J. P. PIERI.

Breech-Loading Fire-Arms.

No. 166,138. Patented July 27, 1875.

Fig. 1.

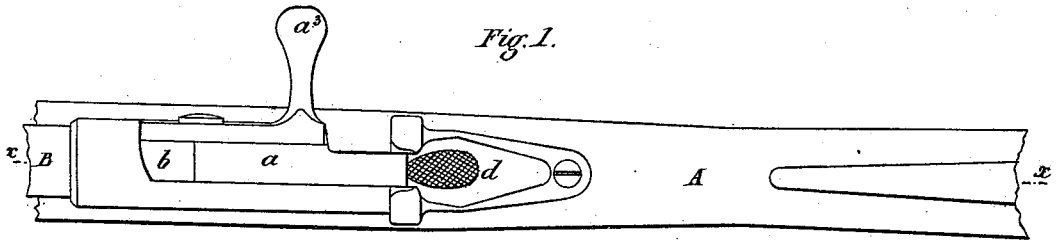


Fig. 2.

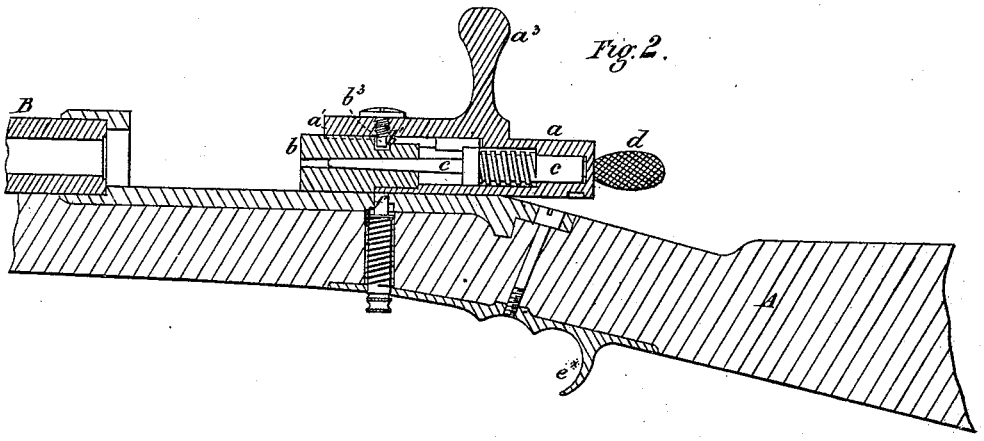


Fig. 4.

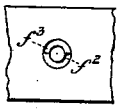


Fig. 3.

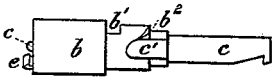
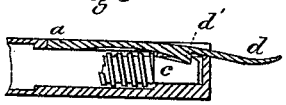


Fig. 5.

Fig. 3ª



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UNITED STATES PATENT OFFICE.

JACQUES P. PIERI, OF GHISONI, CORSICA, ASSIGNOR TO WILLIAM SMITH, OF LONDON, ENGLAND.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **166,138**, dated July 27, 1875; application filed April 30, 1875.

To all whom it may concern:

Be it known that I, JACQUES PHILIPPE PIERI, of Ghisoni, Corsica, a resident of London, England, have invented Improvements in Breech-Loading Fire-Arms, of which the following is a specification:

My said invention relates to breech-loading fire-arms which have at the rear of the barrel a chamber, wherein is fitted a sliding barrel or bolt carrying the firing mechanism, including the trigger, which lies in a groove in the said bolt, and projects from the rear of the same. A firing-pin is fitted inside the said bolt, and is released by depressing the said trigger, and driven forward by a spiral spring. The said bolt has at its forward end a head, which is so attached to the said bolt that it moves endwise therewith, but allows the said bolt to turn without turning the head, and this head is provided with a device for extracting the empty cartridge-shells. The breech-bolt is moved in its chamber to open and close the breech by a handle projecting at the side of the said bolt.

My invention is illustrated in the accompanying drawing, which I will now proceed to describe.

Figure 1 is a plan or top view of the breech of a rifle constructed according to my improvements. Fig. 2 is a longitudinal section on the line *x x*, Fig. 1. Fig. 3 is a plan of a portion of the breech-bolt. Fig. 3ª shows the end of the same with the trigger and firing-pin. Figs. 4 and 5 illustrate a safety device forming part of my improved mechanism.

Like letters indicate the same parts throughout the drawing.

A is the stock, and B the barrel. *a* is the breech-bolt, and *b* is the head of the same. *c* is the firing-pin. *d* is the trigger, and *e* is the extractor. This trigger is a flat spring or elastic piece, fitted in a groove in the bolt, and may be readily removed and replaced when necessary. It has a projection, *d'*, for holding the firing-pin *c*. The trigger *d*, when in position for firing, presents a flat surface above the stock, as in Fig. 1, and is pressed downward by the thumb to release the firing-pin. The piece *e**, below the stock, supports the hand in depressing the trigger *d*. The head *b*, at the forward end of the breech-bolt, is formed with a groove, b^1, in which enters the point of a stop-screw, b^3, that projects through the guide-piece a^1 of the aforesaid bolt *a*, and the head *b* also has a helicoidal surface, b^2, which acts on a shoulder, *c'*, of the firing-pin or rod *c*, in cocking the arm. The handle or lever a^3 of the bolt *a* and the guide-piece a^1 are made solidly, or in one piece with the cylindrical portion of the said bolt, but the end of the said guide-piece projects beyond the forward end of the bolt, as shown. At the under side of the breech I arrange a safety device, which keeps the bolt from turning or moving endwise in its chamber when the bolt-handle is turned upward, or in the position for withdrawing the said bolt; and, when the bolt is in this position, the depression of the trigger will not actuate or release the firing-pin. This safety device consists of a small spring pin or rod, *f*, which is fitted to move up and down, and turn in a hole formed through the under side of the breech-chamber, as clearly shown in Fig. 2. The said pin has a shoulder or stud, f^1, which is so arranged in relation to inclines f^2 f^3 on the under side of the breech-shoe that, when the said pin is turned upon the incline f^2, it will project up through the bottom of the breech-chamber into a hole or cavity in the bolt *a*, and hold the same immovably, but when it is desired to release the said bolt, the spring-pin *f* is turned partially around in its hole, and its shoulder f^1 then comes upon the incline f^3, which is not so deep as the incline f^2, and the pin *f* is then held down below and clear of the bolt.

The extractor of this improved arm is a flat bar of steel, or other suitable metal, fitted and secured in a recess in the side of the bolt, and sliding in a longitudinal groove or channel in the bolt-chamber. The said extractor has a claw or hook, formed to take hold of the rim or flange of the cartridge-shell and draw it from the barrel, and the hook holds the shell until the bolt is fully retracted, when it comes against a shoulder in the side opening of the

breech-chamber, and the cartridge-shell is thereby expelled from the arm in a forward direction.

I claim as my invention—

1. A fire-arm with the trigger *d* at the top or upper side of the arm, attached to the breech bolt or cylinder *a*, and operating as herein specified.

2. In a breech-loading fire-arm, the trigger *d*, firing-pin *c*, and spiral spring, combined with and carried in the sliding breech bolt or cylinder *a*, and operating as herein set forth.

3. In a breech-loading fire-arm, the combination of the breech-bolt *a*, having the trigger *d* and screw b^3, the head *b*, having groove b^1 and inclined surface b^2, and the firing-pin *c*, having the shoulder *c'*, substantially as described and shown.

4. The safety device *f*, arranged and operating in combination with the bolt *a*, as herein set forth.

5. In a breech-loading fire-arm, the combination, with the breech-bolt *a* and head *b*, of the extractor *e*, constructed and arranged substantially as described and shown.

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Witnesses:
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