F. BEALS.

Breech-loading Fire-arm.

No. 52,258.

Patented Jan. 30, 1866.

Fig. 1.

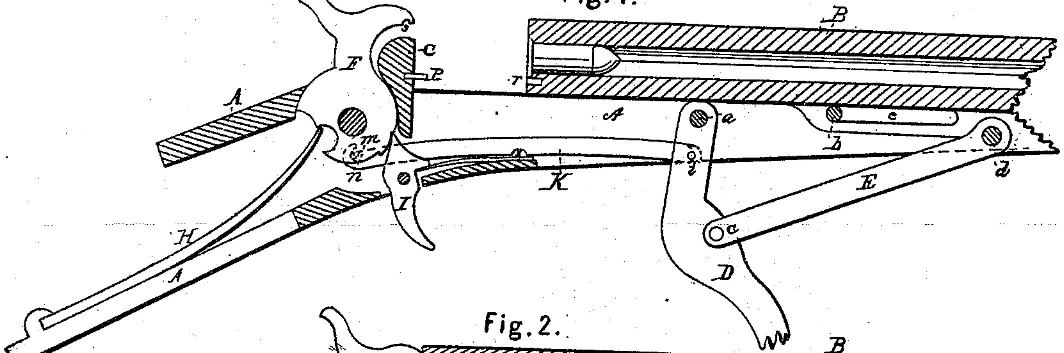


Fig. 2.

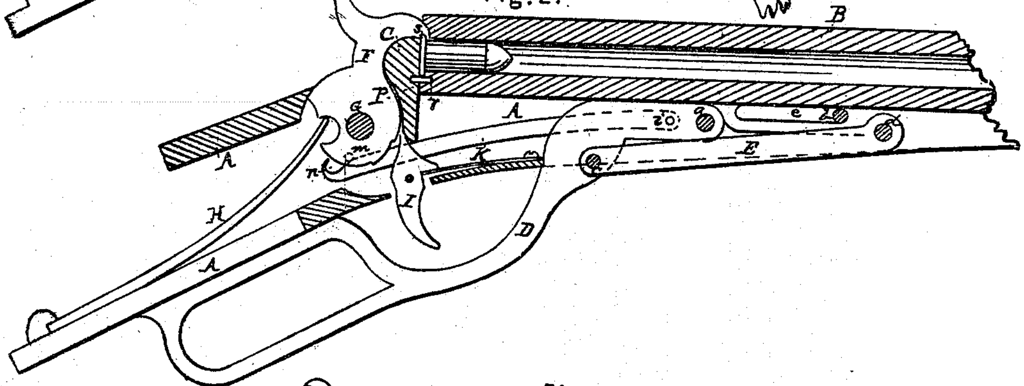


Fig. 3.

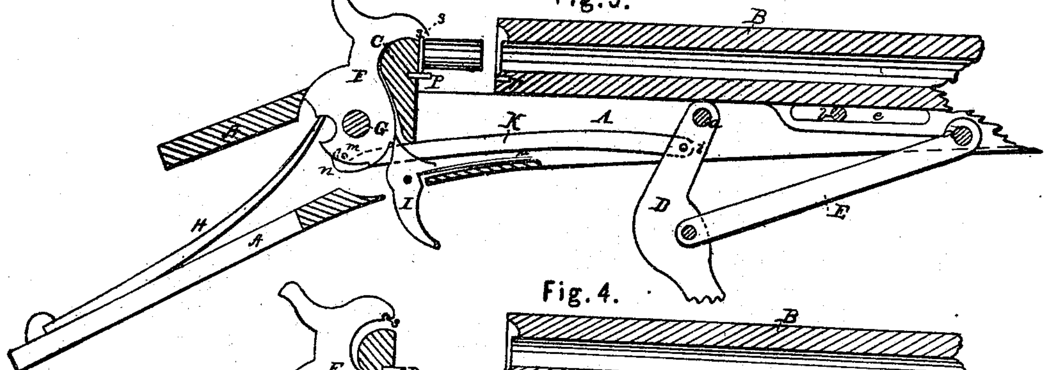
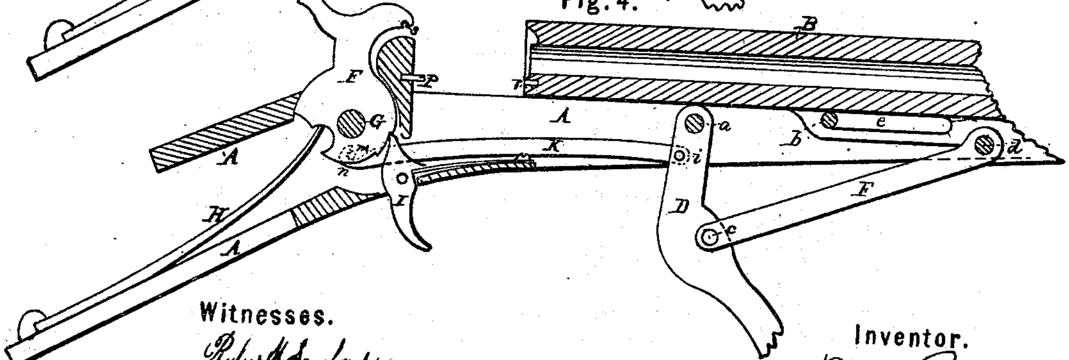


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

FORDYCE BEALS, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **52,258**, dated January 30, 1866.

To all whom it may concern:

Be it known that I, FORDYCE BEALS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Breech-Loading 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—

Figures 1, 2, 3, and 4, longitudinal central sections, showing the several parts of the arm in the positions for loading, discharging, and withdrawing the shell.

My invention relates to an improvement in such breech-loading fire-arms as have the barrel arranged so as to be moved forward from the recoil-plate for the purpose of inserting the charge, and designed for the use of metallic cartridges, the object being to withdraw a discharged shell (or the cartridge itself) from the barrel by more simple means than has heretofore been done, the objection existing to other contrivances being their complexity and liability to get out of repair; and my invention consists in forming a notch on the face of the hammer so as to hook onto the rim of the cartridge or shell to firmly hold the shell or cartridge, so that the barrel may be moved forward, leaving the cartridge locked solely by the hammer until the barrel has been moved so far forward as to clear the shell or cartridge, when the said shell or cartridge will of its own gravity fall therefrom.

To enable others skilled in the art to construct and use my improvement, I will proceed to fully describe the same as illustrated in the accompanying drawings.

A is the frame; B, the barrel, arranged in proper guides so as to be freely moved axially to and from the recoil-plate C, and is secured in the said guide by pin *b* (one or more) passing transversely through the frame and slots *e* on the under side of the barrel.

D is the lever by which the barrel is thus moved, and also forms the trigger-guard. The said lever is hung to the frame by a pivot, *a*, its other end locked to the frame in any convenient manner.

E is a rod connecting the said lever D with the barrel by pivots *c d*, so that when the lever D is dropped as from the position in Fig. 2 to that in Fig. 4 the barrel will be moved forward from the recoil-plate to receive the charged cartridge.

F is the hammer, hung in the frame in the usual manner by a pivot, G. On the face of the hammer is a notch, *s*, formed so as to extend over the flange of the cartridge-shell and serve as a hook to withdraw the shell from the barrel, as hereinafter described.

H is the mainspring, I the trigger, each hung so as to operate upon the hammer in the usual manner.

K is a rod, one end attached to the lever D by a pivot, *i*, the other end extending back, terminating in a hook, *n*, so that when the lever D is dropped from the position in Fig. 2 to that in Fig. 4 it will carry with it the rod K, in which movement its hooked end *n* will catch upon a pin, *m*, or similar device, drawing the hammer back from the position in Fig. 2 to the position of half-cocked, as in Fig. 4.

P is a pin inserted into the recoil-plate, and projecting therefrom so as to enter a hole, *r*, in the barrel, to serve as a guide or steady-pin for the barrel when at rest against the recoil-plate, as in Fig. 2. The said pin may be inserted into the barrel, the hole being in the recoil-plate, if preferred. This completes the construction of my fire-arm.

Its operation is as follows: When it is desired to charge the arm, (or open the breech for any purpose) drop the lever D from the position in Fig. 2 to that in Fig. 4, opening the barrel in the manner as before described, and seen in Fig. 4. Insert the cartridge into the barrel, as seen in Fig. 1. Return the lever D, as seen in Fig. 2, closing the barrel against the recoil-plate. Draw the hammer back to full cock and release it in the usual manner, when it will return by the action of the mainspring H to the position seen in Fig. 2, striking the rim of the cartridge with sufficient force to explode it. When exploded, to remove the discharged shell, again drop the lever D, as seen in Fig. 3. The notch *s* of the hammer, extending over the flange of the shell, holds it securely against the recoil-plate, as seen in said Fig. 3, until the barrel is so far removed from the recoil-plate as to be clear of the shell, as also seen in Fig. 3. When so removed the shell will of its own gravity fall

from the grasp of the hammer, leaving the arm in a condition to receive a new cartridge, as before described. If the charged cartridge, inserted as described, is required to be withdrawn before explosion, the operation is the same as described for the discharged shell. Should the hammer, striking the cartridge to explode it, so fasten itself upon the flange of the shell as to prevent the shell falling therefrom by its own gravity, the continued movement of the lever D to the position in Fig. 4 would release the shell by carrying the hammer to half-cock, as seen in Fig. 4.

The general appearance of my arm is the same as my improvement for which Letters Patent were issued to me June 28, 1864, and February 7, 1865, the arrangement for half-cocking the hammer being the same, as shown in both of said patents, the advantage of the present improvement over the said patented improvement being in the simplicity of the construction for withdrawing the shells, the several springs required for ejecting the cartridge-shell in those patents being entirely dispensed with in the present invention, and no extra pieces are required in its construction to withdraw the shell more than would be required in the construction of the arm without the retractor.

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

Withdrawing a cartridge or spent shell by means of the hammer, constructed substantially as specified.

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Witnesses:

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