(No Model.)

Z. W. SHIELDS.

GUN LOCK.

No. 456,166. Patented July 21, 1891.

FIG. 3.

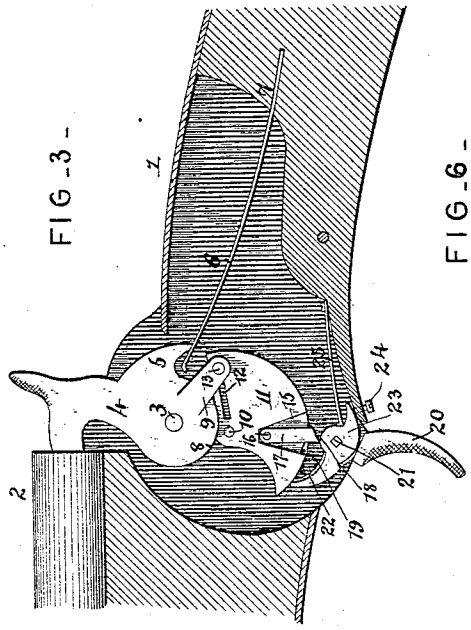


FIG. 6.

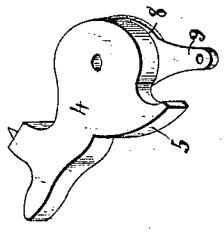


FIG. 5.

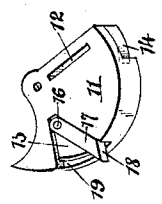


FIG. 4.

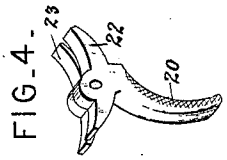


FIG. 1.

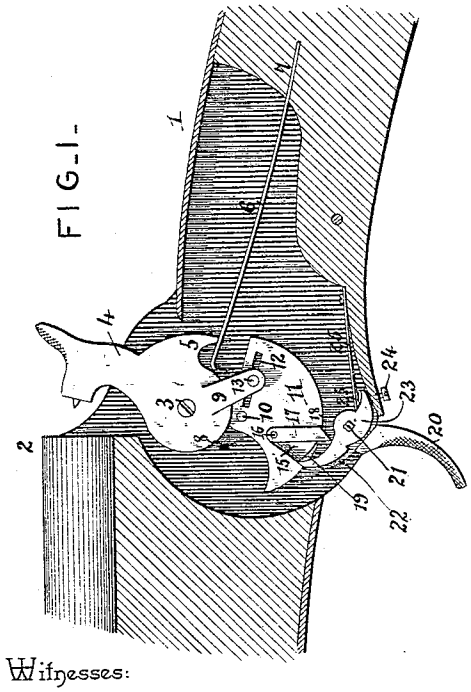
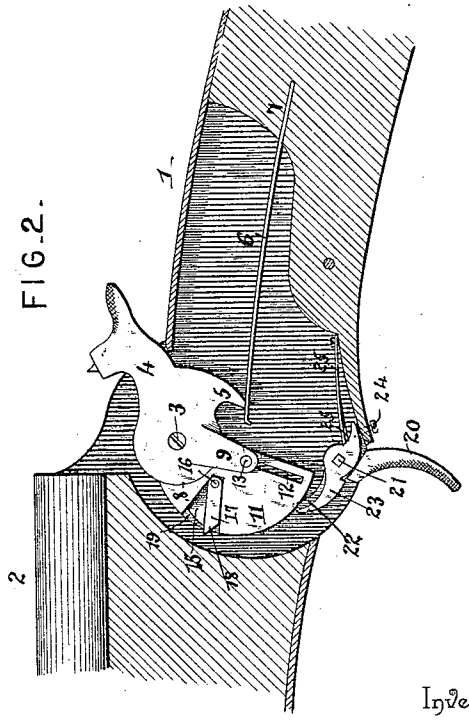


FIG. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

ZACHARIAS W. SHIELDS, OF HARRINGTON, WASHINGTON.

GUN-LOCK.

SPECIFICATION forming part of Letters Patent No. 456,166, dated July 21, 1891.

Application filed February 10, 1891. Serial No. 380,936. (No model.)

To all whom it may concern:

Be it known that I, ZACHARIAS W. SHIELDS, a citizen of the United States, residing at Harrington, in the county of Lincoln and State of Washington, have invented a new and useful Gun-Lock, of which the following is a specification.

This invention has relation to improvements in fire-arms, and has especial reference to the lock mechanism thereof.

The objects of my invention are to produce a lock of exceedingly few number of parts, and these of simple, durable construction, easily assembled and replaced; to provide for an absolutely safe setting of the hammer, whereby accidental pulls upon the trigger will not influence the same, and to provide means for lessening the necessary pull upon the trigger and for regulating the same as to the length of pull desired.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of a lock mechanism constructed in accordance with my invention, the lock-plate removed, and the parts being in position assumed by them when at a safety. Fig. 2 is a similar view, the parts being in position assumed by them when at full-cock and ready for firing. Fig. 3 is a similar view of the piece fired. Fig. 4 is a detail in perspective of the trigger. Fig. 5 is a detail in perspective of the tumbler. Fig. 6 is a detail in perspective of the hammer.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the usual lock-frame, and 2 the firing-pin guide, or it may be the breech or the nipple, in accordance with the style of gun to which my lock is applied.

The lock has passed transversely therethrough the hammer receiving pin 3, upon which is loosely mounted the hammer 4 having at its rear side a shoulder 5 for the reception of the free end of the operating-spring 6, the rear end of which in this instance is inserted into a slit formed in the front end of the grip of the stock 7. The under side of the hammer is rounded and provided with a flange 8, extending a slight distance from the edge of the hammer, and said hammer is further provided with a radiating arm extending rigidly therefrom. Immediately below the pin 3 there passes through the lock a transverse pin 10, upon which is mounted for oscillation a segmental tumbler 11, one end of which is curved, as shown, and adapted to fit against the lower curved side of the hammer and under the small flange 8, and the opposite end of which is provided with a radiating slot 12, in which rides a pin 13, extending inwardly from the arm 9. The lower curved edge of the tumbler is provided near its rear edge with a shallow notch 14, and upon its outer face near its front end with a V-shaped recess 15, in the upper end of which is pivoted loosely, as at 16, a fly 17, the lower end of which extends a slight distance beyond the lower curved edge of the tumbler and has its rear edge chamfered or cut away, as at 18. Opposite the front edge of the V-shaped recess a notch 19 is formed in the tumbler, and over this notch the free end of the fly operates.

20 designates the trigger, mounted loosely upon the transverse pin 21 and provided at each side of its pivot with projections or feet, the front foot 22 being designed to engage with the notch 14 of the tumbler and the rear foot 23 being designed to regulate the depth to which said notch is engaged by the trigger, which regulation is secured by means of a small set-screw 24, passed through the front end of the stock and terminating against the under side of the latter-mentioned foot. The upper end of the trigger is recessed upon its outer side, as shown, and loosely mounted upon the pin 21 is a pawl 22, said pawl fitting in the recess of the trigger and adapted at its front end to engage with the safety-notch. The rear foot of the trigger and the tail of the pawl are pressed lightly upon by a pair of springs 25, the rear ends of which are secured to the stock.

In operation, taking the parts in the position shown in Fig. 1, it will be observed that the safety-pawl is in engagement with the safety-notch of the tumbler, and that the fly has been pressed to the rear wall of its recess by said safety-pawl. By drawing upon the hammer against the tension of its spring 6 pin 13 of the hammer-arm, operating in the

slot 12 of the tumbler, rotates the same to the front and until the full-cock notch 14 of the tumbler is engaged by the foot 22 of the trigger, into which it is lightly pressed by its spring 25. It will be apparent from this that to discharge the piece the strength of the spring 6 does not have to be overcome, but simply of the spring 25, for the reason that the pin 13, at which point the tumbler and hammer are connected, is brought to a point very near the pivot of the tumbler, so that the leverage is so small as to hardly influence the trigger. By operating the screw 24 the length of pull of the trigger may be regulated. It will thus be seen that the piece may have a strong and efficient spring for throwing the hammer and positively discharging the explosive, and yet at the same time be of very light pull. In discharging the piece it will be seen that the safety-pawl will come in contact with the beveled face of the fly, which will be swung to the front of its V-shaped recess, and thus serve to guide the pawl beyond its notch 13 of the tumbler, so that there is no danger of said pawl engaging with the safety-notch and thus impeding the fall of the hammer.

From the above it will be apparent that when at a safety, accidental discharges of the piece by reason of the trigger being accidentally operated is absolutely impossible, as the trigger is not at that time in any way connected with or governing the tumbler and its hammer.

It will be observed that the lock consists of a very few number of parts, none of which are at all delicate or subject to much wear, and that said parts may be easily removed and replaced when wear does take place at a slight cost.

Having described my invention, what I claim is—

1. In a lock, the combination, with a pivoted hammer having an arm extending therefrom, a spring for throwing the hammer, a segmental-shaped tumbler pivoted below the hammer and having a slot radiating from the center of the same, and a pin extending from the arm on the hammer into the slot, of a trigger pivoted below the tumbler, and a spring for pressing the same, said trigger being provided with a foot for engaging a notch in the tumbler, substantially as specified.

2. In a lock, the combination, with the pivoted hammer having an arm terminating at its free end in a pin and a segmental tumbler pivoted below the hammer and having a radial slot for the reception of the pin, said tumbler being provided with a safety-notch and a full-cock notch, the former located in advance of the latter, of a trigger pivoted below the tumbler and having a forwardly-disposed foot adapted to engage the full-cock notch, a spring for pressing the same into such engagement, a safety-pawl pivoted below the tumbler and adapted to engage the safety-notch, a spring for pressing the same, and means for guiding the free end of the pawl over the safety-notch when the trigger falls, substantially as specified.

3. In a lock, the combination, with the pivoted hammer having an arm provided with a pin, a spring for throwing the hammer, and a tumbler pivoted below the hammer having a radial slot for engaging the pin, a rear full-cock notch, a front safety-notch, and provided upon its face with a recess opposite said safety-notch, of a fly pivoted in the recess and having its free end extending slightly beyond the periphery of the tumbler and its rear face at its free end beveled, a trigger pivoted below the tumbler and having forwardly and rearwardly disposed feet, the former adapted to engage the full-cock notch, and a spring pressing on the latter, a safety-pawl pivoted at one side of the trigger, and a latch-spring for pressing upon the rear end of the same, substantially as specified.

4. In a lock, the combination, with the hammer and a tumbler pivoted below the same and adapted to be vibrated by the hammer and provided with a full-cock notch, of a trigger pivoted below the tumbler and having front and rear feet, a spring for pressing the former foot into engagement with the full-cock notch, and a set-screw inserted in the case and bearing against the under side of the rear foot of the trigger, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ZACHARIAS W. SHIELDS.

Witnesses:
JACKSON BROCK,
H. C. HUFF.