July 14, 1942. J. B. FISHER 2,289,490

TOY GUN

Filed July 19, 1940

Fig. 1.

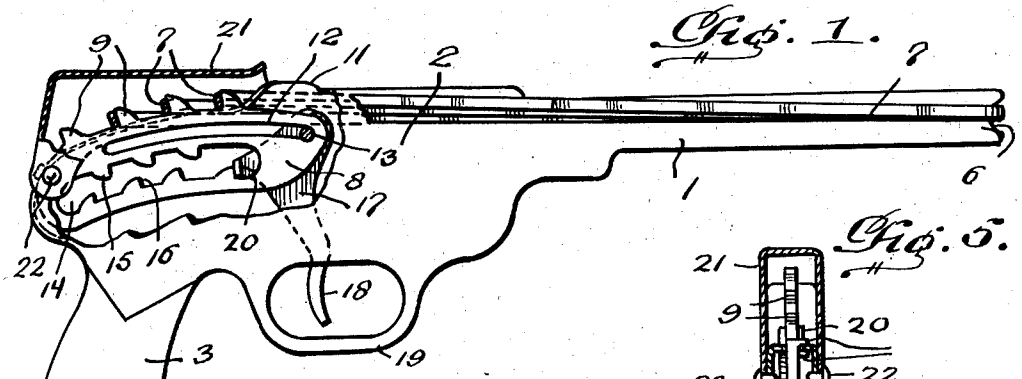


Fig. 5.

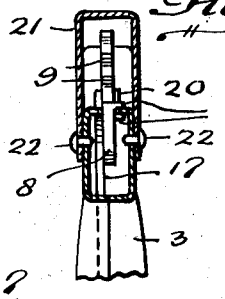


Fig. 2.

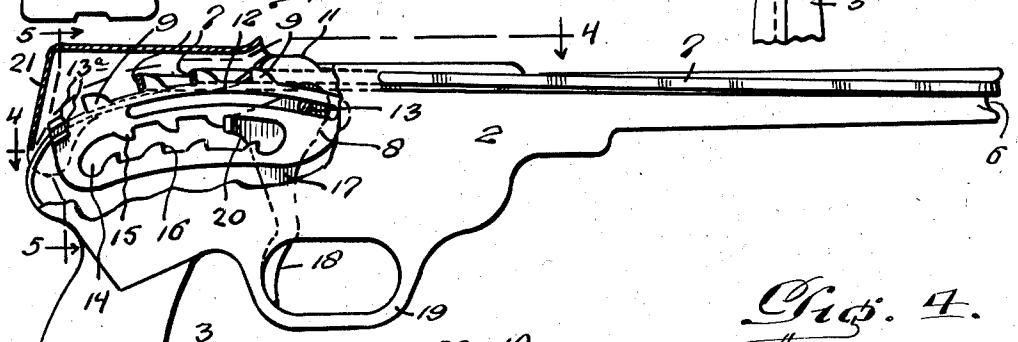
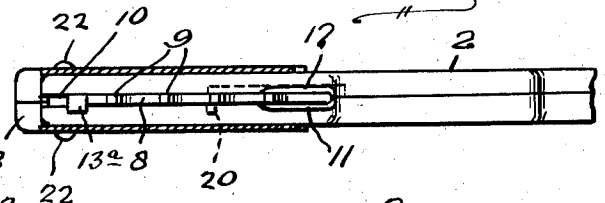


Fig. 4.



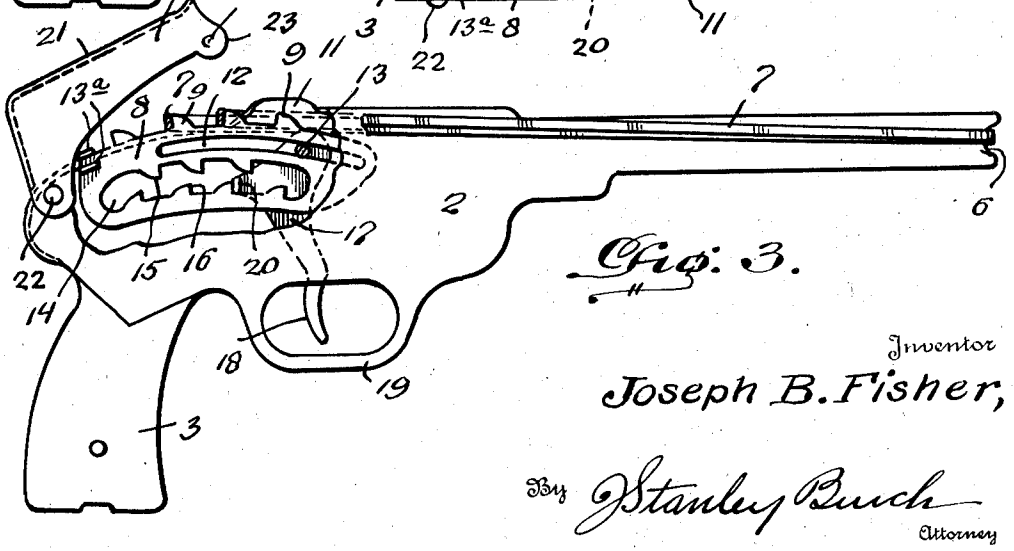


Fig. 3.

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2,289,490

UNITED STATES PATENT OFFICE

2,289,490

TOY GUN

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Application July 19, 1940, Serial No. 346,451

3 Claims. (Cl. 124—19)

This invention relates to toy guns of the type shown in my U. S. Patent No. 1,892,209, dated December 27, 1932, wherein rubber bands are employed as projectiles.

The primary object of the present invention is to provide an improved form of rubber band holding and releasing mechanism, whereby the necessity for manually recocking the gun after the discharge of each rubber band is rendered unnecessary.

A further object of the present invention is to provide a rubber band holding and releasing mechanism which is comparatively simple in construction and highly efficient in operation.

A still further object of the present invention is to provide a gun of the above kind with simple and efficient means for preventing the rubber bands from flying backwards and striking the user of the gun in case they should become broken or accidently disengaged from the front end of the gun barrel.

With the above objects in view, the present invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing:

Figure 1 is a view, partly in side elevation and parly broken away and in section, of a toy gun constructed in accordance with the present invention, the parts being disposed for discharge of the first of a plurality of rubber bands upon pulling the trigger.

Figure 2 is a view similar to Figure 1 with the parts as they appear after the trigger has been pulled and the first rubber band projected or discharged.

Figure 3 is a view similar to Figure 2 with the parts disposed in the position they will assume after release of the trigger and following discharge of the first rubber band as in Figure 2, the guard for preventing the rubber bands from flying backwards being shown in elevated position where reloading of the gun is permitted.

Figure 4 is a horizontal section on line 4—4 of Figure 2; and

Figure 5 is a vertical section on line 5—5 of Figure 2.

Referring in detail to the drawing, the present gun has been shown as of the pistol or revolver type and formed of a pair of pressed metal vertically abutting halves of a size and shape simulating that of an actual revolver. This provides a body comprising a barrel 1, a stock 2 and a handle 3, the body members being suitably secured together. The barrel 1 has a notch or depression 6 at its forward end so as to form a seat for the rubber bands 7 used as projectiles.

The band holding and releasing mechanism includes a horizontally elongated plate 8 mounted in the stock portion of the gun for sliding movement longitudinally of the latter, said plate having formed along its upper edge a row of upstanding band retaining lugs 9 which may slant rearwardly and preferably have flat rear faces. The flanges of the body sections at the top of the stock portion of the gun are spaced apart to provide a slot 10 upwardly through which the lugs 9 project, and at the forward end of the slot 10 these flanges are provided with spaced upward extensions 11 between which the lugs 9 are adapted to pass upon forward movement of the plate 8, the extensions 11 being of slightly greater heighth than the lugs 9 so as to cause dis-engagement of the rubber bands 7 from said lugs as they successively pass between the extensions 11. As shown, the plate 8 has a longitudinal elongated slot 12 therein near its upper edge and extending for the major forward portion of the plate 8. A pin 13 extending transversely between the body sections and carried by the latter near the forward end of the stock portion of the gun, loosely passes through the slot 12 so as to guide the plate 8 in its sliding movement. The plate 8 is further guided and prevented from swinging through the medium of a pair of lateral lugs 13a on the rear upper edge portion of the plate 8 respectively engaging the under and upper surface of a top flange of one of the body sections along one side of the slot 10.

The plate 8 is further provided with a relatively wide longitudinal elongated slot 14 parallel with and below the slot 12, as well as extending rearwardly of the latter. Formed on the plate 8 at the top of the slot 14 are a plurality of depending spaced projections 15 which may incline forwardly and which preferably have flat front edges. Similar upstanding projections 16 are provided on the plate along the lower edge of slot 14, the projections 16 being in staggered relation to the projections 15 and of a number so that a projection 16 occurs forwardly of the foremost projection 15 and another occurs rearwardly of the rearmost projection 15.

A trigger member 17 is pivoted on the pin 13 beside the plate 8 and has a depending finger piece 18 projecting downwardly through a slot in the bottom of the stock portion 2 and within the space bounded by a trigger guard 19 formed on the bottom of said stock portion. The trigger 17 has its upper portion formed with a rearward extension directly below the pin 13, which extension terminates in a laterally directed lug 20 arranged to alternately engage the projections 16 and 15 in a manner which will be presently described.

In use, the plate 8 is slid rearwardly to the position of Figure 1 wherein the pin 13 is disposed at the forward end of slot 12, and wherein the trigger 17 has its finger piece 18 swung

forwardly. In this position, the trigger lug 20 is disposed in front of the foremost projection 16, and the lugs 9 are disposed rearwardly of the upward extensions 11 on the stock portion of the gun. The rubber bands 7 are then disposed in engagement with the notched forward end of the barrel as at 6, the first rubber band applied being in engagement with the rearmost lug 9 and so on. Thus, the outermost rubber band will be then engaged with the foremost lug 9. With the gun thus loaded as shown in Figure 1, a rearward pull upon the finger piece 18 of the trigger 17 will cause dis-engagement of the trigger lug 20 from the foremost projection 16, thereby allowing the rubber bands to shift the plate 8 forwardly until the foremost projection 15 engages the trigger lug 20 as shown in Figure 2. When this takes place, the foremost lug 9 passes between the upward extensions 11 of the stock portion so that such extensions cause the rear end of the outermost rubber band to be elevated out of engagement with its associated lug 9. When thus released, the rubber band, which has been placed under tension, will be projected in a well known manner. As soon as the trigger is released, the plate 8 will be allowed to shift forwardly under the influence of the rubber bands, thereby causing the trigger to be tilted so that its lug 20 will engage the next projection 16 of the plate 8 as in Figure 3. The gun is now conditioned for discharge of the next succeeding rubber band, merely upon rearward pulling upon the finger piece of the trigger. This operation may be repeated until the entire supply of rubber bands has been projected. It will thus be seen that the bands may be rapidly successively fired by simply operating the trigger, no manual re-cocking of the gun being necessary after firing each succeeding rubber band.

In order to prevent a rubber band from flying backwards and striking the user of the gun, in case such rubber band may become broken or accidently dis-engage from the front end of the gun barrel, I provide a guard member 21 which is preferably pivoted at its rear end as at 22 to the rear end of the stock portion 2 and which extends upwardly and forwardly so as to be in the path of any rearwardly flying band. The guard 21 may be swung upwardly away from the lugs 9 so as to permit free loading of the gun, after which the guard member may be swung downwardly to enclose the lugs 9 and thereby furnish maximum protection. As shown, the guard member 21 may be in the form of a hollow member open at the bottom and front and having depending extensions 23 at its forward ends provided with inwardly pressed teats 24 adapted to frictionally engage opposite sides of the stock portion of the gun so as to frictionally retain the guard in its operatively lowered position. The guard 21 is of a length to extend to a point adjacent the rear ends of the upward extensions 11.

From the foregoing description, it will be readily seen that I have provided a device for successfully carrying out stated objects of the invention. While a preferred embodiment of the invention has been shown and described in considerable detail, it will be understood that the device is susceptible to such minor changes in details of construction as fairly fall within the spirit and scope of the invention as claimed.

What I claim as new is:

1. In a toy gun to shoot elastic bands, a vertical plate projecting through and movably mounted in the stock of the gun, upstanding lugs along the upper edge of the plate to engage individual bands at one end, said bands being adapted to be stretched and engaged at the other end with the front end of the gun, said plate being formed with an elongated slot and provided at the top and bottom of said slot with projections, the projections at the top of the slot being in staggered relation with those at the bottom of the slot, a trigger element separate from and pivoted beside the plate, said trigger element having a rearwardly extending portion below its pivot terminating in a lateral lug arranged in the slot of the plate for alternate engagement with said projections, whereby alternate pulling and release of the trigger will permit step by step movement of the plate under the pulling pressure of the bands thereon.

2. In a toy gun to shoot elastic bands, a vertical plate projecting through and movably mounted in the stock of the gun, upstanding lugs along the upper edge of the plate to engage individual bands at one end, said bands being adapted to be stretched and engaged at the other end with the front end of the gun, said plate being formed with an elongated slot and provided at the top and bottom of said slot with projections, the projections at the top of the slot being in staggered relation with those at the bottom of the slot, a trigger element separate from and pivoted beside the plate, said trigger element having a rearwardly extending portion below its pivot terminating in a lateral lug arranged in the slot of the plate for alternate engagement with said projections, whereby alternate pulling and release of the trigger will permit step by step movement of the plate under the pulling pressure of the bands thereon, said plate having a further elongated slot, a pin extending transversely through said slot and carried by the stock to guide the forward portion of the plate in its movement, said pin forming a pivot for said trigger element.

3. In a toy gun to shoot elastic bands, a vertical plate projecting through and movably mounted in the stock of the gun, upstanding lugs along the upper edge of the plate to engage individual bands at one end, said bands being adapted to be stretched and engaged at the other end with the front end of the gun, said plate being forme with an elongated slot and provided at the top and bottom of said slot with projections, the projections at the top of the slot being in staggered relation with those at the bottom of he slot, a trigger element separate from and pivoted beside the plate, said trigger element having a rearwardly extending portion below its pivot terminating in a lateral lug arranged in the slot of the plate for alternate engagement with said projections, whereby alternate pulling and release of the trigger will permit step by step movement of the plate under the pulling pressure of the bands thereon, said plate having a further elongated slot, a pin extending transversely through said slot and carried by the stock to guide the forward portion of the plate in its movement, said pin forming a pivot for said trigger element, and spaced lugs extending laterally from the plate and engaging the stock to guide the rear portion of the plate in its movements.

JOSEPH B. FISHER.