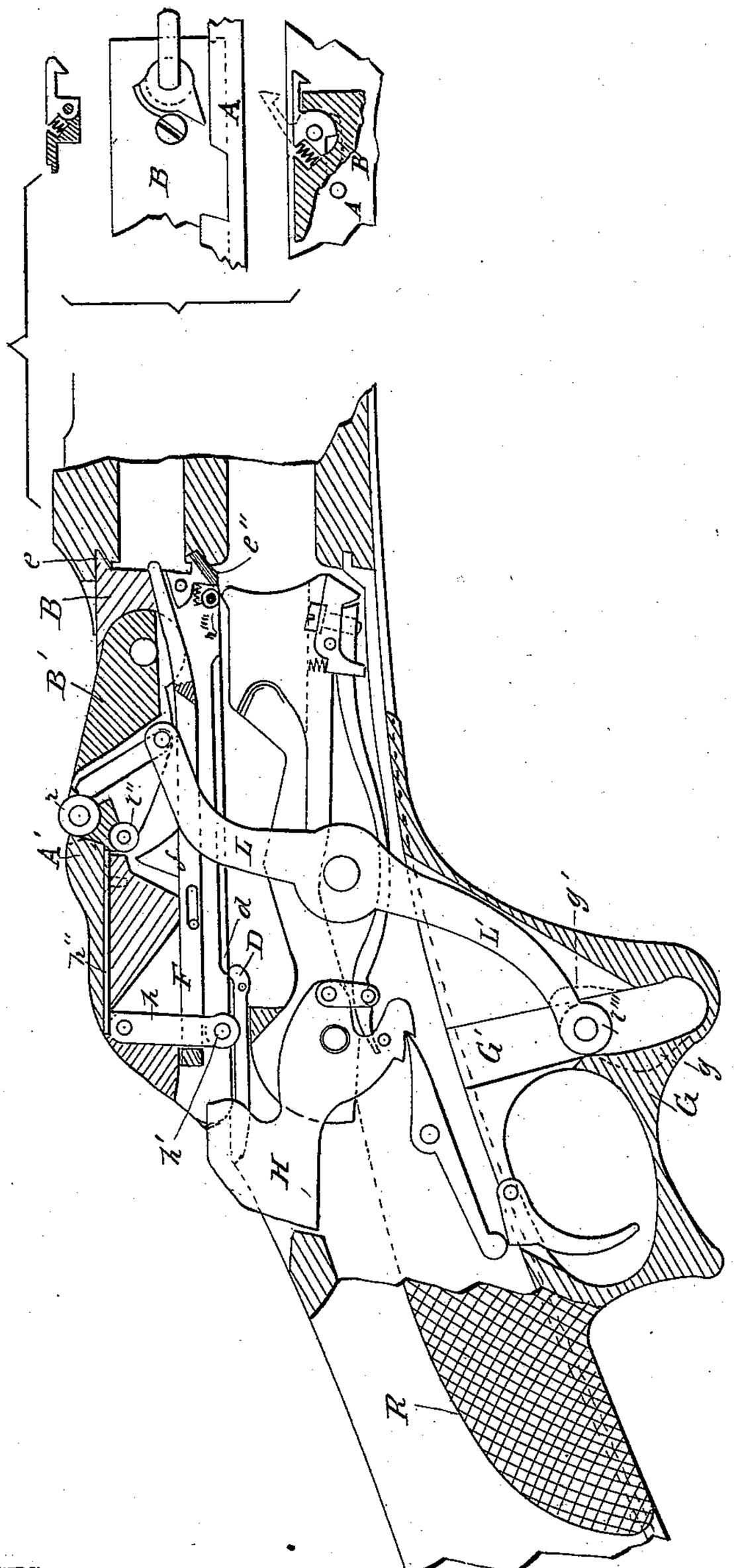
(No Model.)

# A. BURGESS.

## MAGAZINE FIRE ARM.

No. 373,438. Patented Nov. 22, 1887.




WITNESSES:

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ANDREW BURGESS, OF OWEGO, NEW YORK.

## MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 373,438, dated November 22, 1887.

Application filed August 14, 1884. Serial No. 140,499. (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 drawing.

My invention relates to breech-loading and magazine fire-arms; and it consists of various improvements in the operation and mode of manipulation of parts with the object of producing greater rapidity, ease, and effectiveness in such arms by combinations of parts and details of construction, hereinafter more fully described.

The figure is a sectional elevation of the frame and operating-works of a gun, showing the features of this invention, together with other parts and modifications.

Similar letters of reference indicate corresponding parts.

A is the frame of the arm; B, the bolt; B′, the vibrating locking-brace; C, the carrier; D, a vibrating dog to close the opening behind the bolt; *e*, an inclined stud to modify the ejection.

F is the firing-pin; G, the sliding guard; H, the hammer; L, the operating-lever, and R a sectional sleeve-extension of the sliding guard.

The brace B′ locks the bolt B, said brace being operated by the lever L, which is pivoted in the frame below and extends up to connect with the brace by a slot and pin, so that in oscillating the lever its first movement backward unlocks the bolt by turning the brace down below the locking-shoulder A′ in the top of the frame, when it pulls the bolt back, (the brace then acting as a link or connection between the bolt and lever,) and the return forward of the top of the lever closes the bolt and locks it by turning the brace up forward of the locking-shoulder.

A friction-roll, *r*, is hung in the inclined or rounded shoulder of the locking-face of brace B′, which, after forcing the bolt "home," remains beyond the point of resistance on the locking-shoulder, or in a depression made in the outer part of the locking-shoulder.

In the figure I show another roller, *r″*, hung in the bottom face of the locking-brace in position to engage the projection *f* of the firing-pin as the brace falls in its unlocking movement to cam back the firing-pin by the roll *r″*, thereby reducing the friction of the parts.

In the figure a section of a sleeve is attached to the sliding guard to extend around the bottom part of the small of the stock, to give a better hand-hold and keep the fingers of the operator from contact with the stock or frame when moving the gun mechanism with the right hand, said hand grasping the extension R on the small of the stock and thus obtaining its ordinary position in holding and firing a gun. The lower part of the operating-lever is terminated by a roll, *r‴*, which extends into a slot, G′, of the sliding guard G. A fly or swinging arm, *h*, which may have a roll, *h′*, is hung in the bolt, so as to turn forward and ride over the hammer H in opening the breech; but in closing, the spring *h″* turns the fly *h* back, so it engages the rear part of the hammer to cock it as the bolt moves forward to close the breech. The bolt is shortened at its rear, and the opening at the sides of the hammer caused thereby is closed by the dog D, which is pivoted in the frame so as to be turned up at its rear by the shoulder *d* of the bolt when said bolt is closed, and is free to fall from behind the bolt when it starts to open. This dog serves to fill the space at the bottom of the rear of the bolt, so that the bolt may be there shortened, as shown, to prevent it from protruding so far back in opening. The dog D may be turned up by a spring to serve the same purpose as the shoulder *d* of the bolt.

The firing-pin has an upward projection, *f*, in position to be engaged by the roll *r″* of the brace in the unlocking movement to force back the firing-pin.

An inclined stud, *e*, on top of the bolt supports the head of the cartridge against the extractor until the shell is withdrawn, so that it can fall a little at its forward end, in which inclined position the top of its flange will so far leave the inclined stud *e* as to allow it to be thrown upward by the movement of the extractor or any other well-known ejecting device. The extractor *e″* is in the lower part of the bolt, and has an incline on its lower face, with which the cartridge engages and by which the cartridge is glanced forward.

I show the mainspring attached to the car-

rier to raise it and having an extension rearward to rebound the hammer, by engaging a projection thereon rearward of its pivot. (See the figure.)

In the drawing it will be seen that the sliding guard G has a slot, G′, extending downward nearly vertical from the frame, and a mortise of less width at each side of the slot to allow the arm L′ of lever L to play therein when said arm is operated by its roll $r'''$, which is wider than the arm L′, so that said roll is engaged by the walls of the slot G′ when the guard is moved forward and back. To apply greater operating-power to the roll $r'''$ and lever L′ to start open the breech, I incline the rear wall of the slot G′ backward, as at $g$, so said wall shall operate as a wedge or inclined plane to start the lever L′ forward and downward when the guard moves forward, and another inclined portion may be made in the forward wall of the slot G′, as shown by a dotted line at $g'$, to force the breech closed, by wedging down and backward on the lever in the backward movement of the guard; and, moreover, by forming the slot G′ wider than the width of the roller $r'''$ where it engages said roll at or near the closed position of the breech, it allows the guard to be moved back and forth with some lost motion, so as to strike a blow on the lever or its roll when needed to start the breech.

I do not herein claim the laterally-swinging extractor, as it is claimed by me in my pending application No. 141,910, filed September 1, 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, a lever pivoted in the frame and having a part extending below the frame, by which it is operated, a longitudinally-reciprocating bolt, a brace hung in the forward part of said bolt, with its rear end arranged to vibrate upward to lock the bolt before a locking-shoulder at the top of the frame above the bolt and to close down into the bolt to unlock it, all arranged in combination, substantially as shown and described.

2. In the frame of a breech-loading fire-arm, a pivoted hammer and a cocking fly or lever located in the reciprocating bolt and arranged to engage a projection on the hammer to cock it by the forward movement of the breech by mechanism substantially as described.

3. In a breech-loading fire-arm, the combination of a brace arranged to swing outward from the axis of the bolt to lock the breech, in combination with a firing-pin arranged longitudinally in the bolt and having a projection, and a friction-roller located in the brace to cam back the firing-pin, substantially as specified.

4. A sliding guard arranged to move longitudinally on the rear of the frame or small of the stock and serve as a handle to operate the breech of a breech-loading fire-arm, and in combination therewith a sleeve or section of a sleeve which partakes of the movement of the guard and serves as an extension of the hand-hold, substantially as set forth.

5. A sliding handle which curves around the bottom of the small of the stock and is guided thereon, substantially as specified, in combination with the breech mechanism of a gun, and means whereby connection is made and movement imparted to the breech-piece to open and close the breech.

6. The laterally-curved hand-hold R, which reciprocates on the small of the stock, in combination with a guard and a trigger connected to and moving therewith, and means of connection with the breech to operate it by movement of the hand-hold R, substantially as described.

7. In a breech-loading fire-arm, a sliding guard, an operating-lever engaged by said guard without intermediate mechanism, and a breech-piece connected to said operating-lever, all operating, substantially as described, by the reciprocation of the sliding guard, which serves as a handle, and in combination, substantially as set forth.

8. In a breech-loading fire-arm, the breech mechanism, an operating-lever therefor pivoted in the frame and having an extension below the frame, in combination with an operating sliding handle having a sliding contact with a bearing on the lever forward of the trigger, and by which the lever is caused to move by the reciprocation of the handle, substantially as described.

9. In a breech-loading fire-arm, and in combination with the breech mechanism thereof, an operating-lever extending below the frame and having a roller in its lower end, and a sliding guard having a movable bearing against said roller, whereby the roller and lever are caused to move by the reciprocation of the guard, substantially as described.

10. In a breech-loading fire-arm, a reciprocating bolt having an extractor and an ejector in the lower portion of the face of the bolt, and an upwardly-inclined projection from the recoil-face, said incline extending forward from the top of said recoil-face, all combined, substantially as described, whereby the action of the ejector glances the cartridge-shell upward and forward along the incline, as set forth.

11. In a breech-loading fire-arm, the combination, with a reciprocating bolt and suitable bolt-locking mechanism, substantially as described, of a bolt-operating lever pivoted in the frame in front of the trigger-guard and directly under the bolt when the bolt is in closed position, said lever connected, substantially as described, to the trigger-guard, the guard being constructed to reciprocate longitudinally of the frame and move the lower end of the lever in the arc of a circle, thereby opening and closing the bolt by connections from the upper end of said lever, all substantially as described.

12. In a breech-loading fire-arm, in combi-

nation with the lever for operating the breech mechanism, a sliding handle having a slot, as *g'*, wider than the bearing end of the lever, to allow a blow by lost motion to move the lever and breech, in combination, substantially as specified.

13. In a magazine fire-arm, a friction-roller in the lower face of the bolt, in combination with a carrier which is forced down by said roller in the movement of closing the bolt, substantially as specified.

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

ANDREW BURGESS.

Witnesses:
H. CORYDON BROWN,
THOMAS BRADY.