Feb. 15, 1938. F. L. JOHNSON 2,108,669

TOY GUN

Filed Oct. 2, 1936

FIG. 1

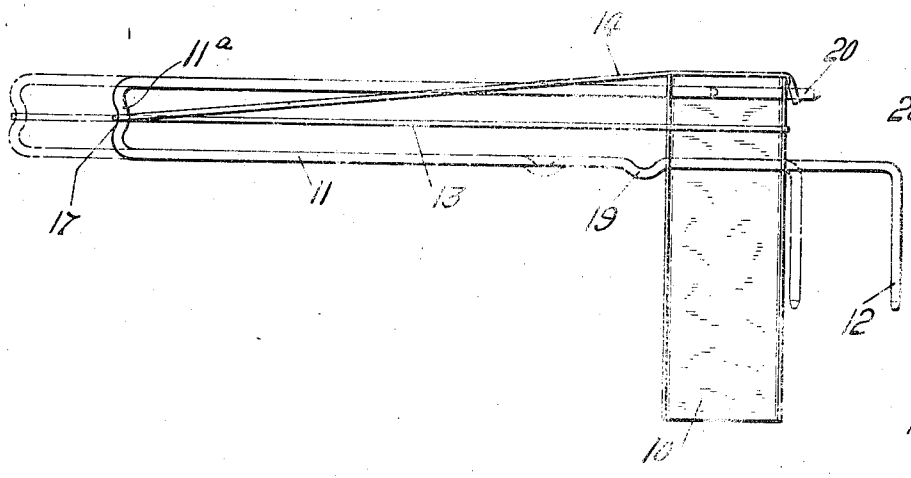
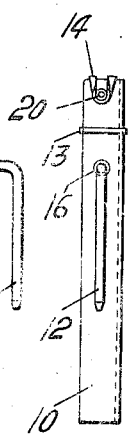


FIG. 2



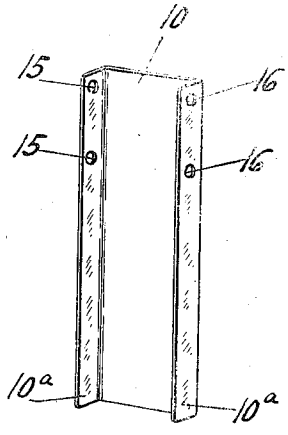


FIG. 3

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TOY GUN

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10 Claims. (Cl. 124—18)

This invention relates to toy guns, and more especially it relates to toy guns of the type that discharge elastic missiles such as rubber bands.

The chief objects of the invention are to provide a toy gun of the character described of an irreducible minimum number of parts; to provide a rubber band shooter of such low cost as to permit it to be sold at a low price, or even to be given away as an advertisement; and to provide a toy that is of realistic appearance. Other objects will be manifest as the specification proceeds.

Of the accompanying drawing,

Figure 1 is a side elevation of a toy gun embodying the invention, in its preferred form, and an elastic missile in position to be discharged therefrom, the discharge position of the elements of the gun being shown in broken lines;

Figure 2 is an end elevation of the structure shown in Figure 1, as viewed from the right thereof; and

Figure 3 is a perspective view of the member that constitutes the butt or handle of the gun.

Referring to the drawing, it will be seen that the improved gun comprises but three elements, namely, a butt or handle **10**, a unitary structure comprising a barrel **11** and trigger **12** movable relatively of said butt, and a spring member **13** normally retaining said barrel and butt in determinate relationship. A missile consisting of a rubber band **14** is shown in association with the gun in the "loaded" condition of the latter.

As is most clearly shown in Figure 3, the butt **10** is a channel-shaped metal structure, the parallel legs or flanges **10***a*, **10***a* of which are formed, adjacent their upper ends, with respective pairs of apertures **15**, **15** and **16**, **16**, the apertures in one flange being axially aligned with respective apertures of the other flange.

The unitary barrel and trigger structure preferaby is formed of a single wire that is reversely bent upon itself so as to provide spaced apart parallel portions that constitute the barrel of the gun and said parallel portions are united at the muzzle of the gun by an arcuate intermediate portion **11***a* that is so disposed as to provide a notch **17** in the end of the barrel. In the assembled structure the parallel portions of the barrel wire are slidably positioned in the apertures **15**, **16** of the butt **10**, the upper wire being disposed in the upper apertures and the lower wire in the lower apertures. The free end of the lower barrel-wire is bent downwardly at right angles into parallelism with the butt **10** and constitutes the trigger **12** of the device.

The spring **13**, herein shown as a rubber band, is looped about the butt **10** and barrel **11**, being engaged in the notch **17** at the muzzle of the latter, said spring normally urging the muzzle of the gun toward the butt **10**. The lower wire of the barrel structure **11** is formed with a stop, herein shown as an offset **19** in the wire, which stop limits the relative movement of the butt and the barrel structure under the impetus of spring **13**. Relative movement of the butt and barrel against the tension of spring **13** is limited by the trigger portion **12** of the barrel structure, which trigger substantially abuts the member **10**, as indicated in broken lines in Figure 1, in the "discharge" position of the respective elements of the gun.

In the normal position of the elements of the gun, the free end of the top wire of the barrel **11** projects but a short distance (about ¼ inch) beyond aperture **16** of butt **10**, as indicated at **20**, and such projecting portion constitutes an anchorage for the missile **14** in the "loaded" condition of the gun and a releasing device in the "discharge" condition of the gun.

In the operation of the gun, with the parts in the normal position shown in full lines in Figure 1, the rubber band **14** is mounted in tensioned condition thereon, one end of the band being looped about the notch **17** at the muzzle of the barrel **11** and the other end of the band being passed over the top of butt **10** and looped under the projecting end portion **20** of the upper wire of the barrel. The gun is held in the hand and may be aimed in the usual manner. The gun is discharged by closing the hand in such a manner as to urge the trigger **12** toward the butt **10**, against the tension of spring **13** and the missile **14**, thereby moving the entire barrel structure relatively of the butt to the position indicated by broken lines in Figure 1. In the aforesaid relative movement of the elements of the gun, the projecting portion **20** of the barrel structure moves through the upper aperture **16** of the butt to a point between the respective flanges **10***a* of the latter, and thus is disengaged from the missile **14** so as to release the latter. Contraction of the missile propels it from the muzzle of the gun toward the target at which the gun is aimed. When the operator opens his hand the spring **13** restores the butt and barrel of the gun to their normal positions.

From the foregoing it will be evident that the spring **13** is not really essential to the operation of the gun, since its only purpose is to restore the two relatively movable operative elements of

the gun to normal position after discharge. In the absence of the spring the tension of the missile 14 would hold the parts in proper position, ready to be discharged. Obviously other types of springs may be employed, the rubber band being preferred for the reason that it is cheap and readily available.

The gun is simple in construction and operation and achieves the other advantages set out in the foregoing statement of objects.

Modification may be resorted to without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. In a toy gun of the character described, the combination of a member constituting the butt of the gun, and a member constituting the barrel thereof, said barrel member being slidably mounted in said butt member and comprising means for holding an elastic band under tension, said band being disengaged from said barrel member by movement of the barrel member as a whole relatively of the butt.

2. A combination as defined in claim 1 including a trigger formed integral with the barrel member and adapted for use in effecting relative movement of the barrel member and butt member.

3. In a toy gun of the character described, the combination of a member constituting the butt of the gun, and a member constituting the barrel of the gun, said barrel member being slidably mounted for longitudinal movement in said butt, and having a portion projecting rearwardly of the butt, in the loaded condition of the gun, constituting an anchorage for one end of an elastic missile, said projecting portion being disposed within the butt, in the discharge condition of the gun, whereby the missile is released.

4. In a toy gun of the character described, the combination of a member constituting the butt of the gun, a member constituting the barrel of the gun slidably mounted for longitudinal movement in said butt, a yielding tension member urging said barrel member as a whole in one direction to a position in said butt member whereat an elastic missile may be received upon the gun, and means for limiting the movement of the barrel member under impetus of said yielding member, said barrel member being manually movable relatively of the butt member, against said yielding member, to effect discharge of said missile.

5. A combination as defined in claim 4 including a portion formed integral with said barrel member and disposed at an angle thereto, adjacent the butt, so as to constitute a trigger for moving the barrel member relatively of the butt member, against the tension of the yielding member, when said butt and trigger are squeezed together.

6. In a toy gun of the character described, the combination of a rod reversely bent upon itself to constitute a barrel member, a butt member within which said barrel member is slidably mounted for longitudinal movement, one end of said bent rod projecting rearwardly of the butt, in the loaded condition of the gun, so as to constitute an anchorage for one end of an elastic missile, and a hand-grip portion on the barrel member for moving the latter relatively of the butt so as to move the projecting missile-anchorage portion of the barrel to a point interiorly of the butt and thereby to release the missile.

7. In a device for projecting elastic bands, the combination of a rod reversely bent upon itself to constitute a barrel member, a butt member consisting of a metal channel, the parallel flanges of which are formed with aligned apertures that slidingly receive the parallel portions of the barrel structure, a means for determinately limiting sliding movement of the barrel relatively of the butt, one end portion of the barrel-rod being disposed between the butt-flanges at one extremity of the barrel's range of movement.

8. In a device for projecting elastic bands, the combination of a rod reversely folded upon itself to constitute a barrel member, a butt member consisting of a metal channel, the parallel flanges of which are formed with aligned apertures in which the barrel member is slidably mounted for longitudinal movement relatively of the butt, one portion of the barrel rod being deformed at opposite sides of the butt member so as determinately to limit the movement of the barrel relatively of the butt, the other portion of the barrel rod being of such length that its end projects through the butt at one extremity of the barrel's range of movement and is disposed between the butt-flanges at the other extremity of the barrel's range of movement.

9. A combination as defined in claim 8 in which the movement-limiting deformation of the barrel structure comprises a trigger for use in effecting relative movement of the barrel and butt.

10. A combination as defined in claim 8, including yielding means engaging the barrel and butt and normally urging them toward one extremity of their range of relative movement.

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