Oct. 6, 1931. C. CARPENTER 1,826,053

TOY PISTOL

Filed July 7, 1930

Fig. 1

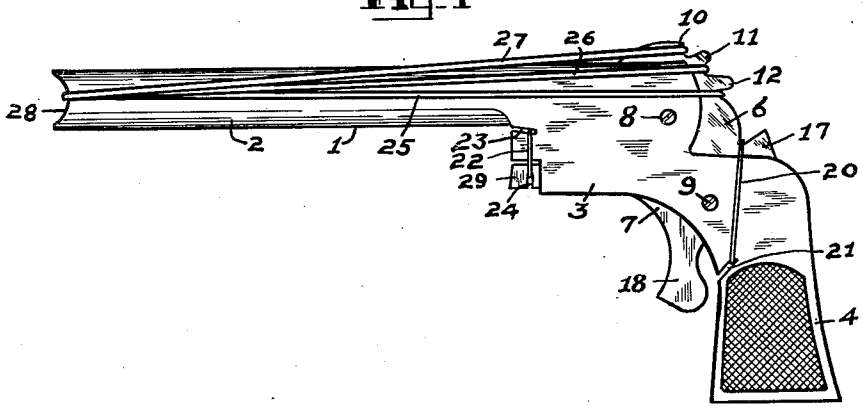


Fig. 2

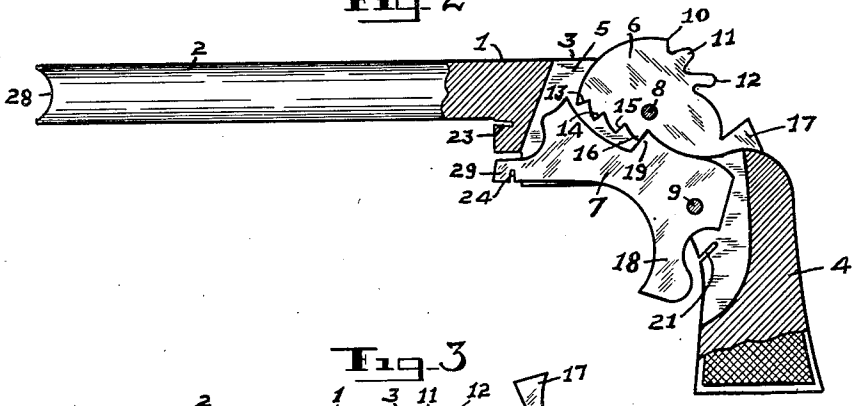
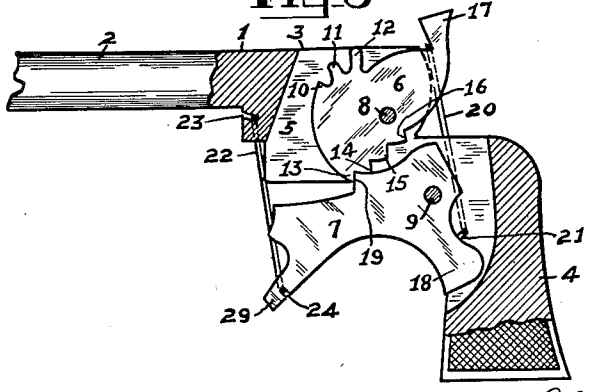


Fig. 3



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UNITED STATES PATENT OFFICE

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TOY PISTOL

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My invention relates to toy pistols adapted for shooting rubber bands, and important objects of the invention are to provide a toy pistol, of the character described, which is conveniently operable for successively shooting a plurality of rubber bands, which is fascinating and entertaining for children, which has relatively few parts, which is simple in its construction and arrangement, safe, durable and efficient in its use, attractive in appearance, positive and automatic in its action, and comparatively inexpensive to manufacture and operate.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention hereinafter disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings, wherein like numerals of reference designate corresponding parts throughout the several views:—

Figure 1 is a side view of a toy pistol constructed in accordance with the invention.

Figure 2 is a similar view thereof, partly in cross section.

Figure 3 is a fragmentary side view of the device, partly in cross section, with the operating parts thereof in the extreme releasing positions.

Referring in detail to the drawings, 1 represents the body portion, of my improved pistol, and comprises the barrel 2, and the stock 3 including the grip handle 4, providing a configuration resembling an ordinary pistol of conventional contour.

The body portion 1 is preferably constructed from an integral piece of wood, but it is obvious that the same may be constructed from metal, or from any other suitable material, and further may be made in like longitudinal sections, which, when assembled provide a unitary pistol structure.

The stock 3, of the body portion 1, is provided with a vertically disposed slot 5, which is open at the upper and lower ends thereof and extends from the barrel 2 to and within the grip handle 4.

An operating member 6 and an associated control member 7 are mounted in the slot 5. The operating member 6 and the control member 7 are flat and disposed edgewise in the slot 5. The operating member 6 is pivotally connected in the upper portion of the slot 5, adjacent to the rear end of the latter, by a screw bolt 8 secured in the stock 3. The control member 7 is pivotally connected, adjacent to its rear end, in the slot 5, below the operating member 6, by a screw bolt 9, which is secured in the grip handle 4, adjacent to the upper end of the latter.

The upper edge margin of the operating member 6 is formed to provide three securing lips, respectively indicated at 10, 11 and 12, the outer ends of which have uniform radial distances from the axial center of the pivoting screw bolt 8, and normally projects through the slot 5. The lower edge margin of the operating member 6, forwardly of the pivoting screw bolt 8, is formed to provide four uniform teeth, respectively indicated at 13, 14, 15 and 16, which regularly decrease in distance from the axial center.

The rear end of the operating member 6 is provided with a rearwardly projecting tail 17, which seats upon the upper end of the grip handle 4, for limiting the return movement of the operating member 6, in a manner hereinafter described, and for maintaining the latter in its normal inoperative position, as clearly shown in Figure 2.

The control member 7 is provided with a depending trigger 18, which is disposed adjacent to the rear end thereof, and projects through the lower end of the slot 5 directly forward of the grip handle 4. The upper edge margin of the control member 7 is provided with a detent 19, which is adapted for engagement with any of the teeth 13, 14, 15 and 16, of the operating member 6, in a manner and for the purpose hereinafter set forth.

The forwardly end of the control member 7 is provided with an arm 29, which projects forwardly through the forward open end of the depending portion of the slot 5 in the stock 3.

When in their normal inoperative positions, the detent 19, of the control member 7, is in engagement with the rearmost tooth 16, of the operating member 6, and the tail 17 of the latter seats upon the top of the grip handle 4, as clearly shown in Figure 2.

The operating member 6 is returned and held in its normal inoperative position by an endless elastic band 20, which passes around the outside of the grip handle 4 and has its upper portion looped over the tail 17. The lower portion of the band 20 is engaged in an upwardly inclining incision 21 provided therefor in the forward side of the grip handle 4.

The control member 7 is likewise returned and held in its normal inoperative position by an endless elastic band 22, which is respectively engaged in the declining incision 23 formed in the forward end of the stock 3, and in the vertical incision 24 formed in the lower edge margin of the control member arm 29.

The embodiment of the invention herein disclosed is designed for successively shooting three endless rubber bands, respectively indicated at 25, 26 and 27. The latter have their forward portions looped around the concavely recessed forward end 28 of the barrel 2. The rear portion of the band 25 is looped around the most rearward operating member lip 12; the rear portion of the band 26 is looped around the central lip 11, and the rear portion of the band 27 is looped around the most forward lip 10 as clearly illustrated in Figure 1.

The bands 25, 26 and 27 are tensionally mounted on the pistol in the sequence enumerated, so that the forward portion of the band 26 will overlap the forward portion of the band 25, and the forward portion of the band 27 will overlap the forward portion of the band 26.

In practice, the operation of my improved pistol is as follows:—Assuming that the operating member 6 and the control member 7 are in their normal positions, shown in Figure 2, with the bands 25, 26 and 27 tensionally mounted on the pistol in the manner stated and as illustrated in Figure 2, the detent 19, of the control member 7, is in engagement with the tooth 16, of the operating member 6, whereby the latter is locked against movement against the combined forward pulling action of the three tensioned bands 25, 26 and 27.

The first rearward pull upon the trigger 18 will release the detent 19 from the tooth 16, allowing the bands 25, 26 and 27 to partially turn the operating member 6 until the tooth 15 is engaged by the detent 19. Such partial rotation of the operating member 6 will cause the forward lip 10 to enter the top of the slot 5, thereby releasing the band 27 to be projected from the pistol.

The second further rearward pull upon the trigger 18 will release the detent 19 from the engaged tooth 15 permitting a further turn of the operating member 6 until the tooth 14 is engaged by the detent 19. The second movement of the operating member 6 will cause the lip 11 to enter the top of the slot 5 thereby forcing the release of the band 26 to be shot from the pistol.

The third still further pull upon the trigger 18 will release the detent 19 from the now engaged tooth 14, again allowing the shifting of the operating member 6 until the tooth 13 is engaged by the detent 19 and the lip 12 has entered the top of the slot 5 to release the last band 25 to effect its projection from the pistol.

After the third and last band 25 has been released from the pistol, the operating member 6 and the control member 7 will be in the position shown in Figure 3. A fourth pull upon the trigger 18 will release the detent 19 from the tooth 13, whereby the now tensioned elastic band 20 will automatically return the operating member 6 to its normal position, and the tensioned elastic band 22 will automatically return the control member 7 to its normal position. By replacing the bands 25, 26 and 27 on the pistol, the latter is again ready for a repetition of the shooting operations as herein stated.

It will be noted, that by consecutively increasing the radial distances of the teeth 13, 14, 15 and 16 from the axial center of the pivoting screw bolt 9, in the order of their engagement by the detent 19, during the shooting operations, the positive engagement of the detent 19 with successive teeth is effected. The tension exerted by the tensioned bands 25, 26 and 27 causes the movement of operating member 6 to shift with very great rapidity when released and until again engaged during each shooting operation.

The impact of the teeth 13, 14, 15 and 16 against the detent 19 produces a report not unlike an ordinary toy explosive pistol, whereby the device is rendered more enjoyable to children.

It is, of course, evident that by increasing the number of lips on the operating member 6 and providing a corresponding number of associated teeth on the latter, the number of shooting bands that may be placed on the pistol, at any one time, may be varied to conform with such construction.

A feature of the present invention resides in the provision of ordinary rubber bands 20 and 22 for returning and holding the operating and control members 6 and 7 to their normal positions. These bands 20 and 22 can be readily replaced by the child itself, when required, whereby the pistol is indefinitely maintained in perfect working order. In analogous devices, now in common use, im-

pairment to operating and control springs invariably result in destroying the utility of the pistol, and the advantage of so employing elastic or resilient bands 20 and 22, for the purpose stated, is apparent.

The present invention provides a most efficient and entertaining toy of its kind, which is preferably colored to simulate a real pistol structure, and which may be safely and economically operated.

What I claim is:

1. A toy pistol for projecting elastic bands comprising a body portion provided with a slot having open upper and lower ends, an operating member shiftably mounted in said slot, a plurality of lips carried by the upper edge of said operating member normally projecting through the open upper end of said slot, each of said lips adapted for securing the rear end portion of an elastic band thereto, a control member operatively mounted in said slot for controlling the movements of said operating member for successively releasing the elastic bands from said lips, and a pair of flexible resilient elements for automatically returning said operating and control members to their normal positions.

2. In combination, a toy pistol of the character described comprising a body portion formed to provide a barrel and a stock including a grip handle, said stock being formed with a slot having open upper and lower ends, an operating member shiftably mounted in said slot, a plurality of lips formed on the upper edge of said operating member and normally projecting through the open upper end of said slot, a plurality of endless rubber bands tensionally mounted on said body portion, each of said bands having its forward end portion secured around the forward end of said barrel and having its rearward end portion secured around respective lips, a control member mounted in said slot and operable for actuating said operating member to successively release the said bands from respective lips, and a pair of flexible resilient elements for automatically returning said operating and control members to their normal positions.

In testimony whereof I affix my signature.

CHALMER CARPENTER.