J. W. COCHRAN.

Breech-loading Fire-arm.

No. 52,679. Patented Feb. 20, 1866.

Fig. 1.

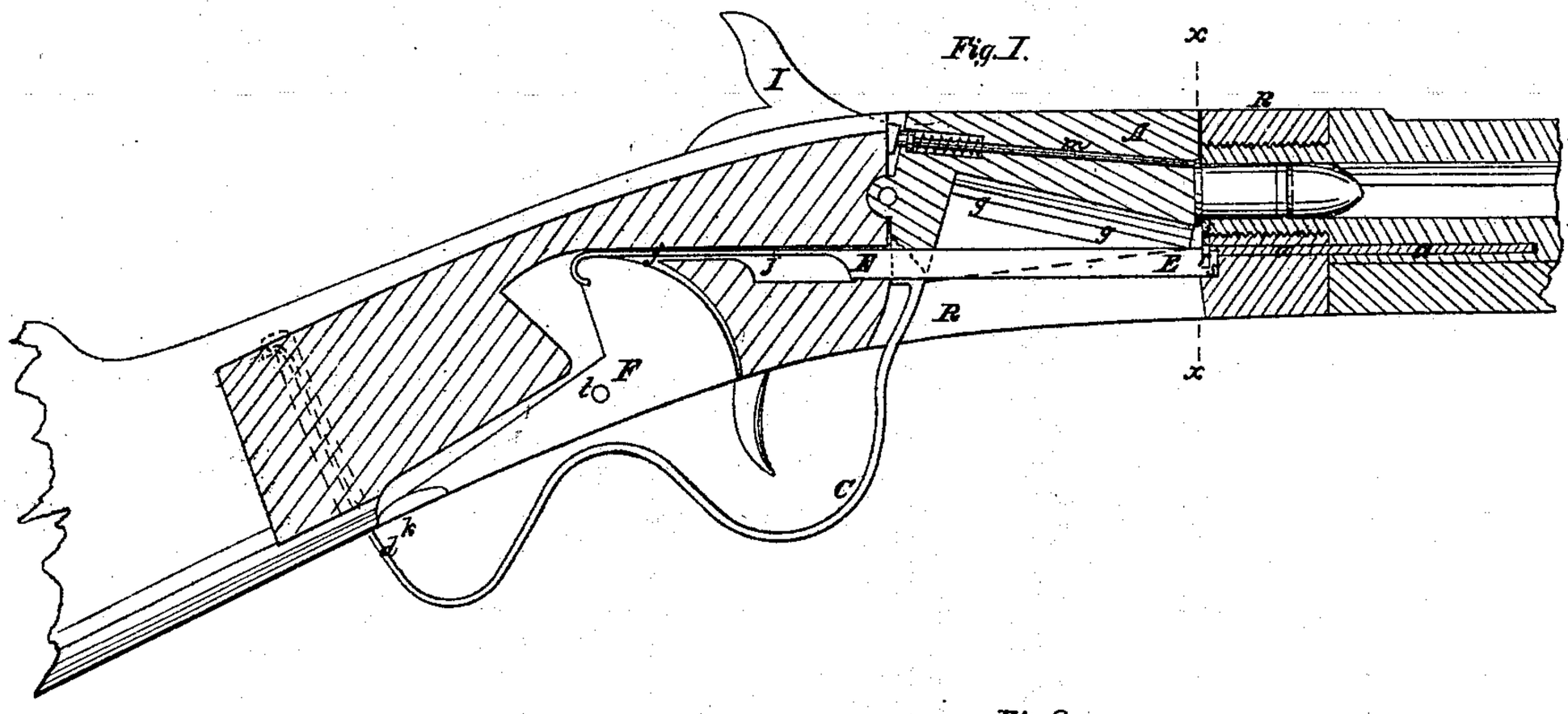


Fig. 2.

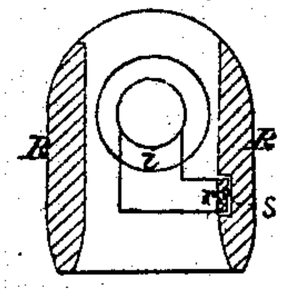
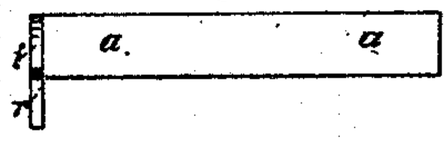


Fig. 3.



Witnesses,

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UNITED STATES PATENT OFFICE.

J. W. COCHRAN, OF NEW YORK, N. Y.

IMPROVEMENT IN CARTRIDGE-RETRACTOR FOR BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **52,679**, dated February 20, 1866.

To all whom it may concern:

Be it known that I, JOHN WEBSTER COCHRAN, of the city, county, and State of New York, have invented a new and useful Improvement in Cartridge-Shell Retractors for Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal sectional view of a breech-loading fire-arm furnished with my retractor. Fig. 2 is a cross-section of the breech-receiver, taken in the line *x x* of Fig. 1, and at right angles thereto, showing the position of the retracting slide with reference to the bore of the barrel. Fig. 3 is a plan or top view of the retracting slide disconnected from the fire-arm.

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

This invention consists in a novel and simple construction and arrangement of parts for operating the retractor, whereby great convenience is afforded for its operating, and the requisite power is obtained for the withdrawal of any shells that may stick in the barrel.

To enable those skilled in the art to understand the construction and operation of my invention, I will proceed to describe it with reference to the drawings.

The fire-arm to which my retractor is represented as applied in the drawings has a pivoted breech-piece, A, from which there projects downward and backward an operating-lever, C, the rearmost end, *d*, of which is formed into a flat spring, *d*, which projects upward into a suitable recess in the stock and holds the breech-piece in position. By pushing this lever downward the breech-piece A is elevated to allow the insertion of the cartridge underneath the same into the end of the barrel.

The charge is ignited by means of the needle *m*, which strikes upon the rim of the cartridge when acted upon by the hammer I.

Working in a suitable longitudinal guide under the rear part of the barrel is a straight slide, *a*, which has upon its rearmost end a tooth or spur, *i*, projecting upward and fitted into a recess in the lower part of the rear end of the barrel in such a way that when the cartridge is placed therein, as shown in Fig. 1, the lower side of the flanged head of the cartridge will be situated just behind the said tooth *i*. Projecting downward and sidewise from the same end of the slide is another spur, *r*, to which the bar E is connected by its hook *s*. This bar E works in a groove formed in the inside of the breech-receiver R at the right-hand side of the breech-piece, and has its rear portion formed into a spring, *j*, which is straight in its normal condition.

F is the operating-lever, which works in a vertical mortise in the stock near the right-hand side thereof, and has its long or rearmost end furnished with a thumb-piece, *k*, which projects laterally therefrom in such proximity to the breech-operating lever C as to permit the thumb to be readily applied to the thumb-piece *k*, after having operated the said lever C, without the neeessity of moving the thumb or hand to any great distance from the stock in so doing. The forward end of this lever F is formed into the arc of a circle concentric with its fulcrum-pin *t*. To the upper corner of this arc is firmly secured the end of the spring *j*, thus enabling the retracting-tooth *i* to be operated by the movement of the said lever.

Such being the construction of the retractor, its operation is as follows, the breech-piece A being first elevated to allow the empty case to be moved backward. The thumb-piece *k* being pushed downward turns the lever F upon its fulcrum-pin *t* and draws back the bar E, which causes the tooth *i*, acting against the forward surface of the rim of the cartridge-case, to draw back the said case out of the barrel into the space behind the same, from which it falls or is thrown or taken out. As the lever F is thus turned the spring *j* is curved upon the arc-shaped end of the same, and as soon as the downward pressure upon the thumb-piece *k* is released the spring, in assuming its natural straight condition, not only throws the slide *m*, with its extracting-tooth *i*, forward to its first position, but also draws the lever F back to its place, thus dispensing with the use of a separate spring for the said purpose.

It will also be noticed that the lever F occupies such a position with regard to the

breech-operating lever C as to be conveniently worked with reference to the movements of the said lever.

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

1. The spring *j*, in combination with the lever F and retracting-tooth *i*, substantially as herein set forth, whereby it is made to serve as the connection between the said lever and tooth, and as the means of returning them to their proper places on the liberation of the lever after the retraction of a cartridge-shell.

2. The arrangement of the lever F and its connection with the retracting-tooth, in relation to the breech-receiver, stock, and breech-operating lever, substantially as herein specified.

Witnesses: J. W. COCHRAN.

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