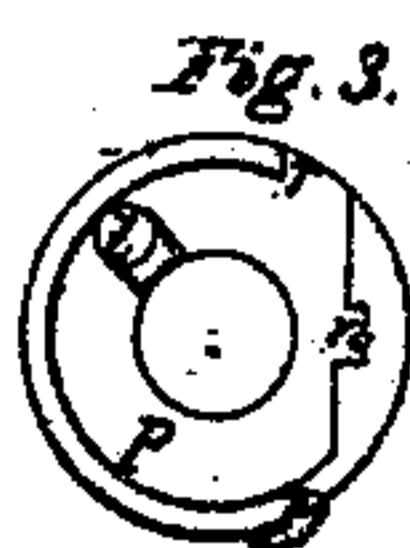
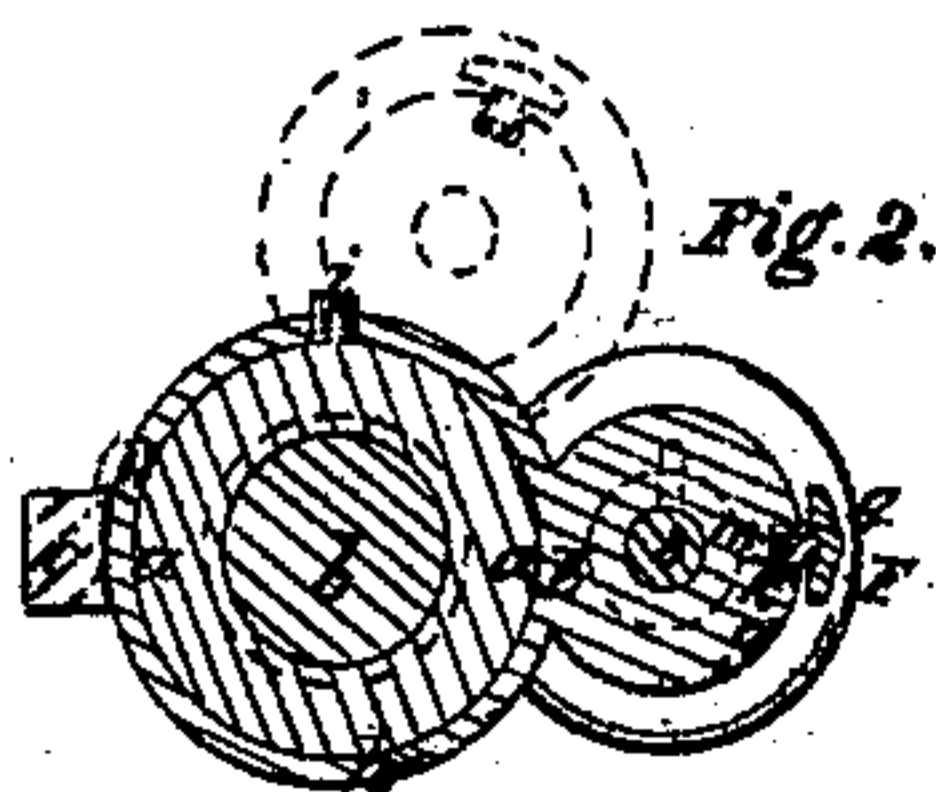
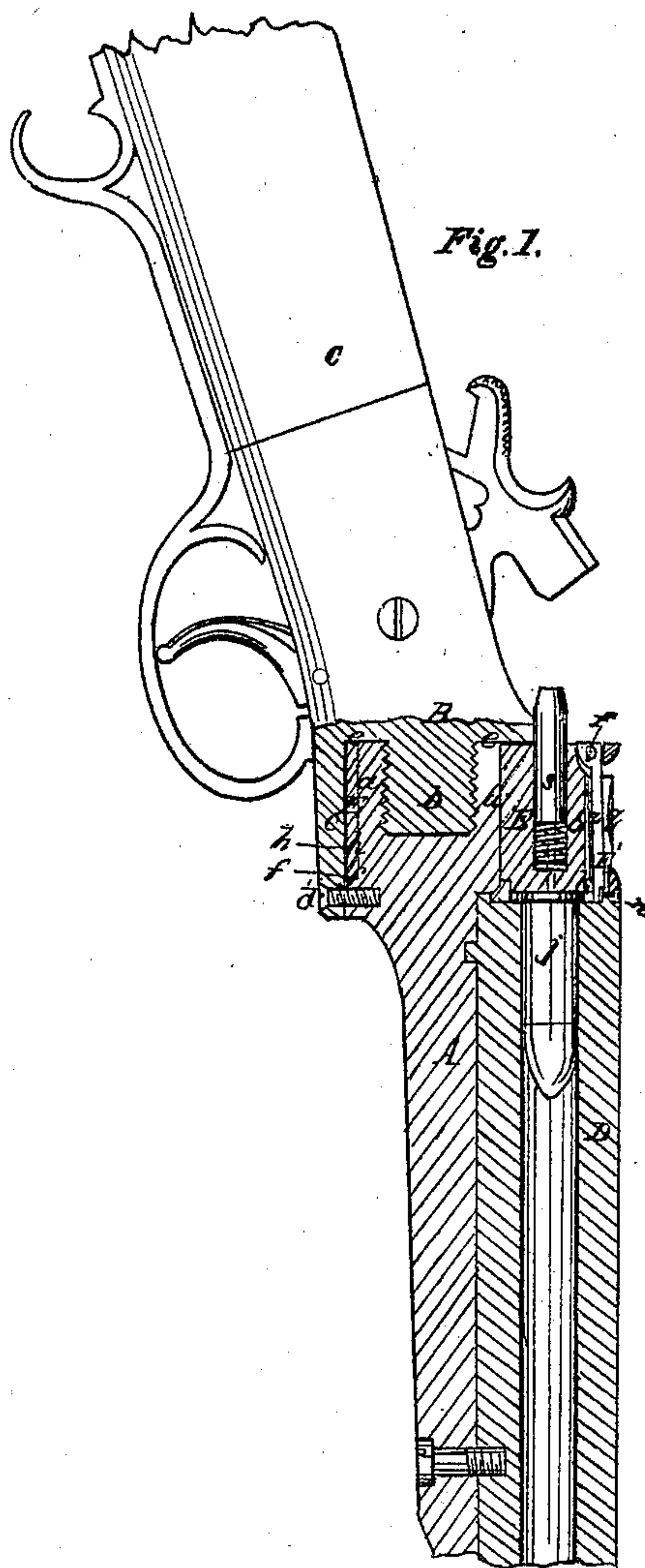


F. CLARK.
Breech-loading Fire-arm.

No. 43,571.

Patented July 19, 1864.



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UNITED STATES PATENT OFFICE.

FRANCIS CLARK, OF NORTH OXFORD, MASSACHUSETTS.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 43,571, dated July 19, 1861.

To all whom it may concern:

Be it known that I, FRANCIS CLARK, of North Oxford, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a central longitudinal vertical section of part of a fire-arm illustrating my invention. Fig. 2 is a transverse section of the same. Fig. 3 is a view of the rear end of the barrel.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to that class of breech-loading fire-arms in which the breech-block moves about an axis below the barrel and parallel with the bore thereof. In such fire-arms the breech-block is commonly arranged either between centers or upon a pin-bearing, neither of which modes provides a sufficiently firm and durable bearing for the breech, or permits the attachment of the barrel to the stock as firmly as is desirable.

This invention consists, principally, in fitting the movable breech-block of such fire-arms to the exterior of a bearing which constitutes a portion of the frame of the arm, and not of a mere pin which serves to connect the back and front portions of the frame, such bearing permitting of as strong an attachment as may be necessary between the barrel and the stock, as well as forming a stronger and more durable attachment for the movable breech-block than is obtained in other breech-loading fire-arms of this class.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A and B are two pieces of which the metal frame of the arm is composed, the latter containing the lock and being attached to the stock C in the usual or any suitable manner, and the former having the barrel D secured to or in it in the usual or any suitable manner.

On the rear end of the piece A below and behind the seat which receives the barrel there is formed a large cylindrical projection, *a*, which forms the bearing about which the movable breech-block turns as far as is necessary

to open and close the rear end of the barrel, the length of the said projection being equal to the desired depth of the breech-block E from back to front, and the diameter thereof being sufficient to enable it to receive within it a strong-screwed pin, *b*, which is formed upon the piece B, and which might be made strong enough to attack the parts A and B of the frame together, and thereby attach the barrel firmly to the stock; but to provide for greater security of attachment between A and B, I prefer to form upon and in the same piece with B a straight strap-piece, *c*, which projects forward under the breech-block E and projection *a*, and is connected with A by a screw, *d*, screwing into the latter. The pin *b* is screwed firmly into a central hole bored and tapped in the projection *a*, the piece B coming up to the end of the said projection *a* with a shoulder, *e*, which is broader than the end of the projection, and another shoulder, *f*, being formed on A around the said projection.

It may be understood that the projection *a*, which forms the bearing for the breech-block, may be made large enough to be as strong as any part of the frame of the arm.

The breech-block E has formed with or upon it, below the body or portion *g*, which constitutes the breech, a cylindrical band or socket, *h*, which fits snugly but easily to the cylindrical exterior of the bearing *a*, and between the shoulders *e* and *f*, hereinbefore mentioned. Its body *g* is or may be substantially like that of the movable breech-piece of other fire-arms of this class, and its face fitted to the rear end of the barrel. The band *h* has screwed into it a stop-pin, *i*, which comes into contact with the strap-piece *c* to stop the breech in its opening movement when it has moved far enough from the left-hand side of the barrel, as shown in red outline in Fig. 2, to permit the insertion of the cartridge *j*, Fig. 1, into the chamber of the barrel. The breech-piece is stopped in position to close the barrel by the locking-catch F. The locking-catch F consists of a small lever-like piece of steel fitted into a slot, *k*, which is provided in the upper part of the breech-block. This catch is attached at its rear end by a fulcrum-pin, *l*, to the breech-block, and its front end projects beyond the face of the said block, as shown in Fig. 1. A spring, *m*, is applied under this catch to press it upward into a notch, *n*, Fig. 3, in the upper

part of a circular cavity, *p*, which is formed in the rear end of the barrel for the reception of the flanged heads of fixed-ammunition cartridges. The said catch is prevented from being thrown up out of the slot *k* by a portion of the block *E* extending over it at a short distance from its front end. The said catch is provided with a broad thumb-piece, *q*, upon which to press the thumb of the left hand while the arm is grasped in that hand, and thereby to press down the catch out of the notch *n*, preparatory to moving the breech aside for loading. An opening, *r*, Fig. 3, is provided in the left side of the cavity *p*, to enable the catch to pass out and in in the opening and closing movements of the breech-block.

To open the breech-block for loading, the piece is grasped in the left hand, as in firing, and the thumb pressed upon the catch, and the breech-block moved aside. The arm is then allowed to remain in the left hand, while with the right the cartridge is inserted into the barrel. The stock is next grasped in the right hand and the breech-block moved back with the left, and the catch, slipping into the notch *n*, locks the block for firing.

It will be seen that the catch from its construction, position, and arrangement, affords great convenience for opening and closing the breech-block to reload, as the left hand never requires to be removed from the breech-block during this operation.

s is a pin inserted through the breech-block for the hammer to strike upon to fire fixed-ammunition cartridges.

t is a cartridge-shell extractor fitted to the barrel and operated by a spring to throw out the discharged shells when the breech is opened. These parts do not differ sufficiently from the corresponding parts of other breech-loading fire-arms to need any particular description.

Instead of the pin *b* being screwed into the projection or bearing *a*, it may be secured therein by a transverse key, and instead of the projection or bearing being upon the piece *A*, and the pin *b* on the piece *B*, the said projection or bearing may be upon the piece *B*, and the pin upon the piece *A*.

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

1. Fitting the movable breech-block *E* to turn upon a bearing which constitutes a part of the frame of the arm and the sole or principal connection between the stock and barrel, substantially as described.

2. The strap-piece *c* of the frame, in combination with the bearing *a*, receiving the connecting-pin *b*, and with the movable breech-block *E*, substantially as and for the purpose herein described.

FRANCIS CLARK.

Witnesses:

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