A. F. TAIT.

Primer for Fire-Arms.

No. 38,770. Patented June 2, 1863.

Fig 2

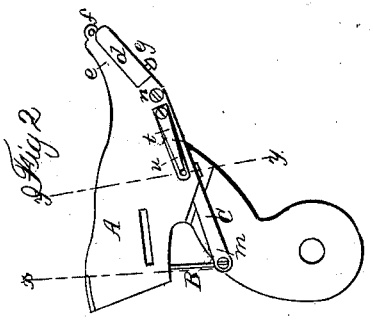


Fig 5

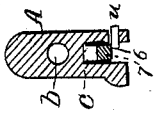


Fig 4

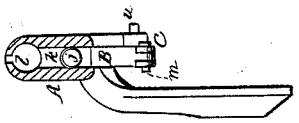


Fig 1

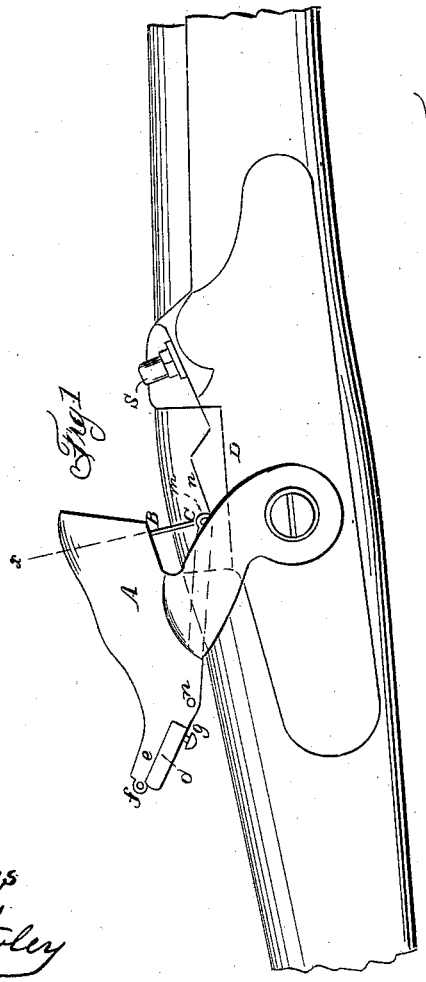
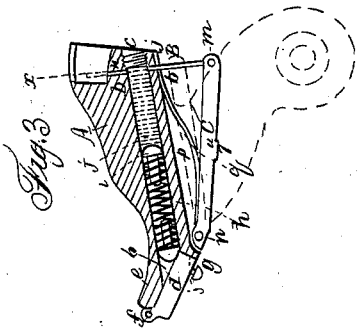


Fig 3



Witnesses
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UNITED STATES PATENT OFFICE.

ARTHUR F. TAIT, OF MORRSIANIA, NEW YORK.

IMPROVEMENT IN SELF-PRIMING HAMMERS FOR FIRE-ARMS.

Specification forming part of Letters Patent No. **38,770**, dated June 2, 1863.

To all whom it may concern:

Be it known that I, ARTHUR F. TAIT, of Morrisania, in the county of Westchester and State of New York, have invented a new and useful Improvement in Automatic Primers for 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 drawings, forming part of this specification, in which—

Figure 1 is a right-hand side view of the hammer and parts of the stock and barrel of a fire-arm having my improvement in primers attached. Fig. 2 is a left-hand side view of the hammer. Fig. 3 exhibits a vertical central section of the hammer-head, exposing the interior of the magazine of percussion-pellets provided therein. Fig. 4 is a front view of the hammer with the head in section at the line *x* indicated on Figs. 1, 2, and 3. Fig. 5 is a section of the hammer-head in the line *y y* of Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to primers the magazine of which, containing the percussion caps or pellets, is in the head of the hammer, and the delivery of the caps or pellets from which is effected by a feeding-slide actuated by the descent of the hammer.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the hammer, and *b b* the magazine, formed by drilling a hole straight through the head of the hammer and inserting a screw-plug, *c*, in front end thereof.

d is a door at the rear end of the magazine, under the thumb-piece *e* of the hammer, for opening the magazine to fill it. This door is hinged at *f* and closed by a spring-catch, *g*.

h is a spiral spring applied within the back part of the magazine, and *i* a follower placed in front of the said spring, behind the pellets *j j*, to press the latter forward toward the front of the magazine.

k is a mortise cut across the extreme front of the magazine in an upward direction from the bottom of the hammer-head, and terminating in the cavity provided in the hammer head in front of its face *l*. This mortise extends right across the magazine, and is of a width from back to front sufficient for the passage of the pellets *j j*.

B is the feeding-slide fitted to the mortise *k*. This slide protrudes from the said mortise below the hammer-head, and is attached by a pivot, *m*, to the front end of the feeding-lever C, the rear end of which is pivoted to the hammer-head at *n*, and the rear portion of which works in a groove, *p*, in the lower part of the hammer-head.

q is a curved spring applied within the groove *p*, between the top of the lever C and the top or back of the groove, and operating to press down the lever and draw down the slide out of the magazine.

r is an inclined plane formed upon the top of the lock-plate D, or other fixed portion of the fire-arm, for the front end of the lever to slide upon during the movement of the hammer. The lever may be fitted with an anti-friction roller to roll along the said inclined plane, and thereby reduce friction. While the hammer is being drawn back to cock it, the spring *q* presses down the lever C gradually as the front end of the latter passes down the inclined plane *r*, and so causes the slide B to be drawn down out of the magazine far enough to permit the spring *h* to force forward the pellets *j j* and push the front one over the said slide, and when the hammer is let off to fire the lever runs up the inclined plane *r*, and is thereby forced upward and caused to push the slide B upward through the mortise *k* and through the magazine, and the said slide is thereby caused to push the foremost pellet upward from the magazine through the mortise and to deliver it in front of face *l* of the hammer, so that before the hammer can reach the nipple *s* the said pellet is interposed between them, and thereby caused to be exploded by striking upon the nipple.

By applying the spring *q* in the groove *p* between the lever C and the part of the hammer-head below the magazine the necessity for making the front part of the thumb-piece of the hammer constitute a portion of the feeding-lever C, as in the primer of Jacob Rupertus, patented May 10, 1859, is obviated, and the construction of the primer considerably simplified.

t is a spring attached to the left-hand or inner side of the hammer-head, and having at-

tached to it a pin, *u*, which works through a hole in the hammer-head, and can thereby be made to enter the groove *p* to pass under the lever C, and thereby lock the said lever and the slide B in the position shown in red outline in Fig. 3, relatively to the hammer, to render the primer inoperative for the purpose of using the hammer to explode caps applied to the nipple *s* in the common way, whenever it may be desired to do so. The said pin *u* has a notch, 6, in its upper side, for the reception of a small tooth, 7, provided on the under side of the lever, to prevent the withdrawal of the pin by the action of the spring *t*, which exerts a constant tendency to pull or hold the pin out from the groove *p*.

To lock the lever C and slide B in the above-mentioned position, the lever C is pushed upward by hand a trifle farther than it is pushed up in descending the inclined plane *r*, and the spring *t* is pushed inward to bring the notch 6 of the pin under it, and the lever is then liberated, while the pressure is still continued on the spring *t*, so that the notch 6 may receive the tooth 7, as shown in Fig. 5, and the lever be thus caused to lock the pin *u*, and the said pin to lock the lever. By thus preventing the descent of the lever the delivery of pellets from the magazine is prevented. To liberate the lever C, when the primer is desired to operate again, the lever C is pressed upward far enough to remove the tooth 7 from the notch 6, and the spring *t* is thereby allowed to draw the pin *u* out of the slot *p*, and the lever C is then allowed to descend and draw the slide B out of the magazine, and thereby permit the delivery of pellets from the magazine.

I do not claim, broadly, the placing of the pellets and mechanism for pushing the same within the hammer; but

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

The combination of the lever C, spring *q*, slide B, and spring-stop *t u*, with the hammer A, magazine *b*, and the inclined plane *r*, in the manner and for the purpose herein shown and described.

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