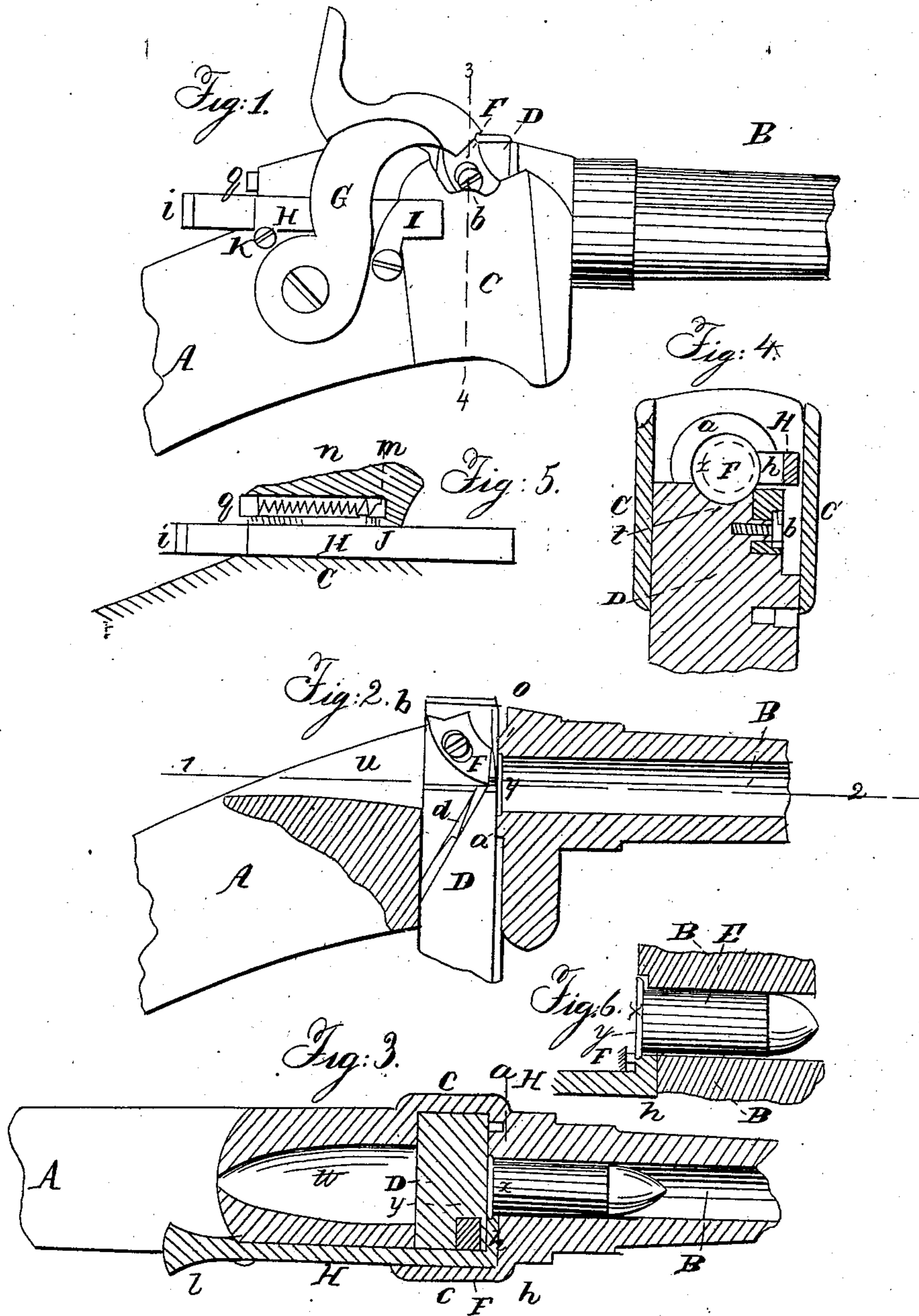


C. SHARPS
 Breech-Loading Fire-Arm.

No. { 2,603, }
 { 33,607. }

Patented Oct. 29, 1861.



Witnesses Charles E. Peter
 Chas. Howson

Henry Howson
 Atty for C. Sharps

UNITED STATES PATENT OFFICE.

CHRISTIAN SHARPS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 33,607, dated October 29, 1861.

To all whom it may concern:

Be it known that I, CHRISTIAN SHARPS, of Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to improvements in breech-loading fire-arms especially arranged for discharging what are generally known as metallic cartridges; and my improvements consist, first, in a vertical sliding breech, in combination with the rear of the barrel, the latter being so recessed as to receive the head of the metallic cartridge; secondly, in a movable block arranged on the sliding breech, substantially as described hereinafter, and forming a medium of communication between the hammer and the metallic cartridge for the purpose of discharging the latter; thirdly, in furnishing the bar by means of which the spent cartridge is extracted with an inclined notch so arranged in respect to the head of the metallic cartridge that when the latter is discharged a portion of the head will penetrate the notch, and thereby become so connected with the end of the bar that the extraction of the cartridge may be effected with certainty.

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

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a side view of a sufficient portion of a breech-loading fire-arm to illustrate my improvements; Fig. 2, a sectional view; Fig. 3, a sectional plan on the line 1 2, Fig. 2; Fig. 4, a transverse vertical section on the line 3 4, Fig. 1; Fig. 5, a sectional view of a portion of my improvements, and Fig. 6 an enlarged sectional view of a portion of the rear end of the barrel with the metallic cartridge.

Similar letters refer to similar parts throughout the several views.

A represents part of the barrel, and B part of the stock, of the fire-arm, C being the frame which forms the junction of the stock with the barrel. In this frame is formed an opening for receiving the vertical sliding breech D, which is situated at right angles to the bore of the

barrel, and which may be operated by a lever bent so as to form the trigger-guard, or by an independent lever, as seen in my patent of September 12, 1848, the front face of the sliding breech fitting snugly against the projection *a* at the rear of the barrel, as seen in Fig. 2, and this projection being recessed for the reception of the head or enlargement *x* of the metallic cartridge E. On one side of the sliding breech is a curved recess for receiving a curved block, F, which is confined to the breech by a set-screw, *b*, passing through an oblong slot in the block, so that the latter can have a limited movement in its curved recess. The lower end of the block is provided with a small projection, *y*, so situated as to coincide with a point in the rear and near one edge of the head *x* of the metallic cartridge, as seen in Fig. 3 and in the enlarged view Fig. 6, the upper end of the block being suitably formed for receiving the outer end of the hammer G. (See Fig. 1.) A spring, *d*, fastened into an inclined recess in one side of the sliding breech, serves to maintain the block F in an elevated position and its projection *y* free from contact with the metallic cartridge when the hammer is raised.

In one side of the frame C, which connects the barrel with the stock, is a recess for receiving the sliding bar H, which has at one end a head, *i*, of a proper form for being handled by the finger and thumb, and at the opposite end a projection, *h*, fitting into a recess at the rear of the barrel, the end of this projection being arranged to catch against the inside of the head *x* of the metallic cartridge, and having an inclined notch. (Best observed on reference to the enlarged view Fig. 6.)

On the upper edge of the sliding bar H is a pin, *j*, the end of which catches into a notch in a small block, *m*, the latter being arranged to slide in a chamber formed in the frame C, and containing a spiral spring, *n*, which is confined to the chamber by a set-screw or plug, *q*. The sliding bar H is maintained in its place by the plate I and set-screw K, after the removal of which and after the detachment of the hammer the bar may be withdrawn from its place.

It will be observed on reference to Fig. 4 that there is a concave depression, *t*, on the upper edges of the sliding breech, this concavity coinciding or nearly coinciding with the lower edge of the head *x* of the metallic cartridge

when the breech has been depressed to its lowest point. The object of this arrangement will be rendered apparent hereinafter. It will also be seen on reference to Figs. 2 and 3, that the upper edge of the frame C, which connects the barrel with the breech, is hollowed out or cut away at *w*, so as to admit of the ready admission of the cartridge to its place in the rear of the barrel when the sliding breech is depressed.

Operation: After lowering the breech to the position shown in Fig. 4, the cartridge is inserted into the barrel, its head *x* fitting snugly into the recess of the projection *a*. After this the breech is raised, the hammer cocked, and the fire-arm is ready to be discharged. On releasing the hammer it will strike the curved block F, suddenly depress the same so that its projection *y* will pierce the edge of the head *x* of the metallic cartridge and explode the detonating material with which the head is filled, thereby discharging the load. It will be observed on reference to Fig. 6 that when the projection *y* of the block F strikes the edge of the enlargement *x* of the metallic cartridge E, that portion of the enlargement struck by the said projection will be driven into the inclined notch of the projection *h* of the sliding bar H. After discharging the load, the hammer is elevated and the sliding breech depressed to the position shown in Fig. 4, in order that the spent cartridge may be withdrawn. This is done by means of the sliding bar H, the head *i* of which is seized between the finger and thumb of the operator, who pulls the bar in the direction of the stock, and thereby withdraws the spent cartridge, the flange of which has by the action of the hammer become connected with the pro-

jection *h* of the bar H. During the extraction of the cartridge the head is guided by the concavity or depression on the upper edge of the sliding breech. After thus withdrawing the cartridge, the bar H is allowed to be moved back to its former position by the action of the spiral spring *n*, another cartridge is then inserted into the bore of the barrel, and the above-described movements are repeated.

I do not desire to claim, broadly, the use of a vertical sliding breech in connection with breech-loading fire-arms; but

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

1. The vertical sliding breech D, in combination with the rear of the barrel when the latter is recessed for the reception of the head *x* of a metallic cartridge, substantially as set forth.

2. The block F, arranged on the sliding breech substantially as set forth, and forming a medium of communication between the hammer and the metallic cartridge, for the purpose of discharging the latter, as described.

3. The inclined notch on the end of the projection *h* of the sliding bar H, the said notch being so arranged in respect to the head *x* of the metallic cartridge that when the latter is discharged a portion of the head will penetrate the notch, as set forth, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHRISTIAN SHARPS.

Witnesses:

JOHN WHITE,
CHARLES E. FOSTER.