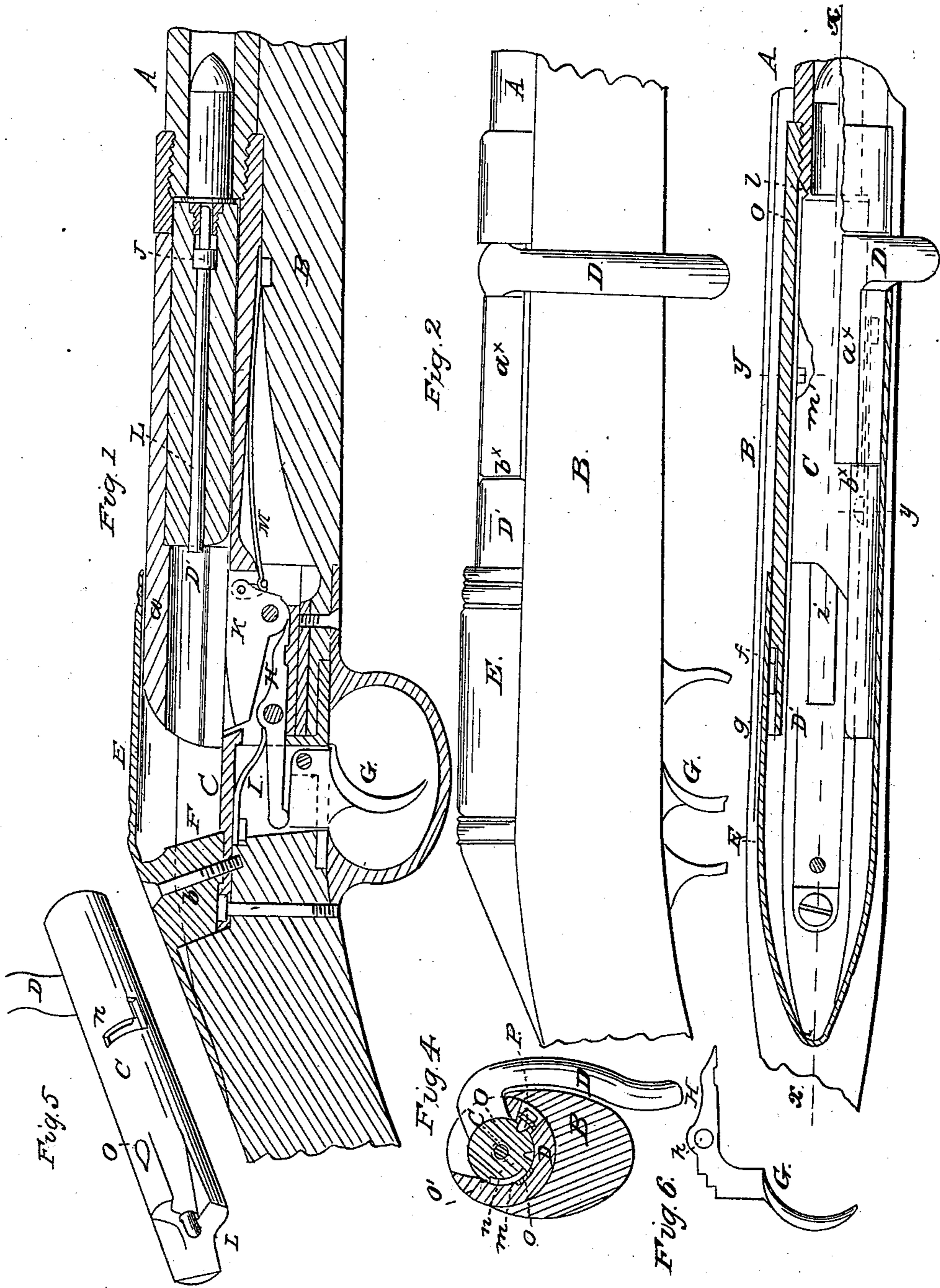


CARTER & EDWARDS.

Breech Loader.

No. 85,999.

Patented Jan'y 19, 1869.



WITNESSES  
Gustave Dieblich  
W. B. Ashkell

INVENTORS  
H. Carter  
J. H. Edwards  
per Mumford & Co  
Attorneys

# United States Patent Office.

HENRY CARTER AND GEORGE HENRY EDWARDS, OF DEMPSEY STREET, STEPNEY, ENGLAND.

Letters Patent No. 85,999, dated January 19, 1869.

## IMPROVEMENT IN 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, HENRY CARTER and GEORGE HENRY EDWARDS, of Dempsey Street, Stepney, in the county of Middlesex, and Kingdom of England, have invented new and useful Improvements in Breech-Loading Fire-Arms; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention is chiefly applicable to that class of breech-loading fire-arms which close with a sliding rotating bolt, provided with a projecting hand-lever.

The invention consists, first, in constructing the barrel of the fire-arm with an open rear end, and also with an open lever-slot, for the ready withdrawal of the bolt, when required, for cleaning, and in applying a cap or cover to the hinder part of the shoe of a gun, which cap or cover completely covers the groove or opening in which the sliding bolt works, with the exception of the opening necessary for the introduction of the cartridge, and for the necessary traverse of the hand-lever of the sliding bolt.

The invention consists, also, in fitting the extractor, applied to such guns, so that a dovetail end, fitted into a recess in the sliding bolt, shall be received in an undercut and dovetail recess, when the bolt is drawn backward, so as to prevent its falling from the bolt when it is withdrawn at the breech.

In the accompanying sheet of drawings—

Figure 1 is a side sectional view of our invention, taken in the line *x x*, fig. 3.

Figure 2, a side view of the same.

Figure 3, a plan or top view of the same, partly in section.

Figure 4, a transverse section of the same, taken in the line *y y*, fig. 3.

Figure 5, a detached perspective view of the sliding bolt.

Figure 6, a detached view of the trigger and sere.

Similar letters of reference indicate corresponding parts.

A is the barrel.

B, the stock.

C, the sliding bolt, or breech-closing plug, provided with a lever, D, for the purpose of sliding and turning it.

This bolt or plug slides in a breech-piece, D', at the rear end of the barrel, said breech-piece being open at its rear end, to enable the bolt or plug to be readily withdrawn from the gun, for cleaning or otherwise, when a cap or cover, E, is removed.

This cap or cover E entirely closes the open rear end of the breech-piece D', and also the rear part of a groove, *a*, in the breech-piece, through which the cartridge is inserted, when the bolt or plug C is drawn back.

The cap or cover is rounded in form, so that it will correspond to the breech-piece D' and bolt or plug C, and it tapers off at the rear, where it fits on the small of the stock, so as to present a smooth surface therewith.

The cap or cover is secured in position by a screw, *b*, passing down through a solid abutment, F, at the inner side of the cap or cover, at its taper end, and into a tail-piece, *c*, the rear end of which is let into the stock. (See fig. 1.)

At the inner side of the cap or cover, near its front, at each side of its lower part, there is a rib or projection, *f*.

These ribs or projections are received in longitudinal grooves, *g*, made in the exterior of the breech-piece, and serve to connect the cap or cover thereto, without interfering, in the least, with the ready removal or detachment of the cap or cover.

This will be fully understood by referring to fig. 3.

G (see fig. 6) represents the trigger, and H, the sere, both of which are in one piece, and work on a common fulcrum, *h*.

By this arrangement, the lock-action is greatly simplified and rendered much quicker in its operation.

The arrangement and application of the sere-spring I and hammer K are shown in fig. 1.

The hammer K, when freed from the sere, is forced upward by a spring, M, and acts against a striker, L, in the bolt or plug C, when the latter is locked in its forward position, the striker exploding the cap of the cartridge, shown in red in figs. 1 and 3.

The inclined projecting end, *i*, of the bolt or plug C serves to prevent the hammer K from acting on the striker L, except when the bolt or plug C is shoved forward, and turned or adjusted, ready for the discharge of the gun.

The projecting end *i* also serves to cock the hammer as the bolt or plug is drawn back.

N, fig. 1, is a screw, by which the striker L may be readily removed from or introduced in the bolt or plug C, the motion of said striker being limited by the enlargement, *j*, made thereon, sliding in a recess, *k*, at the fore end of the bolt or plug.

The nose of the striker is pushed back by the end of the cartridge, on pushing the bolt or plug forward in the breech-piece, in readiness to be again acted upon by the hammer K.

O is the extractor, placed at the side of the bolt or plug C, having its front end provided with a shoulder or nib, *l*, and its rear end is provided with a dovetail lip, *m*, which is fitted in a right-angular slot, *n*, in the exterior of the bolt or plug C, the sides of which are inclined or bevelled, to form a dovetail corresponding with the lip *m*. (See figs. 3, 4, and 5.)

The lateral portion of the slot *n* admits of the turning of the bolt or plug in the breech-piece without the extractor being turned, while the longitudinal portion

of said slot admits of a certain degree of longitudinal backward movement of the bolt or plug before the extractor is moved back.

The dovetail-form of the lip *m* and slot *n* prevents the extractor dropping from the bolt or plug when the latter is drawn from the breech-piece.

P is a spring-catch, placed in the lower part of the breech-piece D', and having its upper end terminating in a nib, to fit or catch into either of two recesses, *o o'*, in the exterior of the bolt or plug, near its rear end.

This spring-catch, in connection with the recesses *o o'*, prevents a casual movement of the bolt or plug.

The screw N, in the bolt or plug C, may be placed at the rear end, instead of being in the position shown, and the striker introduced from behind, in order to obviate the possible effect in the screw becoming loosened by the explosion of the cartridge.

The gun is loaded and fired, or discharged, as follows:

The bolt or plug is drawn back, the cartridge inserted into the breech-piece in front of the bolt or plug, and the latter then shoved forward, and locked by turning it to the right, at the completion of its forward movement, a rib, *a<sup>x</sup>*, on the bolt or plug being turned down in front of a shoulder, *b<sup>x</sup>*, of the breech-piece. The nib *l* of the extractor catches over a flange on the rear end of the cartridge.

The gun is now ready for firing or being discharged, the sere H being freed from the hammer K by pulling the trigger G, and the spring M forcing the hammer upward against the rear end of the striker L, as previously explained.

The lever D of the bolt or plug C is then turned to the left, so that the rib *a<sup>x</sup>* will be in line with the slot or opening in the top of the breech-piece, and the lip

*m*, at the rear end of the extractor, brought in line with the longitudinal portion of the slot *n*.

The bolt or plug C is then drawn back, the extractor O drawing the shell of the cartridge with it, when the front end of the longitudinal portion of the slot *n* comes in contact with the lip *m*.

In drawing back the bolt or plug, its projecting end, *i*, forces down the hammer K, and cocks it, the backward movement of the bolt or plug being terminated by the end, *i*, coming in contact with the abutment F.

By slightly tilting the gun to one side, the shell of the cartridge may be discharged from the breech-piece, and a succeeding cartridge inserted.

We claim as new, and desire to secure by Letters Patent—

1. The breech-piece D', provided with an open rear end, in combination with the cap or cover E, and the sliding bolt or plug C, said parts being arranged substantially as and for the purpose set forth.

2. Connecting the extractor O with the slide or plug C, by means of the dovetail lip *m* on the former, fitted in a dovetail slot, *n*, in the latter, substantially as and for the purpose set forth.

3. The combination of the bolt or plug C, breech-piece D', cap or cover E, extractor O, striker L, and hammer K, all arranged to operate in the manner substantially as and for the purpose set forth.

The above specification of our invention signed by us, this 11th day of November, 1867.

HENRY CARTER.

GEORGE HENRY EDWARDS.

Witnesses:

A. M. CLARK,

W. G. E. SWINNOCK.