

(No Model.)

A. R. BYRKETT.  
MAGAZINE FIRE ARM.

No. 336,289.

Patented Feb. 16, 1886.

FIG. 1.

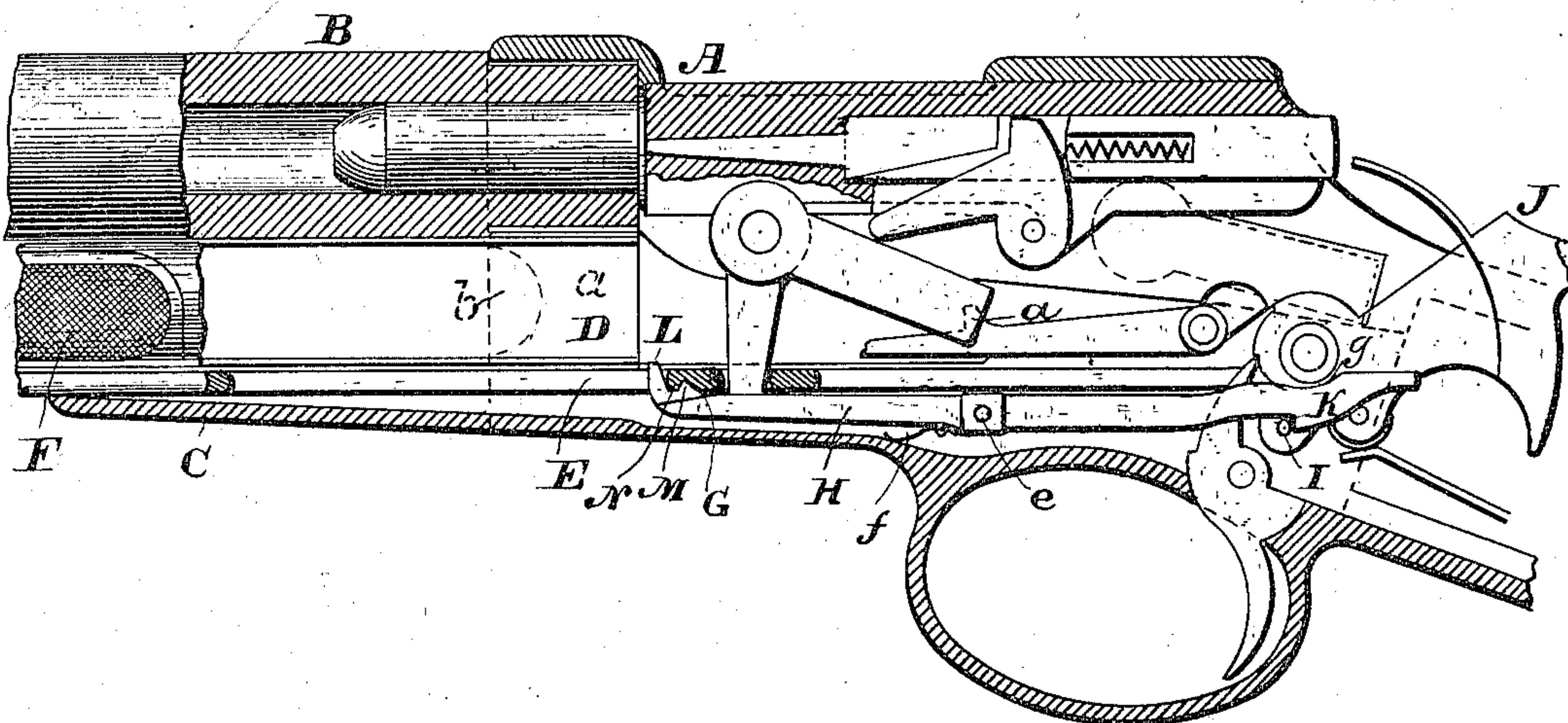
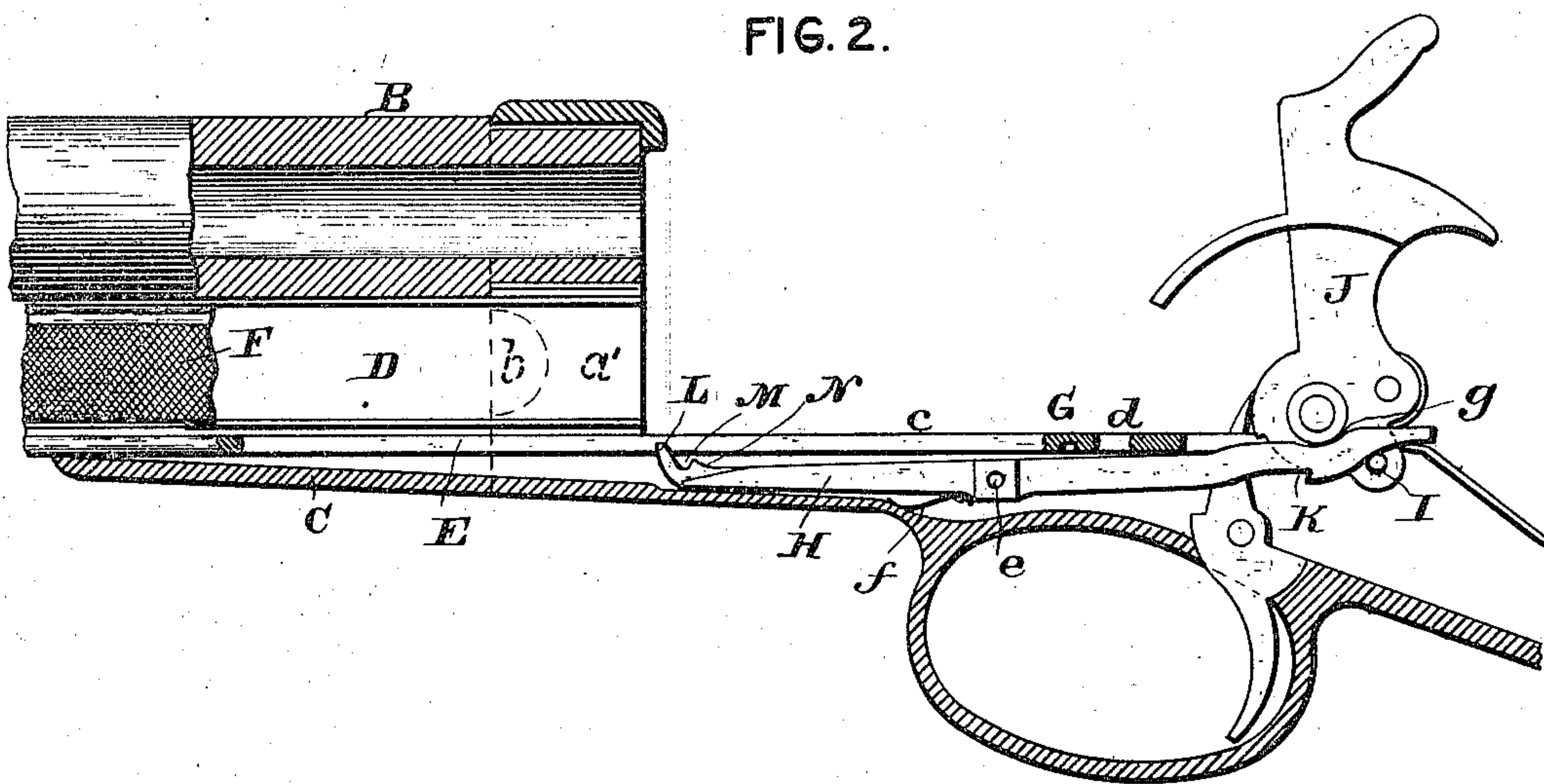


FIG. 2.



ATTEST.  
J. Henry Kaiser.  
Harry L. Ames.

INVENTOR.  
Abraham R. Byrketts  
By Chas. Cooch.  
his attorney



# UNITED STATES PATENT OFFICE.

AHIJAH R. BYRKETT, OF TROY, OHIO.

## MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 336,289, dated February 16, 1886.

Application filed June 18, 1885. Serial No. 169,066. (No model.)

*To all whom it may concern:*

Be it known that I, AHIJAH R. BYRKETT, a citizen of the United States of America, residing at Troy, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Magazine Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in magazine fire-arms, said improvements, while applicable to different constructions of fire-arms, being designed with especial reference to those described and referred to in United States Patent No. 285,020, issued the 18th of September, 1883, to William H. Elliot, said arm being known on the market and to the trade as "Colt's Lightning Sporting-Rifle."

My present invention consists in certain improvements in the construction of the hammer-locking pawl or lever and the parts connected therewith, whereby the slide or handle by means of which the breech mechanism is operated can be automatically and securely locked and also unlocked by simply reciprocating said slide or handle.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of a portion of a breech-loading fire-arm of the description above referred to, with the handle and breech locked and the breech mechanism in firing position. Fig. 2 represents the position the handle, locking-lever, and the hammer assume when the handle is pushed forward and the breech opened.

In the drawings I have represented an arm such as is shown in the patent above referred to; but as my present invention is confined to improvements in the hammer and handle locking lever and the slide connected to the handle, I do not consider it necessary to give any detailed description herein of those parts not the subject of my improvements.

A represents the receiver, within whose forward end the barrel B is screwed in the usual way.

C represents the guard-strap, having on its upper side two upwardly-projecting portions, *aa'*, one, *a*, serving as a locking-shoulder to support the bolt against the recoil of the charge, the other, *a'*, being bored to receive and support the rear end of the magazine-tube D. The projection *a'* has on each side a lateral projection, *b*, which serve as recoil-shoulders to prevent the displacement of the guard-strap by the recoil of the charge.

Connected to the forward end of the strap E, connected to the operative mechanism, is the handle F, by which the breech mechanism is operated. This connecting-strap slides in and is supported by grooves in the guard-strap, and has formed on its under face, and between the slots *c* and *d* therein, a rectangular or other suitably-shaped notch or recess, G.

H represents the feed pawl and handle and hammer locking lever, which is located in the lower part of the receiver below the connecting-strap, and has pivotal bearing at *e*, as shown. This handle and hammer locking lever has attached to its under face a spring, *f*, the tendency of which is to force the forward end of the locking-lever H upward. The rear or hammer end of the locking-lever is bifurcated, and is extended rearwardly a sufficient distance beyond the curved or hook-shaped portion K on the lower edge or under side of the locking-lever, in order to prevent the pin I, projecting from each side of the lower part of the hammer J, passing beyond the rear end of said lever when the hammer is down. The under face of the rear bifurcated portion of the locking-lever is of curved or other suitable shape from the hook or recess K to the extreme end, whereby when the hammer is sprung, by pressure upon the trigger or otherwise, the movement rearward of the lower portion of said hammer causes the pin I to press against the rear end of the locking-lever and force such rear end upward. As the locking-lever has pivotal bearing at *e*, as before mentioned, it necessarily follows that as the rear end of the lever is forced upward the front end thereof will be correspondingly depressed. The front end of the locking-lever is provided with an upwardly-extending beveled projection, L, in the upper face of which is formed a rectangular or other suitably-shaped notch, M as to present at the front end of the lever a pair



of lugs or projections, L and N, the former of which engages the forward slot in the connecting-strap, while the latter engages the notch G, the notch M in the front end of the lever  
5 engaging with the front walls of the notch G when the handle is in its foremost position, and thus holding the same and the breech mechanism securely locked.

In this class of arms where the loading and  
10 the extracting of the empty shells and where the operations of sighting and firing are accomplished without removing the arm from the shoulder or other operative position, the user with one hand grasps the handle and  
15 naturally exerts a rearward pressure thereon, which, where the projection L on the front end of the locking-lever has a continuous beveled upper face, causes the connecting strap to slide over the projection L and open the breech,  
20 and results in the displacement of the parts and their projection into a position preventing the proper operation thereof. By my improved construction, however, this difficulty is avoided, as upon the hammer being cocked  
25 as it passes rearwardly the pin I on the lower part of the hammer is forced into the notched or hook-shaped portion G forward of the rear end of the locking-lever, whereby the hammer is locked and prevented from passing forward  
30 to the firing-pin. While in this position the arbor of the hammer impinges against the rear top edge of the locking-lever and prevents any upward movement thereof. Then the handle is drawn rearwardly to open the  
35 breech and secure the extraction of the cartridge shell, and this accomplished the handle F is pushed forward, which act forces the notch G in the under face of the connecting-strap E into engagement with the notch M  
40 in the lower portion of the beveled projection L, thus securely locking the handle and parts connected therewith in position while firing. Upon these parts being thus locked the hammer is caused to pass forward toward  
45 the firing-pin, either by pressure upon the trigger or otherwise, and as said hammer moves forward the pin I thereon passes out of the hook or notch K, and as the hammer strikes the firing-pin said pin I passes along  
50 the under face of the locking-lever in rear of the hook K, and forces the rear end of the lever upward, which act depresses the front end of the locking-lever and unlocks the handle and connecting-strap and permits of their being  
55 retracted to again open the breech and discharge the spent shell.

g represents a recess in the upper rear face of the locking-lever H, to permit of the free play of the lower part of the hammer.

60 The operation of the several parts can be accomplished with great rapidity, the simple

reciprocation of the handle F being all that is necessary to secure the automatic operation of the entire breech mechanism, and by my improvements there is no possibility of any  
65 of the parts getting out of their proper positions during any part of the operations of the arm. Thus there are no slips or breaks in the perfect and continuous action and firing of the arm so long as there is a supply of  
70 cartridges.

Having thus described my invention, what I claim is—

1. In a breech-loading fire-arm, the combination, with a lever or handle for operating the  
75 breech mechanism and a hammer having at its lower portion an outwardly-projecting pin or shoulder, of a strap connected at one end to said lever or handle and having a notch or recess in its under face, and a pivotal lever adapted  
80 at its rear end to engage the pin on and lock the hammer in cocked position, and at its front to engage the notch in the under face of the strap connected to the breech lever or handle when in its forward position and lock  
85 said handle and parts connected therewith, substantially as and for the purpose set forth.

2. In a breech-loading fire-arm, a hammer provided with the usual mainspring and trigger and having an outwardly-extending  
90 pin or shoulder, a pawl or lever having pivotal bearing within the arm and having near its rear end a notched or hook-shaped portion, the rear end of said pawl or lever extending rearwardly beyond said pin or shoulder and at its front end having a notched  
95 projection, and a handle having a strap or slide provided on its under face with a slot or recess to receive the notched projection on the forward end of the pawl or lever, substantially as and for the purpose set forth. 100

3. In a breech-loading fire-arm, the combination, with a hammer having a pin or projection on its lower portion, of a lever having  
105 at its rear portion and on its under face a recess to engage the pin, and a rearwardly-extending portion, and on its upper rear face a recessed or curved portion, and at its front end an upwardly-extending notched lug or projection, and a lever or handle for operating  
110 the breech mechanism, and a strap connected to said lever and having in its under face a notch or recess to receive the lower portion of said notched lug or projection, substantially as and for the purpose set forth. 115

In testimony whereof I affix my signature in presence of two witnesses.

AHIJAH R. BYRKETT.

Witnesses:

CHAS. J. GOOCH,

WM. L. ALLAN.