(No Model.)

W. H. ELLIOT.

MAGAZINE FIRE ARM.

No. 285,020. Patented Sept. 18, 1883.

Fig. 1.

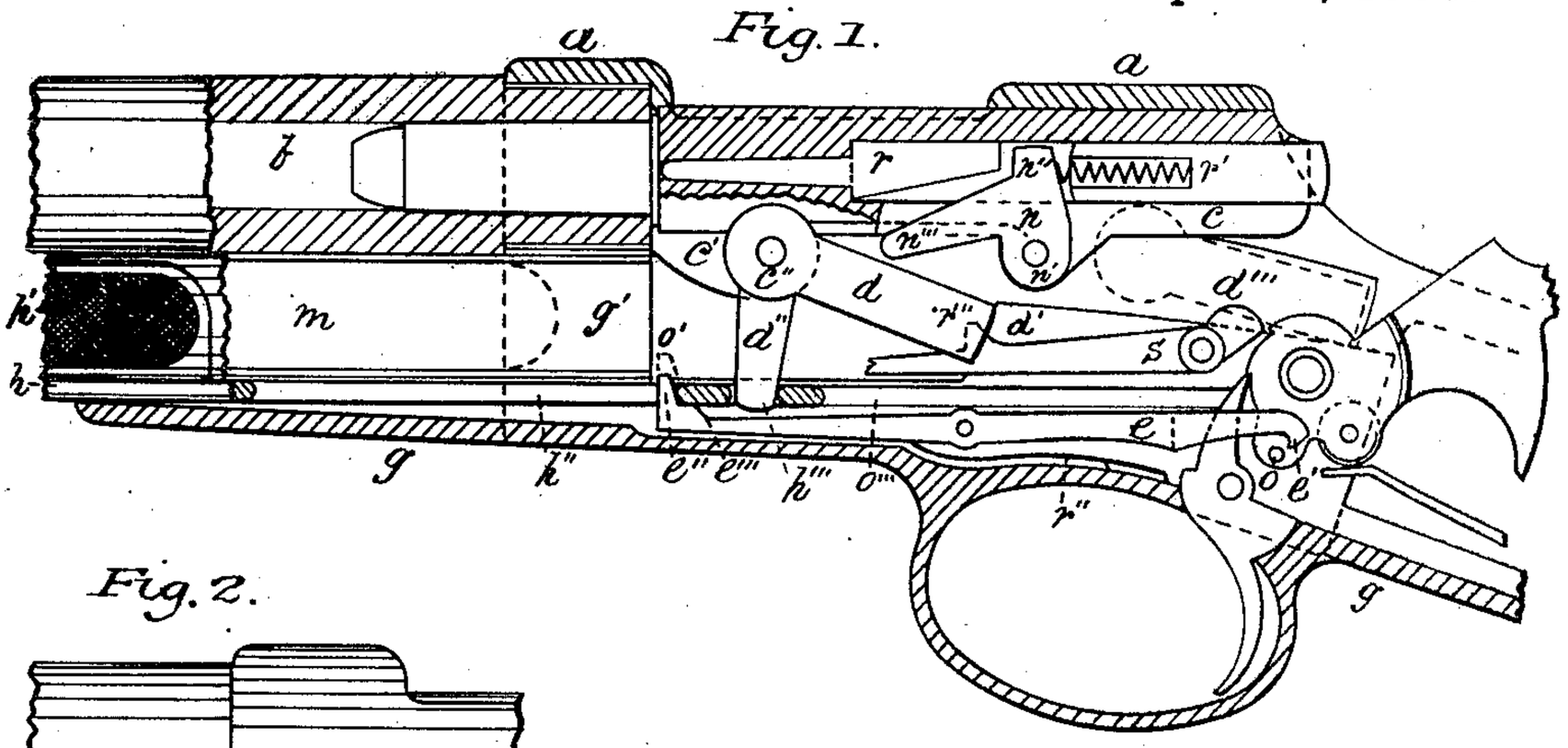

Fig. 2.

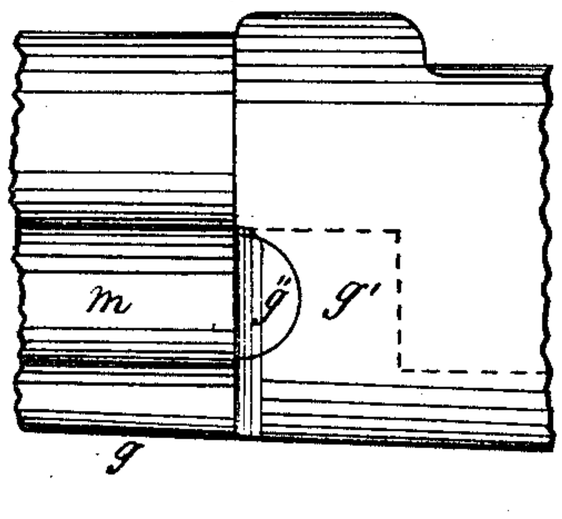

Fig. 3.

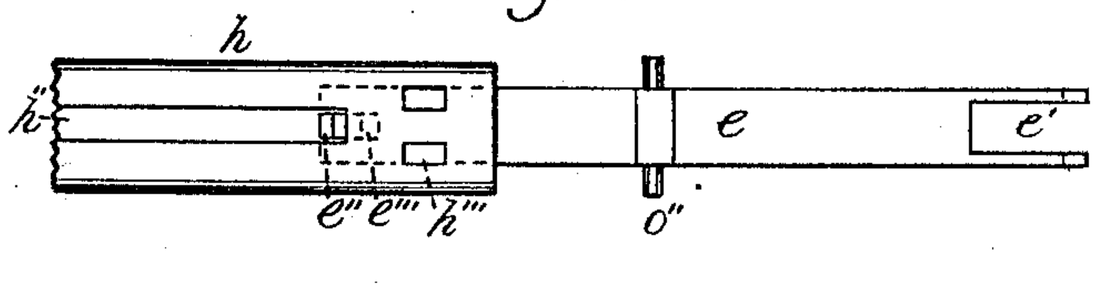

Fig. 4.

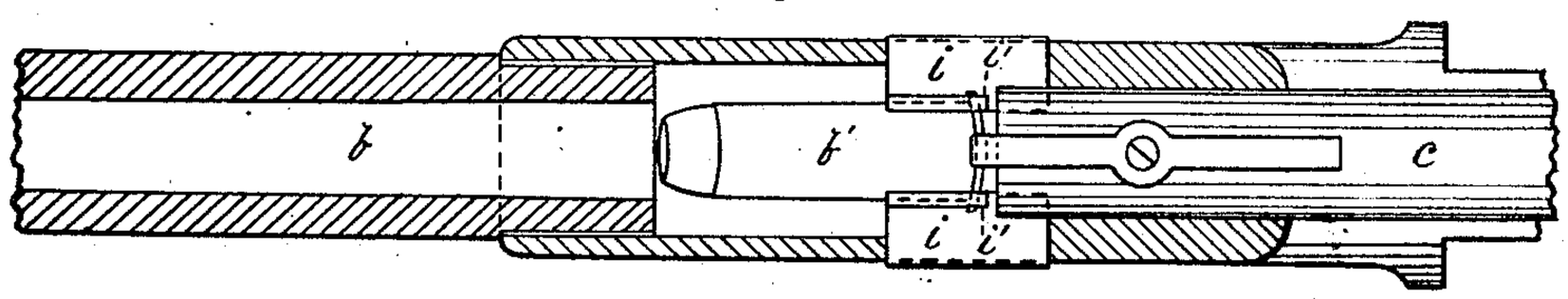

Fig. 5.

Fig. 6.

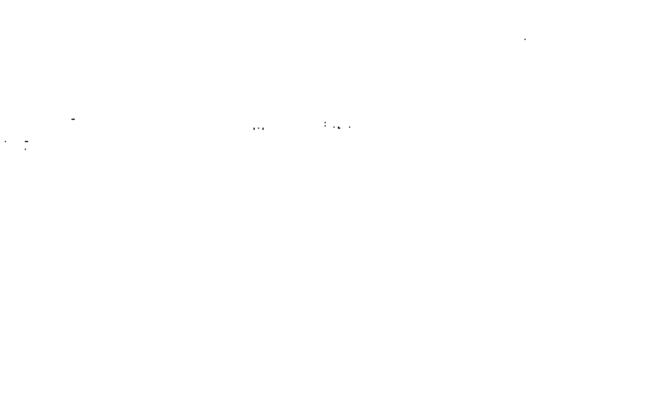

Fig. 7.

Fig. 8.

Fig. 9.

Witnesses:

D. L. Lewis

Geo. B. Richardson

Inventor:

Wm. H. Elliot

UNITED STATES PATENT OFFICE.

WILLIAM H. ELLIOT, OF NEW YORK, N. Y.

MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 285,020, dated September 18, 1883.

Application filed July 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, WM. H. ELLIOT, of New York, county of New York, and State of New York, have invented a new and Improved Magazine Fire-Arm, of which the following is a specification.

The object of my invention is to provide a cheaper, a more rapid, and safer fire arm than any now in use; and the nature of my invention consists in the use of certain appliances and methods, which are fully set forth in the following specification and claims.

Figure 1 is a vertical longitudinal section of my improved arm, showing some of the limb-work in elevation. Fig. 2 is an elevation of a portion of said arm. Fig. 3 is a plan of the feed-pawl and hammer-lock. Fig. 4 is a horizontal section of the arm in the axis of the barrel. Fig. 5 is a section of two cartridges and an end view of the two stop-ejectors. Fig. 6 is a side elevation of two cartridges with the devices that control them. Fig. 7 is three views of the stop-ejector. Fig. 8 is an elevation of a portion of the guard-strap. Fig. 9 is a vertical cross-section of the guard-strap at open lines *x*, Fig. 8, looking toward the forward end.

My invention is applicable particularly to that kind of magazine-arm which has a tubular magazine arranged under the barrel, and a bolt or breech block which moves in a line with the barrel to close the chamber, and is operated either by a lever or handle. It is also applicable to other kinds of arms. The receiver has the barrel screwed into its forward end in the usual way. It also supports the guard-strap *g*. This latter device has upon its upper side two upward-projecting portions, one at *d'*, which serves as a locking-shoulder to support the bolt against the recoil of the charge, and one at *g'*, which is bored through to receive and support the rear end of the magazine-tube, as shown in Fig. 9. The upward projection *g'* is provided with two lateral projections, *g''*—one upon each side. These are half-circular in form, and rest in recesses of corresponding shape cut in the forward ends of the sides of the receiver, as shown in Fig. 2, and serve as recoil-shoulders to prevent the guard-strap from being displaced by the recoil of the charge. It also facilitates assembling the arm, as it only requires, in addition, one screw, *g'''*, Fig. 8, to hold the guard-strap in place. The bolt is moved back and forth, locked, and the carrier operated by means substantially such as are shown in my patent of May 29, 1883, to which I make special reference.

The bolt *c* has a dependent portion, *c'*, at its forward end, to which the brace *d* is pivoted at *c''*. This brace, when the arm is closed, rests at its rear end upon the locking-shoulder *d'*, and has a downward-projecting arm, *d''*, which passes through or is jointed to the connecting-strap *h* at *h'''*. This strap slides in and is supported by grooves *o'''* in the guard-strap, and is at its forward end provided with handle *h'*, by which the breech mechanism is operated. The bolt has another dependent portion, to which the retracting-lever *n* is pivoted at *n'*. This lever has an upward-projecting arm, *n''*, which passes into a thin mortise in the firing-pin. It also has a forward-projecting arm, *n'''*, which, when the firing-pin is driven forward, nearly or quite rests upon the top of the brace *d*, being actuated by spring *r'*. The bolt also has upon it the spring-extractor *s'*, fastened by a screw, as seen in Fig. 4. The carrier is pivoted at its rear end to the guard-strap, and is provided with an upward projection in rear of its pivot, whereby the forward end of the carrier *s* is raised by the brace during its backward movement, and is depressed by the same device in its downward movement as shown and described in said patent.

The feed-pawl *e* is located in the lower part of the receiver, below the connecting-strap, and is provided at its forward end with point *e''*, which projects up through and works in slot *h''* in said strap, and at its rear end it is bifurcated, and is provided with hooks *e'*, which engage the pin *o*, projecting from each side of the lower part of the hammer. It is also provided with spring *r''*, which tends to keep the point *e''* in position indicated by open lines *o'*, and also to keep the hook *e'* engaged upon the pin *o*.

The stop-ejector, Fig. 7, is a rectangular piece beveled off at the upper inner corner, leaving the ejecting-shoulder *i'* also beveled off midway at the lower inner corner, so as to insure contact of the body of the rising cartridge with the extreme forward lower corners or stop-points of the stop-ejectors. These

devices are placed in the receiver, one upon each side, so as to project into the space occupied by the bolt, and are arranged in relation to each other, to the barrel, and to the stop r''' so that their stop-points will strike the body of the cartridge at a point about one-fourth of its length forward of its head to stop its upward movement. These devices are in some respects similar to those shown in my patents of May 30, 1882, and of March 27, 1883; but, unlike those in either patent, they are placed within about three-fourths of the length of the cartridge from the end of the barrel, and are arranged near enough together so that the stop-points on their extreme forward ends strike the body of the cartridge far enough forward of its head to arrest the upward movement of both ends of the cartridge independent of other stops, while the ejecting-shoulder is located on the stop-ejectors fully the length of the cartridge from the rear end of the barrel, by which construction and arrangement the cartridges may be raised by the carrier up against the stop-points as soon as it has moved back far enough to clear the mouth of the magazine, and it may be ejected as soon as it has been extracted far enough to clear the end of the barrel, thereby making it practical to construct the receiver fully one-half inch shorter than can be done by either method mentioned in said patents. The magazine may be charged with cartridges through the side of the receiver in the usual way.

The upward-projecting portion d' of the guard-strap is cut away through the center to make room for the hammer-trigger and carrier, and also for the movement of the connecting-strap h and arm d'', the hammer-trigger and carrier being pivoted to and supported by this portion of the guard-strap, so that when it becomes necessary to clean the breech mechanism the removal of screw g''' liberates the guard-strap, with all the limb-work attached thereto except the bolt and brace.

In Fig. 1 the parts are represented in the position of full-cock, ready to fire. After firing, the first backward movement of the handle h' carries the arm d'' back, which raises the rear end of the brace d, lifts up the arm n''' of the lever n, and retracts the firing-pin r. A continuation of the backward movement carries the brace to the position indicated by open lines d''' and the hammer to full-cock, causing the hook e' to engage the pin o on the side of the hammer by the action of spring r''. In closing the arm the last part of the forward movement of the handle brings the brace d down before the locking-shoulder, and the rear end of the slot h'', striking the bevel e''' on the feed-pawl, depresses the forward end of that device, so as to release a cartridge from the magazine and to disengage the hook e' from the pin o. By these means the firing-pin is prevented from being driven forward before the bolt is fully locked, and the hammer is held at full-cock independent of the trigger until the very last part of the movement of the handle releases it after the brace is upon the locking-shoulder, which affords a double security against a discharge before the bolt is locked. Bringing the hammer to full-cock by any means before the breech-block is braced causes the hook e' to engage the pin o, and so hold the hammer in the full-cock position until released by the action of the connecting-strap upon the pawl.

The downward-projecting arm d'' of the brace may be double or bifurcated, and the carrier s, composed of a single bar, may work between the two sides of the arm, as shown and described in my before-mentioned patent of May 29, 1883; or the carrier may be slotted or bifurcated, and the arm d'', composed of a single bar, may work between the two sides of the carrier, these two methods of constructing and arranging the arm d'' and the carrier in relation to each other being fair equivalents.

Having described my invention, what I desire to have secured to me by Letters Patent of the United States is—

1. In a magazine fire-arm, the stop-ejector i, rigidly fastened to the receiver, provided with the ejecting-shoulder i', an extension forward of said shoulder, and having upon the forward end of said extension the stop-points i'', so arranged as to strike the body of the rising cartridge forward of its head to arrest its upward movement, and in combination therewith carrier s, extractor s', and stop-shoulder r''', attached to the receiver, or to some device supported by the receiver, whereby a cartridge may be raised against the stop-points i'' as soon as it is far enough back to be clear from the end of the barrel, and ejected by the shoulder i' as soon as it is far enough back to be clear from the chamber, substantially as specified.

2. In a magazine fire-arm, a bolt which moves in a line with the barrel for closing the chamber, and is provided with a firing-pin, which passes through said bolt from end to end, a brace for locking the arm, which is pivoted to the forward end of said bolt, and is provided with suitable locking-shoulders within the receiver, and in combination therewith a retracting-lever, n, pivoted to said bolt at n', one arm of which extends upward into or through the firing-pin, while the other arm extends forward over said brace, whereby when said brace is raised for the purpose of unlocking the bolt the arm n'' is raised and the firing-pin retracted, substantially as specified.

3. In a breech-loading fire-arm, a guard-strap which has upon it a recoil or locking shoulder, d', which, through a suitable brace, supports the bolt against the recoil of the charge, and is also provided with shoulders g'', which project laterally from the forward end of said strap, and rest against the forward end of the sides of the receiver in recesses adapted to receive them to support the guard-strap against the recoil, substantially as specified.

4. In a magazine fire-arm, a hammer provided with the usual mainspring and trigger,

and a pin or shoulder, *o*, and in combination therewith the pawl *e*, provided with the hook or catch *e'* for locking the hammer at full-cock, and a handle for operating the breech mechanism through a suitable connection, said pawl being acted upon to unlock the hammer by said connection during the last part of its movement to close and lock the arm, whereby the hammer is prevented from falling upon the firing-pin at any time except when the arm is closed and locked, substantially as specified.

5. In a magazine fire-arm, a bolt which moves in a line with the barrel to close the chamber, and which, during its backward movement, brings the hammer to full-cock, a hammer provided with the usual mainspring and trigger, and a pin or shoulder, *o*, and in combination therewith the pawl *e*, which is pivoted to the guard-strap or other device supported by the receiver, and is provided with the hook or catch *e'* for locking the hammer at full-cock independently of the trigger by engaging the pin *o*, and a handle for operating the breech mechanism through a suitable connection, said pawl being acted upon to release the hammer and fire the charge by the action of said connection upon the forward end of said pawl during the last part of its movement to close and lock the arm, whereby the arm may be loaded and fired by the movement of the handle alone, substantially as specified.

6. In a magazine fire-arm, a tubular magazine arranged under the barrel, a feed-pawl which is pivoted to the guard-strap or other device supported by the receiver, and is provided at its forward end with a suitable point for feeding cartridges from the magazine, and at its rear end with hook or catch *e'*, a handle for operating said pawl through a suitable connection, which also operates the brace of the bolt, and in combination therewith a hammer provided with a notch or pin, *o*, whereby, by bringing the hammer to full-cock by any means before the bolt is fully braced, it will be locked in the full-cock position until released by said connection, substantially as specified.

WM. H. ELLIOT.

Witnesses:
D. LEWIS,
GEO. D. RICHARDSON.