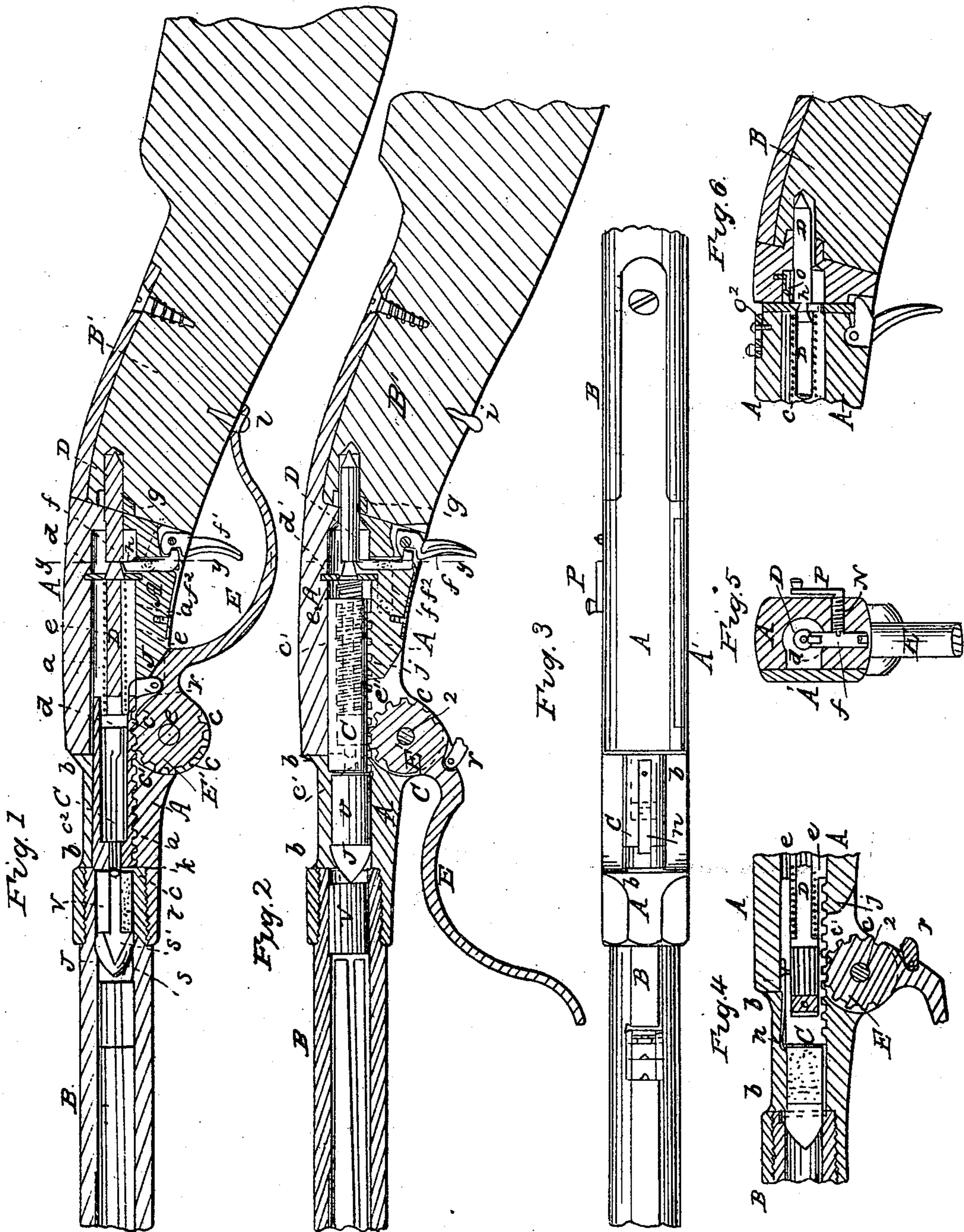


I. B. CONKLIN.

Breech Loader.

No. 86,971.

Patented Feb. 16, 1869.



WITNESSES
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ISAIAH B. CONKLIN, OF BALTIMORE, MARYLAND.

Letters Patent No. 86,971, dated February 16, 1869.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ISAIAH B. CONKLIN, of the city and county of Baltimore, and State of Maryland, have invented a new and improved Breech Loading Fire-Arm; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section of the improved arm, showing the several parts in position for firing, and also showing a centre-fire cartridge in position for being struck by the firing-pin.

Figure 2 is a similar view of the same parts, showing a cartridge in the act of being forced to its place in the breech of the barrel.

Figure 3 is a top view, with a portion of the barrel and the stock broken away, showing a spring-retractor upon the breech-closer, for withdrawing flanged cartridge-shells.

Figure 4 is a sectional view, showing the parts adapted for a flanged cartridge.

Figure 5 is a cross-section through fig. 1, taken at the point indicated by line *y y*, showing the device for locking the firing-pin, when cocked or drawn back.

Figure 6 is a vertical longitudinal section, showing a sliding catch and locking-device for the firing-pin.

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

This invention relates to certain novel improvements on breech-loading fire-arms, and to that class of breech-loaders wherein a firing-pin applied in a movable breech-closer, is used instead of an externally-arranged hammer for igniting the charge.

The nature of my invention consists in a longitudinally-reciprocating breech-closer, operated by a guard-lever, having a toothed segment formed on it, and confined in place, when the parts are in position for firing, by a recoil-block, as will be hereinafter described.

It also consists in combining, with said parts, a spring firing-pin, which is constructed with a recess in it for receiving the trigger-latch, and allowing the latter to arrest the firing-pin when the breech-closer is forced forward, and locked in position for firing the piece, as will be hereinafter explained.

The invention also consists in a tubular cylindrical breech-closer, which is adapted to slide longitudinally in a circular chamber made in the frame of the piece, and which is constructed with teeth upon its bottom side, for receiving and being moved by teeth which are formed on the pivoted end of a vibrating guard-lever, as will be hereinafter explained.

The invention further consists in providing a safety-lock in conjunction with a firing-pin, which is enclosed within the frame of the piece, which lock will prevent a premature or accidental discharge of the piece, when the piece is loaded, and the firing-pin drawn back, as will be hereinafter explained.

The invention further consists in providing a cylindrical tubular breech-closer with a spring-hook, which is adapted to serve as a means for retracting flanged cartridge-shells, when such shells are used, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

The metal frame A, into which the barrel B is screwed, and to which the stock B' is firmly secured, is bored out nearly its entire length, so as to leave a circular chamber, *a*, the axis of which coincides with the axis of the barrel, thereby adapting it to receive within it a cylindrical breech-closer, C, as shown in figs. 1 and 2.

The forward upper portion of the frame A is cut away, just in rear of the barrel B, so as to form a rectangular opening, *b*, for allowing cartridges to be introduced into the chamber *a*, in front of the breech-closer C, preparatory to forcing them into the barrel, and when flanged cartridges are used in conjunction with a retractor, said opening *b* also allows the removal of the cartridge-shells after firing the piece.

The frame A is also constructed with a recess in one side, which allows access to that portion of the chamber *a* containing the trigger and the trigger-latch, and which is closed by means of a removable tightly-fitting plate, A', having one of the ears *c* formed upon its lower forward part, between which, and the ear *c*, which is formed on the frame A, a toothed segment of the lever-guard is fitted.

The cylindrical breech-closer C is constructed with teeth *c'*, upon its lower side, which do not project beyond the periphery of this piece, but are formed by cutting transversely into its periphery.

This closing-piece C is also made tubular; that is to say, it is made with a large central bore, terminating at its front end in a small hole, through which latter, the point *c*² of the firing-pin passes to strike upon the priming of a centre-fire cartridge.

This point *c*² is formed upon the front end of a firing-pin, D, which is constructed with a cylindrical head, *d*, upon its forward end, which fits the enlarged bore of the breech-closer C, and which forms a shoulder, between which, and a guide-piece, *d'*, a spring, *e*, is coiled around the stem of the firing-pin, as shown in figs. 1 and 2.

The piece *d'* is fixed securely into the chamber *a*, just in front of the trigger-latch *f*, and it serves as a rear guide for keeping the firing-pin in its place, in a line coinciding with the axis of the barrel B.

In rear of the guide-piece *d'*, a hole, *g*, is made through the rear end of the frame A, for allowing the firing-pin to be drawn back until the trigger-latch *f* catches into a notch, *h*, formed in this pin, as shown in figs. 1 and 2.

The latch *f* is arranged beneath the firing-pin D, and plays up and down in a hole made through frame A, as shown. It has a hook or nose formed on its lower end, which is acted upon by a hooked projection formed

on the front upper end of the trigger f^1 , so that, by drawing back the trigger, the said latch will be moved downward, and when the trigger is released, the said latch will be forced upward by its spring f^2 .

The upper end of this latch is bevelled, and the rear end of the firing-pin is made conical, so that when this pin is drawn back, it will depress the latch, and allow it to spring up into the annular notch h in this firing-pin.

The lever E is constructed with a toothed segment, E' , upon that end which is pivoted between the jaws or ears c , the teeth of which engage with those which are formed on the breech-closer C , so that by vibrating this lever, the closer will be moved forward and backward in a direction with its length.

The lever E is curved, as shown, so as to form a trigger-guard when adjusted back, and fastened by a friction-catch, i , as shown in fig. 1.

When the lever E is brought back, as in fig. 1, the forward end of the breech-closer will confine a cartridge in place in said barrel, and the force of recoil caused by the discharge of the ball, will be resisted by a recoil-block, r , which is interposed between the rear end of the breech-closer and a shoulder, j , on the frame A .

This recoil-block is pivoted to the lever E , and may be acted upon by a spring, so that in the act of bringing the lever back, and forcing a cartridge into the barrel, this recoil-block will arrange itself snugly in the position above stated; then, in moving the lever forward to retract the breech-closer, the recoil-block will be withdrawn from behind this closer.

It will be seen, from the above description, that I employ, in conjunction with a tubular reciprocating breech-closer and guard-lever, a firing-pin, which is constructed with an extension behind its shoulder-catch, h , which will serve, in conjunction with a guide-piece, d' , as a means for keeping this pin in its place, and allowing of the use of a spring, e , for throwing this pin forward, and firing the charge.

When the lever E is moved forward to the position shown in fig. 2, the breech-closer and firing-pin will both be forced backward, and the latch f will catch in front of the shoulder h , and arrest the firing-pin.

A cartridge is then dropped into the recess b , in front of the breech-closer, and the lever E drawn back to the position shown in fig. 1, which movement will force the cartridge home in the barrel, and bring the recoil-block behind the breech-closer.

The piece is then discharged by releasing the firing-pin, and allowing its spring e to force its point forward against the priming in the cartridge.

The reduced point e^2 , of the firing-pin D , is in a line coinciding with the axis of the barrel, and is therefore adapted to strike centre-fire cartridges, which may be made with or without flanges.

If made without flanges, the exploded shells are forced forward through the barrel, in front of succeeding charges, but if made with flanges, the breech-closer should be provided with a spring-hook, n , shown in figs. 3 and 4, which will serve as a retractor for withdrawing the shells from the breech of the barrel, and allowing them to be removed through recess b .

By having a firing-pin attached to the front end of the stem D , on one side of the centre thereof, flanged cartridges, with the priming in the flanges, may be used.

I construct the ball J for the centre-fire cartridge, with a concentric conical recess, s , in its rear end, and fit a conical wedge, s' , into this recess, which cone has an anvil-pin, t , formed on or applied to it, that serves as the anvil against which to explode the priming.

In the centre of the but of the cartridge-shell v , is a cupped depression, forming an outwardly-projecting tit, k , and in this cup the priming is put, and the rear end of the anvil-pin t fitted.

When the point of the firing-pin strikes the tit on the cartridge-shell, it will explode the priming, and ignite the powder in this shell; the cone s' will then be forced forward, and expand the rear end of the ball, causing it to enter the riflings and prevent windage.

In fig. 5, I have represented a device for preventing a premature discharge of the piece when it is "cocked."

This device consists of a screw-stem, N , which is tapped laterally through one side of the frame A , and constructed with a small crank-handle, P , and thumb-knob on one end, and a reduced point on its inner end, which latter is adapted for entering a notch in the latch f , and locking this latch in place while holding the firing-pin back.

By moving the handle P one-quarter around, more or less, in one direction, the screw-stem N can be made to catch and lock the trigger-latch, and by reversing the movement, the screw-stem will release said latch.

Fig. 6 is a modification of the device just described, and consists of a slotted sliding catch, R , acted upon by a spring, O , which presses it down against a trigger, O' , so that, by raising this slide, the firing-pin is released.

On top of the frame A is a slide, O^2 , inserted into a recess, by moving which over the end of the sliding catch R , this catch will be locked in place.

Having described my invention,

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

1. The hollow breech-closer C , made of one piece, with a hole through its solid end, and with teeth formed in its circumference, in combination with the toothed segment E' , and with a spring-bolt, D , having a firing, or hammer point, e^2 , formed on the striking-end, substantially as described.
2. The tubular breech-closer C , and spring firing-bolt D , the latter having an extension in rear of its shoulder h , in combination with guide d' , substantially as described.
3. The fixed guide d' , applied in the chamber a , formed in frame A , and interposed between the tubular breech-closer C and catch f , said guide serving the double purpose of guiding and steadying the rear part of bolt D , when this bolt is released from catch f , and also of an abutment for the bolt-spring e , substantially as described.
4. The annular shoulder h , formed in the cylindrical bolt D , in combination with catch f , and a device which will lock this catch when required, substantially as described.
5. In combination with a reciprocating tubular breech-closer C , made of one piece, and having teeth formed in its circumference, and a spring-bolt, D , working in it, the vibrating toothed segment E' , with a recoil-block, r , pivoted to it, substantially as described.
6. The self-adjusting recoil-block r , pivoted to the lever-segment E' , in combination with recoil-shoulder j , and a tubular breech-closer C , having a firing-bolt working in it, substantially as described.
7. The locking-device N , applied to hold latch f of an arm, constructed substantially as described.

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Witnesses:

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