J. A. WHITNEY.

Magazine Fire-Arm

No 67,242. Patented July 30, 1867.

Fig 1

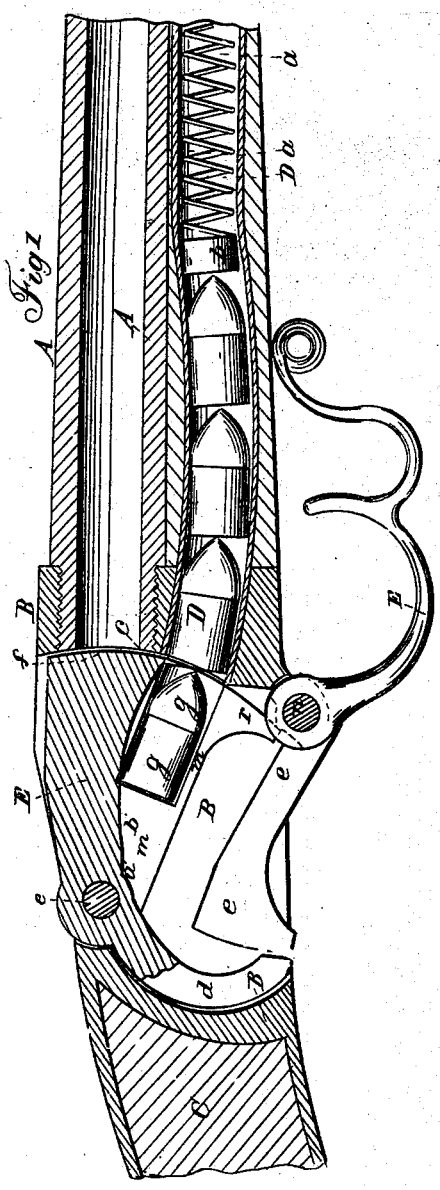

Fig 2

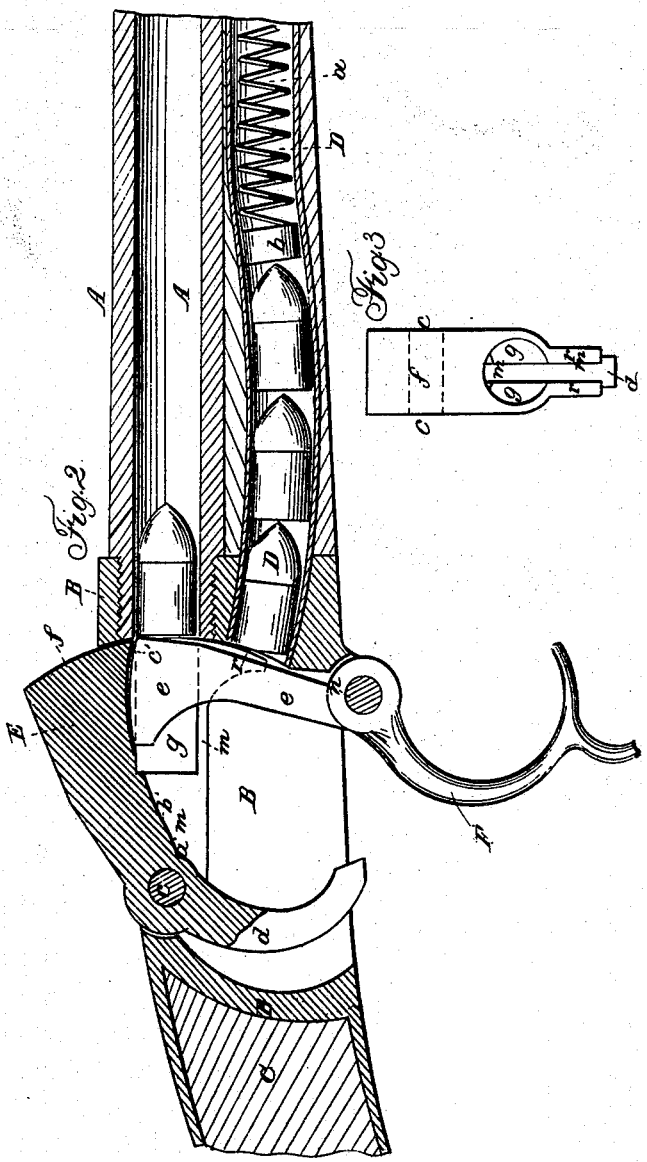

Fig 3

Witnesses:

A F Schlegel

W D Finley

Inventor:

James A Whitney

UNITED STATES PATENT OFFICE.

JAMES A. WHITNEY, OF MARYLAND, NEW YORK.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. **67,242**, dated July 30, 1867; antedated July 18, 1867.

Know all whom it may concern:

That I, JAMES A. WHITNEY, late of Maryland, in the county of Otsego and State of New York, but now of Jersey City, in the county of Hudson and State of New Jersey, have invented an Improved Magazine Fire-Arm; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical longitudinal section of a fire-arm constructed according to my invention, showing the position of the several parts when the breech-block is depressed to close the breech of the fire-arm. Fig. 2 is a vertical longitudinal section of the same, showing the position of the several parts when the breech-block is elevated and the cartridge forced into its place in the barrel. Fig. 3 is a detached front view of the breech-block.

Similar letters of reference indicate corresponding parts in all the figures.

This invention consists in a breech-block constructed with a carrying-chamber arranged below and back of the solid recoil-face thereof, in combination with the barrel and a suitable cartridge-magazine, whereby not only is secured a very simple and efficient means of elevating the cartridges from the magazine to a position in line with the bore of the barrel preparatory to loading the fire-arm, but also of closing the breech in a more solid and secure manner than would be possible if the carrying-chamber formed a portion of the rear end of the bore of the barrel when the breech is closed.

The invention further consists in so combining an arm of the operating-lever with the breech-block that the forward movement of the said arm not only serves to elevate the breech-block to bring the recoil-face thereof away from, and the carrying-chamber in line with the bore of the barrel, but also to force the cartridge from the said chamber into its place in the said bore.

The invention further consists in the combination of a downwardly-extending spur formed upon the breech-block with the arm of the operating-lever, whereby the breech-block is securely locked in place to close the breech.

The invention further consists in a slot formed in the breech-block and extending through or into the carrying-chamber thereof, of such shape and so arranged in relation with the arm of the operating-lever that the said arm in its forward movement holds the breech-block in a stationary position while forcing the cartridge forward from the aforesaid carrying-chamber into the barrel, thus effectually insuring the proper insertion of the cartridge into the latter by a very simple means.

To enable others to understand the construction and operation of my invention, I will proceed to describe it with reference to the drawings.

A represents the barrel of the fire-arm, and B the breech-receiver, into which the rearmost end of the said barrel is screwed or otherwise properly secured, the said breech-receiver being attached to the stock C in any suitable manner. Situated longitudinally underneath the barrel A is the tubular cartridge-magazine D, in which is situated a spiral spring, *a*, and sliding piece or piston *b*, (shown in red outline in the drawings,) and the office of which is to force back the cartridges in the magazine, as required in the operation of loading.

The breech-block is marked E in the drawings, and is pivoted at its rearmost end by a transverse pivot, *c*, the axis of which should not be above the axis of the bore of the barrel A, but preferably a little lower than the same. This breech-block E is constructed with a strong spur, *d*, which projects downward from the rearmost end of the said block, and the lower end of which, when the breech is closed, as shown in Fig. 1, rests against the extremity of the arm *e* of the operating-lever F in such manner as to resist any tendency of the breech-block to be thrown upward by the recoil of the charge in firing.

The recoil-face of the breech-block E, or, in other words, that portion thereof which closes the breech or rear end of the barrel, and against which the recoil of the charge in firing is exerted, is shown at *f*; and formed in the lower part of the forward portion of the aforesaid breech-block, below and back of the recoil-face *f*, just mentioned, is a cylindrical carrying-chamber, *g*, which is so situated that when the breech-block E is depressed to close the breech, as shown in Fig. 1, the forward end of the said

carrying-chamber will coincide with the rearmost end of the magazine D, the carrying-chamber thus constituting, as it were, a continuation of the magazine, and when the breech-block is elevated, as represented in Fig. 2, will be brought in line with the bore of the barrel A. Formed longitudinally in the under side of the breech-block is a deep vertical groove or slot, *m*, which extends upward through the carrying-chamber *g*, and the upper side of which is curved or shaped as shown at *a' b' c'*, in order to enable the arm *e* of the operating-lever F to elevate the breech-block, and to hold the same in position while forcing the cartridge from the carrying-chamber into the barrel, as will hereinafter be fully set forth.

The operating-lever F is pivoted upon a transverse pivot, *n*, and when the breech-block is depressed—or, in other words, when the breech is closed—may extend forward, as represented in Fig. 1, and be retained in such position by a spring-catch of suitable construction, or by any other appropriate means.

The breech-block E is furnished at its forward end with two downwardly-projecting prongs, *r*, which are situated one at each side of the slot or groove *m*, and the front or forward surfaces of which are formed upon the arc of a circle corresponding to that upon which the forward end or surface of the breech-block is formed. The said prongs *r* are designed to prevent the cartridges from being forced back out of the magazine D when the breech-block is elevated, the space between the said prongs being considerably less than the internal diameter of the said magazine.

In order to facilitate the passage of the cartridges (which are indicated in red outline in the drawings) from the magazine into the carrying-chamber *g*, the rearmost portion of the said magazine may be made of a somewhat curved form, as represented in the drawings, and may also be slightly enlarged.

When the breech-block is depressed, as shown in Fig. 1, and hereinbefore explained, the action of the spiral spring *a* forces back the cartridges in the magazine D, so that the rearmost one of the said cartridges is caused to pass into the carrying-chamber *g*, as represented in the said figure; and in order to load the fire-arm the operating-lever F is pulled or turned back around its pivot *n*, thus causing the arm *e* thereof to move upward and forward. The extremity of the said arm *e* is first brought away from the lower end of the spur *d* of the breech-block, and then, striking upon the rear portion, *a' b'*, of the upper side of the groove or slot *m*, raises or elevates the breech-block into the position shown in Fig. 2, thus bringing the carrying-chamber *g* in line with the bore of the barrel, as hereinbefore mentioned. The extremity of the arm *e* then passes along the main portion *b' c'* of the upper side of the groove or slot *m*, and inasmuch as the said portion of the upper side of this groove or slot is formed on the arc of a circle which, when the breech-block is thus elevated, is concentric with the pivot *n* of the lever F, it follows that the breech-block will be retained in a stationary position while the arm *e* is acting upon the said portion *b' c'* of the aforesaid upper side; and while the arm *e* is thus moving forward through the groove or slot *m* it also strikes the rear end of the cartridge in the carrying-chamber *g* and forces forward the said cartridge into the barrel, as indicated in Fig. 2. This being done the operating-lever F is pushed forward, which, of course, causes the arm *e* thereof to move back. The extremity of the said arm, as it leaves the groove or slot *m*, striking the forward surface of the spur *d*, forces the said spur backward, and depresses the breech-block to close the breech, whereupon the said extremity of the arm *e* passes down in front of the lower end of the spur *d*, in order to resist any tendency on the part of the breech-block to be forced upward by the explosion of the charge, as hereinbefore explained. The lever F being thus brought forward, is secured in position by any suitable means, as hereinbefore set forth.

The cartridges employed may be of any appropriate variety, and the charge or cartridge in the barrel may be fired or ignited by any suitable means.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The breech-block E, constructed with a carrying-chamber, *g*, arranged below and back of the solid recoil-face *f* thereof, in combination with the barrel and a suitable cartridge-magazine, substantially as and for the purpose specified.

2. In so combining the arm *e* of the operating-lever with the breech-block E that the forward movement of the said arm shall not only elevate the breech-block to bring the recoil face thereof away from, and the carrying-chamber in line with, the bore of the barrel, but shall also operate to force the cartridge from such chamber into the said bore, substantially as herein set forth.

3. The combination of the downwardly-extending spur *d* of the breech-block with the arm *e* of the operating-lever, substantially as herein set forth, for the purpose specified.

4. A slot formed in the breech-block, and extending through or into the carrying-chamber *g* thereof, of such shape and so arranged in relation with the arm *e* of the operating-lever that the said arm by its forward movement shall simultaneously hold the breech-block in a stationary position and force the cartridge from the carrying-chamber into the barrel, substantially as herein set forth.

JAMES A. WHITNEY.

Witnesses:
ABNER WHITNEY,
WILLIAM R. WHITNEY.