

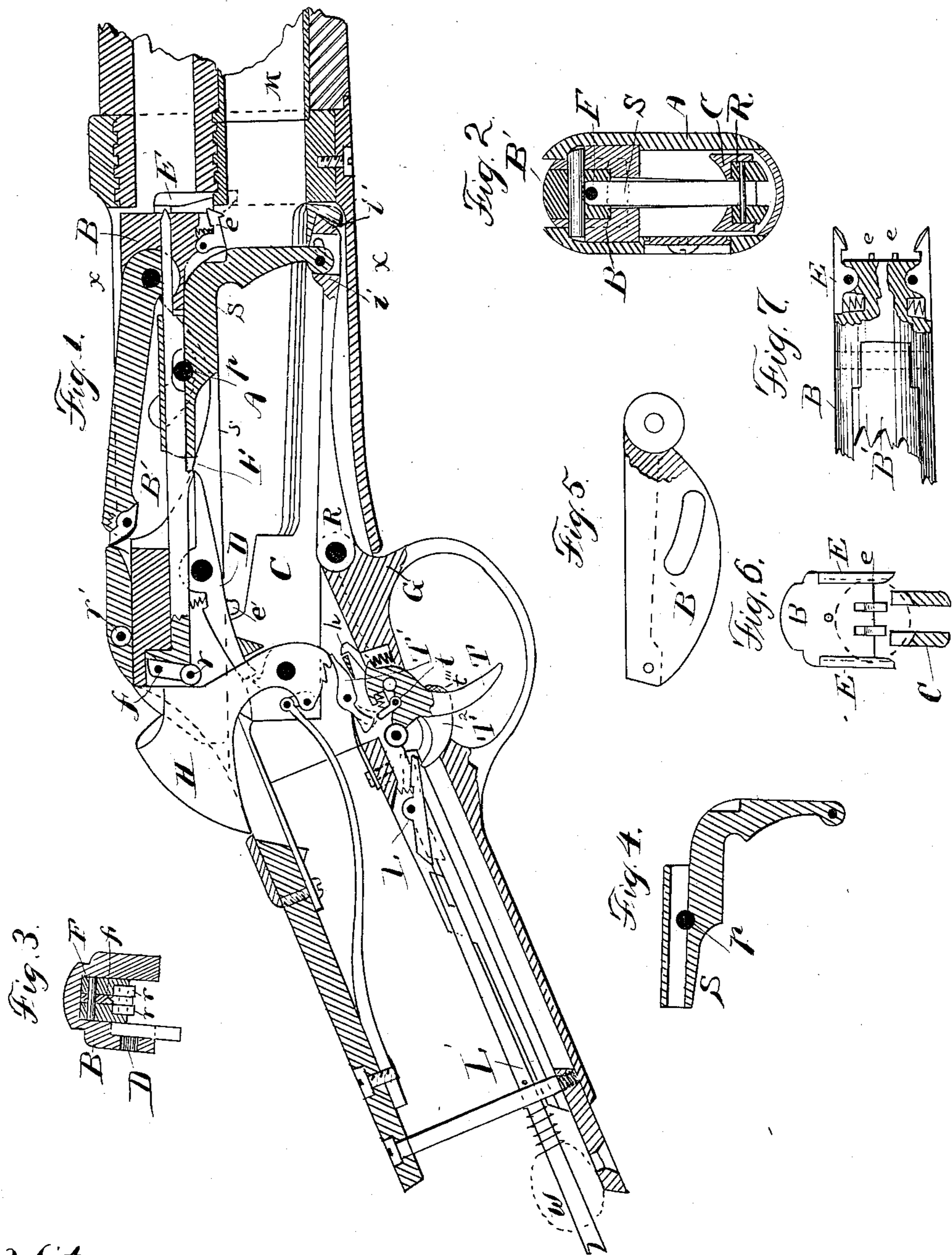
(No Model.)

A. BURGESS.

MAGAZINE GUN.

No. 366,564.

Patented July 12, 1887.



Witnesses:
C. W. H. Brown,
Nolan E. Judd

Inventor:
Andrew Burgess

UNITED STATES PATENT OFFICE.

ANDREW BURGESS, OF OWEGO, NEW YORK.

MAGAZINE-GUN.

SPECIFICATION forming part of Letters Patent No. 366,564, dated July 12, 1887.

Application filed August 27, 1885. Serial No. 175,439. (No model.)

To all whom it may concern:

Be it known that I, ANDREW BURGESS, a citizen of the United States, residing at Owego, in the county of Tioga and State of New York, have invented certain new and useful Improvements in Magazine Fire-Arms, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to magazine fire-arms, and has for its object ease, rapidity, and certainty of operation; and it consists principally in modifications and improvements of my application No. 171,940, of July 18, 1885.

Figure 1 is a longitudinal side elevation of the frame and operative mechanism of this arm. Fig. 2 is a cross-section on the line $x x$ of Fig. 1. Fig. 3 is a cross-section through the rear of the bolt and firing-pin, to show arrangement of the cocking-dog and rollers. Fig. 4 is a detached view of the sliding piece, which operates the brace. Fig. 5 shows the construction of the brace. Fig. 6 is a face view of the bolt, showing side extractors. Fig. 7 is a broken top and sectional view of the front end of the bolt and bolt attachments.

A is the frame, B the bolt, C the carrier, D the cocking-dog, E E the extractors, F the firing-pin, G the guard, H the hammer, L the locking-dog, and L' its operating-rod. M is the magazine; R, the rod or strap to connect the guard and slide-piece S. T is the trigger; T', the sear; T'', a finger-piece to release the locking-dog. t is a pulling-off fly and f a fly to cock the hammer. r is a roll in said fly; r' , a friction-roller in the frame. e is an ejector and pulling-hook, p a pin in slide S to operate the brace, and W a weight on rod L'.

The general construction of this arm is similar to that shown in my application No. 171,940; but I will proceed to describe various details wherein it differs from said arm, and which I desire to claim in this application.

The side extractor-hooks, E E, are widened downward as to the bottom of the bolt, so that when the cartridge-head is thrown up by the carrier between the extractors it enters between the lower parts of the extractor-hooks to be guided thereby upward and held by its flange to prevent its point from flying upward, so that in a gun having the ordinary

construction of the frame and vibrating carrier the extractors serve to stop and guide the feeding cartridges.

The sliding piece S carries a pin, p , which passes through a curved slot in the brace and a straight longitudinal slot in the sides of the bolt. Said slide-piece is formed as a cylinder or sleeve at its top to encircle the firing pin F, and has a downward extending arm which is engaged by the sliding strap R, which connects the operating-handle to the sliding piece S, to thereby move it back and forth to operate the brace and bolt.

The ejector e is arranged to expel the cartridge-shells upward, as in my Patent No. 289,972; but it is also provided with a spring to turn it downward, and a hook at the bottom of its front end to engage the cartridges and pull them back into the frame in the same manner as the pulling-dog p in my application No. 113,436, of December 3, 1883, and the hook of the ejector is raised out of the line of the magazine, as shown in Fig. 1, by the slide-piece S when the breech closes.

The carrier is arranged to be forced nearly but not quite down by the closing-bolt, which slides along its top forward of its pivot, and an incline in the front end of the carrier is then engaged by the incline i' of the strap R to force the carrier below the line of the magazine, as in Fig. 1; but in the first backward movement of the strap R to open the breech its incline i engages a corresponding incline rearward on the carrier to raise the carrier a little, and thereby stop the magazine.

I hang a fly, f , with a roller, r , in the rear of the bolt. I here show it pivoted to the firing-pin; but its action is substantially the same when pivoted or arranged as a sliding fly in the bolt. The roller-fly bears back the hammer to cock it when the bolt moves back to open the breech, and the roller r , projecting below that portion of the bolt or its parts above the hammer or immediately to its front, turns the hammer so far back as to be held at full-cock below that portion of the bolt or its parts forward of the fly, so that the bolt passes back freely over the nose of the hammer until the rear lower part, s , of the slide S reaches and depresses the nose of the hammer, so that it will bear thereon with elastic

force (by means of the mainspring) to hold the parts in open position or from moving therefrom by their own weight. When the bolt moves forward to close the breech, the fly 5 turns back on reaching the nose of the hammer to pass over it without friction. I also pivot a roller, r' , in the top of the frame, to engage the bolt and decrease the friction of the top of the bolt against the top of the frame 10 as the bolt is being opened and the hammer bearing against the fly or bolt when being cocked thereby.

The automatic cocking device here shown is not claimed herein, as it is shown in various 15 forms in my applications No. 168,819, of June 15, 1885, and No. 171,940, of July 18, 1885.

I arrange a fly or movable piece, t , in the trigger to engage the sear when it is in position to hold the hammer cocked, as shown in 20 dotted lines in Fig. 1, so that if the trigger is then pulled it turns the sear, as to the position there shown in full lines, to disengage it from its notch in the hammer. When the piece t will have passed so far as to be in position to 25 turn forward and no longer obstruct the movement of the sear, (the spring of the fly, if used, being so much weaker than the sear-spring as not to resist its operation,) so that if the hammer be again cocked while the trigger is yet 30 being pulled, the sear will spring into place to hold it, and when the trigger is released it will be turned again into operative position by its spring t' , the fly-piece turning back of its point of engagement on the sear when re- 35 tired sufficiently by the turning of the trigger.

The above is a modification of the trigger of my application No. 171,940, in which the pulling-piece is locked by a spring-catch 40 arranged to be released by a set-screw in the fixed guard strap.

A dog or lever, as L , is pivoted in the frame or fixed part of the gun to engage the sliding handle or a part moving therewith, to lock the handle forward or in position to hold the 45 breech closed. I show the dog L pivoted in the guard-strap and provided with a spring to turn its forward part outward, behind a shoulder of the sliding guard-handle, to lock the guard forward, and an unlocking-lever, T'' , is 50 pivoted on the same pin with the trigger, but with independent movement, and has a projection, as t''' , near the base of the trigger, by which it may be engaged to unlock the sliding guard by turning its rear part inward 55 against the locking-dog to press it out of the line of movement of its locking-shoulder in the guard.

It is obvious that the unlocking-piece may be hung independent of the trigger or sliding 60 guard, as in the fixed part of the guard strap or frame, by mere change of construction; but I prefer to arrange its projection t''' in such relation, as shown, to the trigger that the operator in deliberate firing, when it is usual to 65 pull the trigger near its lower point, will not need to engage or operate the unlocking-piece,

but when, as in firing rapidly, it may be desirable, the finger can engage the unlocking-piece and the trigger near its base at the same time. 70

The unlocking-lever may be provided with a hook, as h , to engage a shoulder in the frame and lock the handle independently of the dog L . A rod or movable piece, as L' , is arranged rearward of the locking-dog, in position to be 75 engaged by said dog when the recoil of the discharge thrusts back the gun, the inertia of rod L' insuring such action, so that the inclined ends of the dog and rod strike together to turn the dog out of engagement with the sliding 80 handle to unlock it, so that if the operator is pulling back on the handle in firing, the recoil unlocks it and the same pull of the operator which presses the gun against his shoulder slides back the handle to open the breech. A 85 spring, as shown, may hold the rod out of contact with the dog, (but will be compressed by the recoil, as aforesaid,) and a weight, as W , may be added to the rod, when desirable, to increase the power of its blow on the dog L . 90 The brace is pivoted in the bolt and has a segment bearing therein forward of its pivot, and said brace is widened rearward to fill the opening in the top of the frame, the front of such widened part being concave to bear against 95 segmental shoulders in the top of the bolt rearward of the brace-pivot. (See Fig. 7.)

I do not confine my claim to the lever form of the unlocking dog or piece shown, as other 100 mechanical equivalent (to produce the same result) may be used or substituted by obvious changes in construction, and the unlocking-piece and also the locking-dog may be applied in substantially the same manner to other 105 well-known operating handles.

I claim—

1. In a magazine fire-arm, a reciprocating bolt, a pair of yielding extractors located at the sides of the bolt-face and provided with downward-extending hooks integral therewith 110 to guide the cartridge upward before the face of the bolt by its flange, in combination with a carrier which raises the cartridge-flange to a position between said extracting-hooks, substantially as described. 115

2. In a breech loading gun, a reciprocating bolt, a locking-brace, a sliding piece guided to longitudinal movement in the bolt and surrounding the firing-pin, but having movement independent of the firing-pin movement, and 120 having a downward projection connected to a link, R , operated by the sliding operating-handle, said pins serving to operate the brace by a pin-and-slot connection, substantially as specified. 125

3. In a magazine fire-arm, a reciprocating bolt, an ejector hung in the bottom of the face of said bolt, and means to vibrate it upward to expel the cartridge, in combination with a spring to turn said ejector downward, and a 130 hook thereon to engage and pull back the cartridges from the magazine in opening the

breech, and means, substantially as described, to turn the ejector-hook upward out of engaging position in closing the breech.

4. In a magazine fire-arm, a hammer and a sear arranged to engage the hammer to hold it in a cocked position, in combination with a trigger and a projection carried thereby and having movement relatively to the trigger, all combined and all arranged in such relative position and line of movement that the pulling of the trigger first bears its projection against the sear to release it from the hammer and then carries it past its engaging position to allow the hammer to be cocked by means substantially as described and the sear to engage it while the trigger is yet being pulled.

5. In a magazine fire-arm, a hammer and a sear arranged to engage the hammer to hold it in a cocked position, in combination with a trigger carrying a fly to disengage the sear from the hammer by the first part of the movement of pulling the trigger and then pass its engaging point on the sear by its further movement, and a spring to return the trigger to operative position when the trigger is released.

6. In a breech-loading fire-arm, a sliding handle and means, substantially as described, to lock it, a trigger, and an unlocking-piece hung at the base of the trigger and having

movement independent of the movement of the trigger, all combined and arranged in such relative position that the operator may engage the trigger near its lower end by the finger to fire the gun without unlocking the handle, or near its base to engage both unlocking-piece and trigger to fire the gun and unlock the handle by the same backward pull of the finger.

7. In a breech-loading fire-arm, a dog arranged to engage and lock a sliding handle, and in combination therewith, and a rod or weighted device, with which the locking-dog engages by the force of the recoil of the gun to unlock the handle, substantially as specified.

8. In a breech-loading fire-arm, a sliding handle and a dog arranged to engage said handle to the fixed part of the gun to lock it, in combination with a rod or weighted device, substantially as described, with which the dog engages by force of the recoil of the gun in firing to unlock the handle, and a spring to hold the unlocking-rod out of contact with the locking-dog.

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

ANDREW BURGESS.

Witnesses:

RUFUS S. PICKETT,
NELSON E. JUDD.