W. H. BAKER.
Locks for Fire-Arms.

No. 199,773. Patented Jan. 29, 1878.

Fig. 1.

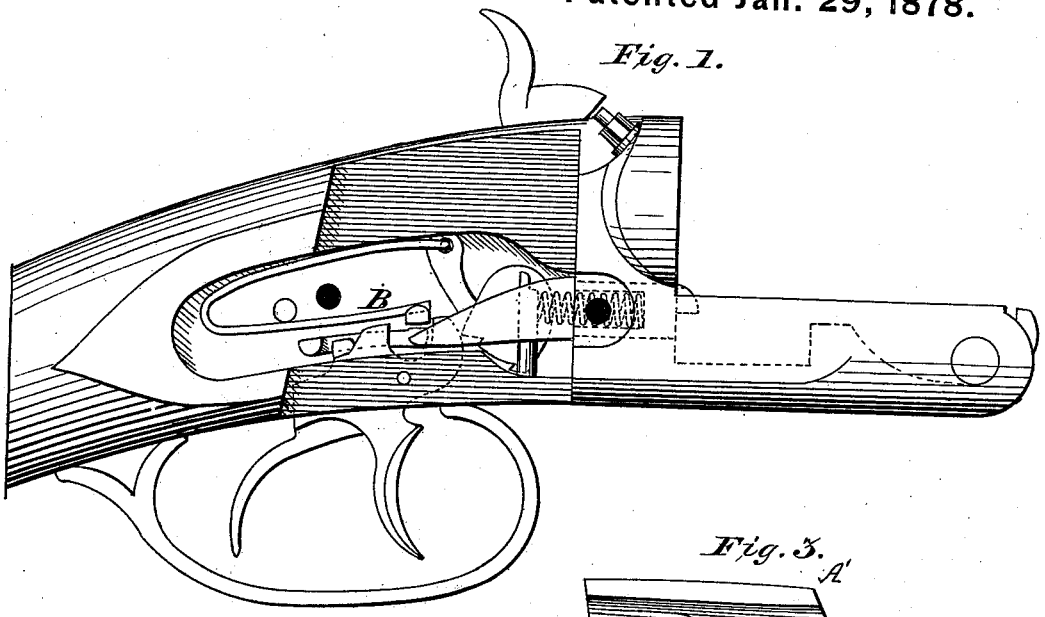


Fig. 3.

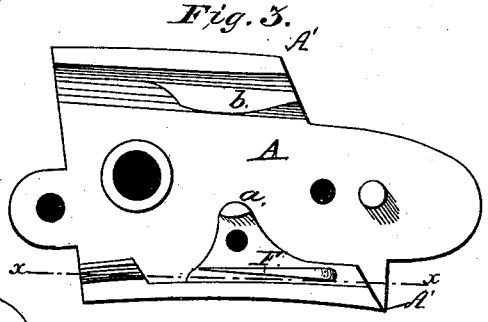


Fig. 2.

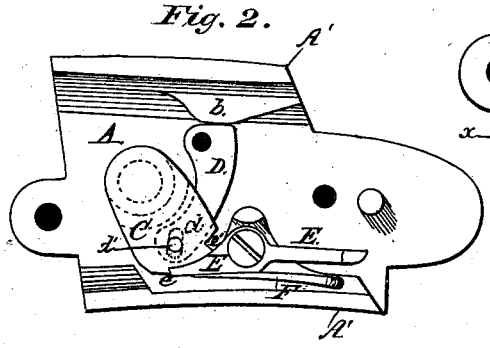


Fig. 4.

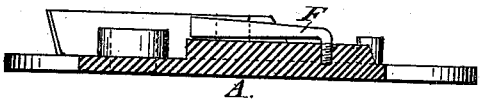


Fig. 5.

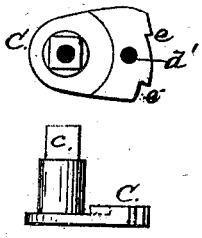


Fig. 6.

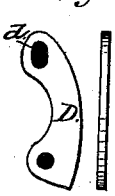
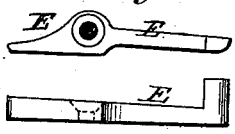


Fig. 7.

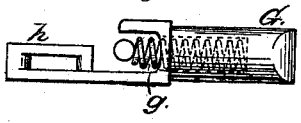


Witnesses:

Geo. J. Gardner

Peter Bunn

Fig. 8.



Inventor:

Wm. H. Baker.

UNITED STATES PATENT OFFICE.

WILLIAM H. BAKER, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN LOCKS FOR FIRE-ARMS.

Specification forming part of Letters Patent No. **199,773**, dated January 29, 1878; application filed December 21, 1877.

To all whom it may concern:

Be it known that I, WILLIAM H. BAKER, of Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Gun-Locks, of which the following is a specification:

My invention relates to gun-locks for use in connection with breech-loading fire-arms, and to a particular construction and combination of the parts for making the hammer rebound to half or quarter cock.

In sporting breech-loading guns the appearance, as well as the efficiency, is a matter of importance; and my invention is designed to preserve the most approved form of arm, as well as the greater strength of breech, without complication and increase of weight, and at the same time obtain a lock of equal efficiency with the best at a moderate cost.

To the foregoing end my invention consists in a raised lock-plate, such as shown, the flanges of which, in a measure, embrace the lock mechanism and afford abutments or stops for the mainspring; and in the combination and connection with it of what I call a "back-acting mainspring"—that is to say, a bow or bent spring arranged behind the tumbler, and so connected therewith as to cause a rebound of the hammer after firing. By this arrangement of the lock mechanism all of the works are behind the recoil or breech part of the frame, and the application of the lock in no way weakens such breech part.

In this application I show an improved construction and means of operating the lock-fast or snap-catch which is described in my patent of August 31, 1875.

In the drawings, Figure 1 represents the frame with one of the locks removed, and showing the interior of the other lock. Fig. 2 represents the interior of the lock-plate, having the sear, sear-spring tumbler, and link or stirrup in place; and Fig. 3 represents an interior plan of the lock-plate with all the parts removed. Fig. 4 is a section through the line *x x*, Fig. 3. Fig. 5 is a plan and side view of the tumbler. Fig. 6 is a side and edge view of the link. Fig. 7 is a similar view of the sear, and Fig. 8 is a view of my improved lock-fast.

A is the lock-plate, having a projection, *a*, upon which one end of the mainspring B impinges, and a ledge or projection, *b*, which serves as a stop to limit the direct action of the mainspring. Said plate has flanges A A′ projecting from its longitudinal edges, which rest against the tang or tail-piece, by means of which the breech-plate or recoil-shield is secured to the stock. These flanges form portions of the wall of the chamber, inclosing the operating devices of the lock, while their outer curved faces afford a convenient surface for the hand to grasp. By using these flanged plates it will be seen that the necessity of mortising the wooden stock is obviated, and greater strength secured than when the lock-plates are set in recesses in the wood.

The letter C indicates a tumbler, which is firmly connected with the hammer in the usual manner, and the upper arm of the mainspring B is connected with the lower portion of this tumbler by a link, D, the lower end of which is provided with a slot, *d*, which fits over a pin or stud, *d′*, projecting from said tumbler, and permits a forward motion of the hammer beyond that occasioned by the direct action of the mainspring, which motion results from the acquired momentum of the hammer, and is sufficient to cause explosion of the cap or ignition of the primer of the charge.

When the hammer is full cocked the mainspring B is, of course, compressed, and the sear F takes into the notch *e′* of the tumbler; but when by the action of the trigger the sear is caused to release the tumbler, the mainspring expands. The pin *d′*, pressing on the upper end of the slot *d*, throws the tumbler rearward and the hammer forward. Now, when the head of the link D strikes the ledge *b* the expansion of the mainspring ceases, and this occurs before the hammer has struck the nipple or firing-pin, its further movement to so strike being occasioned by its acquired momentum, and permitted by the slot *d* slipping upward on the pin *d′*, during which slipping the forward wall of the slot, pressing on pin *d′*, carries backward the lower end of link D, slightly compressing the mainspring, owing to said spring being pivoted, the forward upper corner and the rear upper corner of the link acting as a fulcrum against the ledge *b*. After the hammer has struck the nipple or firing-

pin the expansion of the spring throws the lower end of the link forward by drawing its pivoted corner upward, whereby the tumbler is thrown forward, causing a corresponding backward movement of the hammer until the sear catches in the half-cock notch *e'*.

My improved lock-fast is shown in Fig. 8, and consists of the bolt G, made hollow, and containing its operating spiral spring *g*, and having the loop and extension part *h* made in one piece.

By this construction the bolt is firmer and stronger than in my patent above referred to, while it may be operated through the medium of the trigger, as in that case.

Having fully described my invention, and its principle of operation, what I claim as new, and desire to secure by Letters Patent, is—

1. The lock-plate for breech-loading fire-arms herein described, having flanges projecting from its longitudinal edges, and a stud for supporting, and a ledge or stop for limiting the movement of the mainspring, substantially as set forth.

2. The combination of lock-plate, having stud and ledge, as described, with mainspring, slotted link, and tumbler, as and for the purposes set forth.

3. The hollow locking-bolt, its contained operating-spring, and the trigger, when constructed and combined for operation as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

WM. H. BAKER.

Witnesses:
GEO. J. GARDNER,
PETER BURNS.