(No Model.) 3 Sheets—Sheet 1.

A. BURGESS.

MAGAZINE FIRE ARM.

No. 357,518. Patented Feb. 8, 1887.

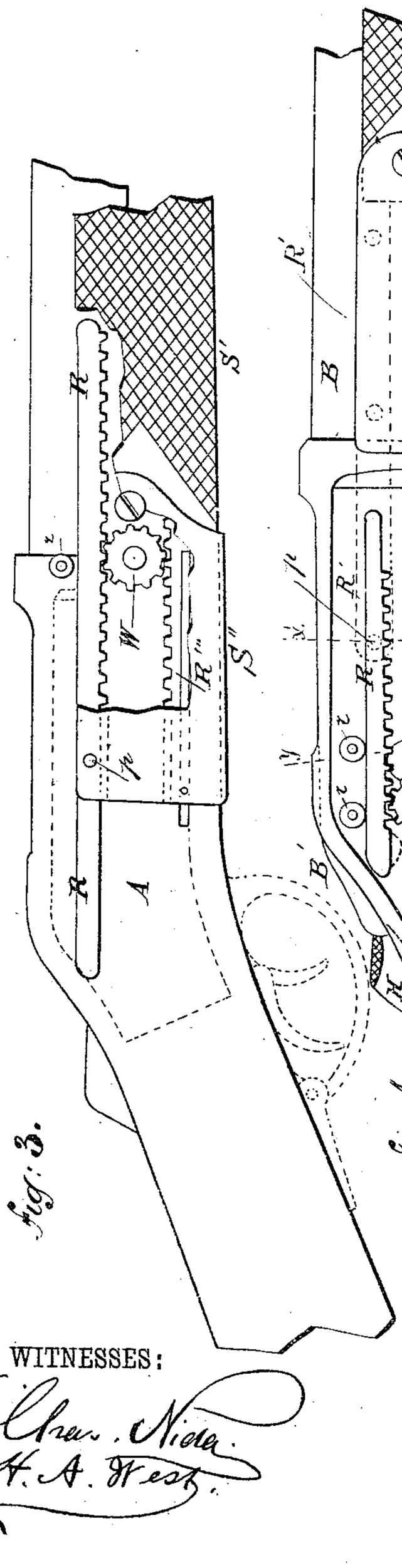

Fig: 3.

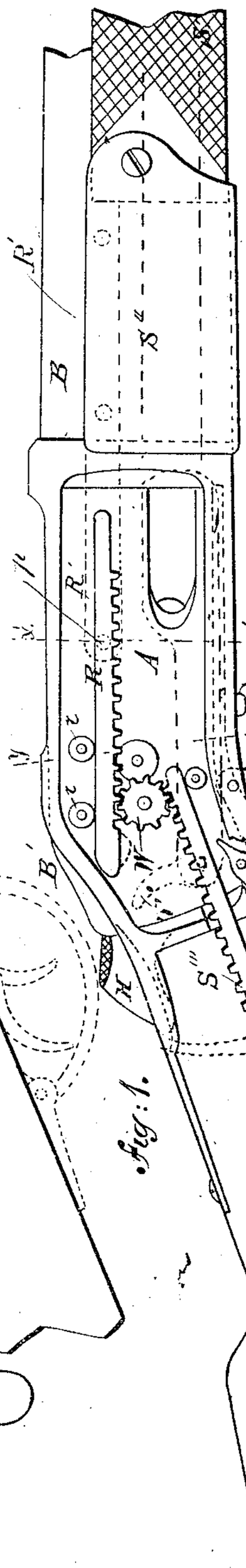

Fig: 1.

Fig: 4.

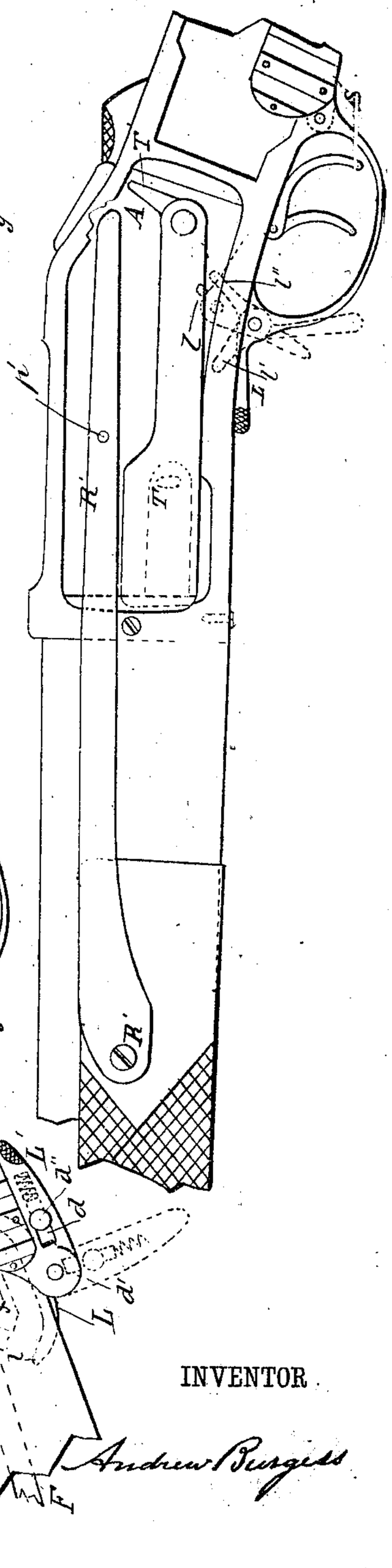

Fig: 2.

WITNESSES:

Chas. Nicol.

H. A. West.

INVENTOR.

Andrew Burgess

(No Model.)

3 Sheets—Sheet 2.

A. BURGESS.

MAGAZINE FIRE ARM.

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Fig. 5.

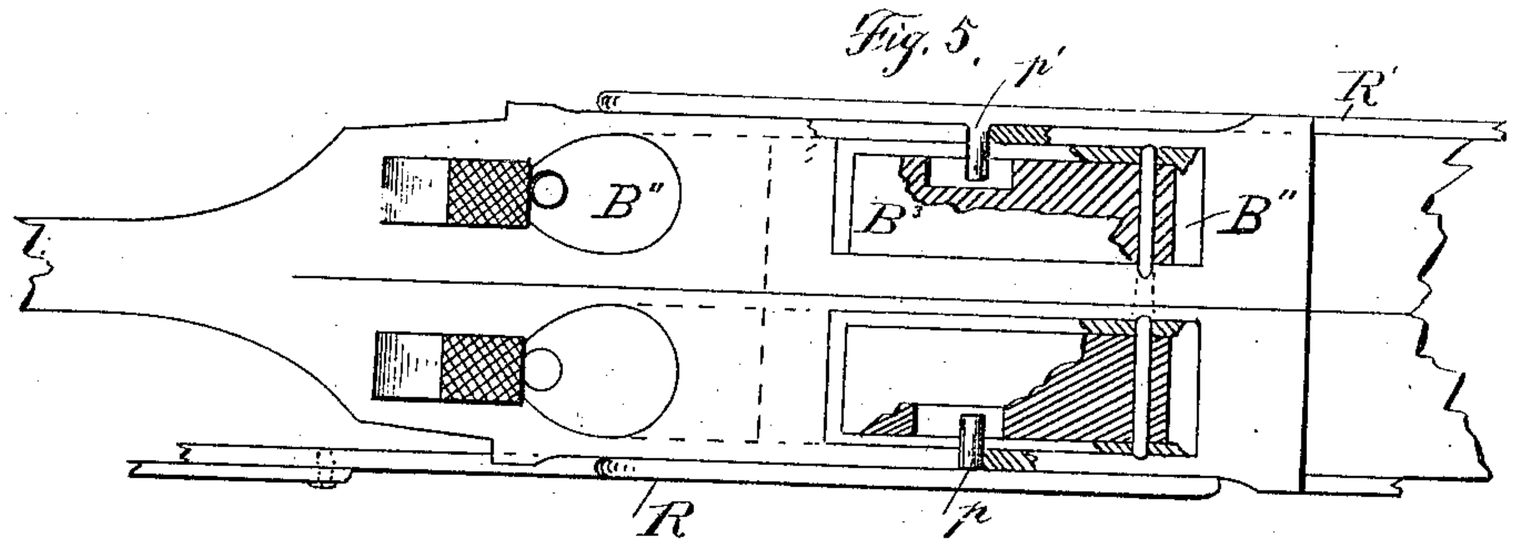


Fig. 6.

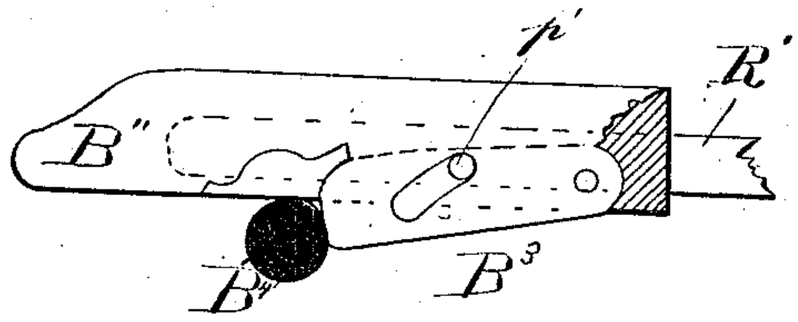
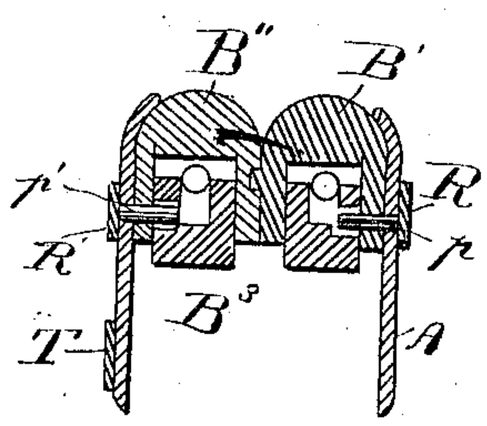


Fig. 7.



Witnesses
C. W. A. Brown.
M. L. Williams,

Inventor
Andrew Burgess

(No Model.) 3 Sheets—Sheet 3.

A. BURGESS.

MAGAZINE FIRE ARM.

No. 357,518. Patented Feb. 8, 1887.

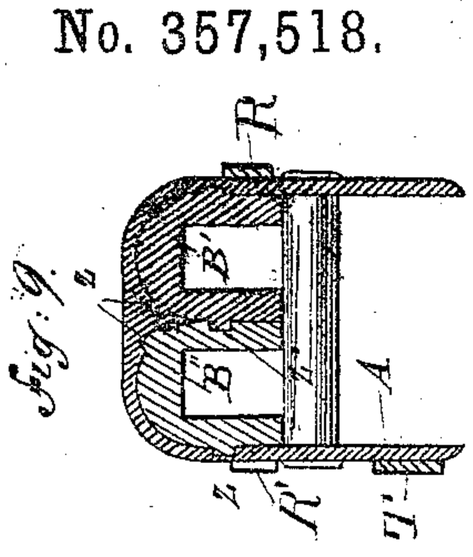


Fig. 9.

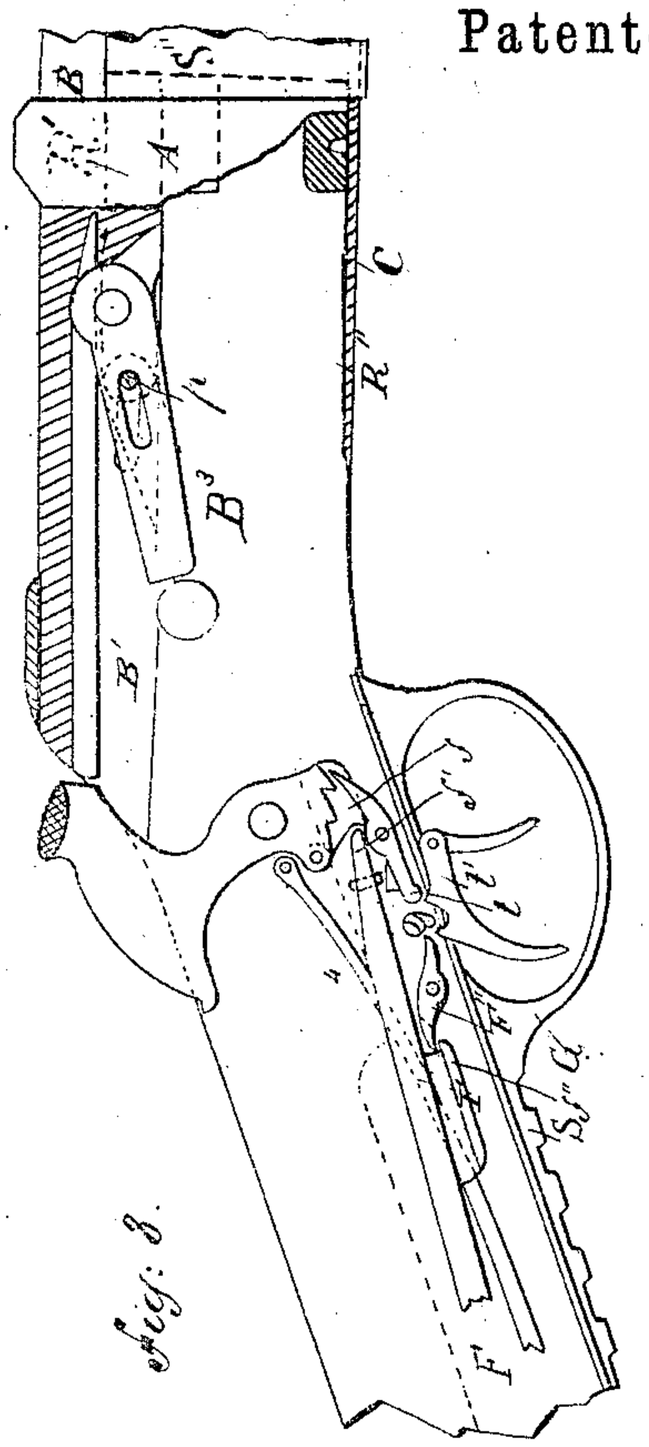


Fig. 8.

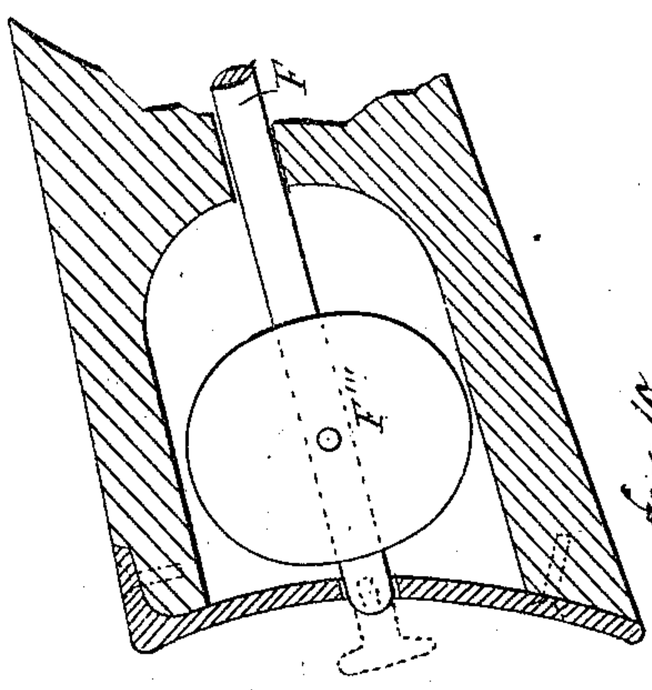


Fig. 10.

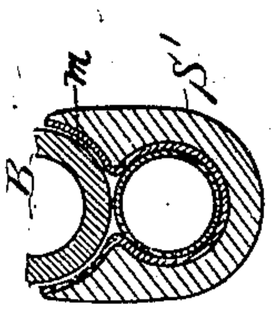
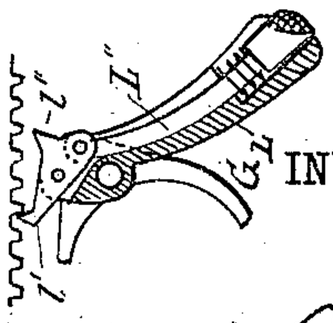


Fig. 11.



WITNESSES:

Chas. Nida

H. A. West.

INVENTOR

Andrew Burgess

UNITED STATES PATENT OFFICE.

ANDREW BURGESS, OF OWEGO, NEW YORK.

MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 357,518, dated February 8, 1887.

Application filed October 15, 1884. Serial No. 145,558. (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 fire-arms, and especially to double magazine-guns; and it consists in the arrangement of various devices to operate the breech mechanism, whether attached to a single or double gun, or whether operating singly, doubly, or simultaneously, and devices to cock the hammers independent of the breech-operating mechanism, together with other arrangements and combinations of parts, hereinafter more fully set forth and described.

Figure 1 is a longitudinal side elevation of a gun having these improvements. Fig. 2 is a similar view of the other side of the same gun, but with forward slide action instead of rear. Fig. 3 shows another means of reversing the action of the sliding fore-arm. Fig. 4 is a cross-section on the line *x x* of the rear operating-slide of Fig. 1. Fig. 5 is a top view of the double gun, showing the connection of the operating-rods and breech mechanism. Fig. 6 is a side view of the left-hand bolt, showing the relation of its operating-rod, brace B^3, and locking-shoulder B^4 when in closed position. Fig. 7 is a cross-section on line *x' x'* of Fig. 1. Fig. 8 shows the cocking-rod F' in position to engage and cock the hammer. Fig. 9 is a cross-section of the bolts and frame on the line *y y* of Fig. 1. Fig. 10 is a cross-section of one barrel, the sliding fore-arm, and its metal lining. Fig. 11 shows a modification of the starting-lever shown in Figs. 1 and 2.

Similar letters of reference indicate corresponding parts.

A is the frame of the gun; B, a barrel; S, the rear sliding handle, which is attached to the guard G.

S' is the fore-arm, which serves as another operating-slide. S'' is the shield to cover the opening between the fore-arm and frame. L is a starting-lever.

F indicates a rod for cocking one of the hammers. A duplicate thereof may be used for the other hammer.

The frame A is constructed broad enough to carry two bolts, B' and B'', (see Fig. 9,) and their locking mechanism, which may be similar to that shown in Fig. 8, or any that may be operated by the handles, substantially as here shown.

A rod, as R, is arranged on either side of the gun. It may be on the outside of the frame when I prefer to protect it by a cover, or inside, and it may reciprocate parallel with the bolt or obliquely to move the bolt in any of the known methods, some of which I have shown and claimed in previous applications.

The rod R has a lost motion in its engagement with the breech bolt and brace, (see Figs. 5, 6, and 7,) which show a pin in the rod entering a slot in the brace and bolt. This lost motion enables the unlocking of the brace before pressure is brought on the bolt.

To operate the bolts separately by two slides, I connect one with a handle forward of the frame and the other to another handle to the rear of the frame by their respective rods, so that the two handles shall not interfere or be in the way of each other in operating.

It is obvious that both handles may thus work in the same direction; but I prefer to reverse the movement of one of them that the operator may be less liable to make the mistake of firing one barrel for the other.

In Fig. 1 I show the rod R provided with cogs and engaged by the reversing gear-wheel W, which is engaged by the ratchet-rod S'''. Said rod S''', being attached to the sliding handle S, serves to turn the lower part of wheel W forward, thereby rotating back the top of said wheel to move back the rod R by the forward movement of the slide S, and the forward end of rod R thus moves so far rearward that the rod S''' may pass obliquely forward and upward—forward of the end of rod R without striking it. The bolt on the other side of this gun is operated by a fore-arm, which is arranged with bearings (as barrel and magazine) forward of the frame to slide thereon, and said fore-arm is connected, as shown in the first figures or otherwise, to the breech mechanism,

so that a sliding longitudinal movement of the fore-arm shall unlock, move, and lock the breech.

In Fig. 1 I connect the sliding fore-arm to the breech by a rod, as R′, so the back and forward movement of said rod when operated by the sliding fore-arm moves the breech-piece back and forth in the same direction as the hand operating it.

In the modification, Fig. 3, the shield S″ is fixed to the sliding stock, so as to telescope back over the frame when the fore-arm is moved back, as there shown, and said shield carries a ratchet-bar, as R‴, and a cog-wheel, W′, is pivoted to the forward end of the frame in position to be engaged by the ratchet-bar R‴, and in turn to engage cogs on the rod R, which connects with the breech mechanism, so that, moving forward, the sliding handle moves the rod R and breech-piece backward to open the breech by operation of the reversing-wheel W′, and the backward movement of the fore-arm closes the breech in a similar manner.

The fore-arm is made in the usual form, but arranged to operate as a sliding handle, as described, and the metal shield S″ is provided to cover the opening between the sliding tip and frame when the fore-arm is in its forward position.

In Figs. 1 and 3 the shield S″ is seen fixed to the sliding fore-arm to telescope over the frame; but in Fig. 2 the said shield is attached to the frame and the tip slides inside of it, and the opening between the tip and frame is covered substantially in the same manner.

I pivot a starting-lever, as L, Fig. 1, to the sliding handle S, and fix one or more shoulders, as *l l*, in the body of the gun, for the upper arm or arms (here shown in dotted lines) to bear against in the last part of the movement of the bolt forward, or when in position to be started back, when allowance may be made for "lost motion," as shown.

The lever L is provided with a handle, L′, which is pivoted to the lever and to its bearing in the slide, so that said handle may be turned up against the bottom of the gun to be out of the way, as shown in Fig. 1, without turning the operating end of lever L; but when the handle L′ is turned down to the position shown in dotted lines the spring-catch *d* snaps into the notch or depression *d′* of the lever to fix the handle firmly to the lever for operating it, and the catch *d* may then be engaged by its projecting stud *d″* to pull it down out of the depression *d′* of the lever, so the handle may turn up out of the way, and the spring-stud *d* then entering a slight depression on the side of the lever L or on the sliding handle thereby holds the handle L′ from falling.

The jointed lever described may be used to advantage as an operating-lever or in the positions usually occupied by operating-levers, which move and lock the breech mechanism of magazine-guns, and the spring-catch may be in the form of a scar to hold but one way, the other way of turning being stopped by a shoulder on the lever.

A modification of the starting-lever of Fig. 1 is shown in Fig. 2, where L is the lever, *l′* and *l″* its engaging points, which remain below the line of their fulcrum *l* when the lever is turned up against the bottom of the gun, as shown, or when turned down against the guard, as indicated in dotted lines, so it may slide past the fulcrum *l* in either position without engaging it; but if turned either way to a position between the two shown, one of the engaging points will be thereby raised to engage the fulcrum *l* to start the slide either way, as desired. A friction-bearing holds the lever in either position desired when not in use.

Another modification of the lever L is shown in Fig. 13. It is attached to the sliding guard G, as before; but the engaging points *l′* and *l″* are here shown as the ends of a double-acting pawl, which is pivoted in the lever and engages for a fulcrum the fixed ratchet-bar *l*, and a spring thumb-piece, L′, is attached to the pawl and arranged in the lever to pull the forward point, *l″*, of the pawl out of engagement with the fulcrum-bar, so that by working the lever back and forward the rear point, *l′*, only will engage the cogs of the bar *l*, and thereby force the guard-slide forward; but if the spring thumb-piece L″ of the pawl be pressed upward it turns the point *l′* of the pawl out of, and the point *l″* into, engagement with the ratchet-bar, so that the vibrations of the lever will force the sliding guard rearward.

The sliding guard G, as shown in Fig. 1, has a pin at its forward end, which travels in a slot in the frame to guide it, and said guard is pivoted at *g* to the sliding handle or section of a sleeve, S, to allow the guard to follow the curved under side of the gun, while the handle follows the straight line of the bottom of the butt-stock.

The handle S curves partly around the small of the stock and consists of an inner corrugated metallic part, as seen in section, Fig. 4, and a softer non-metallic outside portion, as *y*, which is riveted or otherwise fastened to the more rigid inner part.

The outside layer of the slide S may be of leather, papier-maché, rubber, or similar substance, which will give good traction to the hand of the operator, which requires some degree of elasticity, and also a poor conductor of heat, that it may be easily handled whether cold or hot.

In Fig. 10 I show a cross-section of the sliding fore-arm handle, which has an inner metallic part, *m*, to serve as a bearing and a support between the soft outside fore-arm, S′, and the magazine and barrel. The fore-arm S′, as also the part *y* of slide S, may be made by molding material in a soft or plastic state upon the base of support *m* and afterward hardening it thereon.

The scar *t* is so arranged that it can only be engaged by the trigger *t′* when the sliding handle S is in the position that insures the closed

and locked position of the breech, and the trigger has a projection, as t'', which extends laterally to guide the trigger along the way or ledge t^5 until it passes the fixed locking-shoulder t''', when said projection t'' rises behind and against the shoulder t''' by the same pull that forces the trigger up against the sear t to release the hammer, so that at the instant of the discharge of the gun the trigger will be engaged against the shoulder t''' to lock the guard and operating-handle in their rearmost position or from moving in either direction. It will be readily seen that by this construction (as in Fig. 1) the trigger may be pulled by constant pressure when the sliding handle S and guard are being moved backward, (and the pressure on the trigger will help or produce that movement,) and fire the gun by the same pressure when the breech shall reach its closed position and lock the handle, until by the operator changing the movement to a forward one he releases the trigger so the handle becomes instantly free to move forward and open the breech.

The loading-trap T, Fig. 2, and indicated in broken lines in Fig. 1, vibrates on the side of the frame in a similar manner to that shown in my Patent No. 250,880; but may swing down instead of upward to avoid the rod R', which closes the said trap by engaging the upright T'.

In the cross-section, Fig. 9, I show the arrangement of the bolts B' B'' in this double gun. The ribs z z enter grooves in the frame to guide the bolts, and the rib z' of one bolt enters a longitudinal groove in the other bolt to guide each and hold both in proper relative position whether they move together or separately.

The rod F, Fig. 8, is provided with a spring to retire it rearward, the forward end, f'', of said rod taking a position rearward of the projection f' on the hammer below its pivot, so that when the rod is forced forward by the shoulder of the operator, or the gun is forced back by its recoil, the rod F strikes the projection or notch f of the hammer by its end f'' to rotate and cock the hammer, when the rounded rear portion of the hammer above the point f, having rotated so far downward as to strike the top of the rod F, presses it down to release it from engagement with the projection f, so that the hammer may fall or be caught by the sear at full-cock, and the hammer may be caused to fall by releasing the sear in the usual manner whether the rod F remains in its forward or rear position; but if between the two positions the rod might obstruct the falling hammer, which I prevent by hanging a lever, F'', (see Fig. 8,) which has a lateral projection at its rear to travel in the groove f'', which is cut in an extension which projects from the rod F, and the forward end of lever F'' extends to a position to be engaged by the trigger when it is pulled, so that in pulling the trigger to release the sear it also turns the rear of lever F'' downward to force down the point f'' of the rod out of the path of movement of the projection f.

The rod F has a weight attached to it to stop (by its inertia) the rod and cock the hammer when sufficient recoil takes place in firing the gun.

When both handles are used on one breech-piece, it is not necessary that both be connected to the same part of the breech mechanism or in the same manner, or that they each have the same limit or length of movement, as one handle may move the whole distance to open the breech and the other only operate as a lever, or otherwise, to start the breech open or force the breech "home" in closing, or both.

Instead of the double pawl in the modification of Fig. 11, a single dog may slide in the lever and be projected by the thumb-piece L', to engage the ratchet-bar to move the sliding handle, said dog being retired out of engagement with the bar by a spring, as the spring of the thumb-piece L', and a continuation upward of the piece L' may serve as the above dog, the spring remaining as here shown; or a section of a ratchet-wheel may supply the place of the pawl or dog and may be retired by a spring, or turn out of engagement with the bar in a similar manner to that shown by lever L, Fig. 2.

I do not claim the projection formed by lever L, as shown, on the sliding handle in Fig. 1 as a "pistol-grip," as I claim a pistol-grip in such connection in my application No. 168,358, filed June 11, 1885.

I claim—

1. In a gun, a sliding guard and handle located below and to the rearward of the frame and moving obliquely to the axial line of the barrel, a ratchet-bar attached to said guard or handle, a ratchet-bar having connection with the breech mechanism, which connection permits lost motion between the bar and breech mechanism, and a gear-wheel in engagement with both said ratchet-bars, substantially as and for the purpose described.

2. A sliding handle, which consists of a sleeve or the section of a sleeve which moves in a straight line longitudinally on the small of the stock of a gun and obliquely to the axis of the barrel, in combination with a trigger-carrying guard which is jointed to said sliding handle to allow it to take a curved movement, substantially as specified.

3. A sliding handle connected to the breech mechanism of a gun to operate it substantially as described, constructed of a corrugated inner metallic shield which bears upon the body of the gun, and an outer softer portion which serves as a hand-hold, as and for the purpose set forth.

4. In a gun, a sliding handle arranged to operate the breech, substantially as described, in combination with a starting-lever pivoted in the sliding handle, which lever engages a fixed abutment in the frame to start the handle, said starting-lever being pivoted to the handle to fold close against the same when not in use, substantially as described.

5. In a fire-arm, and in combination with the breech mechanism thereof, an operating-handle, a lever pivoted in said handle so as to be inoperative when closed, but to serve as a starting-lever by bearing against an abutment on the gun when open, and a spring-catch operating to retain said lever in its folded position, substantially as described.

6. A pivoted lever arranged to move or operate the breech mechanism of a gun, in combination with a handle pivoted to said lever, and a spring-dog carried thereby, said dog engaging in a notch or depression in the lever (when said handle is in an operative position) to fix the handle to the lever, substantially as described, and a projection on said dog by which the handle may be released to turn independently of the lever, for the purpose set forth.

7. A sliding guard connected to an operating-handle and carrying a trigger, a projection on said trigger, and a fixed projection in the gun, with which the trigger projection *t''* engages when the trigger is pulled to operate the sear, all in combination, so that the pulling of the trigger locks the sliding handle, substantially as specified.

8. In a magazine fire-arm, the combination of a barrel, breech, frame, and breech mechanism, and a sliding fore-end stock covering the bottom of the barrel, as usual, but sliding longitudinally with reference thereto, and connected with the breech mechanism to serve as a handle, and a shield which covers the portion of the gun between the frame and the fore-arm when the fore-arm is in its forward position, substantially as set forth.

9. A sliding handle carrying a bar to operate the breech of a magazine-gun, in combination with a swinging trap, as T, which covers the loading-aperture of the magazine, and a projection on said trap, which swings into the path of movement of the bar or handle when the trap is opened, so as to be engaged by said bar or handle in the movement by which the breech is operated to close the trap, substantially as specified.

10. The frame of a breech-loading gun, provided with recesses to receive and guide the two reciprocating bolts B' and B'', in combination with the said two bolts, which are connected with each other by a longitudinal rib and groove, substantially as described.

11. In a breech-loading fire-arm, a hammer, and a rod loosely supported in the stock, which rod projects forward to engage the hammer on the recoil of the gun, and a weight secured to said rod, all combined, substantially as described, so that the inertia of the weighted rod causes the rod to cock the hammer when the gun recoils, as set forth.

12. In combination with the stock and hammer of a breech-loading gun, a rod extending forward in the stock in position to engage and cock the hammer, and a catch extending outside the stock and engaging said rod in the stock to hold it out of operative relation with the hammer, substantially as described.

13. In a breech-loading gun, a sliding handle, and a guard which moves to operate the breech mechanism to open and close the breech, in combination with a trigger hung in said sliding guard to move therewith, and a shoulder fixed in the body of the gun in position for engagement by an upward projection of the trigger to lock the parts in firing position, substantially as specified.

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

ANDREW BURGESS.

Witnesses:
CHARLES E. PARKER,
H. J. MEAD.