

W. S. SMOOT.

Improvement in Breech-Loading Fire-Arms.

No. 133,063.

Patented Nov. 12, 1872.

Fig. 1

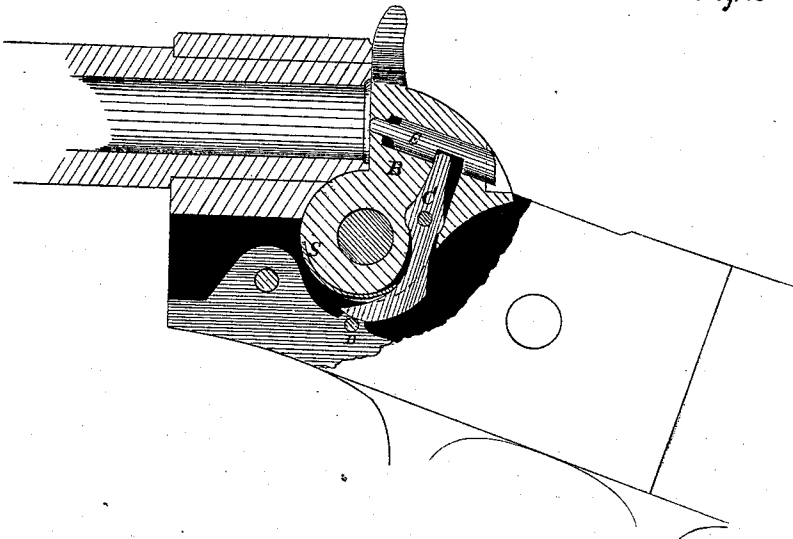
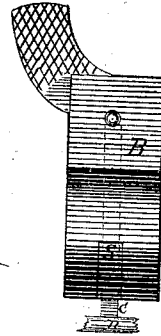


Fig. 2



Witnesses,

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UNITED STATES PATENT OFFICE.

WILLIAM S. SMOOT, OF ILION, NEW YORK.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 133,063, dated November 12, 1872.

To all whom it may concern:

Be it known that I, WILLIAM SYDNEY SMOOT, of Ilion, county of Herkimer and State of New York, have invented a new and useful Improvement in Breech-Loading Fire-Arms, of which the following is a full and exact description, reference being had to the drawing forming a part of this specification.

My invention is designed with reference to that class of breech-loading fire-arms in which the ignition of the charge is effected through a firing-pin, which receives the blow of the hammer and transmits it to the cartridge; and my said invention consists in the arrangement and combination of a lever pivoted to a solid breech-block, and connected at its upper end with the firing-pin, and kept in contact at its lower end with a fixed stud or shoulder by means of a spring, by which, when the breech-block is swung away from the chamber to permit the insertion of a cartridge, the lever is caused to ride over the shoulder, and by an angular movement withdraw the firing-pin into the breech-block; but when the latter is closed the bearing of the lever upon the shoulder will hold the breech-block in such position.

In the accompanying drawing I have shown my invention as applied to what is known as the "Remington" rifle; but it is equally applicable, with certain obvious modifications, to any other form of breech-block, whether the same swings from a center above or below the axis of the barrel, or slides transverse to or parallel with the axis of the barrel in closing or unclosing the chamber.

Figure 1 is a longitudinal section through the barrel and breech-block, a portion of the side of the frame being removed for the purpose of showing the operation of the several parts. Fig. 2 is a front view of the breech-block.

In Fig. 1 the breech-block B has a slot in its rear portion for the reception of a lever, C, pivoted to the breech-block at or near the center of its length, and capable of a limited amount of angular or vibratory movement. The upper end of this lever takes into a notch

in the firing-pin E, and its lower end is kept in contact with a pin or stud, D, on the frame by means of a spring, S.

It will be observed that the notch in the firing-pin is wider than the end of lever C by an amount equal to the movement of the pin.

The mode of operation of the above is as follows: When the breech-block is swung away from the chamber to permit the insertion of a cartridge the lower end of lever C rides over the stud D, compressing the spring S, and taking on a slight angular movement by which the firing-pin is withdrawn into the breech-block. The cartridge being then inserted and the breech closed, the lower end of lever C is pressed outward by the spring S, and, resting against the stud D, forms a support to hold the breech in its closed position, while the upper end of the said lever is thereby moved forward, leaving the firing-pin free to be driven forward by the hammer without imparting any motion to the retractor. When the firing-pin reaches the end of its forward movement it comes in contact with the upper end of the extractor-lever, and the several parts are then in position to repeat the series of operations just described.

It will be observed that the piece C is thus caused to perform the double function of withdrawing the firing-pin and holding the breech in its closed position.

Having thus described my invention, what I claim is—

1. In a breech-loading fire-arm having a solid breech-block, the combination and arrangement of the lever C, pivoted to the breech-block, with the firing-pin E and fixed shoulder D, to operate substantially as and for the purpose herein set forth.

2. In combination with the lever C, pivoted as described, and the fixed shoulder D, I claim the spring S, arranged to operate as described, whereby the breech-block is held in its closed position, as set forth.

W. S. SMOOT. [L. S.]

Witnesses:

H. H. BENEDICT,
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