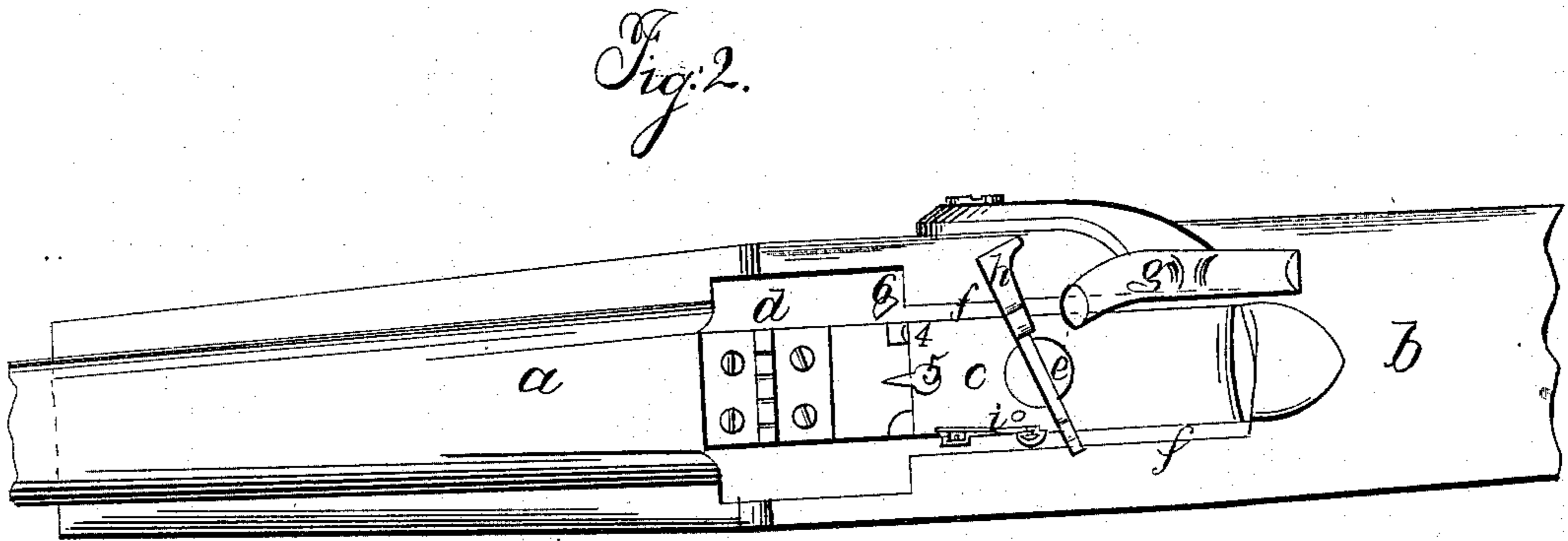
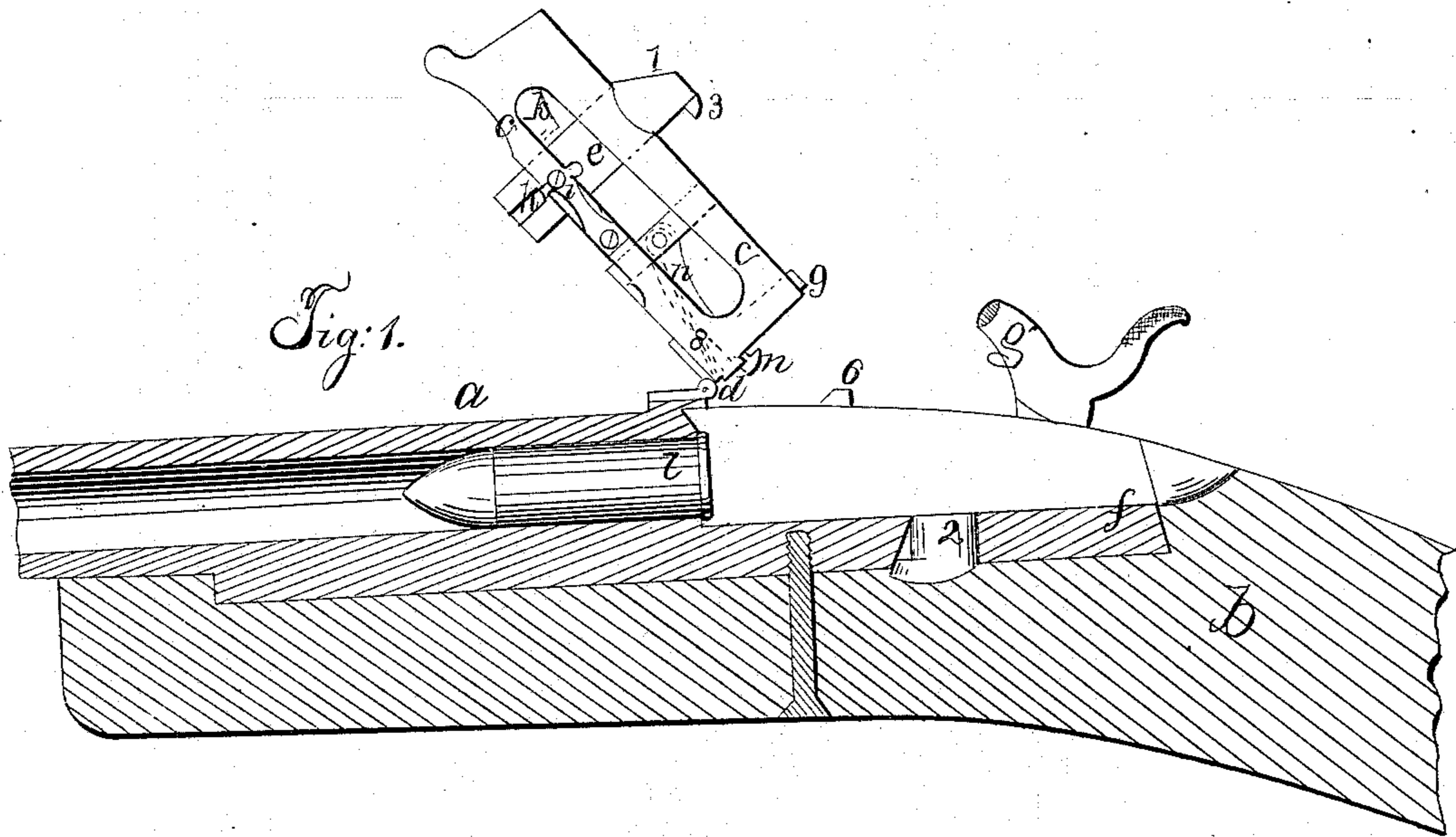


I. M. MILBANK.  
Breech-Loading Fire-Arm.

No. 55,520.

Patented June 12, 1866.



Witnesses.

*Geo. H. Ward*

*Chas. H. Smith*

*I. M. Milbank*

# UNITED STATES PATENT OFFICE.

ISAAC M. MILLBANK, OF GREENFIELD HILL, CONNECTICUT.

## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 55,520, dated June 12, 1866.

*To all whom it may concern:*

Be it known that I, ISAAC M. MILLBANK, of Greenfield Hill, in the county of Fairfield and State of Connecticut, have invented, made, and applied to use a certain new and useful Improvement in Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a longitudinal section of the breech and portions of the stock and barrel, and Fig. 2 is a plan of the same parts.

Similar marks of reference denote the same parts.

Breech-loading fire-arms have heretofore been made in which the breech-block is hinged near the rear end of the barrel, and provided with a cross-bolt to hold the same when closed, and with a claw to withdraw the cartridge-case as the breech is opened, as may be seen in Letters Patent allowed to me February 2, 1866.

The nature of my said invention consists in a turning bolt, in combination with a swinging breech-pin, said turning bolt being beveled on one side to enter its recess, and effectually locking the breech when a partial turn has been given to it, and I employ a lever to give this turning motion, so located that the hammer insures the proper turning of said bolt before the explosion can take place. I employ a latch to hold the lever in position as the breech is opened, which unlatches as the breech closes, and a spring gives a partial rotation to the bolt, and I provide a peculiarly-constructed claw to withdraw the cartridge-case.

In the drawings, *a* is the rear of the barrel; *b*, a portion of the stock. *c* is the swinging breech-block, hinged at *d* to the rear portion of the barrel in any desired manner. *e* is my improved transverse turning bolt, passing through the breech-block *c*, and beveled at the lower end upon one side, as seen at 1, Fig. 1, so that it will enter the recess 2 in the metal extension *f* from the barrel.

When the breech is closed the end of this bolt *e* enters said recess 2, and a partial turn brings the side of the round bolt that is not beveled toward the back of the recess 2, and

the breech cannot be opened until the bolt is turned back again, and when the piece is fired said bolt takes the concussion by a direct bearing against the rear side of recess 2.

In order to insure the holding down of the rear end of the swinging breech *c*, particularly when the lever *h* has been turned but a few degrees, I employ a locking-stud, 3, that enters a recess toward the front of the recess 2 as the breech is closed, and said stud passes under the lower side of the metal strap *f* as said bolt *e* is turned or partially turned.

The hammer *g* is of any usual character, and placed so as to strike the exploding-punch 4, and the lever *h* will be turned back against the stud 5 by the action of the hammer as it is fired, in case said lever shall not previously have been properly turned, thereby insuring the locking of the breech *c* before the explosion can take place.

A stud, 6, may be placed on the part *f* near to the exploding-punch 4, against the side of which stud 6 the hammer *g* passes, so that the hammer will be supported at the opposite side to the end of the lever *h*, and not be strained or injured by any recoil of said lever.

I employ a latch, *i*, at the side of the breech-block *c* to take a notch in the lever *h* and hold it so that it may retain the bolt *e* in the proper position for entering the recess 2, and prevent the bolt *e* turning into a wrong position when the breech is opened, and this latch is pressed back by the side of the recess *f*, into which the breech passes as it is closed, so that the lever *h* is liberated, and a spring, *k*, acting upon a stud upon the bolt *e*, gives to said bolt a partial rotation the moment the breech is closed, so as to lock the same.

It will be understood that in opening the breech the lever *h* is turned transversely at the same time that the thumb is applied under the projecting rear end of the breech-block *c*.

In order to withdraw the cartridge-case *l*, I employ the claw *n* on a fulcrum, 7, with a spring, 8, and a block, 9, that is formed with or attached to the end of said claw *n*. If this block 9 was not used there would be an opening at the rear of the cartridge, into which the case might burst when the explosion took place, said opening being the space in which the claw moves as it retains hold on the car-

tridge to draw out the case. This block 9 covers said opening and prevents the cartridge-case bursting.

What I claim, and desire to secure by Letters Patent, is—

1. A swinging breech, in combination with a transverse turning bolt beveled on one side to enter a recess, and acting to retain the breech by a partial turn of said bolt, substantially as set forth.

2. The lever *h*, for turning the bolt *e* of the swinging breech, in combination with the hammer *g*, the parts being fitted substantially as specified, so that the discharge of the hammer shall insure the proper turning of said bolt, as set forth.

3. The latch *i*, in combination with the lever

*h* and turning bolt *e*, as set forth, whereby the said latch is disconnected from the lever by the closing of the breech, as set forth.

4. The spring *k*, in combination with the turning bolt *e* and swinging breech, to effect the locking or partial locking of the breech as soon as closed, as set forth.

5. The claw or retractor *n*, formed with or attached to the supporting-block 9, in combination with the swinging breech-block, as and for the purposes specified.

Dated February 21, A. D. 1866.

I. M. MILLBANK.

Witnesses:

GEO. D. WALKER,

CHAS. H. SMITH.