

CHARLES F. RUSSELL.

Improvement in Breech-Loading Fire-Arms.

No. 126,748.

Patented May 14, 1872.

fig. 1.

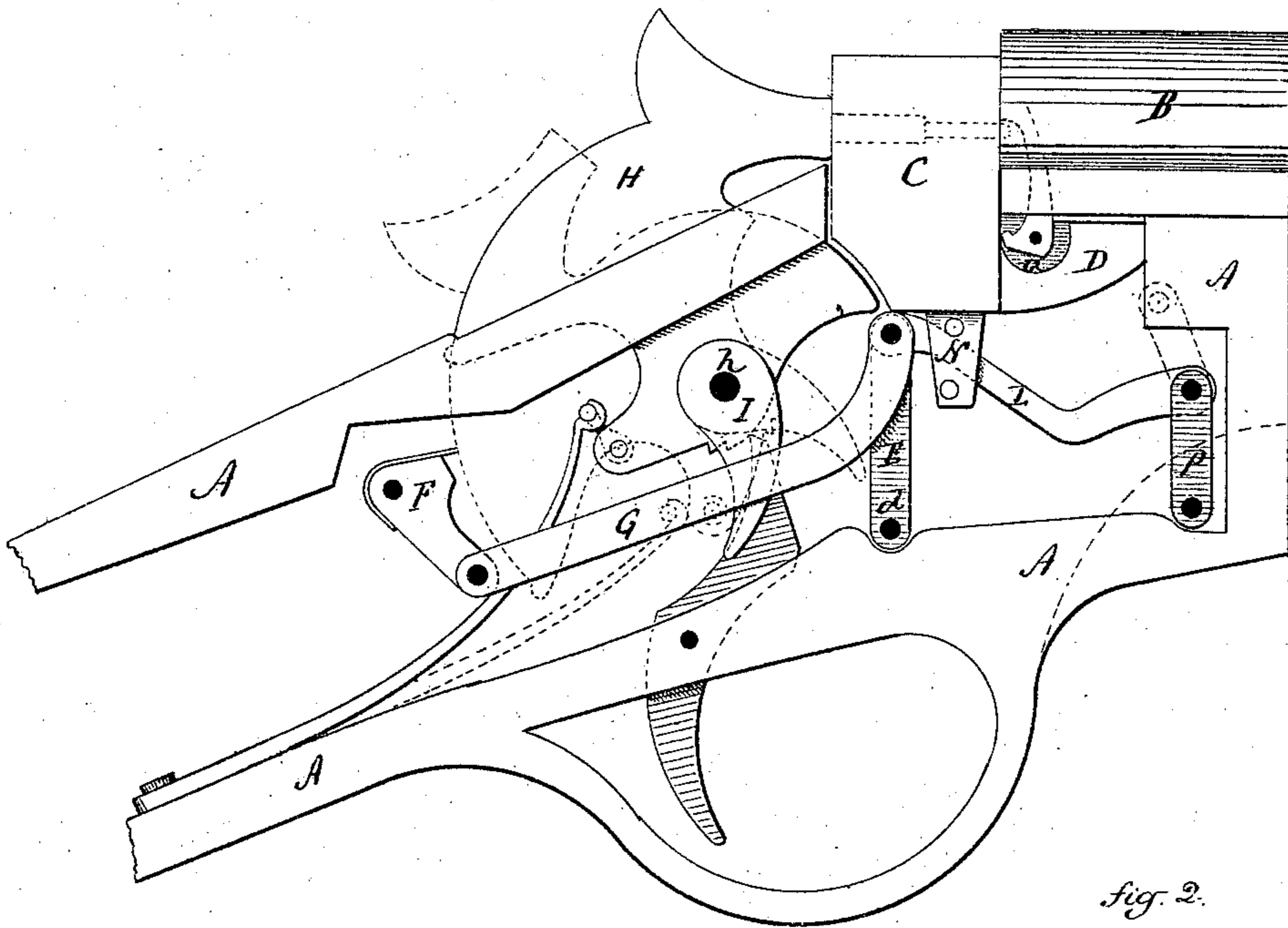
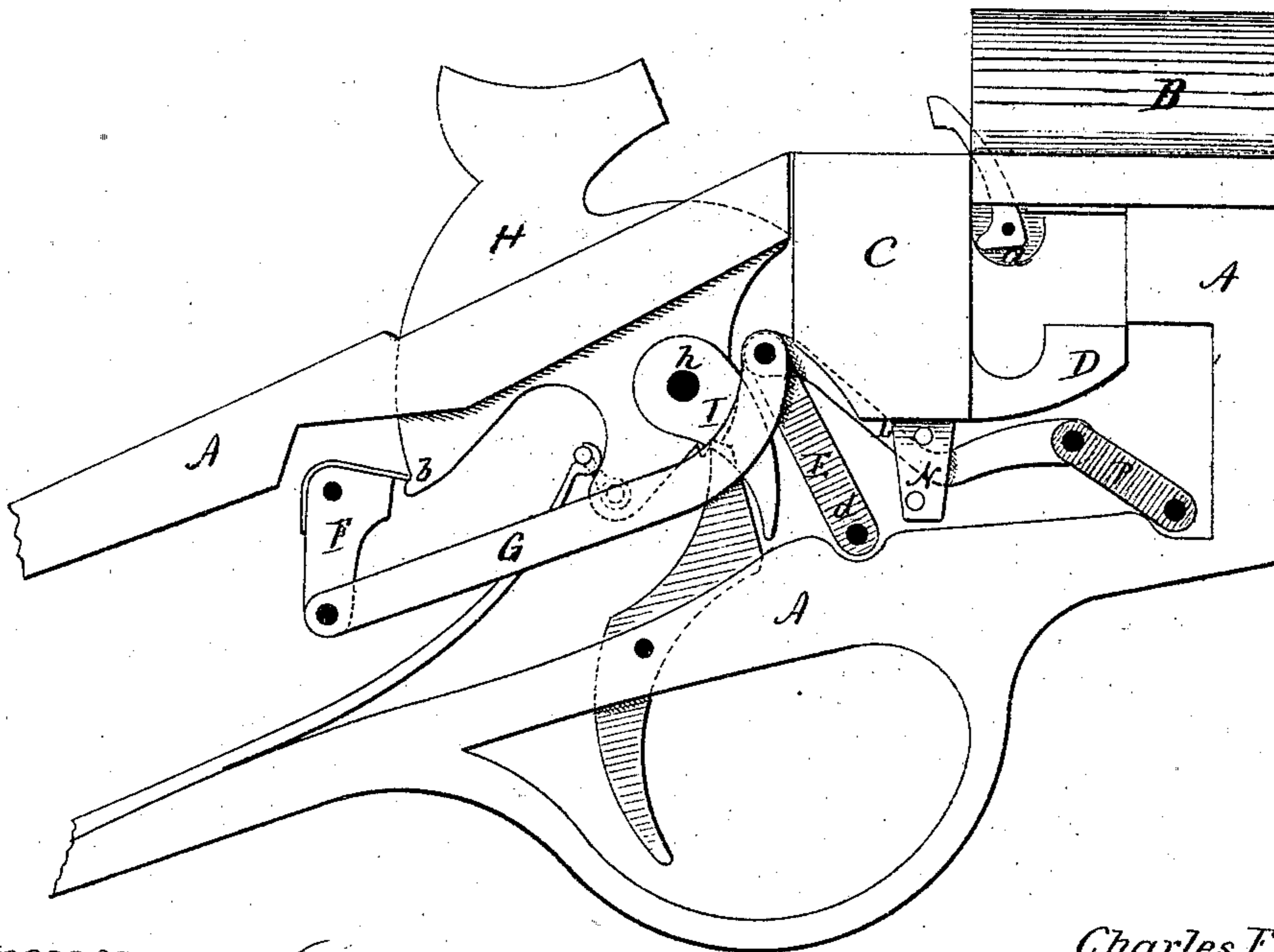


fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES F. RUSSELL, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO HIMSELF AND JOHN B. HAINES, OF SAME PLACE.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 126,748, dated May 14, 1872.

To all whom it may concern:

Be it known that I, CHARLES F. RUSSELL, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Breech-Loading Fire-Arms; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes a part of this specification, and represents, in—

Figure 1, a side view, the covering-plate removed, the parts in position after firing or in a natural state of rest; and in Fig. 2, the same, the hammer at half-cock and the breech open preparatory to introducing the cartridge before firing, or as having discharged the shell after firing.

This invention relates to an improvement in breech-loading fire-arms, especially to that class which have a vertically-moving breech-piece; the object being to operate the said breech-piece by the hammer—that is to say, half-cocking the hammer to open the breech, the movement from half to full-cock closing it—and it consists in the peculiar mechanism hereinafter described, whereby the object of the invention is accomplished.

A is the frame, constructed to receive the mechanism, in external form substantially the same as other fire-arms. To this frame the barrel B, open at the breech, is secured in the usual manner. C is a breech or a recoil block, arranged in suitable guides in the frame to move vertically up and down, as from the position in Fig. 1 to that in Fig. 2, or vice versa, to open and close the breech of the barrel. When up, as in Fig. 1, it takes its bearing against the frame at the rear to resist recoil; but, as an additional security, I form a hook, D, on the front or forward side of the breech-block, as seen in Fig. 2, and on the frame construct a projection, *a*, corresponding to the notch in the said hook, so that when raised to its position, closing the breech, as in Fig. 1, the hook engages on the said projection. Beneath the breech-piece a post, E, is arranged, pivoted at *d*, so as to swing from a perpendicular position under the breech-block, as seen in Fig. 1, back from the block, as seen in Fig.

2. When under the block, as seen in Fig. 1, it holds the block up in the closing position; removed, as in Fig. 2, allows the block to descend; and this movement occurs while the hammer is being thrown back to half-cock by the end *b* of the hammer H (pivoted at *h*) striking one arm of the lever F, from the other arm of which a connection, G, extends to the post E, causing the post to move with the said lever, thus moving from half-cock the lever F is thrown back, carrying with it the post E, which allows the block C to drop. The end *b* of the hammer then passes from the arm of the lever so as to be thrown back to full-cock, as denoted in broken lines, Fig. 1. In this movement, from half to full-cock, a cam, I, formed upon or attached to the hammer for the purpose strikes the post E, forcing it back into a vertical position; this movement of the hammer being denoted in broken lines, Fig. 1; the block being raised by the forward movement of the post, or otherwise, at the same time is, therefore, raised to position and secured when the hammer is at full-cock. A firing-pin is arranged through the breech-piece upon which the hammer strikes, and adapted to the class of cartridges designed to be used in the arm.

To positively cause the movement of the breech-piece, I attach to the upper end of the post, or at other convenient point, a connection, L, which inclines from the top of the post downward and extends through a yoke, N, formed upon the under side of the block C and thence to a lever, P, so that the swinging of the post carries with it the connection L, as from the position in Fig. 1 to that in Fig. 2, the lever P being practically a link to support and guide the other end of the connection. This may be, and generally would be, pivoted in a reverse position, or, as denoted in broken lines, Fig. 1, which would enable the reducing of the frame at the forward end, as also denoted in broken lines. As the post is drawn back the connection L passes through the yoke N, and, being inclined downward, draws down the block, as denoted in Fig. 2; returning, the upper side of the connection forces the block upward and into position, as denoted in Fig. 1.

While I prefer the connection N constructed as described, it will be evident that any in-

clined-moving piece, in connection with the post, may be employed to thus lower and raise the block.

I claim as my invention—

1. The vertically-moving breech-block C, combined with the barrel B and frame of the arm, when the said block C is provided with a hook, D, to grasp a corresponding projection upon the frame or barrel, substantially as described.

2. In combination with the vertically-moving block C the barrel, which it closes, and the hammer, I claim the lever F in connection with the post E, operating to draw the said post from beneath the block while the hammer is being thrown back, substantially as set forth.

3. In combination with the breech-block C, barrel B, hammer H, and post E, I claim the cam I, acting in conjunction with the hammer to throw the post beneath the block when being thrown back, substantially as set forth.

4. In combination with the breech-block C, barrel B, hammer H, and post E, I claim the incline L connected with said post and the yoke N on the said block, whereby the said block is made to descend and ascend by the movement of the said post, substantially as set forth.

CHARLES F. RUSSELL.

Witnesses:

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