C. E. BEST.

Gun-Lock.

No. 216,370. Patented June 10, 1879.

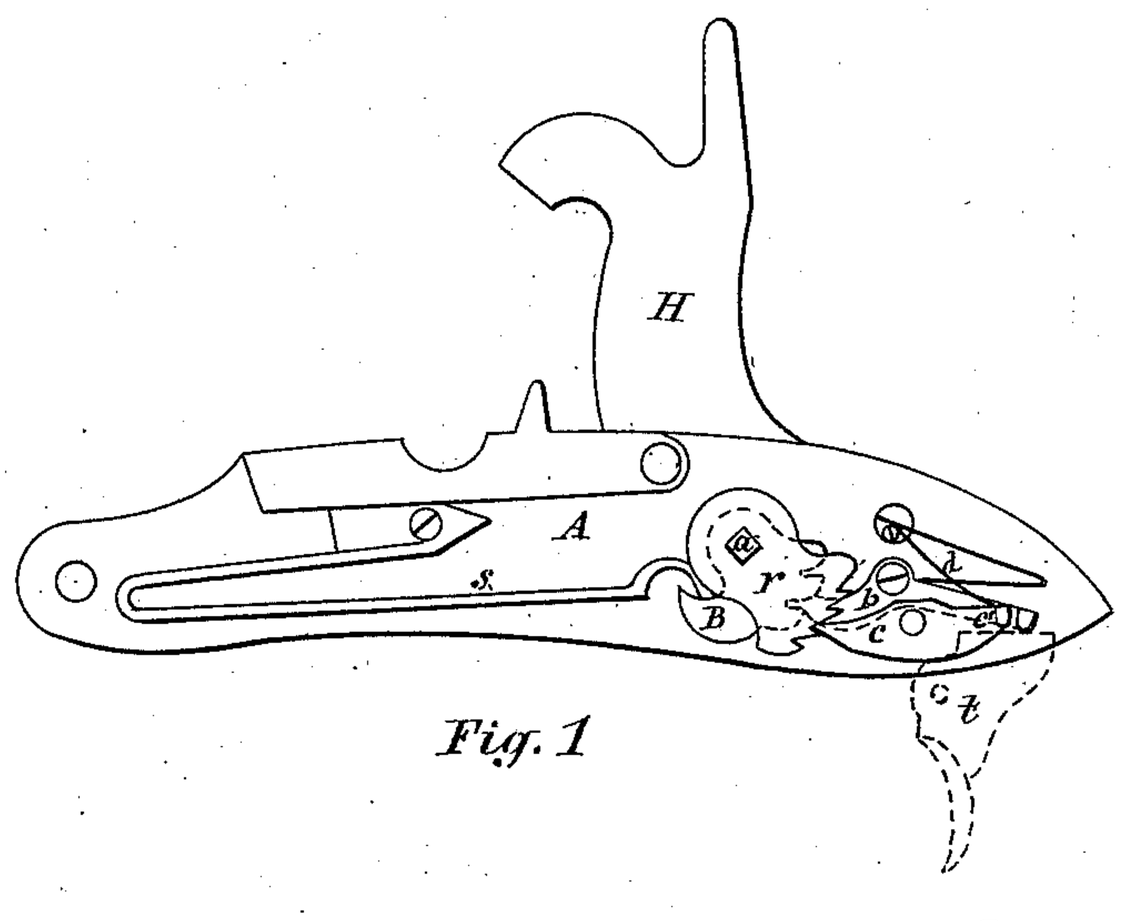

Fig. 1

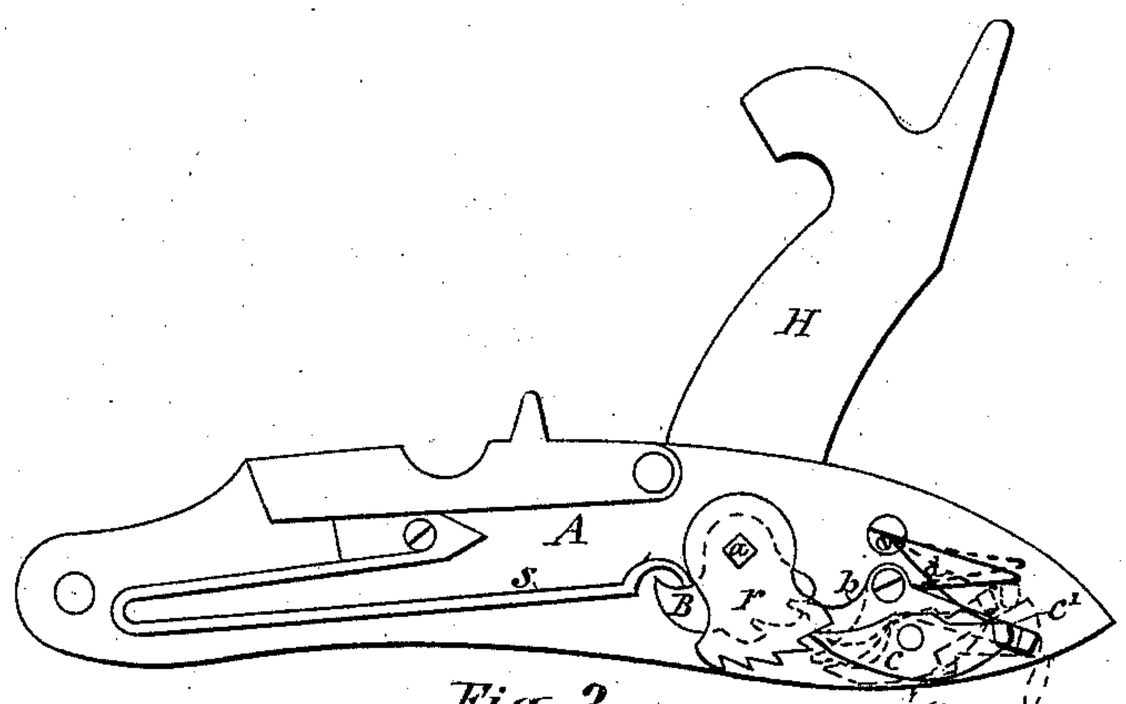

Fig. 2.

WITNESSES:

C. Bendixen.

A. Wood

INVENTOR:

Charles E. Best

per E. Lacass, Atty.

UNITED STATES PATENT OFFICE.

CHARLES E. BEST, OF JORDAN, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES T. PHILLIPS, OF SAME PLACE.

IMPROVEMENT IN GUN-LOCKS.

Specification forming part of Letters Patent No. **216,370,** dated June 10, 1879; application filed March 26, 1879.

To all whom it may concern:

Be it known that I, CHARLES E. BEST, of Jordan, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Fire-Arm Locks, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to a novel construction and arrangement of devices designed to prevent accidental discharge of a fire-arm, and whereby a guard is obtained which is simple in construction, automatic, effective, and reliable in operation, and readily applied to a fire-arm lock, without necessitating an extra trigger, or alteration of the gun-stock, or in anywise interfering with or impairing the efficiency of the lock mechanism.

The invention consists, essentially, in the combination and arrangement, with a gun-lock, of an extra or additional segmental ratchet mounted on the tumbler of the lock, and an extra pivoted spring-pawl engaging the said ratchet, and having its free arranged in the path of the trigger-cam, all constructed, combined, and arranged to co-operate with the usual hammer-cocking and releasing mechanism, substantially as hereinafter fully described.

In the accompanying drawings, Figure 1 shows my invention as applied to an ordinary fire-arm lock and in position for preventing accidental discharge of a partially-cocked gun, and Fig. 2 shows the position of my invention when the gun is fully cocked and ready to be discharged.

Similar letters of reference indicate corresponding parts.

A represents the face-plate, to which the lock mechanism is connected. The lock mechanism here shown is of the ordinary type, consisting of a tumbler, B, having projecting respectively from opposite sides two gudgeons, *a*, one of which protrudes through the plate A, and has attached to its end the hammer H. S is the mainspring, which acts upon the tumbler and imparts to the hammer its power of percussion. *b* is the so-called "sear," which engages the tumbler and retains the hammer in its proper cocked position, and *t* is the trigger, which, by its cam, throws the sear out of connection with the tumbler, and thus releases the hammer when the gun is to be discharged. The tumbler B is usually provided with two locking-shoulders, by which it holds the hammer in what is termed, respectively, a "half-cocked" and a "cocked" position. A release of the hammer, when raised to any position other than those aforesaid, will allow the same to descend and strike the nozzle of the gun. This action generally produces the discharge of the gun when loaded, and has been the cause of many accidents. It is to obviate this which my invention has for its object, and to render my invention applicable to most any gun without changing or interfering with the lock mechanism or necessitating an extra trigger or extra work on the gun-stock, I employ an extra segmental ratchet-plate or supplementary tumbler, *r*, which I mount on or secure to the tumbler proper B. Between the ratchet *r* and the play of the trigger-cam I pivot a pawl or extra sear, *c*, the forward end of which engages the ratchet *r*, and the rear end is provided with an arm, *c'*, analogous to that of the sear proper and contiguous thereto, so as to come in the path of the trigger-cam and be operated thereby synchronously with the sear proper. By means of a spring, *d*, bearing upon the free end of the pawl, the latter is maintained in contact with the ratchet *r*, and by its engagement with the teeth thereof caused to arrest the hammer when raised to any extent.

In order to prevent the trigger from forcing the pawl out of its connection with the ratchet when the hammer is but partially cocked, the teeth of the ratchet are undercut, and the end of the pawl fitted to the interdentals, as best seen in Fig. 1 of the drawing, so that a pressure of the trigger-cam upon the free end of the pawl will impact the engaged parts, and thus re-enforce their hold and render the release of the ratchet impossible without breakage of some of the members.

To allow the trigger to actuate the sear and at the same time liberate the ratchet, when the hammer is fully cocked and the fire-arm to be discharged, the rearmost tooth of the ratchet *r* is arranged in advance of the locking-shoulder on the tumbler, so that when the

hammer is thrown back to a cocked position the pawl *c* is disengaged from the tooth in the ratchet, as shown in Fig. 2 of the drawings, and thus allowed to be swung entirely clear of the ratchet by the pressure of the trigger, which releases the tumbler and the hammer connected therewith.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a hammer cocking and releasing mechanism of a gun-lock, of an extra or additional ratchet connected with the tumbler, and an additional sear arranged to engage with the said ratchet and co-operate with the sear proper, substantially as described, for the purpose set forth.

2. In combination with the tumbler B and trigger *t*, the supplementary tumbler or extra ratchet *r*, connected with the tumbler proper, and having undercut teeth, and the additional sear *c*, having its rear end arranged in the path of the trigger-cam and its forward end fitted to the interdentals of the undercut ratchet, whereby its release from same by the trigger is prevented, substantially as described.

3. The combination and arrangement, with the tumbler B and trigger *t*, of the extra or additional ratchet *r*, mounted on the tumbler B, and having undercut teeth, the rearmost of which is in advance of the cocking-shoulder of the tumbler, the additional sear *c* pivoted between the ratchet and the play of the trigger-cam, and having at its free end the arm *c'*, contiguous to the arm of the sear proper, and in the path of the trigger-cam, and its opposite end fitted to the interdentils of the undercut ratchet *r*, and the spring *d*, bearing upon the free end of the additional sear, all constructed, combined, and arranged to co-operate with the hammer cocking and releasing mechanism, substantially as described, for the purpose set forth.

In testimony whereof I have hereunto set my hand this 20th day of March, 1879.

CHARLES E. BEST.

Witnesses:
CHARLES T. PHILLIPS,
C. BENDIXEN.