No. 682,965. Patented Sept. 17, 1901.

W. O. TAYLOR.

BALL PROJECTOR FOR USE IN PLAYING GAMES.

(Application filed July 13, 1900.)

(No Model.)



Fig. 1.

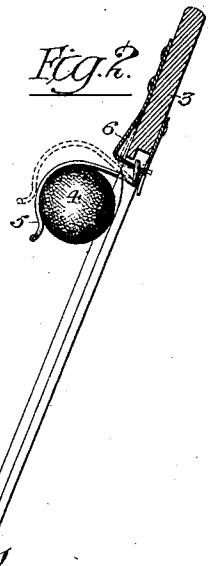


Fig. 2.



Fig. 3.

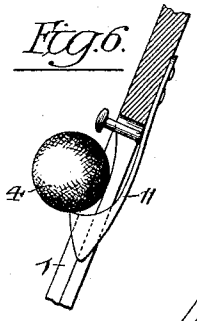


Fig. 6.

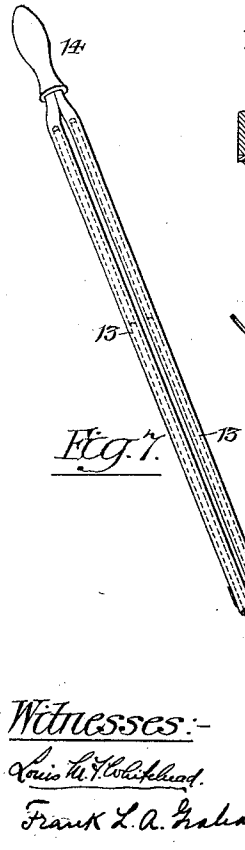


Fig. 7.

Fig. 5.

Fig. 4.

Witnesses:-
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UNITED STATES PATENT OFFICE.

WILLIAM O. TAYLOR, OF NORRISTOWN, PENNSYLVANIA.

BALL-PROJECTOR FOR USE IN PLAYING GAMES.

SPECIFICATION forming part of Letters Patent No. 682,965, dated September 17, 1901.

Application filed July 13, 1900. Serial No. 23,507. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. TAYLOR, a citizen of the United States, residing in Norristown, Pennsylvania, have invented certain Improvements in Ball-Projectors for Use in Playing Games, of which the following is a specification.

My invention relates to that class of game apparatus in which a ball is caused to traverse a grooved bar or handle, so as to be projected forwardly when it leaves the same, the momentum of the ball being due to gravity or other force acting thereon.

One object of my invention is to so construct such a ball-projector that the operator can govern the trajectory of the ball, and thereby vary the length of its flight, another object being to so construct the projector that it can also be used for retrieving the ball, a further object being to provide simple means for retaining the ball at the upper end of the projector in such manner as to permit its ready release, and a still further object being to provide for lengthening or shortening the projector to suit the height of the user. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a view illustrating the method of using the projector. Fig. 2 is a longitudinal section of the projector on a larger scale. Fig. 3 is a transverse section of the same on the line *a a*, Fig. 2. Figs. 4, 5, and 6 are views illustrating modifications of the invention; and Fig. 7 is a perspective view illustrating a feature of the invention not shown in the other views.

The projector shown in Figs. 1, 2, and 3 consists of a bar 1 of any suitable material, preferably of wood, this bar being curved forwardly at its lower end, as shown at 2, and being so shaped at its upper end as to provide a handle 3, which can be conveniently grasped. The upper face of the bar is grooved or channeled, so as to constitute a guide for a ball 4. The ball can be retained at the upper end of the bar 1 by means of a clip 5, pivoted to said bar and acted upon by an elastic trigger 6, which tends to normally hold the clip 5 in position for retaining the ball, as shown by full lines in Fig. 2, but which can be depressed by the thumb or finger of the operator, so as to raise said clip and release the ball, as shown by dotted lines in said figure. In place of this form of retainer, however, I may use a simple spring-trigger—such, for instance, as is shown at 11 in Fig. 6. Supposing that the curved portion 2 of the projector is resting upon the ground or other support, it will be evident that by varying the angle of the bar 1 in respect to the horizontal the outer or delivery end of the projector will be elevated at a reverse angle. Hence the trajectory and length of flight of the ball delivered by the projector can be readily governed by the operator, for the less the angle of the delivery end of the projector in respect to the horizontal the flatter will be the trajectory and the longer the flight of the ball, and the greater this angle the higher will be the trajectory and the shorter the flight of the ball. Projecting from the curved forward end of the bar 1 is a flat plate 7, preferably notched or forked, and the front end of said bar 1 is rounded or beveled, as shown at 8, so that the flat plate 7 can be inserted beneath a ball lying on the ground or other support, and the forward end of the bar 1 can then be raised, thereby causing the ball to roll backwardly along the grooved top of the bar until it is finally caught and retained by the clip 5 or other retainer, the device thus serving to retrieve as well as to project the ball.

Various modifications of the projector are possible within the scope of my invention. For instance, in Fig. 4 I have shown a tubular projector 9, of coiled wire, and in Fig. 5 I have shown a projector having its lower curved portion formed by a flexible and elastic plate 10, to which any desired radius of curvature may be imparted by pressing the same upon the ground or other support without corresponding variation in the angle of the bar 1. Both of these constructions are intended to be included within the term "bar" as that term is used in certain of the claims.

In the construction shown in Fig. 7 the bar is composed of rods 12 12 and 13 13, the rods 13 being tubular and the rods 12 fitted thereto so as to slide therein, whereby the bar is rendered telescopic and can be lengthened or shortened to suit the height of the user. The

rods 12 are flared apart at their lower ends, so as to form the forked retriever, and the upper ends of the rods 13 are fitted to the handle 14.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A ball-projector consisting of a bar of such length as to reach from the hand of the player to the ground, said bar having a handle at the upper end, whereby it can be grasped and swung by the player, and also having a runway for the ball and a forwardly-curved lower end, whereby the direction of flight of the ball can be governed, substantially as specified.

2. A ball-projector consisting of a bar of such length as to reach from the hand of the player to the ground, said bar having a handle at the upper end whereby it can be grasped and swung by the player, and also having a runway for the ball, a forwardly-curved lower end, whereby the direction of flight of the ball can be governed, and at its upper end a ball-retainer, movable in order to release the ball, substantially as specified.

3. A ball-projector consisting of a bar having a handle at the upper end adapted to be held by the hand and serving as a guide and runway for the ball, a pivoted ball-retaining clip at the upper end of the bar, and a spring-trigger acting thereon and serving to normally hold it in retaining position but operative by the hand to move it out of retaining position, substantially as specified.

4. A ball-projector consisting of a bar serving as a guide and runway for the ball, said bar being forwardly curved at its lower end and having at said lower end a portion adapted to be inserted beneath the ball in order to retrieve the latter, substantially as specified.

5. A ball-projector consisting of a bar constructed so as to guide a ball, said bar being composed of sections sliding one upon the other so as to be telescopic, whereby its length may be varied, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM O. TAYLOR.

Witnesses:
F. E. BECHTOLD,
JOS. H. KLEIN.