ANDREW E. WHITMORE.

3 Sheets--Sheet 1.

Breech-Loading Fire-Arm.

117,843.

Patented August 8, 1871.

Fig. 1.

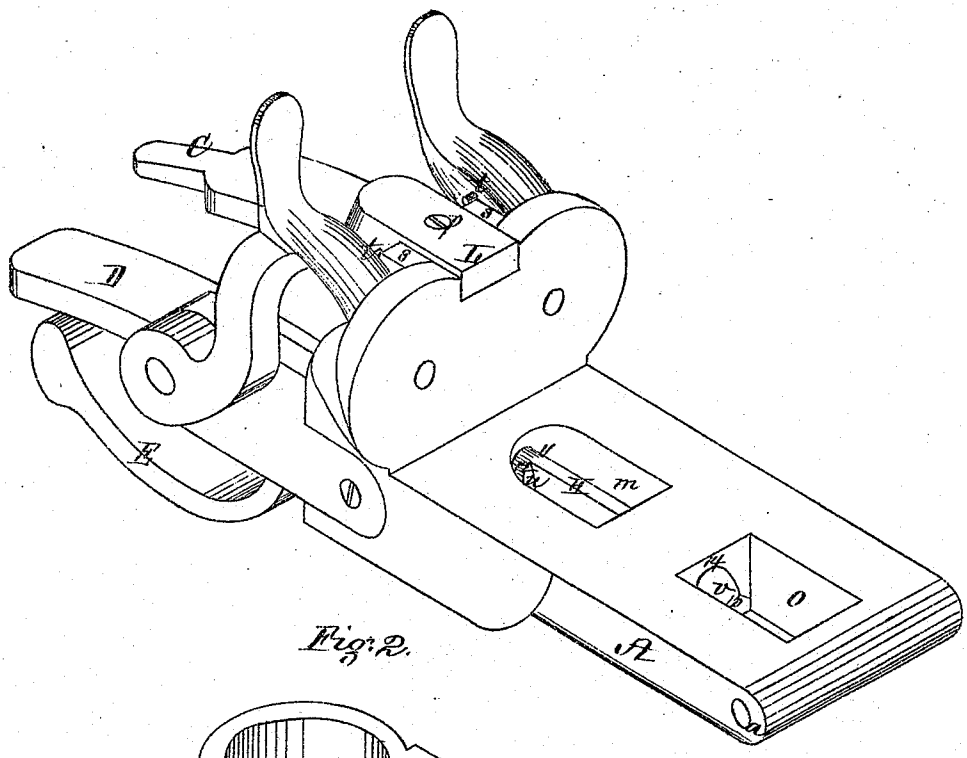
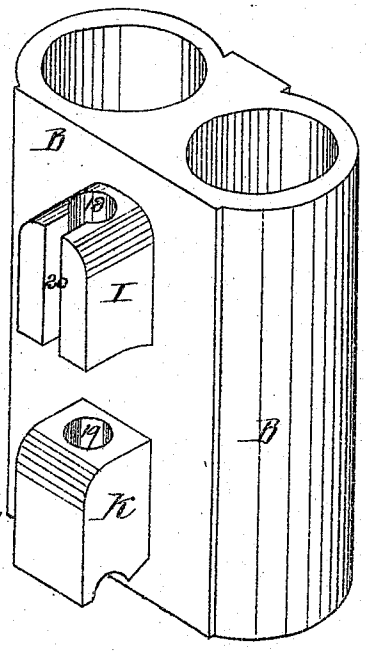


Fig. 2.



Witnesses,
N. W. Stearns
W. J. Cambridge

Inventor,
A. E. Whitmore

ANDREW E. WHITMORE.

3 Sheets--Sheet 2.

Breech-Loading Fire-Arm.

117,843.

Patented August 8, 1871.

Fig: 3.

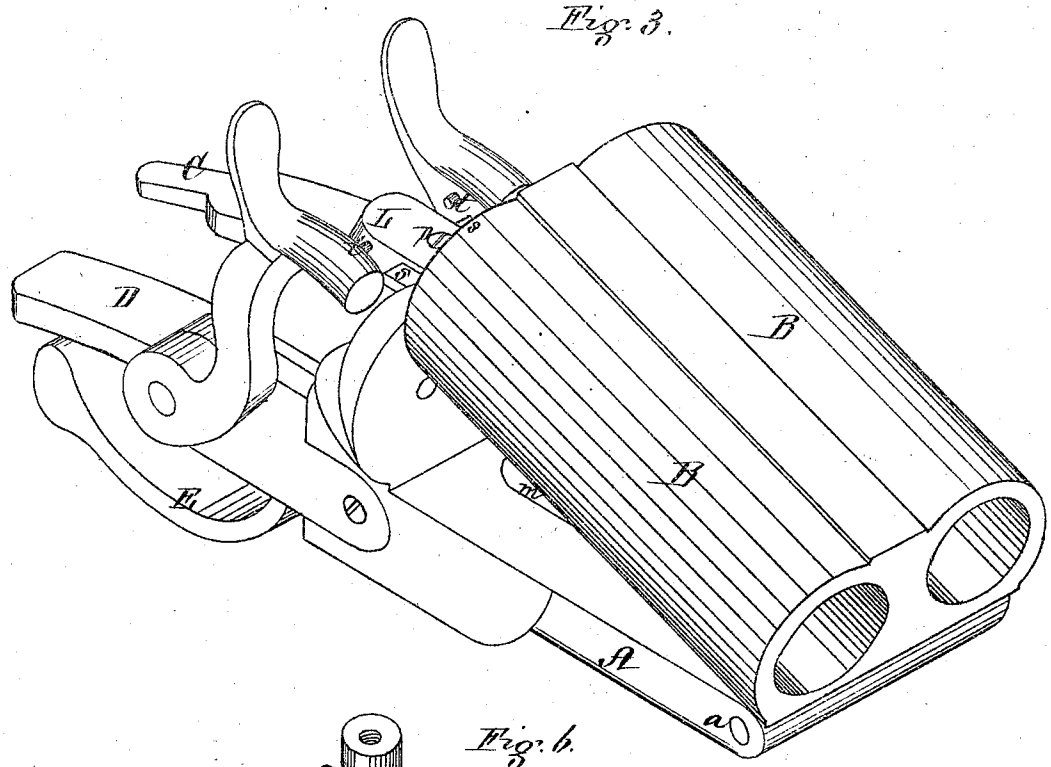
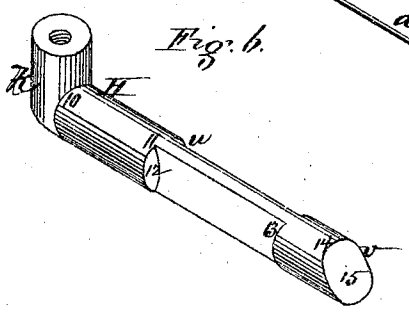


Fig: 6.



Witnesses,
N. W. Stearns
W. J. Cambridge

Inventor,
A. E. Whitmore

ANDREW E. WHITMORE.

3 Sheets--Sheet 3.

Breech-Loading Fire-Arm.

117,843.

Fig. 4. Patented August 8, 1871.

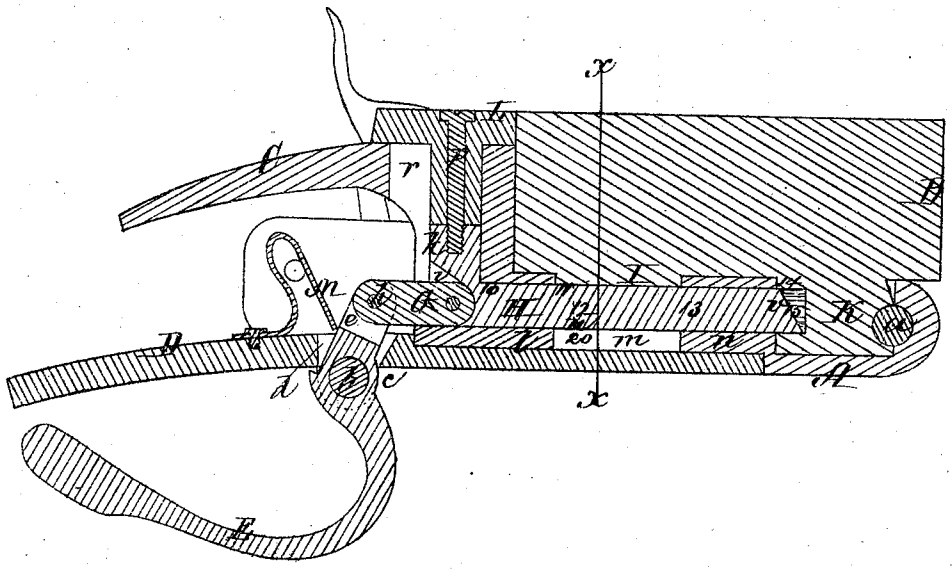
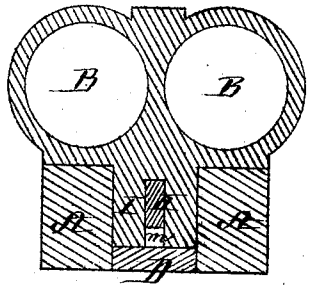


Fig. 5.



Witnesses,
N. W. Stearns
W. J. Cambridge

Inventor,
A. E. Whitmore

UNITED STATES PATENT OFFICE.

ANDREW E. WHITMORE, OF ILION, NEW YORK.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 117,843, dated August 8, 1871.

To all whom it may concern:

Be it known that I, ANDREW E. WHITMORE, of Ilion, Herkimer county, State of New York, have invented certain Improvements in Breech-Loading Fire-Arms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of the breech-block and other portions of a gun having my improvements applied thereto. Fig. 2 is a perspective view representing the rear portion of the barrels of a double-barrel gun constructed in accordance with my invention. Fig. 3 is a perspective view representing the barrels unlocked and swung down on their pivot, the hammers being held at half-cock. Fig. 4 is a longitudinal central section with the barrels locked in place and one of the hammers represented in its firing position. Fig. 5 is a transverse section on the line *x x* of Fig. 4; Fig. 6, the bolt for locking the barrels to the breech-block.

The first part of my invention consists in a bolt passing into slotted and recessed lugs or projections formed on the under side of the barrel near the point where it is pivoted to the breech-block, the bolt being thrown forward and backward in a direct line by operating the guard-lever or otherwise, whereby the barrel may be instantly locked and rigidly held in its firing position or be liberated to be swung down on its pivot to receive the cartridge as required; and the second part of my invention consists in a hammer-guard and lifter for pressing the hammers back to the position of half-cock, to prevent them from striking the firing-pins when the bolt is withdrawn and the barrels are not locked in their firing position.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A represents the breech-block, to which the barrels B B are pivoted at *a* in a well-known manner, in order that they may be thrown down out of their firing position to receive the cartridges at their breech ends. C is the tang, and D the trigger-plate, between which the forward end of the stock (not shown) is secured. E is a guard-lever, pivoted at *b* to projections *c*, seen dotted, Fig. 4, on the underside of the trigger-plate D, the upper end of the guard-lever passing through a slot, *d*, therein, and being provided with ears or bifurcations *e e*, between which is secured at *h* one end of a short link, G, the other end of which enters a recess, *i*, in the rear end *k* of a long bolt, H, which extends through a solid portion, *l*, of the breech-block A, into and through a keep-opening, *m*, Figs. 1 and 4, and thence through a solid portion, *n*, in the breech-block into an opening, *o*, of nearly rectangular form. From 10 to 11 the bolt is circular in cross-section, Fig. 6, being slightly beveled off at 12, from which point to 13 it is cut away, leaving it rectangular. From 13 to 14 it is again circular, and at 15 it is beveled off as at 12, these parts 12 and 15 of the bolt forming heads *u v*, which enter correspondingly-shaped recesses 18 and 19, Fig. 2, in lugs or projections I K formed on the under side of the barrels B B, the lug I dropping into the opening *m* and being provided with a longitudinal rectangular slot, 20, extending through it, of the same width as the rectangular portion of the bolt from 12 to 13, by which construction the lug I fits snugly into the opening *m*, and the sides of the rectangular slot 20 come in contact with the sides of the rectangular portion of the bolt from 12 to 13, while the heads *u v* fit snugly within their recesses 18 19, thereby affording a long or extended bearing-surface, which more effectually prevents any lateral vibration and insures the rigid locking of the barrels when in their firing position. Into the upright portion of the rear end *k* of the bolt H passes a screw, *p*, which extends down through a hammer-guard and lifter L, the lower portion of which fits loosely in a slot, *r*, made through the tang C, by which means as the guard-lever E is pressed down the upper portion of the hammer-lifter, through the connections described, is caused to slide back, the stops *s s* on its sides being thus brought against projections *t t* extending from the inner sides of the hammers, thereby pressing them back till they are brought into the half-cock position shown in Fig. 3, simultaneously with which operation the bolt is moved back sufficiently to withdraw the heads *u v* from their recesses 18 19 in the lugs I K into the solid portions *l n* of the breech-block, when the rear ends of the barrels are free to be swung up into their loading position. After the cartridges have been entered the rear ends of the barrels are swung down and the lugs I K are again brought snugly into their openings, the bolt being forced

back against the resistance of a spring, M, by the rounded corners of the lugs coming in contact with the beveled portions of the heads *u v*, when the bolt is thrown forward by the spring M, carrying the heads *u v* into their recesses 18 19, by which means the barrels are locked in place, the hammer-guard and lifter L being at the same time carried forward, so that its stops *s s* will not be in the way of the projections *t t*, when the hammers descend to strike the firing-pins.

It will be seen from the foregoing that the hammer-guard and lifter, besides carrying the hammers to the position of a half-cock, also prevent them from striking the firing-pins when the barrels are not locked to the breech-block. Instead of operating the bolt L in the precise manner herein described, the link G may be dispensed with, and the bolt be directly pivoted to and operated by the guard-lever, or a vertical crank-shaft passing up through the tang C may be employed, the crank-shaft being operated by a lever at its top, having a lateral motion; but I prefer the construction first described, on account of its simplicity, reliability, and convenience.

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

1. A bolt, H, in combination with slotted and recessed lugs I K formed on the under side of the barrel or barrels, and operating substantially in the manner and for the purpose described.

2. A hammer-guard and lifter, L, operated by the guard-lever E, substantially in the manner and for the purpose set forth.

3. The guard-lever E, bolt H, one or more slotted and recessed lugs I K, and the hammer-guard and lifter L, all combined and operating substantially as described, for the purpose set forth.

Witness my hand this 23d day of June, A. D. 1871.

A. E. WHITMORE.

Witnesses:

N. W. STEARNS,

W. J. CAMBRIDGE.