T. TWICKELER.

Breech-Loading Fire-Arm.

No. 34,706. Patented Mar. 18, 1862.

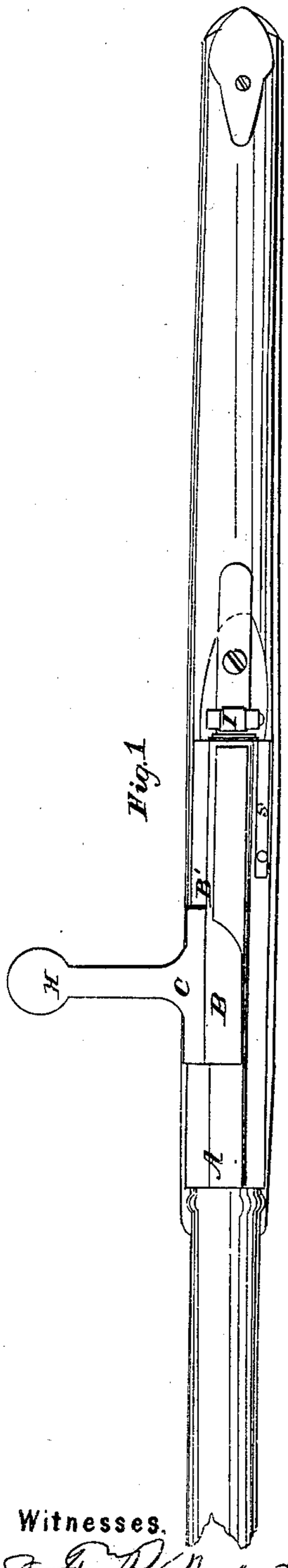

Fig. 1

Fig. 4

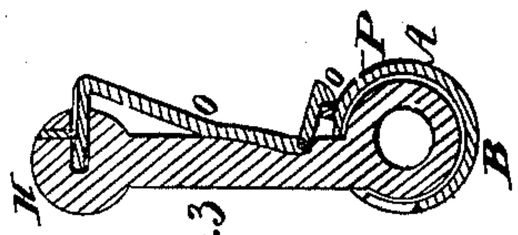

Fig. 3

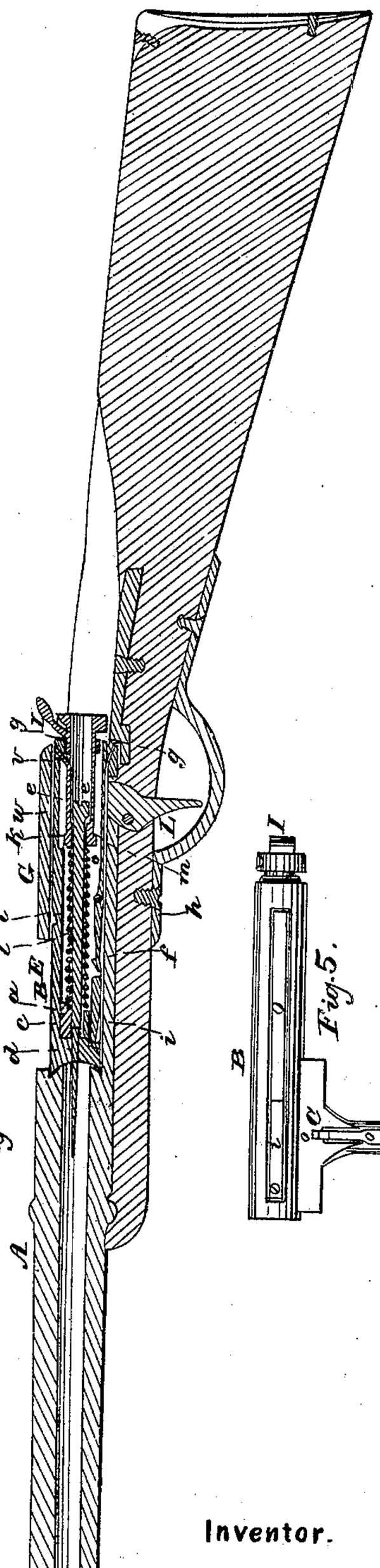

Fig. 2

Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

THEODORE TWICKELER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN NEEDLE-GUNS.

Specification forming part of Letters Patent No. **34,706**, dated March 18, 1862.

To all whom it may concern:

Be it known that I, THEODORE TWICKELER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Breech-Loading Needle-Guns; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a top view of my improved gun; Fig. 2, a longitudinal and vertical section of the same; Fig. 3, a longitudinal section of the handle for operating the sliding breech, the same showing the spring-catch for locking the breech to the muzzle portion of the fire-arm; Fig. 4, a top view of the needle-bar carriage, spring, and needle.

In the drawings, A denotes the barrel of the fire-arm, and B the sliding breech thereof, the said barrel being enlarged at the breech part in order to receive the sliding breech. The said breech part has a slot, B′, cut longitudinally through its top part, to allow the handle carrier or bar C to slide back and forth, so as properly to guide the sliding breech-pin in its movements. The opening in the said portion is still further enlarged to allow the cartridge to be readily inserted in the rear part of the bore. The said breech part or pin B is of a cylindrical form, and has its fron portion made with a concave projecting flange, which is to fit into a corresponding groove made in the rear part of the barrel around the bore, the same being to aid in making a perfectly gas-tight joint between the two parts. The breech-pin has its front end made solid, except a small hole, which is made through the center of the same for a needle, D, to slide through, as seen in Fig. 2. The remaining portion of the said breech-pin is formed hollow, and has the needle-bar carriage E placed within it, the same having a screw-cap or annulus, *c*, which serves to connect the needle with the needle-bar G, the latter having a male screw, *a*, cut upon it, which screws into the cap *c* and against the head *d* of the needle, and thereby firmly confines the needle in place.

e represents a cylinder or sleeve which constitutes the rear and outer portion of the needle-bar carriage. This sleeve has an annular shoulder or ring, *m*, formed on its front end, which operates with a screw-ring, *g*, screwed into the rear part of the breech-pin, to estop the needle-bar carriage when its front end has been drawn backward far enough to be caught and retained by the spring-catch *f*. (Shown in Fig. 2.) The spring-lever O is disposed in a slot formed in the under side of the breech-pin, as seen in Fig. 5, which is an under side view of the breech-pin and its handle. The said lever is hung near its middle on a fulcrum or pin, *h*, so as to play in vertical directions; and, besides, the catch *f* is forced upward by another spring, *i*, one end of which is attached to the breech-pin by means of a screw, while its other end supports the lever of the catch *f*, as seen in Fig. 2. Against the rear part of the lever of the spring-catch the upper part or sear of the trigger operates so as to raise the same and throw the catch *f* out of contact with the front end of the needle-carriage, and thus allow the needle to be forced forward by the coiled spring *l* into the bore of the gun or a cartridge placed in the same. The ends of said spring *l* rest, respectively, against the two inner ends of the needle-bar carriage, or the inner faces of the annulus *c* and the ring *m*. Furthermore, said needle-bar carriage is maintained in its proper position by means of a stud, *k*, formed on the ring *m*, as seen in Fig. 4, the same operating in conjunction with a longitudinal slot, *n*, formed on the inner surface of the breech-pin, as seen in Fig. 2.

H is the handle for operating the breech-pin, the same being formed upon a bar or carrier, C, which is connected to the breech-pin, as seen in Fig. 5. On the under side of the said carrier and handle a bent catch-lever, *o*′, is disposed, the said lever being supported near its inner end by a fulcrum, while its outer end rests upon a spring arranged within the knob of the handle. This catch operates, in connection with a stud, P, arranged on the barrel, to hold the breech-pin and the rear portion of the barrel in firm contact.

I is a thumb-spring lever, which has a stud or shoulder, *v*, formed on its top surface. This shoulder, when the needle-bar carriage is forced inward to its greatest extent, (in order to compress the coiled spring *l*,) rests against the inner end of the screw-ring *g*, and retains such spring in its compressed state until re-

leased by means of the trigger L, acting on the rear end of the lever which carries the catch *f*.

In operating or preparing my improved gun to be discharged, the needle-carrier is first to be drawn backward until its front part is caught by the catch *f*. The handle of the breech-pin is next to be turned to the left, and the slide-bar or handle-carrier is drawn backward until a catch on the inner end of the spring *s* enters a notch formed on the outside of the sliding breech B. The cartridge is then to be passed into the opening formed and pressed into the rear part of the bore. Next the breech-pin is to be moved forward into its place and the handle turned toward the right, so as to allow the spring-catch *o* to lock upon its stud P, and thus maintain the parts in close contact. Next the rear part of the needle-bar carriage is pushed forward until the spring *l* has received its proper degree of compression, when the shoulder *v* of the thumb-lever, acting against the ring *g*, will retain the spring in such compressed state. Next, by pulling gently on the trigger, the catch *f* will be so operated on as to release the coiled spring *l*, which, acting on the needle, will force it forward into the percussion-priming of the cartridge and discharge the piece.

I claim—

The arrangement of the catch-lever O, the spring *i*, and the thumb-lever I, (furnished with a stud or shoulder, *v*, as set forth,) with respect to the needle-bar carriage, and so as to operate in holding the spring *l* in a compressed state, in manner and under circumstances as described.

THEODORE TWICKELER.

Witnesses:
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