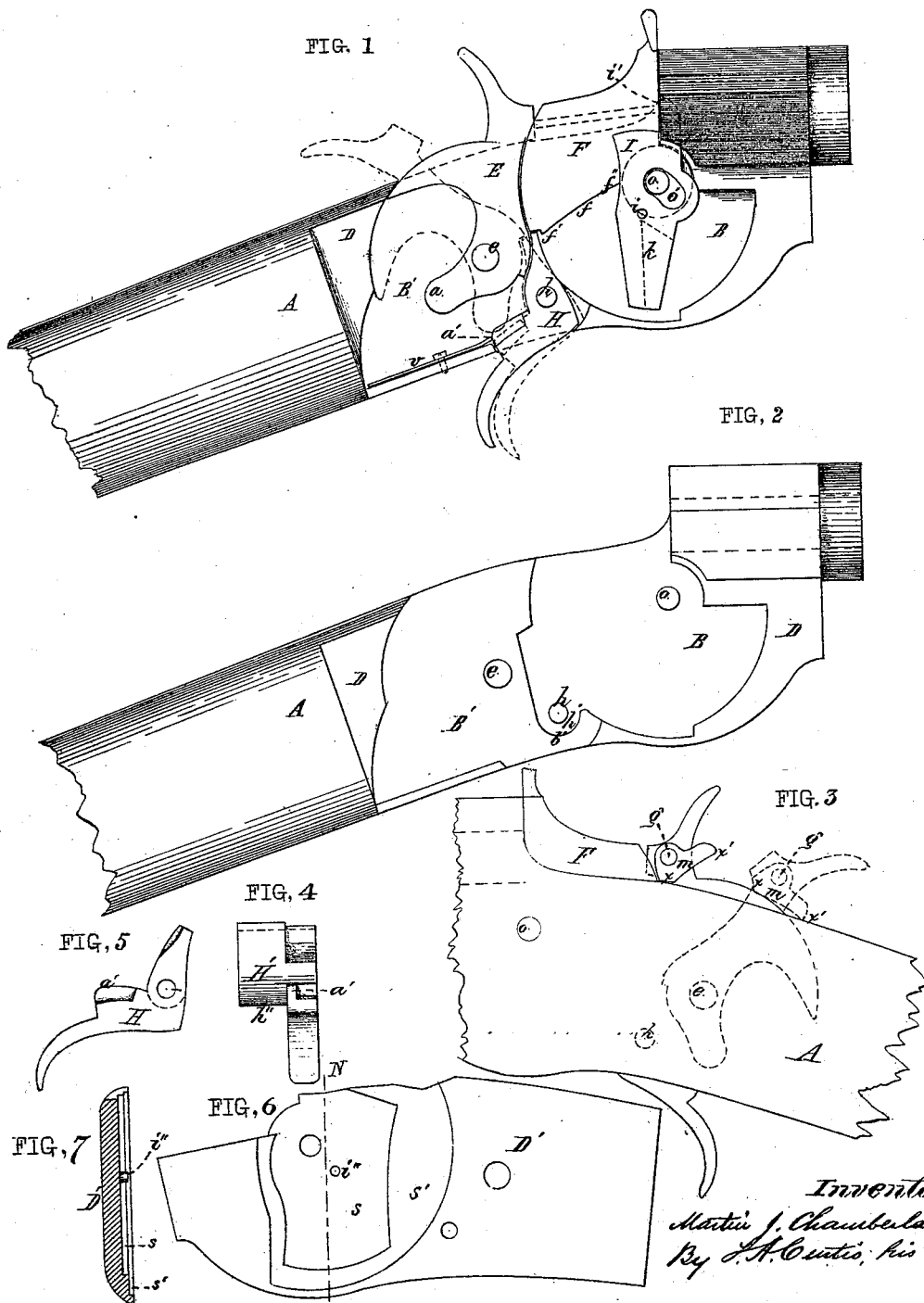


M. J. CHAMBERLAIN.
Breech Loading Fire Arm.

No. 111,814

Patented Feb. 14, 1871.



Witnesses—*C. E. Buckland*
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MARTIN J. CHAMBERLIN, OF SPRINGFIELD, MASSACHUSETTS.

Letters Patent No. 111,814, dated February 14, 1871.

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, MARTIN J. CHAMBERLIN, of Springfield, in the county of Hampden and State of Massachusetts, 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 thereof, reference being had to the accompanying drawing making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side view of a gun made according to my invention, with the lock-plate removed to show the lock.

Figure 2 is a side view of the lock-frame, with the plate and the different parts of the lock removed to better show the recesses made in the frame to receive the several parts of the lock.

Figure 3 is a reverse side view of the arm, showing the safety-button attached to the upper part of the hammer, and in its different positions.

Figure 4 is an end view of the trigger.

Figure 5 is a side view of the same.

Figure 6 is an inside view of the lock-plate; and

Figure 7 is a vertical transverse section of the lock-plate through line N of fig. 6.

My invention relates to the construction of breech-loading fire-arms, whereby a cartridge-retractor is made to swing with an accelerated movement by operating it with the lower end of the breech-block, and whereby the breech-block is unlocked by means of a projection or elongation upon the lower end of the hammer, which presses down the rear end of the trigger, when the hammer is thrown back; and whereby the trigger may have a firm bearing within the recess made in the lock-frame, so that, in case the pin upon which the trigger usually has its bearing becomes broken, it will still operate in the recess independently of its pin or pivots; and whereby the gun is prevented from being discharged prematurely by means of a safety-button attached to the top of the hammer, all constructed and arranged as will be hereinafter fully explained.

In the drawing—

A represents the stock of the gun, wherein is made the recess B, of sufficient depth to receive the breech-block F and the trigger H, and also another more shallow recess, B', to receive the hammer E.

o is the pivot, upon which the breech-block swings;

h is the pivot for the trigger; and

e, another pivot for the hammer; and when these three parts are in place the outside surface of each is nearly flush with the part D, which is made plain, to receive the lock-plate D'.

Upon the outside of the breech-block F is placed the retractor I, in which is made a circular slot, *o'*, described from the center *i*, the end of the pivot *o* pro-

truding through the said slot *o'*, and upon the upper end of the retractor I is made the piece *i'*, projecting upward, and into a recess in the rear end of the barrel, and quite near to the bore.

Upon the inside of the retractor is made a projection, say of about one-sixteenth of an inch thick, and of a form shown by the dotted line *k*.

The lower side of the breech-block is curved, as shown at *f*, and a small pivot projects from the inside of the lock-plate, as shown at *i'* in fig. 7, so that when the lock-plate is secured in place the said pivot enters the small hole *i* in the retractor I, and when thus connected, if the breech-block F be swung backward and downward, the lower end of the curve at *f'* first strikes the lower end of the projection shown at the dotted line *k*, which starts the retractor swinging upon its pivot *i'* in the lock-plate, and then the upper part of the curve at *f''* of the breech-block strikes the upper part of the projection *k* near the pivot, which gives the retractor an accelerated movement, the horn or projection *i'* moving backward to extract the shell from the barrel.

That part of the lock-plate immediately around the pivot *h* is recessed to the same depth as the part B, or to a sufficient depth to leave a bearing below said pivot at *b'*; and the trigger has an inner projection, H', thereon, which enters the recessed part around the pivot *h*, and the lower part of said projection is made circular or cylindrical, to fit the bearing *b'* at the bottom of the recessed part *h'*, so that, by this construction, should the pivot *h*, upon which the trigger operates, become broken by accident, the trigger would still continue to perform its proper function by operating upon the bearing *b'*.

The trigger has also another vertical projection, *a'*, shown in figs. 1, 4, and 5, and the lower end of the hammer E is elongated, as shown at *a*, so that when the hammer is thrown back, as at full cock, said projection *a* strikes against said vertical projection *a'* upon the trigger, forcing the rear part of the trigger downward and the upper part of the trigger backward, locking the hammer at full cock, and releasing the breech-block so that it may be thrown back.

The small spring *u*, secured to the lock-frame and pressing upon the trigger, is intended to cause the trigger to perform its proper functions in this respect; but if the said spring should become broken, the arrangements of the projections *a* and *a'* are intended to supply the place of said spring.

In fig. 3 is shown a device for preventing any premature discharge of the arm, and consists of a safety-button, *m*, secured to the upper part of the hammer by a pivot, *g*, upon which the button turns.

When carrying the gun, and to prevent the hammer from striking the end of the firing-pin, which pro-

trudes slightly through the rear of the breech-block, the button *m* is set with the small end *x* parallel with the striking face of the hammer.

When set in this way, if the hammer is let forward even with its full force, the small end *x* of the button will strike the rear end of the breech-block, and the hammer, not touching the firing-pin, the cartridge will not be exploded.

If, when in this position, the hammer be brought back to a full cock, the arm *x* strikes upon the top of the lock-frame or stock, and the button is turned into the position shown in dotted lines in fig. 3, and by pulling the trigger the hammer falls, striking the firing-pin, and with the button *m* in the position shown in black lines in fig. 3.

The lock-plate is recessed slightly at *s*, to permit the free movement of the retractor *I*, and at *s'*, to permit the same free movement of the breech-block.

I am aware that a breech-loading fire-arm, constructed very similarly, in some respects, to that herein shown and described, has been made heretofore, and for which Letters Patent of the United States were granted to H. W. Chamberlin and myself, dated January 8, 1867, and numbered 60,998, and upon which I intend this as an improvement.

Having, therefore, thus described my invention, What I claim as new, and desire to secure by Letters Patent, is—

1. The retractor *I*, moving upon the pivot *i* and having the projection *k* thereon; and operated by means of the curved part *f* of the breech-block, all constructed substantially as described.

2. The projection *H* upon the trigger, operating within the recess *h* and upon the bearing *b'*, substantially as herein described.

3. The vertical projection *a'* upon the trigger, in combination with the elongated part *a* of the hammer, all constructed and operating substantially as described.

4. The safety-button *m*, secured to the hammer upon the pivot *g*, in combination with the breech-block *F* and lock-frame *A*, constructed and operating substantially as set forth.

MARTIN J. CHAMBERLIN.

Witnesses:

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CLARENCE BUCKLAND.