POULTNEY & CRISPIN.

Breech-Loading Fire-Arm.

No. 64,701. Patented May 14, 1867.

Fig. 1.

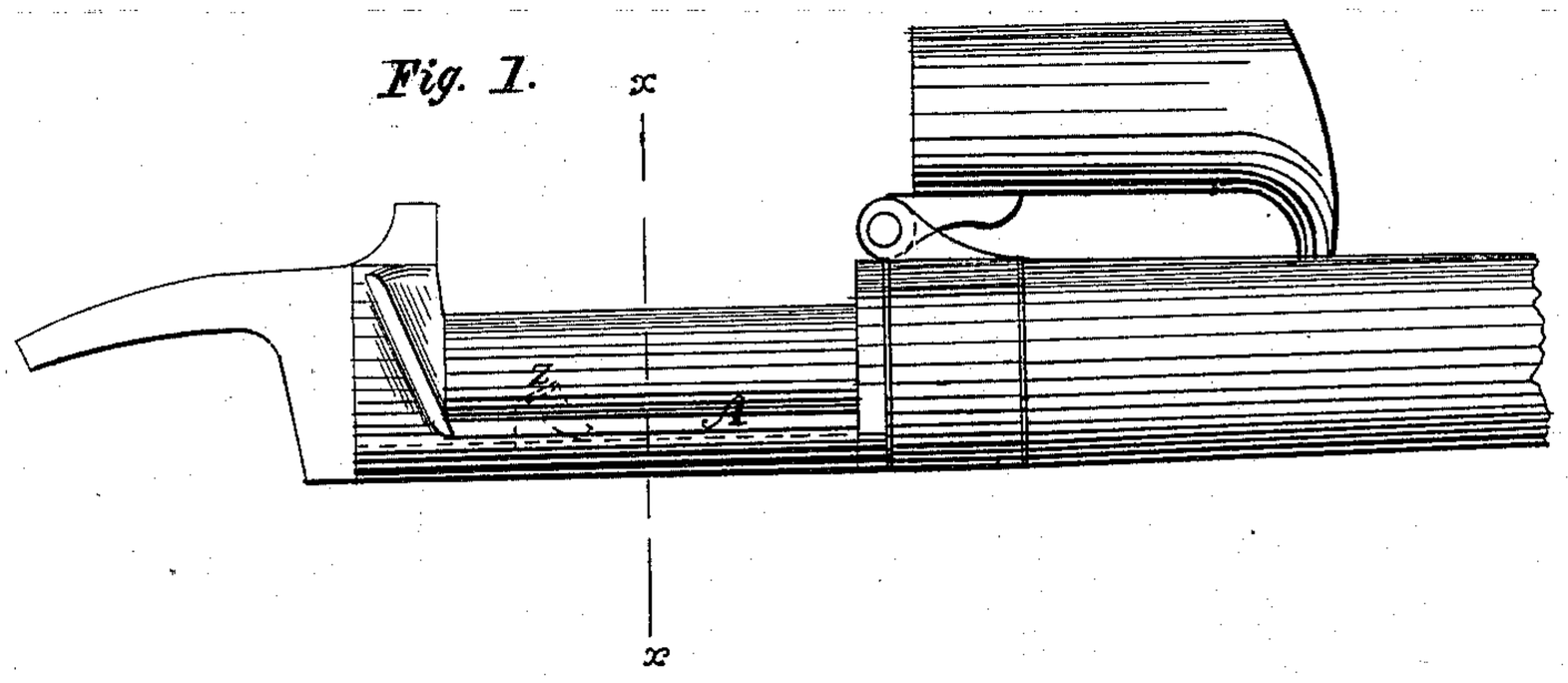
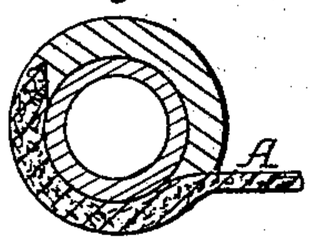


Fig. 2.

Fig. 3.



Inventors,

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Letters Patent No. 64,701, *dated May* 14, 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 we, THOMAS POULTNEY, of the city of Baltimore, in the State of Maryland, and SILAS CRISPIN, of the city and State of New York, have invented a certain improvement in the construction of Breech-Loading Fire-Arms, of which the following specification embraces a full, clear, and exact description, taken in connection with the accompanying drawings, and the letters of reference thereon.

The nature of our invention consists in the peculiar manner of forming the breech-piece receptacle (in arms having a breech-piece hinged to swing upward and forward, and lying in a recess formed in the barrel,) so as to facilitate the insertion of the primed metallic cartridge, and afterward the expulsion of the shell, in that class of breech-loading arms, without detriment to the strength of this part. On the drawing—

Figure 1 is an exterior side view of so much of such an arm as embraces our improvement, the breech-piece being thrown over out of its receptacle.

Figure 2 is a plan view of the same, with the breech-piece removed.

Figure 3 shows, looking forward, a cross-section through the red line *x x*, fig. 1.

Now, for example, in converting arms from muzzle-loaders into breech-loaders of this class, it has been usual to cut an aperture down through the top of the barrel, and form a recess somewhat wider than the original bore, and correspondingly deeper to receive the breech-piece, leaving the walls, so to speak, on each side of the recess as high, or nearly so, as the nature of the operation permitted, for the sake of strength at this point. Now, it will be clear that the wall on the right-hand side, as the weapon is being loaded, impedes that operation, as it is in the way of the thumb, particularly if the hand is gloved. Correspondingly, the cartridge in being ejected has to be lifted to an inconvenient height, requiring a proportionate suddenness and force of action of the ejecting device involving the use of a spring to operate the latter, and drive the catridge-shell over the rear of the breech-piece receptacle. Now, by our form of constructing the breech-piece receptacle, we make its right wall or side very low, without impairing the strength of the part; thus rendering the insertion of the cartridge extremely facile, and enabling the empty shell to be readily thrown out sideways from the breech-piece receptacle, by the simple means of a "positive" extractor (without a spring) and a guiding stud, slanting upward and laterally, located at the bottom of the receptacle at some little distance forward of the recoil bearings, and with which the cartridge, in being ejected from the barrel, coming in contact, is thrown out of the weapon as stated. It will be evident that merely cutting away the right side of the breech-piece receptacle for its entire length, and down to a point but little above its bottom, and proportionately cutting away the lock-plate and the wood of the stock at this point, would afford the desired facility for the insertion of the cartridge, but this would leave the weapon not only with a mutilated appearance, but too weak at this portion. Both of these objections, however, we obviate by the employment of a side horizontal "reinforce" or lip, A, projecting from the breech-piece receptacle (and running its entire length) sufficiently far to cover the wood of the stock and the lock-plate where these would be cut away, or even further, and the inner angle of its junction with the barrel being rounded over, leaves a finish agreeable to the eye and the use. The "reinforce" A may be brazed on, but we propose to make it a real portion of the barrel, as follows, viz, by slitting the barrel longitudinally along near its top a sufficient distance, then down its right side from each extremity of this slit, and at right angles to it, to the bottom of the bore; and by turning down horizontally the part so liberated (on three sides) to the desired position, it can then be flattened out, and be readily finished off in a machine to about the size and form shown in figs. 2 and 3.

The configuration and position of the guiding stud, before referred to, is indicated (in red, for greater distinction,) by *z*, figs. 1 and 2. Its front, as seen, curves not only upward to lift the cartridge-shell by its impact as it is thrown out of the barrel by some proper ejecting device, but is set slanting, so as to deflect it at the same instant sidewise over A and out of the weapon altogether, in a manner as will be understood. This guiding stud, when employed with our style of breech-piece receptacle, should, to render the merits of the latter more fully available, always have the characteristics mentioned to enable it to deflect the cartridge-shell in the manner stated, whatever its precise form. It will readily be seen that by the employment of the "reinforce"

A, the weakening of the weapon at the breech-piece receptacle, by cutting down the side of the latter as low as described, is prevented, while the advantages set forth are at the same time attained.

Having now fully described the nature of our improvement, what we claim, and desire to secure by Letters Patent, is—

The horizontal "reinforce" lip or projection, described, on the breech-piece receptacle of breech-loading fire-arms of the class specified, said "reinforce" being formed and located substantially in the manner and for the purpose set forth, and having, to serve in combination with it, a guiding stud, *z*, or its equivalent in effect, also as explained, for the purpose explained.

THOMAS POULTNEY,
SILAS CRISPIN.

Witnesses:
CHAS. J. McGOWAN,
ALLEN G. SINCLAIR.