(No Model.)

W. W. WETMORE.

MAGAZINE FOR FIRE ARMS.

No. 310,103. Patented Dec. 30, 1884.

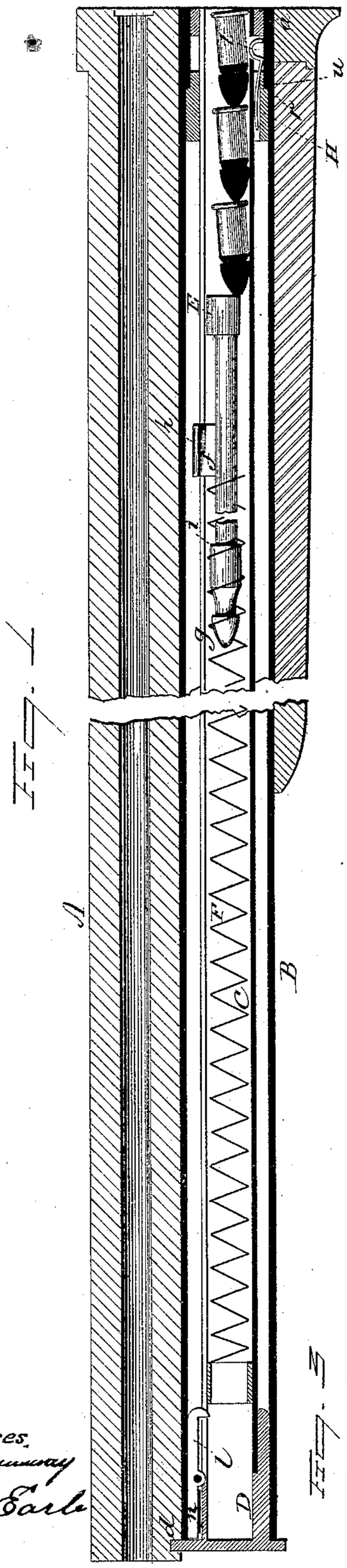

Fig. 2.

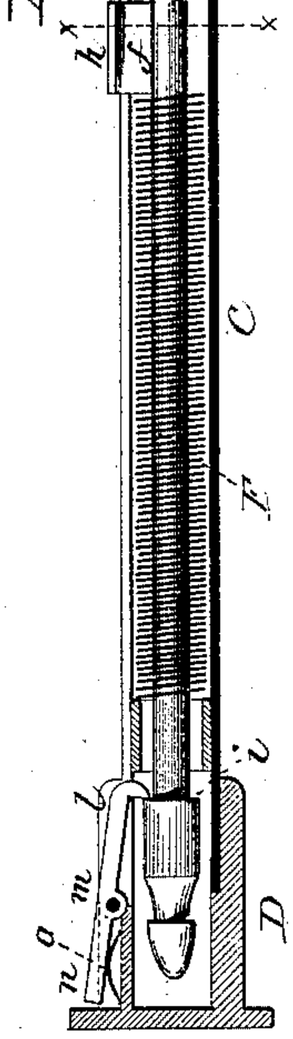

Fig. 3.

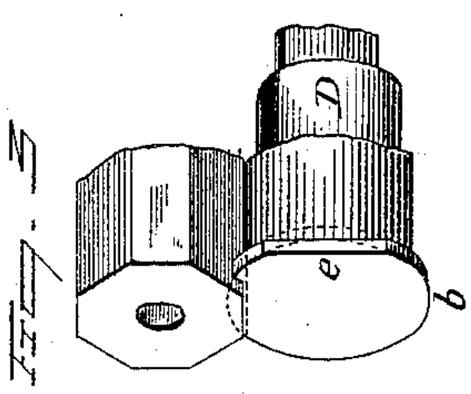

Fig. 4.

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MAGAZINE FOR FIRE-ARMS.

SPECIFICATION forming part of Letters Patent No. 310,103, dated December 30, 1884.

Application filed November 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. WETMORE, 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 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 longitudinal central section through the barrel and magazine portion of the arm; Fig. 2, a longitudinal section of the magazine detached, showing the follower as moved forward and locked in position for charging the magazine; Fig. 3, a detached perspective view of the forward end of the barrel and magazine, showing the method of locking the magazine-tube in place; Fig. 4, a transverse section through line *x x* of Fig. 2.

This invention relates to an improvement in that class of magazine fire-arms in which the magazine is arranged longitudinally beneath the barrel, and particularly to that class of arms designed for the use of the smaller-sized cartridges.

To use small cartridges—such as 22's, for illustration—it is found very difficult to employ the usual fixed magazine-tube, and into which the cartridges are introduced from the rear, the point end first, through an opening in the receiver. This difficulty arises from the small size of the cartridge.

The object of my invention is the construction of a magazine in which this difficulty is overcome; and it consists in a longitudinal tube arranged and fixed beneath the barrel, of a larger diameter than required for the cartridges, combined with a removable inner tube of a diameter corresponding to the cartridges to be employed in the arm, a spring-follower within said inner tube, and a locking device arranged to hold the column of cartridges against rear movement, the said inner tube removed from the arm to be charged, the said locking device holding the column of cartridges as they are introduced, until the return of the inner tube, with its cartridges, to the outer tube, the said outer tube provided with a device which will disengage the lock of the inner tube when the said inner tube arrives at its proper location for delivering the cartridges to the carrier, and in details of construction, fully hereinafter described, and particularly recited in the claims.

A represents the barrel; B, the outer tube, which is arranged longitudinally beneath the barrel, in the usual manner of arranging the magazine-tube, but of larger diameter than required for the cartridges to be employed in the arm.

C is a tube or magazine proper, arranged longitudinally within the tube B, its internal diameter such as to receive and properly conduct the cartridges which may be placed therein. The inner end of this tube is constructed with a fixed annular collar, *a*, corresponding to the internal diameter of the rear end of the outer tube, and so that when in place the said collar will locate and support the magazine-tube in its proper position within the outer tube, and in relation to the opening through the receiver to the carrier. At the other end the magazine-tube C is provided with a head, D, its external diameter corresponding to the internal diameter of the outer tube, and so as to enter therein and support that end of the magazine in its proper relation to the outer tube.

Around the outer end of the head D is a radially-projecting flange, *b*, and in the under side of the barrel a notch, *d*, is cut corresponding to this flange. At one point in its circumference the flange *b* is cut away, as at *e*, so that if that cut-away portion stand in line with the under side of the barrel it will pass freely beneath it, and until the flange comes into the plane of the notch *d*. Then by rotating the head D the flange *b* will come into the notch *d* in the barrel, as seen in Figs. 1 and 3, and thereby lock the magazine in place, and from which it may be removed by turning the head D until the cut-away portion *e* comes to the notch *d*. Then the head and the magazine will be free to be withdrawn.

Within the magazine is a follower, E, arranged for free longitudinal movement, and forward of it is a helical spring, F, one end taking a bearing near the forward end of the

magazine, and the other upon the spindle of the follower, and so that the tendency of the spring is to force the follower rearward.

From the spindle of the follower is a projection, *f*, through a longitudinal slot, *g*, in the tube C, this projection *f* provided with a thumb-piece, *h*, by which the follower may be conveniently moved. The forward end of the spindle is constructed with a shoulder, *i*, and in the magazine-tube, near the forward end, a latch, *l*, is hung upon a pivot, *m*, the nose of the latch rearward. Its tail *n* extends forward, and beneath it is a spring, *o*, the tendency of which is to turn the nose of the latch inward, and so that when the magazine is removed from the arm and the follower drawn forward the latch *l* will engage the shoulder *i* of the follower, as seen in Fig. 2, and hold the magazine-spring F in its compressed condition. Then the cartridges may be introduced from the rear end, point inward, until the tube is filled. This done, the magazine may be returned to its place in the arm, and as it approaches its seat at the rear end the tail *n* of the latch strikes the inside of the outer tube, so that it will be turned downward and draw the nose of the latch from the shoulder of the follower, as seen in Fig. 1, to release the follower and permit it to move rearward, carrying the column of cartridges therewith, as seen in Fig. 1.

It is desirable to lock the column of cartridges in the magazine, so that they shall not be released until just as the magazine reaches its extreme rear position. To this end I arrange near the rear or inner end of the magazine a sleeve, H, constructed with a shoulder, *r*. In a longitudinal groove in this sleeve I arrange a latch, *t*, which extends into an opening, *s*, in the inner tube. When the sleeve is forward, as seen in Fig. 2, the projection of the latch *t* into the tube is so far as to prevent the passage of a cartridge head inward or outward; but when the sleeve is moved rearward, as indicated in broken lines, Fig. 2, then the latch is withdrawn from the opening *s*, and so that the cartridges may be freely introduced into the tube. When the magazine has been filled to the desired extent, the sleeve H is moved rearward to throw the latch into the tube in rear of the last cartridge, and as seen in Fig. 2. In this condition the magazine is ready for introduction to the arm. The collar H passes freely through the outer tube, and serves as a guide to direct the collar *a* to its place at its rear position; but just before the tube reaches this position the shoulder *r* on the sleeve H strikes a corresponding shoulder, *u*, in the outer tube, and so that in completing the inward movement of the magazine the sleeve will remain stationary against that shoulder *u*, the tube moving away from it, as seen in Fig. 1, and so as to withdraw the latch *t* from its position in rear of the cartridges, leaving the cartridges free to successively pass to the carrier. This latch prevents the accidental displacement of the cartridges from the magazine, as might be the case were no such stop provided. The latch *l* at the forward end may be dispensed with. In that case the follower will be depressed as the cartridges are successively introduced therein until the last cartridge is introduced. Then the sleeve H will be moved rearward and lock the column of cartridges against the action of the spring, which lock will be removed when the magazine is introduced, as before described. The outer tube, B, should be a close tube, both for the appearance of the arm and to prevent the introduction of anything into the outer tube which might clog the free movement of the inner tube, as well as to protect the longitudinal slot *g* in the magazine-tube; but as the office of the outer tube is principally as a guide for the introduction of the inner tube it may be more or less open.

In the illustration I do not show the mechanism of the arm, as this mechanism may be any of the known constructions—for illustration, that of the Winchester repeating-arm, too well known to require illustration or description.

I claim—

1. In a magazine fire-arm, the combination of the tube B, arranged longitudinally beneath the barrel, the tube C, removably arranged within said tube B, and provided with a bearing within said tube B at its outer and inner ends, a spring-follower arranged longitudinally within said inner tube, the sleeve H near the inner end of the inner tube and longitudinally movable thereon, with a lock, *t*, and a shoulder in said outer tube, arranged to engage said sleeve H as the magazine approaches its extreme rear position, substantially as described, and whereby the said lock may be thrown into the magazine-tube to hold the column of cartridges therein, and said lock withdrawn as the magazine-tube approaches its extreme rear position, substantially as specified.

2. In a magazine fire-arm, the combination of the outer tube, B, arranged longitudinally beneath the barrel, the inner or magazine tube, C, removably arranged within said outer tube, B, and constructed with a longitudinal slot, *g*, the follower E, and spring F, arranged within said magazine-tube, the follower constructed with a projection, *f*, through said longitudinal slot *g*, the follower also constructed with a shoulder, *i*, with a latch at the forward end of the magazine-tube to engage said shoulder on the follower, substantially as described.

3. In a magazine fire-arm, the combination of the outer tube, B, arranged longitudinally beneath the barrel, the magazine-tube C, arranged longitudinally within the said tube B, and constructed with a longitudinal slot, *g*, the follower E, and spring F, arranged within said magazine-tube, the follower constructed with a projection, *f*, through said slot *g*, and also constructed with a shoulder, *i*, the latch *l*,

arranged at the forward end of the magazine-tube, the sleeve H, arranged near the rear end of the magazine-tube, the lock *t*, and the shoulder *u* in the outer tube, substantially as and for the purpose described.

4. In a magazine fire-arm, the combination of the outer tube, B, arranged longitudinally beneath the barrel, the magazine-tube C, arranged longitudinally within said outer tube, and removable therefrom, the follower E, and spring F therein, the said inner tube supported within said outer tube at its rear and forward ends, the forward head of the tube constructed with a radially-projecting flange, *b*, a portion, *e*, of which is cut away, and the barrel constructed with a corresponding notch, *d*, substantially as described.

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