July 1, 1930. L. G. TAYLOR 1,768,944

TOY WEAPON

Filed Oct. 2, 1928

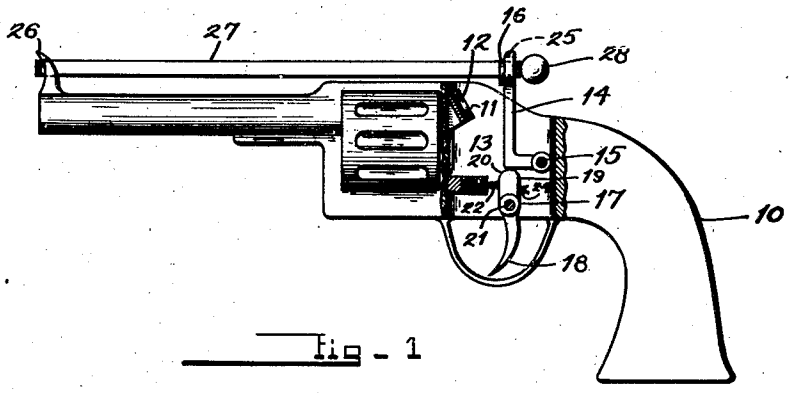


Fig - 1

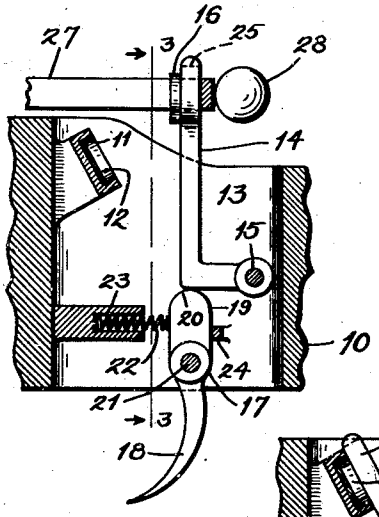


Fig - 2

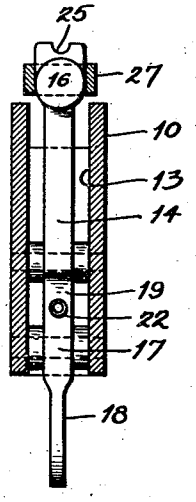


Fig - 3

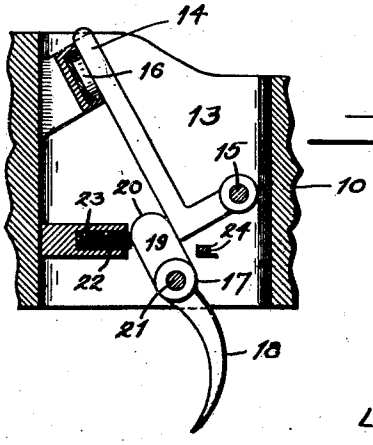


Fig - 4

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UNITED STATES PATENT OFFICE

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TOY WEAPON

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My invention relates to toy weapons.

The principal object of my invention is to devise a toy weapon, preferably in the form of a rifle or pistol, which is arranged to control and utilize the propulsive power embodied in the missile discharged by the weapon.

A further object is to devise a weapon of the character described and to associate therewith mechanism for exploding percussion caps, the operative force for which is derived from the missile discharged by the weapon.

A further object is to devise a weapon as above set forth which is characterized by simplicity of design, low cost of manufacture, and whose use is marked by a reasonable degree of accuracy against designated targets.

Toy weapons of the general class to which the present invention belongs employ usually either compressed air, or a spring actuated plunger, as a means of propelling objects through the air. These forms of construction, however, are unduly complicated, relatively costly to manufacture, and are characterized by early breakages or failure to operate for other reasons.

With a view of providing a weapon which is simple and rugged in construction, the device embodied in the present application has been designed. Essentially, it comprises a supporting member in the form of a rifle or pistol, along whose barrel on the exterior thereof is stretched a simple rubber band, or a special form of missile having the elastic properties of such a band. Preferably, the band is stretched between the front sight and the hammer as limiting points, so that when the latter is released, the energy stored within the stretched band causes it to pivot about the front sight and to be propelled endwise through the air.

In order to improve the realism of the weapon, the hammer mechanism has been arranged to explode a percussion cap of the type commonly used in the so-called cap pistol, the driving power for the hammer being derived from the stretched band. It will be obvious, therefore, that my improved weapon may not only employ as a missile an object which is easily obtained everywhere, but that it may be manufactured at low cost, thus rendering the same highly advantageous for use by children.

These and further objects of my invention will be set forth in the following specification, reference being had to the accompanying drawing, and the novel means by which said objects are effectuated will be definitely pointed out in the claim. In the drawing:

Fig. 1 is a side elevation of my improved weapon, partly in section, the various elements being in readiness to discharge a missile.

Fig. 2 is an enlarged view of a portion of Fig. 1, showing the trigger and hammer mechanism in the cocked position.

Fig. 3 is a section along the line 3—3 in Fig. 2, looking in the direction of the arrows.

Fig. 4 is a view similar to Fig. 2, but showing the relation of the trigger and hammer in the firing position.

The numeral 10 represents generally a toy cap pistol which is provided with the usual pocket 11 for the reception of a percussion cap 12. An opening 13 extends through said pistol adjacent said pocket and a hammer arm 14, generally L-shaped in outline, is pivotally supported therein as at 15 on the extremity of the base of the arm. The vertical limb of the arm 14 extends upward above the upper surface of the pistol and has formed thereon a striking head 16 for coaction with the pocket 11.

A trigger lever 17 is pivotally supported in the opening 13 below the arm 14, the lower portion 18 thereof extending below the lower surface of the piston and being curved to fit the index finger of the hand. The upper portion 19 of said trigger is rounded as at 20 for engagement with the base of the arm 14 when the various parts are in the positions shown in Figs. 1 and 2. For a purpose hereinafter explained, the pivot 21 of said trigger is disposed in alignment with the median line of the vertical limb of the arm 14 and when said trigger and arm are in the cocked position as shown in Fig. 2, the portion 19 of said trigger will be aligned with

said limb and accordingly with said pivot. In order to maintain the trigger 17 in a cocked position and to return the same thereto after firing, one end of a spring 22 coacts with the portion 19 of said lever and the other end of said spring is slidably mounted in a pocket 23 provided in the body portion of the pistol. A stop 24 is formed on the pistol on the opposite side of the lever 17 from the spring 22 in order to limit the movement of said lever in that direction.

A notch 25, serving as a rear sight, may be provided on the upper end of the arm 14 and aligned therewith is a front sight 26, preferably hook-shaped, on the muzzle end of the pistol. An elastic band 27 is stretched over the sight 26 and the upper end of the arm 14 and may be provided with a ball 28 on the end adjacent the arm 14 to improve the ballistic property of said band. The band 27 constitutes the missile of the weapon and it may be a simple rubber band as shown, or it may be arranged in some fanciful manner, provided that some portion of the length of the latter is elastic and capable of being stretched as above.

Assuming that the parts of the weapon are disposed as shown in Fig. 1, it will be obvious that the tendency of the band 27 to resume its normal length causes the arm 14 to bear downwardly against the nose 20 of the trigger 17, but as the portion 19 and pivot 21 of the latter are directly aligned with the vertical limb of said arm through the action of the spring 22 and the stop 24, said arm is immobilized against movement. If now the curved portion 18 of the trigger is moved toward the right, as viewed in Figs. 1 and 2, the nose 20 will be freed from contact with the hammer 14 and the latter will be rotated downwardly by the band 27, thus causing the release of said band and a driving of the striking head 16 against the cap 12 to explode the same. The pocket 11 also acts as a stop for the arm 14 and the various parts will then occupy the relative positions shown in Fig. 4.

When released, the upper end of the arm 14 moves substantially below the plane of the lower edge of the band 27 and the contracting force of the latter acting against the front sight 26 causes a pivoting of the band thereabout and an endwise propulsion through the air in approximate alignment with its original position. The band 27 may be fired with a reasonable degree of accuracy against targets, the character of the trajectory obtained depending upon the size and strength of said band. It will be understood, however, that other forms of missiles may be employed, the only requirement being that it be capable of being stretched over the front sight and the hammer. Likewise, other forms may be substituted for the ball 28.

After firing, the hammer may be returned to its cocked position, whereupon the spring 22 will move the trigger to its locking position with said hammer. This mechanism is intended to be representative generally of such means, for it is contemplated that other schemes may be adopted without affecting the central thought involved, which is the discharge of a missile in the manner above described. However, the mechanism disclosed renders possible the utilization of the contracting force of the band to effect an explosion of the cap 12 without requiring an additional spring for actuating the arm 14, and hence improves the realism of the weapon.

While I have shown one set of elements and combinations thereof for effectuating my improved toy weapon, it will be understood that the same is for the purpose of illustration only and in nowise to limit my device to the exact forms and structures shown, for many changes may be made therein without departing from the spirit of my invention.

I claim:

A toy weapon comprising a supporting body portion, a fixed arm and an arm having an offset pivot on said portion, an elastic member stretched between said arms, a trigger pivoted on said portion in alignment with said pivoted arm when in the cocked position, a stop, and a spring pressing said trigger against said stop for maintaining the trigger in said position until released.

In testimony whereof, I affix my signature.

LLOYD G. TAYLOR.