A. N. NEWTON.

Primer for Fire-Arms.

No. 10,950. Patented May 23, 1854.

Fig. 1.

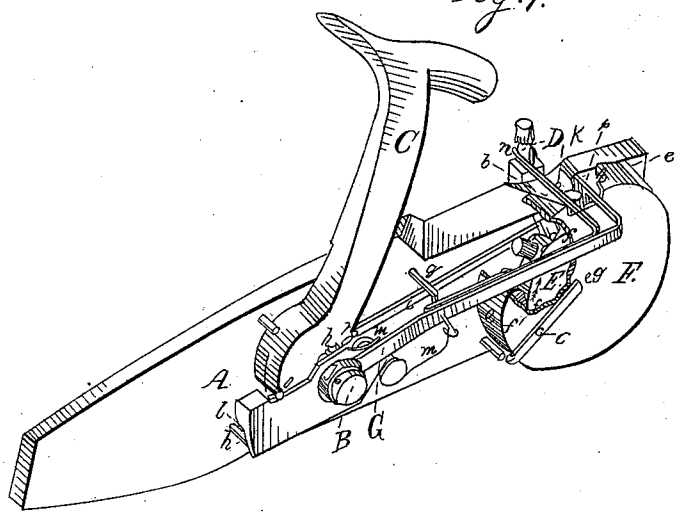


Fig. 2.

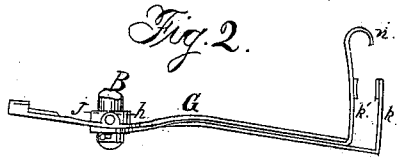
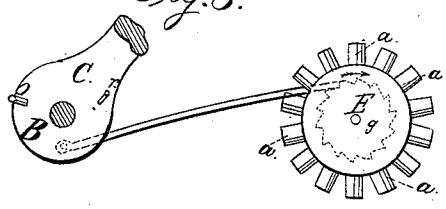


Fig. 3.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ABNER N. NEWTON, OF RICHMOND, INDIANA.

PRIMER FOR FIREARMS.

Specification of Letters Patent No. 10,950, dated May 23, 1854.

To all whom it may concern:

Be it known that I, ABNER N. NEWTON, of Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Self-Acting Primers for Capping Guns or other Firearms; 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 perspective view of my improved primer. Fig. 2, is a top view of the capping arm. Fig. 3, is a side view of the mechanism by which the caps are served to the capping arm.

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

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

A, is what is termed the lock plate of an ordinary gun lock, to the inner face of which, is supposed (but not shown) to be attached, all the mechanism of the lock usually placed on that side. Close to the outer face of the plate is fitted the cock, C, which is attached and secured to the tumbler shaft, B, in any suitable manner and occupies such a position as to fall on the nipple, D.

The cylinder, E, which carries the caps to supply the nipple, consists of a circular plate or disk of metal, having a series of studs, *a*, *a*, radiating from its periphery at equal distances apart all round. These studs are nearly close together, and are each of proper size to allow a percussion cap to be placed loosely upon it. The cylinder fits close to the outside of the lock plate, and is furnished with a journal, *g*, on each side, one of which enters a hole or bearing in the plate, and the other a bearing in a shield, F, see Fig. 3, which is attached to the lock plate, and incloses the cylinder so as to leave only one stud at a time exposed at an opening, *b*, *b*, which is made to allow the fingers to enter to take off the caps. The stud which is presented at this opening is the one opposite or nearest to the nipple. The shield, F, is simply attached to the lock plate by a light clamp, *e*, which turns on a pivot, *d*, at one side, and is kept in place by small studs, *e*, *e*, which are firmly attached to it and enter holes in the lock plate. A part of the shield is shown broken away at *f*, *f*, to show the cap cylinder inside, and the studs, *a*, *a*, are represented with caps upon them. The cylinder is caused to receive part of a revolution, in the direction of the arrow, see Figs. 1 and 3, sufficient to remove one stud from the opening, *b*, *b*, and present the next one in rear of it at the said opening, by means of the pawl, *i*, which is attached to the cock below the tumbler shaft, and engages with a ratchet wheel, which is formed upon, or secured to, the cylinder, on the side next the lock plate. This ratchet is shown dotted in Fig. 3. Every time the cock is drawn back, the pawl is thrown forward, and turns the ratchet, and when the cock falls the pawl returns and passes a tooth of the ratchet.

G, is the capping lever, which is a lever of the first order, having its fulcrum on the end of the tumbler shaft, B, outside the cock. The fulcrum is so constructed as to form an universal joint, to admit of the lever moving to a limited extent in all directions. This is effected by widening that part of the lever near the fulcrum, and making a hole large enough to receive a loose collar, *j*, which fits so as to turn easily on the tumbler shaft; and making an eye on each side of the hole which receives the collar, to receive one of the two studs, *h*, *h*, which stand out radially from the collar. The front end of the lever carries the two elastic fingers, *k*, *k'*, which stand out nearly at right angles to the lever, and are of such form that when placed over the top of a cap, and pressed upon it, they will open and receive it, but would very easily relinquish it if drawn laterally from it. One of the two fingers, *k'*, is longer than the other, and formed with a crook, *n*, which, when the fingers seize the cap presented at the opening, *b*, *b*, of the shield which covers the cap cylinder, partly encircles the nipple, D, as shown in Fig. 1. The back extremity of the lever is formed with an inclined surface on its inner side, as shown at, *l*, in Fig. 1. In front of the fulcrum, a spiral spring, *m*, which is coiled round a post secured in the lock plate, is applied to the lever in such a way as to pull it down when it is not held up by other means. When the cock is down, the fingers, *k*, *k'*, are in a position to grasp the cap on the nipple, *a*, which is presented at the opening, *b*, and the crook, *n*, is quite at the bottom of the nipple. The parts are held in this position by a stud, *q*, on the lock

plate, against which the inside of the front arm of the lever bears, and another stud, *p*, against which the inside of the hinder arm of the lever bears. As the cock is raised in cocking, a projection or stud, *o*, on the back part of it, comes down on the back part of the lever, G, and forces it downward. The projection or stud, *o*, is represented in Fig. 1, as just coming into operation, the cock being supposed to be in the act of rising. The downward movement of the back end of the lever raises the front end with the fingers, *k*, *k'*, and the fingers take the cap from the stud. The crook, *n*, at the same time, rises on the nipple, and if an exploded cap remains thereon, it lifts it off and causes it to fall. By the time the fingers have moved upward, far enough to take the new cap from the stud, and throw the exploded cap off the nipple, the back end of the lever has moved downward far enough to bring the inclined surface, *l*, in contact with the end of the stud, *p*, on the outside of the lock plate, and its further descent while the inclined face is in contact with the stud, causes it to be thrown outward from the lockplate, and the fingers, *k*, *k'*, to be thrown inward far enough to bring the cap which is held by them, over the nipple; and when the fingers have reached this position, the back part of the lever is thrown out far enough to clear the projection, or stud, *o*, on the cock, and leave the lever under the influence of the spring, *m*, which causes it to descend and place the cap on the nipple, and then the lever is arrested in its descent by the stud, *q*, on the top of which it falls, and on which it is caused to remain by the stud or projection, *o*, which keeps the back of the lever forced outward. The lever, during the time the piece remains cocked, remains in the position last described; but as soon as the cock is set free and commences to fall, a pin or projection, *r*, on that part of the face of the cock in front of the fulcrum of the lever, comes in contact with the inner face of the lever, which is suitably inclined for the purpose, and forces the front end of the lever and the fingers outward. The fingers being thus drawn laterally from the cap while it is on the nipple, are enabled, by reason of their elasticity, to relinquish their hold readily. The lever continues resting on the stud, *q*, until those parts of the fingers which receive the caps arrive nearly above the cap cylinder, which since the last cap was removed, has received a movement in the manner already described, to present another cap to be received by the nippers. As the fingers reach this position, the lever passes the end of the stud, *q*, and the spring, *m*, pulls down the front part and draws the fingers down over the new cap, which they spring apart to receive. The crook, *n*, at the same time arrives at the nipple, and when the cock is next raised, all the above described operations are repeated.

Instead of the cylinder, E, any other suitable device may be employed for presenting the caps to the fingers.

I am aware that a capping lever differently constructed and arranged but operated by the cock of the gun has before been used and that various devices have been employed for removing the exploded cap, such therefore, merely of themselves, I do not claim, nor yet the rotating cap cylinder (E) which is an old device: But I do claim as new and useful, and desire to secure by Letters Patent,

1. The spring forceps or capping lever (G) arranged and operated by the cock of the gun in such a manner that, the elastic fingers (*k* and *k'*) of the said lever, picking a cap from the cap cylinder (E), or its equivalent, during each rise or back movement of the cock, convey it to the gun or other fire-arm nipple and seat and hold it thereon, and, in working back to their original position, relinquish or ease their hold laterally of the cap on the nipple, whereby any tendency to jerk the cap off the nipple by upward movement of the capping lever is avoided, and greater pliancy and facility of adjustment is afforded in the operation of the said lever to insure its perfect action, the said capping lever having a universal joint movement at its fulcrum or otherwise equivalently hung or constructed, and being operated by fixed and movable studs (*o*, *r*, *p*, *q*) and spring (*m*), or the equivalents of such devices, substantially as specified.

2. And I further claim constructing the capping lever (G) with a crook or arm (*n*) arranged so as to grip the nipple and, by the specified capping action of the said lever, to remove the exploded cap from the nipple preparatory to a new cap being put thereon and simultaneously with the picking up of a cap from the cap cylinder or its equivalent and with the rising of the cock of the gun or fire-arm, essentially as set forth.

ABNER N. NEWTON.

Witnesses:

OLIVER BUTLER,

FLAVIUS JOSEPHUS MALLORY.