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COMBINED TARGET AND PROJECTOR WITH AURAL INDICATOR

Filed Dec. 6, 1965

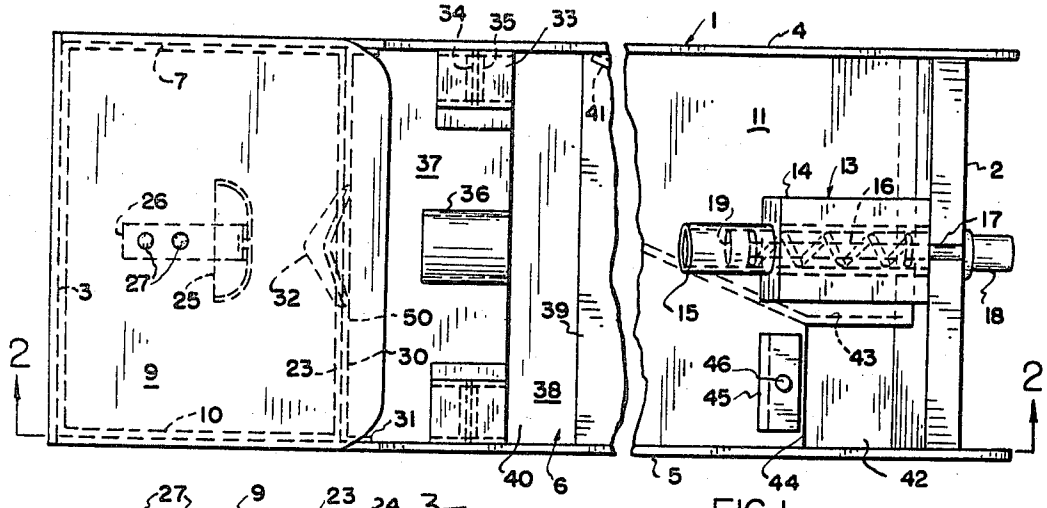


FIG. 1

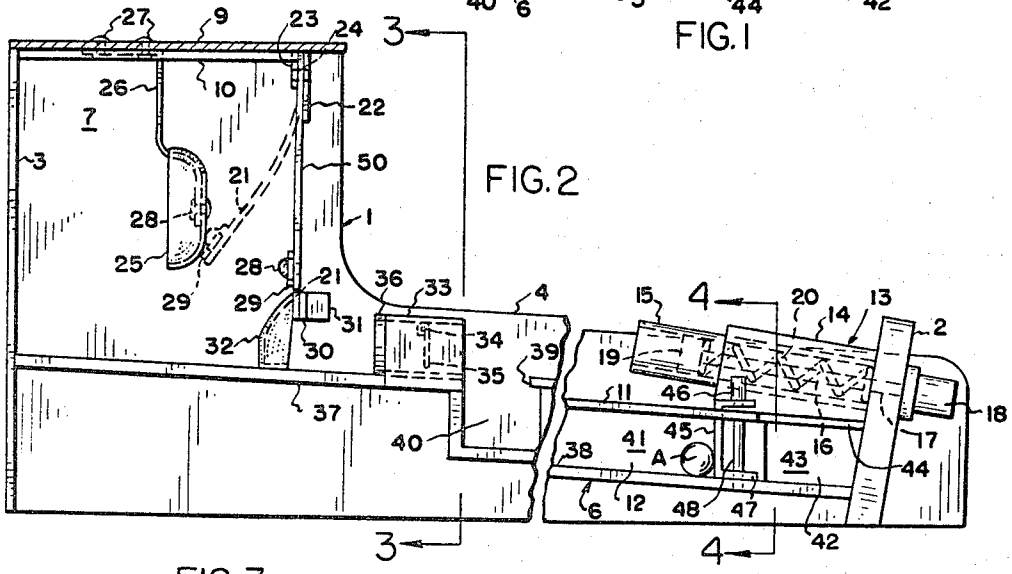


FIG. 2

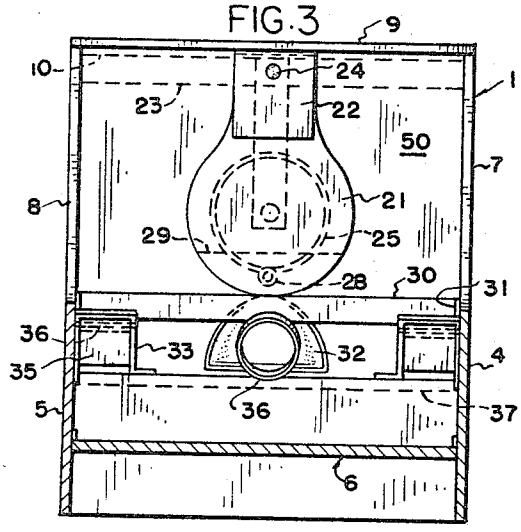


FIG. 3

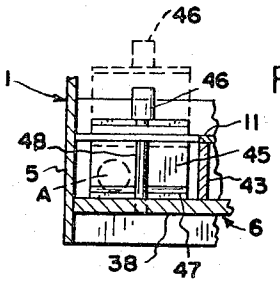


FIG. 4

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COMBINED TARGET AND PROJECTOR WITH AURAL INDICATOR

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ABSTRACT OF THE DISCLOSURE

A housing having a front and rear end walls, and mounting a ball shooting device at the front end portion thereof to shoot balls toward a target disposed at the rear end portion of the housing, with the provision of a ball storage chamber, having a pocket with an opening giving access to said pocket for manual withdrawal of said balls, and with the further provision of means for delivering spent balls to said pocket for such withdrawal, and the still further provision of a gate having vertical travel between open and closed positions to respectively afford or deny access of said balls to said pocket.

This invention relates to ball and target games, and particularly to such games as include a ball shooting device to project a ball toward a target, and which game has provision for gravitationally returning the ball to proximity to the shooting device.

An object of the invention is to provide a housing having a front and rear end and mounting a ball shooting device at the front end to shoot balls toward a target disposed at rear end portion of the game, and to further provide a ball storage chamber, having a pocket, and having an opening giving access to said pocket for withdrawal of said balls, and to provide means for delivery of spent balls to said pocket.

Another object is to provide a gate having vertical travel between a normally closed position to deny access to the pocket of said spent balls, and an open position to afford access to said pocket of said spent balls.

Another object is to provide guide means to guide said gate in its travel between said closed and open positions.

Still another object is to provide a curtain at the target area of the game, and to form a hole in said curain, and to mount said target in said hole, and to further provide pivot means to afford a swinging travel of the target about the axis of said pivot responsive to the impact of a ball.

Still another object is to provide a ball deflector to deflect balls which pass behind said curtain and drop downwardly into engagement with said ball deflector, and to so dispose said ball deflector as to establish the position of the lower portion of said curtain.

Still a further object is to provide a bell disposed rearwardly of the target and the curtain, and to provide means on said target to engage said bell and ring the bell when a missile has been launched against the target with a high degree accuracy. These and various other objects are attained by the construction hereinafter described and illustrated in the accompanying drawing, wherein:

FIG. 1 is a plan view of my invention having a central portion thereof broken away.

FIG. 2 is a side elevational view taken on the line 2—2 of FIG. 1, whereby a side wall is omitted to show the interior of the game.

FIG. 3 is a sectional, elevational view taken on the line 3—3 of FIG. 2 to portray in detail said target and said curtain.

FIG. 4 is a partial, vertical, sectional view on the line 4—4 of FIG. 2 portraying said game in greater detail.

In these views the reference character **1** generally designates a housing having a front wall **2** inclined from the vertical, and a rear wall **3**. Said front and rear walls are

interconnected by side walls **4** and **5**, and all four walls are interconnected by the bottom wall **6**.

The rearward end portions of said sidewalls have uniformly elevated portions **7** and **8**, and surmounting said elevated portions is a top wall **9** located relative to the side and rear walls by downwardly protruding ribs **10**. An upper wall **11** is spaced upwardly from the bottom wall at the forward end portion of the housing, and may be rigidly interengaged with the side walls and the front wall. The construction as described provides a ball storage chamber **12** for the balls A. Any convenient means, such as adhesives or fastening devices may be used to maintain the construction in assembly.

Surmounting the upper wall **11**, is a ball shooting device generally designated as **13**. Said shooting device includes a block **14** which may be secured in position by any desired means (not shown). A barrel **15** extends through said block and receives a rod **16**, which forwardly extends through a slot **17** in the front wall **2** and terminates in a handle **18**. An annular head **19** is slidably received in the barrel and engages a ball placed in the mouth of the tube. And a spring **20** reacts between said head and the inner face of said wall so that when said hande is drawn backwardly, the ball rolls down the tube following said annular head **19**, and the spring **20** is compressed. When the handle is released said spring impells the head **19** forward causing the ball A to be projected from the tube toward the target. Said handle engages the outer face of the rear wall to limit the forward travel of the rod and said annular head.

A target **21** carries on its upward portion a strip of flexible material **22** which may be attached to said target as by an adhesive. The upper portion of said flexible material is attached to a flange **23** downwardly projecting from the top wall **9**, as by a rivet **24**, or the like. Said tape thus affords a pivotal axis about which the target is afforded swinging travel to and from its normal position, in which position it tends to hang straight down from the tape-pivot.

A bell **25** is suspended by a bracket **26** which is secured to the top wall as by rivets **27**. The target **21** is provided with any suitabe object **28** which upon impact with the bell will cause the latter to ring. Experience has shown it desirable to reinforce said target with extra material as shown at **29**.

Substantially coplanar with the target is a curtain extending between the elevated portions **7** and **8** of the side walls **4** and **5** and formed with an aperture in which said target is normally suspended. Such curtain has its upper marginal portion secured to the flange **23** and has its lower marginal portion secured to a bracket **30**. The end portions **31** of said bracket frictionally engage the interior surface of the side walls **4** and **5** to resist withdrawal of said bracket and the lower marginal portion of said curtain from a vertical position. A ball deflector **32** is disposed to engage the rearward face of said curtain in the area of said bracket to establish the position of said curtain longitudinally of the construction.

Scoring tubes **33** are each provided with a pivot **34** from which is suspended a gate **35** which swings on the axis of said pivot responsive to the force applied by a ball passing through said tube. It is to be observed, as best shown in FIG. 3, that said scoring tubes are so designed that they can be placed on either side of the game without the necessity of altering their construction, thus effecting a saving in manufacturing costs. At **36** is portrayed a centrally disposed scoring tube. Obviously any desired numerical score may be attributed to the three scoring tubes.

As shown best in FIG. 2, the rearward end portion **37** of the bottom wall **6** is elevated higher than the forward end portion **38** of said bottom wall, and both portions of said bottom wall are forwardly, downwardly inclined to

afford a gravitationally induced return of spent balls to the said storage chamber **12**. The upper wall **11** is rearwardly terminated at **39**, to afford an opening **40** extending across the device through which spent balls may drop to enter such storage chamber. A guide wall **41** is disposed between said upper wall and said bottom wall to guide the balls toward a ball receiving pocket **42** formed at the side of the construction by an extension **43** of said guide wall **41**. An opening **44** in the upper wall **11** affords access by the player to said pocket for manual withdrawal of the balls so that they may be placed in the shooting device and projected toward the target.

As it is contemplated that each played will shoot a specific number of balls, a gate **45** is provided to deny access to said pocket **42** of spent balls which have entered the storage chamber so that no confusion can arise as to the number of balls shot by any player. Said gate is upwardly provided with a handle **46** and has a lower end portion **47** forwardly bent and apertured to receive a vertical guide pin **48** which rigidly upstands from the bottom floor **6**.

The angle of inclination of the barrel **15** is fixed, and variation in the speed of missiles fired from said barrel is achieved by the fact that spring tension will vary with the extent to which the handle is drawn backwardly. Thus it is possible that balls may be fired without sufficient force to swing the target **21** far enough to admit such balls behind the curtain **50**. Spent missiles which are delivered with insufficient force may drop forwardly of said curtain and rolled haphazardly down the inclined rear portion **37** of the bottom wall **6**. Should a ball be impelled toward the target with sufficient force to swing the target inwardly to connect with said bell, the probability is that such balls when spent will drop downwardly behind said curtains whereupon they may engage the ball deflector **32** which will deflect said balls laterally of the game, and which is so proportioned relative to the game as to enhance the possibility that the ball will pass through one of the scoring tubes **33**.

It is believed that in a game of the type described the combination of the ball deflector **33** with the apparently unique storage chamber **12**, pocket **42**, with the vertically operable gate **45**, is inventive. Applicant also points out that the dual purpose served by the ball deflector in both deflecting spent missiles and in establishing the longitudinal relationship of the lower portion of said curtain to the device, appears to be highly unique and avoids the necessity of employing any other means to establish said position of said curtain.

It is contemplated that the device hereinabove described shall be used in the home for the diversion and entertainment of children; it is to be noted that the construction is portable, and may readily be used in comfort on a carpeted floor.

What I claim is:

1. The combination with a ball and target game including a housing having a rear portion and a front portion, and having a front wall, a rear wall spaced from said front wall, side walls interconnecting the front and rear walls, and a bottom wall, of

a bell mounted, within the rear portion of said housing,

a target member disposed forwardly of said bell, and having a normal dependent position,

a ball shooting device disposed at the front portion of the housing to shoot balls toward said target,

pivot means mounting said target for swinging travel about a pivotal axis from and to said normal position responsive to impact upon said target of a ball,

a ball deflector disposed upon the rearward portion of said bottom wall, beneath said target to intercept and laterally deflect balls dropping upon said deflector,

the forward portion of said housing having an upper wall substantially parallel to and spaced upwardly from said bottom wall to form a missile storing chamber,

an opening in said upper wall from which missiles may be manually withdrawn from said chamber,

guide means disposed in said chamber to guide balls to rest beneath said opening, a portion of said guide means forming a ball receiving pocket beneath said opening, and

a gate having sliding substantially rectilinear travel between a normal closed position to obstruct access of balls to said pocket and an open position to afford such access,

a handle on said gate to afford manipulation of the gate between its closed and open positions, and

guide means rigidly extending from the bottom wall to guide the gate in its travel.

2. The combination as set forth in claim **1**,

said bottom wall being downwardly, forwardly inclined to enable travel of spent balls from the target to the ball shooting device by gravitational attraction,

the rearward portion of the side walls being extended upwardly higher than the forward portion,

a top wall, extending between the rearward portions of said side walls, and said bell being suspended from said top wall, a curtain extending between said side walls at the forward portion thereof and being suspended from said top wall,

a bracket secured to the bottom marginal portion of the curtain, the end portions of the bracket having frictional engagement with the side walls to releasably secure the bottom portion of the curtain in a desired position,

and an aperture formed in curtain, and said target being normally suspended in said aperture.

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