

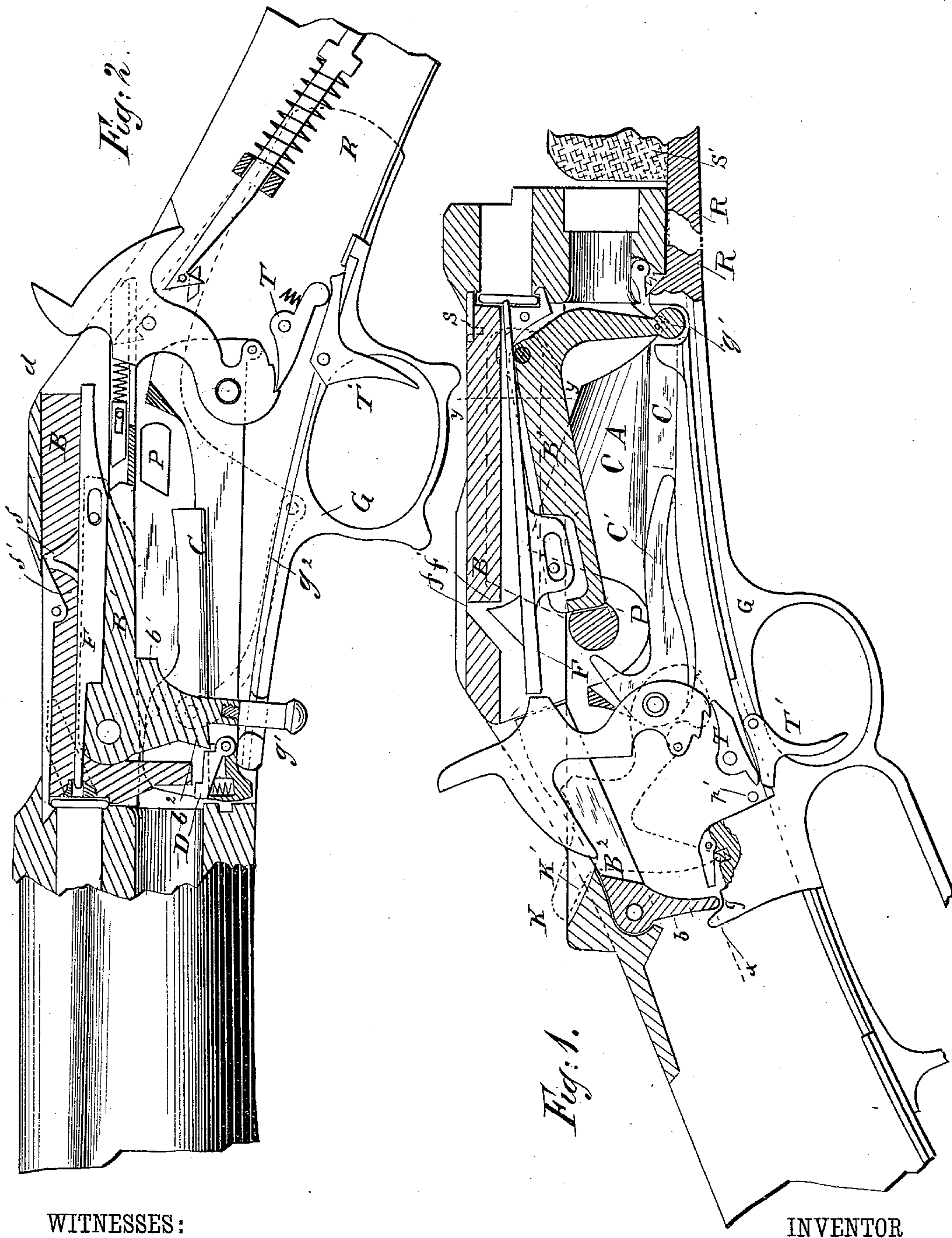
(No Model.)

2 Sheets—Sheet 1.

A. BURGESS.  
MAGAZINE FIRE ARM.

No. 366,559.

Patented July 12, 1887.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ANDREW BURGESS, OF OWEGO, NEW YORK.

## MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 366,559, dated July 12, 1887.

Application filed July 15, 1884. Serial No. 137,812. (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 breech-loading and magazine guns; and it consists in certain combinations and details of construction, in which my object is to improve the operation and mode of manipulation of parts, as hereinafter more fully set forth and claimed.

Figure 1 is a longitudinal section of this gun, showing an arrangement and relation of sliding handles and the two locking-braces. Fig. 2 is a modification which shows a sliding guard to work the breech, only the forward locking-brace being used. Fig. 3 shows the rear brace as operated by the sliding guard and relation of parts when only the rear locking-brace is used. Fig. 4 is a plan view of the top of frame and bolt, showing location of mortises into which the carrier rises, also the stop on top of the bolt to hold down the cartridge. Fig. 5 shows a detail of the carrier, its auxiliary lever, and the bolt. Fig. 6 is a vertical cross-section of the bolt through the line *yy* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the frame of the gun; B, the bolt; B', the forward locking-brace; B<sup>2</sup>, the rear brace; C, the carrier; C', the auxiliary carrier-lever; G, the sliding guard; S, the cartridge-stop; R, a connecting-rod, and S' a sliding handle forward of the frame.

The sliding guard G engages the downward-projecting arm of a locking-brace, as B', which is pivoted in the forward part of the bolt. The first part of the backward movement of the guard operates upon the brace B' to turn it, like a bell-crank lever, so that its rear end will rise above the locking-shoulder P, and thereby release the bolt, that it will be free to be moved back by the further backward movement of the guard to open the breech, and the return or forward movement of the guard carries the bolt to its closed position and locks it by turning the rear of the brace B' down-

ward before the locking-shoulder P. Another brace, B<sup>2</sup>, is pivoted in the frame rearward of and below the bolt, and is split to work past the hammer, so it locks the bolt by rising against its rear end.

The brace B<sup>2</sup> has a downward-projecting arm, *b*, which projects into a notch in the sliding guard when the breech is closed, as in Fig. 1, so that the first rearward movement of the guard turns the said arm *b* back by the engagement of the front wall of the notch *g* with it, thereby turning down the forward arm of the brace B<sup>2</sup> below the path of the bolt to unlock it, so the continued backward movement of the guard carries the bolt with it by its engagement therewith by the slot or notch at *g'*, or a link, as *g*<sup>2</sup>, of Fig. 2.

In unlocking the brace B<sup>2</sup>, as above described, its arm *b* is turned back and upward to the line *x* of Fig. 1, so the front wall of notch *g* can then pass under it rearward and forward; but when it has passed forward in the last part of its movement to close the breech the wall behind the notch *g*, rising higher, engages the arm *b* to turn up the brace B<sup>2</sup> and lock the breech. The firing-pin is attached loosely to the brace B', so as to be lowered into the path of the hammer, as seen in Fig. 1, when the breech is locked or raised out of its path by the rising brace when the breech is unlocked, as shown in dotted lines in same figure. The front wall of notch *g* may consist of a spring-pawl or fly, as shown in Fig. 1.

The sliding guard carries a trigger, as T', which, if held back by the operator at each closing of the breech, will strike the sear T at the last part of the closing movement to fire the gun; or, by leaving the trigger free to turn, the gun may be fired by pulling the trigger in the ordinary manner after the breech is closed.

In Fig. 2 I show the firing-pin F housed in the brace B' and said brace raised so the bolt is unlocked, and the firing-pin thereby raised above the point of impact, H, of the hammer, and the firing-pin is withdrawn backward as the bolt is unlocked by the brace, carrying its raised projection against the solid part *f'* of the bolt to cam it back, as shown in Fig. 2 and in a similar manner in Fig. 1. When the



rear brace,  $B^2$ , alone is used to lock this arm, the sliding guard is connected to the bolt, to move it, by a slot and pin, as shown at  $g$  in Fig. 3, or other means allowing sufficient  
 5 "lost motion" to move the brace to unlock and lock it, while the bolt may remain stationary. By using the brace  $B^2$  the bolt may be shortened from below at its rear, as shown in Figs. 1 and 3, the top of the brace filling the  
 10 vacancy between the bolt and frame when the breech is closed, and when opened the rear of the bolt does not extend so far back.

In Fig. 2 the locking-brace  $B'$  has an abutment,  $b'$ , arranged to engage and raise the piv-  
 15 oted carrier when the bolt is withdrawn, and a projection,  $b^2$ , which turns forward as the breech is being locked to depress the dog or stop  $D$  below the mouth of the magazine, to release the cartridge therefrom.

20 The magazine stop  $D$  is hung in the guard strap or carrier, to spring up and stop the magazine until depressed by the turning of the locking-brace, as aforesaid.

The extractor is a spring hook or hooks  
 25 hung at the bottom or sides of the face of the bolt, and a stop,  $S$ , is arranged at the top of the bolt to hold the cartridge down against the extractor while being pulled back, until it reaches a proper place to be ejected, when a  
 30 lateral arm of the said stop  $S$  strikes a pin or projection, as  $s$ , in the frame, (see Fig. 4,) to turn the stop, and thereby retire its forward arm rearward to about the line of the face of the bolt, as shown in broken lines in Fig. 4,  
 35 so as to no longer obstruct the rising of the cartridge, which is then easily expelled by the rising carrier or an upward-striking ejector, and another pin, as  $s'$ , in the forward part of the frame engages the stop to turn it forward  
 40 as the breech is closed.

The pivoted carrier contracts at its top to hold the cartridges from flying up, and the bolt has mortises cut out each side of its cen-  
 45 ter to receive said top of carrier when in its raised position. These mortises extend to the face of the bolt, as shown at  $m m$ , Fig. 4, so the center part of the bolt can operate through the carrier, as in the well-known Winchester gun, the center part of the bolt being thinner at its  
 50 middle than its face, to allow the carrier to fall or be forced down by the brace  $B'$  as it falls to lock the breech from over it when the breech is nearly closed.

When the bolt is mortised to receive the car-  
 55 rier sides, and both braces are used, as in Fig. 1, the forward locking-brace is made narrow at its front part, so it may close into the central part of bolt between the mortises, and while co-operating with the other brace  
 60 as a locking device, it serves to connect the operating handle and bolt, and to operate the firing-pin and cartridge-stop, as described; or said brace  $B'$  may be hung in the middle part or rear of the bolt, and may lock against  
 65 the top of the frame, as in my application No. 132,094, of May 19, 1884.

A lever, as  $C'$ , Figs. 3 and 5, is pivoted in the frame or carrier, to extend forward under the rear part of the floor of the carrier, and has an elbow-arm,  $c$ , arranged forward of the  
 70 point of impact on the carrier, by which it is raised, so that the part of the breech which raises the carrier first engages the arm  $c$  to raise the rear of the cartridge, so that when the car-  
 75 rier rises the lever  $C'$  will hold the rear of the cartridge above the floor of the carrier, to present it more nearly in alignment with the barrel of the gun.

A projection, as  $K$ , Fig. 1, is fixed at the top of the small of the stock, which extends  
 80 backward to about the rearmost point that the bolt may reach, the bolt riding backward on top of it. This device protects the hand of the operator that holds the gun, while the other  
 85 hand is operating the breech by a slide or lever forward of the frame, or at other times, when the bolt is thrust back, prevents any part from resting in the path of said bolt.

In Fig. 1 two handles are employed to move the breech mechanism, the sliding guard to  
 90 operate under and to rearward of the frame, and a slide, as  $S'$ , forward of the frame, (which is connected to the breech mechanism by the rod  $R$ ,) so that both operate in the direction of  
 95 their movement.

I do not herein claim the "lost-motion" striking arrangement of sliding guard to start the breech, as I make such claim in my appli-  
 100 cation No. 141,910, filed September 1, 1884; nor do I herein claim the locking of the sliding guard in firing position by the trigger or other lever, as I claim a lever in that connec-  
 105 tion in my above-cited application No. 141,910, and a trigger as such lever and locking device in my application No. 145,558, filed October 15, 1884; nor do I broadly claim operating a reciprocating bolt by a sliding guard, as I show such operation in reverse direction in my Patents Nos. 290,393 and 290,968, and in  
 110 same direction (obliquely) in my application No. 113,436, of December 3, 1884.

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

1. In a breech-loading fire-arm, the com-  
 115 bination of a guard sliding in the arc of a circle below the frame, a reciprocating bolt and a link or movable connection between the guard and bolt, and a locking-piece to lock the bolt against a bearing in the frame, so that  
 120 the backward curving movement of the sliding guard first moves the locking-piece to unlock it and then opens the breech, and its forward movement closes and locks the breech, sub-  
 125 stantially as described.

2. In a breech-loading fire-arm, a sear hung to vibrate on a fixed axis in the frame, in com-  
 130 bination with a guard sliding in the arc of a circle, a trigger hung in said guard, a reciprocating bolt, and means which connect the sliding guard and bolt, so that the backward movement of the sliding guard opens the



breech and retires the trigger out of position for engagement with the sear, and its forward movement closes the breech and returns the trigger into position to engage the sear, substantially as described.

3. In a breech-loading fire-arm, a reciprocating bolt and a pivoted locking-brace, in combination with a sliding guard which moves in the arc of a circle to vibrate the brace to lock and unlock the breech and moves the bolt to its open position by its backward movement and to close the breech by its forward movement, and a trigger arranged in the guard in such relative position to the sear, substantially as described, that the trigger can only engage the sear when the brace is in its locked position.

4. In the reciprocating bolt of a breech-loading gun, a locking-brace hung in said bolt, and which locks the bolt by swinging downward against a shoulder in the frame, in combination with a firing-pin arranged longitudinally in the bolt or brace and connected to said brace, substantially as described, so as to be lowered at its rear end by the locking movement of the brace and raised by the unlocking movement.

5. In the reciprocating bolt of a breech-loading gun, a locking-brace which locks the bolt by swinging downward against a shoulder in the frame, in combination with a firing-pin arranged longitudinally in the bolt or brace, connected to said brace substantially as described, so as to be lowered at its rear end by the locking movement of the brace and raised by the unlocking movement, and a hammer whose range of striking is below the firing-pin when the breech is unlocked.

6. In the reciprocating bolt of a breech-loading gun, a locking-brace which locks the bolt by swinging downward against a shoulder in the frame, in combination with a firing-pin arranged with longitudinal movement in the bolt and connected to said brace, substantially as described, so as to be lowered at its rear end by the locking movement of the brace and raised by the unlocking movement, and a projection on the firing-pin which engages a shoulder on the bolt to cam back the said firing-pin as it rises in the bolt.

7. In the frame of a breech-loading gun, the brace B<sup>2</sup>, pivoted in the frame and having an arm, in combination with a sliding guard provided with an opening or notch, into which the said arm enters to be engaged and operated by the guard by the abutting walls of its notch or opening, substantially as specified.

8. In the frame of a breech-loading gun, the brace B<sup>2</sup>, pivoted in the frame and having an arm, in combination with a sliding guard provided with projections to engage the arm b, to turn the forward end of the brace upward to engage and lock the bolt and downward to unlock it by the movement of the guard.

9. In the frame of a breech-loading gun, a reciprocating bolt shortened at its rear end, as

described, in combination with a swinging piece hung in the frame to bear up against the bolt and close the opening in the frame behind the bolt.

10. In a magazine-gun, a spring dog or stop hung at the bottom of the delivery end of the magazine, in combination with the locking-brace B' and its projection, which strikes the spring-dog, and by which said dog is operated to release the cartridge by the locking movement of the brace and handle, substantially as set forth.

11. In a magazine-gun, a breech-piece which moves forward to close the breech and backward to open it, in combination with a lateral cartridge-stop hung to vibrate in a horizontal plane on the top of said breech-piece, and means by which said stop is moved to overhang the face of the breech-piece and vibrate backward to release the cartridge, and an extractor at the lower part of the bolt, substantially as described.

12. In a magazine-gun, a breech-piece which moves forward to close the breech and backward to open it, in combination with a cartridge-stop hung to vibrate forward of the face of said breech-piece, and a projection in the frame to retire said stop to allow the cartridge-head to rise, an extractor in the lower portion of the bolt, and means to eject the cartridge sidewise, substantially as specified.

13. In a magazine-gun, a carrier contracted at its inner top to hold the cartridge, substantially as described, in combination with a movable breech having side and center pieces, and having mortises between said side and center pieces in the lower part of the breech to receive the raised sides of the carrier.

14. In a magazine-gun, a bolt constructed at its forward part with sides to guide it by bearing inside the frame, and with mortises in the bottom of the bolt therein, and a center piece, in combination with a carrier having an open top contracted to hold a cartridge, and means to raise said carrier when the bolt is open.

15. In a magazine-gun, a movable breech-piece having an extractor connected to its lower front portion and an unobstructed front when the breech is open, in combination with a vibrating carrier constructed with an open contracted top, and means whereby said carrier is raised to strike the cartridge-shell by the top of said carrier and throw it upward from the gun, substantially as set forth.

16. In a magazine fire-arm, an auxiliary carrier-lever pivoted in the frame at the rear of the carrier, with a free short arm above its pivot, and whose long arm extends forward below the floor of the carrier, in combination with a pivoted carrier and a moving contact-piece of the gun, and mechanism, substantially as described, whereby the short arm is engaged to raise the long arm of the lever, and thereby the head of the cartridge, above the floor of the carrier.

17. A projecting hand-guard having the de-

pression K' on the small of the stock, extending to the rearward of the bolt when the breech is closed, and serving as a support to the bolt when withdrawn, in combination with a hammer pivoted in the frame below said bolt and whose top turns into the depression K', and the reciprocating bolt of a magazine fire-arm, substantially as specified.

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

ANDREW BURGESS.

Witnesses:

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THOMAS BRADY.