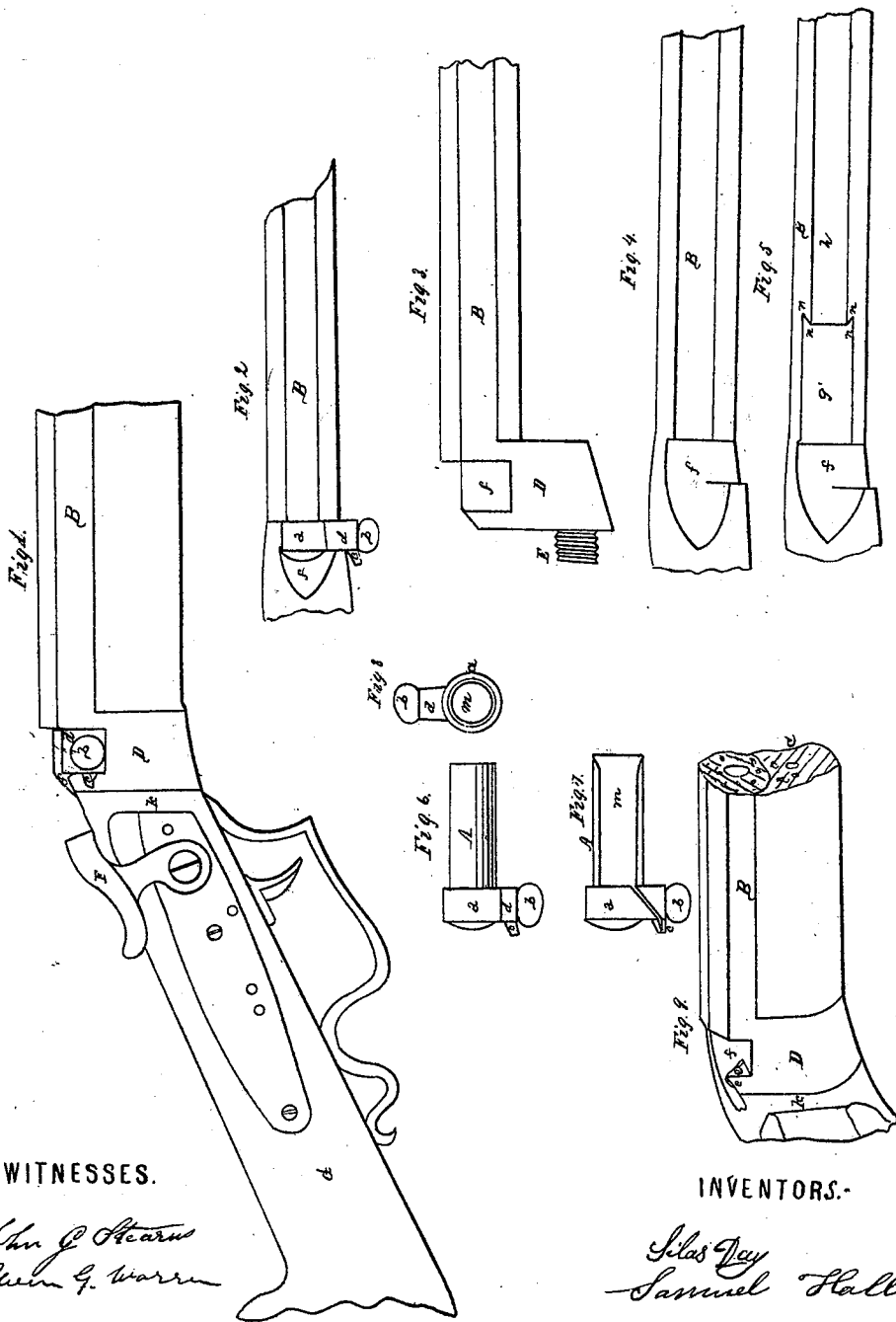


HALL & DAY. Breech-Loading Fire-Arm.

No. 1,461.

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WITNESSES.

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IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. 1,461, dated December 31, 1839.

To all whom it may concern:

Be it known that we, SILAS DAY and SAMUEL HALL, have invented a new and useful Improvement in Fire-Arms; and we do hereby declare that the following is a full and exact description.

The name of this invention is "Day's Improved Gun-Breech."

The nature of it consists in inserting an extra breech or charged chamber into the open breech of the gun and securing it in its place by turning down a projection into a notch.

To enable others skilled in the business to make and use our invention, we proceed to describe its construction and operation, reference being had to the drawings hereunto annexed and making part of this specification.

It resembles a common gun in its barrel, stock, lock, and percussion-hammer. The breech is open, so that one may see through from end to end. There is an enlargement in the barrel at the breech end (see Fig. 5) made to receive the extra breech or charged chamber. There is a recess, *f*, back of the barrel, which admits the extra breech A into it. It is rounded or hollowed out at the bottom, and has a notch on the percussion side, into which the projection *d* of the extra breech is thrust to hold it secure while fired. It is also deepened at the bottom, so that the notch extends in as far as the center of the barrel at the bottom.

The extra breech, Figures 6, 7, and 8 of the draft: This is a small piece with a powder-and-ball chamber in it about an inch and a quarter in depth. The outer edge of the bore is enlarged or countersunk, so that the ball when pressed in will remain firm. The other end has a shoulder about an eighth of an inch larger all round. This shoulder extends about half an inch, or but three-eighths back. On one side of this shoulder is a projection, *d*, about half an inch, in which is inserted the cone for the cap on the back part near the top. There is also a "knob," *b*, on this projection, to serve as a handle to place it in the notch. This notch *e* is made deep in the bottom of the recess, and the projection of the extra breech must be made to fit it. The use of the notch is to hold in firm the charged chamber or extra breech A when fired, the percussion-cap being brought in the right position for the hammer by turning down the

projection into the notch. The use of the shoulder is to prevent the escape of fire or smoke backward. The use of the countersink or enlargement at the outer end of the extra breech (see Fig. 7) is, by entering into a circular groove, *n*, in the enlargement of the barrel, to prevent the escape of fire and smoke, and also to hold the ball secure when the extra breech is charged and put into the cartridge-box. The barrel has a projection, *D*, at bottom (see Fig. 2) of the shape of the stock with a screw, *E*, by which it is attached to the "break-off" *k*.

The following is a more minute description by immediate reference to the drawings:

Fig. 1, a perspective view of a part of the gun; Fig. 2, a view of the barrel with the extra breech inserted. Fig. 3 shows the screw by which the barrel is attached to the break-off; Fig. 4, top view of the barrel and recess; Fig. 5, a longitudinal section of the barrel; Fig. 6, view of the extra breech; Fig. 7, longitudinal section of the same; Fig. 8, the extra breech seen at the muzzle; Fig. 9, part of the barrel and stock, showing the notch in perspective.

The same letters refer to the same things in all the drawings.

A is the extra breech; *a*, the shoulder; *d*, the projection; *e*, the cone for the percussion-cap; *b*, the knob; B, the barrel; C, the stock; D, the projection upon the bottom of the barrel of the shape of the stock; E, the screw by which it is attached to the break-off *k*; *e*, the notch; F, the hammer of the lock; *f*, the recess; G, the stock back of the lock; *g*, the enlargement of the barrel to admit the extra breech; *h*, the bore of the barrel; *k*, the break-off; *m*, the bore of the extra breech; *n*, the circular groove in the fore part of the enlargement of the barrel.

Operation: The extra breech is first charged with a due quantity of powder. Then when shot are used a cut wad is put upon it. When a ball is used it may be put in with or without patching. The ball being crowded firmly in will remain safely in its position. This extra breech thus charged is put into the open breech of the gun through the recess *f*, and the projection and knob *d* and *b* turned down into the notch. The percussion-cap having been previously put on, it is now ready to be discharged. A quantity of the extra chambers A being

ready charged and in a cartridge-box, as soon as one is fired it is removed and another put in its place, an operation that requires but a few seconds.

What we claim as our invention, and desire to secure by Letters Patent, is—

The method of retaining the extra breech in its place in the barrel by means of the projection on the extra breech, to which is attached the nipple fitting into a corresponding recess

in the breech-plate D of the barrel, as herein described; but we do not claim as our invention the entire extra or movable breech which contains the charge.

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Witnesses:

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