O. F. RICHTER.

GUN.

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1,244,896. Patented Oct. 30, 1917.

Fig. 1

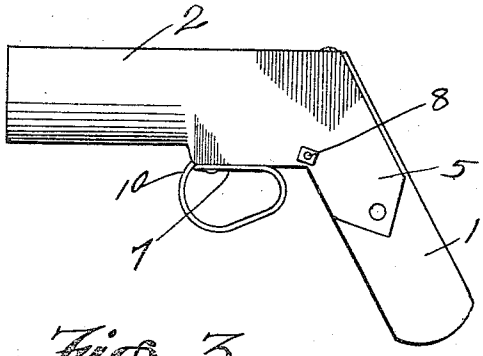


Fig. 2

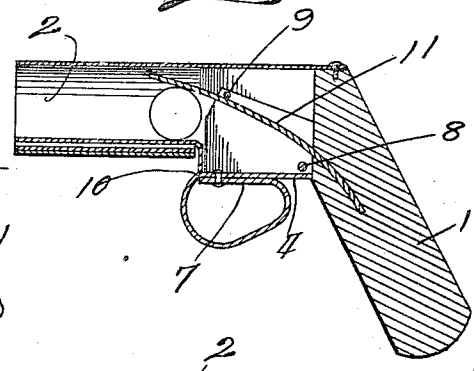


Fig. 3

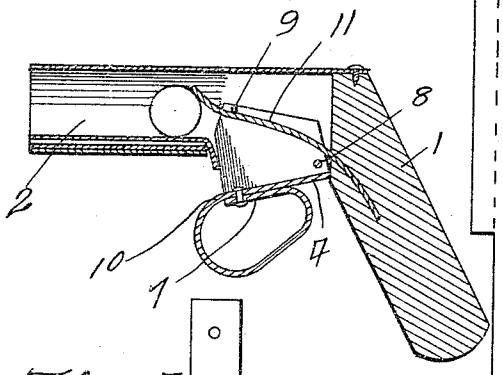
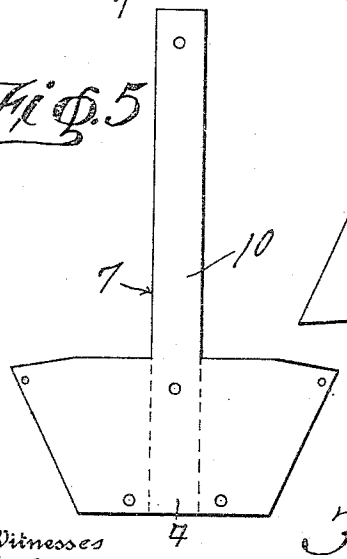


Fig. 5



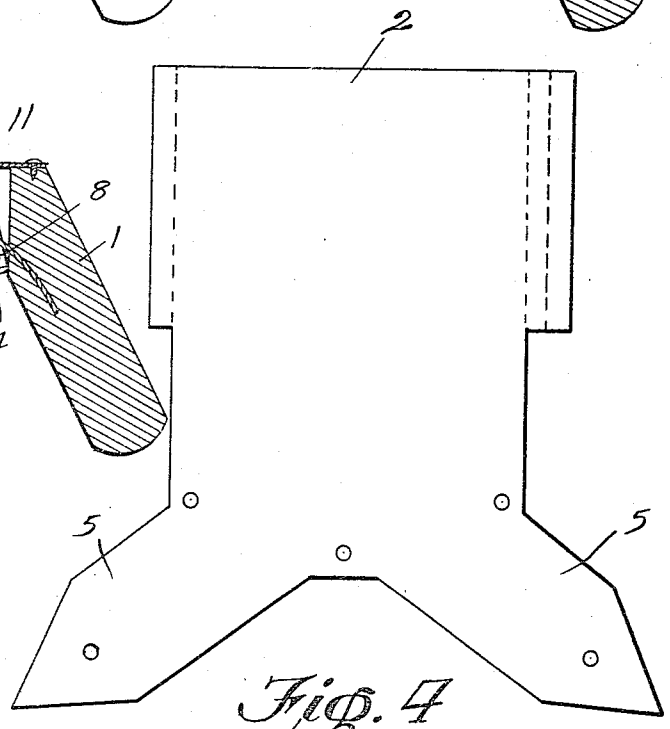


Fig. 4

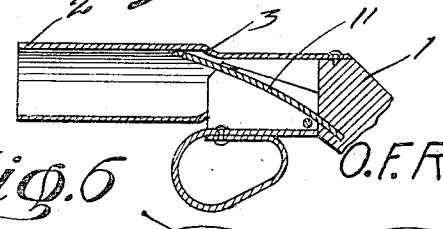


Fig. 6

Witnesses

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GUN.

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To all whom it may concern:

Be it known that I, OTTO F. RICHTER, a citizen of the United States, residing at Indianapolis, in the county of Marion, State of Indiana, have invented certain new and useful Improvements in Guns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to toy guns, and has particular reference to a gun for projecting marbles.

The object of this invention is to provide an improved form of gun from which marbles may be spring projected either in marble games where the gun will be used for projecting a taw or for use as a plaything in other connections. In carrying out my invention I have provided in combination with a suitable barrel and stock, a leaf spring upon which the marble or projectile is caught, and as the trigger is actuated to bend the spring, the latter exerts a pressure upon the marble which finally throws it out of the barrel with considerable force.

With the above objects in view, and such others as may hereinafter appear, my invention will now be fully set forth and described reference being had to the accompanying drawings.

In the drawings:—

Figure 1 is a side elevation of the gun,

Fig. 2 is a longitudinal section therethrough,

Fig. 3 is a longitudinal section with the trigger in discharging position,

Fig. 4 is a blank of the gun barrel,

Fig. 5 is a blank of the trigger, and

Fig. 6 is a sectional view of a modified form of the invention.

Referring more particularly to the drawings, 1 represents the stock and 2 the barrel of my improved gun, the barrel structure being formed from a blank shown in Fig. 4. Thus, the forward portion 2 is shaped into the barrel proper, into which the marble is dropped. At the termination of the cylindrical or barrel portion 2 the blank is shaped into a trigger chamber 4, and behind the trigger chamber the blank terminates in a pair of flat parallel leaves 5 which are secured to the stock 1 by means of bolts, rivets or screws.

Mounted in the trigger chamber 4 is a trigger structure 7 which is formed from the blank shown in Fig. 5. The trigger structure thus consists of a comparatively deep U-shaped element which is pivoted at its lower rear corner between the walls of the trigger chamber 4 upon a pin or bolt 8. The walls of the trigger structure incline forwardly and upwardly and have their upper forward corners joined by means of a transverse connecting pin 9. The lower wall or bottom of the trigger structure is thus brought in substantial coincidence with the open bottom of the trigger chamber 4, said open bottom being formed by permitting the edges of the blank at this point to hang freely and in parallel relation, instead of being crimped into the tubular structure of the barrel 2. The forward end of the trigger structure 7, between the side walls thereof, is continued into a tongue 10 which is turned downwardly and backwardly to be thus shaped into a suitable trigger or finger grip the free end of this tongue being riveted to the bottom of the structure 7.

Formed in the forward end of the stock 1, just behind the trigger body is a longitudinal slot, preferably at a suitable incline to receive the rear end of a leaf spring 11. The forward end of the leaf spring 11 extends between the walls of the trigger body 7 and passes below the transverse connecting pin 9 the relation of the pin 9 to the angle of the slot which receives the rear end of the spring being such that the latter normally pulls the trigger body upwardly into the trigger chamber and forces the extended forward end of the spring against the top of the barrel 2. As will be noted, the forward extended end of the spring 11 projects against the top of the barrel just outside of the structure 4 so that a marble dropped into the muzzle of the gun will be caught between the lower face of the spring 11 and the lower side of the barrel 2.

The action of dropping the marble into the muzzle of the gun not only loads the gun, but sets it for a discharge, since, when the marble is caught below the extended inclined end of the spring, it is merely necessary to draw the spring downwardly so that its end is bent into position behind the marble in order to cause the marble to be projected from the barrel. Thus, as seen in Fig. 3, where the gun is shown just at the point of discharge, by drawing the finger against the finger hold 10 the trigger body

7 is rocked downwardly on the pivot 8 with the result that the spring 11 is curved downwardly until its free end bears with resilient pressure against the large portion of the marble. As the trigger action is continued, the spring 11 finally reaches that point where it causes the marble to yield, and straightening out behind the yielding marble, causes the latter to be projected from the gun with considerable force.

In the modified form of the invention shown in Fig. 6, a shoulder 3 serves as a stop for the marble, and coöperates with the spring 11 to position the marble for shooting.

From the foregoing description it will be apparent that I have constructed an extremely simple and effective toy of this type. The mechanism, consisting only of two operative parts, can be constructed at a minimum of cost and to last for a long time, since, with legitimate usage the parts are practically unbreakable. Furthermore, since the barrel structure and trigger structure can be made from two simple blanks stamped from the same sheet material, the cost of manufacture, aside from the cost for material, is a feature which can be reduced to the lowest point.

What I claim as my invention is:—

1. A toy gun, comprising in combination, a stock and barrel structure, a trigger body mounted in said structure, and a leaf spring connected to said trigger body, said spring being shaped to grip a marble to hold the device in loaded condition and to be bent behind the marble when the trigger body is actuated to discharge the former.

2. A toy gun, comprising, in combination, a stock and barrel structure, a trigger body mounted in said structure, a spring carried by the structure and having one end projected toward the front of the barrel to form a grip for a marble dropped into the barrel, and a connection with the trigger body whereby the spring may be sent against the marble to discharge the latter.

3. In a toy gun, the combination with a barrel structure and a trigger body of a leaf spring projected into the barrel and lying at an angle to the latter to grip a marble dropped into the barrel and to be flexed behind the marble to project the latter.

4. A toy gun, comprising in combination, a stock, a barrel structure, a trigger body pivotally mounted within the barrel structure, and a leaf spring carried by the stock and projected through the trigger body in tensioned relation to hold the body within the structure, said leaf spring extending beyond the trigger body into the barrel to grip a marble and being flexed when the trigger body is rocked to discharge the marble.

5. In a toy gun, the combination of a stock, a barrel structure carried by the stock and formed from a single blank, a trigger body mounted in the barrel structure and also formed from a single blank, and a discharging spring interposed between the barrel structure and trigger body.

In testimony whereof, I affix my signature in the presence of two witnesses.

OTTO F. RICHTER.

Witnesses:
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HOMER C. BECK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."