(No Model.)

3 Sheets—Sheet 1.

W. R. FINCH.

MAGAZINE GUN.

No. 306,144.

Patented Oct. 7, 1884.

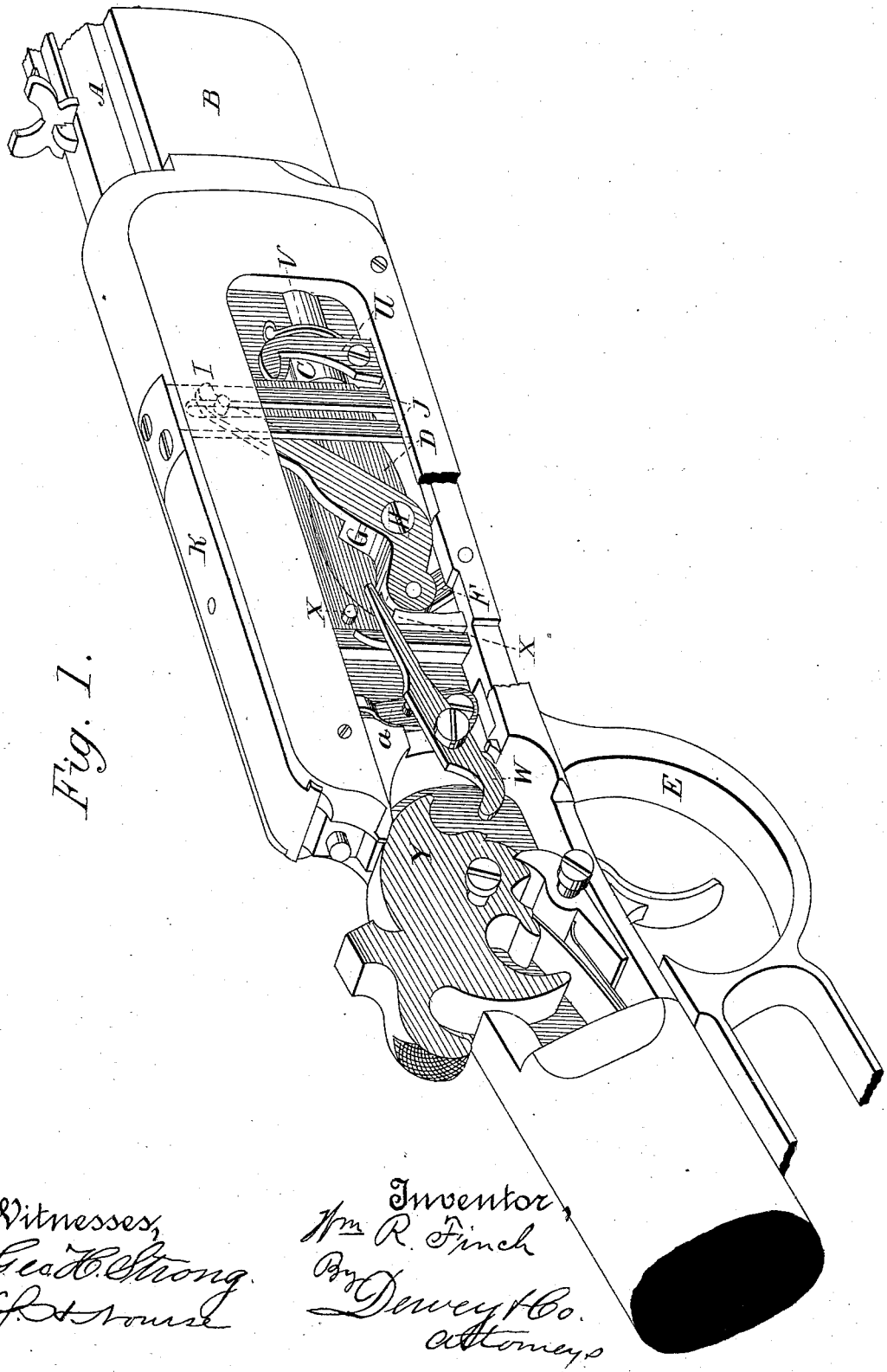

Fig. 1.

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(No Model.)

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MAGAZINE GUN.

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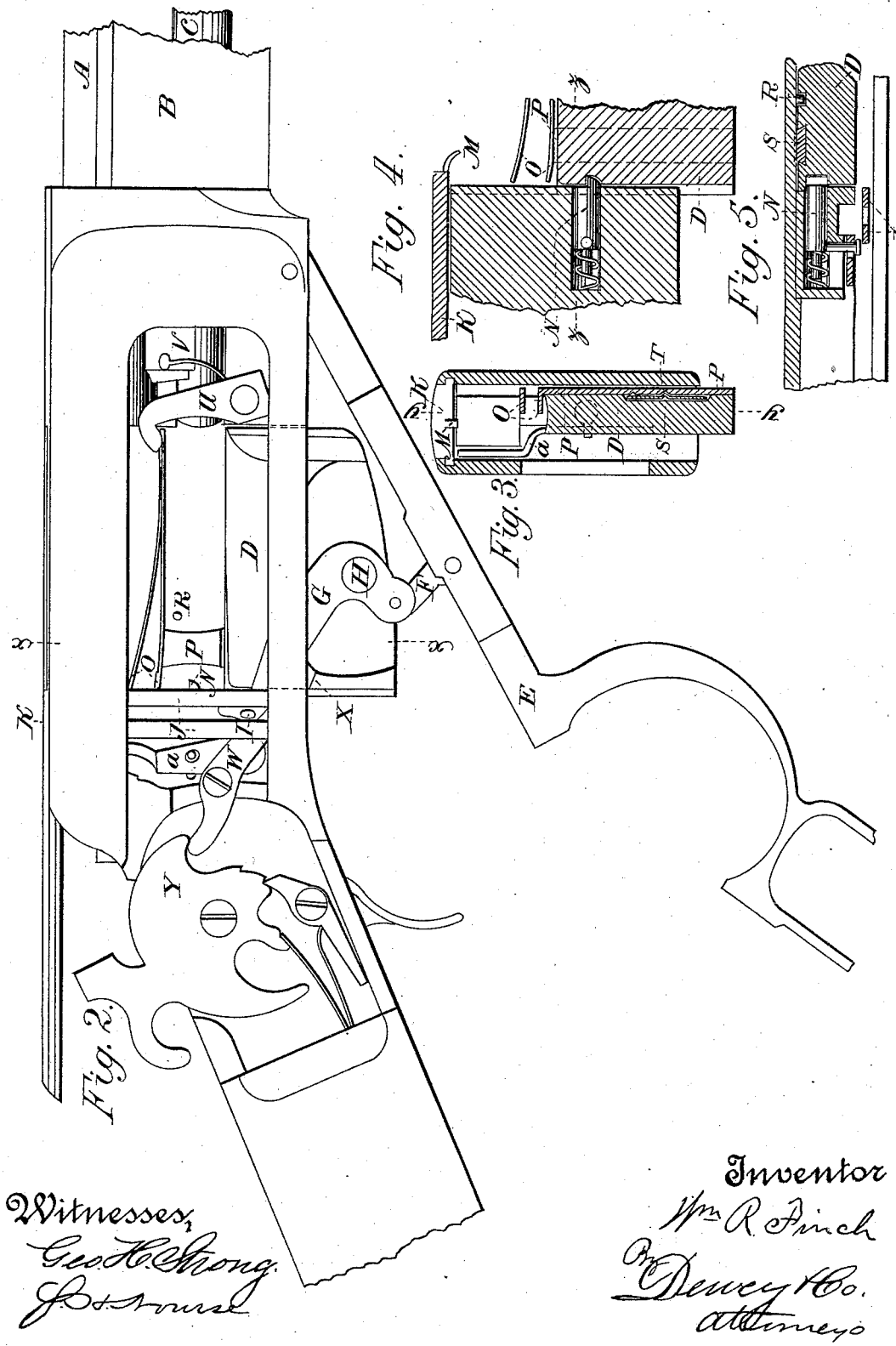

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MAGAZINE GUN.

No. 306,144. Patented Oct. 7, 1884.

Fig. 6

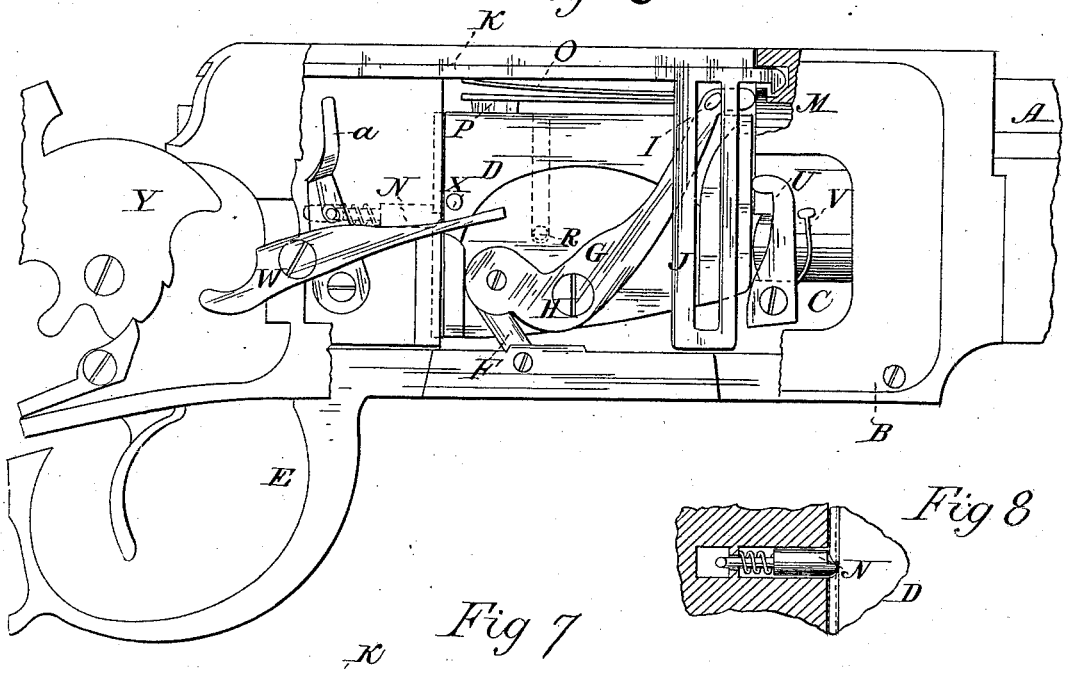

Fig 8

Fig 7

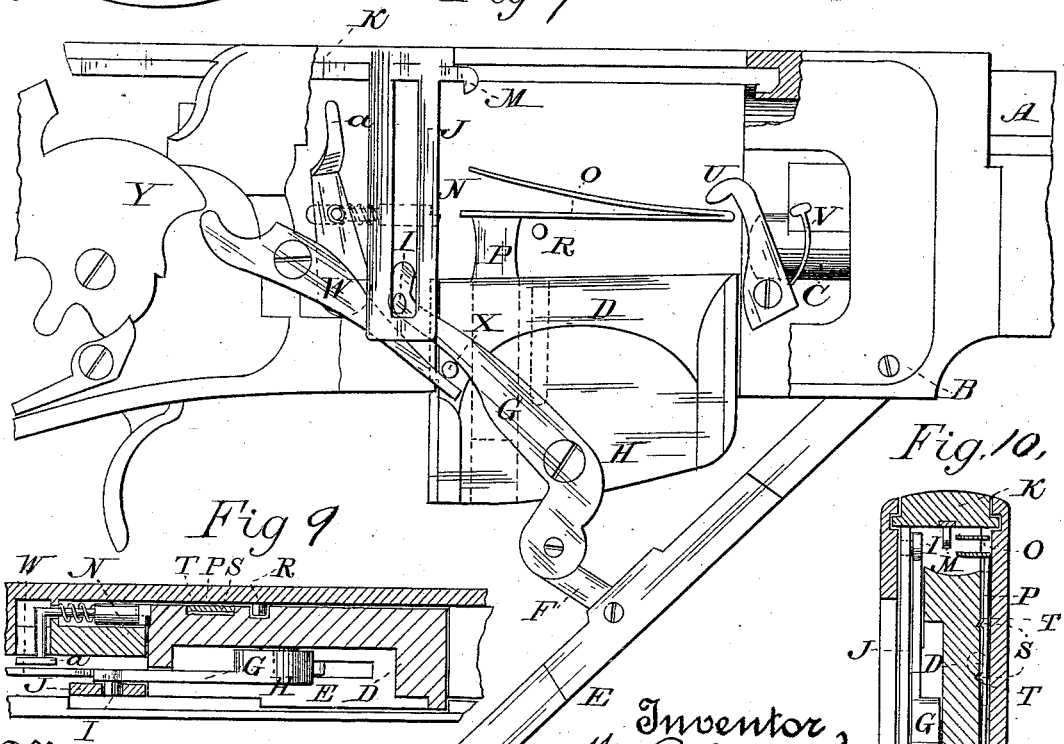

Fig. 10.

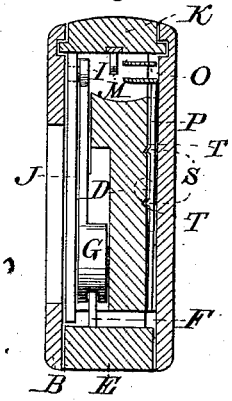

Fig 9

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UNITED STATES PATENT OFFICE.

WILLIAM R. FINCH, OF EUREKA, CALIFORNIA.

MAGAZINE-GUN.

SPECIFICATION forming part of Letters Patent No. 306,144, dated October 7, 1884.

Application filed October 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ROSE FINCH, of Eureka, county of Humboldt, and State of California, have invented an Improvement in Magazine-Guns; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in magazine-guns; and it consists of a vertically-moving carrier and breech-block operated by a hinged lever beneath the stock, which also serves as a trigger-guard, in combination with a shell-extractor of novel construction, a means for holding the breech-block stationary while the cartridge is being forced into the barrel of the gun, and certain operating devices and details of construction, all of which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my gun, showing the breech mechanism from the right side and closed. Fig. 2 shows the breech mechanism from the same side open. Fig. 3 is a vertical section on the line *x x*, Fig. 2. Fig. 4 is a portion of a longitudinal section through slide K, frame, and breech-block D, and an elevation of the pin N, taken on the line *y y*, Fig. 3. Fig. 5 is a horizontal section on the line *z z*, Fig. 4. Fig. 6 is a side elevation, in partial section, with breech closed. Fig. 7 is a side elevation with breech open. Fig. 8 is a section of part of frame and breech-block, showing the pin N. Fig. 9 is a top view of horizontal section of frame and breech-block. Fig. 10 is a vertical section through the breech-block and frame.

A is the barrel, B is the stock, and C is the magazine, which is in the present case shown of that pattern which extends beneath the barrel and has its rear end opening into the chamber in which the breech mechanism works.

D is the breech-block, which also serves as a cartridge-carrier, and slides in a vertical channel made in the frame.

E is the guard-lever, having its forward end hinged beneath the gun and its rear end forming a handle, by which it may be thrown down and raised in the usual manner. This lever is connected by a link, F, with the short arm of a bell-crank lever, G, which has its angle fulcrumed upon the side of the breech-block by a pin, H. The long arm of this lever extends up by the side of the carrier, and a pin, I, projecting from the side of its upper end, enters a slot in a vertical link, J, which projects downward from the horizontal slide K. The retractor engaging the head of the shell holds this slide when closed, and prevents its being drawn back by the first movement of the lever E, which, thus acting through the link F upon the pin H, draws the breech-block down until the breech of the gun is open and the cartridge exposed.

M is a hook or retractor fixed to the slide K, and projecting forward so as to hook over the head of the shell. The rear end of the breech-block is grooved or recessed, and when it reaches the point just described a pin, N, is thrown forward by a spring from the rear part of the frame into this recess and holds it stationary until the slide K and the retractor are drawn back by the action of the lower arm, G, upon the vertical link J. When the slide is fully drawn back, the link strikes a lever-arm, *a*, connected with the pin N, and forces it back and releases the breech-block, so that it can complete its downward movement.

A spring, O, lies upon the top of the breech-block, so that as the shell is withdrawn by the retractor it slides along the top of the spring until the end is clear of the barrel, when the spring throws it upward and out of the chamber. The lower part of this spring has a tongue or projection, P, at one side, which extends down beside the breech-block, and a spring-catch or projection, S, on the breech-block engages a shallow notch, T, in the tongue and holds it, so that the two move downward together until the shell has been ejected. The lower part of the spring thus strikes a pin, R, in the side of the frame, which prevents its being carried any farther down, and as the notch T is shallow and the edges slightly beveled it is easily disengaged from the catch, so that the breech-block continues its downward movement and leaves the spring O, held by the pin R, just above the line of the magazine. When the breech-block has reached its lowest point the magazine-opening will be exposed, so that a cartridge will be forced by

the magazine-spring into the space between the top of the breech-block and the lower plate of the spring O. When the guard-lever is thrown up, the breech-block slides up, carrying the cartridge between its upper surface and the spring O until the cartridge has arrived at a point opposite the barrel. A hook, U, has the lower end of its shank pivoted in the forward part of the frame, and a spring, V, throws its upper end forward, so that when the breech-block has reached the point just described this hook engages its upper corner and prevents its rising farther. The action of the arm of the lever G upon the slotted link J from the slide K forces the latter forward, and the end of the lever-arm forces the cartridge into the barrel. As this movement is completed, the link J reaches the front of the chamber, and striking the point of the hook hook U forces it back until the breech-block is released, and the further movement causes the tongue P to slip over the catch S, so that the spring O, being held from upward movement by the slide K, is overtaken by the top of the breech-block in the completion of its upward movement, thus closing the two together again, so that when the breech-block is again depressed and the slide K draws the retractor back the shell will be discharged from the gun above the spring, as before described. The gun is cocked by the action of a lever, W, which is pivoted to the frame, so that its forward end is moved by two pins, X X, upon the breech-block, while its rear end acts upon a lug upon the tumbler Y, and thus forces it back, when the breech-block is thrown down until the rear falls into the proper notch to hold the hammer back. The lever W is moved out of contact with the tumbler when the breech-block is again thrown up, so that when the trigger is pulled the hammer will fall without touching the lever.

The operation of the breech mechanism is as follows: Supposing the breech to be closed and an empty shell in the barrel, the movement of the lever draws the breech-block D downward, and its top spring with it, until there is room in the receiver for the shell to come out of the barrel above the breech-block, when the said block stops. The slide K now moves back and carries the shell with it until the shell is ejected by the spring O. The backward movement of slide K now releases the block D from its stop-pin N, and the block moves farther down and uncovers the magazine; but the spring on top of the block is held from moving farther down by pin R, so that a new cartridge comes out from the magazine between the block and the spring. The block now rises by a reversal of the lever movement and carries the cartridge and spring on top thereof; but when it (the spring) has risen so that the cartridge is in line with the barrel it is stopped by hook U. The lever then inserts the cartridge in the barrel, at the same time closing slide K. When this is done, the hook U is tripped and the breech-block rises against its top spring and closes the breech ready for firing.

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

1. In a gun, and in combination with the operating-lever, connected, substantially as described, to the breech-block, a vertically-moving breech-block, which serves also as a carrier and is channeled at one side, a horizontal plate or spring above the breech-block, with a tongue or support extending down beside the breech-block, and catches by which the two are engaged, so as to move simultaneously, substantially as herein described.

2. In a gun, and in combination with the operating-lever and connections, substantially as described, a vertically-moving breech-block having a vertical channel upon one side and a spring-catch projecting into it, in combination with a plate or spring, O, with a tongue or support, P, extending down into the channel and having shallow transverse notches to engage the catch, so as to hold the spring in contact with the top of the breech-block, or to cause it to move simultaneously with it when separated to admit a cartridge between them, substantially as herein described.

3. In a gun, and in combination with the operating-lever and connections, substantially as described, a vertically-moving breech-block and a parallel plate or spring connected with it from above by a notched tongue or support, which is engaged by a catch upon the breech-block, so as to hold the plate in contact with the breech-block when the latter commences its descent, in combination with a pin projecting from the side of the breech-block chamber to engage the plate and prevent its further descent, substantially as herein described.

4. In a gun, the vertically-moving breech-block, which serves also as a carrier, and the bell-crank lever pivoted to one side and connected with the guard-lever by a link, as shown, in combination with a slide moving in grooves in the top of the breech-block chamber, and having a vertical link, J, projecting downward and slotted to allow the pin I from the lever G to travel in and actuate it, substantially as herein described.

5. In a gun, a vertically-moving breech-block, with a bell-crank lever pivoted to one side and connected by a link with the guard-lever, a slide moving horizontally in the upper part of the breech-block chamber, with a slotted link extending down at the side to engage a pin projecting from the bell-crank lever, by which the slide is actuated, in combination with a hook, M, projecting from the front of the slide to extract the shell, and a spring, O, below the line of the barrel to throw the shell out when withdrawn, substantially as herein described.

6. In a gun, a vertically-moving breech-block and a horizontally-moving slide carrying the

shell-extractor, with operating mechanism, as shown, in combination with a spring pin or catch, N, projecting from the rear part of the chamber, so as to engage a slot in the rear of the breech-block and prevent its further depression until the slide and retractor are fully withdrawn, substantially as herein described.

7. In a gun, a vertically-moving breech-block, with a plate or spring, O, above the same and adjustably connected with it, a retractor-slide moving horizontally in the upper part of the breech-block chamber, and mechanism for operating the same, as shown, in combination with the spring-hook U, pivoted in the frame, as described, so as to engage the forward end of the breech-block in its upward movement and hold it until the slide has been moved forward and the cartridge placed in the gun, substantially as herein described.

In witness whereof I have hereunto set my hand.

WILLIAM R. FINCH.

Witnesses:
S. H. NOURSE,
H. C. LEE.