No. 863,171. PATENTED AUG. 13, 1907.

C. HAMILTON.

RIFLE CONSTRUCTION.

APPLICATION FILED FEB. 4, 1907.

3 SHEETS—SHEET 1.

Fig. 1.

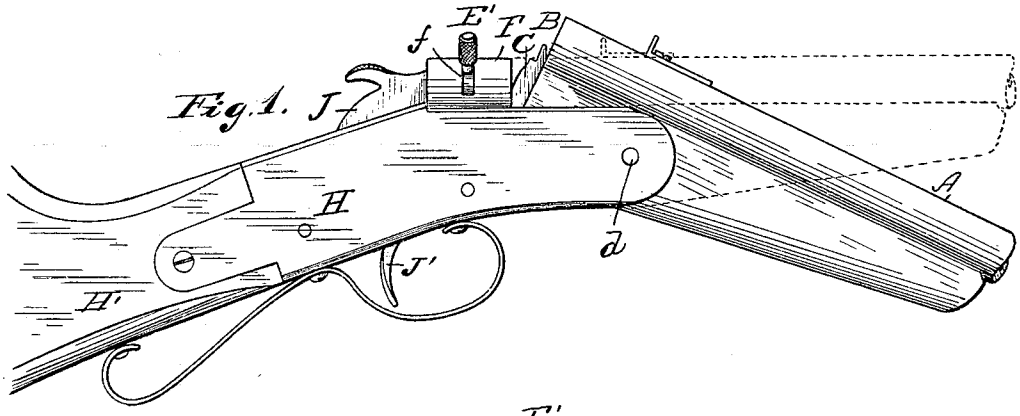


Fig. 2.

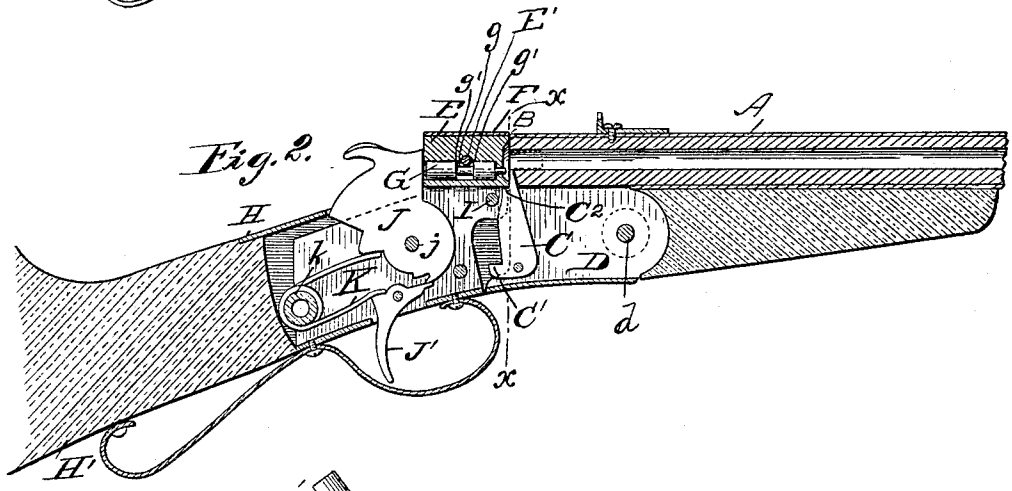


Fig. 3

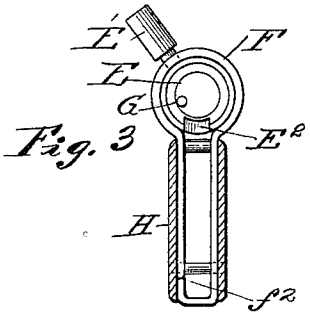
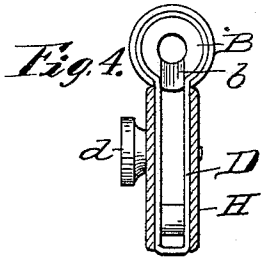


Fig. 4.



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3 SHEETS—SHEET 2.

Fig. 5.

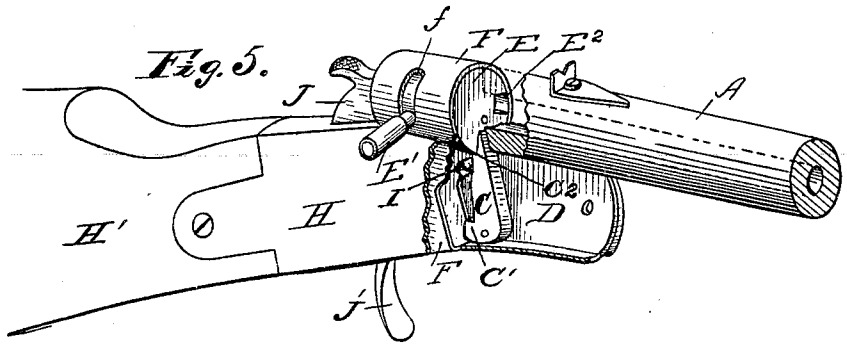


Fig. 6.

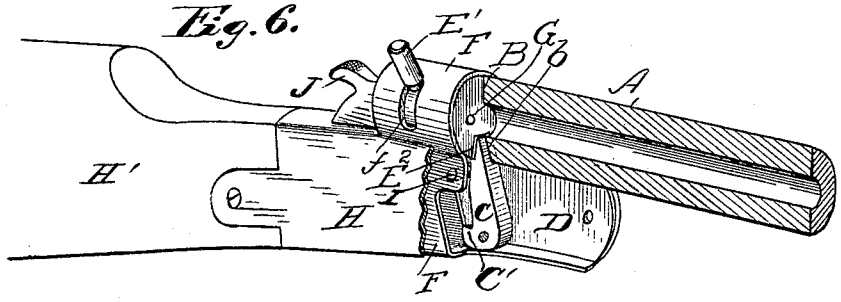
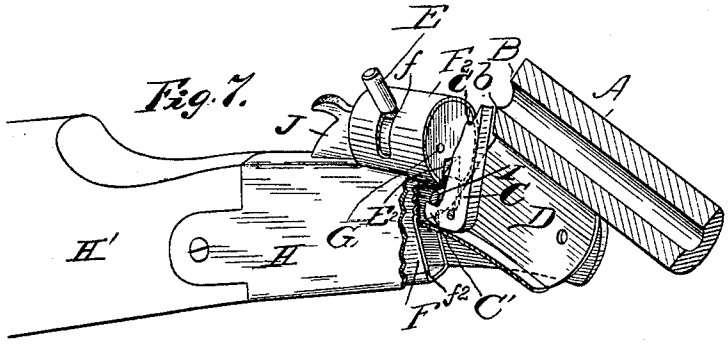


Fig. 7.



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3 SHEETS—SHEET 3.

Fig. 8.

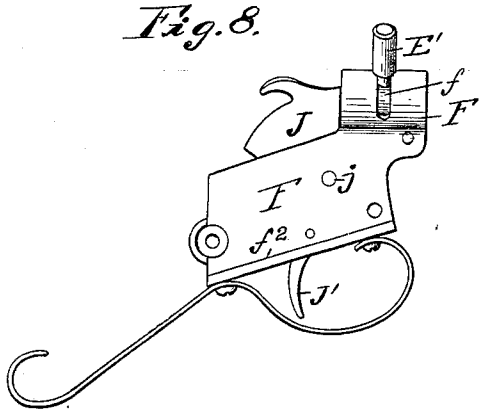


Fig. 9.

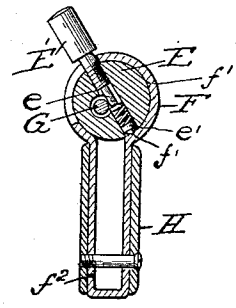
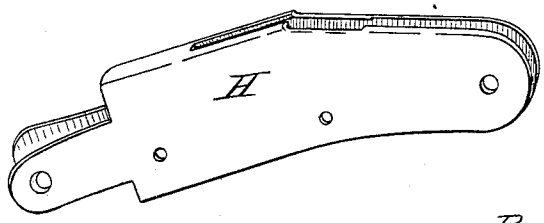


Fig. 10.



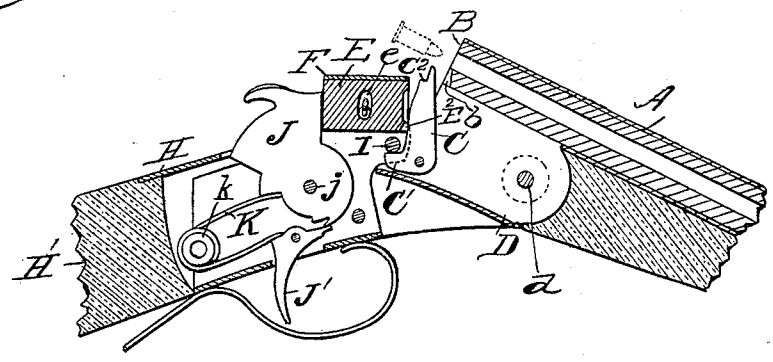


Fig. 11.

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RIFLE CONSTRUCTION.

No. 863,171. Specification of Letters Patent. Patented Aug. 13, 1907.

Application filed February 4, 1907. Serial No. 355,585.

To all whom it may concern:

Be it known that I, COELLO HAMILTON, a citizen of the United States, residing at Plymouth, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Rifle Construction, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in rifles shown in the accompanying drawings and more particularly pointed out in the following specification and claims.

In the drawings:—Figure 1 is a side view of a portion of the rifle adjacent to the breech showing the parts in position for ejecting the shell. Fig. 2 is a longitudinal section showing the parts in firing position. Fig. 3 is a cross-section on line *x*—*x* of Fig. 2 looking toward the breech-block. Fig. 4 is a cross-section on line *x*—*x* of Fig. 2 looking toward the breech and the ejector. Fig. 5 is a perspective view of the breech portion of the rifle with parts broken away and in section, showing the breech-block rotated so as to lock with the breech, and in condition for firing. Fig. 6 is a view similar to Fig. 5 showing the breech-block after rotating in a direction opposite to that shown in Fig. 5, the parts being in position to eject the shell. Fig. 7 is a view similar to Figs. 5 and 6, showing the stock swung downwardly from the barrel, and carrying with it the breech-block;—the operation actuating the ejector and discharging the shell. Fig. 8 is a side elevation of a detail showing the parts inclosing the breech-block and trigger mechanism. Fig. 9 is a cross-sectional view through the breech-block and the parts inclosing the same, showing the means employed to lock the breech-block in its firing and released positions. Fig. 10 is a detail view in perspective showing the bracket piece inclosing the trigger mechanism. Fig. 11 is a longitudinal section through the breech and breech-block showing the trigger mechanism and the ejector discharging a shell.

This invention consists in an improvement in the general construction of rifles and has for one of its objects a novel construction in the means employed for locking the breech-block in position for firing, which is accomplished in conjunction with the shell ejector.

Another feature is the means employed for tripping the shell ejector.

Another feature is the one piece bracket supporting and inclosing both the breech-block and trigger mechanism.

Another feature of the construction is that the same spring which controls the action of the trigger actuates the hammer when the trigger is operated, releasing its control over the hammer.

Other improvements will hereafter appear.

Referring to the letters of reference shown in the drawings, A denotes the barrel. B the breech notched or cut away as shown at *b* to admit the free end of the ejector C pivoted in the frame or bracket D.

E is the breech-block sleeved in the inner bracket F provided with an operating handle E′ projecting through a slot *f* in the bracket.

e is a transverse hole through the breech block designed to receive the screw threaded stem of the handle E′ and spring actuated detent *e*′ adapted to engage slight depressions *f*′ formed in the wall of the inner bracket F to lock the breech-block when turned to the limit of its movement in either direction.

G is the firing pin housed within the breech-block, being cut away at its middle portion, as shown at *g*, to form shoulders *g*′, *g*′ between which the stem of the handle E′ projects by means of which the movement of the firing pin G is limited.

E^2 is a depression or recess formed in the end of the breech-block of about the same width as the ejector C with which it is caused to register.

H is an outer bracket or frame secured to the stock H′ and pivoted by means of the thumb-screw *d* to the depending frame D. The bracket H incloses the inner bracket F with its trigger and breech-block mechanism, the walls of the inner and outer brackets being secured together by rivets or screws.

I is a pin secured in the side walls of the inner bracket F and is designed to engage the hooked end C′ of the ejector C. Upon rocking the stock with respect to the barrel through its pivotal connection *d* with the outer bracket H, it will be seen that the pin I will contact with the hooked end C′ of the ejector C, rocking the ejector on its pivot and thus ejecting the shell, provided the breech-block E has been previously rotated so that the depression or recess E^2 formed in the breech block is turned so as to register with the ejector. So also when it is desired to lock the breech-block in position for firing, the breech block is turned so that the recess E^2 registers with the end of the ejector C, as shown in Figs. 6, 7 and 11. The stock with its bracket or frame H is then swung upward with respect to the barrel on the pivotal connection *d* between the stock and barrel, and when in this position the breech block is rotated by means of its operating handle to the position shown in Figs. 2 and 5, which brings into position the projecting rim of the breech block E over the notched portion C^2 of the ejector, thereby locking the breech block in its firing position. It will be noted

that this action crowds the upwardly projecting end of the ejector into the notch *b* of the breech, as clearly shown in Figs. 2, 5 and 6, forcing the cartridge home, which has been previously placed in the breech. It will be understood that the spring actuated detent *e'* entering the depression formed in the inner bracket locks the breech block against accidental displacement when the latter is rotated to the limit of its movement in either direction.

J is a hammer pivoted at *j* to the inner bracket. J' is its trigger also pivoted in the bracket and provided with the usual sear nose adapted to enter notches in the hammer.

K is a spring coiled around the hub *k* on the inner bracket, its ends bearing upon shoulders formed in the hammer and trigger mechanism, which serves the double purpose of operating the hammer and holding the trigger in its locked relation with the hammer.

Attention is called to the peculiar formation of the inner bracket which is preferably made of sheet metal shaped in forming dies, the construction being such that it incloses the breech-block and trigger mechanism, the junction of the abutting walls, as indicated at f^2, occurring back of the walls of the outer bracket and being thereby concealed.

It will be seen that by removing the thumb-screw *d*, the gun barrel may be removed from the stock of the gun for convenience in packing.

Having thus described my invention, what I claim is:—

1. In a fire arm having a stock portion and a barrel portion pivoted together, a rotatable breech-block sleeved within a bracket secured to the stock portion, its end notched to register with a shell ejector, the bracket secured to the stock portion within which the breech block is sleeved, a depending frame secured to the barrel portion, the shell ejector pivoted in said depending frame and provided with a shoulder to receive the overlapping wall of the breech-block whereby the breech-block may be locked with the breech, substantially as described.

2. In a fire arm having a stock portion and a barrel portion pivoted together, a rotatable breech block sleeved within a bracket secured to the stock portion, its end notched to register with a shell ejector, said bracket provided with a slot through which projects a handle for operating the breech-block whereby the rotation of the breech-block in either direction is limited by the operating handle contacting with the wall of the bracket at each end of the slot, the operating handle secured to the breech-block, a shell ejector pivoted to the barrel portion provided with a shoulder to receive the overlapping portion of the end of the breech-block; the construction being such that by rotating the breech-block in one direction the wall of the breech-block will overlap the shoulder formed in the ejector and lock the breech in firing position, and when rotated in the opposite direction the notch in the breech-block will register with the ejector whereby the breech-block is released from its locked relation with the breech, substantially as described.

3. In a fire arm having a stock portion and a barrel portion pivoted together, a rotatable breech-block sleeved within a bracket secured to the stock portion, said bracket slotted to provide for a projecting operating handle, said breech-block having a transverse bore, a spring actuated detent, depressions in said bracket to receive the point of the spring actuated detent by which means the breech-block may be locked at the limit of its rotation in either direction, said breech-block having a notched portion designed to register with a shell ejector, the shell ejector pivoted to the barrel portion having a shoulder designed to receive the overlapping wall of the breech block, substantially as described.

4. In a fire arm having a stock portion and a barrel portion pivoted together, a rotatable breech block sleeved within the stock portion, its end notched to register with the shell ejector, the shell ejector pivoted to the barrel portion and provided with a shoulder to receive the overlapping wall of the breech block whereby the breech block may be locked with the breech by rotating the breech-block so that its projecting wall will overlap the shoulder in the ejector, substantially as described.

5. In a fire arm having a stock portion and a barrel portion pivoted together, a rotatable breech-block sleeved within the stock portion, its end notched to register with the shell ejector, the shell ejector pivoted to the barrel portion and provided with a shoulder to receive the overlapping wall of the breech block, said ejector also provided with a hook designed to engage a tripping device secured to the stock portion when the stock is swung downward with respect to the barrel portion on its pivotal connection with the latter whereby the ejector is operated to discharge the shell, and said tripping device for operating the ejector, substantially as described.

6. In a fire arm, a rotatable breech-block sleeved in the frame, the firing pin housed within the breech-block having a central portion smaller in diameter than its ends, said breech-block provided with a transverse bore to receive the stem of an operating handle, a detent and spring for controlling the same also housed within the bore, the construction being such that the stem of the handle projects between the enlarged ends of the firing pin whereby the pin is held within the breech-block and its movement limited, and said frame supporting the breech-block slotted to accommodate the operating handle of the latter and also provided with indentations on the inner face to receive the end of the spring actuated detent, substantially as described.

7. In a fire arm, a rotatable breech, a hammer, a trigger, a single spring for controlling the hammer and trigger, a bracket formed of a single piece of sheet metal constructed to inclose said elements, the edges of the bracket meeting upon one side of the fire arm, and a plate fitted to the bracket to cover the meeting edges of the latter.

8. In a fire arm, a hammer, a trigger, a single spring for controlling both hammer and trigger, a bracket formed of sheet metal inclosing and supporting all of said parts, and an outer frame secured to the stock and pivoted to the barrel portion embracing said bracket and to which it is secured, substantially as described.

9. In a fire arm, a stock portion and a barrel portion pivoted together, a rotatable breech-block, a hammer, a trigger, a single spring for controlling both hammer and trigger, a bracket formed of sheet metal within which the breech-block is sleeved and said other parts housed, a frame secured to the stock and pivoted to the barrel portion to and within which said bracket is secured, and means acting in conjunction with the breech-block for locking the stock portion and the barrel portion together for firing by the rotation of said breech-block, substantially as described.

10. In a fire arm having a stock and barrel pivoted together, an ejector, and means coöperating with the ejector to lock the stock and barrel together in firing position.

11. In a fire arm having a stock and a barrel pivoted together, an ejector, and a rotatable breech block arranged to coöperate with the ejector to lock the stock and barrel together in firing position.

12. In a fire arm having a stock and a barrel pivoted together, a breech block casing carried by the stock provided with a slot, a rotatable breech block arranged within the casing to effect a locking of the stock and barrel in firing position, a firing pin carried by the breech block, the firing pin being reduced intermediate its ends, and means passed through the breech block for engagement with the reduced portion of the firing pin to limit the movement of the latter the block having a handle portion projecting through said slot.

13. In a fire arm having a stock and a barrel pivoted together, an ejector, a rotatable breech block arranged to coöperate with the ejector to effect a locking of the stock and barrel in firing position, and means whereby the ejector may be tripped when the arm is broken.

14. In a fire arm having a stock and a barrel pivoted together, a breech block casing carried by the stock provided with a slot, a rotatable breech block arranged within the casing to effect a locking of the stock and barrel in firing position, means including a handle portion projecting through said slot whereby the block may be rotated, and a spring controlled detent to hold the breech block in its different positions.

15. In a fire arm having a stock and a barrel pivoted together, an ejector, a rotatable breech block arranged to coöperate with the ejector to effect a locking of the stock and barrel in firing position, and a transverse pin arranged to trip the ejector when the arm is broken.

In testimony whereof, I sign this specification in the presence of two witnesses.

COELLO HAMILTON.

Witnesses:
WILLIAM T. CONNER,
PAUL W. VOORHIES.