

J. P. TAYLOR.
Breech-Loading Fire-Arms.

No. 138,711.

Patented May 6, 1873.

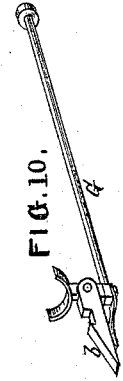
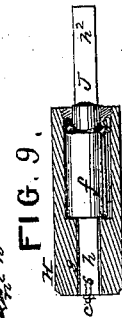
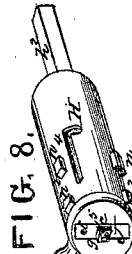
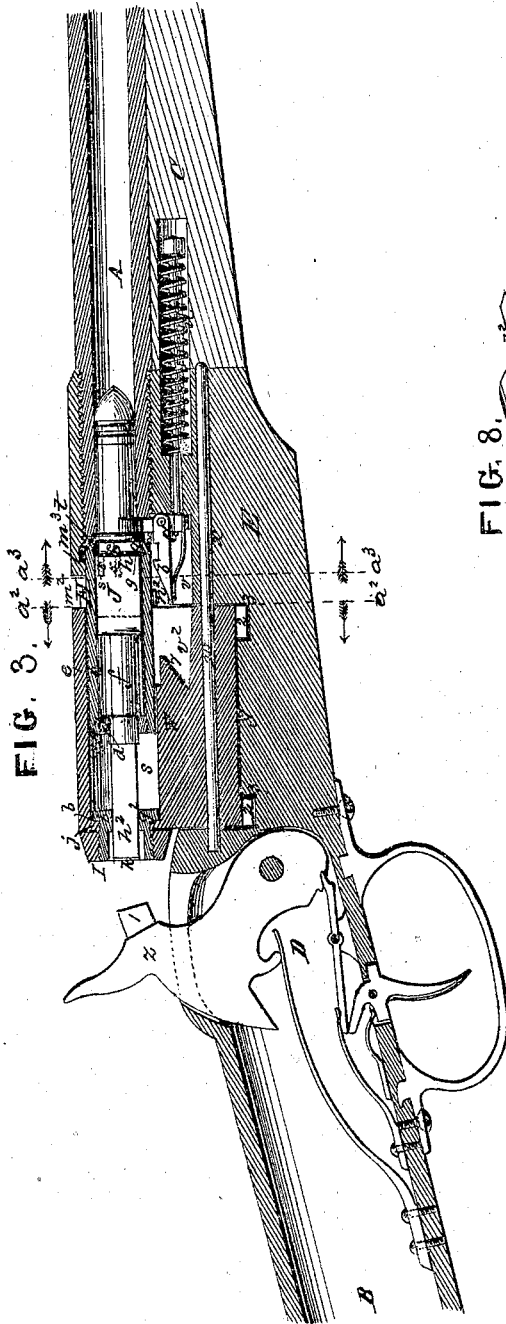


FIG. 6.

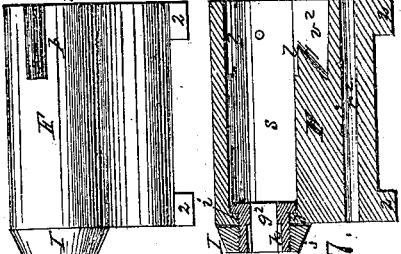


FIG. 5.

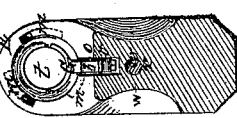
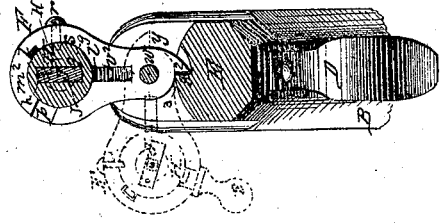


FIG. 7.

FIG. 4.



Witnesses.

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JAMES PATTON TAYLOR, OF ELIZABETHTON, TENNESSEE.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **138,711**, dated May 6, 1873; application filed October 29, 1872.

To all whom it may concern:

Be it known that I, JAMES PATTON TAYLOR, of Elizabethton, in the county of Carter and State of Tennessee, have invented a certain Improved Breech-Loading Rifle, of which the following is a specification:

Nature and Objects of the Invention.

This invention relates primarily to breech-loading rifles, employing laterally-swinging breech-blocks; but certain parts of the invention are applicable to other breech-loading fire-arms. The objects of the invention are superior simplicity and safety and freedom from liability to foul, or to fire before the breech is closed and the locking thereof completed. The first part of the invention consists in the combination, with a laterally-swinging breech-block, of an axial bolt or breech-plug, sliding longitudinally into and out of the breech, and locked within the same by a partial rotary motion. The second part of the invention consists in a movable face-plate for the breech-block, containing an orifice, which receives the beak of the hammer when in proper position, and receiving motion from the breech-bolt through a non-circular firing-pin so as to preclude access to the firing-pin while the bolt is unlocked. The third part of the invention consists in a cartridge-extractor of peculiar construction, operated by the breech-bolt in connection with a tripping-incline and a retracting-spring.

Description of the Drawing.

Figure 1 is a side elevation of a breech-loading rifle illustrating this invention. Fig. 2 is a plan view of the same. Fig. 3 is a vertical longitudinal section on the line *a*, Fig. 2. Fig. 4 is a transverse section on the line *a'*, Fig. 3, looking backward. Fig. 5 is a transverse section on the line *a''*, Fig. 3, looking forward. Fig. 6 is a side elevation of the breech-block. Fig. 7 is a vertical longitudinal section of the same. Fig. 8 is a perspective view of the breech-bolt with the firing-pin therein. Fig. 9 is a horizontal longitudinal section thereof. Fig. 10 is a perspective view of the cartridge-extractor.

The closed and locked position of the breech-block and bolt is illustrated in Figs. 1 and 3,

and by full lines in Figs. 2 and 4; and the open position of the same is illustrated by dotted lines in the latter figures.

General Description.

The improved rifle may have a barrel, A, stock B, barrel-stock C, and lock D, with the immediate appurtenances thereof, of any approved construction; the lock comprising a hammer, *z*, with a thin striking point or beak, 1. The hammer is screwed into a metallic waist-block, E, which also receives and supports a laterally-swinging breech-block, F, and a cartridge-extractor, G. These with their appurtenances complete the structure. The waist-block E comprises a recess, *y*, and longitudinal socket *x* to receive the breech-block F and its pivot *w*, a shouldered cavity, *v*, to receive the cartridge-extractor G and its spring *u*, and a circular breech-cavity, *t*, coincident with the rear end of the barrel. The breech-block F is arrested by projections 2 on the bottom thereof, engaging with stop-notches 3 in the recess *y*, and is constructed with a cylindrical cavity or bore, *s*, in line with the barrel A, and breech-cavity, *t*, and of similar size with the latter, to receive a breech-bolt or plug H. This bolt is retained by a screw, *r*, entering an L-formed stop-groove, 4, and is furnished with a handle, *q*, by which it receives certain longitudinal and partial rotary motion. A slot, *p*, in the breech-block receives the handle *q* when the bolt is retracted. In its rotary motions the handle works in a space, *o*, at the front end of the breech-block. In these movements lugs *n n'* are carried behind shoulders *m* formed by bayonet-grooves within the breech-cavity and lands *m'* in the face of the breech-block. When the bolt is retracted these lugs enter longitudinal grooves *l* within the breech-block. A face-plate, I, containing an aperture, *k*, to receive the beak of the hammer is swiveled to the rear end of the breech-block by means of a flange, *j*, within the latter, occupying a circumferential groove, *i*. A firing-pin, J, is arranged within the breech-block and breech-bolt, and is constructed with non-circular ends *h h'* occupying corresponding perforations *g g'* in the front end of the breech-bolt and in the face-plate. It thus receives the rotary motions of the

former and imparts them to the latter, which is so moved in this manner as to displace the hammer aperture *k* whenever the breech-bolt is not perfectly locked. An enlargement, *f*, with parallel sides, occupying a corresponding cavity, *e*, of greater length in the breech-bolt, and a stop-nut, *d*, closing the rear end of this cavity, serves to attach the firing-pin to the breech-bolt, and to allow it the requisite limited movement independently of the latter. The front end *h* of the firing-pin is extended vertically, corresponding with the enlargement *f* so as to receive the sockets 5 6 for a shiftable firing-point, *c*, for use with either center-fire or rim-fire cartridges, as may be preferred. The cartridge-extractor *G* is furnished at its front end with a spring-catch, *b*, having an upwardly-presented face so as to engage with the lugs *n* on the breech-bolt, by which the extractor is thus withdrawn. An extension, *v*², of the cartridge-extractor cavity *v* into the breech-block *F* receives the extractor during this movement, and is formed with an inclined top, 7, constituting a cam, by which the catch is detached from the breech-bolt when the extractor is retracted by its spring *u*.

The breech-bolt may possibly be constructed with but one set of locking-lugs, and other details of construction are variable.

Operation.

The gun is represented in Figs. 1 to 4 as loaded and at "half-cock." The firing operation is not peculiar. The hammer strikes the firing-pin *J* through the orifice *k*, and thus fires the cartridge. After firing, the handle *q* of the breech-bolt *H* is struck up to coincidence with the slot *p*, which action releases the bolt, and brings one of the lugs *n* thereon into mesh with the catch *b* of the cartridge-extractor *G*. The handle *q* is then drawn back until the breech-block is released by the withdrawal of the bolt *H* from the breech-cavity, *t*, and the retraction of the cartridge-extractor *G* by its spring, *u*, the shell having been released, when the breech-block is withdrawn by a lateral movement. A new cartridge is then readily introduced, and the hammer is put at half-cock. The breech-block

is then thrown back into vertical position, and the breech-bolt is projected into the breech-cavity behind the cartridge, and locked by partially rotating it, which movement also returns the face-plate *I* to its position in which the hammer has access to the firing-pin. The piece is now ready for firing. The movements of the breech-bolt are properly limited by the L-groove 4. The piece is adapted for use with center-fire or rim-fire cartridges, as may be preferred, by shifting the firing-point *c*. The breech-bolt is released by loosening the screw *r*, and the firing-pin may then be separated by removing the nut *d*. The parts may thus be detached or put together with the utmost facility. In replacing the breech-bolt and firing-pin within the breech-block, it is important to properly arrange the face-plate, but this may be insured by the shape of the firing-pin.

Claims.

The following is claimed as new:

1. The combination of a laterally-swinging breech-block, *F*, and an axial breech-bolt or plug, *H*, sliding within the breech-block to close the breech-cavity *t* and to furnish the rear abutment for the charge, substantially as herein shown and described.

2. The swiveled face-plate *I* containing the hammer-aperture *k*, in combination with the breech-block *F* and breech-bolt *H* and a firing-pin, *J*, arranged within the same, communicating the rotary motion of the breech-bolt to the face-plate and thereby shifting the hammer-aperture, so as to prevent accidental firing before the bolt is locked.

3. The cartridge-extractor *G*, furnished with the retracting-spring *u* and spring-latch *b*, in combination with the breech-block *F* and breech-bolt *H* constructed with the tripping-incline 7 and lugs *n*, respectively, substantially as herein specified, said extractor being withdrawn by the breech-bolt and returned to its seat automatically.

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Witnesses:

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