4 Sheets—Sheet 1.

F. W. TIESING.

Magazine Fire-Arm.

No. 208,128. Patented Sept. 17, 1878.

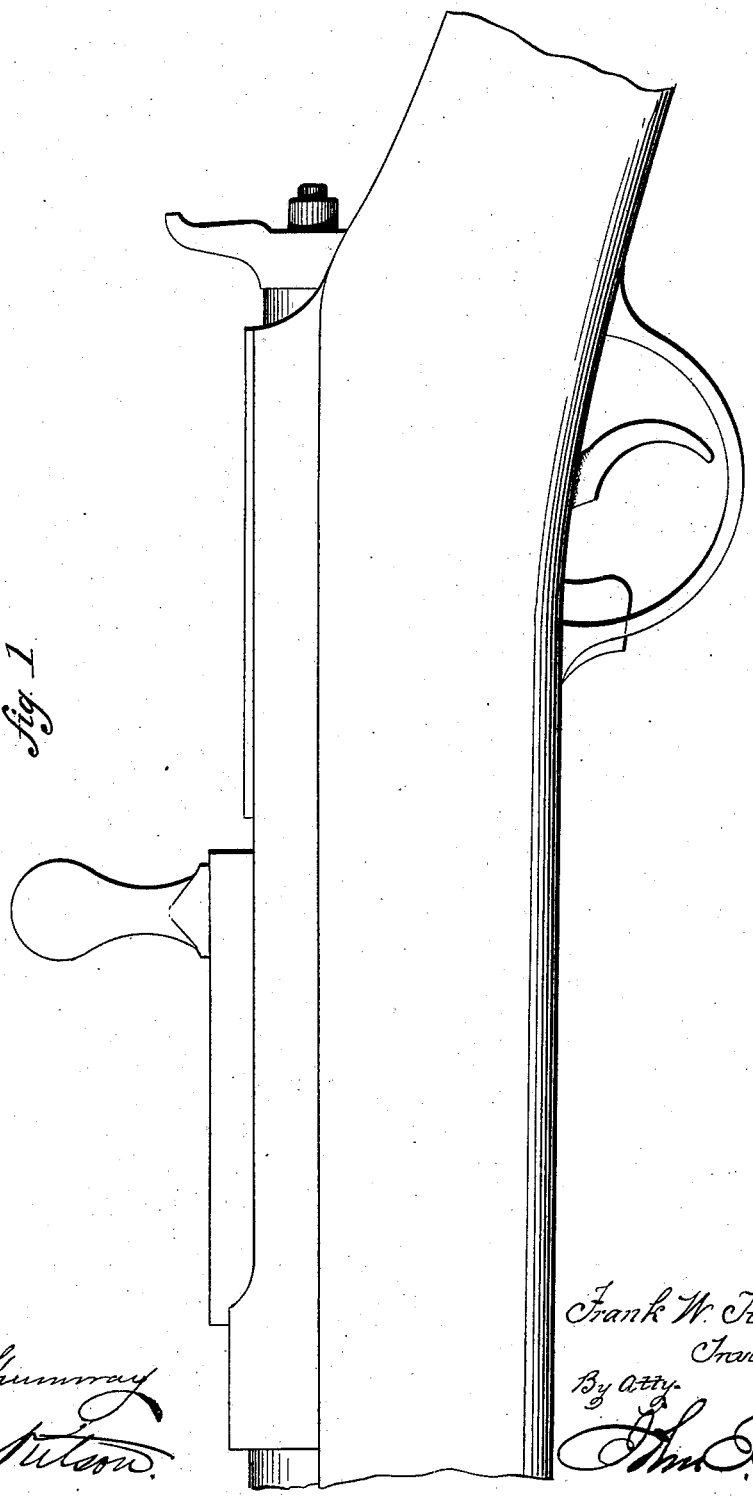

Fig. 1

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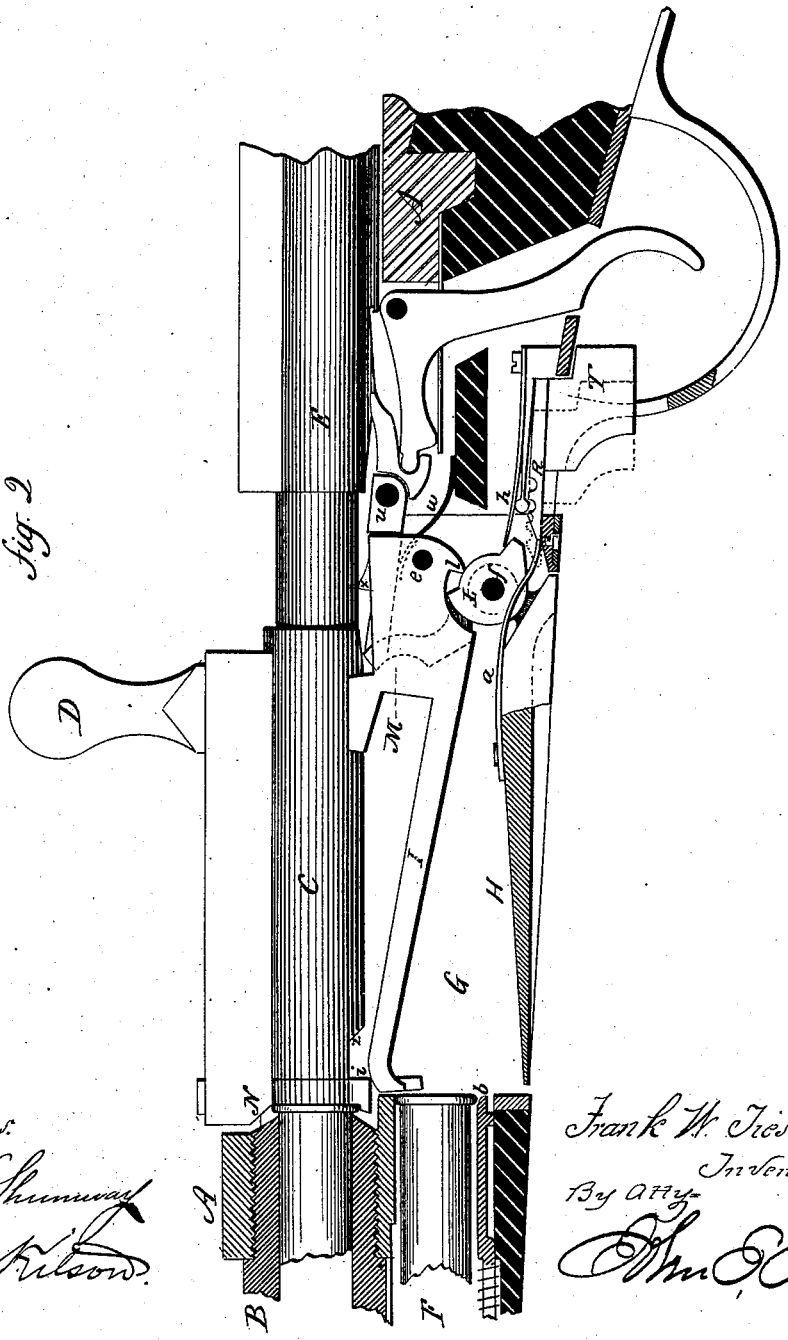
Fig. 2



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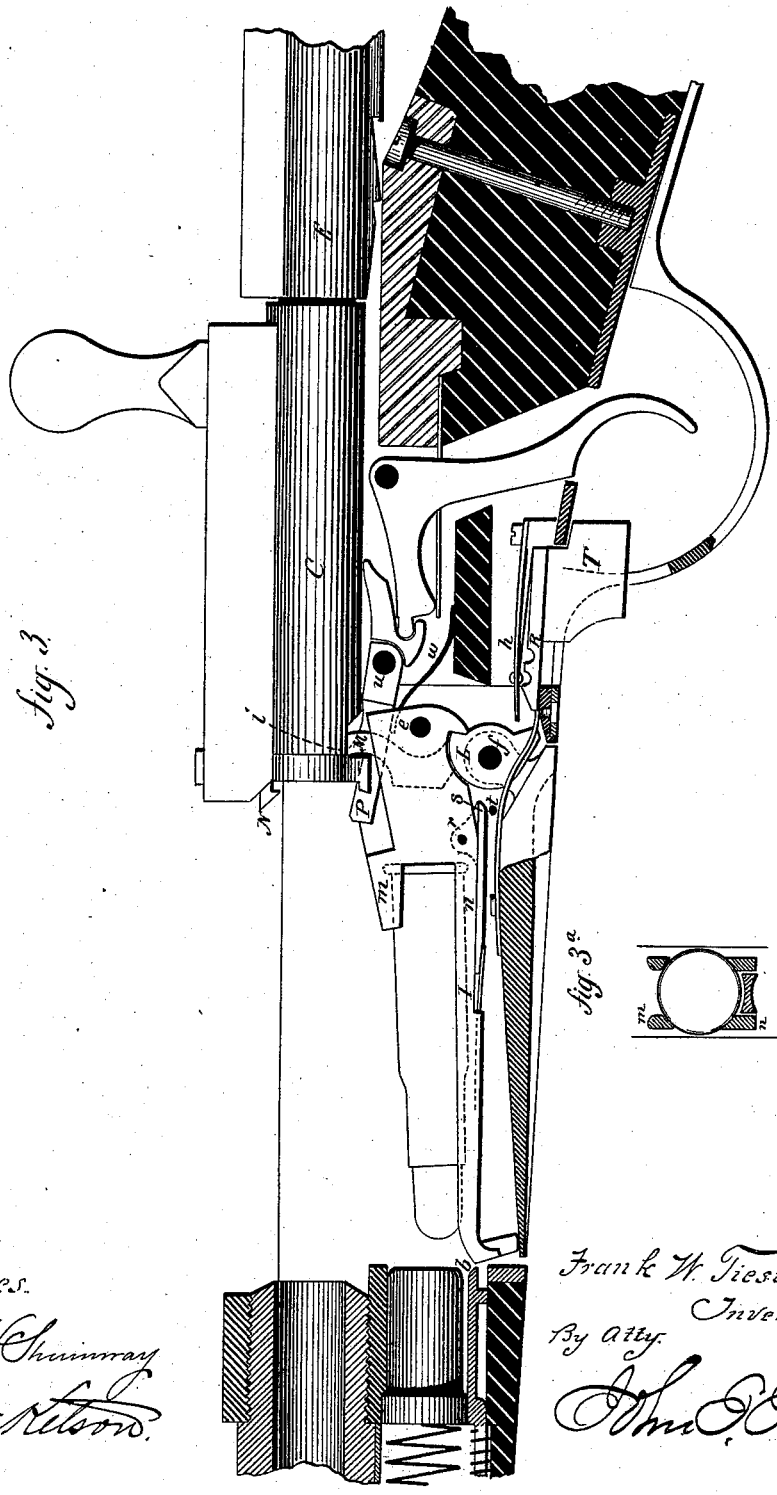

Fig. 3.

Fig. 3a.

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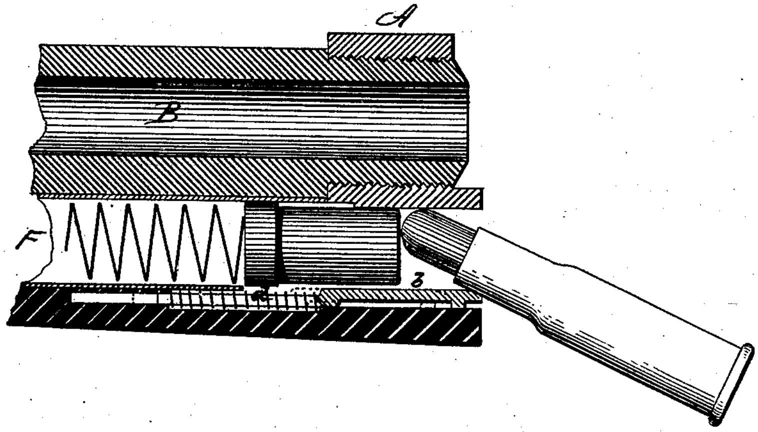
Fig. 4.



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. **208,128**, dated September 17, 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, with the parts in their normal condition; Fig. 3, the same, with the breech-piece open as preparatory to charging; Fig. 4, longitudinal section through the rear of the magazine.

This invention relates to an improvement in that class of fire-arms in subdivision known as "breech sliding backward operated by handle," and particularly to that class of magazine fire-arms in which the magazine is arranged beneath the barrel, and from which the cartridges are successively forced to the rear, transferred to the line of the barrel, and inserted in the barrel by the movement of the breech-piece; and the invention consists in the construction and combination of the parts, as hereinafter described, and more particularly recited in the several claims.

A is the frame within which the operative mechanism is arranged; B, the barrel; C, the breech-piece; D, the handle by which it is moved; E, the hammer, and F the magazine, all substantially of usual construction, and so well known as not to require particular description in this specification.

Vertically through the frame is the usual mortise G, closed upon the under side by a cover, H, hinged at its rear end and provided with a spring, *a*, the tendency of which is to hold the said cover in its closed position, but yet allow of its being turned inward, in which case it serves as a guide for the insertion of the cartridges to the magazine. Owing to the incline of this guide or cover, which opens for the insertion of cartridges, the cartridge is presented at such an angle to the magazine as to make it difficult to introduce cartridges to the magazine, this angle being shown in Fig. 4. It is desirable that the cover should be as nearly flat and conform to the shape of the under side of the frame as possible, as seen in Fig. 2. This necessitates the angle referred to.

To overcome the difficulty thus presented to the introduction of the cartridges, the lower portion of the mouth of the magazine, as at *b*, is detached from the body and made to slide longitudinally against a spring, *d*, and so that when a cartridge is presented to the magazine it will strike the rear end of the said part *b* and force it inward, as indicated in broken lines, thus opening wider the mouth of the magazine, and permitting the cartridge to freely enter.

I is the carrier, hung at the rear upon a pivot, *e*, and so as to vibrate freely up and down. Beneath the rear or hinged end of the carrier is a cam, L, hung upon a pivot, *f*, and from which a lever, M, extends upward, and so as, in its normal condition, to lie close upon the breech-piece, and held there by a spring, *h*. When the breech-piece is drawn back, as indicated in Fig. 3, and just before it reaches its extreme rear position, a shoulder, *i*, on the breech-piece strikes the lever M, carrying it rearward and turning the cam L, which strikes a downward projection, *l*, on the carrier I, thereby causing the carrier to be turned downward into the position to receive a cartridge from the magazine, and onto which the cartridge is forced by the follower in the magazine, as seen in Fig. 3. From the carrier, near the rear end, fingers *m* project forward, one at each side, as seen in Fig. 3, and so as to overhang the rear end of the cartridge when it is on the carrier, and aid in holding it in its proper position.

As a further aid in holding the cartridge on the carrier a clamp, *n*, is hung in the carrier in rear of the cartridge-seat, as at *r*, and projecting forward under the cartridge, with a tail-piece, *s*, extending to the rear, which, when the carrier is dropped, will strike the projection *t* in the frame, and cause the clamp to be turned downward, as seen in Fig. 3. A spring is attached to the carrier, the tendency of which is to press upward the forward end of this clamp; hence, so soon as the carrier begins to rise, and after the cartridge has been thrown from the magazine onto it, the clamp rises and presses the rear end of the cartridge

upward against the fingers *m*, holding the cartridge, so that it cannot be accidentally removed from its position on the carrier, and until the breech-piece is moved forward, when that strikes the rear end of the cartridge and carries it forward to its place in the barrel.

The upward movement of the carrier is caused by the shoulder *z* on the breech-piece striking the lever M from the rear and turning it with the cam L forward, as seen in Fig. 2. In doing this the cam L works against the under side of the carrier forward of its hinge or pivot, causing the carrier to rise to its highest position before the forward end of the breech-piece has advanced to the rear end of the cartridge.

The breech-piece is provided with the usual latch or spring-extractor N to seize the flange of the cartridge, and so that when the breech-piece is drawn back it will draw the cartridge with it. In the frame and in rear of the extreme rear position of the forward end of the breech-piece the ejector P is hung on a pivot, *u*. This is a simple arm held up by a suitable spring, *w*, and so that when the breech-piece is forward the projection *x* on the upper side of the ejector will ride on the under side of the breech-piece, and until the breech-piece has been moved backward, so that the said projection *x* may enter the notch *i* near the forward end of the breech-piece. Then the spring will cause the ejector to rise suddenly, striking the cartridge or shell, as the case may be, forward of its flange, giving it a sudden blow sufficient to turn up the forward end, free it from the extractor, and eject it from the arm.

To hold in reserve the cartridges in the magazine, and use the arm simply as a breech-loader, the carrier is held in its up position, as in Fig. 2, by forcing a slide, R, forward and beneath the cam L, as seen in broken lines, Fig. 2, which turns the cam, and with it the lever M, a little farther forward, so that the lever M will be free from the shoulder *i* when the breech-piece is moved. This will cause the carrier to remain up and serve as a guide for the insertion of cartridges to the barrel from above, and to hold the cartridges in the magazine in reserve. The slide R is moved by a finger-piece, T, extending down through the frame; but may be otherwise operated.

I claim—

1. In a magazine fire-arm, the movable part *b*, arranged in the mouth of the magazine, and so as to yield for the insertion of the cartridge, substantially as described.

2. In a magazine fire-arm, the combination of a longitudinally-sliding breech-piece, a carrier hinged at the rear to swing up and down, and fingers on said carrier projecting forward above the rear end of the cartridge when on the carrier, substantially as described.

3. In a magazine fire-arm, the combination of a longitudinally-sliding breech-piece, a carrier hinged at the rear to swing up and down, and fingers on said carrier projecting forward above the rear end of the cartridge when on the carrier, and an automatic clamp in the carrier beneath the cartridge, substantially as and for the purpose described.

4. The combination, in a magazine fire-arm, of a longitudinally-sliding breech-piece, the carrier hinged at the rear so as to swing up and down, a cam arranged to act upon said carrier forward of its hinge, a lever extending from said cam upward to the breech-piece, and a notch or shoulder near the forward end of the breech-piece to operate said cam at or near the completion of the rear movement of said breech-piece, substantially as described.

5. The combination, in a magazine fire-arm, of a longitudinally-sliding breech-piece, the carrier hinged at the rear so as to swing up and down, a cam arranged to act upon said carrier forward of its hinge, a lever extending from said cam upward to the breech-piece, and a notch or shoulder near the forward end of the breech-piece to operate said cam at or near the completion of the rear movement of said breech-piece, and a device, substantially such as described, to hold the said cam and prevent the operation of the carrier, substantially as and for the purpose described.

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Witnesses:

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