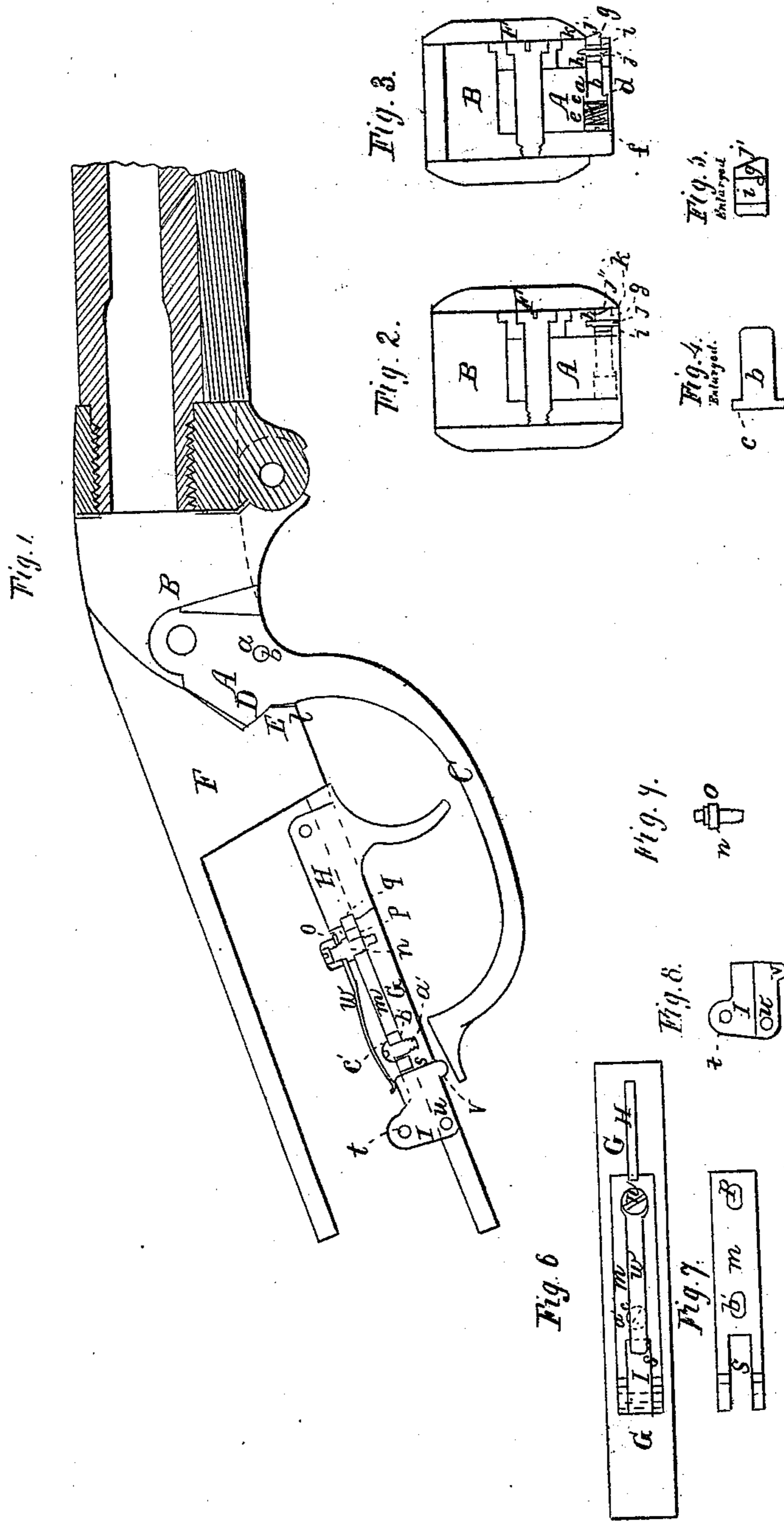


F. CURTIS.
Breech-Loading Fire-Arm.

Patented Jan. 19, 1864.

No. 41,281.



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IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 41,281, dated January 19, 1864; antedated January 2, 1864.

To all whom it may concern:

Be it known that I, FREDERICK CURTIS, of Newton Lower Falls, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and I do hereby declare the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 represents part of a breech-loading fire-arm containing my invention. Fig. 2 is a vertical and transverse section of the same, and Fig. 3 another vertical and transverse section of the same, these two sections being taken through the movable breech and guard-lever and the locking mechanism connected with them, as hereinafter described. Fig. 4 is a section of the spring-bolt, and Fig. 5 a section of the slotted rod, both to be hereinafter described. Fig. 6 is a top view of the trigger-plate and spring-catch, to be hereinafter described. Fig. 7 is a top view of the spring-slide; Fig. 8, a side view of the stud; and Fig. 9, a side view of the screw or standard, all to be hereinafter described.

In carrying out my invention I combine with the trigger and the movable trigger guard or lever of the breech-block a trigger-locking mechanism, which, by an upward movement of the said lever toward the trigger-plate and by other means or devices, shall be unlocked from the trigger and while the lever is depressed or forced away from the trigger-plate, and for the purpose of lowering the breech-block shall lock or bolt the trigger, and thereby prevent accidental discharge of the piece or fire-arm. It is in this locking mechanism and its combination with the trigger and the movable guard or lever of the breech-block, so as to produce effects as stated, that the nature of my invention consists.

The drawings also exhibit the locking apparatus by which the trigger-guard lever C is locked to the breech-block under circumstances and for the purpose as hereinafter set forth.

The locking apparatus of the guard-lever is constructed as follows: A recess, *a*, Fig. 3, is made through the guard-lever A, to contain a spring-bolt, *b*, which has a small head, *c*, to bear against a shoulder, *d*, of the recess *a*, which prevents the bolt *b* from being forced out of the

recess *a* by the spring *e*, which is placed against it, and which is retained within the recess *a* by a screw-head, *f*.

g, Figs. 2, 3, and 5, is a short rod or pin playing within a recess, *h*, formed in the rotating breech B, the said rod having a short slot, *i*, made through it, through which a screw or pin, *j*, passes and confines it within its recess *h*, but which at the same time allows a slight lateral movement of the rod *g*. The outer end of the rod *g* is beveled, and extends a short distance beyond the side face of the breech B, as seen at *j'*, Fig. 3, while its inner end comes an equal distance within the recess *h*, to allow the end of the spring-bolt *b* to enter it. We will suppose the movable breech B turned down away from the barrel and the end of the spring-bolt *b* extending into the end of the recess *h* of the breech, as seen in Fig. 3. Under this state of things, if the breech be brought up into place by force applied to the handle C of the guard-lever, the beveled end of the rod *g* will be carried in contact with the inner side or face, *k*, of the receiver F of the gun, and will be pressed inward, and at the same time will press the end of the spring-bolt *b* out of the recess *h*, and allow the guard-lever to be moved backward until its shoulder D shall have passed over the projection E, formed in the receiver F, Fig. 1. Vice versa, by laying hold of the handle of the guard-lever and rotating the breech until the beveled end of the rod *g* may have passed below the side *k* of the receiver F, the end of the spring-bolt *b* will be pressed by its spring *e* into the recess *h*, and will retain the guard-lever in that position while the breech is away from the end of the barrel or out of the gun. The object of this locking mechanism is to prevent any play or "rattle" of the guard-lever, but principally to prevent the shoulder D of the guard-lever from striking against the under part, *l*, of the receiver F, which would otherwise prevent the breech from being brought up to place.

The trigger-locking mechanism, before mentioned, is constructed as follows: A slide or bolt, *m*, is placed on the trigger-plate G of the gun, and is confined thereto at one end by a screw or standard, *n*, having a shoulder, *o*, which extends over the top of the slide *m* and prevents its being forced upward on pulling the trigger. This screw or standard passes

through a short slot, *p*, formed in the slide *m*, and screws into the trigger-plate, the said slot allowing a slight longitudinal movement of the slide *m*, or sufficient to allow its front end to extend into a notch, *q*, made in the rear end of the trigger *H*.

I is an arm or stud, which passes through an opening, *s*, made in the trigger-plate *G*, and also through an opening or slot, *s'*, made in the slide *m*, the said arm being connected or hinged to the trigger-plate by a pin, *n*, and to the upper part of the slide *m* by a pin, *t*, as seen in the drawings. The lower part of the arm *I* has a projection, *v*, extending below the trigger-plate. A spring, *w*, is confined to the upper part of the screw or standard *n*, and presses on the top of the arm *I*, as seen in Fig. 1 of the drawings. It will be seen that on drawing down the handle of the guard-lever from its place against the under part of the trigger-plate the action of the spring *w* on the arm *I* will force the end of the slide *m* into the notch of the trigger and retain the said trigger immovably in that position. When the handle of the guard-lever is returned to place against the trigger-plate, it will bear against and force upward the projection *v* and rotate the arm *I* on its pin *u*, and withdraw the end of the slide *m* out of the notch of the trigger and release it and allow the gun to be discharged.

In case it should be desirable not to use this safety-catch, it can be forced back away from

the end of the trigger and firmly secured to the trigger-plate by a screw, *a'*, passing through a slot, *b'*, formed in it and screwing into the trigger-plate, the said screw *a'* having a head, *c'*, to cover the top of the slide *m*.

I claim—

1. In combination with the trigger and the movable guard or lever of the breech-block, a trigger-locking mechanism, which, by an upward movement of the said lever toward the trigger-plate and by other means or devices, shall be unlocked from the trigger, and while the lever may be depressed or forced away from the trigger-plate, and for the purpose of lowering the breech-block, shall lock or bolt the trigger, and thereby prevent accidental discharge of the fire-arm.

2. The peculiar mechanism for operating the bolt *m*, the same consisting of the arm or retractor *I* and the spring *w*, (or their mechanical equivalents,) such being arranged with respect to the trigger-bolt *m* and the guard-lever *C*, and so as to operate and be operated in manner and under circumstances substantially as specified.

In testimony whereof I have hereunto set my signature this 15th day of November, A. D. 1862.

FREDERICK CURTIS.

Witnesses:

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