2 Sheets—Sheet 1.

G. F. EVANS.

LOCKS FOR MAGAZINE FIRE-ARMS.

No. 189,848. Patented April 24, 1877.

Fig. 1.

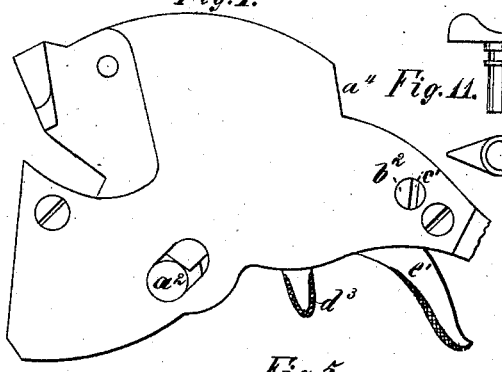


Fig. 11.

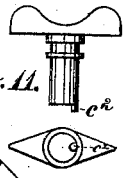


Fig. 2.

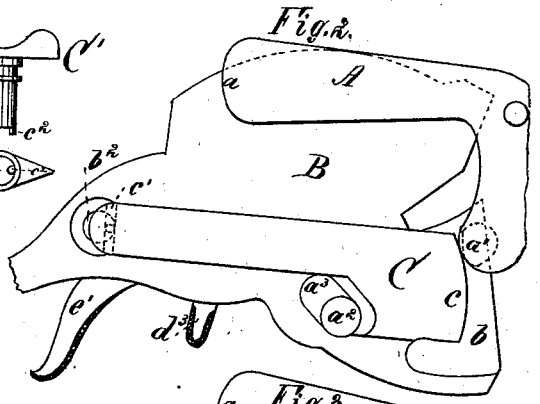


Fig. 5.

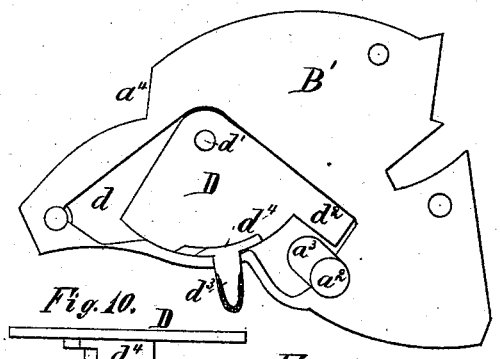


Fig. 10.

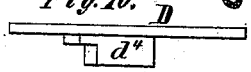


Fig. 3.

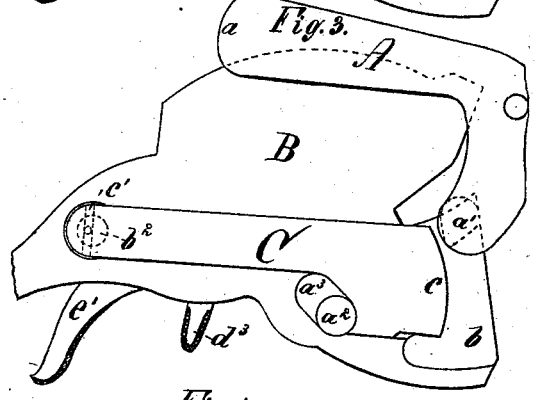


Fig. 6.

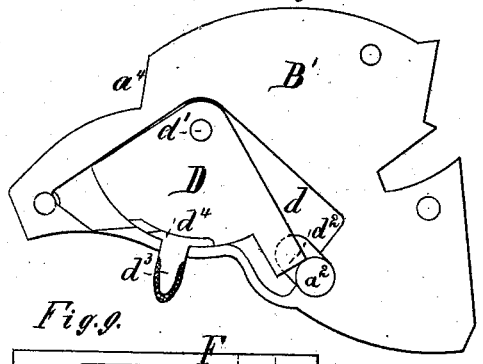


Fig. 9.

Fig. 4.

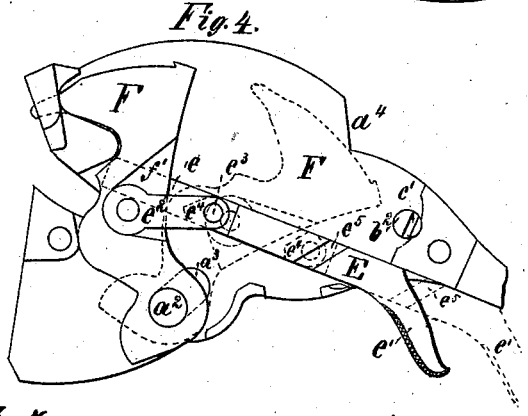


Fig. 7.

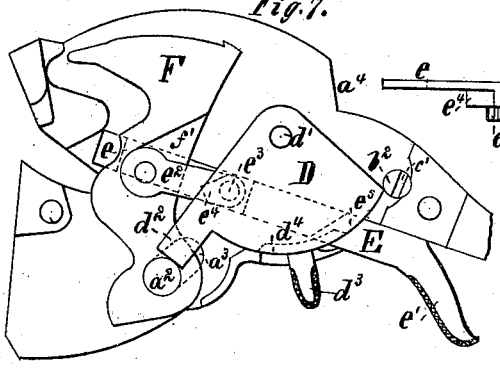
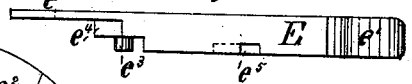


Fig. 8.



Witnesses:

Theodore L. Foster.

George L. Reed.

Inventor:

George F. Evans

2 Sheets—Sheet 2.

G. F. EVANS.

LOCKS FOR MAGAZINE FIRE-ARMS.

No. 189,848. Patented April 24, 1877.

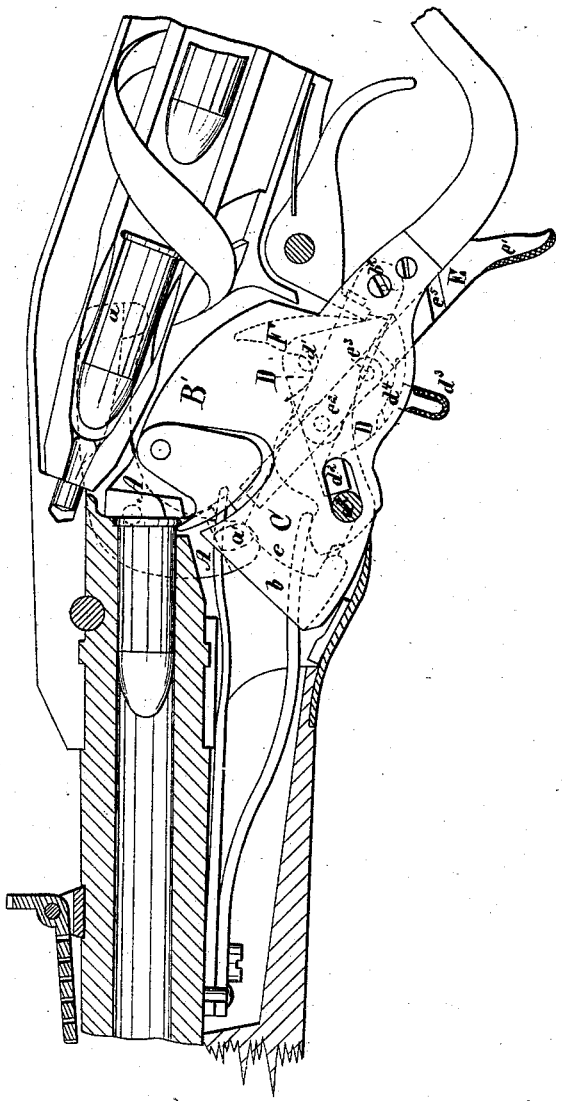


Fig. 12.

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By W. Coates

his Atty.

UNITED STATES PATENT OFFICE.

GEORGE F. EVANS, OF MECHANICS FALLS, MAINE.

IMPROVEMENT IN LOCKS FOR MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. **189,848**, dated April 24, 1877; application filed January 15, 1877.

To all whom it may concern:

Be it known that I, GEORGE F. EVANS, of Mechanics Falls, in the county of Androscoggin and State of Maine, have invented certain Improvements in Magazine-Guns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to the gun-locks of magazine-guns, and is an improvement on the gun-lock for such arms described and claimed in Letters Patent No. 119,020, granted to Warren R. Evans, and bearing date the 19th day of September, 1871; and the object of my invention is, first, to prevent the revolving of the fluted column in the magazine, which carries forward, successively, the cartridges by the swinging downward of the breech-block, so that the breech-block may be swung down and cartridges inserted by hand, and the breech-block again closed back without disturbing or moving the cartridges in the magazine, whereby the contents of the magazine may be reserved for an emergency, which may demand the rapid firing of the gun; second, the locking of the breech-block in its closed position; and, third, enabling the operator to bring the gun to half-cock, and lock the hammer in that position, and thereafter to bring the hammer to full-cock without disturbing or moving the breech-block; and my invention consists in the devices and their combinations hereinafter particularly described and claimed.

Figure 1 is a side face view of the breech-block. Fig. 2 is a reverse side face view of the same, showing the parts in such position that the revolution of the fluted column in the magazine will be effected. Fig. 3 is a similar view of the same, showing the parts in such position that the said movement of said fluted column will be prevented. Fig. 4 is an inner face view of the opposite plate of the breech-block, showing the devices for bringing the hammer to half and full cock. Figs. 5 and 6 are reverse views of the plate seen in Fig. 1, showing in its different positions the lever employed to lock the breech-block in a closed position. Fig. 7 is a similar view to that seen in Fig. 4, and shows the hammer locked at half-cock, and the breech-block locked closed. Figs. 8, 9, and 10 are edge views in detail of devices employed. Fig. 11 is a side and end view of a key, the purpose of which is hereafter described. Fig. 12 is a longitudinal central section of portions of the barrel and frame of a fire-arm in which my present inventions are employed.

The improved devices constituting my invention relate to a magazine breech-loading gun, in which the cartridges are contained in a chamber in the stock, being introduced at the butt-end of the same into grooves or flutes arranged to rotate within said chamber, and being moved forward to the breech by the co-operative agency of a spiral coil fixed within and to the walls of the said chamber. In the Patent No. 84,685, issued to Warren R. Evans, December 8, 1868, this said chamber, spiral and grooved roller are described, and in the Patent No. 119,020, issued to said Warren R. Evans, September 18, 1871, a gun-lock is described, to which the devices herein described are improvements. In the drawing, Fig. 12, herein, the said chamber, spiral-fluted column, and gun-lock, with my improved devices, are shown.

A is the bell-crank lever, by which the revolution of the fluted column carrying or feeding the cartridges from the magazine to the barrel is effected, a projection on end *a* of the lever engaging the walls of the flutes of said column successively, and at each swing of the breech-block giving to the column a quarter-turn on its axis. This lever is actuated by the engagement of a stud, a^1, in its opposite end, working in a channel, *b*, cut in the inner face of the plate B, with the edge *c* of the bar C, which forms one of the walls of the said channel *b*. This bar C I place in a recess cut in the face of the plate B, to fit said bar, and permitting the longitudinal movement of said bar in said recess. At the rear end of said bar, on its inner side or face, I form the transverse groove *c'*, and immediately over said groove, in the plate B, and communicating with the exterior thereof, I cut a circular opening, b^2. By means of a suitable key, C', adapted to enter the opening b^2, and carrying a crank-pin, c^2, adapted to fit into the transverse groove c^1, I am, by the introduction of

said key into said opening and turning the same, enabled to move the bar C back and forth in its seat in the recess in the plate B, and to place it in the position shown in Fig. 2, where the edge *c* will engage the stud a^1 on the lever A, or in the position shown in Fig. 3, where the edge *c* will escape the said stud when the breech-block is swung upward on its pivot a^2, thus preventing the movement of the lever A, and consequent revolution of the fluted column.

By this means I am enabled at pleasure to load the barrel by hand without disturbing the contents of the magazine, and thus hold the magazine in reserve for an emergency which may demand rapid firing.

D, Figs. 5, 6, and 7, is the lever I employ to lock the breech-block in a closed position, and to lock the gun at half-cock. This lever swings in a recess, *d*, cut in the plate B′, so that an even surface is presented by the face of the plate and lever. The said lever swings upon a pivot, d^1, and carries an arm, d^2, and is provided with a finger-piece, d^3, extending outward below the breech-block, by which the said lever is operated. The arm d^2 is arranged to be, by the movement of the lever, either swung away from (as in Fig. 5) or impinge upon (as in Fig. 6) the stud a^2, which is the pivot of the breech-block. The breech-block may, therefore, when the lever is swung into the position shown in Fig. 5, be opened and closed at pleasure, the pivot a^2 being free to move in its slot a^3, and thus permit the recoil-shield a^4 to pass the abutment of the gun; or, when the lever is swung into the position shown in Fig. 6, the arm d^2, resting upon the pivot a^2, will prevent the movement of the pivot in its slot, and thus preclude the passage of the recoil-shield from the abutment of the gun, and thus the breech-block securely locked in its closed position.

E is a bar, which is seated and arranged to slide longitudinally in a channel or recess cut in the inner face of the plate B. Upon the forward end of this bar is an arm, *e*, which reaches forward in the recess, and lies under the hammer F. Upon the rear end of the bar is a downwardly-projecting exposed finger-piece, e^1, by which the bar is moved. An arm, e^2, is pivoted on the upper side or face of the hammer, in a recess, *f*′, cut therein, and at its other end said arm is pivoted to the bar E by pin e^3. The hammer is thus embraced by the arm *e* and the pivoted arm e^2. The bar is cut away at e^4 to permit the free movement of the hammer to full-cock, as shown in the edge view of the bar, Fig. 8. Across the face of the bar is cut the diagonal transverse recess or channel e^5. Upon the lever D, on its inner face, is formed the projection or rib d^4, adapted to enter the groove e^5 in the bar E, as will presently appear.

When the breech-block is swung downward the hammer is brought to full-cock. Now, if it is not desired to at once fire the gun it may be brought to half-cock, as is evident, by the following operation:

The trigger being released, and the bar E controlled by the finger-piece e^1, the hammer may, by gradually releasing the said bar E, be permitted to fall to half-cock. Then the lever D on the plate B′, which, in the completed gun, is imposed on the plate B and its parts shown, may, by means of its finger-piece d^3, be swung backward so that the projection or rib d^4 will enter the groove e^5 in the bar E, and thus lock the hammer at half-cock, while the arm d^2 will impinge on the pivot a^2, as hereinbefore set forth, thus locking the breech-block closed. When it is desired to fire the gun the lever D is swung forward, thus releasing the bar E, when said bar may be drawn backward, bringing the hammer to full-cock. The form of the hammer and lever D is shown in edge view, respectively, in Figs. 9 and 10.

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

1. In the lock of a magazine-gun, the combination, with the bell-crank lever A, which actuates the cartridge-feeding fluted column of the magazine, of the bar C, having a longitudinal motion in the breech-block, as and for the purpose specified.

2. The combination, with the pivoted breech-block, of the lever D, having the arm d^4 and exposed finger-piece d^3, as and for the purpose specified.

3. In the breech-block of a magazine-gun, the combination, with the hammer F, of the bar E, having a longitudinal movement in the breech-block, and pivoted to said hammer, as and for the purpose specified.

4. In the breech-block of a magazine-gun, the combination, with the hammer F and its pivoted bar E, having transverse slot e^5, of the lever D, with its rib d^4, as and for the purpose specified.

GEORGE FRANKLIN EVANS.

Witnesses:

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G. L. REED.