June 1, 1954 J. THOMPSON 2,679,838

PROJECTILE RETAINING BLOWGUN

Filed Jan. 16, 1951

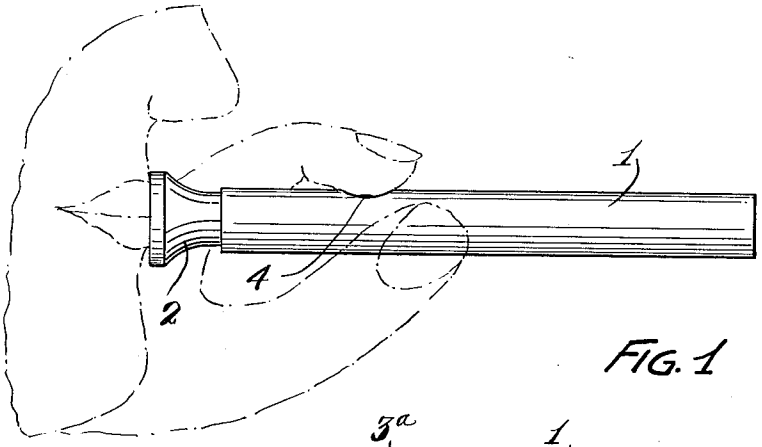



FIG. 1

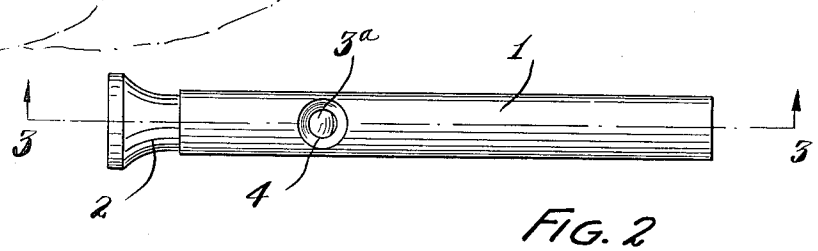



FIG. 2

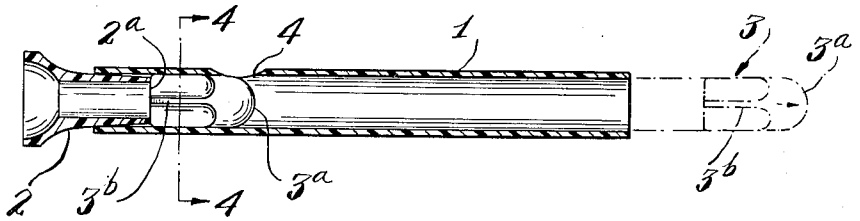



FIG. 3

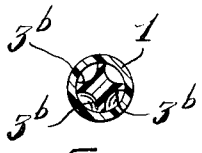



FIG. 4

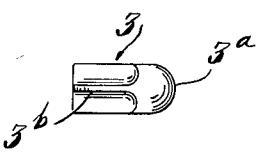



FIG. 5

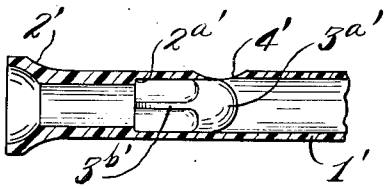



FIG. 6

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## PROJECTILE RETAINING BLOWGUN

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3 Claims. (Cl. 124—12)

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This invention relates to the general art of toys and consists of an improved form of device that may conveniently be referred to as belonging to the class of pea-shooters.

In the use of the very familiar form of pea-shooter, it is of course well known that the pea or other missile is apt to either roll or slide out of the forward end of the shooter barrel or to roll or slide out of the rear end thereof into the mouth and throat of the user. That is, if the pea-shooter with a pea or other missile therein be tilted upwardly so as to prevent the same from rolling or sliding out of the front end thereof, it is apt to roll or slide out of the rear end; or, if the shooter be tilted in the opposite manner so as to prevent the missile from falling out of the rear end, it will of course be apt to fall out of the front end as there is no provision in the present-day pea-shooter for preventing the pea or other missile from rolling or sliding out of one or the other end of the same prior to its discharge therefrom. Thus such a device is quite objectionable and it is this situation that my present invention is intended to correct. Also, my present improved form of device embodies other features which mark an advance in the art so far as I am aware.

Accordingly, one object of my present invention is to devise a toy of this general nature with means whereby the missile may be temporarily retained within the barrel of the shooter preparatory to discharging the same therefrom.

Another object is to devise such a toy in which there may be built up air pressure by the user to the rear of the missile while holding the same temporarily within the shooter so as to permit discharge therefrom in a most effective manner.

Another object is to devise such a toy in which the missile is of such form and is adapted to be so arranged within the shooter that it will permit air pressure to be built up by the user at the rear thereof preparatory to discharging the same and that may then function in a manner somewhat similar to that of a guided missile.

Another object is to devise a particular form of missile that is particularly well adapted for use in my present improved form of device, this missile possessing the combined characteristics of a bullet and guiding fins therefor.

Other objects will appear from the following description and claims when considered together with the accompanying drawing.

Fig. 1 is an elevation of one form of my present invention and illustrates the manner of using the same;

Fig. 2 is a top plan view of the same;

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Fig. 3 is a view taken on line 3—3 of Fig. 2;

Fig. 4 is a view taken on line 4—4 of Fig. 3;

Fig. 5 is an elevation of the improved missile; and

Fig. 6 is a partial view illustrating my invention when the mouth piece and body are made as one integral body.

It is to be understood that the present form of disclosure is merely for the purpose of illustration and that there might be devised various modifications thereof without departing from the spirit of my invention as herein set forth and claimed.

Referring now to the accompanying drawing in detail, the one-piece main tubular body member 1 may be made of plastic or any other suitable material and may have a comparatively thin wall. This body member 1 may be of uniform plain cylindrical form throughout its entire extent and may have its interior of uniform cross section throughout its entire length. At the rear end thereof there is the mouth piece 2 which has frictional engagement therewithin and thus provides an annular shoulder 2*a* for engagement by the rear end of the missile 3 so as to prevent the same from accidentally falling out of the rear end of the shooter and into the mouth of the user while preparing to discharge the same.

The body member 1 is provided with the aperture 4 of such size as to permit one finger of the user's hand to be inserted thereinto sufficiently to engage and hold the missile 3; and the missile is of such length that it will extend between this aperture and the shoulder 2*a*.

The missile 3 is of special form which is characterized by the spherical bullet-like nose 3*a* at the forward end thereof and the circumferentially spaced radial fins 3*b* extending rearwardly therefrom, the outer edges of these fins being tangent to the curvature of the spherical nose 3*a*. This missile is of such size radially that it will have sliding fit within the tubular member 1 so as to fill the same and yet be capable of being freely and forcibly ejected therefrom; and this missile is of such length that, when its rear end engages the stop shoulder 2*a*, its forward end will extend into the region of the aperture 4 so as to be capable of being engaged by the one finger of the user's hand. The missile 3 may be made of plastic or any other suitable material.

With the missile 3 in the position indicated in Fig. 3 of the accompanying drawing, it will engage the shoulder 2*a* and may be engaged temporarily by the user's finger or thumb through the aperture 4, as illustrated in Fig. 1 of the draw-

ing. With the user's lips applied to the mouth piece 2, he may blow into the rear end of the device and, while holding the missile not only against accidental escape but also in substantially airtight engagement with the inner surface of the tubular member 1 so as to prevent escape of air past the same, he may build up air pressure at the rear of the missile, that is just prior to release and ejection of the missile. Then, upon release of the missile but while still holding the aperture closed against escape of air therethrough, the missile may be effectively discharged from the forward end of the tubular body member 1 by continuing the blowing action at the mouth piece, and the air pressure at the rear of the missile will augment the force of ejection of the missile from the tubular member 1. The missile 3, including the nose portion and the fins, is made as one single integral member.

More than this, the rearwardly extending fins 3b will serve as a guiding means to maintain the course of the missile in a straight line as it is discharged and after it has been discharged from the tubular member 1, which means more effective ejection and more accurate propulsion of the missile towards its mark. With my present improved form of device, the missile may be shot with greater force and precision than is possible with other such devices so far as I am aware.

It is to be understood that the term "finger" is used herein as a matter of convenience in referring to the thumb or one of the other fingers of the user's hand.

This device is of simple construction and can be manufactured and sold at a popular price. As above stated, it can be made of plastic material; and, if so desired, the mouth piece and stop means for the misisle may be molded integrally with the main body so as to comprise but a single structure in its entirety except for the missile. This integral body is illustrated partially in Fig. 6 of the present drawing in which corresponding parts are indicated by reference numerals of a character corresponding to those in the other Figures of the drawing. Also, this device may be molded with any desired outer form and appearance so as to facilitate handling and to present an attractive design.



What I claim is:

1. A toy comprising a tubular body member that is open entirely therethrough and has a mouth-end for application of pressure therewithin, and a missile of suitable size for slidable engagement with the inner surface of said tubular body member for ejection therefrom, the interior of said tubular body member being provided near said mouth-end thereof with means for stopping said missile from escaping out of said mouth-end, and said tubular member being provided with an aperture of such extent and so located in the wall thereof as to permit said missile to be positioned between said stop means and said aperture for engagement by a finger of the user's hand through said aperture so as to temporarily hold the same in such position preliminary to release and ejection thereof along and from said tubular body member by the force of air applied to said mouth-end thereof.

2. The same structure as recited in claim 1 hereof and in which said stop means is in the form of the inner end of a mouth piece which extends within said one end of said tubular member.

3. The same structure as recited in claim 1 hereof and in which said stop means and a mouth piece are formed integrally with said tubular body, said mouth piece being provided at said mouth-end of said tubular body.

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