S. CRISPIN.

Breech-loading Fire-arm.

No. 61,722. Patented Feb. 5, 1867.

Fig. 1.

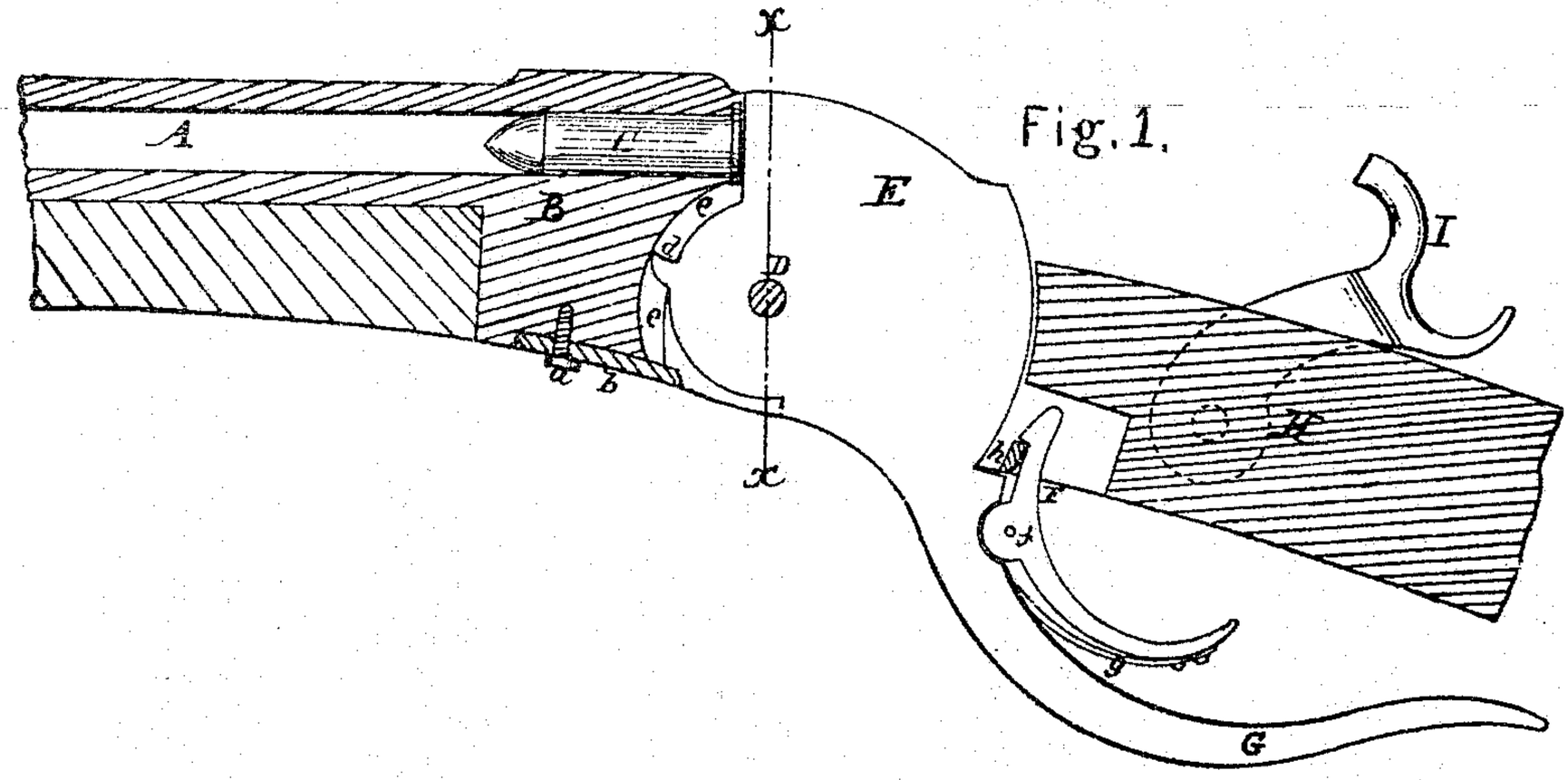


Fig. 2

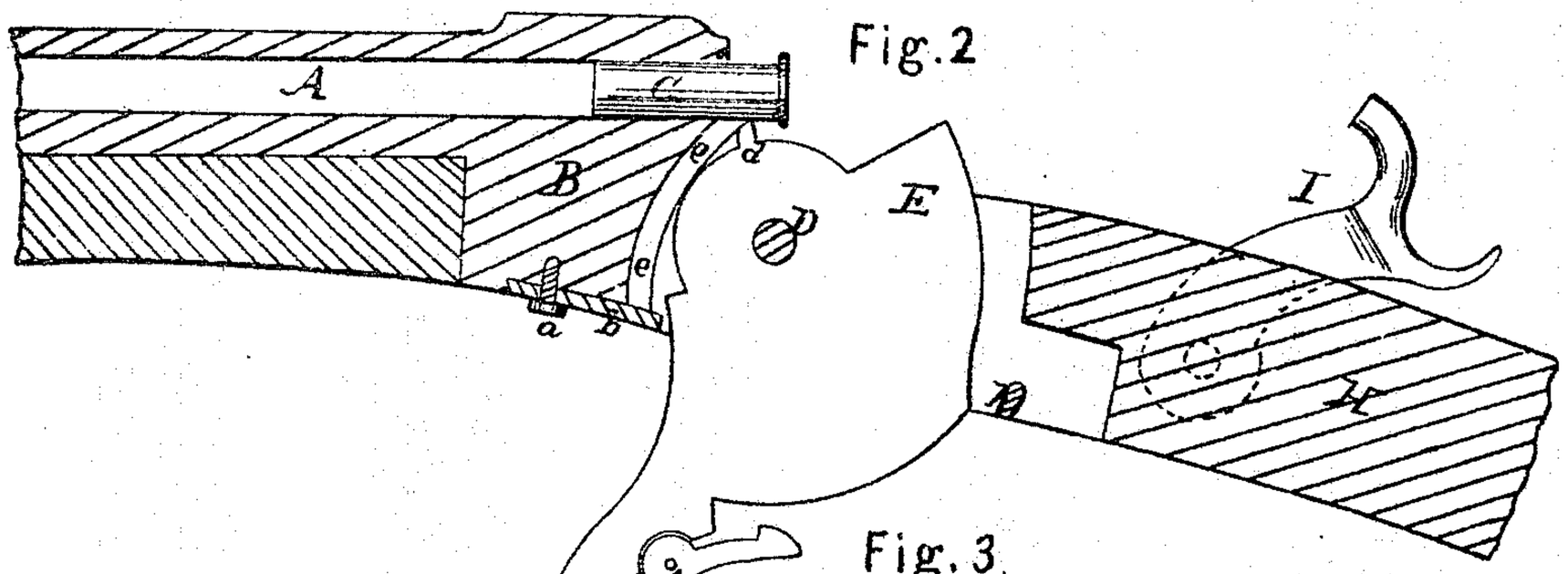
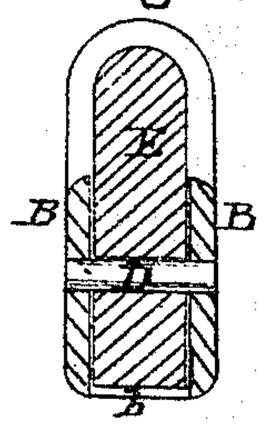


Fig. 3.



Witnesses:

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United States Patent Office.

SILAS CRISPIN, OF NEW YORK, N. Y.

Letters Patent No. 61,722, *dated February* 5, 1867.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SILAS CRISPIN, of New York, of the county of New York, in the State of New York, have invented certain new and useful improvements in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this application.

Previous to my invention various breech-loading guns have been devised and used, many of them adapted to the use of metallic cartridges and involving a variety of differing combinations, each supposed to embody certain advantages. From practical experience and experimont I am led to believe that in a breech-loading gun (adapted to the use of metallic cartridges) the following conditions of parts and their arrangement and operation together, are most desirable, viz, a solid breech-block, which is certainly the simplest, so arranged as to rotate toward and from the rear of the chamber of the gun, since this kind of motion in the breech-block possesses less liability to derangement from rust, dirt, or any of the numerous obstructions which are likely to occur in the working parts of a gun, in service or use. It is also desirable, I believe, to have the rotating breech-block entirely separate and disconnected from the lock, or any of its attachments, since thereby the lock is closed and sealed, free from rust and dirt, to which it is exposed where it is in the breech-block, or any part of it connected thereto; besides, the point of support can be placed further from the axis of rotation than it can be in that class of arms in which the support is afforded by a part of the lock, or by some device connected with the latter. To embody in a compact and in every way practical and desirable method, these leading features of construction is the object of my invention, which consists in the employment of a solid rotating breech-block, with its axis of rotation at its anterior inferior portion, having no motion of translation, and being entirely uncombined with or disconnected from the lock mechanism. Also in the employment, in connection with such a breech-block, of a rotating or vibratory catch lever and spring, arranged and operating as will be presently described. Also, the combined arrangement of the solid rotating breech-block, and lever, and spring catch, with the cartridge extractor, all as hereinafter more fully explained.

To enable those skilled in the art to make and use my improved arm, I will proceed to describe more particularly its construction and operation, referring by letters to the accompanying drawing, forming a part of this application, and in which—

Figure 1 is a longitudinal vertical section of a fire-arm embracing my invention.

Figure 2 is a similar view, showing the parts in different position.

In the several figures I have denoted the same part by the same letter of reference.

A is the barrel of a gun, and B its rear open end, into which the cartridge is inserted. H is the stock, and E the solid rotating breech-block, which is hung on a stud or axis at D. This breech-block E is formed with a long curved handle or lever, G, to which is pivoted at *f* a catch or pawl, F, provided with a spring, *g*, and adapted to catch over the bar *h* of the lock frame or metallic portion of the stock. On the curved portion of the breech-block E is formed or arranged a projection, *d*, which acts as an extractor, taking hold, forward, of the flanch of the cartridge case C, and extracting or withdrawing the latter, as the breech-block is thrown into the position seen at fig. 2, (for reloading.) I is the hammer, which is intended, through the medium of a pin, or in any desirable manner, to explode the cartridge. At fig. 1 the parts are shown as the arm would be loaded and ready for firing. After the discharge the breech-block E is thrown down into the position seen at fig. 2, (by unlatching the catch E and depressing the lever G, in a manner familiar to those skilled in the use of breech-loading guns,) whereby the extractor *d* is caused to pull back and throw out of the gun the empty case, when the chamber may be reloaded and the breech-block again moved back, as seen at fig. 1.

It will be seen that by the use of the solid breech-block E having a rotatory or vibratory motion around its axis D, and entirely disconnected from the lock mechanism, the simplest and most desirable movable breech is afforded, for it is less liable to clogging than any other kind of moving breech, while, having no motion of translation, it must open and close very freely. By having no connection between the breech-block and lock mechanism, the latter may be entirely closed or sealed, which is evidently a great desideratum. It will be seen that the point of support is placed further from the axis of rotation in my improved arm than it can be in one where the breech-piece is supported by some portion of the lock, which is another advantage arising from my invention. It will be understood that in my improved arm the breech-piece may be most readily worked by the

swinging lever G, and that by the arrangement of parts shown, the empty cartridge case may be most effectually withdrawn and discharged by the action of the extractor *d*, operated by means of the lever of breech-block. In a gun constructed as shown and described by me, there is no liability of the points of support being "forged," as in guns where the distance between point of support and axis of rotation is short, owing to having lock support. I am aware that a solid breech-block has been used, as, for instance, in the "Peabody" and "Cocheran" guns; but in these the block is hinged at its posterior portion, and hence (unlike mine) there is more or less friction or wedging motion where the face of the breech-block comes against the rear end of the barrel or chamber, which is of course disadvantageous. In the Burnside gun (though not adapted to the use of metallic cartridges) there is a breech-piece hinged somewhat like mine, but his breech-block contains a portion of the chamber, and besides, the bottom of said chamber has a motion of translation.

Having fully explained the characteristic features which my improved gun possesses, and in which features its advantages rest, what I claim therein as new, and desire to secure by Letters Patent, is—

The employment of a solid, plane-faced, vibratory or rotating breech-block, having its axis at its anterior inferior portion, in combination with the lever G and spring catch, when there is no connection between such parts and any portion of the lock work, and the whole is arranged to operate as specified.

I also claim the combined arrangement as set forth of the extractor, with the breech-block and swinging lever or long arm, for the purposes set forth.

In testimony whereof I have hereunto set my hand and seal this day of , 1866.

SILAS CRISPIN.

Witnesses:

ANDREW DE LACY,

J. N. MCINTIRE.