Jan. 19, 1937. J. T. GURNEY 2,068,289

SELECTIVE HAIR TRIGGER AND SAFETY DEVICE

Filed Nov. 27, 1935 2 Sheets-Sheet 1

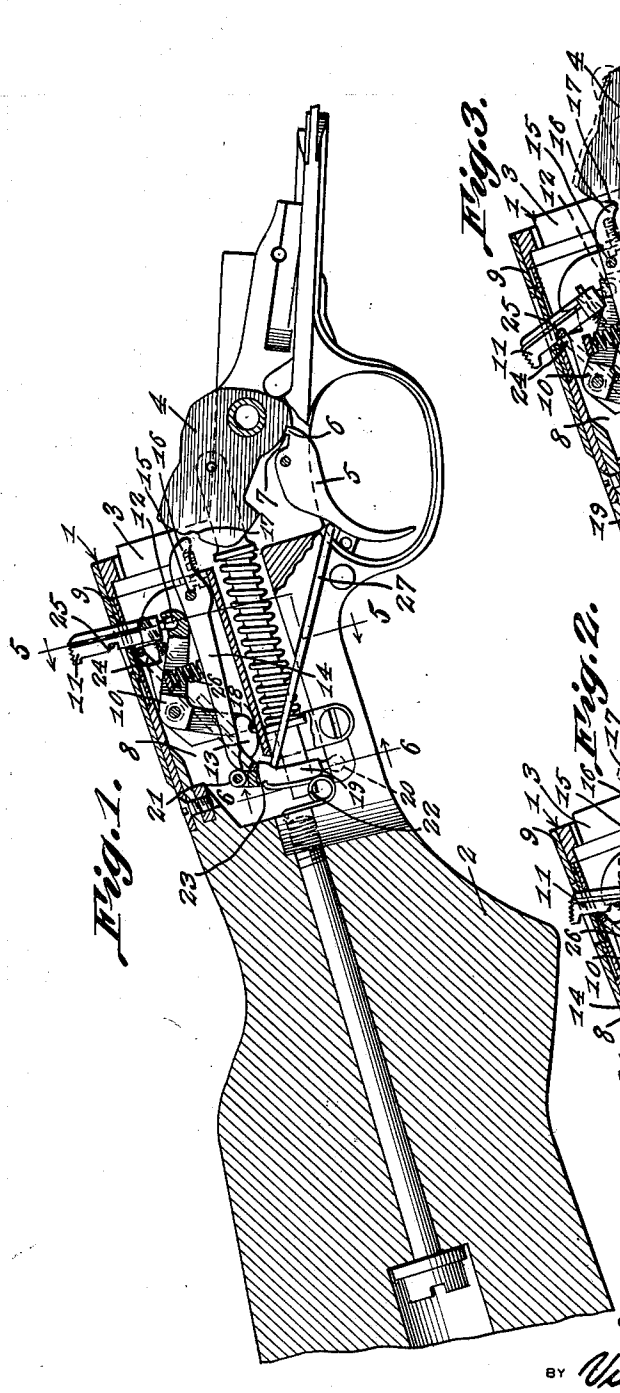


Fig. 1.

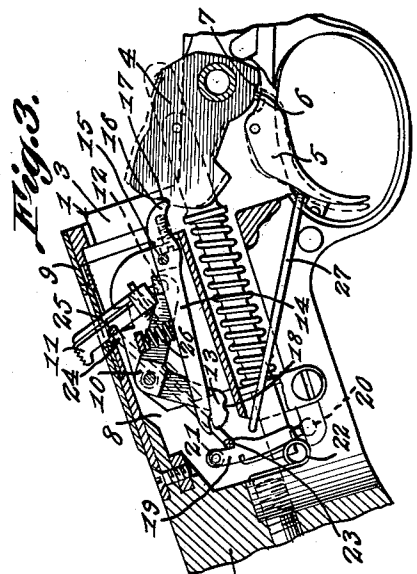


Fig. 3.

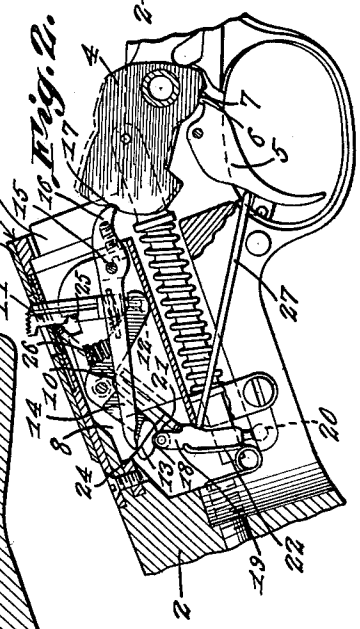


Fig. 2.

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SELECTIVE HAIR TRIGGER AND SAFETY DEVICE

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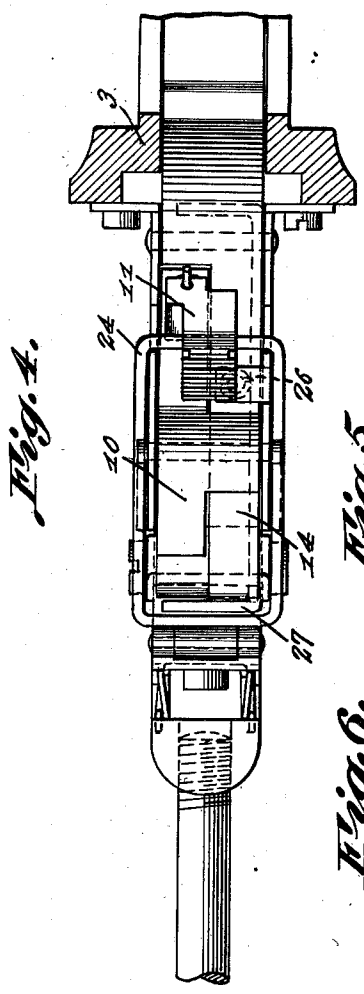


Fig. 4.

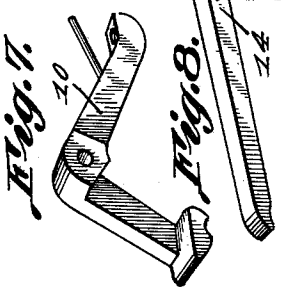


Fig. 7.

Fig. 8.

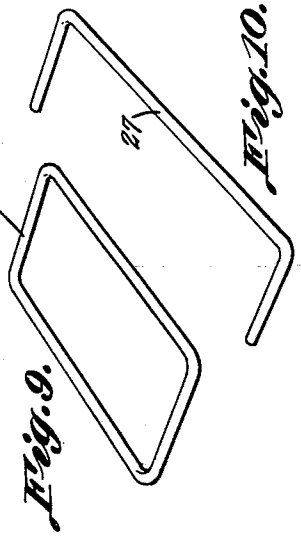


Fig. 9.

Fig. 10.

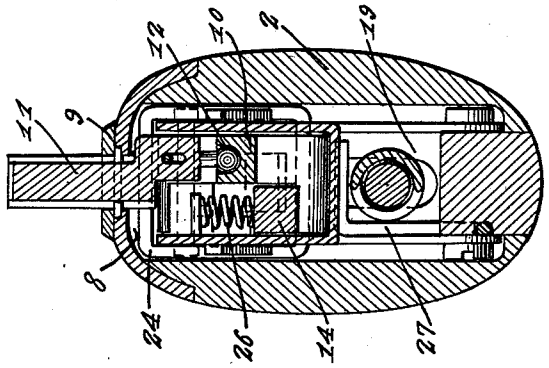


Fig. 5.

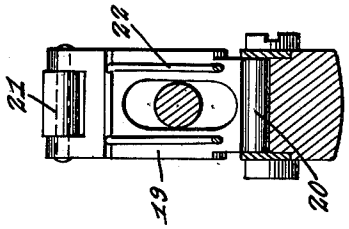


Fig. 6.

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UNITED STATES PATENT OFFICE

2,068,289

SELECTIVE HAIR TRIGGER AND SAFETY DEVICE

Joseph Thomas Gurney, Johnson City, N. Y.

Application November 27, 1935, Serial No. 51,895

3 Claims. (Cl. 42—70)

This invention relates to gun appliances, and has for the primary object the provision of a device of this character which may be readily adapted to a gun for providing thereto a hair trigger action so that the gun at the will of the user may be quickly and conveniently changed from a standard trigger pull to a hair trigger pull and also will provide a safety to the gun to prevent accidental firing thereof by positively securing the hammer of said gun in a cocked position against release through the actuation of the usual trigger mechanism.

With these and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a fragmentary vertical sectional view showing a gun equipped with a trigger and safety device constructed in accordance with my invention.

Figure 2 is a view similar to Figure 1, showing my invention arranged to provide to the gun a hair trigger action.

Figure 3 is a view similar to Figures 1 and 2 showing my invention positioned to provide a safety to the gun to prevent accidental firing thereof.

Figure 4 is a fragmentary plan view, partly in section, showing the combined trigger and safety device.

Figure 5 is a transverse sectional view taken on the line 5—5 of Figure 1.

Figure 6 is a transverse sectional view taken on the line 6—6 of Figure 1.

Figure 7 is a perspective view showing a bell crank lever forming a part of the present invention.

Figure 8 is a perspective view showing a hammer engaging lever forming a part of the present invention.

Figure 9 is a perspective view showing a rectangular shaped frame forming a part of the present invention.

Figure 10 is a perspective view illustrating a push rod forming a part of the present invention.

Referring in detail to the drawings, the numeral 1 indicates a fragmentary portion of a gun wherein the stock 2 is shown secured to the gun frame 3 and the latter carries the usual spring actuated hammer 4 and trigger mechanism 5. The trigger mechanism includes the usual trigger and a projection 6 to engage in a notch 7 of the hammer 4 for retaining the latter in firing position. The foregoing description relates to a conventional type of gun and to which the present invention is adapted.

The gun frame has a chamber 8 opening outwardly through the upper face thereof and closed by a slotted plate 9. A bell crank lever 10 is pivotally mounted in the chamber and has one end connected to a finger piece 11 by a ball and socket connection 12. The finger piece 11 extends through the slotted plate 9 and is capable of a limited pivotal movement forwardly and backwardly with respect to the gun and also has a limited sliding movement inwardly and outwardly with respect to the chamber 8. The other end of the bell crank lever has formed thereon a head 13 on which rides a hammer engaging lever 14, the latter being pivotally mounted, as shown at 15. The pivoted end of the lever 14 has a hook-shaped portion 16 to move into and out of a notch 17 formed in the hammer 4. The head 13 is provided with a notch 18. A latch element 19 is pivotally mounted in the chamber 8, as shown at 20, and carries at its free end a roller 21 which may engage in the notch 18 of the head 13. A spring 22 acts on the latch element 19 to urge the latter in the direction of the head 13. A shoulder 23 is formed on the latch element adjacent the roller 21 to be engaged by a rectangular-shaped frame 24, the latter being suitably mounted to the gun for a sliding movement and may engage in a notch 25 of the finger piece 11 during one of the positions of said finger piece. A spring 26 acts on the lever 14 to normally position the parts, as shown in Figure 1, that is, the hook-shaped end 16 of the lever out of the path of movement of the hammer 4 and the roller 21 out of engagement with the notch 18 of the head 13 of said bell crank lever. A slidable push rod 27 is arranged between the latch element 19 and the trigger of the trigger mechanism 5.

Figures 1 to 3, inclusive, show the hammer 4 in a cocked position, the hammer being held in a cocked position in Figure 1 by the trigger mechanism 5. In Figure 2, the hammer is held in a cocked position by the hook-shaped end of the lever 14 engaging in the notch 17 of the hammer and the lever being held against pivotal movement due to the roller 21 of the latch lever engaging in the notch 18 of the head 13. The

parts positioned, as shown in Figure 2, provides to the gun a hair trigger action changing the gun from a standard trigger action. A pull upon the trigger of the trigger mechanism 5 will disengage the latch element 19 from the head 13 and the spring 22 acts to disengage the hook-shaped end 16 from the notch 17 of the hammer, consequently releasing the same from a cocked position, permitting the hammer 4 to move in firing position by its usual mechanism. To obtain the hair trigger action to the gun, the finger piece 11 is pushed inwardly which rocks the bell crank lever on its pivot, elevating one end of the lever 14 and moving the hook-shaped end 16 thereof into the notch 17 relieving the trigger mechanism 5 of holding the hammer in cocked position. It is to be understood that the hammer is moved into cocked position prior to moving the finger piece 11 inwardly.

To provide a safety to the gun, the finger piece 11 after being moved inwardly, as shown in Figure 2, is swung rearwardly with respect to the gun to assume the position, as shown in Figure 3. During this movement of the finger piece 11, the rectangular-shaped frame 24 is caused to slide and also enter the notch 25 of the finger piece. The sliding movement of the frame 24 disengages the latch element 19 from the head 13. The frame fitting in the notch 25 of the finger piece retains the lever 14 and bell crank lever in position for securing the hammer in cocked position. Thus it will be seen that if the trigger mechanism 5 is actuated, it will not release the hammer from firing position and also will not actuate the latch element 19 through the push rod 27, consequently the gun is set in a safety position against accidental firing.

The return of the finger piece to the position shown in Figure 1 restores the gun to its normal or standard trigger action and the hair trigger action provided to the gun of this invention may be varied in accordance with the strength of the spring 22.

Having described the invention, I claim:

1. In combination with a gun provided with a hammer and a trigger mechanism having a standard pull normally acting to hold the hammer in cocked position and to release said hammer from said cocked position when manually pulled, a finger piece pivotally and slidably mounted on the gun and capable of having several positions, a bell crank lever pivoted to the gun and to the finger piece, a head formed on said bell crank lever, a hammer lever pivotally mounted to the gun and engaging said head at one end and engaging the hammer at its opposite end to hold the hammer in cocked position when said finger piece is moved into one of its positions and thereby provide a safety against accidental firing of the gun, a spring pressed trip element normally moved into a position to engage either of said levers and during one of the positions of the finger piece is adapted to engage the head for holding the hammer lever in a position to retain the hammer in cocked position, means engageable with the trip element and the finger piece for positioning said trip element out of engagement with the levers and securing the finger piece in a position to retain the hammer in cocked position against accidental firing, and means between the trigger mechanism and the trip element to disengage the latter from the head after the positioning of the finger piece in one of its positions to release the hammer with a hair trigger pull.

2. In combination with a gun provided with a hammer and a trigger mechanism having a standard pull, a finger piece pivotally and slidably mounted to the gun and having several positions and adapted to be manually moved into any one of said positions, a bell crank lever pivoted to the gun and pivotally connected to the finger piece, a head formed on said bell crank lever and having a notch, a trigger lever pivoted to the gun and engaging and riding upon said head and having one end of hook-shape to move into and out of the notch of the hammer, a spring-pressed trip element pivoted to the gun and movable into and out of the notch of the head, a slidable element carried by the gun and engageable with the trip element and engaged by the finger piece when in one of its positions to secure the hammer lever in engagement with the notch of the hammer and thereby provide a safety to the gun, and means connected with the trigger mechanism and engaged by the trip element when contacting the notch of the head to retain the hammer in cocked position after the movement of the finger piece into another one of its positions and providing to the gun a hair trigger pull.

3. In combination with a gun provided with a hammer and a trigger mechanism having a standard pull, a movably mounted finger piece carried by the gun and capable of occupying several positions, a finger piece lever connected with said finger piece and pivotally mounted to the gun, a head formed on said lever and having a notch, a hammer lever pivoted to the gun and engageable with the hammer and the head, a spring acting on the hammer lever, a trip element pivoted to the gun and movable into and out of the notch of the head, a spring acting on the trip lever, a slidable frame carried by the gun to engage the trip lever and the finger piece when in one of its positions, and a push rod connected to the trigger mechanism and adapted to engage the trip element on a pull on said trigger mechanism to disengage the trip element from the head and provide to the gun a hair trigger pull.

JOSEPH T. GURNEY.