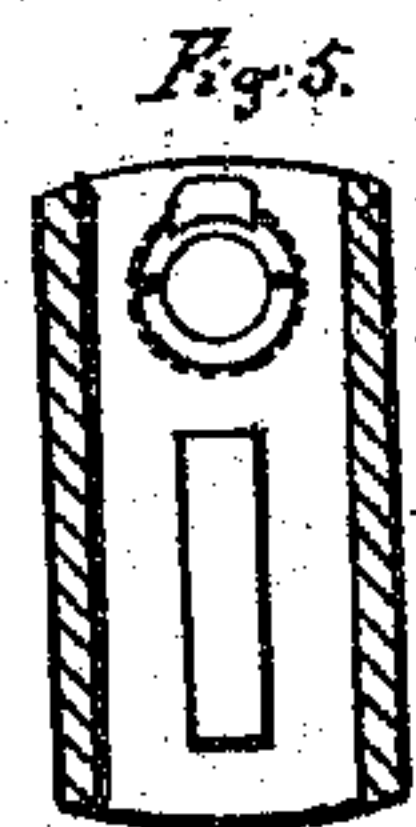
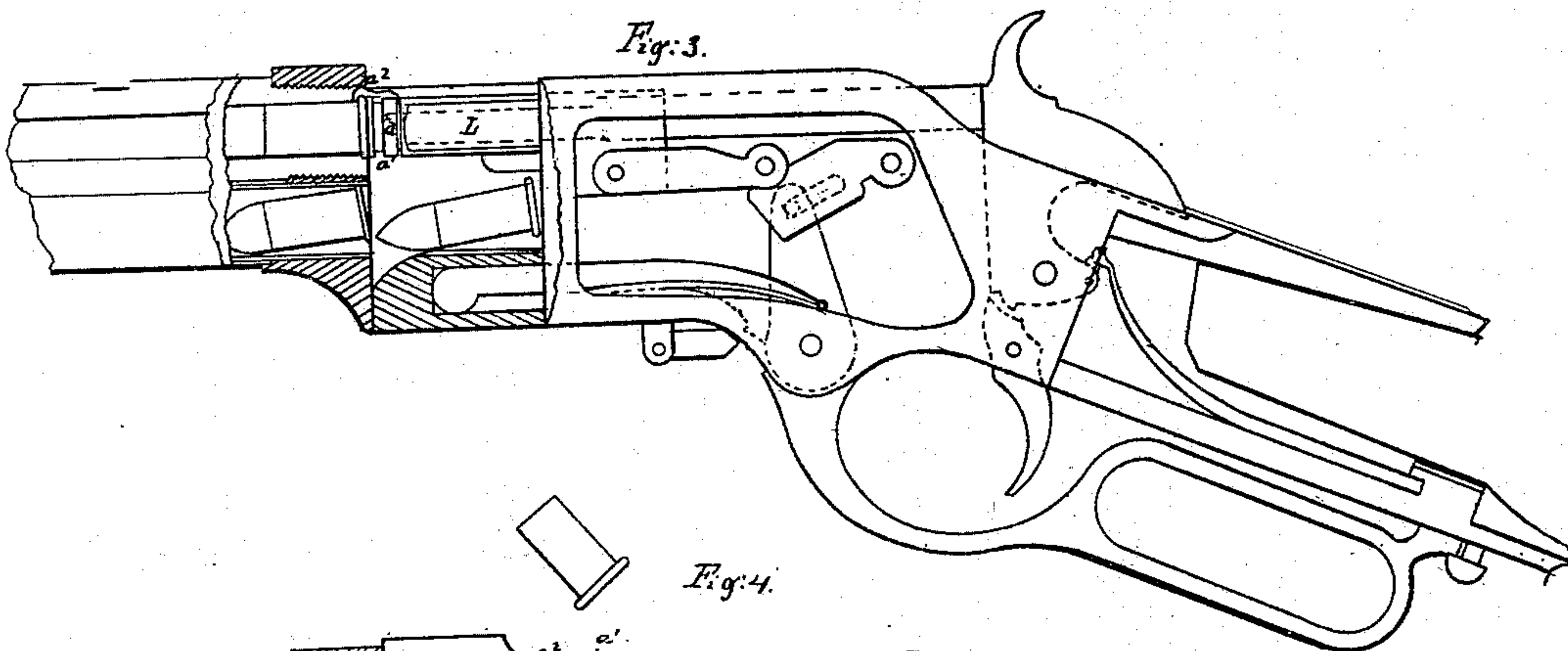
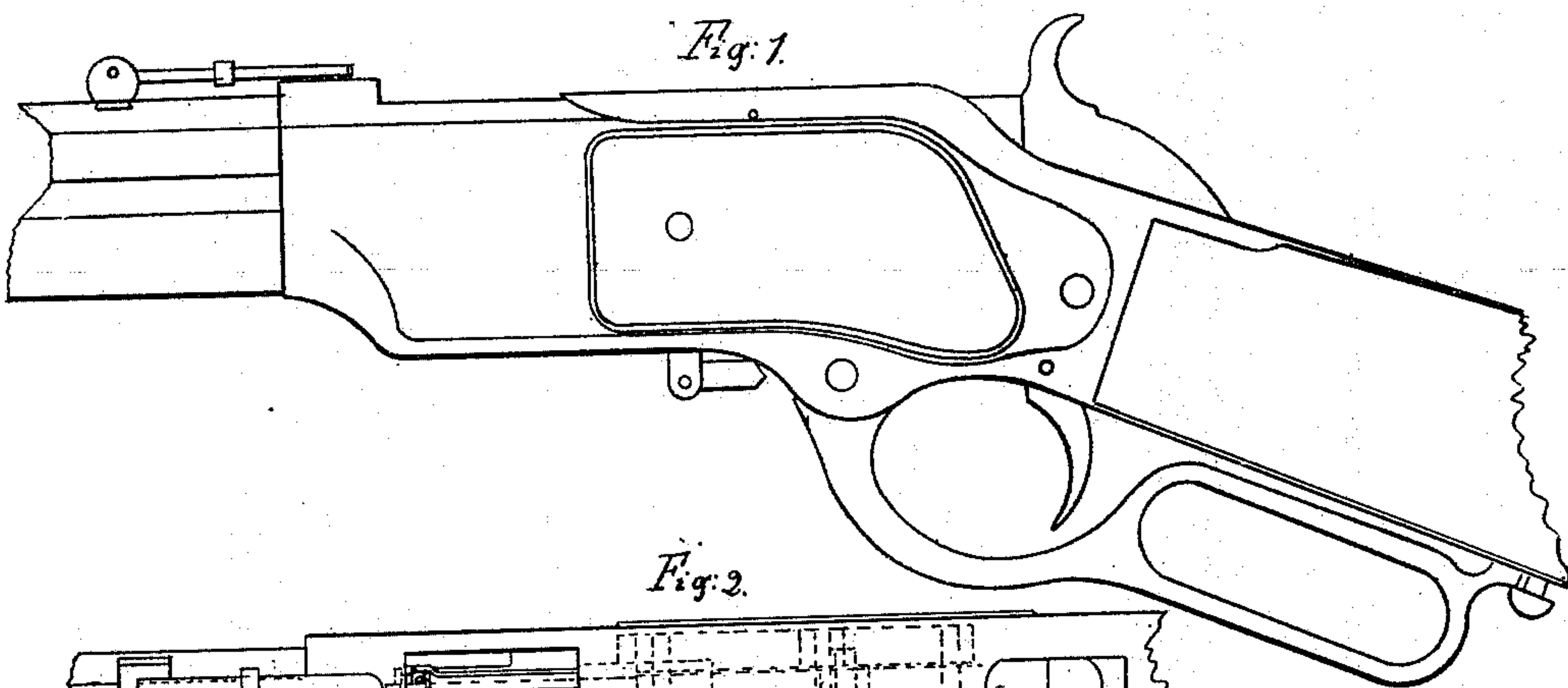


N. KING.
Magazine Fire-Arm.

No. 57,633.

Patented Aug. 28, 1866.



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UNITED STATES PATENT OFFICE

NELSON KING, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO
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IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. 57,636, dated August 28, 1866.

To all whom it may concern:

Be it known that I, NELSON KING, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new Improvement in Repeating Fire-Arms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a top view; Fig. 3, a sectional side view, showing the mechanical parts of the arm; Fig. 4, a longitudinal central section; and in Fig. 5 a section on line *x x*, looking to the rear.

My invention relates to an improvement in the repeating fire-arms patented by Horace Smith and Daniel B. Wesson the 14th of February, 1854, improved by B. T. Henry, patented October 16, 1860, in which several metallic cartridges are placed in a tube or magazine beneath the barrel of the arm, and carried therefrom to the barrel, and after the cartridge is discharged the shell retracted by the movement of the trigger-guard; and my invention consists in an improvement whereby the retraction of the cartridge is made positive.

The operative parts of the arm in which I illustrate my improvements are substantially those found in the patents before referred to.

A is the barrel, of any known construction; B, the frame, to the forward end of which the barrel is secured, and to the rear end a wooden stock, C. In the frame B, and directly in the rear of the barrel, is formed a chamber or mortise, D, in which is placed a carrier-block, E, the office of which is to receive a cartridge from the magazine and raise it for insertion into the barrel; also to throw the discharged shell from the arm after it has been withdrawn from the barrel. For this purpose the said carrier-block E is constructed with a chamber, E², (see Fig. 5,) to receive the cartridge from the magazine, and it is moved up within the chamber or mortise D to present the cartridge to the barrel for insertion, and down when the cartridge has been removed from the carrier to the barrel, and is thus

moved by means of the lever F, one end of which lies within the carrier-block E, the other hung to the pivot G.

H is a lever, serving both as a trigger-guard and as an instrument by which the several mechanical parts of the arm are made to operate. It is hung to the pivot G, upon which both the levers F and H may be freely moved.

By moving the lever H from the position denoted in Fig. 3 to that denoted in Fig. 4, a shoulder, *a*, formed upon the lever H, strikes a corresponding shoulder, *b*, upon the lever F, raising the said lever and carrier-block E, as denoted in Fig. 4. By returning the said lever H the upper arm, I, of the lever H strikes another shoulder, *c*, on the said lever F, and returns the lever F, with the carrier-block E, to the position denoted in Fig. 3.

The breech-pin L is hollow, of cylindrical form, through which passes a piston, M. The rear end of the said pin L is formed, as seen in Figs. 4 and 3, so as to attach upon either side to a pivot, *d*, a link, N, of a toggle-joint, as denoted in broken lines, Fig. 2. The other links, P, of the toggle are hinged to the frame by a pivot, *e*, and the two links hinged together at *f*.

The upper arm, I, of the lever H extends up between the two toggle-joints, and through the said arm I a pin, *g*, passes, extending out upon either side, so as to enter a slot or groove, *h*, upon the inside of the links P, so that as the lever H is moved, as from the position in Fig. 3 to that in Fig. 4, the pin *g* will act to close the toggle and draw back the breech-pin L, which moves freely back and forth in the frame B, as denoted in Fig. 4, and by the return of the lever H will extend the toggle and return the breech-pin L, as seen in Fig. 3.

The raising of the carrier-block E, as before described, occurs after the breech-pin has been drawn back, and the breech-pin is returned before the return of the carrier-block, passing through the chamber E² in the carrier-block, for the purpose, as more fully hereinafter shown, of removing the cartridge from the chamber E² in the carrier-block to the barrel. Therefore, in order to allow the carrier-block to return, it is necessary to cut a

slot, E^3 , from the chamber E^2 up through the carrier-block, as seen in Fig. 8. This slot must be narrower than the chamber, in order to prevent the accidental removal of the cartridge in the said chamber, as also to cause the raising of the carrier-block to eject the discharged and withdrawn shell; and that this narrow slot may pass down over the breech-pin, which is nearly the same diameter as the chamber in the carrier-block, the breech-pin is reduced upon its two sides, as seen in Figs. 2 and 3.

A separate spring, z , for each of the levers F and H is secured upon the frame, the ends of which bear one upon the lever H to retain the lever in its home position, the other upon the lever F , (see Fig. 4,) for the purpose more fully hereinafter described. The lever H is held in its position against the frame by means of a thumb-screw, or an equivalent therefor.

Beneath the barrel, and opening through the frame to the carrier-block, is fixed a tube or magazine, A' , into which several cartridges are placed, to be successively removed by the carrier-block for insertion into the barrel, and are forced from the tube into the chamber in the carrier-block by means of a helical spring within the said tube.

To the inner end of the piston is fixed a collar having projecting points upon either side. (See Fig.) The said collar is of larger diameter than that part of the piston to which it is attached, and the recess made in the breech-pin to receive the said collar is made a little deeper than the thickness of the collar, so as to allow the piston with the collar to move back, so that when the pin is forced up against the cartridge, as before described, the projecting points, as they press against the cartridge, will force the piston back, and thus situated, when the hammer strikes the piston, as before described, the projecting points will indent the metal of the cartridge sufficiently to explode the fulminate and ignite the powder within the cartridge.

Heretofore a latch upon the breech-pin has been arranged so that as a cartridge was forced into the barrel by the breech-pin the said latch would hook over the flange of the cartridge and withdraw the shell when the breech-pin was again withdrawn. This arrangement, though much approved, may sometimes fail to retract or withdraw the shell from the barrel. To avoid this possibility and make the retraction or withdrawal positive, I form an annular groove, a^1 , (see Fig. 4,) upon the breech-pin L , into which I place a ring, d^2 , having upon its upper side a hook, a^2 , projecting forward,

so that when the carrier-block is raised, as in Fig. 4, to carry the cartridge up for insertion into the barrel, as from the position in Fig. 3 to that in Fig. 4, the rim of the cartridge comes under and within the grasp of the said hook.

After the cartridge has thus passed up to the position denoted in Fig. 4, return the breech-pin to the position denoted in Figs. 2 and 3, which operation will insert the cartridge into the barrel, the hook a^2 passing into a recess in the rear of the barrel, as seen in Fig. 3.

The ring d^2 I make a little shorter than the groove in which it is placed, for two reasons: first, that as the cartridge, when it is raised, lies upon the carrier-block upon a little inclination, as seen in Fig. 4, therefore it is necessary that the hook be a little longer than the thickness of the rim of the cartridge, in order that the cartridge may surely enter the grasp of the hook.

When the breech-pin is moved forward, as in Fig. 4, the hook and its ring are forced back in the groove, in order that as little recess as possible may be formed in the rear of the barrel; but when drawn out, as in Fig. 4, the hook and ring are again forced forward for the reason just given, and for the further reason that the cartridge is ejected from the hook much easier than if it were held closely against the breech-pin, as hereinafter shown.

After the cartridge has been discharged, withdraw the breech-pin, as before described. The hook upon the pin surely withdraws the shell from the barrel to the position denoted by the cartridge in Fig. 4. When in this position the carrier-block is again raised. The block will strike the shell, the hook holding the rear end until the carrier is nearly up to its full height. The spring z will fall into a notch on the lever F , giving a sudden movement to the carrier, which will eject the discharged shell entirely from the arm, as denoted in Fig. 4, the carrier presenting another cartridge for insertion into the barrel; and thus the operation may be continued until all the cartridges in the magazine have been each in their turn discharged.

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

The arrangement of the retracting-hook a^2 , with its sleeve d^2 , upon the breech-pin L , so as to retract the cartridge or shell, substantially in the manner herein described.

NELSON KING.

Witnesses:

HENRY A. CHAPIN,
WM. D. LANE.