G. R. BACON.

BREECH LOADING FIREARM.

No. 39,270. Patented July 21, 1863.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE R. BACON, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **39,270**, dated July 24, 1863.

To all whom it may concern:

Be it known that I, GEORGE R. BACON, of the city of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Breech-Loading 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 frame and parts of the stock and barrel of a fire-arm, representing the frame partly broken away to expose the cartridge-block and illustrate my improvement. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a side view of the breech-block, illustrating a slight modification of my invention.

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

This invention relates to what is known as the "Burnside fire-arm," with the improvement of I. Hartshorne, patented March 31, 1863. In this arm the cartridge-block is connected with the frame by a link, and to bring the said block from the position for firing to the position for loading, and vice versa, two movements are necessary—viz., a movement of the block and link together on the pin which connects the link with the frame, and a movement of the block alone upon the pin which connects it with the link. No means have been heretofore provided for guiding the breech-block in the above-mentioned movements, and some practice and dexterity have consequently been required to manipulate it properly for bringing it to the requisite positions for loading and firing, and the soldier, in the excitement of battle, might sometimes fail to load and fire with that celerity which might be insured by some means of guiding the block.

This invention consists in providing in one side of the block a compound curved groove, which receives the point of a stationary pin that projects inwardly from the contiguous side of the frame of the arm, for the purpose of so guiding the block that it is not possible to manipulate it otherwise than in a proper manner.

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 frame of arm, B the barrel, and C the stock. D is the cartridge-block, and E the link which connects it with the frame. *a* is the pin which attaches the link E to the frame, and *b* is the pin which attaches the cartridge-block to the link. F is a lever rigidly attached to the cartridge-block for the purpose of manipulating it.

c d, Figs. 1 and 2, is the compound curved groove in the cartridge-block, and *e* the stationary pin, screwed into one side of the frame to enter the said groove. The said groove is represented in Fig. 1 in the form of two arcs, *c* and *d*, the latter of which is always concentric with the pin *b*, and the former is concentric with the pin *a* when the cartridge-block is in the position for firing, (shown in black outline in Fig. 1,) at which time the link E is close up under the said block.

To bring the cartridge-block from the position for firing (shown in black outline in Fig. 1) to the position for loading, (shown in red outline in the same figure,) the lever F is pulled downward and forward, and during the first part of this movement, in which the pin *e* remains in the portion *c* of the groove concentric with the pin *a*, the block D is compelled by the stationary pin *e* to move downward with the link E, as though the said block and link were rigidly connected together; but as soon as the portion *d* of the groove which is concentric with the pin *e* arrives at the pin *e* the further downward movement of the link and block is prevented, and the continued movement of the lever F to the position shown in red outline merely causes the block to turn on the pin *b* in such manner as to present the mouth of its chamber upward for the reception of the cartridge. In returning the lever to the position close under the stock, the cartridge-block is compelled by the arc *d* of the groove *c d* first to turn on the pin *b* till it comes in close contact with the link E, and afterward compelled by the arc *c* of the said groove to move with the link from the pin *a* until it arrives in line with the barrel and in position for firing.

In the modification shown in Fig. 3 the portion *c* of the groove in the cartridge-block is the same as represented in Fig. 1; but, instead of the portion *d* being concentric with the pin *b*, its lower part inclines slightly inward toward the said pin and terminates in a sharp

bend, *d'*. This causes the block to move upward slightly while the portion *d* of the groove is moving on the pin *e;* but when the bend *d'* arrives at the pin the block drops a short distance, and the said bend *d* prevents it from swinging after the lever has been liberated and while inserting the cartridge into the chamber. When, after loading, the lever is drawn back toward the stock, the bend *d'* passes freely over the pin *e* and causes the block to rise slightly before it commences to move on the pin *b*, and after the said bend has passed the pin *e* the block moves the same way as that shown in Fig. 1, except that it descends slightly while the portion *d* of the groove is moving on the pin *e*.

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

The combination, with the cartridge-block D and its link-connection E, of the compound groove *c d* or *c d d'* in the said block and the stationary pin *e* in the frame, substantially as and for the purpose herein specified.

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Witnesses:
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