3 Sheets—Sheet 1.

F. W. TIESING.

Magazine Fire-Arm.

No. 206,367. Patented July 23, 1878.

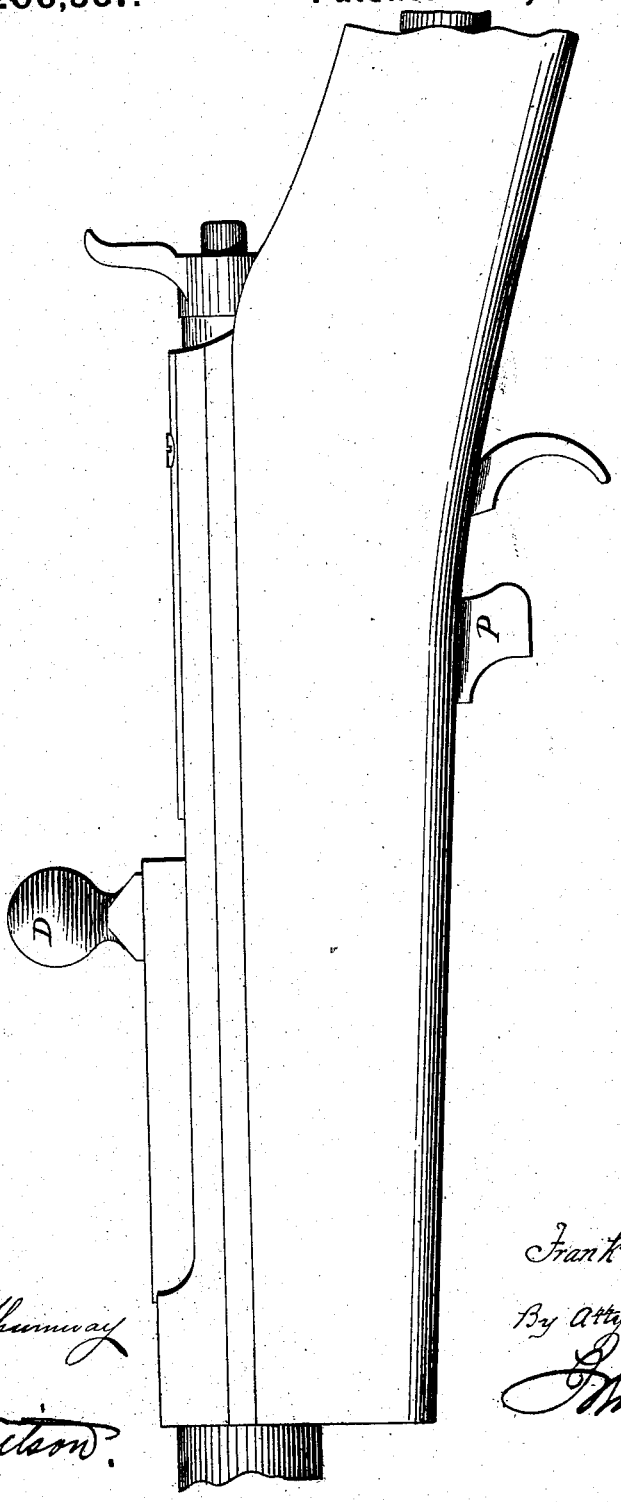

fig 1

Witnesses.

J. W. Shumway

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Thos. P. Clark

3 Sheets—Sheet 2.

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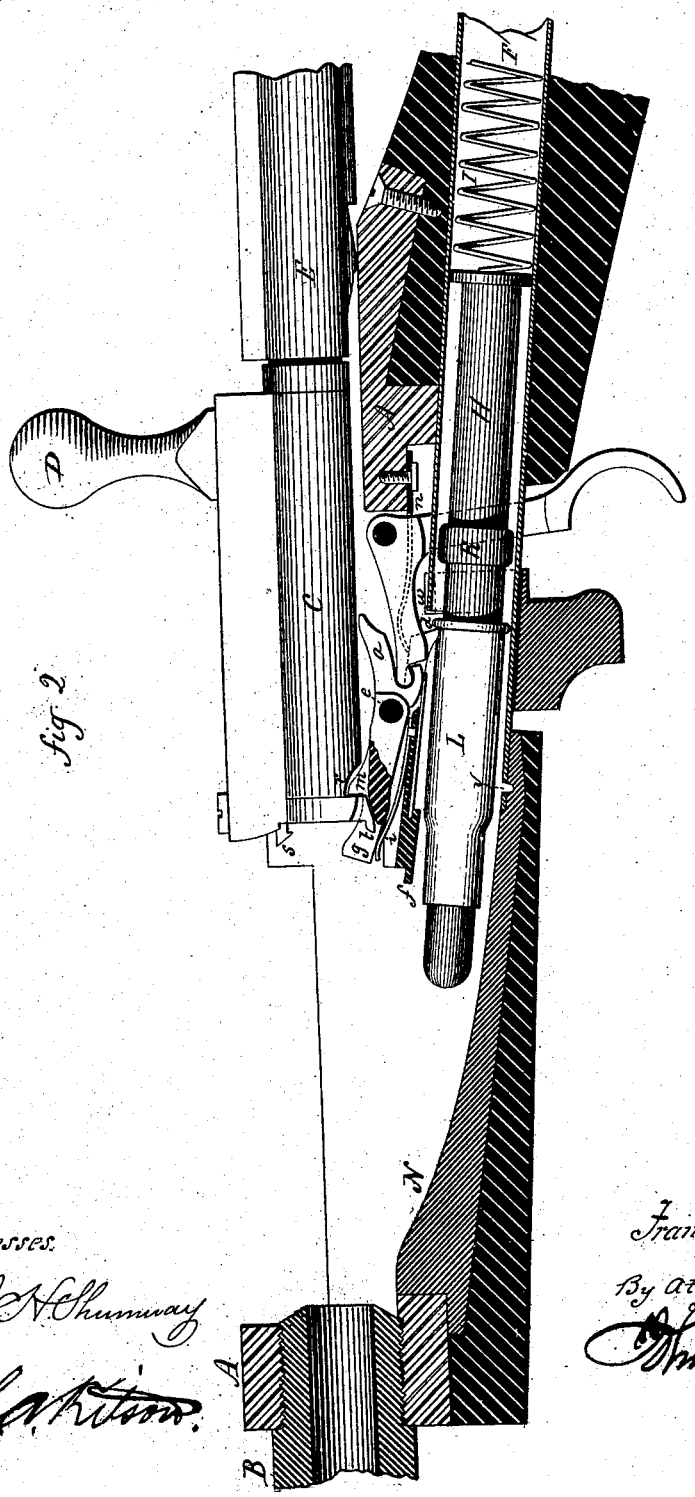

fig 2.

Witnesses.

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3 Sheets—Sheet 3.

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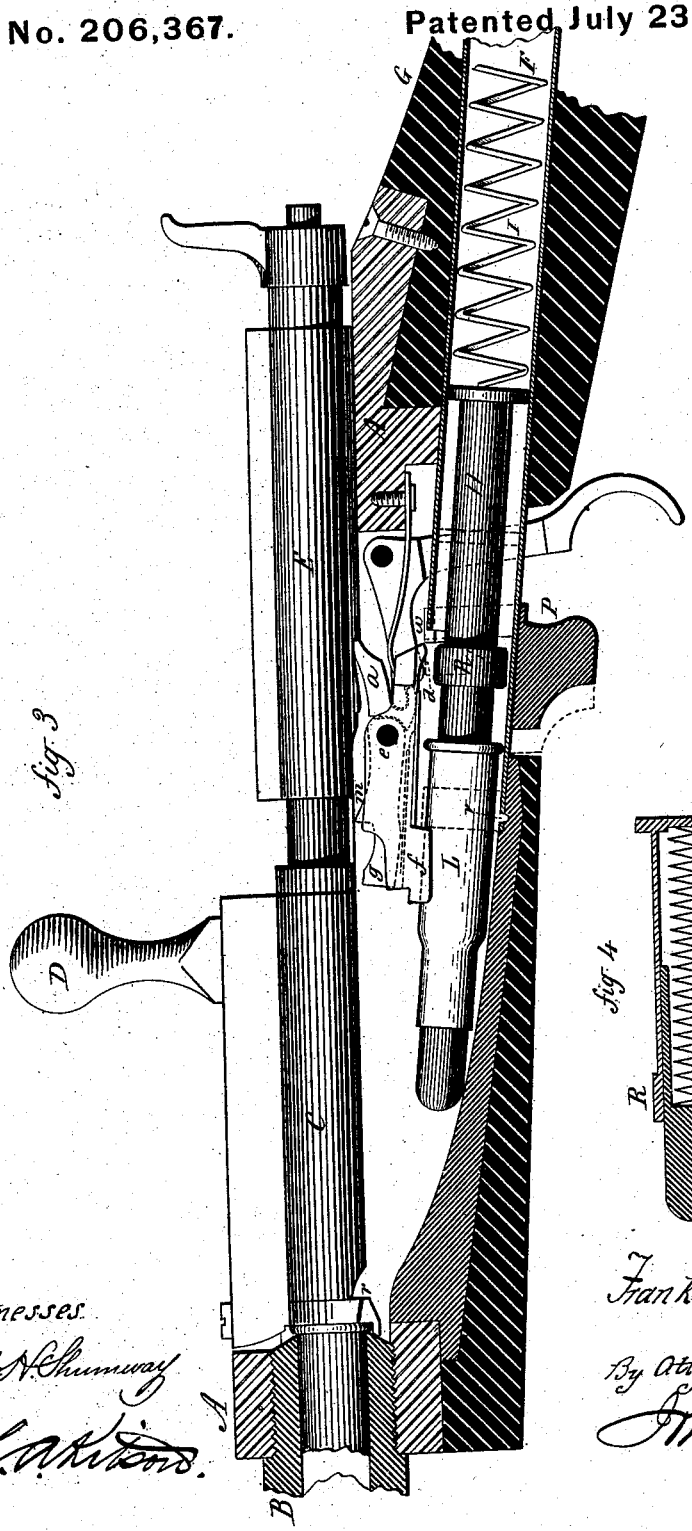

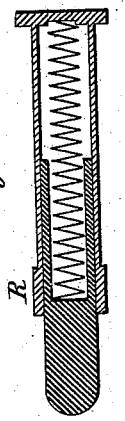

Witnesses.
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UNITED STATES PATENT OFFICE

FRANK W. TIESING, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. **206,367**, dated July 23, 1878; application filed February 13, 1878.

To all whom it may concern:

Be it known that I, FRANK W. TIESING, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Magazine 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, side view; Fig. 2, longitudinal section, showing the parts in position of open breech; Fig. 3, longitudinal central section, showing the parts with the breech closed; Fig. 4, modification of the follower.

This invention relates to an improvement in that class of fire-arms known as "breech sliding backward, operated by handle," and particularly to magazine-arms in which the magazine is arranged in the stock of the arm in rear of the barrel; and it consists in the construction and combination of the parts, as hereinafter described, and more particularly recited in the claims.

A is the frame; B, the barrel attached thereto and open at the breech; C, the breech-piece; D, the handle attached thereto; E, the hammer, arranged to be thrown back by the rear or opening movement of the breech-piece and to be engaged by the sear *a*, substantially in the usual manner for this class of fire-arms—a construction so well known as not to require more particular description; F, the magazine, arranged in the stock G, and provided with a follower, H, and spring I, and so that when the breech is open, as in Fig. 2, the magazine may be charged by introducing cartridges rear end first against the follower, and forcing it back into the magazine until the desired number of cartridges are introduced.

d is a dog or stop hung upon a pivot, *e*, which will successively engage the flange of each cartridge as it is introduced, so as to retain them in the magazine. The dog *d* extends forward, and forms a brake or holder, *f*, and on the same pivot *e* is hung an ejector, *g*. Between the ejector and the holder *f* is a spring, *i*. In rear of the dog *d* a spring, *n*, is arranged to force the dog down onto and over the flange of the cartridge, as seen in broken lines, Fig. 2. When the parts are in position as in Fig. 2, the power of the spring *n* is greater than that of the spring *i*; hence the dog *d* allows the flanges of the cartridges to easily pass it and drop forward of them.

On the ejector, and in rear of its forward end, is an upward projection, *m*. This projection, when the breech-piece is forward, rests upon its under side, as seen in Fig. 3, and continues to be held down by the breech-piece, and consequently bearing the spring *i* down upon the holder *f* until the breech-piece is fully opened, when the projection *m* rises into the notch *r* in the breech-piece, as seen in Fig. 2. This relieves the holder from the pressure of the spring *i*.

When the holder is pressed down, as in Fig. 3, the dog *d* is raised so as to leave the flange of the cartridge free; therefore the cartridge is freed so soon as the breech-piece is moved so far forward as to press down the ejector into the position seen in Fig. 3.

Supposing, then, the parts to be in position as in Fig. 2, with one or more cartridges in the magazine, the outer one, L, held by the dog *d*, the breech-piece is now closed, and in the first part of its movement in so doing the dog is raised, as before described, and the cartridge freed; but at the same time the holder *f* is depressed. The result of this is that instantly on the freeing of the cartridge it is thrown forward, but will be caught by the holder *f*, as seen in Fig. 3, bearing upon the cartridge with sufficient force to hold it in that advanced position; then, when the breech-piece is again opened, the ejector *g* will rise and free the holder, as seen in Fig. 2. Then the cartridge which was before held will be forced forward up the incline N and enter the barrel B so far, at least, that when the breech-piece is again advanced it will strike the head of the cartridge and force it home into the barrel, the next cartridge being caught by the holder *f*, as before described. The sudden action of the spring in the magazine gives to the cartridge a sufficient momentum to throw it into the barrel, so that it is not necessary that it should be followed closely by the next cartridge or the follower.

On the top of the breech-piece is the usual spring-latch *s*, and below the usual stud or holder *t*, which passes beneath the head, so

that the head of the cartridge will be taken by the latch or extracting hook *s* when the breech-piece is closed, as seen in Fig. 3. Hence, when the breech-piece is opened the cartridge or shell, as the case may be, will be extracted and drawn back with the breech-piece, in the usual manner, until the projection *m* on the ejector reaches the recess *r* in the breech-piece. Then the ejector *g* is free to be thrown by the spring *i*, as seen in Fig. 2, and, striking the cartridge forward of its head, will throw its forward end upward and eject the shell from the arm, leaving the parts ready to advance for the next cartridge.

When the cartridges are suddenly released from the action of the holder *f*, and advancing, as before described, the flange is liable to come in contact with the shoulder on the holder *f* above, the tendency of which would be to throw up the forward end, and thus prevent its entering the barrel. To prevent this, or rather to overcome it, a groove, *v*, or some slight obstruction, is formed on the lower side of the conductor, or in the path of the cartridge, so that the under side of the head will strike such obstruction and prevent any tendency which the cartridge would otherwise have to rise at the forward end.

To use the arm as a breech-loader and cut off the magazine, a slide, *w*, is arranged with a finger-piece, P, below the frame, and preferably within the trigger-guard, which, when the brake is down upon the cartridge, as in Fig. 3, may be moved forward beneath the dog *d*, and thus prevent the holder from rising from the cartridge, and so that the first and the succeeding cartridges in the magazine may be held in reserve, as occasion requires, the ejector, however, being free to act, that being independent of the holder.

The follower H is constructed with an annular projection, R, of slightly larger diameter than the cylinder of the cartridge, and so that when the last cartridge has been thrown forward the said projection R will strike the shoulder on the rear end of the brake, as indicated in broken lines, Fig. 3, and there be arrested, so that it cannot be thrown from the magazine.

In order to give to the last cartridge in the magazine a greater momentum than could be given to it by the follower advancing until arrested by the holder, as before described, and which is less than that given the preceding cartridges, the follower may be provided with an auxiliary spring, as seen in Fig. 4. This spring being of less power than that in the magazine, the spring will be always compressed until the follower is arrested by the holder. Then the auxiliary spring within the follower will force forward the then free part of the follower, as indicated in broken lines, and thus add to the momentum of the cartridge, or follow the cartridge farther with its power than it could do without this auxiliary spring.

While representing the ejector *g* and holder *f* as operated by a spring common to both, and the holder pressed downward through the agency of the ejector, these may be operated independently of each other; but the construction shown is simple and effective.

The spring on the ejector may be dispensed with altogether, because the notch *r* in the breech-piece, striking the shoulder *m* on the ejector, will necessarily cause the ejector to rise, and with sufficient force to eject the cartridge; but the spring is preferable.

I claim—

1. The combination, in a magazine fire-arm, of the longitudinally-sliding breech, the holder *f*, and dog *d*, substantially as and for the purpose described.

2. The combination, in a magazine fire-arm, of a longitudinally-sliding breech-piece, the holder *f*, dog *d*, ejector *g*, with its upward projection *m*, and notch *r* on the under side of the breech-piece, substantially as described.

3. The combination, in a magazine fire-arm, of a longitudinally-sliding breech-piece, the holder *f*, dog *d*, ejector *g*, with its upward projection *m*, and notch *r* on the under side of the breech-piece, with a spring, *i*, between the ejector and holder, and common to both, substantially as described.

4. The combination, in a magazine fire-arm, of a longitudinally-sliding breech-piece, holder *f*, dog *d*, and stop or slide *w*, substantially as and for the purpose described.

5. The combination, in a magazine fire-arm, of the holder *f*, dog *d*, and the follower in the magazine, constructed with an annular projection, R, substantially as and for the purpose specified.

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Witnesses:

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