N. R. DAVIS.
Fire-Arm.

No. 217,001. Patented July 1, 1879.

Fig. 1.

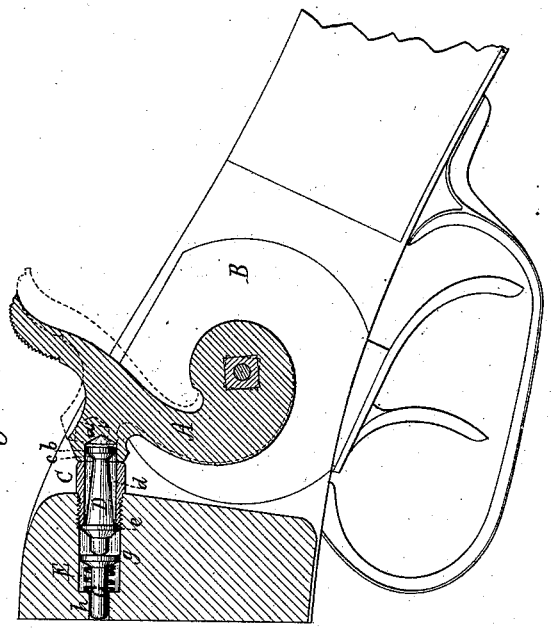


Fig. 2.

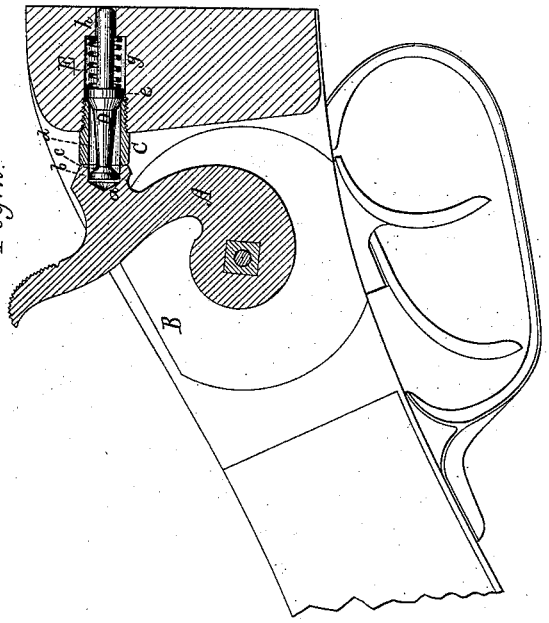
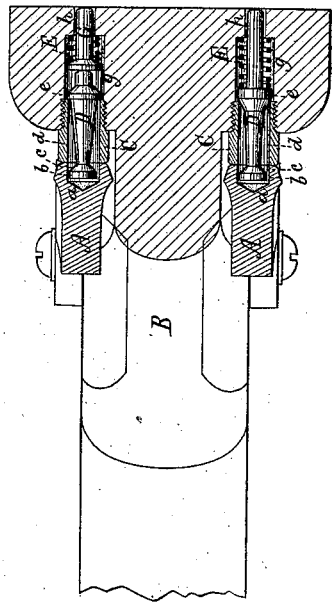


Fig. 3.



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UNITED STATES PATENT OFFICE.

NATHAN R. DAVIS, OF FREETOWN, MASSACHUSETTS.

IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. **217,001**, dated July 1, 1879; application filed May 3, 1879.

To all whom it may concern:

Be it known that I, NATHAN R. DAVIS, of Freetown, of the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Fire-Arms; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figures 1 and 2 are vertical sectional views, and Fig. 3 a horizontal section, of the lock parts of a double-barrel breech-loading gun with my invention applied thereto.

My improvement relates to those fire-arm locks which have a slide or pin to effect by a blow of the hammer thereupon the firing of the percussion-priming of the cartridge.

In all such locks known to me to be in use before my invention, the slide-pin has been applied so as to be capable of rectilinear movements only, in which case it becomes necessary to have with such what is termed a "rebounding hammer"—that is, a hammer which instantly after a blow of it on the slide-pin would fall back a little, in order to allow the slide-pin to be retracted or forced back by its spring sufficiently from the cartridge to admit of the barrel being moved into position for withdrawal or discharge of the spent cartridge case or shell from it and the insertion of a fresh cartridge.

With my invention there is no necessity of the lock-hammer being provided with mechanism to effect any such rebound of it. In fact, after its blow on the slide or firing pin, the hammer is estopped against a shoulder or chambered nipple, within which the slide-pin is arranged. This nipple is so chambered, and the slide is so made and applied to the nipple, as to enable the slide not only to move lengthwise back and forth, but to play or swing laterally in the nipple. Furthermore, the hammer-head is provided with an open recess or chamber to receive the rear end or head of the slide or firing pin during the rebound of such slide or pin. The hammer in falling strikes the rear end or head of the pin eccentrically of the said recess in the hammer-head. The circular mouth of the nipple has a diameter corresponding with, or about with, that of the head of the slide or pin, which head, at its rear, is conical, such conical part of the head being to effect, during an advance of the slide-pin, centralization or lateral movement of the slide-pin in the nipple sufficient to enable the said slide-pin, on being driven backward, after an advance of it, against the cartridge, to enter the recess or chamber of the head of the hammer, which then will be against the nipple. By having the slide-pin movable laterally as well as lengthwise in the nipple, as described, the hammer, while being drawn back either to full or half cock, will readily free itself from the head of the pin, which, were the pin to move rectilinearly only in the line of its axis, would prevent, or be very liable to prevent, the hammer from being so moved.

From the above it will be seen that the recess on the hammer-head allows the necessary rearward movement of the slide-pin immediately after an advance of it, caused by the hammer, and while the said hammer is at rest, from which it will be seen that to admit of the rearward movement of the pin there becomes no necessity of said rebounding of the hammer after a blow of it on the pin.

In the drawings, A denotes the hammer as provided with the open recess or chamber *a* in its head. B is the stationary breech of the stock. C is the nipple; D, the slide-pin, and E the spring of such pin.

The head *b* of the slide-pin is shown as formed or provided in rear with the conical frustum or part *c*, and the nipple has a bore or chamber, *d*, having a diameter greater than the part of the slide-pin shank that is within it, but a little greater than that of the head of the pin. The pin-shank is provided with a back stop or shoulder, *e*, to abut against the inner end of the nipple, so as to determine the extent of rearward movement of the pin. The helical spring E bears at its front end against the bottom of the cylindrical chamber *g*, into which the nipple is screwed. The pin passes through a passage or cylindrical hole, *h*, leading out of the said chamber, all being as shown in Fig. 2.

In descending the hammer-head moves in the arc of a circle, and impinges against the slide-pin, moves down on it, and impels it forward. As the head of the pin passes into the chamber of the nipple such head becomes forced up or centralized in the nipple, so as,

on the pin being forced back, to enter the recess *a* in the head of the hammer.

In Fig. 1 the slide-pin is shown as duplex, or having in advance of it an auxiliary firing-pin, G, arranged as shown, and provided with the helical spring E. It is sometimes convenient to so employ two pins, and arrange one somewhat out of line with the other, in which case the back pin would bear eccentrically against the head of the front pin. This arrangement dispenses often with the necessity of making the pin-passage oblique to the plane of movement of the hammer, in order to bring the firing-pin to strike the center of the head of the cartridge.

I am aware of the improvement constituting the subject of the English Patent No. 3,548 for 1874, wherein the firing-pin spring is of strength sufficient to force the hammer back to half-cock, the hammer being recessed in its head, all of which differs from my invention, in which the firing-pin spring performs no such function, and the firing-spring is of necessity adapted to its carrier, so as to play laterally and longitudinally therein, and is provided with means to centralize it or restore it after a blow of the hammer to a position to cause it to fall or be forced into the recess of the hammer-head, and to operate in other respects as described.

I claim as my invention as follows—that is to say:

1. The combination of the hammer chambered in its head, essentially as described, with the firing-pin provided with the conical head, and adapted to its nipple or carrier, so as to be capable of moving longitudinally and laterally therein, and to operate therewith and with the hammer, substantially as set forth.

2. The combination of the auxiliary firing-pin G, arranged in the breech and with the main firing-pin, with the hammer chambered in its head, and with such main firing-pin D, provided with the conical head, and adapted to its nipple or carrier in manner, and to operate therewith and with the hammer, substantially as set forth.

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