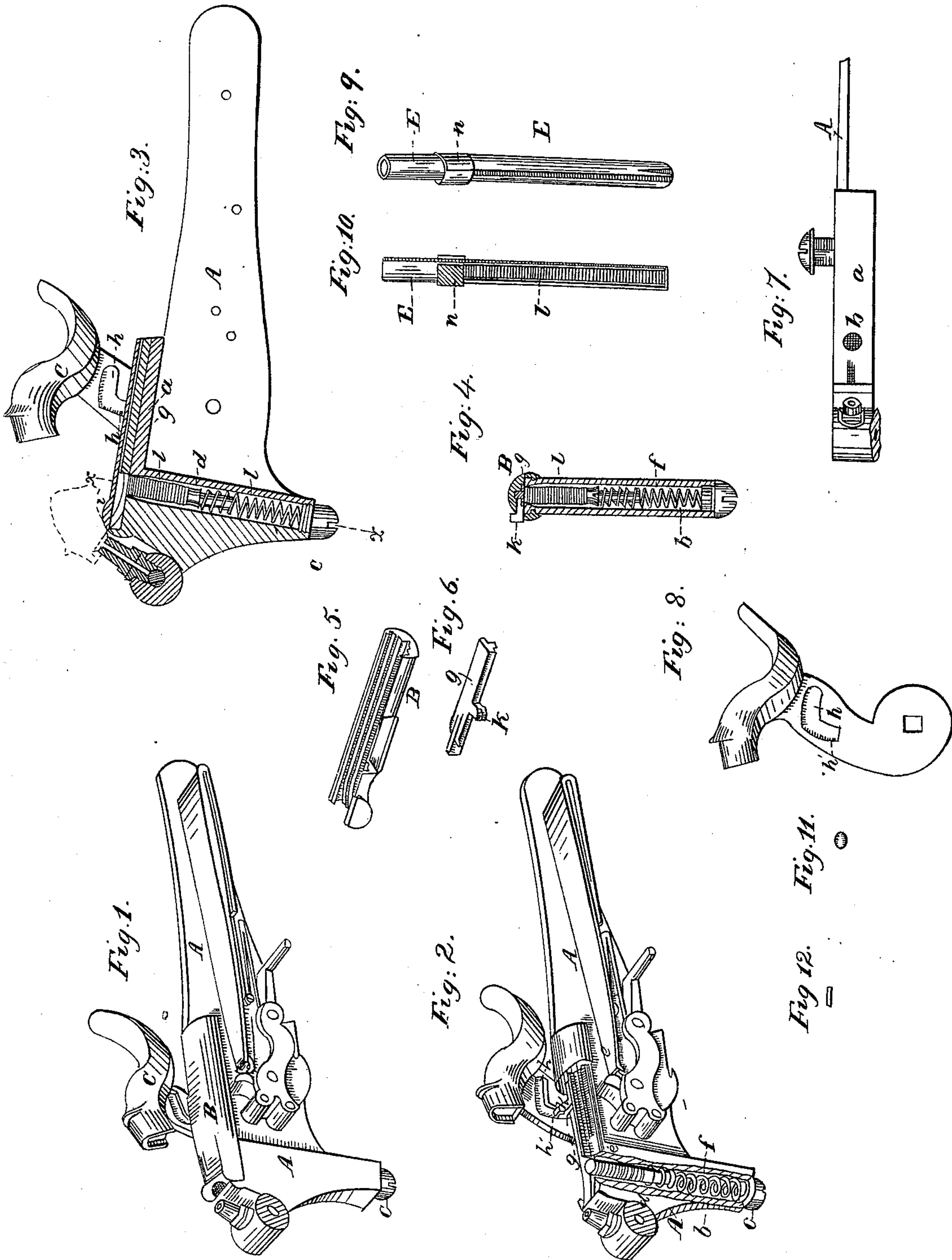


Priming Cock.

No. 9,308.

Patented Oct. 5, 1852



UNITED STATES PATENT OFFICE.

CHRISTIAN SHARPS, OF HARTFORD, CONNECTICUT.

METHOD OF PRIMING FIREARMS.

Specification of Letters Patent No. 9,308, dated October 5, 1852.

To all whom it may concern:

Be it known that I, CHRISTIAN SHARPS, of the city and county of Hartford and State of Connecticut, have invented a new and useful Method of Priming Firearms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 is a view in perspective of a musket lock adapted to my mode of priming; Fig. 2 is also a perspective view of the lock with certain portions of the outside removed, to show the construction of the interior; Fig. 3 is a vertical longitudinal section through that portion of the lock which constitutes the priming apparatus, and of the nipple and the parts to which it is attached; Fig. 4 is a vertical transverse section through the magazine, at the line *x x* of Fig. 3; Fig. 5 is a view in perspective of the under side of the cap which covers the magazine and the driver; Fig. 6 is a view in perspective of the under side of the driver; Fig. 7 is a plan of the magazine with the cap and driver removed, showing also a top view of the nipple, and a portion of the lock plate; Fig. 8 is a side elevation of the cock; Fig. 9 is a view in perspective, and Fig. 10 is a longitudinal section of a charger for the percussion pellets; Figs. 11 and 12 are views in perspective, and a section of a percussion pellet.

My invention consists in a mode of priming fire arms, by throwing a pellet of percussion material, over the nipple simultaneously with the descent of the cock, the movements of the cock and pellet being so timed, that the latter shall be struck down in its flight upon the nipple by the cock.

My invention further consists in throwing or projecting explosive or percussion pellets from a magazine, by means of a driver or other equivalent mechanism actuated or let off at the proper moment by the cock or moving parts of the lock.

One of the modes of applying my invention is illustrated by the accompanying drawing of a musket lock, which contains all the parts of the ordinary percussion lock constructed and arranged in the usual manner with my improvements superadded.

As the usual parts of the lock are well known I shall confine my description to the improvements. The lock plate A in this instance is extended farther forward, and

made deeper and thicker at the front extremity than usual. The forward half of its upper edge is made wider by a plate *a* secured thereto, which supports a reciprocating driver whose construction and uses will be presently described.

The enlarged portion A' of the lock plate has a tubular chamber *b* formed in it, which is closed at the lower end by a screw plug *c* and is fitted with a piston *d* and with a helical spring *f* placed beneath the piston which tends constantly to press the latter upward. The upper extremity of the chamber is slightly contracted, and the upper end of the piston is correspondingly narrowed; this form of the parts allows the upper extremity of the piston to be forced out even with the top of the chamber, while as the lower portion of the piston is too large to pass out of this contracted opening, there is no danger of its being thrown out by the spring. This chamber forms a magazine to contain a supply of percussion pellets which it delivers as they are wanted to fire the gun. The chamber is represented in the drawing about half full of pellets.

The wide portion *a* of the upper edge of the lock plate A as seen in Fig. 7, is on a level with the upper extremity of the chamber *b* and at right angles thereto except at its front extremity, which has an upward curvature. The edges of this plate are parallel, and have grooves *e* made in them to receive tongues formed on the inner edges of an arched cap B which slides over the plate.

The inner side of the cap B fits upon the plate *a* except at the middle, where a longitudinal groove is formed, which is of uniform depth throughout its entire length, but of unequal depth transversely. Into this groove, a slide or driver *g* is fitted. This driver is about two thirds of the length of the grooves, and has a rib—on its upper side which enters a deep channel—in the groove of the cap; this rib stiffens the driver and projects at the front extremity thereof, to push or throw the percussion pellet. The front part of the plate *a* which turns up to give direction to the flight of the pellet has a recess *i* formed in it to receive the front extremity of the driver *g*. An arm *h* projects from the outer edge of the driver through the side of the cap B in an oblong opening made for the purpose, and extends into a groove *h h'* in the inner side of the

cock C. One portion h of this groove h is concentric with the axis on which the cock turns, while the remainder h' of it is nearly radial thereto; so that as the cock rises, the concentric portion h of the groove will first move over the arm k without communicating motion to it, but toward the latter portion of the upward movement of the cock, the radial part h' of the groove will act upon the arm k and draw back the driver g . On the other hand when the cock descends, the radial portion of the groove will first act to push the driver forward, while during the latter part of the descent of the cock, the concentric portion of the groove will pass over the arm without giving motion to it.

When the driver is drawn to its backward position by the raised cock as seen in Fig. 3, its front extremity, stands just back of the top of the magazine, so as to allow the pellets l to be forced up by the spring piston against the cap B and as the thickness of the pellets, and the depth of the groove in the cap are equal, a single pellet is raised into the groove, so that when the cock descends, and the driver is carried forward, the latter will strike the upper pellet, drive it forward to the front end of the groove and throw it therefrom.

As the descent of the cock in the act of firing is always rapid, it will push the driver and pellet forward with corresponding velocity. As the pellet in the act of being discharged, nears the forward extremity of the groove, it is turned upward from the line of motion of the driver, by the curve, so as to be discharged in a line parallel to, and very near the face of the nipple. This deflection of the pellet by the curvature of the groove, shows that its flight is not necessarily restricted to the line of motion of the driver, but may be varied therefrom as circumstances may require. It is necessary that the driver should be connected with a part of the cock that will give to it a rapid motion in order that the pellet may be thrown with sufficient velocity to insure its meeting the hammer on the face of the nipple; care should be taken however that the pellet be not projected with too great velocity lest it should pass the nipple before the cock comes down to explode it. As the time of moving the driver, and the speed with which it is moved, are determined by the form and position of the groove h h' on the side of the cock, any desired alteration of the time or speed, at which the pellet is thrown, can be effected by simply changing the shape and position of this groove.

The dotted lines in Fig. 3, show the pellet in its flight, and the cock in its descent, just in the act of meeting upon the face of the nipple. The percussion pellets may for greater convenience be made in the form of

thin circular cakes or disks, the explosive materials being inclosed in a metallic or other casing of corresponding form. These disks should be of the same diameter as the orifice of the magazine, which is of about the same diameter as a common percussion cap, say three sixteenths of an inch, and they may be about one thirty second of an inch in thickness; so that a chamber with a clear space of an inch above the piston, when the spring is compressed, will contain thirty-two pellets or primings. The pellets may be introduced into the magazine from the bottom, the plug c being unscrewed, and the spring f and piston d withdrawn previous to inserting them. It will however, generally be found more convenient to introduce the pellets into the magazine at the top by means of a charger such as is represented at Figs. 9 and 10. This charger consists of a tube E and piston n . The lower extremity of the tube is slitted to allow it to expand and contract, and it is contracted slightly to prevent the pellets from dropping out. The upper portion of the tube is slightly larger in diameter than a pellet, and the pellets are introduced into it at this end, and the piston placed upon them in the manner represented in Fig. 10. To transfer the pellets from the charger into the magazine, the cock is raised, and the cap B and slide g are drawn back, leaving the orifice of the magazine exposed; the lower end of the charger is now applied to the orifice, and the piston n pressed down with sufficient force to expel the pellets from the charger into the chamber b pushing down the piston and compressing the spring to make room for them, the cap is now pushed forward over the orifice of the magazine, to confine the pellets, and the apparatus is ready for use.

The pellets may be made in the form of pills or in any other shape that may be deemed suitable or convenient, and may be shielded or covered in any way that will be effectual, or in which such things are commonly protected from injury by moisture or friction. If changes are made in the form or size of the pellets, corresponding changes must be made in the magazine and driver to adapt them to such changes.

It may be deemed advisable in some cases to construct the magazine in such manner that it can be readily inspected to ascertain whether it requires replenishing. This can be done by making a slot down its outer side, and fitting it either with a transparent covering, or a sliding or hinged metallic shutter or other contrivance to protect the pellets from injury while exposing them to view.

It is quite obvious that mechanisms of various forms and arrangement could easily be made to carry out in practice my mode of priming, but I do not deem it necessary to

describe them, as that which I have represented and described is found to answer the purpose in an efficient and satisfactory manner.

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

The priming of fire-arms by throwing a pellet of percussion or priming material over the nipple at the time the cock is descending

thereon, so that the priming shall be struck 10 down in its flight between the cock and the nipple and exploded.

In testimony whereof I have hereunto subscribed my name.

CHRISTIAN SHARPS.

Witnesses:

P. H. WATSON,
E. P. RENWICK.