

W. H. & G. W. MILLER.
Breech-Loading Fire-Arm.

No. 68,099.

Patented Aug. 27, 1867.

Fig. 1.

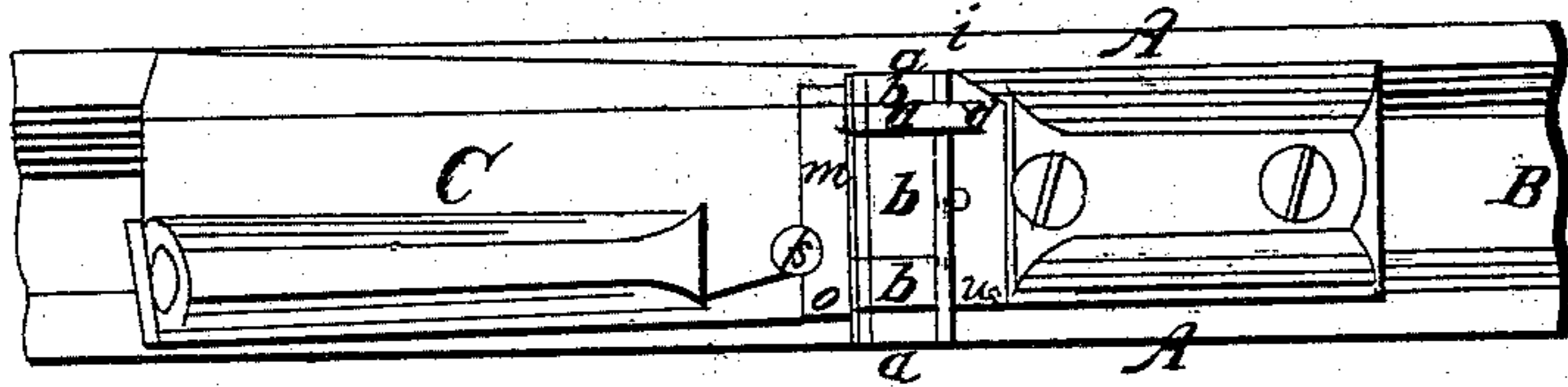


Fig. 2.

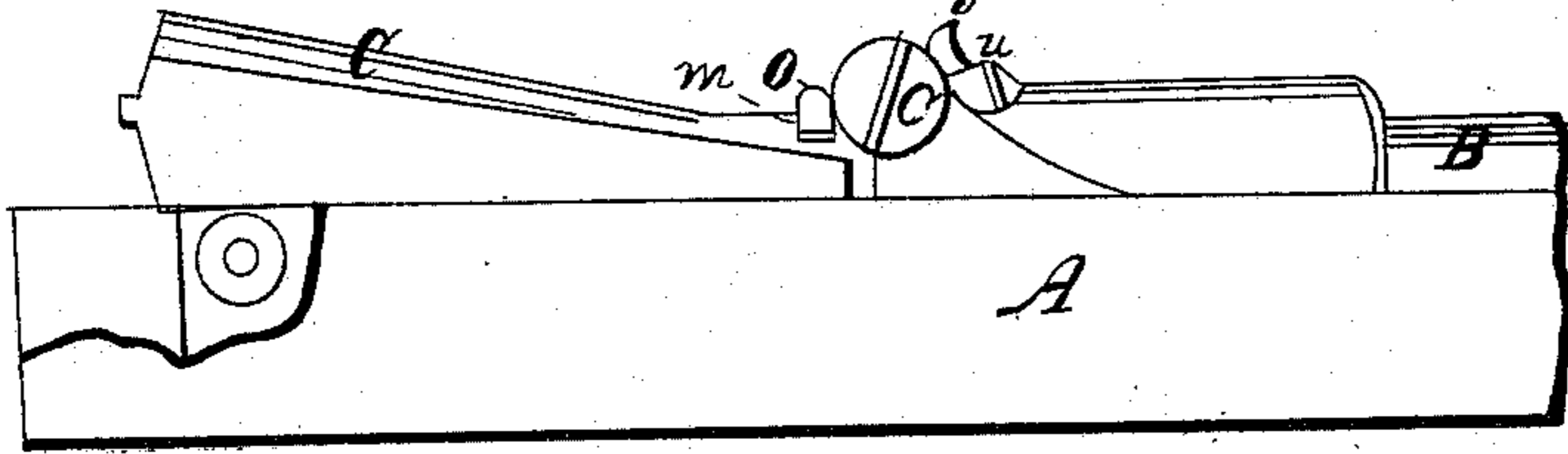


Fig. 4.

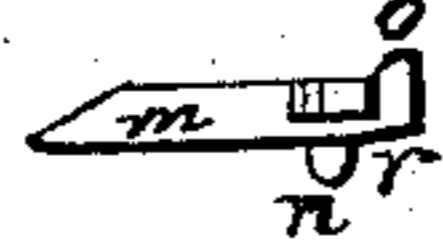
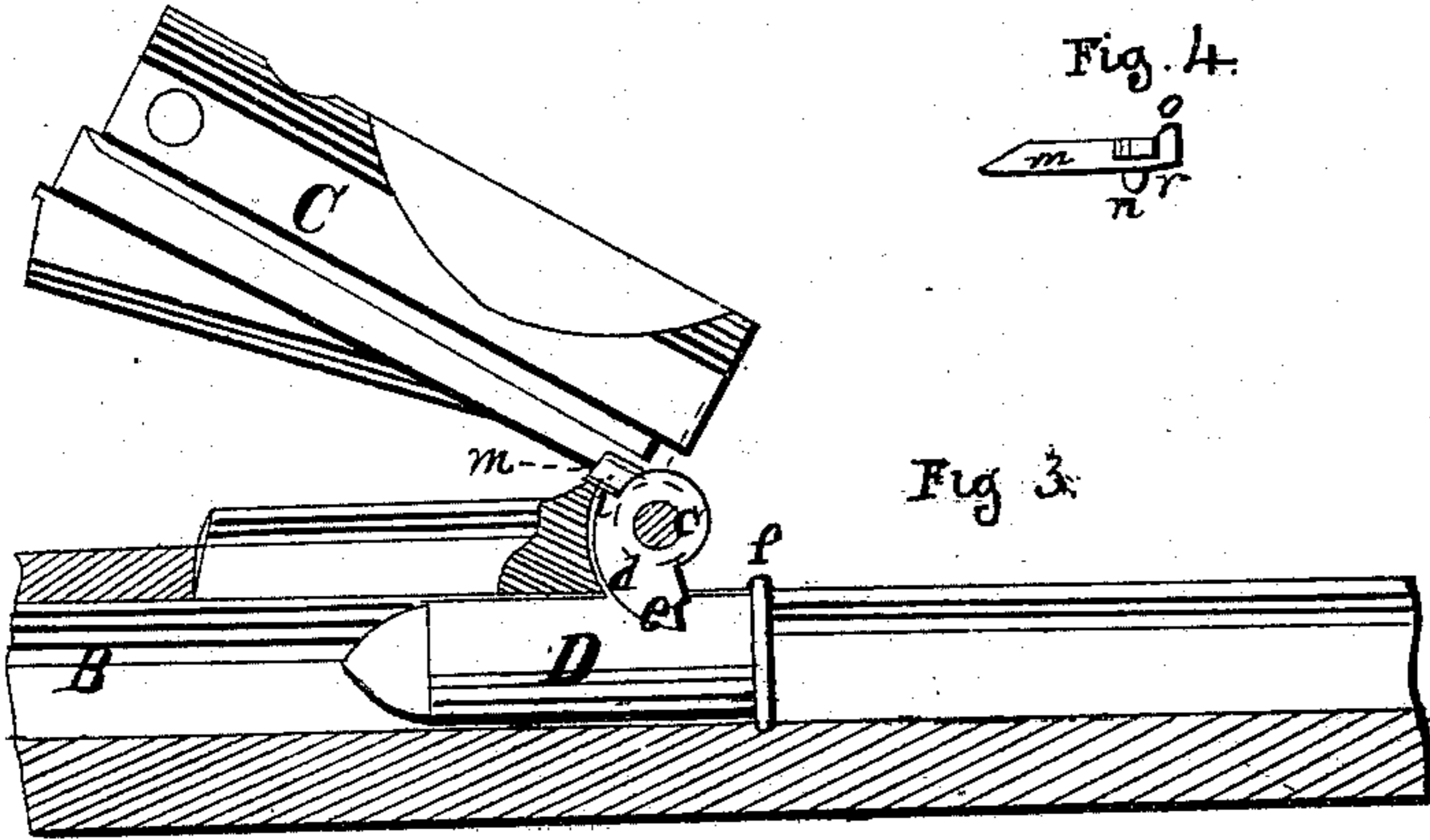


Fig. 3.



Witnesses.
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Thos. J. Chamberlain } By atty *A. B. Thompson.*

United States Patent Office.

WILLIAM H. MILLER AND GEORGE W. MILLER, OF WEST MERIDEN, CONNECTICUT.

Letters Patent No. 68,099, dated August 27, 1867.

IMPROVEMENT IN CARTRIDGE-EJECTOR FOR BREECH-LOADING FIRE-ARMS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, WILLIAM H. MILLER and GEORGE W. MILLER, of West Meriden, in the county of New Haven, and State of Connecticut, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a top plan of so much of a breech-loading fire-arm as will illustrate our invention.

Figure 2 represents a side view thereof.

Figure 3 represents a side view, partially in section, with the swinging breech-block raised up as in the act of loading the arm.

Figure 4 represents a view of the accelerating lever detached from the arm.

Similar letters of reference where they occur in the separate figures denote like parts of the arm in all the drawings.

Our invention consists in combining with an ejector placed loosely on the pivot-pin of the swinging breech-block, an accelerating or rocking lever, that imparts a blow or quick motion to the ejector after it has started back the cartridge-case, and causes it to throw out the shell or case clear of the arm.

A represents a portion of the stock, and B a portion of the barrel of a fire-arm. C is a breech-block, hinged to the top of the barrel at *a*, in any suitably substantial manner, by lugs *b b b* and a pivot-pin, *c*, passing through them. On the pivot-pin *c* of the swinging breech-block is loosely placed an ejector, *d*, which has upon its inner or under portion a shoulder, *e*, for taking against the flange *f* of the cartridge-case D, and backing it out of the loading or firing-chamber. On the outer or upper portion of the ejector *d* there is a projection, *i*, against which the accelerating lever takes, to first turn the ejector to start back the cartridge-case, and then to receive a sudden impulse to further throw back or push out said cartridge-case, as will be presently explained. In rear of the hinge-joint *a*, and in close proximity to it, upon the swinging breech-block, is placed an accelerating lever, *m*, which lies parallel with the plane or axis of the hinge-joint. On the under side of this lever *m* there is a stud or projection, *n*, which enters a seat in the breech-block, and upon the upper side thereof, and at or near the end most remote from the ejector, there is a head or projection, *o*. This lever *m* is placed in a groove cut in the breech-block, and the under side of the lever, as at *r*, may be sloped off, so that when the head *o* is struck, the lever may rock in the line of its length, upon the stud *n*, as a fulcrum, and give a sudden throw or impulse to its other end, which being at the time in contact with the ejector, imparts an accelerated motion to said ejector and to the cartridge-case, with the flange of which the ejector is in contact. Instead of sloping off the under side of the lever *m*, a recess or plane may be formed in the bottom of the groove, which would accomplish the same end. The lever *m* is held in its place by a screw, *s*, the head of which projects over and into it far enough to prevent it from falling out. Farther than merely holding it to its place or seat, the lever is free to rock in the groove, or upon its pin or stud *n*.

The operation is as follows: The cartridge is placed in the loading-chamber, and partially run up into the firing-chamber, by the fingers. The breech-block is then brought down, and its forward end comes against the heel of the cartridge and forces it home. The flange of the cartridge-case coming against the shoulder *e* of the ejector, turns the ejector upon the pivot-pin *c* until its projection *i* comes into the position shown in fig. 2. When the arm has been fired, or the cartridge or shell is to be taken or backed out, the breech-block is swung open, and in doing so the point of the lever *m* comes against the shoulder *i* on the ejector, and turning the ejector on the pivot-pin *c*, and the end *e* of the ejector bearing against the flange *f* of the cartridge, starts back the cartridge case. Continuing the raising up and throwing forward of the breech-block, the head *o* of the lever *m* strikes upon a part, *u*, in front of the hinge, which throws down that end of the lever, and correspondingly raises the other end; and in a degree increased, by the position of the fulcrum *n*, with regard to the whole length of the lever. As the breech-block is raised up and thrown forward with a quick motion, it causes quite a blow, through the lever *m*, to the ejector, and through the ejector to the flange of the cartridge-case, throwing

the latter out of the arm or far enough back to drop out, by a slight turning of the arm, without applying the fingers, and without using a spring, which, from slight nature, is liable to be broken or disarranged. The swinging breech-block has upon it, or connected with it, all the necessary appliances for opening, closing, locking it down, and for transmission of the blow from the hammer to the fulminate to ignite the charge.

What we claim as our invention, and desire to secure by Letters Patent, is—

In combination with a hinged and swinging breech-block, the accelerating lever *m* on said breech-block, and the ejector *d* on the pivot-pin of the hinge, for the purpose of giving a quick impulse to the ejector, and through it to the cartridge-case, to throw the latter out of the gun, substantially as described.

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Witnesses:

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