No. 695,242. Patented Mar. 11, 1902.

F. SNYDER.

GUN LOCK.

(Application filed July 24, 1900.)

(No Model.)

Fig. 1.

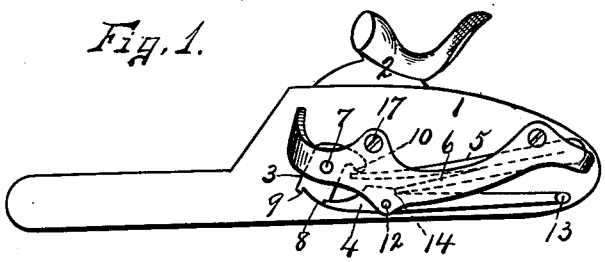


Fig. 2.

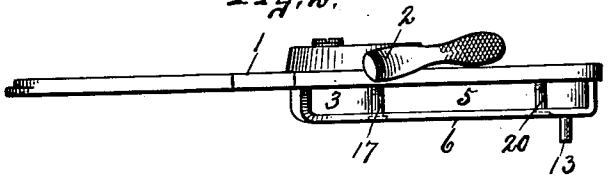


Fig. 3.

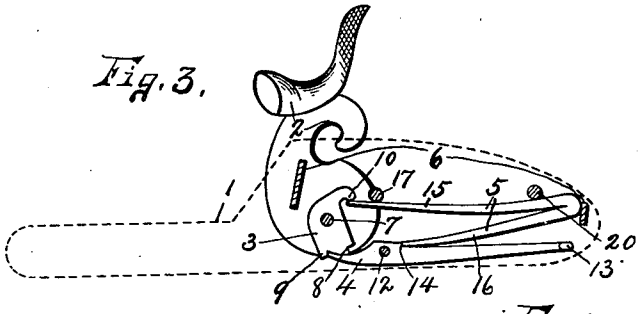


Fig. 4.

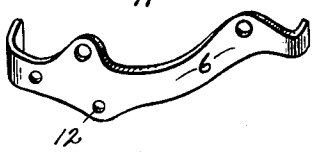


Fig. 5.

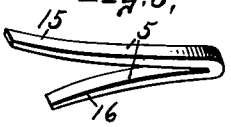


Fig. 6.

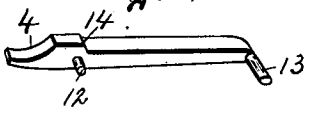


Fig. 7.

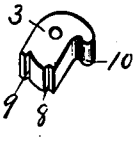
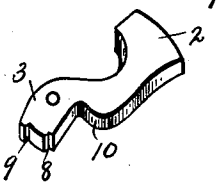


Fig. 8.



WITNESSES.

F. C. Arthur,

H. B. Chase,

INVENTOR.

Frank Snyder

BY Smith & Morrison

ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRANK SNYDER, OF FULTON, NEW YORK, ASSIGNOR TO THE HUNTER ARMS CO., OF FULTON, NEW YORK, A CORPORATION OF NEW YORK.

GUN-LOCK.

SPECIFICATION forming part of Letters Patent No. 695,242, dated March 11, 1902.

Application filed July 24, 1900. Serial No. 24,663. (No model.)

To all whom it may concern:

Be it known that I, FRANK SNYDER, of Fulton, in the county of Oswego, in the State of New York, have invented new and useful Improvements in Gun-Locks, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in gun-locks, and particularly to that class in which the hammer and its actuating and locking mechanism are applied to a side plate and removable therewith.

The object of this invention is to produce a gun-lock with as few parts as possible in which all the parts are removable with the lock-plate without disturbing their operative relation to each other, a single spring serves to actuate the hammer and the sear, the spring is held in its operative position by the bridle, and in which the hammer is automatically locked from further movement after its rebound from the firing-pin.

To this end the invention consists in the construction, combination, and arrangement of the parts of a gun-lock, as hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is an inner face view of a side plate and the assembled parts of my invention applied thereto, the hammer being shown in its cocked position. Fig. 2 is a plan view of the parts seen in Fig. 1. Fig. 3 is a face view similar to Fig. 1, the side plate being shown by dotted lines, the hammer and tumbler as in their operative position after the rebound of the hammer, and the bridle as partly broken away. Figs. 4, 5, 6, and 7 are isometric perspective views of detached parts of my invention, showing, respectively, the bridle, mainspring, locking-sear, and tumbler; and Fig. 8 is an isometric view of a modification, showing the hammer and tumbler as integral for use in "hammerless guns."

The mechanism embodied in this invention consists of a side plate 1, a hammer 2, a tumbler 3, a locking-sear 4, a spring 5, and a bridle 6, all of which parts are held in their assembled position by suitable fastening means, hereinafter described.

The side plate 1 and the hammer 2 may be of any desired form or construction, the hammer 2 being usually mounted on a spindle 7, journaled or otherwise movably supported on the side plate 1. As seen in Figs. 1, 2, and 3, the hammer 2 is supported at the outer side of the side plate 1, but may obviously be formed integral with the tumbler, as seen at Fig. 8, and mounted at the inner side of said plate in the manner usual for hammerless guns.

The tumbler 3 is arranged at the inside of the plate 1, is secured to the spindle of the hammer 2 for controlling the movement of the hammer, and is provided with peripheral shoulders 8, 9, and 10 for engaging the sear and mainspring in a manner presently described.

The shoulders 8 and 9 are arranged one in advance of the other, the shoulder 8 serving to engage the sear for holding the hammer in its cocked position and the shoulder 9 being adapted to engage the sear and hold the hammer from engaging the firing-pin (not shown) after the "firing" and "rebound" of said hammer.

The shoulder 10 preferably consists of a hook-shaped extension having a rounding or beaded bearing-face for engaging the end of the adjacent arm of the mainspring, said bearing-face being rounded for the purpose of reducing friction and for rendering the firing and locking action positive and easy.

The sear 4 preferably consists of a rocking lever pivotally connected at 12 to the side plate 1 and having one end adapted to engage the shoulders 8 and 9 and its other end provided with a lateral extension 13, adapted to be engaged by a trigger (not shown) for the purpose well known. This sear is arranged to be automatically forced into engagement with the tumbler by the mainspring and is provided with a shoulder 14, disposed between the pivotal point 12 and extension 13 or, in other words, at the side of the pivot 12 opposite to the end of the sear which engages the tumbler and serves to retain said spring in its proper relative position for forcing the tumbler-engaging end into engagement with the shoulders 8 and 9.

The spring 5 is preferably formed substantially V shape, and the free ends of its oppo-

site diverging arms 15 16 are interposed between the shoulder 10 of the tumbler 3 and the adjacent face of the sear 4 for forcing portions of said tumbler and sear away from each other, and thereby engaging the sear 4 and shoulders 8 and 9. The arm 15 for engaging the shoulder 10 usually extends beyond the corresponding end of the arm 16 and is arranged to engage a stop-pin 17 at such time and in such a manner as to permit a free rebound of the hammer when said hammer has been released by the sear 4 for operating the firing-pin. (Not shown.)

It will be noted upon reference to Fig. 3 that the shoulders 9 and 10, stop-pin 17, and the tumbler 3 are so relatively arranged that when the arm 15 of the spring 5 is engaged with the pin 17 the shoulders 9 and 10 are in position to simultaneously engage respectively said engaging end of the sear and the arm 15 of the spring, and when the sear is withdrawn from registration with the shoulder 8, as in firing, it is apparent that the hammer is free to move by its momentum into contact with the firing-pin and to rebound to the position seen in Fig. 3 without further resistance than its own gravity. It is also apparent that when adjusting said engaging end of the sear to give the required "throw" to the hammer it is simply necessary to release the sear from the shoulder 9 of the tumbler and rock the hammer forward, whereupon the end of the sear may be readily filed or otherwise fitted without removing any of the parts of the gun-lock.

The bridle 6 serves the purpose of additionally holding the parts of the gun-lock mechanism in position and consists of a single plate having its opposite ends extended beyond the opposite ends of the spring 5 and bent at substantially right angles to its intermediate portion and adapted to engage the inner face of the side plate 1 for holding said intermediate portion a desired relative distance from the plate 1. This bridle is held in position by suitable fastening means, as the pin 17, which preferably consists of a screw and an additional screw 20, said screws being engaged with threaded apertures in the plate 1.

The screw 20 and the adjacent offset end of the bridle 6 serve to additionally hold the spring 5 in position, the united ends of the spring-arms being adapted to abut against the contiguous offset end of the bridle.

It is evident that when desired to remove the spring 5 it is only necessary to remove the screw 20, whereupon the spring may be moved laterally from engagement with the contiguous end of the bridle and readily removed.

The operation of my invention will now be readily understood from the foregoing description and the accompanying drawings, and it will be noted that the parts are exceedingly few and simple, are readily assembled, and form a neat, compact, and efficient gun-lock which can be manufactured at a minimum cost.

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

1. A gun-lock comprising a lock-plate, a tumbler having front and rear shoulders, a sear for engaging said shoulders, a spring for actuating the tumbler and sear, and a bridle detachably secured to the plate and having one of its fastening members adapted to engage the spring and limit its action upon the tumbler at about the same time that the forward shoulder of the tumbler is registered with the sear for the purpose described, one end of the bridle forming a stop to prevent endwise movement of the spring.

2. A gun-lock comprising a lock-plate, a tumbler, a sear, a spring for actuating the tumbler and sear, and a bridle detachably secured to the plate and having one end forming an abutment for the adjacent end of the spring for the purpose set forth.

3. In combination with a lock-plate and a bridle detachably secured thereto, and having portions thereof disposed at an angle with the main body and engaged with the plate for the purpose described, of a tumbler, sear and spring operating in the manner set forth and interposed between the plate and bridle, one of the angular portions forming an abutment for the adjacent end of the spring.

4. A gun-lock comprising a lock-plate, a tumbler, a sear, a spring for actuating the tumbler and sear, and a bridle detachably secured to the plate and having one end forming an abutment for the adjacent end of the spring for the purpose set forth, and a removable fastening member for holding the spring in position and permitting its removal.

5. A gun-lock comprising a lock-plate, a tumbler having front and rear engaging shoulders and a beaded projection, a sear adapted to engage said shoulders and provided with an abutting face, a V-shaped spring for actuating the tumbler and sear, said spring having one leaf engaged with the beaded projection and its other leaf abutting against the face of the sear, a bridle having portions thereof disposed at an angle with its main body and engaged with the plate, one of said portions forming an abutment for the closed end of the spring to prevent the endwise displacement of the spring, and a fastening member for detachably securing the bridle and spring in position.

In witness whereof I have hereunto set my hand this 21st day of July, 1900.

FRANK SNYDER.

Witnesses:

THOMAS HUNTER,

L. C. FOSTER.