E. T. STARR.

Toy Fire-Arm.

No. 160,965. Patented March 16, 1875.

Fig. 1.

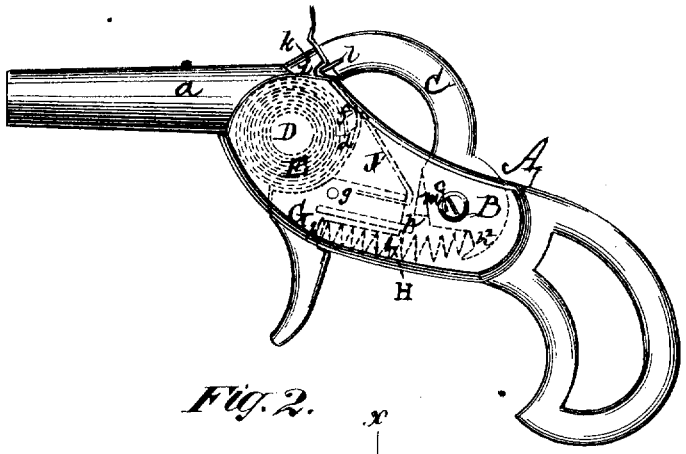


Fig. 2.

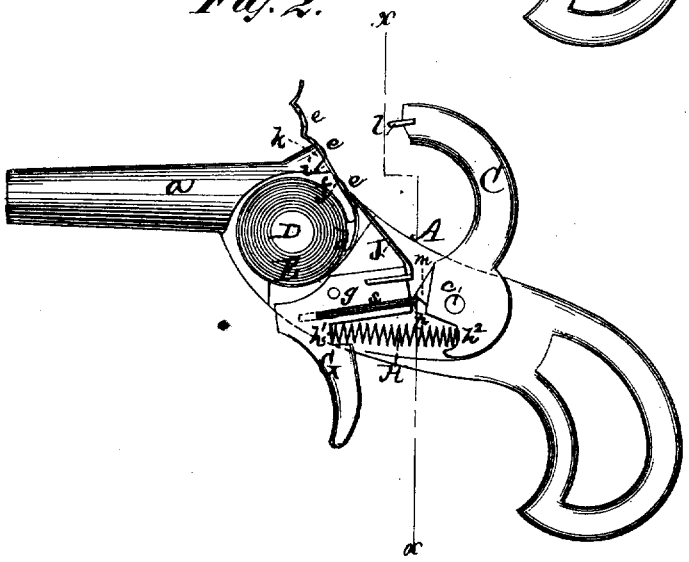


Fig. 4.

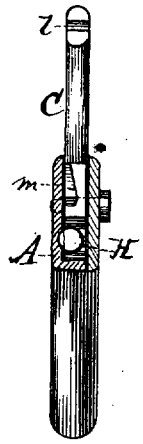
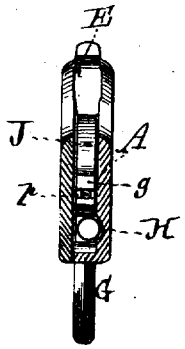


Fig. 3.



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UNITED STATES PATENT OFFICE.

EBEN T. STARR, OF NEW YORK, ASSIGNOR TO HENRY C. MORGAN, OF BROOKLYN, N. Y.

IMPROVEMENT IN TOY FIRE-ARMS.

Specification forming part of Letters Patent No. **160,965**, dated March 16, 1875; application filed January 29, 1875.

To all whom it may concern:

Be it known that I, EBEN T. STARR, of New York, in the county and State of New York, have invented certain Improvements in Toy Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to certain improvements in toy-fire arms, whereby a harmless explosion may be produced and repeated rapidly; and it consists in provision for the use of a fulminate-ribbon in combination with a toy gun or pistol, and in a novel construction and arrangement of parts whereby the ribbon is readily placed in position and successfully operated, and provision is made for its renewal when desired.

In the accompanying drawing, Figure 1 is a side view of a pistol constructed according to my invention, showing the hammer down. Fig. 2 is a similar view, with the hammer in the act of being cocked. Fig. 3 is a transverse section taken in the line *x x* of Fig. 2, looking toward the muzzle. Fig. 4 is a similar view, looking toward the butt.

The pistol or gun is made to resemble an ordinary fire-arm in its general form and appearance. The lock-plate B is pivoted to the stock A, so that it may be swung up or down to expose the inside of the stock without the necessity for the removal of screws. The pivot by which the lock-plate is attached may be the pivot *c*, upon which the hammer C turns. Within the stock A is a magazine for holding a coil of fulminate-ribbon, which magazine consists of a circular cavity, D, immediately in rear of the barrel *a*. The fulminate-ribbon E consists of a strip or strips of paper or other suitable material, with fulminate-pellets *e* attached thereto. It is rolled into a coil and placed in the magazine with its axis parallel with the axes of the hammer C and trigger G. On the rear side of the magazine D is an opening, *d*, to allow the end of the ribbon to protrude and pass upward outside of the magazine, and over an inclined surface, *f*, which forms a bearing for the ribbon to support it against the feeder. The hammer C and trigger G are pivoted in the stock in the ordinary manner. A spiral spring, H, has one end resting in a recess, h^1, in the heel of the trigger, and the other end in a similar recess, h^2, in the heel of the hammer, and thus serves the double purpose of a mainspring and trigger-spring. The triggger G is formed with its heel *g* elongated and projecting backward toward the hammer. To the rear end of the heel *g* is attached the lower end of an elastic strip, J, the upper end of which bears against the ribbon E over the inclined surface *f*, and serves as the feeder for the ribbon, its upper end engaging with the ribbon between the pellets *e* or against the edge of one of the pellets, and feeding it up to be operated upon by the hammer. The bearing *f* terminates at the top or upper side of the stock in a notch, *i*, above which is a projection, *k*, which forms the anvil. The nose of the hammer is provided with a projection, *l*, which enters the notch *i* when the hammer falls, carrying with it into the notch the portion of ribbon lying between two of the pellets *e*. In the heel *g* of the trigger is a groove or slot, *s*, open at the rear end and toward one side of the stock. In the groove or slot *s* is an elastic pin, *p*, having its inner end fastened at the inner end of the groove, and its outer or rear end projecting slightly beyond the heel *g* into the space between it and the heel of the hammer. On the front edge of the heel of the hammer is a wedge-shaped projection, *m*, having its base broad and one of its sides tapering.

When the trigger is pulled the projecting end of the elastic pin *p* engages with the base of the projection *m* and raises the hammer until the end of the pin reaches the angle formed by the junction of the base and the tapering front side of the projection, when the hammer is forced down by the spring H acting as a mainspring, which spring, also acting as a trigger-spring, returns the trigger to its place, the projecting end of the elastic pin *p* moving laterally and sliding down the tapering side of the wedge-shaped projection *m* to its former position under the base of said projection. By the same movement of the trigger which cocks the hammer the feeder J is raised, so that its upper end engages the ribbon and feeds it up

over the bearing *f*, so as to bring one of the pellets *e* between the anvil *k* and the nose of the hammer. As the hammer descends and explodes the fulminate the projection *l* enters the notch *i*, carrying with it the portion of the ribbon which lies between the pellet about to be exploded and the next succeeding pellet, thus retaining the ribbon and preventing its return by the action of the feeder, and also preventing the fire from passing backward or downward into the stock. The projection *l* may be made sharp enough to cut the ribbon as it descends into the notch, so as to allow the exploded pellet and its attached portion of ribbon to be shaken off and thrown out of the way.

Instead of the notch *i* there may be a shoulder with a recess above it on the top of the stock or rear end of the barrel, and the nose of the hammer may be formed so as to shut or lap over the shoulder, so as to accomplish the same result, as above described.

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

1. The stock A of a toy gun or pistol constructed with the cavity D for receiving and holding the coil of fulminate-ribbon, and having its axis parallel with the axes of the hammer and trigger, substantially as herein shown and described.

2. The combination, with the toy pistol or gun having a cavity for receiving and holding a coil of fulminate-ribbon, of the elastic strip J, having its upper end arranged to bear on the ribbon, and attached at its lower end to the trigger, by which it is operated for feeding the ribbon, substantially as and for the purpose described.

3. The combination of the cocking pin or spring *p*, arranged to move laterally, but confined vertically, in the slot *s* in the heel *g* of the trigger, and the wedge-shaped projection *m* on the hammer, substantially as and for the purpose shown and described.

4. The spiral spring H, arranged to engage, as described, with the hammer and trigger, and serving as a mainspring and trigger-spring, substantially as specified.

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Witnesses:

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FRED HAYNES.