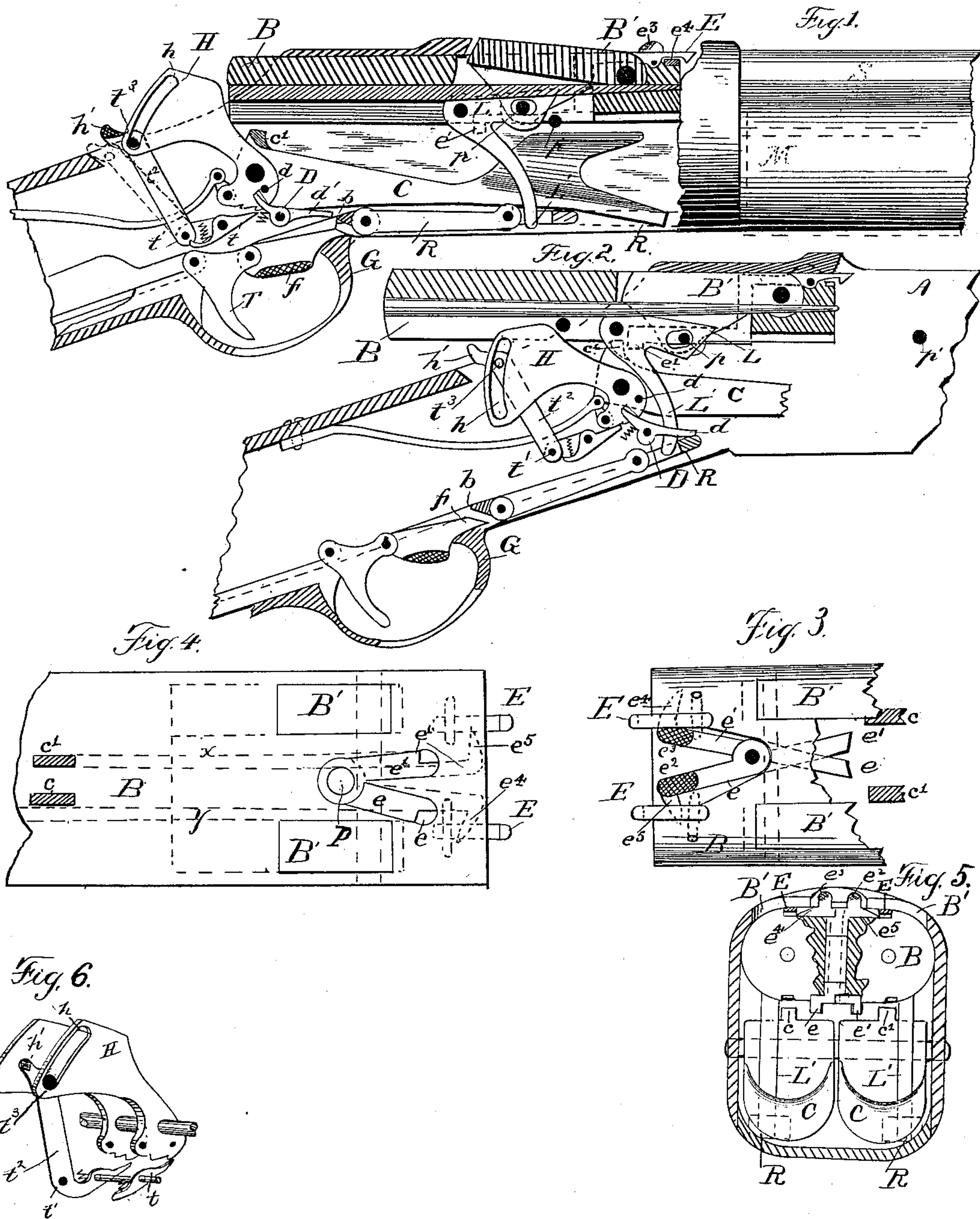


(No Model.)

A. BURGESS.
MAGAZINE FIRE ARM.

No. 366,563.

Patented July 12, 1887.



Witnesses:
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UNITED STATES PATENT OFFICE.

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MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 366,563, dated July 12, 1887.

Application filed August 4, 1885. Serial No. 173,569. (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 double or single magazine or breech-loading fire-arms, and has for its object improvements in their general efficiency; and it consists of new arrangements in the operation and locking devices and construction of parts, hereinafter more fully set forth.

Figure 1 is a longitudinal sectional elevation of the frame and breech mechanism of this gun in closed position, showing a sliding guard-handle, a carrier, and the device for locking the operating rod and handle, and connection for discharging one barrel by pulling off the other, a forward sliding handle being indicated in broken lines. Fig. 2 is a similar view, with some modifications, in open position, to especially show the sliding guard, many other parts being omitted. Fig. 3 shows the double bolt, top view, but partly cut away to show relation of the carrier-operating levers to the carrier. Fig. 4 is a bottom view of the bolt, with the lifting-levers modified so that the points for engaging the carrier are forward of their pivot. Fig. 5 is a cross section looking rearward from the face of the bolt, the central part of the bolt being broken away. Fig. 6 is a perspective showing the twin hammer and means of releasing one by the other.

This arm contains many features specially adapted for double-barreled magazine-guns, in which a single reciprocating bolt closes the breech of both barrels. Many of the parts are referred to in the following description in the singular number, where they can be single for a single-barreled gun and duplicate for a double gun.

A is the frame; B, the bolt; B', the locking-brace; C, the carrier; *c* and *c'*, projections of carrier; D, the dog-lever to lock a sliding handle; *d*, a projection on the hammer to disengage the dog from its notch *b*; E E, the extractors; *e* and *e'*, the lifting-levers; *f*, a lifting-piece to disengage the locking-dog; G, the sliding guard; H, the hammer; L, the lever to

operate the locking-brace; M, a magazine; P, the pivot of lifting-levers; R, the operating-rod, which connects a sliding handle to the breech mechanism. S is a sliding handle under the barrel. T is the trigger, *t* the right-hand sear, and *t'* the left-hand sear. *t''* is a piece or strap to connect the left-hand sear and right-hand hammer; *h*, a slot or groove in the hammer to receive the pin *t''* of the connecting-strap *t''*, and *h'* is a thumb-piece on strap *t''*. This arm is provided with a reciprocating bolt, and is locked by a vibrating brace pivoted therein and which bears upward against a shoulder in the frame to lock the bolt, and is turned downward into the body of the bolt to unlock it, as I have shown in former applications.

The brace B' is operated by a sliding handle which moves a rod, as R, to engage the downward-extending arm L' of the lever L to vibrate said lever on its axis or fulcrum, which is here shown as a pivot in the bolt, so that the rearward-extending horizontal arm of said lever is vibrated downward by the backward movement of the operating-rod and upward by the forward movement of said rod; and the horizontal arm of the lever L being connected to the brace, as by a pin, *p*, and slot, the brace is thereby made to partake of the downward and upward movement of said arm of the lever to unlock and lock the bolt in the frame. Another pin, as *p'*, is fixed in the frame, and the forward arm of the lever L has a cam projection or incline to engage and bear against said pin as the breech is being opened, and thereby cam back the bolt as the brace is being unlocked by the lever, the locking-faces of the brace and shoulder in the frame being cut eccentric with the pivot of the brace to allow some backward movement of the bolt while being unlocked.

I show substantially the above arrangement of lever L in my application, No. 171,940, of July 18, 1885, but do not claim it therein. I show the sliding guard connected to the rod R and serving as a handle to operate it; but the operating-rod R may be moved by a forward-sliding handle, as S, either alone or in combination with a rearward handle, or each may be connected to a locking-brace (by a separate rod) when two braces are used in a double bolt, like that shown in Fig. 4; but I herein

make no claim to the forward handle, but broadly do claim the means shown, and hereinafter described, for locking the operating-rod and starting-lever by whatsoever handle they may be moved.

A dog or pawl, as D, is hung in the frame, and a shoulder or abutment, as *b*, is formed in the operating-rod R, or a connection therewith, in position to be engaged by the dog when said rod is in its forward position to lock the breech, as seen in broken lines in Fig. 1; but when the hammer falls to fire the gun its projection *d* engages the free arm of the dog-lever to turn its forward end upward out of locking engagement with shoulder *b*, as shown in full lines in same figure, so that the rod R is thereby made free to move backward to open the breech.

I here show the dog D as operated by a vibrating hammer to unlock the operating-rod or sliding handle; but it may be operated in like manner by connection from the firing-pin, (especially when the firing-pin serves as a hammer by being provided with a spring,) or it may be operated by the recoil of the bolt or gun; but these specific details will be claimed in other cases.

It is obvious that the locking-dog will operate in the same manner, whether a sliding handle and operating-rod are applied to a reciprocating or vibrating breech-piece.

In Fig. 1 it will be seen that the mortise connecting rod R to the breech mechanism is elongated forward, so that the said rod will have to move back a little before operating on the breech. This "lost motion" allows an instant of time to pass between the unlocking of the rod and operating-handle by the striking of the hammer (if the operator should be pulling back on the handle and rod at the time of firing) to allow time for the discharge to take place before the breech is started to unlock, and so the slight "hang-fire" possible may not find the bolt entirely unlocked.

A swinging-foil or finger-piece, as *f*, is hung inside the loop of the guard in position to be engaged at will by the finger that pulls the trigger, so that the forward end of said foil *f* may be thus swung up to strike the end *d* of dog D, to force it up out of engagement with its shoulder *b* to unlock it, or to prevent its locking the handle, when desired, as when the trigger is kept under constant pressure in very rapid firing. It is obvious that this device, operated, as described, from the outside of the gun, may be used alone in connection with the dog D or in combination with the automatic releasing projection *d* on the hammer.

When I arrange the mechanism, substantially as shown and described, in a double-barreled magazine-gun, with one or both hammers hung to vibrate up and forward to fire the gun, I attach a strap, as *t*², Fig. 1, to the sear rearward of its pivot, as the left sear, *t*¹, and said strap extends upward to engage the inside of right-hand hammer in its slot *h* by a pin, as *t*³, so the hammer may be cocked, as

in Fig. 2, (moving its slot *h* freely over the pin *t*³;) but when the hammer falls, as in Fig. 1, the abutment at the lower termination of the slot *h* engages the pin *t*³, and thereby lifts the strap and end of the sear to fire the left barrel immediately after the right shall be fired by pulling the trigger.

When the use of strap *t*² is not required, it may be turned to the left and back to disengage its pin *t*³ from the slot *h*, as shown in dotted lines, Figs. 1 and 6.

I herein claim only the special double-firing arrangement shown, as it differs from that shown and claimed, broadly, in my application No. 145,558, filed October 15, 1884.

When this gun is constructed with two barrels which are closed by a single bolt, I arrange that bolt with lifting-levers, as *e e'*, Fig. 3. The forward ends of said levers have thumb-pieces *e*² and *e*³, by which to swing them laterally, so that their forward wedge-shaped ends *e*⁴ and *e*⁵ may be swung under the spring-extractors to raise them out of operative position, while at the same time and by the same means the rear ends of said levers are swung into or out of position for engaging the carrier. By this arrangement, by pressing the ends *e*² and *e*³ of the lifting-levers together their wedge projections are withdrawn from under the extractors, so that they may fall to engage the cartridges, and the rear ends turn by the same movement outward to the line of the projections C C' of the carriers, by which the levers, where they project below the bolt, engage said carriers to operate them, so that the one movement of pressing the forward ends of levers *e e'* together throws the bolt from the inoperative condition of Fig. 3 into operative relation with both barrels and magazines, and a reverse movement of the levers raises the extractors out of operation and turns their projections out of line for engaging the carrier; or each lever may be operated alone, as shown in the modification, Fig. 4, so that one barrel alone will be operated.

It will be seen that the levers *e e'*, Fig. 4, are substantially the same as those of Fig. 3, except that the projection behind the pivot is omitted, and the engaging-points are placed on the forward instead of the rear part. The operation on both extractors and carriers is precisely the same in both cases.

I claim—

1. In a breech-loading fire-arm, a reciprocating bolt and a brace pivoted therein to lock the bolt against a bearing in the top of the frame, in combination with a lever pivoted in the bolt and having engagement with the brace, and a connection below the bolt with a downward-extending arm of said lever, and a sliding handle to operate the breech, substantially as described.

2. In a breech-loading fire-arm, a reciprocating bolt and a brace pivoted therein to lock the bolt against a bearing in the top of the frame, in combination with a lever pivoted in the bolt and having engagement with the

brace, and a connection below the bolt with a downward-extending arm of said lever, and a sliding handle to operate the breech, and an incline on the lever to engage an abutment in the frame and cam back the bolt by the unlocking movement of the lever, substantially as specified.

3. In a breech-loading fire-arm, a sliding handle having means of connection by which it operates the breech mechanism, and an abutment carried by the sliding handle, in combination with a dog hung in the frame in position to engage said abutment and lock said handle, and an abutment on a moving part of the operating mechanism, which throws the dog out of locking engagement, substantially as described.

4. In a breech-loading fire-arm, a sliding handle which moves the breech to a closed position and a dog hung in the frame, which engages a connection of the sliding handle to hold it in its forward position, in combination with a hammer having a projection to release the dog by engagement therewith in the striking of the hammer.

5. A dog hung in the frame to lock the sliding handle, and an abutment on a moving part of the operating mechanism to release the dog from its engagement, in combination with a projecting foil-piece in position to be engaged by the operator to release the dog at will, substantially as described.

6. In a breech-loading fire-arm, a sliding handle which moves the breech-piece, a locking-catch for said handle, and an abutment on a moving part of the operating mechanism by which said catch is disengaged and the handle released in firing the gun, all in combination, substantially as stated.

7. In a double magazine-gun, a sear to hold one lock in a cocked position, and a strap pivoted to said sear and attached to the vibrating hammer of the other lock of the gun by a slot-and-pin connection to permit the cocking of the hammer, all in combination, so that the firing movement of one hammer releases the sear of the other lock, substantially as set forth.

8. In a breech-loading fire arm having two hammers, the combination, with the sear of one hammer, of a strap pivoted to said sear and connected to the other hammer by a slot-and-pin connection, and a connecting-piece extending outside the frame of the gun for disengaging said strap, substantially as described.

9. In a double-barreled magazine-gun, a single movable breech-piece to close both barrels,

a separate extractor on said breech-piece for each barrel, and a shifting-piece by which one of the extractors may be thrown out of operation while the other remains in operative position, all in combination, substantially as described.

10. In a double-barreled magazine-gun, a reciprocating bolt, two extractors carried by said bolt, and two shifting-levers arranged in the gun in position to engage said extractors, substantially as described, whereby by the shifting of the levers either or both extractors may be thrown out of operation, all in combination, as set forth.

11. In a double-barreled magazine-gun, the combination, with the barrels, of a single reciprocating bolt, two carriers hung in the frame, and a shifting-piece in position to engage or disengage one carrier and thus throw it into or leave it out of operation.

12. The combination, in a double magazine-gun, of a reciprocating bolt, two extractors carried thereby, two cartridge-feeders, and a shifting-piece which may be thrown into engagement with one extractor and one feeder to throw said parts out of operation, substantially as described.

13. In a magazine-gun, the combination, with a reciprocating bolt, an extractor thereon, and a cartridge-carrier, of a shifting-piece on the bolt, which may be placed in position, substantially as described, to render both the extractor and carrier operative or both inoperative, as and for the purpose stated.

14. In a breech-loading gun, the combination of a sliding handle which operates the breech, a catch which locks said handle, and a moving abutment, substantially as described, in position to disengage the catch, with a breech-piece and a loose connection from the handle to the breech-piece, whereby a slight movement of the handle is permitted before the breech is started, substantially as described.

15. In a double gun, two hammers each having a holding-sear, a trigger in connection with one sear, by which to release it from its hammer, and a connection from the hammer thus released to the sear of the other hammer, whereby the second hammer is released by the striking of the first, all in combination, substantially as described.

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

ANDREW BURGESS.

Witnesses:

C. A. THOMPSON,

J. A. BASSETT.