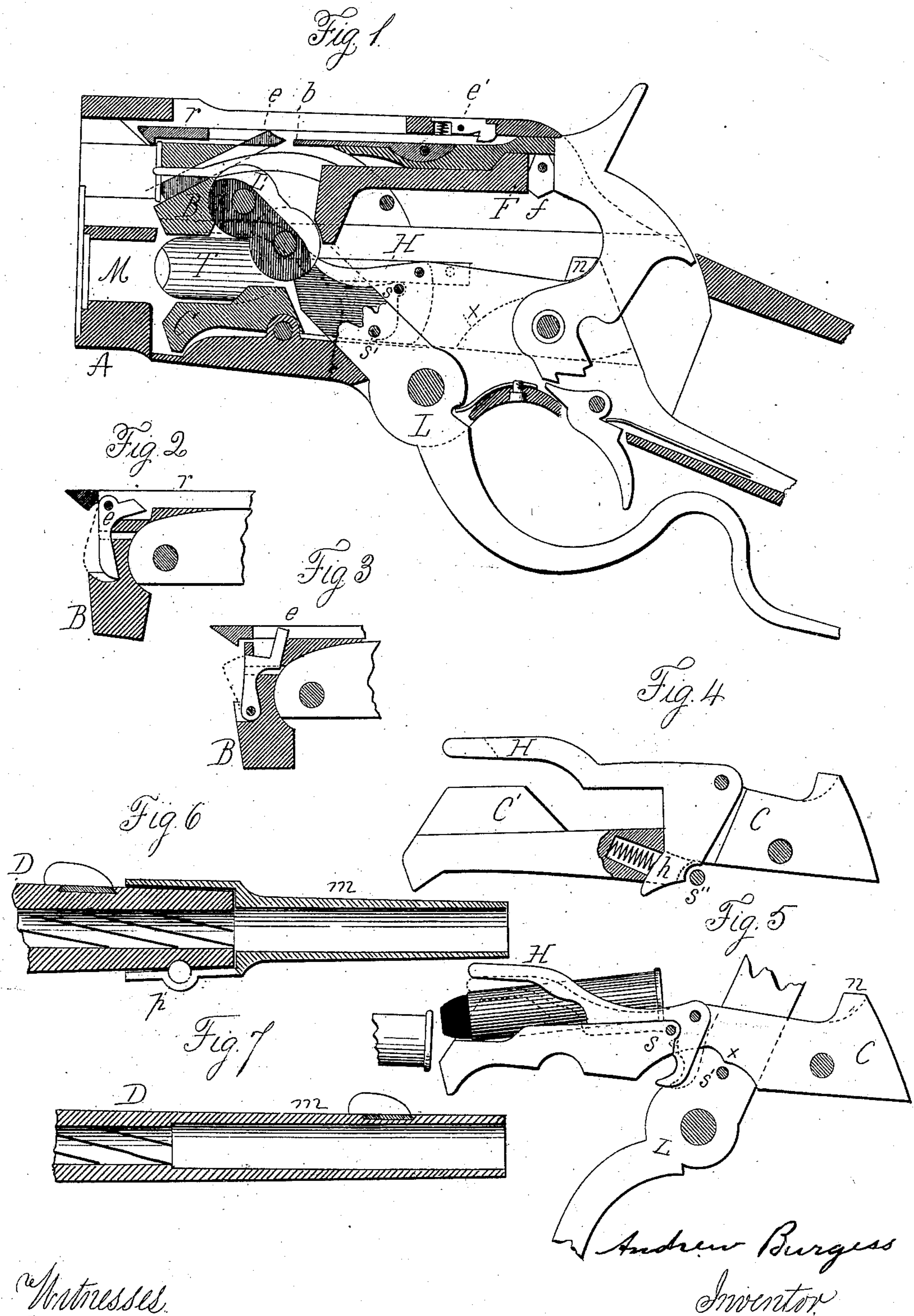


(No Model.)

A. BURGESS.  
Magazine Fire Arm.

No. 235,204.

Patented Dec. 7, 1880.



Witnesses  
Geo. R. Cooley  
Edgar A. Robinson

Andrew Burgess  
Inventor

# UNITED STATES PATENT OFFICE.

ANDREW BURGESS, OF OWEGO, NEW YORK.

## MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 235,204, dated December 7, 1880.

Application filed October 28, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW BURGESS, of Owego, in the county of Tioga and State of New York, have invented a new and useful Improvement in Magazine Fire-Arms, which improvement is set forth in the following specification, reference being had to the accompanying drawings.

This invention relates, principally, to improvements on my patent of April 1, 1879, and numbered 213,865, but in part may be applied to other systems and breech-loaders.

In the accompanying drawings, Figure 1 represents a sectional side elevation of the breech mechanism of the arm. Figs. 2 and 3 show modifications of the ejector; Fig. 4, a carrier provided with the lever-arm H, as operated by a spring. Fig. 5 shows carrier with same arm operated positively, and also a means for partly raising the carrier; and Figs. 6 and 7 show the application of smooth-bored muzzles to rifled barrels.

Similar letters of reference indicate corresponding parts.

A is the frame of the arm; B, the bolt; C, the carrier; D, the barrel; *e*, the ejector; F, the firing-pin; H, the lever-arm to hold the cartridge on the carrier; L, the operating-lever; L', the lever-link; M, the magazine; *m*, the smooth prolongation of a rifled barrel; *s*, the stop to partly raise the carrier, and T the loading-trap.

To the vibrating carrier C, I pivot the lever-arm H, as shown in Figs. 4 and 5. When the carrier is down, as shown in Fig. 1, the arm H is raised (relatively to the carrier) by the bottom of the frame or a projection therein, so that loading-trap T may be pressed in between said arm and the carrier to charge the magazine.

In Fig. 4, where a spring is used to close down the long arm of the lever H, I arrange the pin *s''* in the bottom of the frame, to hold said arm up when the carrier is down by coming in contact with the short arm *h*, and by forming a notch or depression therein, as shown in Fig. 4. The abutment thus formed bears against the pin *s''* to lock the lever and carrier in that position, so that the spring shall not raise the carrier.

In Figs. 1 and 5 I leave out the spring and

use a pin, *s*, which projects from the inside of the frame and engages the short arm of the lever H to close it down upon the cartridge, as shown in dotted lines in Fig. 5, when the carrier rises.

The lever-arm H may be hung in the frame and the operating pin or projection carried by the carrier, so as to act substantially in the same manner. I prefer to pivot the arm H so loosely as to allow a little lateral movement and form a depression inside of the frame just above the trap T, that the forward part of the lever-arm can so far enter said depression when the carrier is down as to give free passage to the closing-bolt.

The carrier has an upward-projecting side, C', Fig. 4, opposite the lever-arm H, so that when lever H is depressed, as shown in dotted lines in Fig. 5, the cartridge will be clasped by said arm against the side C', that it may not fly out when the carrier rises, and when the bolt moving forward starts the cartridge partly into the barrel the carrier falls, so that the side C' moves below the cartridge and allows said cartridge to swing so far laterally that it can be forced past the arm H by the closing-bolt.

It being sometimes desirable to use short and long cartridges in the same gun, I construct it to take long ones, and then provide it with adjustable means for raising the carrier a little before the extreme opening of the breech, so that when short cartridges are used, when one passes entirely onto the carrier from the magazine the next forward cartridge will be stopped by the face of the carrier, that it may not hinder the carrier from rising when the bolt reaches its backward limit.

In Fig. 5, S' is a projection on the lever L, that may be adjusted to strike the shoulder *x* on the carrier to raise it so far as to prevent the next cartridge from interfering with the raising of the carrier.

To allow the forward movement (relatively to the bolt) of the ejector to cease before the bolt reaches the extreme of its rearward movement, I set the ejector *e*, as shown in Fig. 1, at an angle in the bolt, so that when it shall be forced forward by stop *e'* to eject the shell it becomes so far depressed as to allow said stop to pass over it.

Fig. 2 shows a modification, in which the short arm of the pivoted lever-ejector is adapted to be turned by the stop *e'*, when said stop may fall into the depression near the pivot, so there may be a slight backward movement of the bolt after the ejector shall have fully acted.

Fig. 3 shows another modification of lever-ejector, which, being operated upon through a slot in the extractor, swings from over the firing-pin.

I prefer to make the stop or stud *e'* with a spring, so that it is held up by the bolt when closed, as in Fig. 1; but as the bolt moves backward and said stud stops the ejector it falls from the ledge *b* of the bolt to give the ejector a quick impulse forward.

To prevent the objectionable friction of the firing-pin and bolt on the nose of the hammer as they ride over after having cocked it, I place a fly in the firing-pin, Fig. 1, so that when the hammer is forced back by the bolt and firing-pin the lower point of said fly, projecting below the firing-pin in the backward movement of the bolt, completes the cocking of the hammer, and when the bolt passes back the hammer will be held at full-cock, so that the nose of the hammer shall not bear against the firing-pin or bolt as they ride over it, and when the bolt moves forward the fly *f* turns back and upward to move easily over the hammer. The fly *f* may consist of a slide instead of being pivoted, as here shown, or it may be attached to the bolt or nose of hammer and produce the same result.

To prevent the extreme scattering of shot when they are fired from a rifled gun, I make a portion of the muzzle smooth by boring out the lands, and thereby enlarging it, as in Fig. 7, or use a detachable muzzle, as shown in Fig. 6. These smooth muzzles concentrate the shot, especially when the extreme muzzle is slightly contracted or choked; and when rifle-bullets are used, as they do not touch the walls of the smooth part of the muzzle, the accuracy of the arm as a rifle is unimpaired.

This false muzzle, enlarged and applied to the muzzles of those barrels in which many

small rifled bores are grouped in one barrel, to be fired simultaneously, prevents the great dispersion caused by the "windage" of the different charges against each other as they leave the muzzle.

I do not, in this application, claim the fly shown in Fig. 1 of the drawings, nor the application of a smooth-bore muzzle to a rifle-barrel, but reserve the right to make separate application for these features hereafter.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a magazine fire-arm, a carrier, a lever-arm, *H*, pivoted thereto, and a feeding-trap, *T*, in the side of the frame, combined for operation in the manner described.

2. A carrier having an arm or lever, *H*, pivoted thereto, substantially as described, in combination with a pin or projection in the frame, which engages with a vertical shoulder of said arm and turns it down to grasp the body of the cartridge as the carrier rises.

3. A reciprocating bolt having an ejector set therein at an angle, a stop projecting into the frame to operate said ejector, arranged and combined substantially as shown and described, so as to allow the free ultimate rearward movement of the bolt after the ejector shall have fully operated, substantially as specified.

4. A bolt having the ledge *b*, the spring ejector-stop *e'*, in combination with an ejector, so that the stop *e'* first starts the ejector positively and then falling from the ledge *b* springs the ejector forward, substantially as described.

5. A pivoted carrier and a removable stop or shoulder on the movable breech mechanism, to engage with the carrier and slightly raise it, so as to serve as a magazine-stop before its final movement to elevate the cartridge, substantially as described.

ANDREW BURGESS.

Witnesses:

GEO. R. COOLEY,  
EDGAR A. ROBINSON.