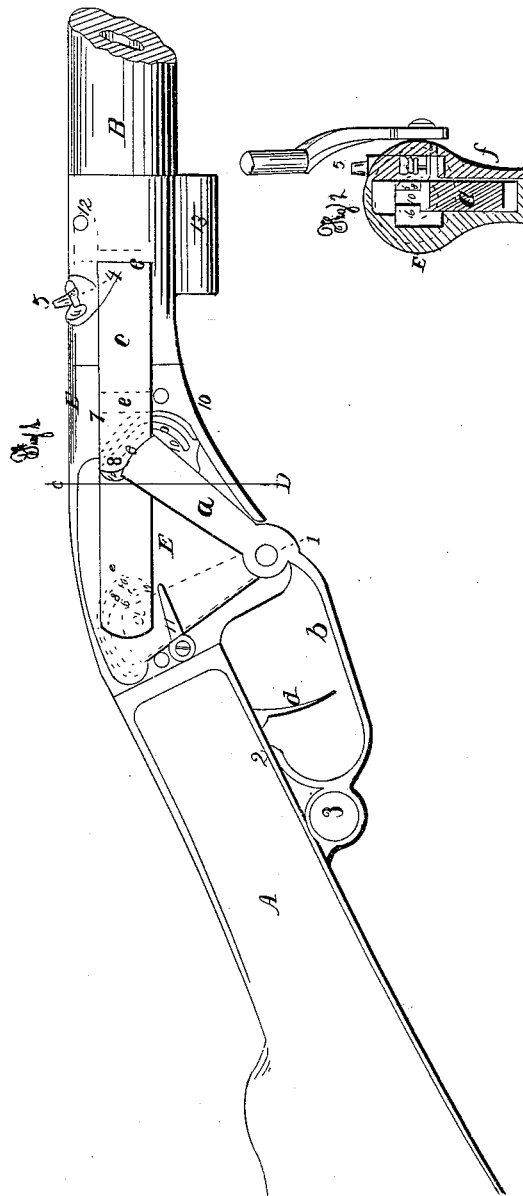


W. W. MARSTON.  
Breech-Loading Fire-Arm.

No. 7,443.

Patented June 18, 1850.



Wm W. Harston

Witnesses

W. S. L. S. L.

Samuel W. Penell

# UNITED STATES PATENT OFFICE.

WILLIAM W. MARSTON, OF NEW YORK, N. Y.

DEVICE FOR MOVING AND HOLDING A PISTON BREECH-PIN.

Specification forming part of Letters Patent No. 7,443, dated June 18, 1850.

*To all whom it may concern:*

Be it known that I, WILLIAM W. MARSTON, of the city of New York, gunsmith, have invented, made, and applied to use certain new and useful improvements in the construction of fire-arms that are loaded at the breech; that the said improvements consist in so constructing the parts at the rear of the chamber that they receive the charge and place it in the chamber, lead the explosion of the cap to the center of the chamber, and hold the breech-pin against the recoil of the charge at the moment of explosion, and admit a second and successive charges, by means for which I seek Letters Patent of the United States, and that the construction, operation, and effect of the said improvements are fully and substantially set forth in the following description and shown in the drawings annexed to and making part of this specification, wherein—

Figure 1 is a side elevation of the parts employed, the lock-plate and lock being removed to show them. Fig. 2 is a section through the line C D of Fig. 1, showing the parts as seen from the rear, the like letters and numbers as marks of reference applying to the same parts in each figure as follows:

A is the stock; B, the barrel of the arm. E is a metal chamber containing the working parts, and also connecting the barrel and stock. 1 is a center carrying the radius-bar *a*, the lower and rear part, *b*, of which both forms the trigger-guard and serves as a lever to move the radius-bar *a*. A pin, 2, on the lever *b* enters a hole in the strap of the chamber, and a bow, 3, receives a finger to move the lever *b*. The loading-slide and breech-pin *c* lies in the chamber E, and is fitted round the front to enter the rear or chamber of the barrel B, with a stop-shoulder, *e*, and a stud, 4, which has a touch-hole opening to the center of the barrel from a nipple, 5. The left side of the slide *c* is fitted before the dotted line 7 as a semicircle, and behind 7 it is fitted as a square, the grooves in the chamber E being made to fit the slide when in place for discharging the arm, the semicircle being the same size as the rear of the barrel and matching with it, as seen by dotted lines in Fig. 2. At 6 the rear of the slide *c* is formed as a pair of jaws, with a pin, 8, through them, and on the fore end of the radius-bar *a* a tenon, 10, has a slot, 9, through it, which takes the pin 8. This connects the

radius-bar *a* to the slide *c*. The upper part of the slot 9 and the front of the radius-bar is formed nearly as an arc to the center 1, taking an equal arc on the rear of the breech-pin slide *c*, and below the top of the radius-bar this tenon and slot is continued to from nearly a quarter-circle, when it is farther extended toward the sear of the lever. At *d* is the trigger, fitted to communicate by a lever, 11, to the rear of a common lock, with the usual springs, tumblers, and percussion-hammer, the parts of which are fitted inside the movable cover-plate *f*, as seen in Fig. 2. At 12 is a pin to hold the rear of the barrel B in place, and at 13 is the ramrod-thimble. When thus made, the operation of the parts is as follows: To load the arm, the pin 2 is to be drawn out from the strap and the lever *b* thrown forward into the position shown by dotted lines. This moves the radius-bar to nearly the opposite angle to that it previously formed with a vertical line from the center. At the commencement of this motion, the slot 9 being an arc from the center 1, does not move the loading-slide and breech-pin; but so soon as the second and lower curve of the slot comes up and takes the pin 8 the breech-slide *c* moves with the radius-arm and slot to the rear of the piece, as shown by dotted lines in Fig. 1. The square part behind 7, moving in the square groove on the chamber, maintains the rectilinear motion of the slide *c*, leaving a cell or space between the end *e* and the barrel to receive a cartridge and bullet. On reversing the movement of the lever-guard *b* and replacing the pin 2 in the strap, the parts take the positions shown by full lines, the movement forcing the cartridge into the breech of the barrel, to be discharged by the trigger and hammer. The recoil of the explosion, acting in a straight line on the front of the breech-pin, is sustained by the front of the radius-bar *a*, which taking the breech-pin with a corresponding arc from the center 1 at an incident angle of about forty-five degrees, the effects of the recoil is as much to force the radius-bar downward and forward as to force it upward and backward, so that by thus balancing the forces of the recoil the ultimate shock is thrown on the parts of the metal chamber above the breech-pin, and on the parts that carry the center 1, making it nearly impossible for the breech-pin to blow back without a disruption of one or both these parts.

The several parts used herein being all well known, I do not intend to claim any one of them herein as my invention; but

I do claim as new and of my own invention and desire to secure by Letters Patent of the United States—

The arrangement of the parts described and shown, in which arrangement the radius-bar *a* is connected to the rear end of the sliding breech-pin *c* by a tenon, 10, and slot 9, taking a pin, 8, on the jaws 6 at the rear end of the breech-pin, for the purposes of holding the breech-pin in place while the charge is exploded, removing

the breech-pin to receive successive charges, and forcing the charge into the barrel by replacing the breech-pin for the next successive discharges, the whole constructed, arranged, and acting substantially as described and shown.

In witness whereof I have hereunto signed my name, in the city of New York, this 30th day of April, in the year 1850.

WM. W. MARSTON.

Witnesses:

WM. SERRELL,

LEMUEL W. SERRELL.