(No Model.)

J. M. MARLIN.

MAGAZINE FOR FIRE ARMS.

No. 316,554. Patented Apr. 28, 1885.

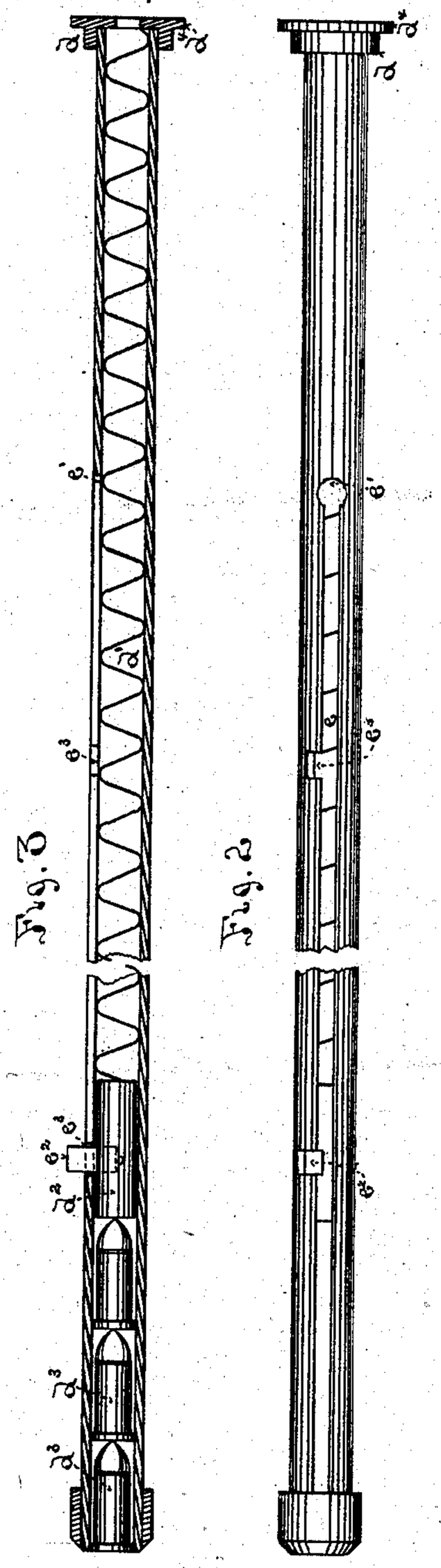

Fig. 3

Fig. 2

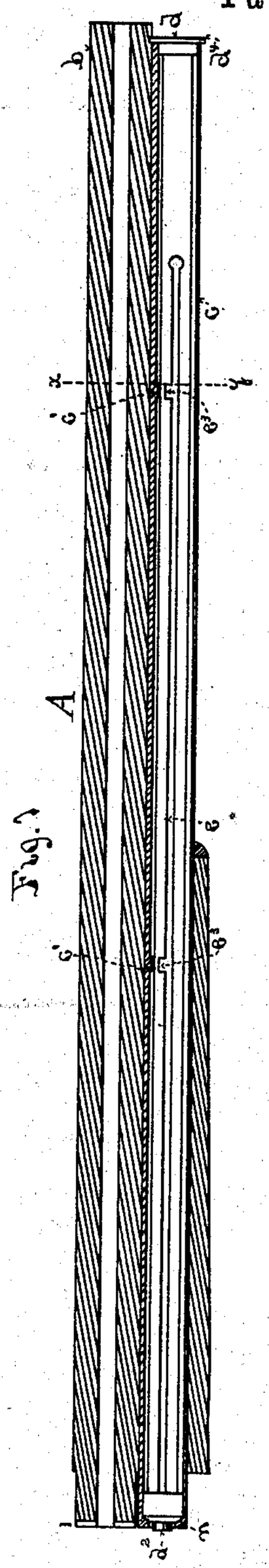

Fig. 1

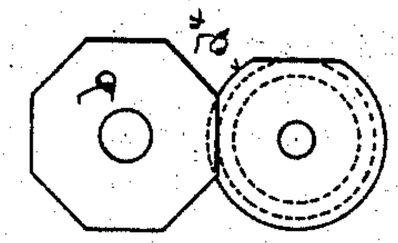

Fig. 5

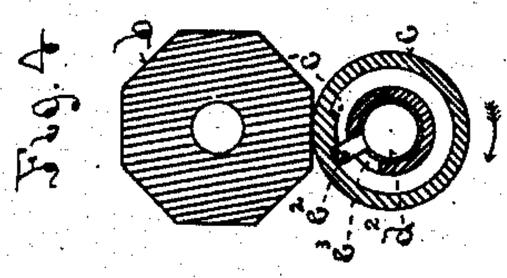

Fig. 4

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UNITED STATES PATENT OFFICE.

JOHN M. MARLIN, OF NEW HAVEN, CONNECTICUT.

MAGAZINE FOR FIRE-ARMS.

SPECIFICATION forming part of Letters Patent No. 316,554, dated April 28, 1885.

Application filed August 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. MARLIN, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Magazine-Guns, of which the following is a specification.

My invention relates to that class known as "magazine-guns;" and it consists in certain improvements whereby the cartridges of such arms may be more readily introduced into the magazine and delivered therefrom to the loading mechanism of the gun, substantially as hereinafter described and claimed.

In the drawings, Figure 1 is a view of a portion of a magazine-gun, partly in section, provided with my improvement. Fig. 2 is an enlarged view of the magazine loading-tube detached from the magazine. Fig. 3 is a sectional view of the same. Fig. 4 is an enlarged section of Fig. 1 through the line *x y*. Fig. 5 is a view of the barrel and head of the loading-tube at their outer ends.

Hitherto it has been found convenient to employ a cartridge-loading tube inside of the magazine-tube of the magazine-gun, especially when the gun is made of small caliber, the loading-tube being capable of being charged and inserted into the magazine much quicker than a like number of cartridges can be inserted directly into the magazine by hand.

A is the gun, made of any well-known construction, wherein the breech-block raises each cartridge successively from the level of the magazine to that of the bore of the barrel. *b* is the barrel of the gun. *c* is the magazine-tube. *d* is a loading-tube inserted in the magazine-tube from the forward end, and having within it a coiled spring, *d'*, and a plunger, d^2, to bear against the cartridges d^3 d^3, placed within it, and press them successively into the breech-block as the charges are fired.

When the loading-tube *d* is removed from the magazine to be filled with cartridges, it has been found difficult to confine the spring *d'* in a compressed position to allow the plunger d^2 to be pushed back as far as possible and give room for as many cartridges as the loading-tube will hold, and to hold it in this position and unlock it therefrom readily after the loading-tube has been inserted in the magazine, so as to allow the plunger and spring to deliver the cartridges into the loading mechanism in the ordinary manner. I provide a slot, *e*, extending longitudinally from near the open end of the loading-tube nearly to its closed end, where the slot terminates in a round hole, *e'*, cut through the side of the tube. A pin rectangular in cross-section, e^2, is formed with a screw-thread on its lower end, and of a proper thickness on its outer end to fill the slot *e* transversely, so as to prevent its turning when in the slot. The greatest breadth of the upper end of the pin e^2 is such that it is slightly less than the diameter of the hole *e'*. Having inserted the coiled spring into the loading-tube against the internal surface of its closed end, I place the plunger d^2 on top of it and press the latter down until a hole tapped in its side and provided with an internal screw-thread to fit that of the pin e^2 comes opposite to the hole *e'*. I then screw the pin e^2 into the hole in the plunger a sufficient distance and bring its edge opposite the slot *e*, release the plunger, when it is forced toward the open end of the loading-tube, the pin traversing the slot. The pin being unable to turn in the slot thus secures the loading-tube and its coiled spring and plunger together while in use, and at the same time permits them to be readily detached from each other by reversing the operation above described.

In one side of the slot *c*, I form notches e^3 e^3, into which the pin e^2 can be pressed by a rotary motion as it comes opposite to them, respectively, and these notches having square shoulders, when the pin e^2 is pressed into one of them, it holds the plunger d^2 at that point in the tube until the pin is pressed out of the notch into the slot *e* again. These notches e^3 e^3 are each placed so that when the plunger is locked by the pin into one of them, as before described, a certain given number of cartridges, when dropped into the open end of the tube and resting down against the plunger, will just fill the tube. The pin e^2 projects a sufficient distance beyond the surface of the loading-tube to enable the plunger d^2 to be readily pressed back and locked by hand from the exterior of the tube into one of the notches, as described.

The tube, being thus filled with cartridges, is inserted into the magazine from the front end, in the position shown in Fig. 1, when it becomes necessary to unlock the plunger to

permit the spring to feed the cartridges into the loading mechanism of the gun. This I accomplish in the following manner: I press a portion of the magazine-tube *c* (preferably one of its edges where it is welded together) inward, thus forming one or more shoulders, *c'*, which come opposite the notches e^3 in the loading-tube when the latter is placed in the magazine. These shoulders *c'* project inward far enough to engage with the pin e^2 when the loading-tube is revolved in the right direction, so as to bring the pin against the shoulder, while the shoulders do not project inward far enough to prevent the loading-tube from being readily revolved in the magazine. Having inserted the loading-tube into the magazine, as described, I revolve the tube by means of the head end in the direction shown by the arrow in Fig. 4 until the pin e^2, coming against the shoulder *c'*, is thrown out of its notch e^3 into the slot *e*, and thus the spring *d'* and plunger d^2 are released from their locked position and operate to force the cartridges toward the loading mechanism in the usual manner.

The same rotary motion of the loading-tube serves to lock it in the barrel in the following manner: The barrel projects slightly beyond the magazine, and has a transverse slot cut in its lower side of proper breadth to receive the head d^4 of the loading-tube *d*. This head d^4 is milled on its exterior to aid in turning it in the magazine by the fingers, and on one side is cut off so as to allow it to pass the barrel and come opposite to the slot last mentioned. This cut-off side serves not only to allow it to be pressed into the magazine to this position, but also to show the position of the slot *e* in inserting the loading-tube into the magazine.

The revolution of the loading-tube, as before described, while it unlocks the spring and plunger, also brings the circular portion of the head of the tube d^4 into its slot in the barrel and prevents its being withdrawn until it is revolved backward, so as to bring the cut-off side underneath the barrel.

When the loading-tube is inserted into the magazine, in order to bring its open end to readily deliver the cartridges and afford the least friction possible, I secure a bell-mouth or taper-mouth collar, *n*, in the rear end of the magazine-tube, which fits around the exterior of the end of the loading-tube *d* and centers it properly in the magazine at that end.

Instead of the shoulders *c'* being made with their faces which abut against the pin e^2 extending longitudinally of the magazine, they may be made with their faces extending in a spiral direction around it, if desired, and so that the act of inserting the cartridge-loading tube into the magazine in a longitudinal direction will bring the pin e^2 against the spiral face of the shoulder and press the pin out of its retaining-notch in the loading-tube without departing from the spirit of my invention.

What I claim as new and of my invention is—

1. The combination of the magazine-case *c*, provided with one or more internal shoulders, *c'*, with the longitudinally-slotted magazine *d*, provided with the spring *d'*, its plunger d^2, carrying pin e^2, and one or more notches, e^3, in slot *e*, with which said pin engages, substantially as described.

2. The combination of the magazine-case *c*, provided with one or more shoulders, *c'*, the magazine *d*, provided with the longitudinal slot *e*, and spring *d'*, its plunger d^2, carrying pin e^2, one or more notches, e^3, in said slot, with which said pin engages, and the magazine-head d^4, adapted to lock itself in a corresponding slot in the arm by the rotary movement of the magazine, substantially as described.

3. The combination, with the magazine *d*, of the spring *d'*, its plunger d^2, carrying pin e^2, flattened on two sides, and slot *e*, in which it slides, having an enlargement, *e'*, whereby the flattened pin may be introduced into said slot, substantially as described.

4. The combination, with the removable magazine *d*, of the longitudinal slot *e*, spring *d'*, its plunger d^2, carrying pin e^2, and one or more notches, e^3, in said slot, with which said pin engages, substantially as described.

5. The combination, with the magazine *d*, of the spring *d'*, its plunger d^2, carrying the pin e^2, flattened on one or more sides, and the longitudinal slot *e*, in which it slides, having an enlargement, *e'*, whereby the flattened pin may be introduced into said slot, and one or more notches, e^3, in said slot, with which said pin engages, substantially as described.

6. The combination, with a removable cartridge-magazine, of spring *d'*, its plunger d^2, and suitable latch mechanism, which locks the plunger and spring back in the magazine-tube when the same is removed from the magazine, said latch mechanism being provided with a part projecting beyond the magazine to unlock it, with one or more suitable attachments in the magazine-case, which automatically engage with said projecting part of said latch and unlock the said latch mechanism by the movement of inserting said tube into its place or seat in said case, substantially as described.

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Witnesses:
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