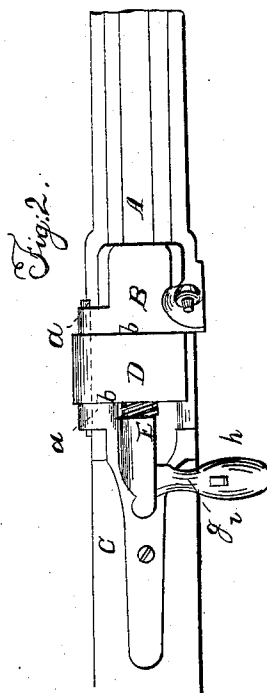
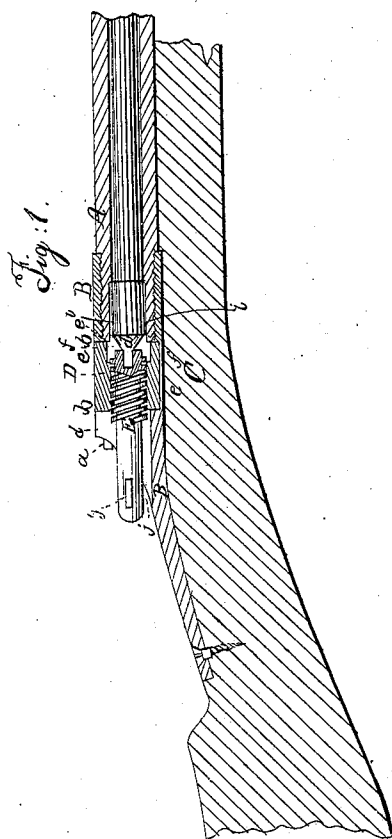
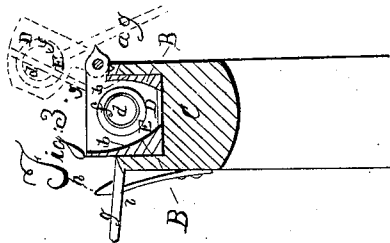


J. H. SEARS.
 Breech-Loading Fire-Arm.

No. 26,526.

Patented Dec. 20, 1859.



Witnesses:
M. W. Camp
Jas. C. Adams

Inventor
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UNITED STATES PATENT OFFICE.

J. HUNTER SEARS, OF BRANTFORD, CANADA WEST.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 26,526, dated December 20, 1859.

To all whom it may concern:

Be it known that I, J. HUNTER SEARS, a citizen of the United States, at present residing at Brantford, in that part of the Province of Canada known as Canada West, 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 longitudinal central section of the breech and parts of the stock and barrel of a gun with my improvement. Fig. 2 is a top view of the same. Fig. 3 is a transverse section taken close in front of the breech.

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

My invention consists in a novel construction of and mode of applying a movable breech, whereby very great facility for loading and a very tight and secure joint between the breech and barrel are obtained.

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

A is the barrel, screwed into the breech-supporter B, which may be made of malleable cast-iron or other metal, and which is secured to the stock C in a suitable manner. The chamber for the charge is within the barrel itself.

The movable breech is composed of two principal parts—viz., the block or breech piece D, which is fitted into a cavity, *b b*, provided for it in the breech-supporter B, and is hinged to one side of the breech-supporter by a hinge, *a a*, the axis of which is parallel with the bore of the barrel, and a screw, E, which screws through the block D, and whose axis when the block D is in the cavity *b b*, stands in line with the axis of the bore of the barrel. To the front end of the screw E there is fitted and firmly secured a stout ring or cap, *f*, of copper, the front portion of which is turned to fit into the rear portion of the chamber *i i* of the barrel and against a shoulder, *c c*, at the rear of the barrel, and which is fitted with a conical plug, *d*, upon which the force evolved by the explosion acts to cause the outward expansion of the said ring or cap *f* against the

sides of the chamber. The neck of the screw E, which extends some distance beyond the rear of the block D, through a lesser cavity, *j j*, provided in the breech-supporter B, behind the cavity *b b*, is furnished with a short lever, *g*, by which to turn it to insert it within and draw it from the chamber *i i*. The screw E should be double threaded, or have so quick a revolution will be sufficient to force the ring or cap *f* as far into the chamber as is desired, and withdraw it therefrom. A shoulder, *e*, is provided on the screw or its ring or cap *f*, to prevent it being drawn back farther than is necessary to withdraw the ring or cap from the chamber. At that side of the gun which is to the left-hand in looking from the muzzle toward the breech there is a latch-spring, *h*, Fig. 3, which, when the breech is closed, enters a slot, *i*, in the lever *g*, and locks the breech.

The operation is as follows: Suppose the breech to be closed, as represented in Figs. 1 and 2, and in black outline in Fig. 3, and the gun to be held with the two hands in the usual manner, the right hand upon the small part of the stock in rear of the breech, the right thumb is placed against the end of the latch-spring *h*, and the latter pulled aside in the slot *i* far enough to liberate the lever *g*, which is then raised by the thumb and finger and thrown over toward the opposite side of the gun, about as far as represented by blue outline in Fig. 3, or far enough to draw the ring or cap *f* of the screw C out of the chamber and bring the shoulder *e* to a bearing against the block D, when the screw being prevented turning any farther in the block, the continued pressure against the lever *g* moves the block on its hinge upward and outward from the cavity *b b* to about the position shown in red outline in Fig. 3, leaving the chamber *i i* open so that a cartridge may be inserted therein through the cavities *j j* and *b b* of the breech-supporter, and when this is done the breech-block B is pushed back into the cavity *b b*, and the lever *g* moved back to the position shown in black outline, which carries the screw forward and forces the ring or cap *f* close up against the shoulder *e* and into the rear of the chamber *i i*.

I wish it to be understood that the collar or cap *f* and the conical plug *d* may be dis-

pensed with by making the front end of the screw E of a valve-like character to fit a seat within and around the rear of the chamber *i*; but the tightness of the joint at the breech may be better insured by the use of the said ring or cap and conical plug.

I do not claim, separately, either the use of a breech-piece, which opens by a movement upward and outward on a hinge parallel with the bore, or of a screw screwing up against or toward a seat at the rear of the chamber; but

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

Combining and applying the hinged breech-piece D and the breech-screw E, substantially as herein specified, so that the force applied to a lever attached to the screw may-serve to first withdraw the screw and afterward throw out the breech-piece, as herein described.

J. HUNTER SEARS.

Witnesses:

FREDK. MARTER,

C. B. WOOD,

Of the town of Brantford, Notary Public, &c.