A. N. NEWTON.

Breech-Loading Fire-Arm.

No. 11,198. Patented June 27, 1854.

Fig 1.

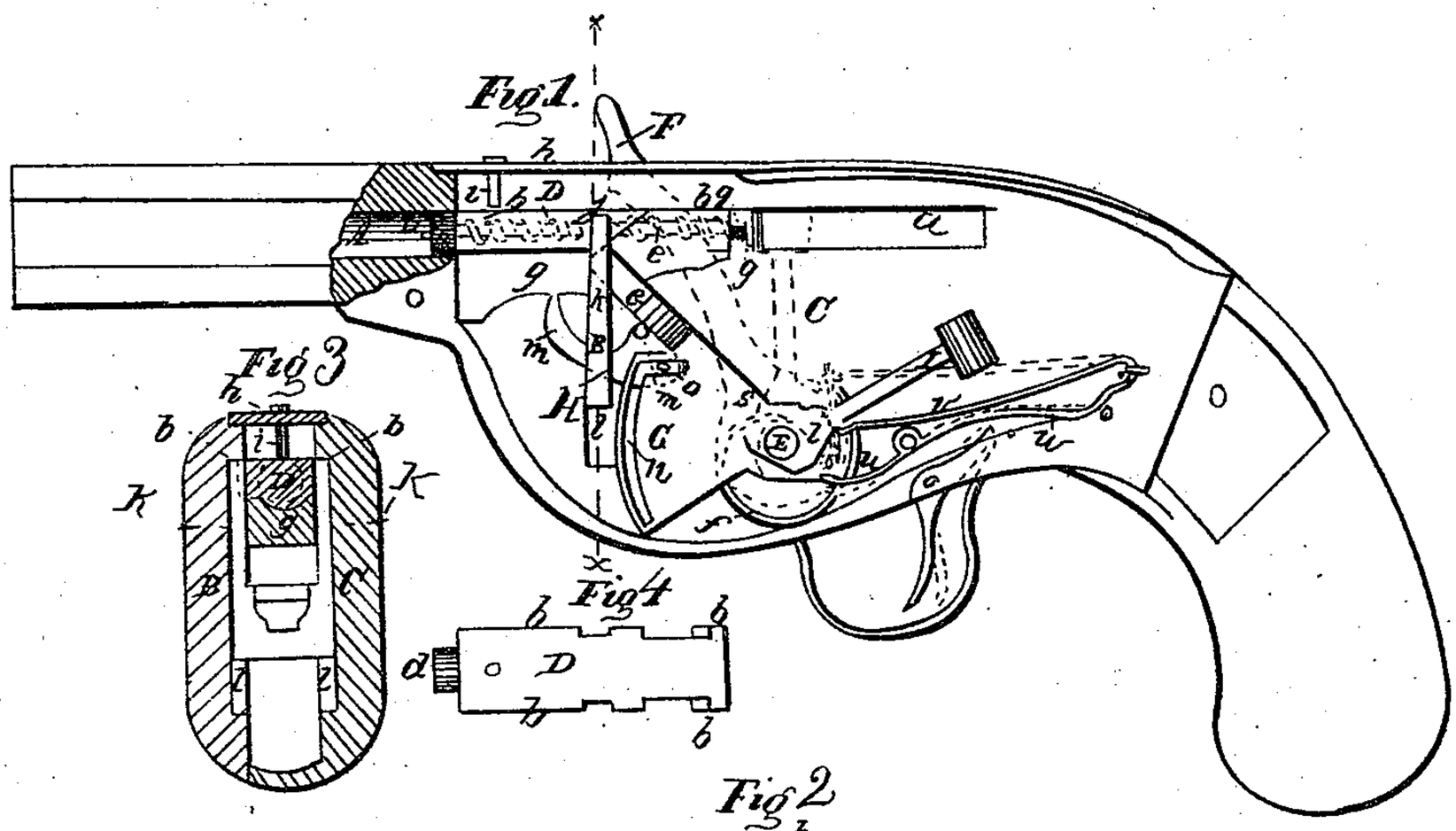


Fig 3

Fig 4

Fig 2

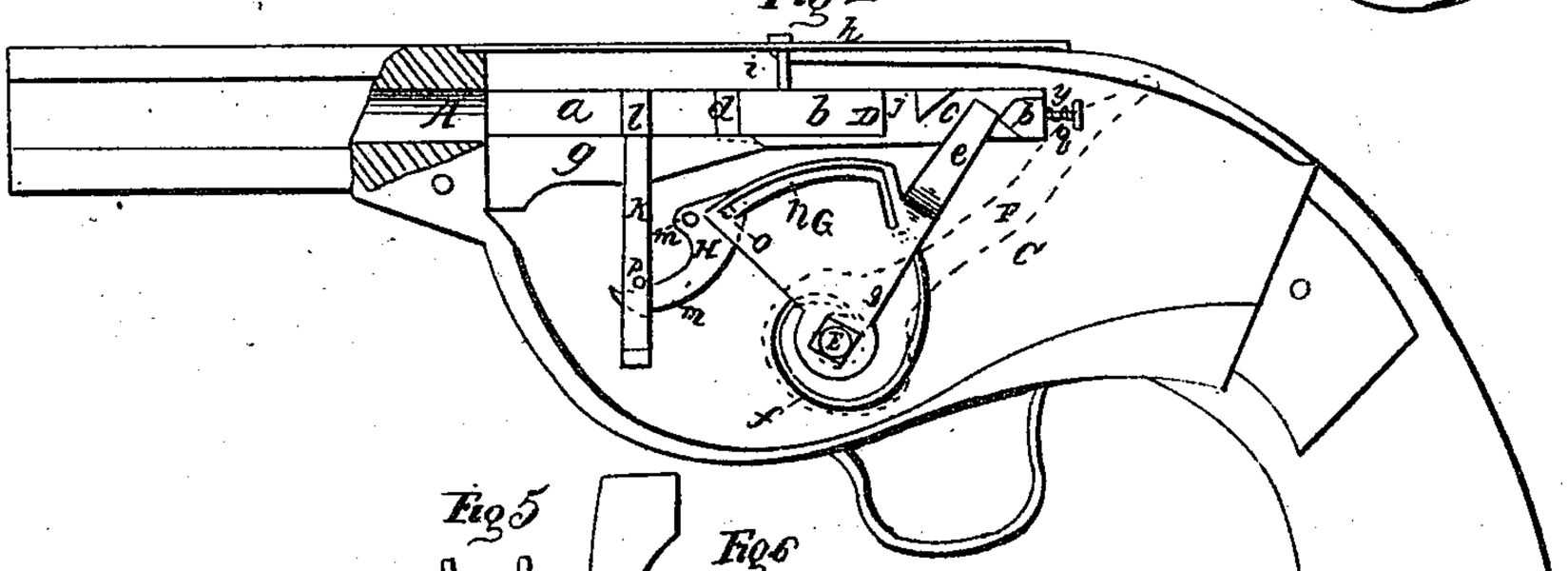


Fig 5

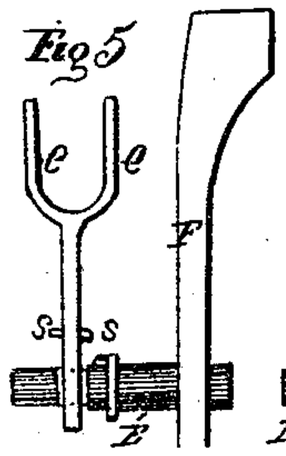
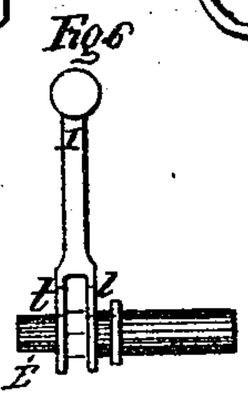


Fig 6



UNITED STATES PATENT OFFICE.

ABNER N. NEWTON, OF RICHMOND, INDIANA.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **11,198**, dated June 27, 1854.

To all whom it may concern:

Be it known that I, ABNER N. NEWTON, of Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of a pistol constructed according to my invention, having one side of the shank which unites the barrel with the stock removed, to show the lock and the mechanism by which the breech-pin and the cock are operated. Fig. 2 is a similar view, showing only the mechanism for operating the breech-pin, and that in a different position to Fig. 1. Fig. 3 is a section in the red line *x x* shown in Fig. 1. Fig. 4 is a top view of the breech-pin. Fig. 5 is a back view of the fork and thumb lever employed to draw back the breech-pin. Fig. 6 is a back view of the cock.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in certain improvements in the method of arranging and operating a sliding breech-pin, and in the arrangement and means of operating the cock, whereby the repetition of charging and firing is enabled to be performed with great rapidity, and the arm can be carried and handled with a very great degree of safety.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The barrel A is united with the stock by means of a hollow iron shank made in two parts, B C, of which the part B is capable of being readily detached, for the purpose of exposing the interior, and in each part or side of this shank is a groove, *a*, to receive a tongue, *b*, on either side of the sliding breech-pin D, and direct the movements of the said pin in a line with the barrel.

The construction of the breech-pin is shown in Figs. 1, 2, 3, 4. It has a part, *d*, capable of fitting closely in the back part of the chamber, and when that part *e* is in the chamber the part behind *d* fits to the rear of the chamber with a shoulder. It has a recess, *c*, in either side, to receive one of the prongs of a forked lever, *e e*, which is firmly attached to an arbor, E, which corresponds with the tumbler-shaft of an ordinary fire-arm, and protrudes through the side C of the shank far enough to receive, outside the shank, the lever F, which I term the "thumb-lever," and which is firmly attached to the arbor, for the purpose of drawing back the breech-pin to load the piece. The arbor E has a spring, *f*, attached to it and to the side C of the shank in such a way that after the breech-pin has been drawn back by the action of the forked lever *e e*, and the lever F has been released, it will be returned to its place (as shown in Fig. 1) by the action of the spring. The charge, which is employed in the form of a cartridge, is placed upon a shelf, *g*, which is fixed close in the rear of the chamber and is left uncovered when the breech-pin is drawn back. The breech-pin is covered, when in place, as shown in Fig. 1, by a plate, *h*, which is attached to it by a screw-pin, *i*, so as to slide back and forth in grooves provided to receive it. The breech-pin has two other recesses, *j j*—one on each side—to receive the two sides of the lock-piece *k k*, which is of forked form and slides in upright grooves *l l* in the sides B C of the shank. This lock-piece is drawn down far enough to set free the breech-pin when it is desired to be drawn back, and is raised to lock it, when thrown forward, by the action of a slotted plate, G, attached to or forming a portion of the forked lever *e e*, and a small lever, H, which swings on a fixed fulcrum, *m*. The greater portion of the slot *n* in the plate G is in the form of an arc described from the center E, but a short piece at the back part is straight, as shown in Figs. 1, 2. One arm of the lever H is furnished with a pin, *o*, which plays freely in the slot, and its other arm, *m'*, which is curved, plays between the bottom of the lock-piece and a transverse pin, *p*, attached to the same. When the drawing back of the thumb-lever commences, the action of the straight part of the slot upon the pin is such as to raise it and throw down the part which acts upon the lock-piece, thus throwing down the latter and unlocking the breech-pin. When the arc-formed part of the slot receives the pin, no further motion of the lock-piece takes place, but the breech-pin is

kept unlocked. In drawing back the thumb-lever, the straight part of the slot must act before the drawing back of the breech-pin commences. When the thumb-lever is set free to allow the breech-pin to be thrown forward, the straight part of the slot does not act till the breech-pin is in place. The two sides *k k* of the lock-piece are made of slightly-tapering form, as shown in Figs. 1, 2, that they may act as wedges in driving home the breech-pin.

The cartridge to be employed in this fire-arm is of that kind which is exploded by being pierced with a needle in the rear, which contains some detonating composition. The needle *q* is fitted to slide freely through the breech, and is held back by a spring, *y*, so that its point does not protrude through the breech-pin until the head at its back end is struck by the cock. This is substantially like the needle in other fire-arms. The cock I is substantially like the cock of other guns, except that it is attached directly to the tumbler and is within the shank B C, instead of outside the piece. It is fitted to work loosely on the arbor E, and is cocked by drawing back of the thumb-lever, preparatory to the loading of the piece, being thrown back simultaneously with the forked lever *e e* by means of a pin, *s*, which is inserted transversely through the lower part of the forked lever, and which comes in contact with the tumbler. The tumbler is represented as composed of two plates, *t t*, which both fit the shaft and receive between them the hub of the forked lever *e e* and plate G. The cock is held back by a catch, *u*, and feather-spring *w* in the usual way, which are set free by the trigger J, and it is made to strike when set free by a mainspring, *v*, substantially like that commonly employed. (See Fig. 1.)

The loading and discharging of the piece is performed in the following manner: The piece is held in the right hand in the usual way, and the thumb-lever F, which occupies the place usually occupied by the cock, is drawn back by the thumb until the tongues *b b* on the sliding breech-pin arrive at the back of the grooves *a a*, as shown in Fig. 2, and the lever can move no farther. During the early part of the movement from the position shown in Fig. 1, the straight part of the slot *n* in the plate G is in operation on the stud *o* in drawing down the locking-piece *k k* to unlock the sliding breech-pin, and by the time that is free the prongs of the forked lever *e e* have reached the back of the recesses *c c* and will commence moving back the breech-pin. The cock at the time the drawing back of the thumb-lever commences is in the position represented in red in Fig. 1; but about the same time as the breech-pin commences moving the pin *s* comes in contact with the tumbler *t t*, and commences throwing back the cock, which is secured by the falling in of the catch *u* before the breech-pin stops. The cartridge is placed on the shelf *g* with the left hand, and the thumb-lever then set free, when the spring *f* quickly drives forward the breech-pin and drives the charge into the barrel. The piece is now ready to be discharged, which is done by pulling the trigger in the ordinary way and setting free the hammer to strike and drive the needle forward.

A gun constructed on this plan may be loaded and fired from twenty to thirty times in a minute. It is more free than a gun of ordinary construction from any liability to accidental explosion of the charge, as if the thumb-lever is accidentally caught and moved while the gun is cocked, it does not affect the cock in any way.

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

1. The method herein described of operating the sliding breech-pin D by means of the lever *e e*, the thumb-lever F, and the spring *f*, all applied or attached to the arbor E, which forms the tumbler-shaft, and operating substantially as set forth.

2. Locking and unlocking the sliding breech-pin by means of a locking-piece, *k k*, which slides in grooves in the stock or shank of the gun, and a lever, H, having a stud, *o*, working freely in a slot of suitable form in a plate, G, attached to the same arbor as the levers by which the breech-pin is operated, the whole being arranged and operating substantially as set forth.

3. Fitting the cock and tumbler, or other equivalents usually secured to the tumbler-shaft E, loosely to the said shaft within the stock or shank of the piece, and causing the cock to be driven back, to cock the piece, by means of a pin, *s*, attached to the lever *e e*, by which the sliding breech is moved back and forth, whereby the sliding breech is allowed to return after the cartridge is introduced and leave the piece cocked, substantially as herein described.

ABNER N. NEWTON.

Witnesses:

JOHN K. BOSWELL,

JOHN FINLEY.