H. Lord.

Breech-Loading Fire-Arm.

No 74387 Patented Feb. 11, 1868

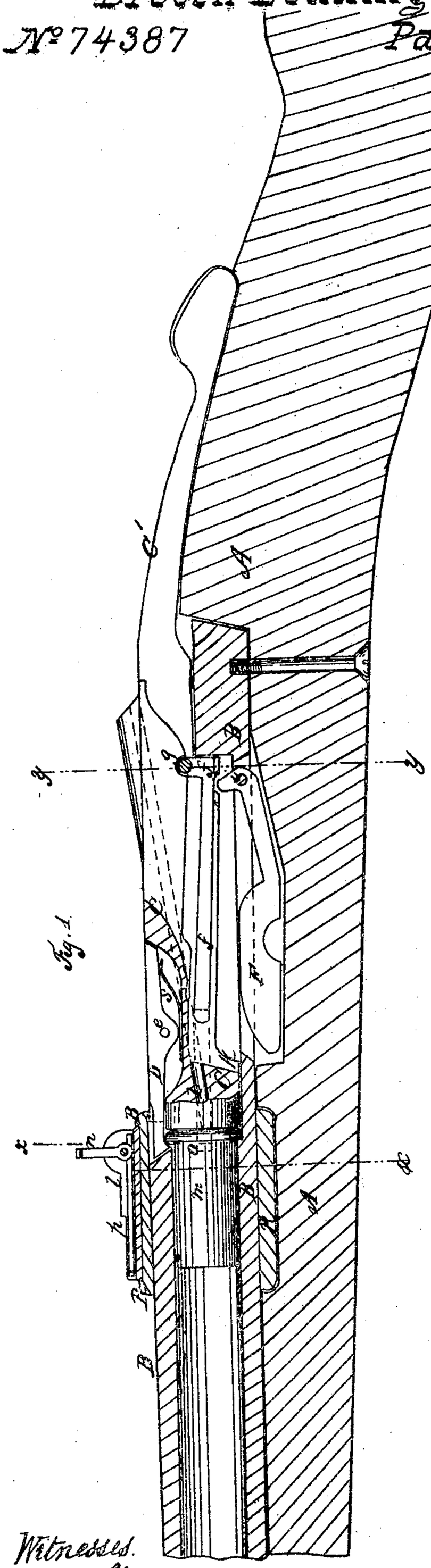

Fig. 1.

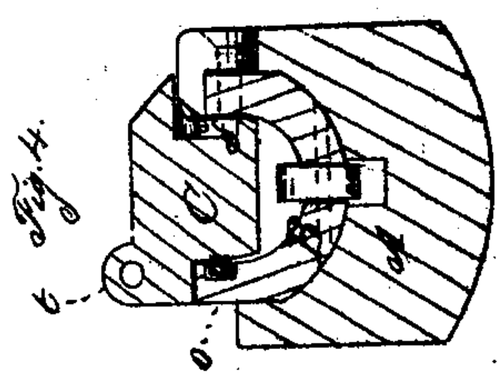

Fig. 4.

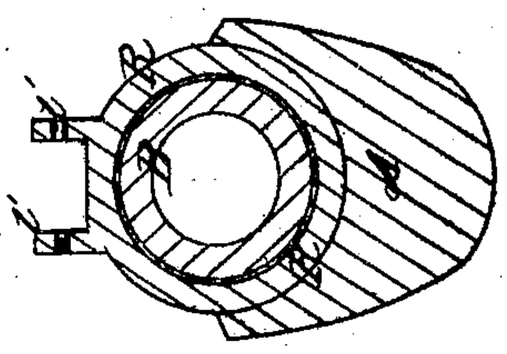

Fig. 3.

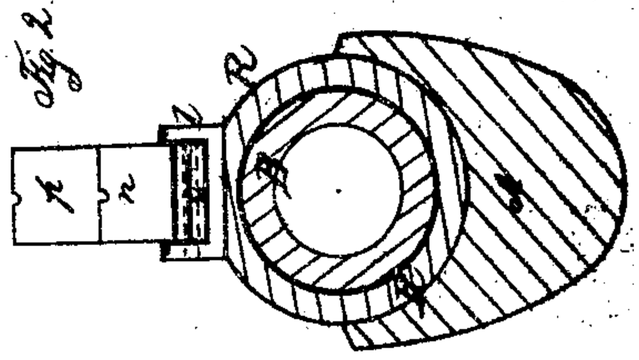

Fig. 2.

Witnesses.
Charles Speer
A. Smith.

Inventor.
H. Lord
By atty.
J. N. McIntire

United States Patent Office.

HORACE LORD, OF HARTFORD, CONNECTICUT.

Letters Patent No. 74,387, *dated February* 11, 1868.

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, HORACE LORD, of Hartford, of Hartford county, in the State of Connecticut, 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.

My invention relates particularly to certain improvements in breech-loading guns which are made out of muzzle-loading arms, or what are generally designated "altered" guns. In the alteration of ordinary muskets, or muzzle-loading guns, by cutting away a portion of the breech of the barrel, and inserting a movable breech-block, (or breech-piece,) the arm is so changed that the charge-chamber, or that portion of the barrel in which is placed and exploded the cartridge, is considerably further forward in the barrel than it was prior to the alteration, and that portion of the barrel to which the charge-chamber is thus removed is not strong enough to withstand the force of the explosion, but is very apt to burst open.

My invention has for its object, mainly, to provide a simple and effective means of strengthening the barrels of altered guns, and a preventive of the danger of bursting, and at the same time otherwise improve the arm; and to these ends my invention consists in the employment, in connection with the barrel of an "altered" or cut-away gun, of a strengthening-band or "reinforce," applied just about in advance of the cut-away portion; or about where the cartridge is received and held during its explosion. And my invention further consists in forming the said "reinforce" with projections, which constitute the stand in which are hung the leaves of the sight, and also in so arranging the said reinforce that its rear end shall cover the forward end of the horizontally sliding breech-block and extractor, as will be presently more fully explained.

To enable those skilled in the art to make and use my invention or improvement, I will proceed to describe it more fully, referring by letters to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section, illustrating an altered musket with my improvement.

Figure 2 is a cross-section at line *x x*, fig. 1.

Figure 3 is a similar section, showing a different form or arrangement of sight-stock; and

Figure 4 is a cross-section at the line *y y*, fig. 1.

In the several figures the same letter indicates the same part.

A is the stock, B the barrel, and C the sliding breech-piece of the gun. The breech-piece C, when placed in position for the firing of the gun, takes a bearing against a vertical shoulder in the rear (cut-out) portion of the barrel, as clearly seen at fig. 1. It is retained by a pin or stud, *g*, projecting from the side of the cut portion of barrel B into a slot, *f*, and is manipulated by the band-piece or tail portion, C′. The slot *f* is cut in such a direction in the side of breech-piece C (see fig. 1) that the said breech may be first lifted upward at its rear end, and then drawn backward. D is the extractor, hung on a pivot at *e*, and having a spring, *s*, arranged to press up its rear end, as shown. F is the flipper, or device for turning out the empty cartridge-shell. It is a simple lever, pivoted at its rear end at *i*, and so arranged that when the breech-piece C is drawn back the projecting portion *k* of the latter will strike the rear (bent-up) portion of said flipper F, and throw its forward end suddenly up to knock the empty cartridge-case clear of the gun. *m* illustrates a cartridge, placed in the gun in a position to be discharged. *l* is the stand or stock of an ordinary leaf-sight, and *u p* are its leaves. R is the "reinforce," or strengthening-collar.

The operation of the gun shown and described will be readily understood, and since my present invention relates wholly to the reinforce, I need here only give the following brief description of the operation: The beech-piece having been drawn back, a cartridge is inserted into the charge-chamber, (or partially inserted.) The breech-piece C is then forced forward, driving the cartridge home, and the spring-extractor D, passing over and catching on to the flanch of the cartridge, as shown. The cartridge may be exploded by a firing-pin, arranged in the hole *t* of the piece C, and struck by a hammer (not shown) in the usual manner. When it is desired to reload, the breech-piece is lifted and drawn back suddenly; the extractor D pulls the empty cartridge-case back, and nearly out of the charge-chamber, when the flipper F (being now struck at its rear end by the projecting portion or shoulder *k* of the breech-piece) flies up and knocks the empty shell clear out of the gun.

The reinforce R, I propose to make about of the form shown, and it may be shrunk on to the barrel, or slipped down from the muzzle, and driven on, brazed on, or secured in any desired manner. In that kind of breech-piece arranged to slide back and forth, as shown, there is generally an open joint where its forward upper extremity comes up to the rear cut-off upper portion of the barrel, and in the use of the kind of extractor shown, the barrel is cut or slotted out for the reception of the extractor in such a manner that the extractor is exposed to view, and is liable to be thrown up by the bursting of the shell. In order to cover over and protect and hold down the forward end of such an extractor, and in order, also, to neatly cover over the joint, where the forward end of the breech-piece comes against the cut-away portion of the barrel, and to hold down or lock the sliding breech at its forward end securely, I propose to arrange the reinforce R as shown, so that it will extend or lap over the forward end of the breech-piece C, and cover the front portion of the extractor D. I propose, also, to make the reinforce R with projecting ears, *l' l'*, (see fig. 3,) in which may be hung on a pivot, in the usual manner, the leaves *u p* of the sight, but it will be understood that the leaf-sight may be attached to the reinforce R, as seen at fig. 2, as it is now attached to the barrel, without departing from the main features, or losing the main advantages of my invention.

Having explained my invention, so that those skilled in the art can fully understand it, what I claim as new, and desire to secure by Letters Patent, is—

1. The employment, in combination with an altered gun-barrel (having its rear portion cut out to accommodate a movable breech-block,) of a reinforce or strengthening-band, or external tube, substantially in the manner and for the purpose described.

2. I also claim so arranging the reinforce as to protect the extractor, and lock down the forward end of the breech-piece, as specified.

3. I also claim forming the reinforce with projecting ears for a leaf-sight, substantially as described.

In testimony whereof, I have hereunto set my hand and seal, this day of , 1867.

HORACE LORD. [L. S.]

Witnesses:

C. B. RICHARDS,

LEWIS SHELDON.