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A. P. LARSON

ARROW GUN

Filed March 8, 1926

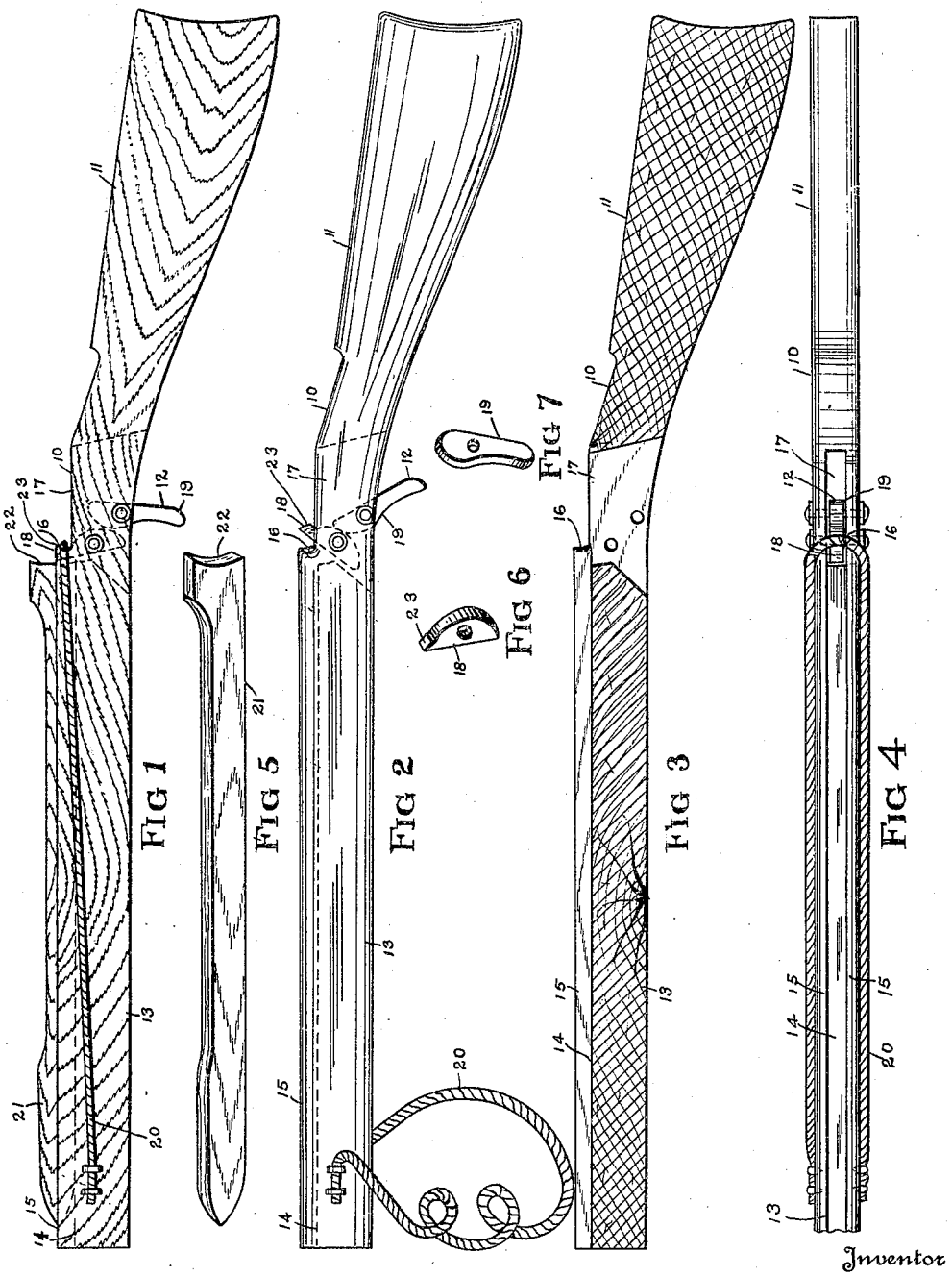


FIG 1

FIG 5

FIG 2

FIG 6

FIG 7

FIG 3

FIG 4

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UNITED STATES PATENT OFFICE.

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ARROW GUN.

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This invention relates to an improvement in an arrow gun intended to be used as a toy for children.

The primary object of this invention is to provide a simple gun for use as a toy, which will shoot an arrow or other projectile a short distance with a force insufficient to injure either person or property.

Other objects of this invention appear from a consideration of the following description taken in connection with the drawings which form a part thereof, and in which

Fig. 1 is a side elevation of an arrow gun and projectile embodying this invention, set and ready to be fired;

Fig. 2 is a similar view of the gun itself after the projectile has been discharged;

Fig. 3 is a longitudinal sectional view of the gun itself;

Fig. 4 is a top plan view of the gun without the projectile, set and ready to be fired;

Fig. 5 is a perspective view of one form of projectile that might be used; and

Figs. 6 and 7 are perspective views of parts of the trigger mechanism.

Referring to the drawings, the reference numeral 10 is employed to designate a toy gun having a stock 11, trigger mechanism 12, and barrel 13, the parts being made to assume as closely as possible the appearance of a real gun. It will be understood that instead of a gun the same invention could be employed with a toy imitating a revolver, a rifle, cannon, mortar or the like.

In the top of the barrel 13 is formed a groove or guide 14, which may be integral therewith, as shown in the drawing, or may be a separate element, if preferred. As here shown the guide 14 is formed by the walls 15, which are integral projections of the barrel 13, and which terminate at their inner ends in a notch 16. Through the gun between the barrel and the stock is cut a slot 17, in which the trigger mechanism 12 operates. The trigger mechanism 12 is made up of two members, an upper member or hammer 18 and a lower member or trigger 19. Both members are pivotally mounted in the slot 17 and are so formed that when the trigger 19 is drawn from the position shown in Fig. 1 to the position shown in Fig. 2, the hammer 18 is tilted, as illustrated in the two figures. Rigidly secured to the sides of the barrel 13 in any suitable manner are the ends of an extensible cord 20, thus forming a loop which can be inserted into the notches 16 of the guide walls 15, as shown in Figs. 1 and 4, in order to set the gun.

Fig. 5 shows an arrow 21, which is intended to be used as a projectile, and which is of a size sufficient to rest freely in the groove 14, having an enlarged inner end or butt 22, which preferably projects to some distance above the walls 15 of the guide 14. The gun is set or loaded by stretching the cord 20 until its loop can be slipped into the notch 16 behind the tip 23 of the hammer 18. The arrow 21 is then placed in the guide 14 with the butt 22 near the end of the guide.

The trigger 19 is now drawn backward in the usual way to tilt the hammer 18 into the position shown in Fig. 2. This movement of the hammer draws the cord 20 out of the notch 16, and since the tip 23 of the member 18, which projects into the guide 14 in front of the notch 16 is inclined, it is obvious that as soon as the cord 20 has been drawn out of the notch 16, it will slide off the tip 23, strike the butt 22 of the arrow 21 to drive it forwardly from the gun, and return to its normal position hanging from the outer end of the barrel. The walls 15 function to keep the projectile in a direct path.

In the drawing the extensible cord 20 is illustrated as of elastic, the ends of which are secured to the barrel 13 by staples, but it is of course obvious that a spring or other form of extensible cord and any suitable form of fastening means be substituted if desired.

While one embodiment of this invention has been shown and described, applicant is not limited thereto, since it is obvious that other embodiments can be made without departing from the spirit and scope of this invention as set forth in the following claims.

Having thus set forth my invention what I claim as new and for which I desire protection by Letters Patent is:

1. An arrow gun having a barrel, a guide at the top of said barrel to receive a projectile, and having horizontal notches therein, said gun being provided with a vertical slot which extends into said guide in front of said notches, a looped extensible cord fixed to the outer end of said barrel and adapted to be put under tension with the loop inserted in said notches, trigger mechanism in said slot and including a hammer having a rearwardly inclined tip, which enters said guide in front of said notches, whereby the operation of said mechanism retracts said hammer

so that the tip thereof draws said cord out of said notches and allows it to return to the outer end of the barrel, striking in its travel the butt of a projectile in said guide and driving it forwardly from said gun.

2. An arrow gun having a barrel, a guide at the top of said barrel to receive a projectile, and having horizontal notches therein, said gun being provided with a vertical slot which extends into said guide in front of said notches, a looped extensible cord fixed to the outer end of said barrel and adapted to be put under tension with the loop inserted in said notches, trigger mechanism in said slot and including a hammer having a rearwardly inclined tip which enters said guide in front of said notches, and a trigger, both said hammer and said trigger being pivotally mounted in the slot in such position that retraction of the trigger causes a retraction of the hammer.

In testimony whereof I have affixed my signature.

ALFRED P. LARSON.