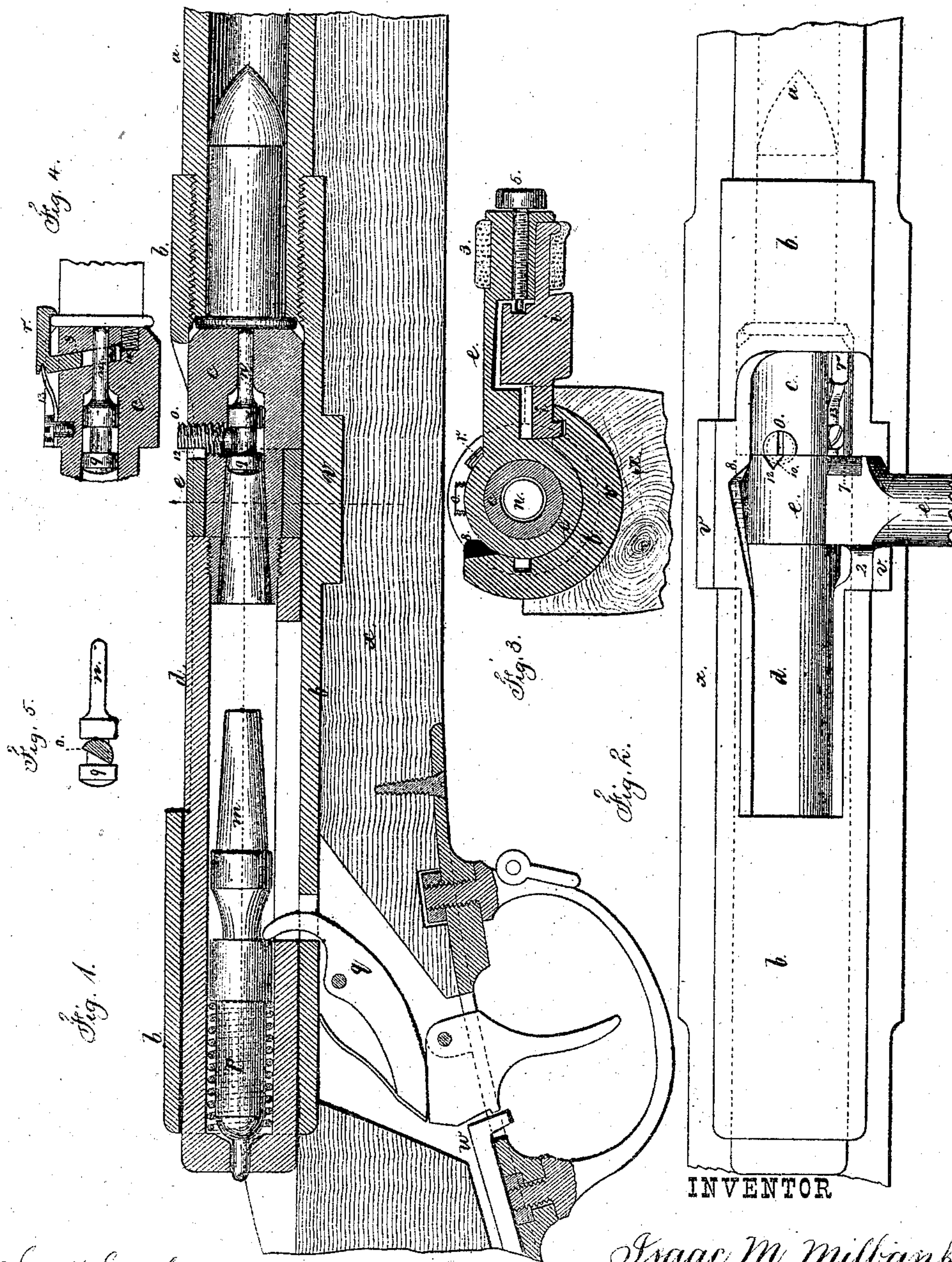


I. M. MILBANK.

Breech-Loading Fire-Arms.

No. 136,850.

Patented March 18, 1873.



INVENTOR

Chas. H. Smith
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Witnesses.

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ISAAC M. MILBANK, OF GREENFIELD HILL, CONNECTICUT.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 136,850, dated March 18, 1873.

To all whom it may concern:

Be it known that I, ISAAC M. MILBANK, of Greenfield Hill, in the county of Fairfield and State of Connecticut, have invented an Improvement in Breech-Loading Fire-Arms; and the following is declared to be a correct description of the same.

In this gun there is a breech-pin sliding in the metal cylinder at the rear of the barrel, and this breech-pin is made in two parts, between which is the eye of a lever which serves to move and to lock the breech-pin. The hammer is within the breech-pin, and the firing-pin is provided with a safety-stud to prevent discharge when the lever is not fully to place, and a retractor of peculiar construction is employed to draw the cartridge-case out of the gun.

In the drawing, Figure 1 is a longitudinal section of the breech and parts connected therewith. Fig. 2 is a plan. Fig. 3 is a cross-section at the center of the lever, and Fig. 4 is a detached section of the retractor.

The barrel *a* is of any usual character and screwed into the cylinder *b*, that receives within it the sliding breech-block and tube, made of the parts *c d* screwed together or otherwise connected. The eye of the lever *e* is introduced around the tubular connection between *c* and *d*, and swings freely thereon, so that it partially turns upon the axis of the breech-block in locking and unlocking the said breech-pin, instead of moving in a plane parallel to the axis of the breech-block or at an inclination thereto. The cylinder *b* is made with an opening in its upper side, through which the cartridge is inserted or the case withdrawn when the breech-pin is moved back out of the way. The offset at 2 forms a recoil-shield to support the lever *e*, and through it the breech-pin *c*, against the explosion. It is to be understood that the lever *e* forms a handle to move the breech-pin back and forth, and that, when pushed forward, said lever is turned down with its rear surface against the recoil-shield 2. It is preferable to employ a rubber tube, 3, around the outer portion of the lever *e*, to lessen the concussion upon the hand; and in order to hold the lever against any accidental movement, I employ the latch *i*, that is made, as seen in Fig. 3, to catch into the edge of the cylinder *b* and hold the lever *e*, in consequence of occupying

a tangential position to the arc in which the lever swings. This latch *i* may be blocked by a screw, 5, so as not to be capable of being withdrawn until the screw is loosened. Upon the lever *e* is an incline, 7, that comes into contact with the incline 8, at the side of the opening in the cylinder *b*, to form a pry that aids in starting the cartridge-case in withdrawing the same. The breech-block *c* is hollow, and receives the firing-pin *n*, and this is acted upon by the hammer *m* and spring *p*. The sear *q* holds the hammer against the action of the spring as the breech-block is moved forward to close the chamber of the barrel; hence the hammer is cocked by the act of closing the breech. There might be a risk of the piece being discharged when the lever *e* was not closed entirely down to its place, if it was not for the safety-pin *o*, that is inserted in the breech-pin *c* adjacent to the eye of the lever *e*. This safety-pin has a projection or diagonal incision at the end, so that, when the face thereof is parallel to the projection 9 on the firing pin, the latter can move freely, but when the lever *e* is turned the incline 10 thereon rotates this safety-pin into the position shown in Figs. 2 and 5, to cause the pin to arrest the forward movement of the firing-pin, unless the lever *e* is entirely closed, so that there will be nothing to prevent the firing-pin, in its forward movement, rotating the safety-pin and bringing the upper portion thereof around into the notch 12 in the eye of the lever *e*. It is preferable that this notch should be in the side of the eye, so that there will not be any opening at the surface into which dirt or foreign substances can pass. When the lever *e* is swung up and the breech-block drawn back to allow for inserting the cartridge, the lever *e*, taking against the rear end of the slot in the cylinder *b*, determines the extent of motion. The end of the breech-block *c* is provided with a spring, 14, to loosen the cartridge-case and aid in ejecting the same when drawn back out of the chamber of the gun. The retractor *r* has a steady-pin or stock, *s*, made with or permanently connected to it, and passing across the breech-pin *n* at a forward inclination, and this retractor has a spring, 13. By this construction the steady-pin *s* is retained by the firing-pin, by said firing-pin passing through an elongated hole in said pin *s*, and said pin *s* being at an inclination, there is

less friction as the retractor is raised by the latch at the end running over the flange of the cartridge-case than there would be if the steady-pin *s* was at right angles to the retractor or had a backward inclination. In pulling out the cartridge-shell this inclination increases the hold of the retractor upon the flange of the cartridge.

If desired, there may be a projection on the eye of the lever, moving in a groove in the inside of the cylinder *b*, and coming into the L-shaped portion of that groove when the lever is turned to lock the breech-block; thereby said eye and lever will be supported against the explosion at both sides of its fulcrum, and in this groove there may be an inclination to form a pry and aid in starting the cartridge-case to withdraw the same, in place of using the inclines 7 and 8. In the inside of the eye of the lever *e* there may be a screw-thread, either sectional or whole, and upon the surface of the tubular connection from the breech-block to the breech-tube a corresponding screw-thread, so that these parts take the recoil instead of the rear end of the breech-pin bearing against the side of the lever-eye; or the sectional screw-thread may be upon the outside of the lever-eye, to turn into similar threads upon the inside of *b*.

The trigger-lock *w* is constructed substantially as and for the objects set forth in my patent No. 84,566. The band *v* is made by a projecting portion of the metal of the cylinder *b*, and is let into the wood of the stock. This answers the two purposes of strengthening

the cylinder where weakest in consequence of the opening for the lever *e*, and of forming a lock to prevent the barrel becoming loose in the wooden stock *x*.

I claim as my invention—

1. The sliding breech-blocks *c d*, with a tubular connection between them, around which is the eye of the lever *e*, the parts being screwed together so as to be removable from the cylinder *b*, as set forth.

2. The spring-retractor *r*, having a steadying-pin, *s*, that passes diagonally into the breech-block *c*, and is retained in place by the firing-pin, that passes through an elongated opening in said steadying-pin, substantially as set forth.

3. The band *v* upon the outside of the cylinder *b* to strengthen the same where the opening is made for the lever *e*, and to aid in connecting the parts with the wooden stock, as set forth.

4. The safety-pin *o*, in combination with the eye of the lever *e* and the notch or opening 12, into which a portion of that safety-pin turns when the parts are in proper position for firing, substantially as set forth.

5. The latch *i* upon the lever *e* entering the cylinder *b*, in combination with the screw 5, or its equivalent, whereby the lever is either latched or locked, as set forth.

Signed by me this 20th day of June, A. D. 1872.

I. M. MILBANK.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.