2 Sheets—Sheet 1.

H. HAMMOND.

Breech-Loading Fire-Arm.

No. 44,798 Patented Oct. 25, 1864.

Fig. 1

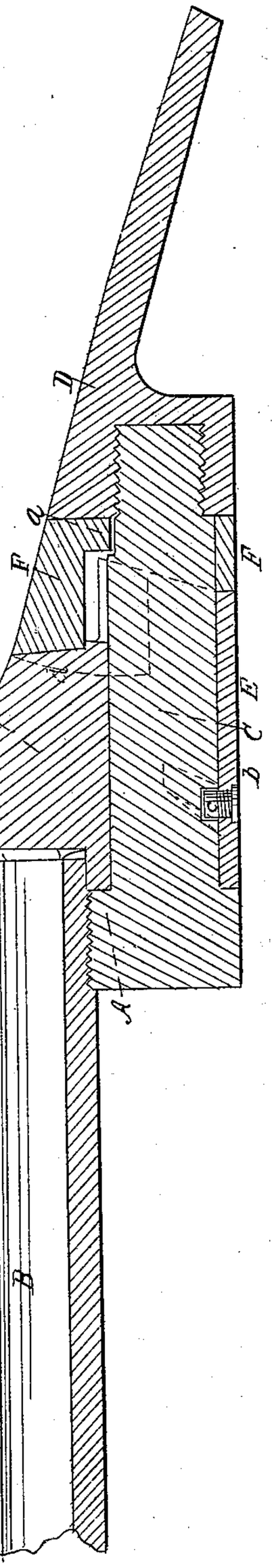
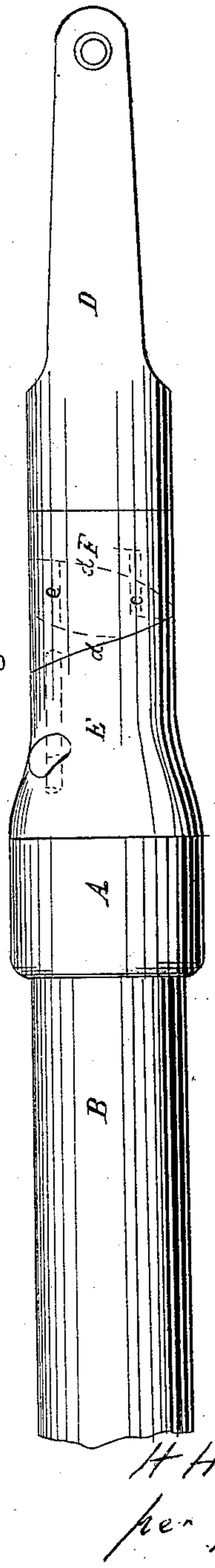


Fig. 2.



Witnesses.

Jno Coombs

Geo Reed

Inventor.

H Hammond

per Munn & Co

attys

2 Sheets—Sheet 2.

H. HAMMOND.

Breech-Loading Fire-Arm.

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Fig. 4.

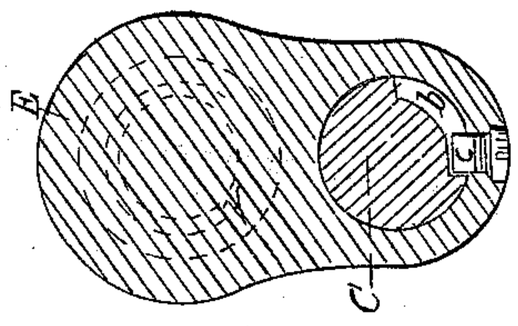


Fig. 6.

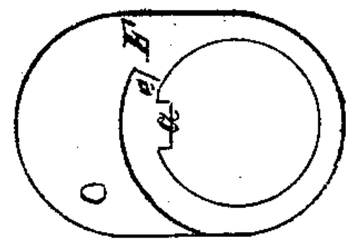


Fig. 3.

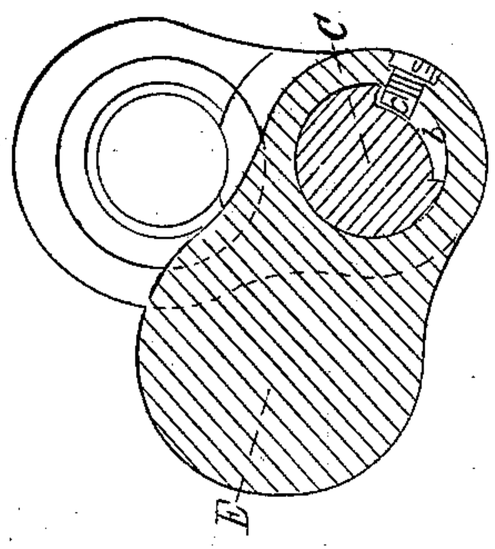
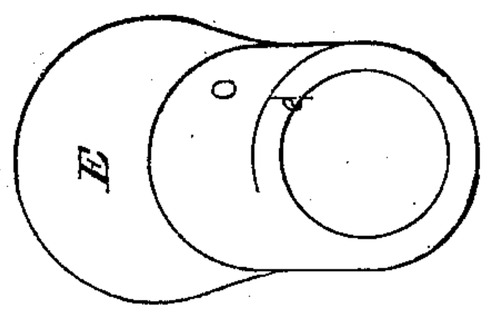


Fig. 5.



Witnesses

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attys

UNITED STATES PATENT OFFICE.

HENRY HAMMOND, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **44,798**, dated October 25, 1864.

To all whom it may concern:

Be it known that I, HENRY HAMMOND, of the city of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and I do 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 breech-loading fire-arm illustrating my improvement. Fig. 2 is a top view of the same. Fig. 3 is a transverse section of the same, taken through the breech, and showing the breech open. Fig. 4 is a section taken in the same plane as Fig. 3, but showing the breech closed. Fig. 5 is a back view of the breech-piece. Fig. 6 is a front view of the stationary cam in front of the breech-piece.

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

This invention relates to the employment of a movable breech-piece which opens and closes the rear end of the barrel by a movement about an axis below and parallel with the bore of the barrel, such breech-piece having also a limited movement in a backward direction to free it from the barrel and relieve it of friction in opening, and a corresponding forward movement in closing.

The improvement consists in a certain construction of such breech-piece and mode of applying a stationary cam or cam-like recoil-piece in rear of it, for forcing it forward toward the barrel and sustaining the recoil.

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

A represents a strong socket, of steel or other metal, into which the barrel B is screwed. C is a stout pin-forged or otherwise made in the same piece with or rigidly attached to the said socket A, said pin being arranged below the said socket, and projecting therefrom in a rearward direction parallel with the bore of the barrel.

D is the stock-frame screwed onto or otherwise rigidly connected with the rear end of the pin C.

E is the breech-piece fitted to turn on the said pin C, to expose the rear end of the barrel, as shown in Fig. 3, for loading.

F is the stationary cam or cam-like recoil-piece in rear of the breech, secured upon the pin C by the attachment of the frame D. The face of the breech-piece E is made flat and perpendicular to the axis of the pin C, to fit up against the back of the socket A or rear end of the barrel, and the back is made of spiral form, as shown at *d* in Fig. 2, like the face of a square screw-thread. The face of the cam or recoil piece F is made of a spiral form, to correspond with the back of the breech-piece. The said cam or recoil piece F is prevented from turning on the pin, and also from moving forward thereon, by a tongue, *a*, provided on its exterior to enter a groove in the pin C, and it is prevented from moving back thereon by the frame D. The breech-piece, when turned to a position opposite the barrel, as shown in Figs. 1, 2, and 4, fits snugly between the back of the socket A or rear end of the barrel and the face of the cam or recoil piece F. In the under side of the pin C there is a short spirally-arranged groove, *b*, which is screwed or otherwise securely inserted through the lower part of the hub of the breech-piece E, the pitch of the said groove corresponding with that of the spiral surfaces of the breech-piece and stationary cam or recoil piece. This groove and pin produce the drawing back of the breech-piece as it is turned aside to open the rear end of the barrel, and the ends of the said groove serve as stops to the pin to limit the movement of the breech-piece around the pin. The breech-piece should be furnished with a small spring bolt or catch for securing it when closed. This bolt or catch may be so arranged as to be operated by the pressure of the thumb to liberate the breech-piece after firing.

The operation of the breech-piece is as follows: As it is turned aside toward the position shown in Fig. 3 for loading, it is drawn back by the pin *c*, working against the oblique surface of the front side of the groove *b*, thus opening without friction or wear of the face of the breech and affording facility for withdrawing discharged metallic cartridge-shells from the barrel by an extractor attached directly to the breech-piece. As the breech-piece is turned back to close the barrel after the insertion of the cartridge into the latter, it is moved forward toward the barrel by the action of its oblique or spiral rear face against the corresponding surface of the cam or recoil piece F,

and when thus moved forward it is supported against the recoil by the cam or recoil piece.

The stoppage of the breech-piece in its opening movement may be effected by means of shoulders *e e* on the hub of the breech-piece, and within the cam or recoil piece F, instead of by the pin *c* and end of the groove *b*.

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

1. The method, substantially as described, of constructing the breech-block E with an oblique or helical rear surface, and connecting the same with the stock or frame, so that in opening and closing the breech-block by rotation it will be withdrawn laterally and obliquely backward, as herein specified.

2. The oblique or spiral-faced stationary cam or recoil piece F, in combination with the oblique groove *b* in the pin C, and the pin *c* in the hub of the breech-piece, when constructed and arranged as herein specified.

HENRY HAMMOND.

Witnesses:
JOHN TURNER,
JAMES C. COLLINS.