the refinements of approved arms in the same manner as other corresponding mechanism. The mainspring I and the sear-spring K are both rigidly and strongly secured to A by a single screw, L.

The hinge *c*, on which the part C turns, is peculiarly formed, as represented, and is adapted by means of a shoulder or hook, M, to draw out the metallic remains of a cartridge in the act of elevating the part C. The adjacent surface of A is so formed and adapted that the hook M fits quite closely.

My invention may be very easily and rapidly operated. Pressing upward on the knob C', the hammer H having been previously drawn back, the hinged piece C is released from the spring G and turns on its hinge *c*. As it turns upward toward the position shown in Fig. 3, its hook or shoulder M sweeps downward through the curved channel provided for it in the fixed part A, and presses against the front face of the flange on the cartridge. Meanwhile the spring E has exerted a constant though gentle pressure against said flange at its lower point, as will be obvious. The action of both E and M tends to extract the metallic remains of the cartridge by pushing it backward. When the hinged part C has been raised to the position shown in Fig. 3, the cartridge, or, rather, the portion thereof which remains after firing will be so far pushed back by these means as to allow its ready removal by the fingers. The operator next inserts a new cartridge B, and presses it forward with his thumb to the position shown in Fig. 3. He then presses down the hinged part C. This latter operation pushes the cartridge B forward, carrying with it the spring E, and elevates the hook M, so that it is of no effect. In this condition of the parts the front of C bears against the rear of the cartridge. The rear of C presses fair against the bevel at its rear end, but with a tendency to rise, when subjected to the recoil due to the discharge, unless supported by other means, and the knob C' is gently held by the friction-spring G, so as to merely retain it against the force of gravity and slight shaking and concussions in turning the arm over, and other ordinary movements to which it may be subjected. The cock or hammer H may, of course, be let down slowly, to confine it very strongly, if desired. When the piece is fired, which is effected by the release of H by the trigger, and its percussion communicated through D to the fulminate in the cartridge, the recoil to which the piece C is subjected is resisted by the bevel at its rear, and by the hammer H, which laps over it, as shown in Figs. 1 and 2, and forbids its rising. To repeat the operation the hammer H is now drawn back again and the part C elevated, and the old cartridge removed and another supplied, as before. The friction-spring G keeps up a friction sufficient to hold

the parts against slight strains even after the surfaces of itself and C' are considerably worn. This would not be the case except for its elasticity. The spring E aids the action of M by preventing the metal of B from being turned and caused to jam by the force applied to extract it. M and E act on the flange of the cartridge so as to mutually assist each other. When at any time the mainspring and sear-spring, or either of them, require to be removed for repair or other cause, it is necessary to operate only the screw L to release or secure both. This cheapens and simplifies the construction. The operations of removing the cartridge remains with the fingers and pressing in the next with the thumb, as above described, are not necessary if the conditions are favorable, because the remains will then be thrown out freely by the mechanism itself, and the new cartridge will, on lowering the muzzle of the arm, throw itself forward by gravity into the position shown in Fig. 3. These are very important advantages. If the grease on the exterior of the cartridge be very hard or very profuse, or if the cartridge for any reason wrong, it may be necessary to push it, and in such case every facility is afforded by my construction and arrangement for pushing it with all the force required; but usually the arm may be loaded and fired repeatedly with one hand. A cavalry-soldier having the arm strapped in the usual way, and having his left hand fully occupied with the management of his horse, will, under ordinary conditions, after each discharge, let his carbine drop into a perpendicular position by his right side with the muzzle downward, lift the part C smartly with slight shake of the arm and tumble the old metal out upon the ground, leave the arm suspended by the strap while the hand travels to the cartridge-box and returns with a fresh cartridge, drop the cartridge freely into its place, and depress C. These operations, with the ordinary ones of cocking before, and elevating, aiming, and pulling trigger afterward, are all that is required to complete the entire process, and all may be performed with tolerable ease without dropping the bridle or ceasing for an instant to employ the eyes and the bridle-hand in the management of the animal.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

1. The hammer H and center *h*, arranged to confine and release the movable piece C, and to operate in combination with C and with the striking-pin D, substantially as specified.
2. The within-described arrangement of the mainspring I, sear J *j*, sear-spring K, and screw L, for the purposes specified.

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Witnesses:

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