G. H. FERRISS.

Breech-Loading Fire-Arms

No. 149,456. Patented April 7, 1874.

Fig. 1.

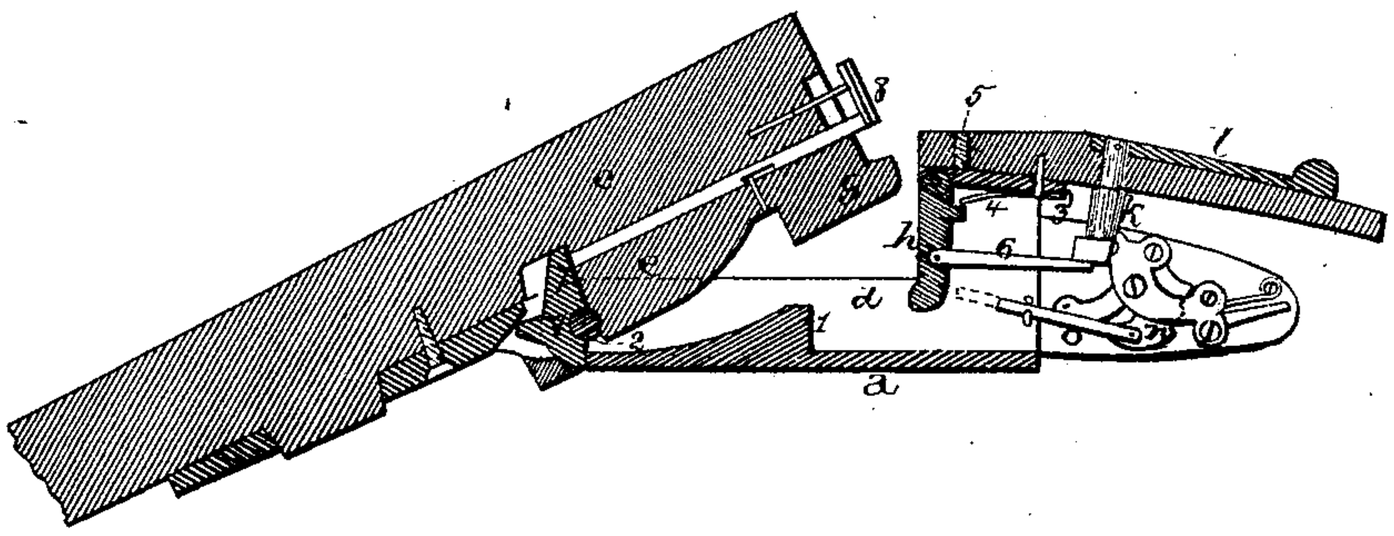
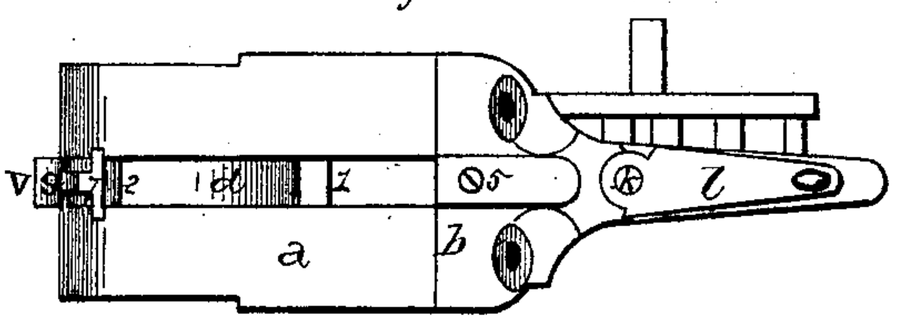


Fig. 2.



Witnesses,
Phil. W. Hale,
J. Wm. Garner.

Inventor.
Geo H. Ferriss
per
G. T. Lehmann, Atty.

UNITED STATES PATENT OFFICE.

GEORGE H. FERRISS, OF UTICA, NEW YORK.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **149,456**, dated April 7, 1874; application filed January 15, 1874.

To all whom it may concern:

Be it known that I, GEO. H. FERRISS, of Utica, in the county of Oneida and State of New York, 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 invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to an improvement in breech-loading fire-arms; and it consists in, first, a flat plate, secured in the upper part of the slot through the break-off, and to which the pawl is pivoted. Passing vertically down through the top of the break-off, and bearing upon the top of this plate, is a set-screw, which forces the plate and pawl downward, as the end of the pawl wears away, so as to properly hold the barrels in position. Second, the manner of fitting the block, having projections to operate the retractor, and prevent the barrels from moving too far into the end of the frame by means of tongue and groove, so that should one of the projections be broken off the block can be readily removed and another inserted. Third, in the arrangement and combination of parts, which will be more fully set forth hereafter.

The accompanying drawings represent my invention.

a represents the frame-work, made in one solid piece, forming the base *b* at the breech of the barrel *c*. Formed in the top of the part *a*, extending under the barrels, is a groove, *d*, into which projects the part *e*, which forms the pivot upon which the barrels turn, and the projection *g*, for locking the barrels in a horizontal position. Near the center of this groove is formed a shoulder, 1, against which the front end of the projection strikes and rests while the barrels are in proper position. Extending across the front end of the slot is the pivot-pin 2, upon which the part *e*, having a circular recess in its end, catches and turns. Cut through the base *b* is a slot, in the under side of which is secured a flat plate or piece, 3, having its front end flush with the face of the base, and to which the pawl *h* is pivoted. To the under side of the piece 3 is fastened a spring, 4, which bears against a projection formed on the pawl and keeps it pressed forward, so that when released, after having been forced backward either by the operating-lever or projection *g*, it will automatically spring forward and lock the barrels in position. Passing down through the top of the base *b*, and bearing against the top of this plate, is a set-screw, 5, by which the pawl can be forced downward as its end wears away, so that it will always catch over the projection *g* in such a manner as to hold the barrels firmly in place. Secured to the top of the crank-shaft *k*, which passes vertically down through the break-off, is a small hand-lever, *l*, which moves horizontally around through about an eighth of a circle, turning the shaft with it. This shaft is connected at its cranked end with the pawl by the connecting-rod 6, so that whenever the shaft is turned by the lever the pawl is drawn backward, so as to release the projection *g* and allow the rear end of the barrels to be elevated. In depressing the end of the barrels the projection forces the pawl backward until it has passed below it, when the pawl automatically springs forward and locks it down. Pivoted to the tumbler *n* of the lock is a locking-bar, *o*, which is moved forward and back with the tumbler in cocking and uncocking the gun. When the gun is cocked the front end of this bar is moved forward until it rests just back of the pawl, so that the pawl cannot be moved backward to release the barrels while the gun is in this condition, and thus all accidents are prevented. In uncocking the gun the tumbler draws the bar backward out of the way of the pawl, when the pawl can be freely operated as before. Passing vertically down through the front end of the frame *a*, and closing the front end of the groove *d*, is the block *v*, provided with a finger or projection, 7, for operating the cartridge-retractor 8, and a finger or stop, 9, which limits the swinging movement of the barrels. This block has a tongue formed on each side, which fit in corresponding grooves in the frame, and the block is then firmly locked in position by the pivot-pin 2.

By thus forming the tongue and grooves this

block is made readily removable, so that should one of the projections be broken off the block can be taken out and another inserted.

Should it be so desired, this block may be simply dovetailed in position, and may be inserted from the side, or in any other manner.

Having thus described my invention, I claim—

1. The combination of a pawl, spring-plate, and set-screw, so as to compensate for the wear on the pawl and projection, substantially as set forth.

2. The combination of the operating-lever, crank-shaft, connecting-rod, pawl, plate, and spring, so as to furnish a means of locking the barrels in position, and compensating for wear, substantially as specified.

3. The combination of the tumbler, locking-bar, and pawl, substantially as shown.

4. The block *v*, made removable and provided with tongues and grooves for securing it in position, substantially as shown and described.

In testimony that I claim the foregoing, I have hereunto set my hand this 10th day of January, 1874.

GEORGE H. FERRISS.

Witnesses:

C. W. SHAPLEY,

A. J. LATHROP.