

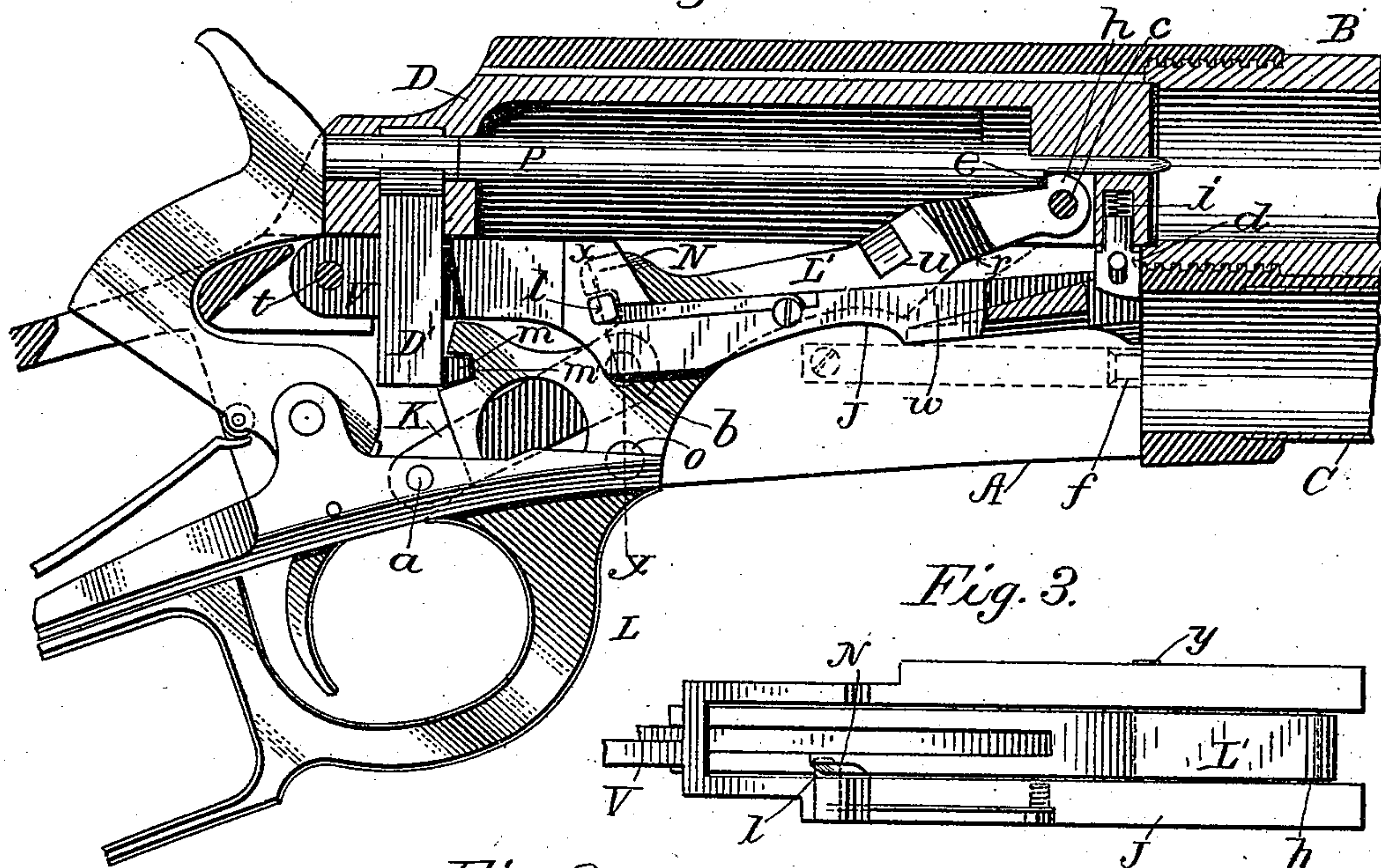
(No Model.)

L. L. HEPBURN.  
MAGAZINE FIREARM.

No. 549,722.

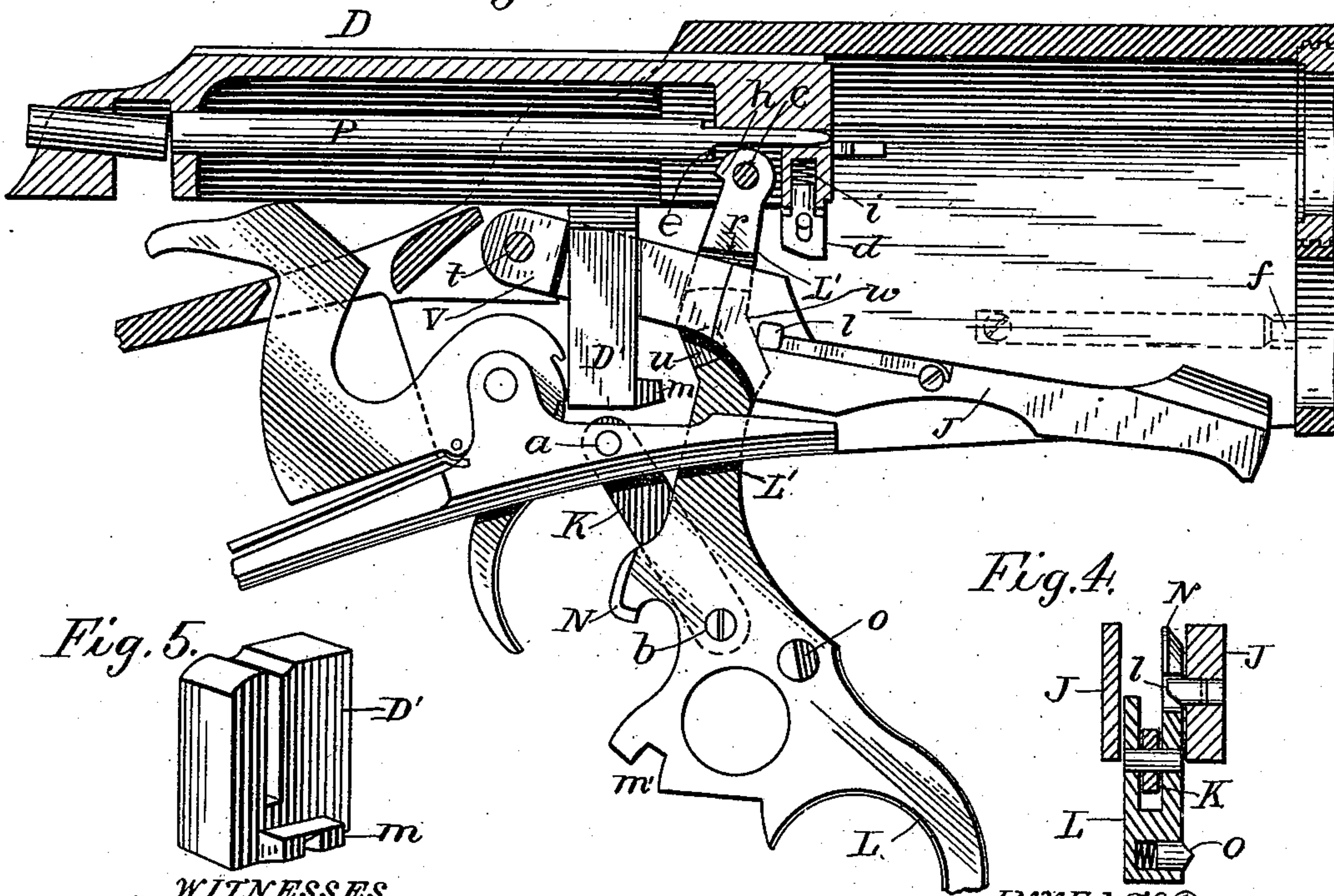
Patented Nov. 12, 1895.

*Fig. 1.*

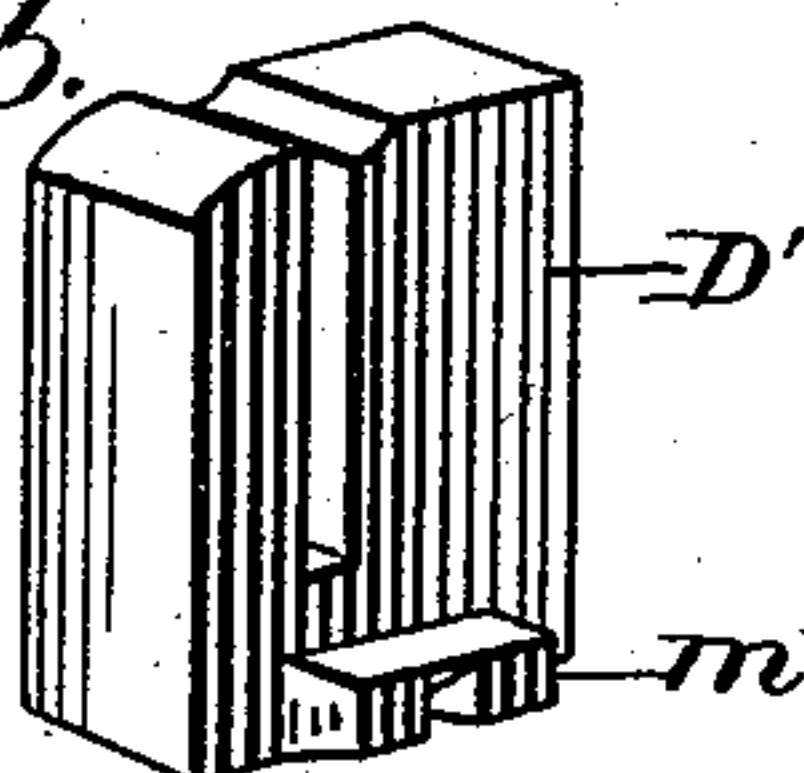


*Fig. 3.*

*Fig. 2.*



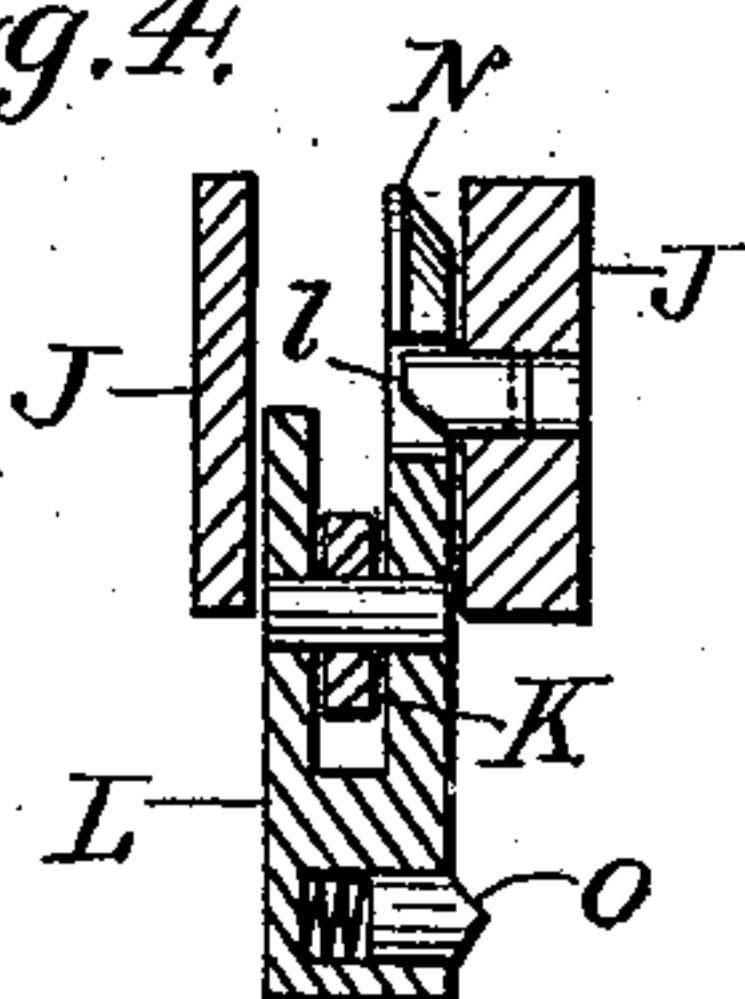
*Fig. 5.*



**WITNESSES**

WITNESSES  
C. B. Burdine.  
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*Fig. 4.*



*INVENTOR*

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# UNITED STATES PATENT OFFICE.

LEWIS L. HEPBURN, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE  
MARLIN FIRE ARMS COMPANY, OF SAME PLACE.

## MAGAZINE-FIREARM.

SPECIFICATION forming part of Letters Patent No. 549,722, dated November 12, 1895.

Application filed October 30, 1894. Serial No. 527,452. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS L. HEPBURN, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Magazine-Guns, of which the following is a specification.

This invention relates to magazine-guns; and the invention consists in certain novel features of construction and combinations of devices hereinafter more fully set forth, and specified in the claims.

The object of my present invention is to construct a magazine or repeating shotgun; and the invention consists in combining with a longitudinally-reciprocating breech-bolt a vertically-reciprocating locking-block and a lever connected to the frame by a swinging link arranged to operate the bolt and its locking-block; and also in the arrangement of two detents, one to hold the cartridges when the breech is closed and the other when the breech is opened and the carrier raised.

It further consists in a peculiar construction of the cartridge-carrier and the lever for operating the same.

Figure 1 is a longitudinal vertical section of that portion of the gun which contains the operating mechanism, showing the parts in the position they occupy when the breech is closed and the gun fired. Fig. 2 is a similar view showing the position of the parts when the breech is open and the empty shell expelled. Fig. 3 is a top plan view of the cartridge-carrier and a portion of the operating-lever. Fig. 4 is a transverse vertical section of the same on the line *xx* of Fig. 1; and Fig. 5 is a perspective view of the breech-locking block shown detached.

The drawings represent a magazine-shotgun, and are made of full size, though it is obvious that rifles may be made on the same plan.

The reciprocating breech-bolt D and its locking-bolt D' are essentially the same as in my patent of October 11, 1887, No. 371,455, the only difference being that in the present gun the locking-block is provided at its lower end with a lateral projection *m*, which engages in a notch *m'* of the lever, whereas in

my former patent the block was provided with a notch in which a projection on the lever engaged.

The operating-lever L, instead of being pivoted on a fixed fulcrum, as in my prior patent, is pivoted to the end of a link K, as shown in Figs. 1 and 2, the opposite end of said link being pivoted to the trigger strap or frame, as shown at *a*, thus causing the lever to turn on a swinging fulcrum *b*, which during the movements of the lever in opening and closing the breech swings in the arc of a circle of which the fixed pivot *a* is the center. This lever L, as in my former patent, is provided with an extension or arm L', the front end of which is pivoted to the breech-bolt D near its front end, as shown in Figs. 1 and 2. Its upper face at the front end is provided with a projection or shoulder *h*, which is arranged to lie just in front of a corresponding shoulder *e* on the firing-pin when the latter has been driven forward to explode the charge, so that as the lever begins its movement to open the breech this shoulder *h* on the lever will engage with or press against the shoulder *e* on the firing-pin, and thereby retract or force back the firing-pin until its point is flush with the front end or face of the breech-bolt and thereby prevent it from striking the primer when the breech is closed again. On its upper side this arm L' is provided with a short arm or projection N, as shown in Figs. 1 and 2, one face of which is beveled, as shown in Fig. 2, to enable it to pass the spring-detent *l* in the side of the carrier J when the latter has been moved to its proper position, and thus permit the lever to continue its movements after the carrier has been moved to its position, both in closing and opening the breech. The operation of these parts is similar to that of the corresponding parts in my former patent; but in that case the bevels were formed on the body of the arm L', whereas in this case, because of the lever moving on a swinging fulcrum, it becomes necessary to change the construction, as above set forth.

As the arm L' has to pass some distance beyond the stud or detent *l* both in opening and in closing the breech, I cut a bevel or incline *u* on the arm L' at the point where the



latter comes in contact with the detent *l* on its backward movement to open the breech, this beveled edge entering under the end of the detent and forcing it back out of the way 5 and permitting the arm to pass by it to the position shown in Fig. 2. On the reverse movement of the arm *L'* to close the breech the inclined edge *w* of the arm, pressing against the rear and under face of the stud 10 *l*, throws the carrier up with a quick movement until the stud or detent *l* is brought opposite a notch or recess *r* in the side of the arm *L'*, when the latter is free to pass the detent and complete its movement, while the 15 carrier remains stationary, the carrier being held up by the friction-pin *y*, (shown in Fig. 3,) and which presses against the inner wall of the receiver with sufficient force to prevent the carrier from dropping until forced down 20 by the lever, as elsewhere explained.

The carrier *J*, which lifts the cartridges from the magazine up opposite the chamber of the barrel, is made of the form shown in Figs. 1, 2, and 3, and is slotted longitudinally about 25 three-fourths of its length to permit the arm *L'* to play freely through it, as represented in Figs. 1, 2, 3, and 4, its front portion being solid and recessed on its upper face to permit the arm *L'* to rest in said recess as far as may 30 be necessary when the carrier is raised. Its rear end terminates in a single arm or bar *V*, which is pivoted to the frame or receiver by a pin *t*, as shown in Figs. 1 and 2. As shown in Fig. 5, the locking-block *D'* is provided 35 with a vertical slot, through which this arm *V* of the carrier passes, thus permitting the carrier and the locking-block to be moved each independently of the other, the same as in my former patent, No. 371,455.

40 On the inside of one of the side walls of the receiver is a shallow recess, in which is secured a flat-spring-detent *f*, as shown in dotted lines in Figs. 1 and 2, its free end serving to act as a stop and prevent the cartridges from 45 being forced out of the magazine *C* when the breech-bolt with its detent is drawn back; but as this detent is forced back at times by the carrier, as the latter is raised and lowered, I have provided an additional detent *d*, which, 50 as shown in Figs. 1 and 2, is secured to the under side of the breech-bolt at its front end. This detent consists of a small block *d*, having a stem working in a hole, with a spring *i* in the hole tending to force it out, the body 55 of the detent having a slot in it through which a pin passes, said pin being held by two flat arms, which project from the under side of the breech-bolt on opposite sides of the detent *d* and between which it slides up and down. 60 The detent is beveled or inclined at its rear lower edge, so as to permit the flange of the shell when forced past it into the magazine to depress the detent and let the head of the cartridge pass it, the detent immediately 65 springing back again as soon as the head has been shoved past it, and thus holding the cartridge in the magazine.

The cartridges are put into the magazine through the open space in the bottom of the receiver, with the breech closed, as in Fig. 1, 70 in which position it will be seen that the detent *d* projects past the wall of the magazine sufficiently to hold the cartridge in. This detent *d* will of course operate only when the breech is closed, and the object of having 75 the two detents is to prevent a cartridge from accidentally working out of the magazine at an improper time.

A friction-pin *y*, with a spring to push it outward, is set in the side of the carrier *J*, as 80 shown in Fig. 3, which, pressing against the wall of the receiver, serves to hold the carrier against accidental movement, and a similar friction-pin *o* is placed in the side of the lever *L*, as shown in Figs. 2 and 4, the projecting 85 end of this pin *o* being beveled, as shown in Fig. 4, so that as it strikes the trigger-strap it will be pressed inward and permit the lever to continue its movement.

The firing-pin is made in two sections, as 90 described in my patent of August 1, 1893, No. 502,489, and as shown in Fig. 2, so that it will be impossible to fire the gun until the breech is closed and the locking-block is raised to the position shown in Fig. 1, thus prevent- 95 ing the possibility of an accidental discharge before the breech is fully closed and locked.

From the foregoing description the operation of the mechanism will be readily understood, the manipulation of the arm in use 100 consisting simply in moving the hand-lever *L* to and fro, as is usual in this class of guns.

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

1. The combination in a gun of the longi- 105 tudinally reciprocating breech bolt, the vertically reciprocating locking block *D* and the lever *L* having its arm *L'* pivoted to the breech bolt, said lever being pivoted to one end of a swinging link *K* which has its opposite end 110 pivoted to the receiver, the said parts being constructed and arranged substantially as shown and described.

2. The combination in a gun of the longi- 115 tudinally reciprocating breech bolt provided at its front end with a spring detent *d*, the vertically swinging carrier *J*, and the spring detent *f* secured to the wall of the receiver in the path of the movement of the carrier, said parts being arranged and timed to move rela- 120 tively as shown and described, whereby the cartridges are held in the magazine by one of said detents while the other by the movement of said parts is thrown out of action.

3. The combination in a gun, of the slotted 125 carrier *J*, provided with the spring stud *l* and friction pin *y*, and the lever *L* having its arm *L'* provided with the incline *w* for raising the carrier, said lever being also provided with the bevel faced projection *N*, and the recesses 130 *u* and *r*, all arranged in relation to each other substantially as shown and described.

4. The combination in a gun, of a cartridge carrier pivoted at its rear end to the frame



and provided with the spring detent *l*, with  
the lever *L L'* pivoted at its front end to the  
sliding breech bolt, and provided with the  
cam surface *w* arranged to engage with the  
5 detent *l* and lift the carrier as the lever com-  
mences its movement to close the breech,  
substantially as described.

In witness whereof I hereunto set my hand  
in the presence of two witnesses.

LEWIS L. HEPBURN.

Witnesses:

J. M. MARLEY,  
M. E. WARD.