E. ALLEN.

Breech-Loading Fire-Arm.

No. 49,491. Patented Aug. 22, 1865.

Fig. 2.

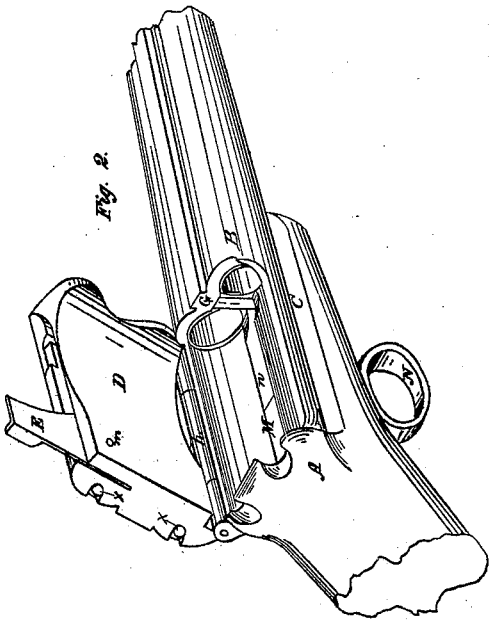


Fig. 4.

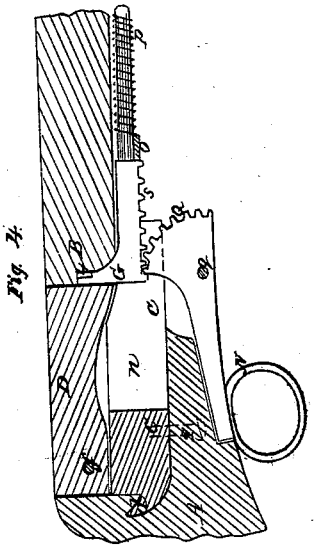


Fig. 1.

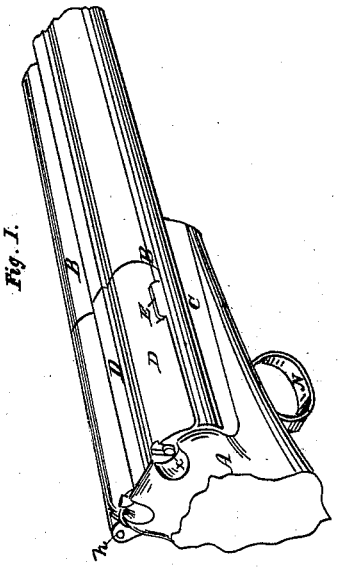
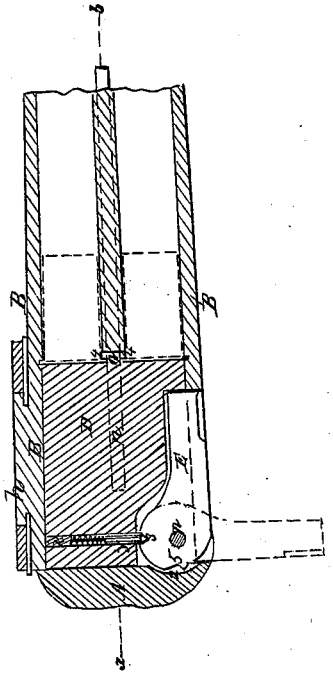


Fig. 3.



Witnesses,
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UNITED STATES PATENT OFFICE.

ETHAN ALLEN, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **49,491**, dated August 22, 1865.

To all whom it may concern:

Be it known that I, ETHAN ALLEN, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Double-Barrel Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a perspective view of the breech-piece and breech end of said improved double-barrel fire-arm. Fig. 2 represents a similar view as Fig. 1, but showing the breech of the arm in a raised position. Fig. 3 represents a horizontal section through the breech and the adjoining ends of the barrels. Fig. 4 represents a longitudinal central section through the piece, in the line *a b* of Fig 3.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the breech-piece of the gun, the rear part of which is shown as broken off in the drawings, as that part of the gun has no relation to this present invention. It is secured to the stock of the gun in the ordinary manner.

B represents the rear ends of the two barrels of a double-barrel fire-arm, which are secured together in the ordinary manner. A supporting-piece, C, is brazed or otherwise permanently secured to the lower side of the barrels, and the end of said supporting-piece is formed with a projecting or retaining hook, *d*, which enters a corresponding recess in the breech-piece A. This hook is so formed that it secures the barrel in a firm manner to the breech-piece. The latter is also secured to the supporting-piece C by means of screws *g*, and said screws, in connection with the retaining-hook *d*, constitute a very simple and effective method of firmly securing the barrels to the breech-piece A, but at the same time permit the parts to be taken apart with the greatest facility by simply removing the screws *g*.

D represents the hinged breech of my double-barrel fire-arm. It is hinged to the side of the arm at *h*, and is shaped to cover the breech ends of the two barrels. The opening and closing of said breech are effected by turning it on its hinge; but before this can be done a locking-lever, E, has to be operated, as hereinafter described. Said locking-lever is pivoted at *m* within the breech-cover, and when the latter is closed it can be turned on its pivot horizontally. Figs. 1 and 3 represent said lever when the breech is locked. In that position the lever E rests in a recess within the breech-cover, and nothing thereof extends beyond the breech but its thumb-piece. The lever in this position firmly locks the breech by its rear end entering a notch, 2, in the breech-piece A, and the lever, in its turn, is firmly locked by the action of the horizontal spring-bolt *f* entering a notch, 3, thereof. The bolt *f* and its spring are both inserted into a cavity in the breech-cover, the end of which is closed by a plug, *k*. When the breech is to be opened the lever E is turned to the position represented at Figs. 2 and 3 in red lines. In this position it no further locks the breech, as its rear end has cleared the notch 2 in the breech-piece, and the lever E can then be used for raising the breech, it being held open by the spring-bolt *f*, which then enters the notch 5.

G represents my cartridge-extractor. It is inserted into the cavity left between the two barrels, where they are joined to each other, and can slide in a notch, *n*, made in the bridge M, within the open breech. It is held in its position by means of the supporting-piece *o*, and a coiled spring, *p*, forces it against the breech end of the barrels, in the positions represented in Figs. 2, 3, and 4. To make this cartridge-extractor operate on the two cartridge-shells of both barrels simultaneously, it extends within a recess in the bridge between the two barrels, and I provide its head G with two projections, 4, which extend into the two barrels sufficiently to operate upon the rims of the cartridge-shells when the latter are to be withdrawn. In operating this cartridge-extractor the hand-lever N is turned on its pivot *q*, whereby the toothed sector Q operates upon the rack *s* of the cartridge-extractor and pushes the latter and its cartridges into the open breech. On releasing the hand-lever N the coiled spring *p* will force the cartridge-extractor again into its position represented on the drawings. The cartridge-shells are represented on the drawings in red lines.

x represents pins or rods in the hinged breech-piece, against which the hammer of the piece strikes to explode the metallic cartridges.

In case, by rapid firing, the expansion of the barrels and of the hinged breech-piece should

occasion any binding of the latter, the locking-lever E gives such a leverage as to enable the operator to easily open and close the former.

Thus by the application of the simple devices above described I have succeeded in perfecting an excellent breech-loading double-barrel fire-arm in which ordinary metallic cartridges may be used; and I believe that such a gun has been a great desideratum for sporting and other purposes.

Having thus fully described the nature of my invention, what I claim herein as new, and desire to secure by Letters Patent, is—

1. The combination, with the hinged breech D, of a horizontally-moving locking-lever, E, substantially as and for the purposes described.

2. The combination, with the rear of the locking-lever E, of a self-adjusting stop or piston, *f*, substantially as and for the purposes described.

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