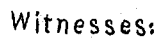


Breech-Loading Fire-Arm.

Patented Mar. 21, 1865



Samuel W. Lovell
Chas Geo Hand

Inventor:

Inventor:
J Williamson

UNITED STATES PATENT OFFICE.

DAVID WILLIAMSON, OF BROOKLYN, NEW YORK, ASSIGNOR TO MOORE'S
PATENT FIRE ARMS COMPANY, OF SAME PLACE.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 46,977, dated March 21, 1865.

To all whom it may concern:

Be it known that I, DAVID WILLIAMSON, of Brooklyn, in the county of Kings and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a longitudinal section of the breech representing my improvement, and Fig. 2 is an inverted plan of the same. Fig. 3 is a section with the breech open.

Similar marks of reference denote the same parts.

My invention is an improvement upon that for which Letters Patent were granted to D. Moore, December 3, 1861, in which two blocks are employed—one on the line of the barrel, and the other at right angles to the same.

The nature of my said invention consists of a compound lever with a changeable fulcrum for actuating the aforesaid breech-blocks, whereby the movements given to the blocks are very direct and reliable, the parts are simple, easily constructed, and not liable to derangement or wear.

In the drawings, *a* represents the screw for receiving the barrel, and *b* of the stock. *c* is the metal housing connecting the stock and barrel, and provided with the straps and any suitable lock, as usual. *d* is the breech-block sliding longitudinally at the rear end of the barrel in grooves in the inner faces of *c*. *7* are the spring-clamps, to withdraw the cartridge, and *4 4* the shoulders for receiving the cartridge, as in the patent of A. J. Bergen and D. Williamson, dated November 22, 1864. *e* is the breech-block sliding transversely in *c*, and when raised sustaining the block *d*, and when depressed allowing its withdrawal from the rear of the barrel. The blocks *d* and *e* are mortised in their central portions, the block *e* in the front part and the block *d* in the rear part, and these mortises receive the end portions of the lever *h*, which extends downward and backward to form a trigger-shield. The

lever *h* is attached at its front end to the block *d* by a screw or pin, *i*, and *o* is a screw or pin through the block *e* that occupies a slot, *x*, in the lever *h*.

It will now be evident that if the lever *h* is pressed downward and forward the pin *i* acts as the fulcrum, and the pin *o* causes the block *e* to descend or move transversely of the gun, and as soon as the front end of said block *e* clears the rear end of the block *d* the pin *o* becomes the fulcrum against which the power acts in sliding the block *d* back from the rear end of the barrel. In closing the breech the reverse movements take place, the block *d* is first pushed forward and then the block *e* is raised up behind it. On account of the change of angle of the lever to the blocks *d* and *e*, as said lever *h* is moved it acts nearly at right angles to the block *d* to move it back and forth at one portion of its motion, and nearly at right angles to the block *e* to move it up and down at another portion of its motion. Thus the movements are given to the respective parts with great ease, and there is but little wear on the parts, and none of them require great accuracy in fitting.

In order to hold the lever *h* up to its place when the breech is closed, I apply a spring, *l*, acting upon a toe, *n*, upon the lever *h*, and when the lever *h* is pressed downward and forward against the action of this spring so soon as the lever passes a nearly vertical position, the said spring, acting against the side of the toe *n*, throws that up and the lower end of the lever forward, fully opening the breech and holding the parts in position ready for receiving a cartridge, thus preventing the parts moving by their own weight, as the gun may change position. Fig. 3 represents the parts of the gun with the lever forward and breech open.

The spring *l* may be placed on the lever *h* and act against a pin going across the block *d*, as represented by red lines in Figs. 1 and 3, in which case the spring will act to hold the lever back when above said cross-pin and forward when below it.

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

1. The combination of the breech-blocks *d* and *e* and lever *h*, having a changeable fulcrum and actuating the said blocks *d* and *e*, substantially as specified.

2. The spring *l* and toe *n*, or its equivalent, in combination with the lever *h* and breech-blocks *d* and *e*, as specified.

In witness whereof I have hereunto set my signature this 2d day of February, 1865.

D. WILLIAMSON.

Witnesses:

LEMUEL W. SERRELL,
CHAS. H. SMITH.