(No Model.) 2 Sheets—Sheet 1.

A. BURGESS.

MAGAZINE FIRE ARM.

No. 251,694. Patented Jan. 3, 1882.

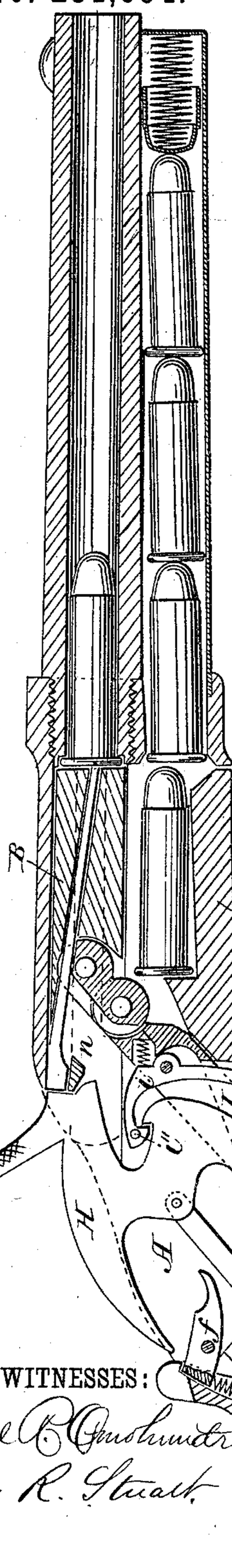

Fig: 1.

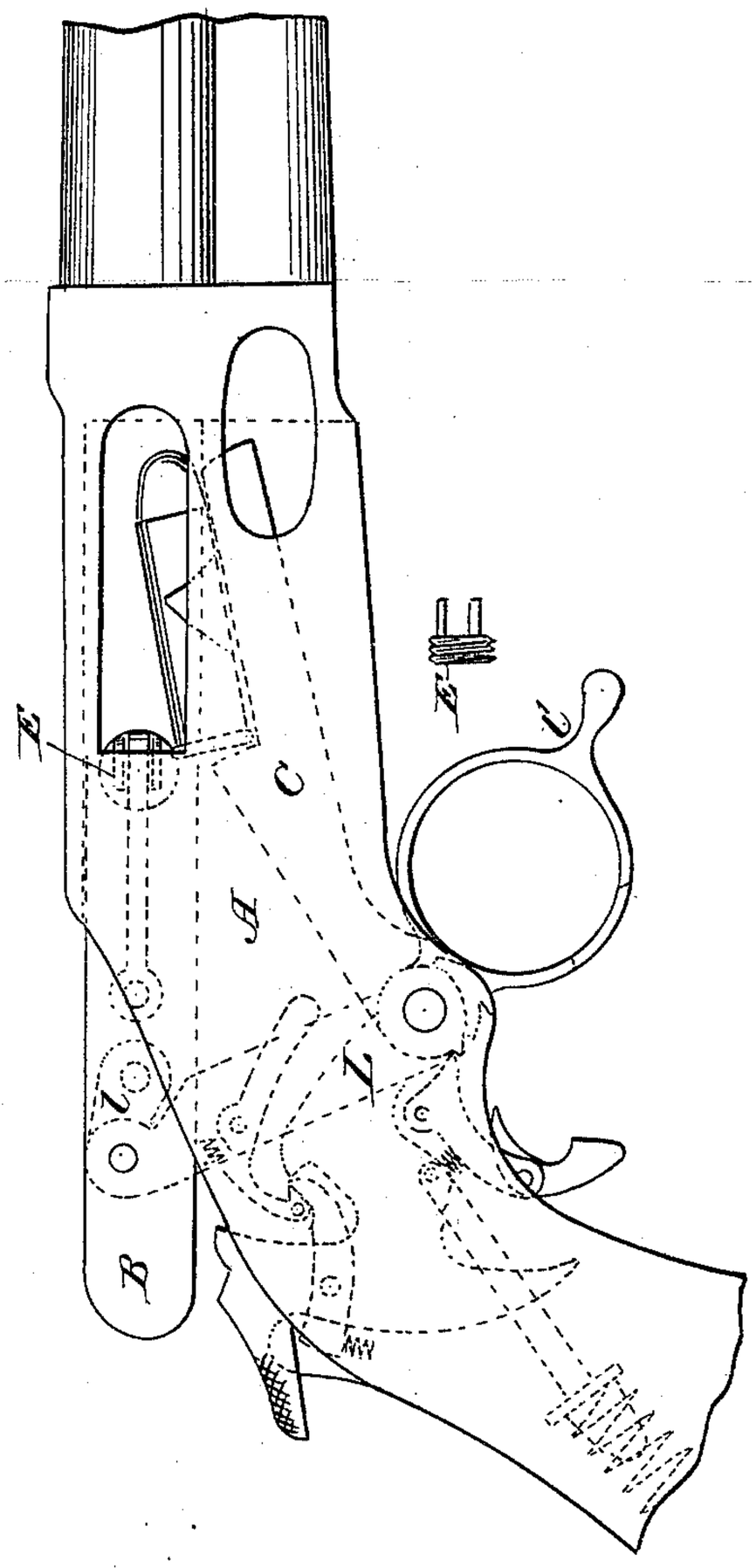

Fig: 2.

WITNESSES:

Will B. Gaskins Jr.

Tom R. Stuart

INVENTOR

Andrew Burgess

(No Model.) 2 Sheets—Sheet 2.

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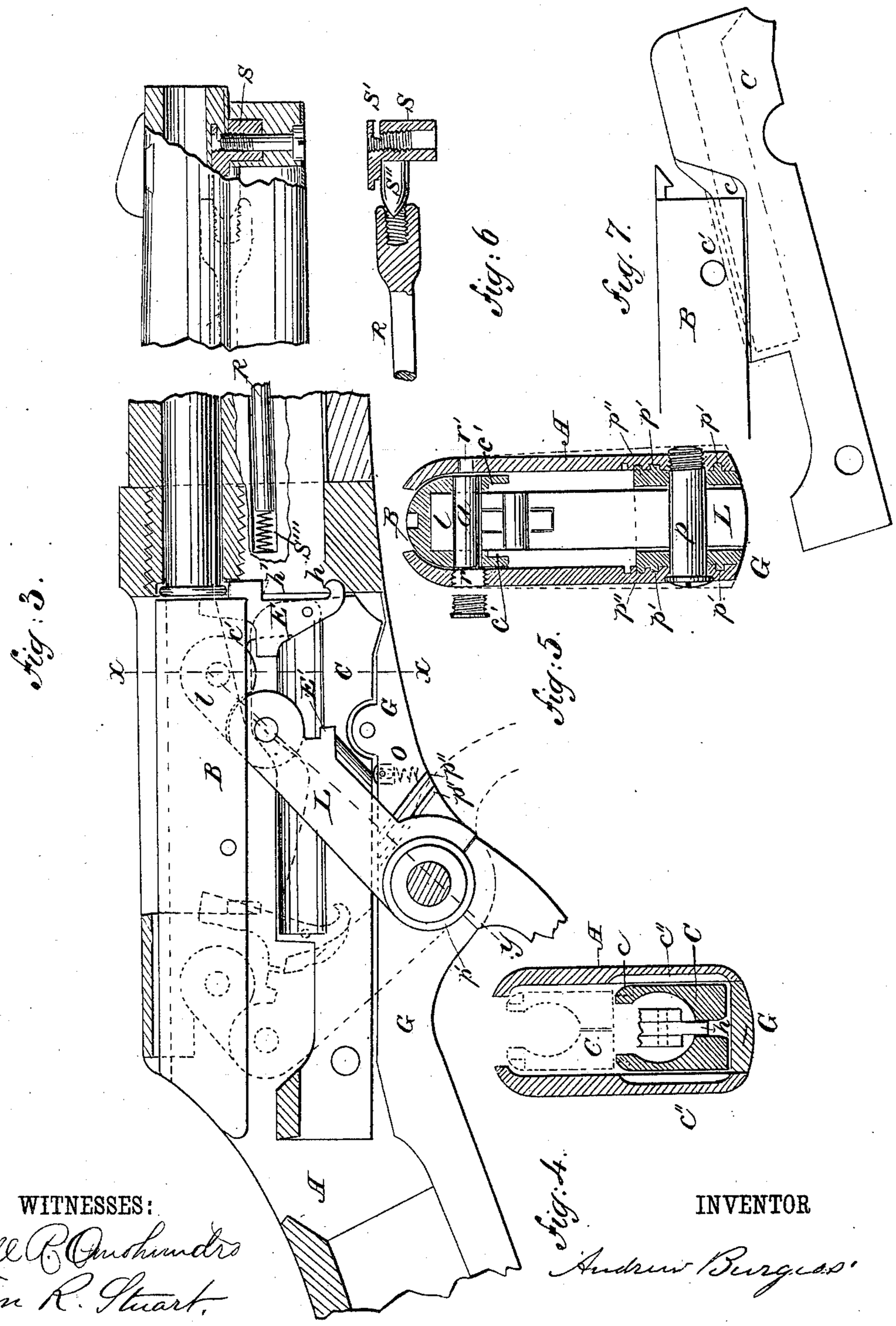

WITNESSES:

Will C. Orrishundro

Tom R. Stuart.

INVENTOR

Andrew Burgess.

UNITED STATES PATENT OFFICE.

ANDREW BURGESS, OF OWEGO, NEW YORK.

MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 251,694, dated January 3, 1882.

Application filed November 26, 1881. (No model.)

To all whom it may concern:

Be it known that I, ANDREW BURGESS, of Owego, in the county of Tioga and the State of New York, have invented new and useful Improvements in Fire-Arms, of which the following is a specification.

My invention relates principally to magazine-guns; but some parts apply also to other small-arms.

In the accompanying drawings similar letters of reference indicating corresponding parts, Figure 1 is a vertical longitudinal section of a magazine-arm in closed position; Fig. 2, an outside view of same arm with breech shown open in broken lines. Fig. 3 is a side view in section of frame, showing parts with other points of construction. Fig. 4 is a vertical cross-section of Fig. 3 on the line *x x*; Fig. 5, another cross-section on the line *x y*. Fig. 6 shows the device for attaching the magazine and ramrod, and Fig. 7 shows the position of the bolt when about to force the carrier down.

A is the frame of the arm; B, the bolt or breech-piece; C, the carrier; H, the hammer, and R the wiping-rod or ramrod.

The bolt is moved and locked by the lever L through the link *l*, and I arrange a hook, latch, or catch in the said lever to engage the hammer H, so that in pulling back the hammer to cock the arm the lever is drawn back also by force of the engagement of the hook *i*, so that by said lever and the link *l* the breech is retired until the projection *i''* of the latch *i* reaches the dog or lifter *f*, which, projecting inside of the frame at an angle to the movement of the latch, disengages the latch by its inclined part. To make said disengagement easier I pivot this dog *f* and form a projection on its rear to be engaged by the back of the hammer at its rearmost movement, and thereby raise the forward part of the dog to lift the latch, as shown in Fig. 2. The latch *i* has also a projection, *i'*, extending to the outside of the frame, which may be pressed upon to disengage the catch from the hammer when the hammer is to be cocked, without moving the lever or breech. In this case the hammer is only to be so far moved that the trigger may engage in the notch *x* of hammer, which I form for that purpose, that the carrier may not prevent the hammer from cocking far enough to fire the arm without raising said carrier.

I form a ring or handle, *l'*, below the pivot of the lever L, in such relative position to the hammer that while the thumb of the operator moves back the hammer one or more fingers of the same hand may engage the ring or handle, so that by a wrenching motion of the hand—the thumb turning backward the hammer and the fingers forward on the lever—a double force or leverage is exerted on the mechanism to move the breech-bolt backward, and the ring may be pulled back by the fingers to close the breech.

In the sear *t*, I hang a lever, *t'*, which serves as a trigger, so that when the breech is open, as seen in Fig. 2, the trigger is free to turn by any pressure on its lower end or arm, so as not to act upon the sear; but when the breech is closed, as in Fig. 1, the handle reaches its upper arm and so confines it that pressure on the lower arm operates the trigger and sear.

The carrier is hung on the same pivot as the locking-lever and hammer, in a manner similar to that shown in my Patent No. 222,008. The locking-lever may also be similarly supplied with a spring to close the breech, if found desirable, and the mechanism here shown to operate the lever may be applied to that system as well as to several others.

It will be seen that the hammer strikes under an incline, *n*, Fig. 1, on the bolt, to lock it either in connection with the links or independent of them. The hammer may also be hung on an independent pivot back of the lever, to operate in a similar manner and produce like results.

It is not essential that the latch *i* should be attached to the lever or operated precisely as here shown; but it will produce a like result if attached to the hammer or constructed as a sliding catch or cam, and may be released by a connection with the outside of the frame at top or side; or the said latch may be extended to the guard-lever, as shown in broken lines in Fig. 1.

It will be seen in Fig. 3 that I attach a hook or hooks *h h'* to the lower projection of the bolt at the mouth of the magazine, so that when any obstruction occurs in the magazine or the feeding cartridge would fail to move backward as fast as the bolt may be withdrawn the hook carries along the cartridge by engaging its flange until at the latter part of the movement

of the bolt, when the hook *h* is turned back and downward to release the cartridge, and the ejector, striking forward, moves said cartridge with it, and forms an incline to guide the cartridge up clear of the hook *h*, as shown in broken lines in Fig. 3. I here show the hook *h* formed as a part of the ejector, so that when the ejector is closed back into the bolt the hook closes up to grasp the cartridge-flange; but when the top of the ejector turns forward the hook recedes to admit or release the flange. When the top projection, *h'*, is used alone in this connection, the carrier is arranged to spring up slightly as the breech is opened, to confine the flange between the carrier and the shoulder *h'*. The bolt confining the carrier tightly down when the breech is closed, as in Fig. 3, said carrier will not be raised by the spring *o*, or its equivalent, until the cartridge has so far entered the carrier that its body or forward part may be so raised that it will not be obstructed by the shoulder at the magazine entrance and the carrier, the movement of the spring *o* being so limited, but far enough to stop the head of the next cartridge in the magazine in case the feeding cartridge is too short to do it. In this way I use short and long cartridges in the magazine, the face of the carrier stopping the magazine in a similar manner to that shown in my Patent No. 235,204; but here a spring is used in place of the positive action of the breech mechanism.

The ejector is hung in the bolt and operated in similar manner to that in my Patent No. 216,080, except that here the link-connection *l* forces the bolt and ejector against the projection on the lever.

In Fig. 2 I show a modified ejector, E, consisting of a screw having two prongs, which extend into grooves in the bolt.

The carrier C, Figs. 3 and 4, is constructed with a vertical opening or split through its front end, and is arranged with sides which spring together. The sides of said opening through the carrier are beveled at the rear, so that when the breech is being closed the downward-projecting part *h* forces apart the sides of the carrier, as shown in Figs. 3 and 4, so that a cartridge can enter the carrier from the magazine, and when the projection *h* is withdrawn by the movement of opening the breech the sides of the carrier spring together, as seen in dotted lines in Fig. 4, to hold or grasp the cartridge. I also cut away the outside of the top of the carrier, as at *c*, Fig. 7, and make a corresponding cut-out within the sides of the bolt, as marked by dotted lines in Figs. 1 and 7 at *c'*, so that when the bolt is moved forward over the said raised carrier to drive a cartridge into the chamber the thin top parts of the carrier enter the cuts *c'* of the bolt, as shown in Fig. 7, so that the carrier will not be forced down until the cartridge has so far entered as to be supported by the chamber. I also form recesses *c''* *c''*, Fig. 4, in the inside of the frame, so that the sides of the carrier may be forced farther apart into said recesses when the carrier is down. This occurs when the head of the cartridge may happen to rise, so that its flanges become caught by the narrow top of the carrier, and by forming the recesses described the carrier sides can be forced apart by the cartridge as it is driven in by the bolt.

The guard-strap G is constructed separate from the frame and removably inserted. This makes the bearing of the lever L on the pin *p* distant from its support in the sides of the frame, as seen in Fig. 5, and great strain upon said pin results, to lessen which I form the projecting rings *p' p'* on the sides of the guard-strap to enter recesses inside the frame and couple said strap to the frame, so that it shall support the pin close to the lever through the firm support given it by the projections *p''* or *p''* in the frame. When the rings *p' p'* are used it becomes necessary to spring the frame apart to the broken lines at the sides of Fig. 5, to remove the guard-strap; but I construct the frame to so spring apart in its normal condition, so that it has to be forced together, as shown, by the screw-pin *p*. To avoid this I show in place of the rings *p' p'* diagonal projections *p'' p''* on the guard-strap and corresponding recesses in the frame, Figs. 3 and 5, so that the projections will enter diagonally from the front without the springing apart of the frame and hold the guard-strap against the recoil of the bolt.

To fix the magazine to the barrel of this arm I construct the stud S, Figs. 3 and 6, to slide into a lateral cut in the barrel, and provide it with a downward projection to enter the magazine, and which receives a screw from beneath the magazine to secure it; and to prevent the slide portion from moving laterally I form a recess in the stud at S', extending into the screw-hole, so that when the screw enters it presses firmly against or passes through the lip formed by the under-cut in the barrel and which enters the cut-out S'. This obviates the necessity of making a depression in the barrel at the bottom of the cut-out, which is liable to dent through to the injury of the bore of the arm.

I make a hole in the frame, Fig. 3, to receive the small end of the ramrod and fix the spring S''' therein, so that when the rod is inserted the spring presses it forward, and by arranging a stud near the muzzle to project toward the breech, as shown in Figs. 3 and 6, the pressure of said spring forces the hollow face of said rod over the stud to hold the rod securely between the stud and spring; but it may be easily disengaged by pressing the head of the rod to compress the spring and then moving it laterally from the stud. I prefer to form the stud S'' on the magazine-stud S, as shown.

I couple the link *l* to the bolt by a pin, *a*, through a hole, *r*, made in the side of the frame, and to release said link I make a small hole, *r'*, in the opposite side of the frame, through which the pin may be reached to drive it out

of the hole *r*. The large hole *r* may be closed by a screw to hold the pin in place.

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

1. In the frame of a breech-loading fire-arm, a lever, L, a latch, *i*, and a hammer, H, all in combination with a projection, *f*, arranged in the frame to uncouple the lever from the hammer, substantially as described.

2. In the frame of a breech-loading fire-arm, the lever, latch, and hammer described, when said latch is provided with an extension to the outside of the frame to operate the latch, substantially as and for the purpose set forth.

3. In a breech-loading fire-arm, a reciprocating bolt, a hammer, a guard-lever, and coupling mechanism, in combination substantially as described, whereby the turning or wrenching movement of the hand withdraws the bolt by the combined force of the hammer and guard-lever.

4. The rocking lever or trigger *t'*, in combination with the sear *t*, pivoted to the trigger and in the frame, and the guard-lever, which furnishes a bearing for the said trigger, substantially as and for the purpose described.

5. In a magazine-gun, a reciprocating breech-bolt provided at its forward end with a hook, *h*, in combination with a shoulder, *h'*, whereby the cartridge is grasped and withdrawn from the magazine in the act of opening the breech, substantially as specified.

6. A carrier constructed, substantially as described, with two sides vertically open in front, said sides springing together, in combination with an extension on the bolt to open the carrier in the closing movement of the breech, substantially as described.

7. A carrier provided with spring sides, reduced at *c* and extending upward above the center of the cartridge, and a bolt having recesses *c' c'* to receive said upward extensions of the carrier, whereby the carrier is permitted to remain in its upward position until the cartridge is entered well into the barrel, substantially as set forth.

8. The stud S, having the recess S', in combination with a lip on the barrel to enter said recess and a screw to enter the magazine, recess, and lip, to secure the parts together, all in combination substantially as specified.

9. A guard-strap provided with the projections *p''* or *p''*, in combination with a frame having grooves to receive said projections, and a pin or screw to bind the parts together in a fire-arm, substantially as set forth.

10. In a fire-arm, a spring, S''', located in a recess at the breech, and a stud, S'', located near the muzzle and extending back parallel with the barrel, and a rod with a concavity in its face, all in combination, so that the said spring and stud hold the rod between them, substantially as specified.

ANDREW BURGESS.

Witnesses:
GEO. M. LOCKWOOD,
JAS. S. PHILLIPS.