

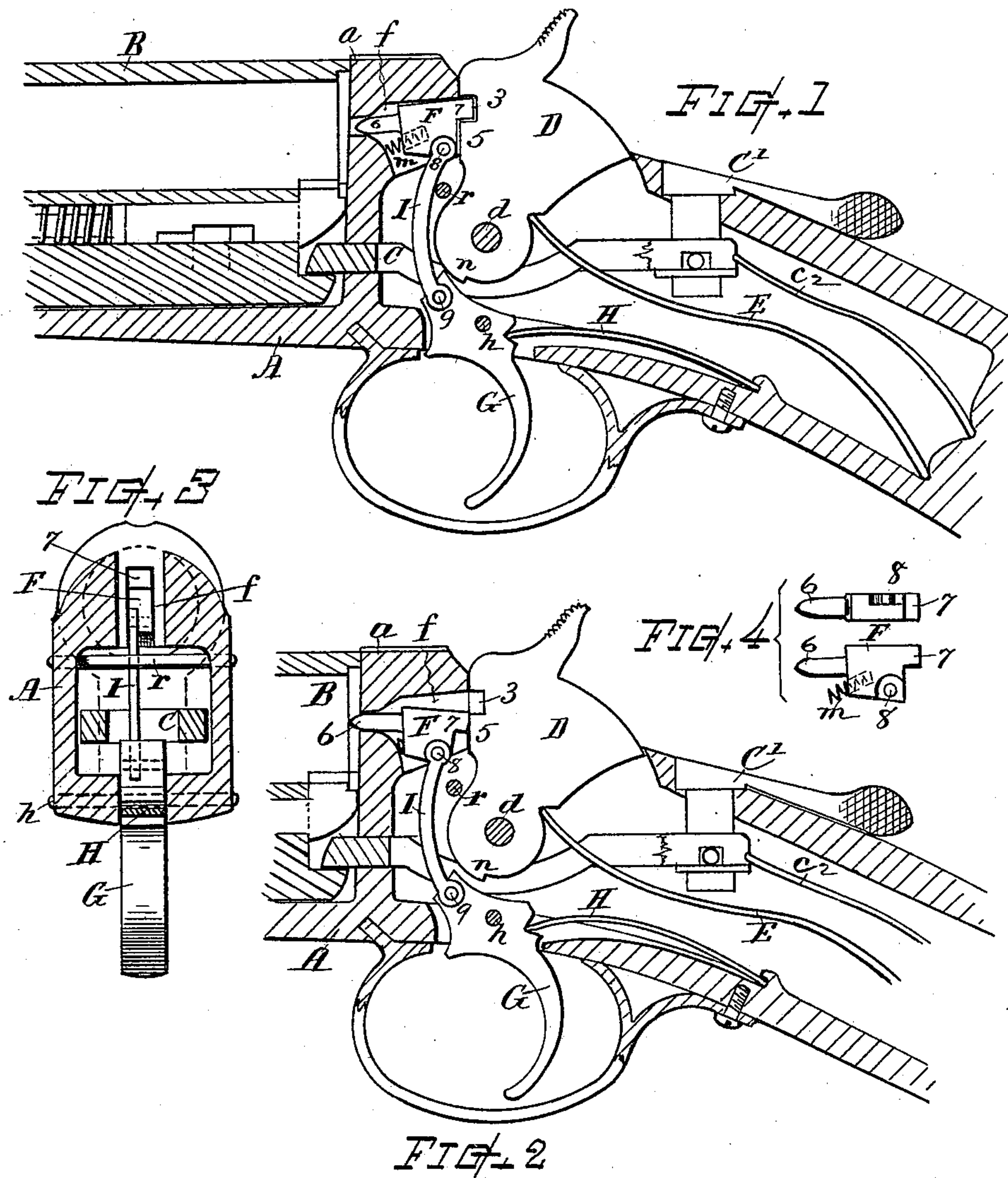
No. 624,321.

Patented May 2, 1899.

A. FYRBERG.  
LOCK FOR FIREARMS.

(Application filed Dec. 15, 1898.)

(No Model.)



Witnesses.  
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# UNITED STATES PATENT OFFICE.

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## LOCK FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 624,321, dated May 2, 1899.

Application filed December 15, 1898. Serial No. 699,319. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW FYRBERG, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Safety Lock Mechanism for Firearms, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

My present invention relates to the peculiar construction and arrangement of the cartridge-discharging devices; and it consists of a recessed hammer, a vertically-swinging firing-pin, and an actuating connection therefor, in combination with the trigger, as hereinafter explained, the objects being to provide a safety lock mechanism more especially adapted for thumb-cocking-hammer guns, and combining a rebounding firing-pin and a recessed hammer-face in a manner to give release of the firing-pin and insure safety when the hammer is let down; also, rendering the parts non-operative except by first raising the hammer.

In the drawings, Figure 1 is a section of a gun, illustrating my invention, the parts being shown as at non-active position. Fig. 2 is a section of the same, showing the parts as at the instant of firing. Fig. 3 is a transverse vertical section showing the rear of the trigger, the firing-pin, and their connecting-link; and Fig. 4 shows a bottom and side view of the firing-pin separate from other parts.

In the drawings, A denotes the stock-frame, of suitable form; B, the barrel; C, the barrel-catch, arranged and operated in well-known manner by the top lever C' and spring c<sup>2</sup>, as heretofore employed in "breakdown" guns.

D indicates the hammer, which is pivoted to swing upon the pivot-pin d and to throw forward against the rear side of the recoil-block, which arrests its forward motion. It is operated by a thumb-pad or projection for cocking and a suitable mainspring E, arranged for throwing forward the hammer in well-known manner. The hammer, as a part of my invention, is provided with a recess 3 and a solid portion 5 in its striking-face. The recess 3 is preferably of rectangular shape or

of such dimension and form as will receive the rear end of the firing-pin without contact therewith when the hammer-front is solidly against the frame. The striking-face above and below said recess is best made flat, and a part thereof matches or contacts with the rear side of the recoil-block a. The opening f through the recoil-block within which the firing-pin is disposed is formed with a small front aperture and rearwardly enlarged in vertical directions, but with parallel sides, as indicated in Fig. 3.

F indicates the improved firing-pin, which is made with a flat body portion having a projecting point or nose 6 and a rearward-projecting part 7. Said firing-pin is arranged within the opening f in the frame in such manner that it can have endwise movement, while its rear end can oscillate or have an upward and downward swinging action, sufficient to carry its rearward-projecting part 7 into and from alinement with either the recess 3 or solid part 5 of the hammer-face. The point 6 of the firing-pin is loosely fitted to the tunnel-shaped aperture at the front part of the recoil-block, through which it is advanced for discharge of the cartridge, and serves also as a fulcrum-point from which the oscillatory action takes place, the flat body of the pin being non-rotatively supported between the parallel sides of the opening. The body of the firing-pin has an opening formed therein, preferably below the point 6, and the spring m is arranged therein for pressing back said pin and effecting its retractive action.

G denotes the trigger, which is pivoted in the usual manner at h and normally pressed forward by a suitable trigger-spring H for raising its fore end to engage the notch n on the hammer-tumbler when the hammer is cocked.

I indicates a link or bar connecting the trigger-head with the firing-pin F. Said connecting-link I has one end pivoted to the rear part of the firing-pin at 8, while its other end is pivoted to the head of the trigger, as at 9. A guard or pin r is arranged in the frame in rear of the link I for limiting the rearward movement of the link and firing-pin.

The operation is as follows: When the trigger is at normal forward position, the connecting-link I keeps the rear end of the firing-pin at such position that its projecting part



7 coincides with and enters the recess 3 in the hammer D. (See Fig. 7.) The firing-pin cannot then be driven forward by the hammer by any accidental stroke thereon. Also when the hammer is down the parts so interlock with the recess that the trigger cannot be drawn back unless the hammer D is first raised. When the hammer is at full-cocked position and the trigger-point engaged with the notch *n*, then the act of pulling back the trigger for discharging the piece causes the firing-pin to be shifted or swung downward at its rear end by the link I, and the projecting part 7 is brought into alinement with the solid or contact face 5 of the hammer, which latter as it is thrown forward strikes said projecting end and drives forward the firing-pin, (see Fig. 2,) so that its point 6 explodes the cartridge. When the trigger G is released, the trigger-spring H causes the trigger G, connection I, and firing-pin F to at once assume their original positions, as in Fig. 1, there being sufficient play-room for the firing-pin in front of the hammer-face to permit this movement without any liability of the parts becoming wedged or held fast by the forward pressure of the hammer, thus providing for the ready rebound or automatic retraction of the firing-pin to its idle position, while the hammer stands with its face in stationary contact with the frame.

I am aware that the idea of controlling a safety device by the trigger is not new, such feature having been employed in various differently-constructed mechanisms. Hence it will be understood that I do not broadly claim such means; but my invention comprises the construction and organization of mechanism specifically as illustrated and defined.

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

1. In a firearm, the combination of the pivoted hammer, its front adapted for contact with the frame and having a recess in its striking-face, an endwise-movable firing-pin arranged to swing up and down at its rear part and having a rear end projection adapted to enter the recess in said hammer, the discharge-controlling trigger having the pivoted head, and a link connecting at its ends with said

firing-pin and with the head of the trigger, for the purposes set forth.

2. In combination, the hammer having a recess and a solid portion on its striking-face, a rebounding firing-pin, its rear end adapted to swing into alternate alinement with either said recess or said solid portion of the hammer-face, the trigger pivoted in the frame and its fore end adapted for engaging said hammer, the trigger-spring, the flexibly-connected link, its ends respectively pivoted to said firing-pin and to said trigger and the transverse guard-bar in rear of said link, substantially as set forth.

3. In a firearm, the frame provided with an opening formed with a tunnel-shaped front aperture and rearwardly enlarged in upward and downward direction with internal parallel sides; in combination with the firing-pin, consisting of a laterally flat body having a rounded forwardly-projecting point supported in said aperture, the flat body fitted for upward and downward movement between the parallelsides, the spring for retracting said firing-pin disposed within an opening in the body beneath the point, a guard limiting the rearward movement of the parts, the operating-trigger, and a shifting link connecting with said trigger and pivoted on a stud fixed in the body near the rear end of said firing-pin, as shown and described.

4. In a firearm, the combination with a trigger and a pivoted thumb-cocking hammer having a recess in its striking-face, of a firing-pin having the rear end projection adapted for entering the recess in said hammer, and a connecting-link directly joining said firing-pin to the trigger-head, said firing-pin and hammer-recess intermatchedly coacting in the manner shown and described, when the hammer is down or at forward position and the contact-face seated against the frame, substantially as set forth.

Witness my hand this 13th day of December, 1898.

ANDREW FYRBERG.

Witnesses:

CHAS. H. BURLEIGH,  
NILS J. A. FYRBERG.