

May 7, 1929.

F. WALTHER
AUTOMATIC PISTOL

1,712,411

Filed July 6, 1927

2 Sheets-Sheet 1

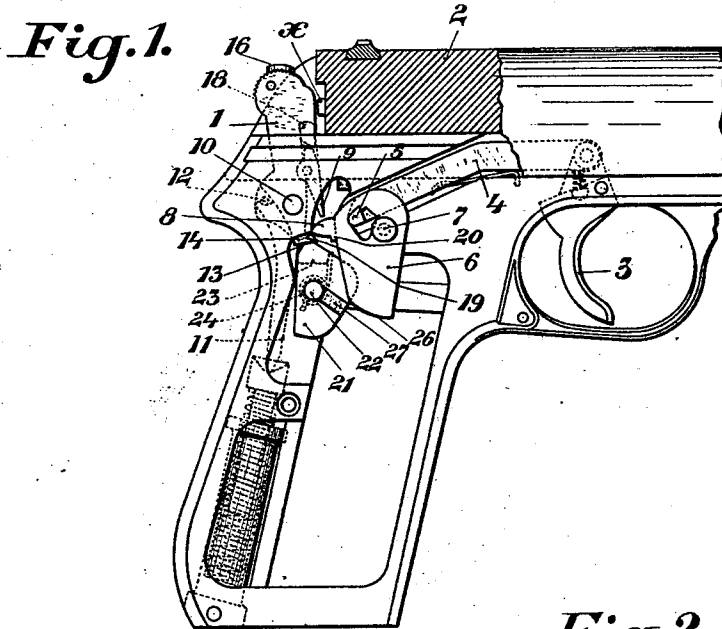
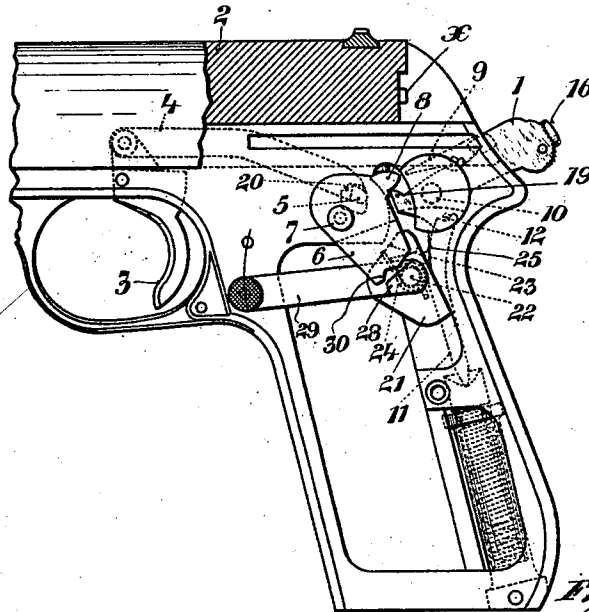


Fig. 2.



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Fig. 3.

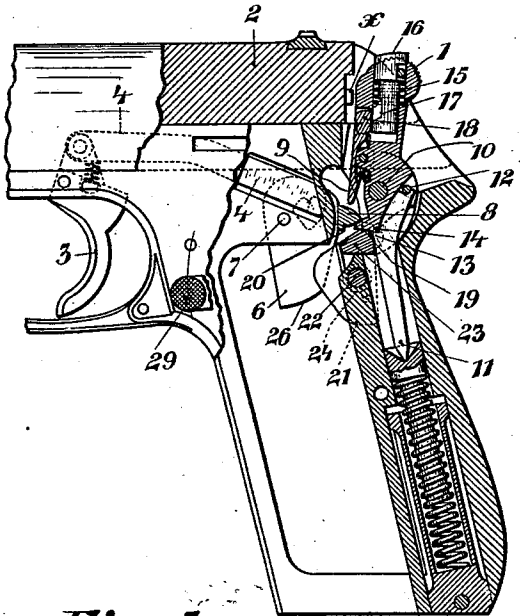
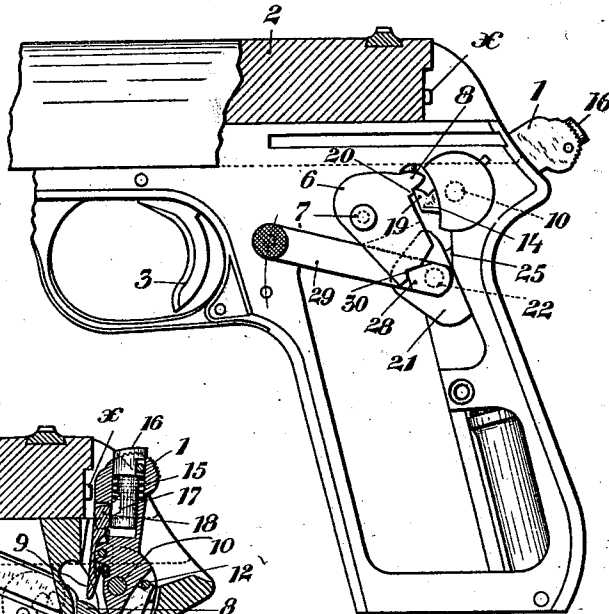


Fig. 4.

Fig. 5.

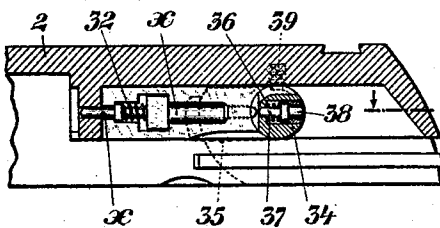
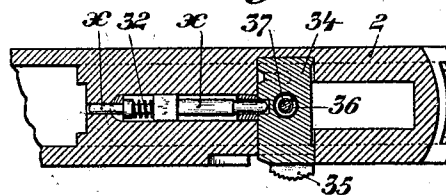


Fig. 6.



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1,712,411

UNITED STATES PATENT OFFICE.

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AUTOMATIC PISTOL.

Application filed July 6, 1927, Serial No. 203,801, and in Germany April 19, 1927.

The present invention relates to improvements in automatic fire-arms, one object of the invention being the provision of an automatic pistol in which the hammer is trigger-set or hand-set, as may be desired, and in which several safety devices are interposed to prevent, in two instances, the hammer from being released to strike the firing-pin, and in the third instance, in case the hammer is released, the firing-pin is held inactive.

A still further object of this invention is the provision of an automatic pistol of the magazine type and of the reciprocating breech-block type, said breech-block being provided with and bodily carrying the firing-pin, said breech-block being provided with a hammer-interceding member whereby the firing-pin is held in safe position, regardless of the position of the hammer.

In the accompanying drawings:—

Figure 1 is a view, partly in elevation and partly in section, of the rear end of the automatic fire-arm made according to and embodying this invention, the hammer being in its retracted position and the barrel being broken off.

Figure 2 is a view similar to Figure 1, taken from the opposite side, showing the hammer cocked.

Figure 3 is a view similar to Figure 2 with the hammer cocked and the locking safety device in locking position.

Figure 4 is a view somewhat similar to Figure 3 showing the breech-block and main spring housing in full section, the hammer being in retracted position.

Figure 5 is a vertical longitudinal sectional view through the breech-block showing the method of rendering the same safe, the parts, however, being in the position to be engaged by the hammer.

Figure 6 is a section taken on a horizontal line of Figure 5, said line being partially shown by the broken line and arrow at the right thereof, the safety device being in safety position.

Referring to the drawings, the numeral 1 designates the hammer and 2 the reciprocable breech-block of the present fire-arm. The trigger 3 is mounted in the usual manner and has connected therewith a plate or rod 4 which extends rearwardly and is provided with a projection 5 seated within an opening in the pivoted rocking plate 6, this plate 6 being provided, as shown in Figure

1, to be pulled forwardly when the trigger 3 is depressed, so that the lower end of the rocking plate 6 is tilted or moved rearwardly upon its pivot 7 so as to elevate the curved projection or lug 8 to, in turn, engage the free end 9 of the pivoted catch which is connected to and carried bodily by the hammer. This action tends to move the hammer from the position as shown in Figure 1 to that shown in Figures 2 and 3, so that the hammer pivots upon its pin 10.

In order to lock the hammer in this position, there is provided a notch 30 in the lower edge of the plate 6 which is in the path of to be engaged by the lug 28 of the manually movable lever 29 which is pivoted upon the pin 22, and as particularly shown in Figure 3. During the movement of the trigger and the hammer, the pin 12 engages the rod 11 and thereby depresses the main spring S of usual construction. At the same time, the projection 19 carried upon the lower portion of the hammer will connect with the lug 8 of the rocking plate 6. Below the hammer and the projecting end 19 is the spring-actuated rocking support 21 which is controlled by the spring 24 and is mounted upon the pivot 22, the lug 23 of the support 21 being adapted to fit under the end piece 14 of the hammer, while the spiral spring 24 presses the support 21 against the surface 25 of the housing of the fire-arm. Thus, when the rocking piece 6 turns the cam face 26, the said cam face will abut against the lug 27 of the support 21, and thus tend to depress the support 21 to cause the same to rock upon its pivot 22 downwardly, as viewed in Figure 1, to cause the upper end 23 to disengage the end 19 of the hammer, this being due to the continued rearward pull of the trigger 3. If the safety device 29 is released or in the position as shown in Figure 2, the hammer will be released to engage the firing-pin α , and thus discharge the fire-arm.

Mounted in and carried bodily by the hammer 1 is a piston 16 which is longitudinally slidable therein against the action of the spring 15. This piston is provided with a notch 17 into which the upper end 18 of the spring latch 9 may fit. Thus, when the piston 16 is depressed and the end 18 engages or fits within the notch 17, the free end of the latch 9 will be moved outwardly and thus it cannot pass the lug 8 even though the trigger may be actuated with the safety device 29 in

released position. Thus, by this means, an additional safety device is provided in the present construction.

In order to provide the third safety device for the present fire-arm, the construction as illustrated in Figures 5 and 6 is provided, in which is mounted for oscillation transversely of the breech-block, a cylinder 34, said cylinder 34 being held in either one of two adjusted positions by means of the locking spring pin 39 and is manipulated by means of the finger-piece 35. Carried bodily by the cylinder 34 and disposed diametrically therethrough and adjacent the encased end of the firing-pin α is a pin 38 which is normally held in a hammer-receiving position by means of the spring 30 while the reduced end 39 is adapted to align and engage the rear end of the firing-pin α when the parts are in the position as shown in Figure 5. When they are in the position as shown in Figure 6, the pin 38 is at right angles to the firing-pin α and the solid portion of the cylindrical member 34 is interposed to receive the hammer in case of accidental release thereof. The firing-pin as here shown is provided with the usual spring 32 which normally holds the same retracted so that no accidental discharge by engagement with the fulminating cap of the cartridge can be had.

From the foregoing description, taken in connection with the drawings, it is evident that with the present construction and arrangement the hammer can be either cocked through the instrumentality of the trigger 3 or by hand, and that two safety devices are provided for locking the hammer in cocked position, namely; the lever 29 and its locking lug 28 and the plunger 16 and the pivoted catch 9, while in order to provide a further or third safety device, the oscillatory cylindrical member 34 mounted and bodily carried by the breech-block is provided. By this construction, when the breech-block is being manually retracted, there is no liability of discharging the cartridge if the fingers should slip off of the same and the breech-block be permitted to accidentally recoil as the safety device, including the cylinder 34, would prevent the firing-pin from being acted upon by the hammer.

I claim:—

1. An automatic fire-arm including a barrel, a receiver, a magazine, a reciprocable breech-block mounted in the receiver, a firing-pin mounted in the breech-block, a hammer pivotally mounted in the receiver, a main spring for throwing the hammer, a trigger, cooperative means carried by the trigger and the hammer whereby the hammer is moved into cocked position during the initial depression of the trigger, a lever pivoted in the receiver and disposed in the path to lock said means to hold the hammer in cocked position, and cooperable means carried by the hammer

and by the cocking means for preventing the release of the hammer even though the trigger is fully depressed.

2. An automatic fire-arm including a barrel, a receiver, a magazine, a reciprocable breech-block mounted in the receiver, a firing-pin mounted in the breech-block, a hammer pivotally mounted in the receiver, a main spring for throwing the hammer, a trigger, cooperative means carried by the trigger and the hammer whereby the hammer is moved into cocked position during the initial depression of the trigger, a lever pivoted in the receiver and disposed in the path to lock said means to hold the hammer in cocked position, cooperable means carried by the hammer and by the cocking means for preventing the release of the hammer even though the trigger is fully depressed, and means mounted in the breech-block to be interposed between the firing-pin and the hammer to prevent the engagement of the firing-pin by the hammer.

3. An automatic fire-arm including a barrel, a receiver, a magazine, a reciprocable breech-block mounted in the receiver, a firing-pin mounted in the breech-block, a hammer pivotally mounted in the receiver, a main spring for throwing the hammer, a trigger, a link connected to the trigger and extending rearwardly toward the hammer, a pivoted plate mounted in the receiver and operably connected to the link, cooperative means carried by the pivoted member and the hammer, whereby the hammer is cocked during the initial depression of the trigger, a second pivoted plate associated with the hammer, and cooperative means carried by the latter plate and the first pivoted plate whereby the continued action of the trigger causes the release of the hammer through the second pivoted plate.

4. An automatic fire-arm including a barrel, a receiver, a magazine, a reciprocable breech-block mounted in the receiver, a firing-pin mounted in the breech-block, a hammer pivotally mounted in the receiver, a main spring for throwing the hammer, a trigger, a link connected to the trigger and extending rearwardly toward the hammer, a pivoted plate mounted in the receiver and operably connected to the link, cooperative means carried by the pivoted member and the hammer, whereby the hammer is cocked during the initial depression of the trigger, a pivoted plate associated with the hammer, cooperative means carried by the plate and the first pivoted member whereby the continued action of the trigger causes the release of the hammer through the pivoted plate, a safety lever pivoted in the receiver, and cooperative means carried by said lever and the first pivoted member for locking said member and the hammer cocked.

5. An automatic fire-arm including a barrel, a receiver, a magazine, a reciprocable

breech-block mounted in the receiver, a firing-pin mounted in the breech-block, a hammer, pivotally mounted in the receiver, a main spring for throwing the hammer, a trigger, a link connected to the trigger and extending rearwardly toward the hammer, a pivoted plate mounted in the receiver and operably connected to the link, cooperative means carried by the pivoted member and the hammer, whereby the hammer is cocked during the initial depression of the trigger, a second pivoted plate associated with the hammer, cooperative means carried by the latter plate and the first pivoted plate whereby the continued action of the trigger causes the release of the hammer through the second pivoted plate, a safety lever pivoted in the receiver, cooperative means carried by said lever and the first pivoted plate for locking said plate and the hammer cocked, a spring projected recessed plunger mounted in the hammer, and a pivoted latch controlled thereby whereby said latch is projected to render the trigger inactive when the hammer is cocked.

In testimony whereof I have hereunto set my hand.

FRITZ WALTHER.