July 10, 1945. E. A. ANDERSON 2,380,140

SAFETY GUN TRIGGER

Filed July 1, 1943

Fig. 1.

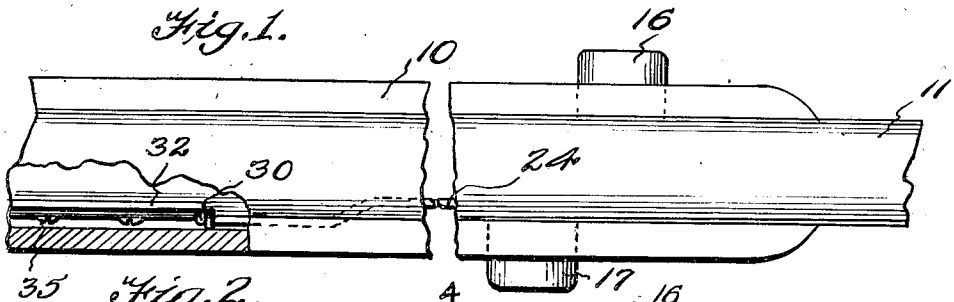


Fig. 2.

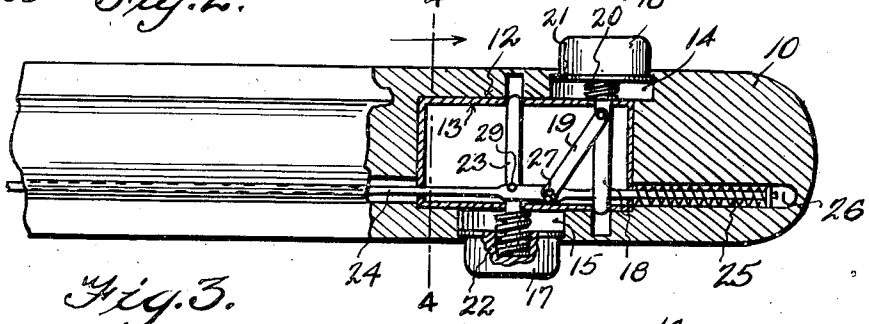


Fig. 3.

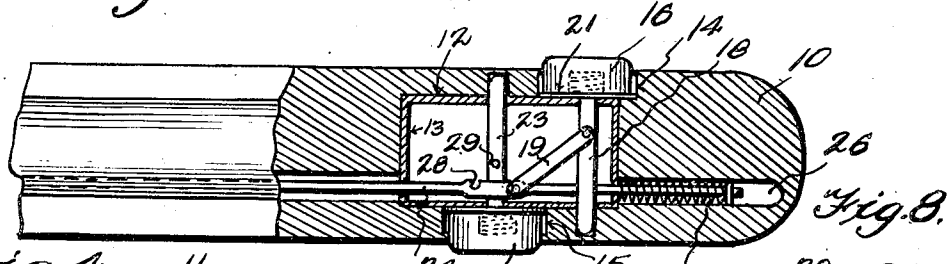


Fig. 8.

Fig. 4.

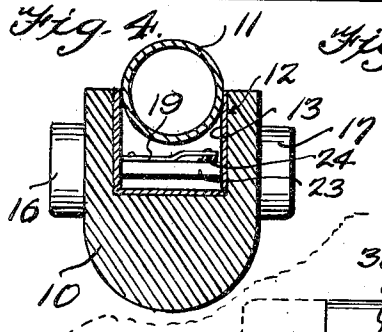


Fig. 5.

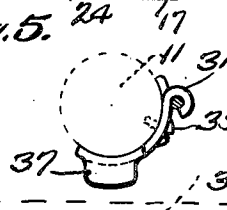
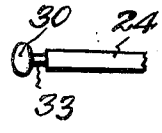


Fig. 6.



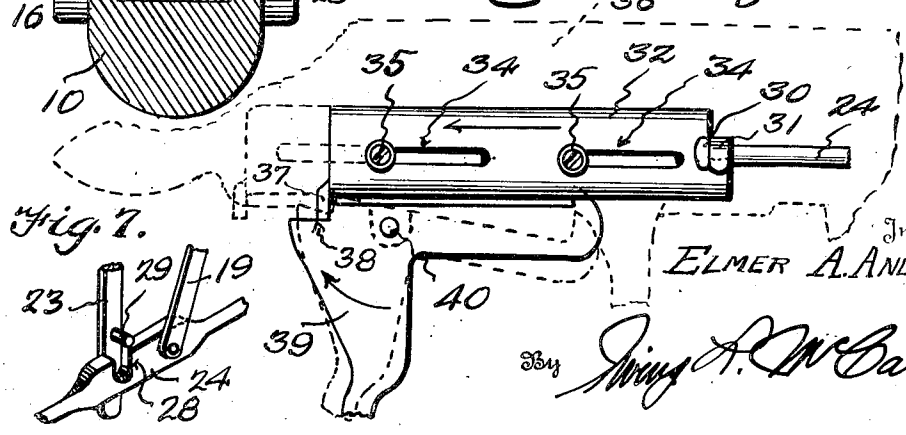


Fig. 7.

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SAFETY GUN TRIGGER

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4 Claims. (Cl. 42—70)

This invention relates to a safety gun trigger, and has for one of its objects the production of a simple and efficient means for positively locking the trigger of a gun against movement and thereby preventing the accidental discharge of the gun.

A further object of this invention is the production of a simple and efficient three-point safety device for locking a trigger of a gun against accidental movement.

Other objects and advantages of the present invention will appear throughout the following specification and claims.

In the drawings:

Figure 1 is a fragmentary top plan view of a portion of a gun showing the safety means located thereon;

Figure 2 is a horizontal longitudinal sectional view showing the parts in a locked position;

Figure 3 is a similar view showing the parts in a released position;

Figure 4 is a transverse sectional view taken on line 4—4 of Figure 2;

Figure 5 is an end elevational view of the trigger lock;

Figure 6 is an enlarged side elevational view of the trigger lock, a portion of the trigger also being shown;

Figure 7 is a detail perspective view of the means for locking and unlocking the pull rod;

Figure 8 is a fragmentary side elevational view of the inner end of the pull rod.

By referring to the drawing, it will be seen that 10 designates the stock of the gun which carries the conventional barrel 11. The stock 10 of the gun is provided near its forward end with a pocket 12 in which is mounted a box 13. A button-receiving socket 14 is formed in one side of the stock 10 communicating with the pocket 12, and a button-receiving socket 15 is formed in the opposite side of the stock 10 communicating with the pocket 12, and in offset alignment with the socket 14. A push-button 16 is mounted within the socket 14 and a push-button 17 is mounted in the socket 15. A plunger rod 18 is carried by the push-button 16 and supports a pivot link 19. A spring 20 is interposed between the push-button 16 and the box 13, to normally urge the button 16 outwardly and this button 16 may be provided with a suitable flange 21 to limit the outward movement of the button 16. A similar spring 22 is carried by the button 17, and this button 17 is constructed similarly to the button 16. The particular construction or design of the buttons 16 and 17 may be varied without departing from the spirit of the invention.

The push-button 17 is provided with a plunger rod 23 and the plunger rod 23 extends into the box 13 for engaging and locking the rod 24 in a safety position. The plunger rod 18 extends into the box 13, and the plunger rod 18 extends in an opposite direction to the rod 23 and transversely of the box 13, as shown, and when operated this plunger rod 18 will shift the rod 24 longitudinally to release the plate 32 from a locking position relative to the trigger 39.

A pull rod 24 extends longitudinally of the stock 10 and carries an expansion spring 25 at its forward end, the spring 25 being located in the socket 26 which extends longitudinally of the forward end of the stock 10. The spring 25 is adapted to normally pull the pull rod 24 forwardly. The link 19 which is pivotally connected to the rod 18 is also pivotally connected, as at 27, to the pull rod 24 and is inclined rearwardly and away from the push-button 16. The rod 24 is provided with a transversely extending notch 28 in spaced relation to the link 19 and this notch 28 is adapted to receive the pin 29 which is carried by the plunger rod 23 for the purpose of holding or locking the rod 24 in a set position.

The rod 24 is provided with a knob 30 at its rear end in front of which knob 30 is fitted a hook 31 of the trigger-releasing and engaging slide plate 32. The rod 24 is provided with a shank 33 near the knob 30 for the purpose of receiving the hook 31. This hook 31 is carried by the forward end of the plate 32 and this plate 32 is provided with a pair of longitudinally extending slots 34 for receiving the retaining screws 35. The retaining screws 35 are adapted to secure the plate 32 to the conventional bolt of the gun 36 indicated in dotted lines. The plate 32 is provided at its rear end with a depending lip 37 which is adapted to engage the shoulder portion 38 of the trigger 39 and hold the trigger against movement until the lip 37 and plate 32 are shifted to a disengaging position.

The operation of the device is as follows:

The parts are normally in the position shown in Figures 1, 2 and 6. When it is desired to fire the gun, the left hand of the operator will engage the forward portion of the stock 10 adjacent the push-buttons 16 and 17 with his right hand and trigger finger adjacent the trigger 39. The push-button 17 is then pushed inwardly, thereby releasing the pin 29 from engagement with the notch 28. The push-button 16 is then pressed inwardly and this movement will cause the link

19 to shift the trigger-releasing rod 24 inwardly and longitudinally of the stock 10, thereby moving the trigger-releasing plate 32 rearwardly to the dotted line position shown in Figure 6 where the depending lip 37 will be moved out of engagement with the shoulder 38 of the trigger 39 and thereby permitting the trigger 39 to be swung for releasing the firing pin of the gun.

It should be understood that the present device may be applied to various types of fire-arms, and only those portions of the gun which are essential to all types have been illustrated in view of the fact that the present invention relates to a means for locking the trigger against swinging movement until the trigger is first mechanically released by the operation of the push-buttons 16 and 17. As shown in Figure 6, the trigger 39 is pivoted as at 40, and it should be understood that the bolt, the particular type of trigger, and firing pin control mechanism may be varied without departing from the spirit of the invention, and also that certain detail changes in design may be employed so long as these changes fall within the scope of the appended claims.

Having described the invention, what is claimed is:

1. A safety device for guns having a trigger, said device comprising a slidable trigger-engaging and releasing plate for normally holding a trigger in a safety position, a pull rod secured to said plate and extending forwardly of said trigger and plate, a releasable locking member engaging said pull rod for normally holding the pull rod in a safety position, and a pull rod actuating member engaging the pull rod for shifting the pull rod when said locking member is released from said pull rod, the locking member and the actuating member being mounted adjacent said pull rod and extending at right angles to said pull rod, said locking and actuating members being located forwardly of said trigger and releasing plate.

2. A fire-arm of the class described comprising a stock having an elongated barrel-supporting portion, a trigger carried by said stock, a trigger-engaging plate mounted upon said stock and movable to and from a trigger-engaging position for selectively locking and releasing said trigger, a pull rod connected to said plate and extending longitudinally of the barrel-supporting portion of the stock, a pull rod locking member carried by and movable transversely of the barrel-supporting portion of the stock, said locking member being located near the outer end of the barrel-supporting portion and also being located forwardly of the trigger, the locking member being movable to and from a pull rod locking position, and a pull rod shifting member engaging said pull rod for shifting the pull rod and plate to a trigger disengaging position after said locking member has been released from said pull rod.

3. A fire-arm of the class described comprising a stock having an elongated barrel-supporting portion, a trigger carried by said stock, a trigger-engaging plate mounted upon said stock and movable to and from a trigger-engaging position for selectively locking and releasing said trigger, a pull rod connected to said plate and extending longitudinally of the barrel-supporting portion of the stock, a pull rod locking member carried by and movable transversely of the barrel-supporting portion of the stock, said locking member being located near the outer end of the barrel-supporting portion and also being located forwardly of the trigger, the locking member being movable to and from a pull rod locking position, a pull rod shifting member engaging said pull rod for shifting the pull rod and plate to a trigger disengaging position after said locking member has been released from said pull rod, an operating push button carried by said locking member and located upon one side of said barrel-supporting portion within convenient reach of the fingers of one hand of an operator, and an operating push button carried by said pull rod shifting member and located upon the opposite side of said barrel-supporting portion relative to the first mentioned push button and within convenient reach of other fingers of the mentioned hand of an operator.

4. A fire-arm of the class described comprising a stock having a forwardly extending barrel-supporting portion, a trigger carried by the stock, a trigger-engaging means movable to and from a trigger-engaging position, a locking member movable to and from a locking position relative to said trigger-engaging means, a shifting means engaging said trigger-engaging means for actuating said trigger-engaging means, said locking member and shifting means being carried by the barrel-supporting portion forwardly of the trigger, and the locking means being located upon the opposite side of the barrel-supporting portion relative to the shifting means and accessible to the supporting hand of an operator gripping the barrel-supporting portion of the fire-arm while in a firing position.

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