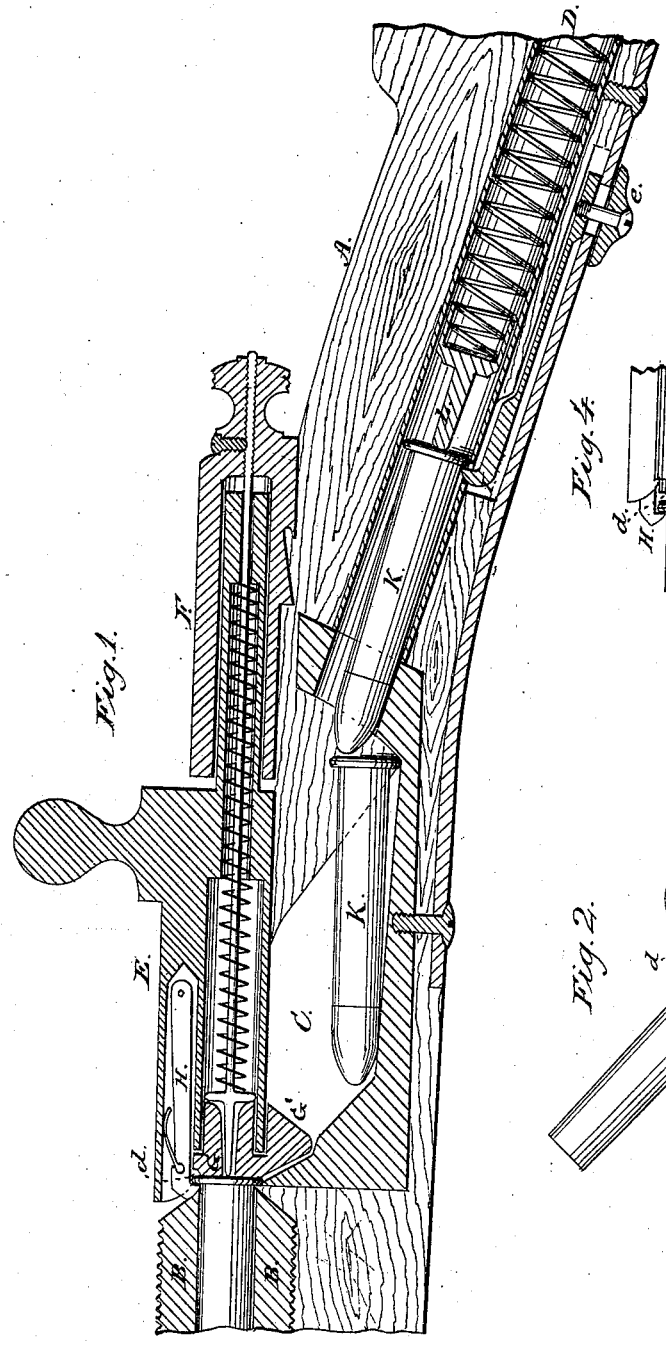
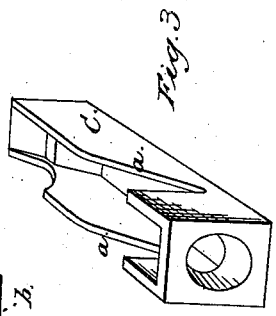
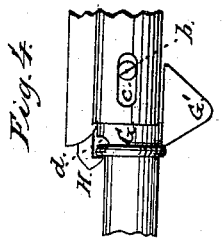
W. TRABUE.

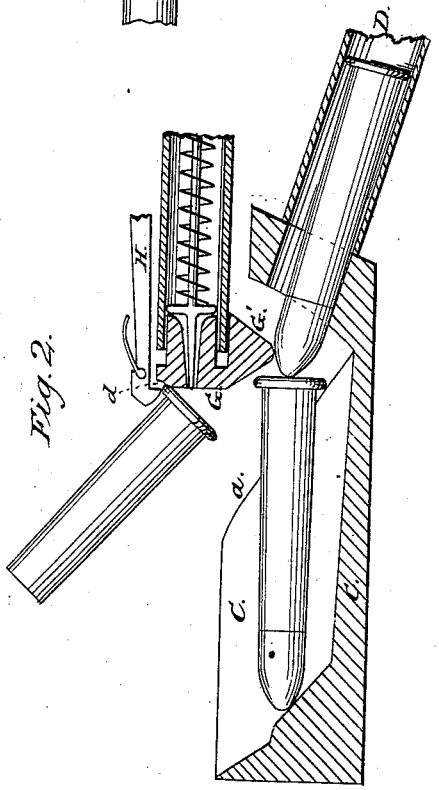
Magazine Fire-Arm.

No. 207,782. Patented Sept. 3, 1878.









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UNITED STATES PATENT OFFICE.

WILLIAM TRABUE, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. **207,782**, dated September 3, 1878; application filed June 29, 1878.

To all whom it may concern:

Be it known that I, WILLIAM TRABUE, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Fire-Arms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to that class of guns known in the art as "magazine bolt-guns;" and it has for its object the simplification of those devices which operate to bring the successive cartridges from the magazine into position to be exploded.

Prior to my invention the means usually employed for bringing the cartridges into the position above named have been so arranged and operated that the successive cartridges are thrown up into alignment with the bore of the breech by a spring-movement at the time that the bolt reaches the limit of its retrograde movement.

My improvements in this particular consist in the peculiar construction and arrangement hereinafter described, by means of which the successive cartridges are brought forward at the time of the forward movement of the bolt, the retrograde movement simply inducing to the adjustment of the rim end or base of the cartridge, so that the next forward movement of the bolt will positively push the said cartridge accurately into the breech of the barrel.

My invention also consists in the peculiar construction and arrangement, with the front end of the bolt and firing-pin and the main-spring, of a reciprocating head and longitudinally-stationary extracting-hook, by means of which the exploded shells are successively withdrawn and "flipped" from the gun.

My invention also consists in forming the longitudinally-reciprocating head above described with a vertical beveled projection for holding the cartridges passive in the receiver and arresting the advance of succeeding cartridges from the magazine, while it also serves to push forward at the proper time the cartridges into the breech of the gun, as will be hereinafter more fully set forth.

To enable those skilled to understand the construction and operation of my improved gun, I will proceed to describe the same, referring by letters to the accompanying drawings, which are intended to simply illustrate the features of my invention, and which show, in—

Figure 1, a central longitudinal vertical section of so much of a gun as is necessary to illustrate my invention; Fig. 2, a similar view of the shoe and the front ends only of the bolt and magazine-tube; Fig. 3, a perspective view of the shoe; and Fig. 4, a detail side elevation of the bolt with its head and extracting-hook holding a cartridge in position to be withdrawn.

Similar letters indicate like parts in the several figures.

A is the gun-stock, and B the barrel, arranged in the ordinary manner, with the intermediate connection. C is what I denominate the "shoe," the bottom of which is about parallel with the axis of the bolt, its forward end being inclined or beveled, as clearly shown at Figs. 1 and 2, and formed at its rear, on the sides, with corresponding incline guides or ways *a*, which terminate at the point where the rear end of the bottom rises up toward the passage leading to the magazine-tube D, to form a check or stop for the cartridges as they are successively permitted to enter the shoe and lie upon its bottom, as shown at Fig. 1.

The depth of the shoe is such that a cartridge is permitted to lie upon the bottom of the same while the bolt is reciprocated; and, in addition to other advantages, it will be observed that an additional cartridge to the full complement contained in the magazine may be carried in the gun.

It will be observed that the shoe C is formed independent of and detachable from the other parts of the gun, and hence it may be handled, in the process of constructing the same, with great facility and accuracy; and smoothness of its inclines or bevels can be more readily obtained than would be the case were the shoe formed with any other part or parts of the gun.

E is the bolt, and F the hammer, arranged with reference to the firing-pin and main-spring in the usual way. G is a head, arranged upon and within the forward end of the bolt E by a screw, *b*, and slot *c*, to permit slight

longitudinal movement. This head G is centrally perforated to permit the firing-pin to pass through it to explode the shell. The front end of the firing-pin is formed in rear of the head G with a flange, so that the pressure of the mainspring will tend to keep the head G pressed forward and permit a yielding to rearward, as will be presently explained. The top front edge of the head G is recessed horizontally, as seen at *d*, Figs. 1, 2, and 4, to facilitate the flipping of the shells, as will be hereinafter explained, and it has a vertical beveled projection, G′, as clearly shown at Figs. 1 and 2. H is the extractor-hook, secured to the bolt E, with a suitably-arranged spring for forcing its hook end over the rim of the shell to be extracted, so that it shall grasp it just above the bottom of the recess *d*, which acts as a fulcrum when the head G is forced by the mainspring against the base of the cartridge. I is a spring-catch for retaining the shells within the magazine, and is operated to release them by a slide, *e*, the spring-catch I having an incline or bevel, which strikes a corresponding one in the stock as the slide *e* is moved, causing the hook end to move away from the cartridges, as clearly indicated in the drawing.

Having described the construction of the several parts, I will now describe their operation.

The magazine-tube being loaded by forcing the shells into it from the rear of the shoe C, (the bolt being forced back for that purpose,) they are held within the magazine by the spring-catch I. Now, if the bolt is closed, the release of the spring-catch I will permit the forward shell to be projected or sprung into position on the bottom of the shoe C and under the bottom of the bolt E, the next succeeding shell pressing against the base of the first shell. Now, as the bolt is moved rearward the beveled vertical projection G′ on the head G travels over the top of shell No. 1 and holds it down, and it, in turn, holds back the shells in the magazine, as seen at Fig. 1. As soon as the bolt reaches the position seen at Fig. 2, it releases shell No. 1, and shell No. 2 jumps forward until stopped by the projection G′. This movement of shell No. 2 has kicked shell No. 1 forward sufficiently to lift it slightly upon the inclines of the shoe, so that in the next forward movement of the bolt E cartridge No. 1 is forced by the projection G′ to ride up the inclines and into alignment with the bore of the barrel, into which it is forced by the bolt in completing its forward movement. While this movement is taking place shell No. 2, being no longer retarded by the projection G′, has followed along under the bolt and succeeded to the former position of shell No. 1 on the bottom of the shoe C.

As the bolt reaches its extreme forward position the head G is forced back against the mainspring, and the extractor-hook has grasped the rim of the shell in the bore of the gun, so that the pressure of the mainspring is acting upon the base of the shell. Now, as the bolt is drawn back, as before described, No. 2 cartridge is held, released, and slightly advanced, as previously explained with reference to shell No. 1, and No. 1 is retracted; and as the front end of the same escapes from the bore of the gun, the pressure of the mainspring against its base while its top edge is held by the hook causes the shell to turn upon the shoulder of recess *d* in head G and be flipped out. If the slide *e* is moved to release the shells in the magazine while the bolt is in its rear or open position, the first shell will be stopped by the beveled projection G′, as shown at Fig. 2.

From the foregoing it will be seen that the cartridges are not thrown into alignment and in front of the bolt by the ordinary and uncertain action of a spring during the retrogade movement of the bolt, but that, on the contrary, each successive shell is brought into position under the bolt during its forward movement and lies passive during the retrograde movement of the bolt. The cartridges do not travel on a continuous incline from the magazine to the bore, nor is their movement continuous; but, on the contrary, they are delivered by an incline magazine to a practically horizontal receiver, where they remain passive as the bolt recedes, simply jumping slightly as it reaches its limit of movement, so as to be in position to be positively forced into position within the barrel by the bolt.

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

1. The shoe C, arranged below the bolt, and formed with front and rear inclines and rear check or shoulder, in combination with the bolt E, provided with the downward projection G′, substantially as and for the purposes set forth.

2. The bolt E, provided with the head G, having longitudinal movement, and formed with a vertical beveled projection, as described, substantially as and for the purposes set forth.

3. In combination with the bolt, extractor-hook, and mainspring, the independent head G, formed with a recess, *d*, substantially as and for the purposes set forth.

4. The shoe C, bolt F, head G, and magazine D, combined and arranged in the manner and for the purposes set forth.

In testimony whereof I have hereunto set my hand and seal this 15th day of June, A. D. 1878.

WILLIAM TRABUE. [L. S.]

In presence of—
WM. C. MCINTIRE,
D. P. CONE.