

July 14, 1936.

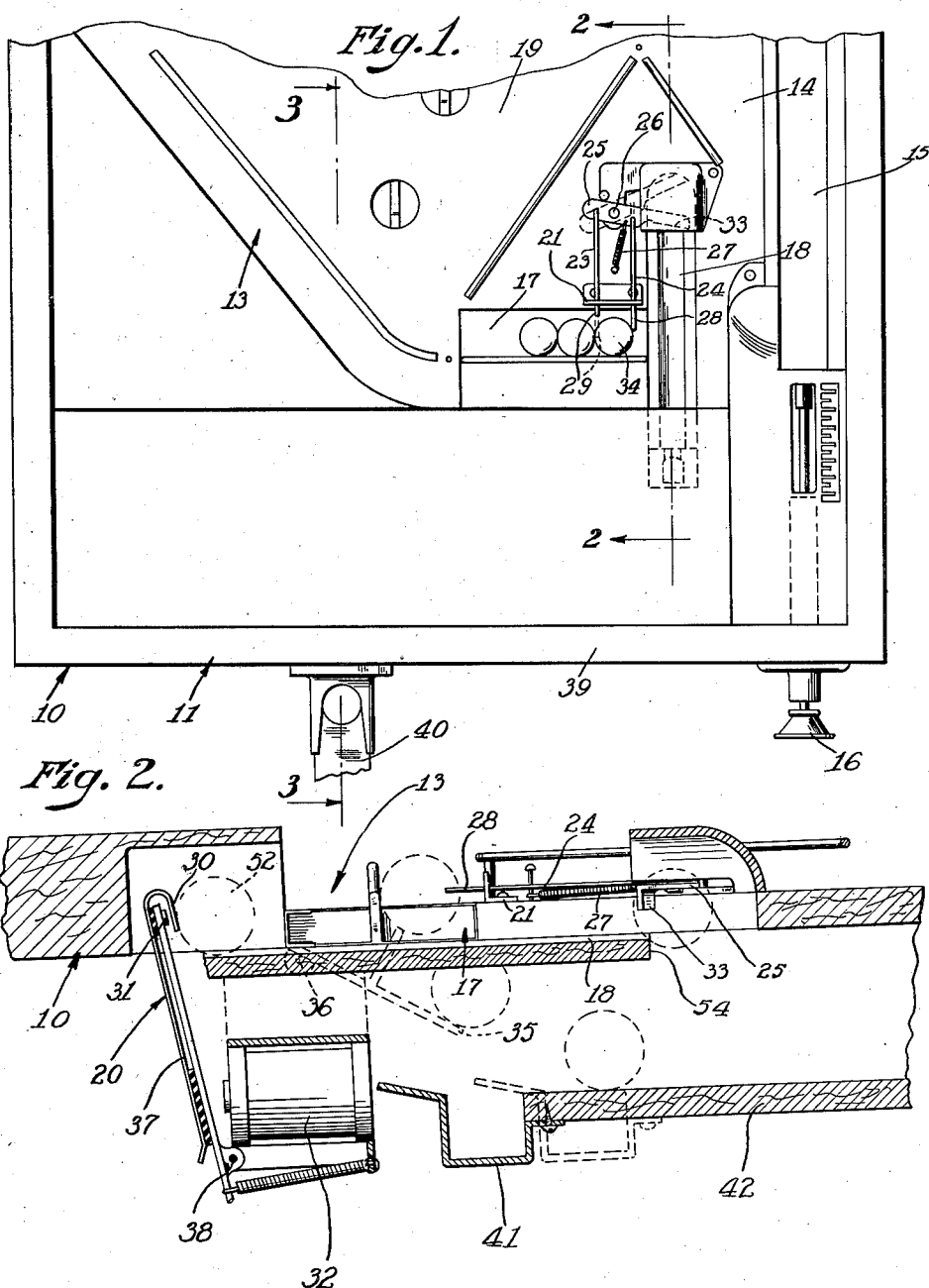
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2,047,800

GAME APPARATUS

Filed Aug. 23, 1935

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3.

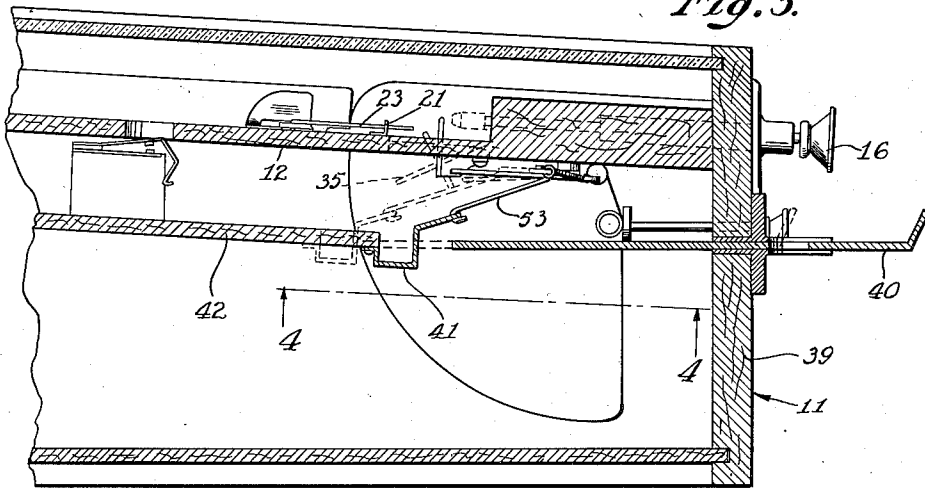


Fig. 4.

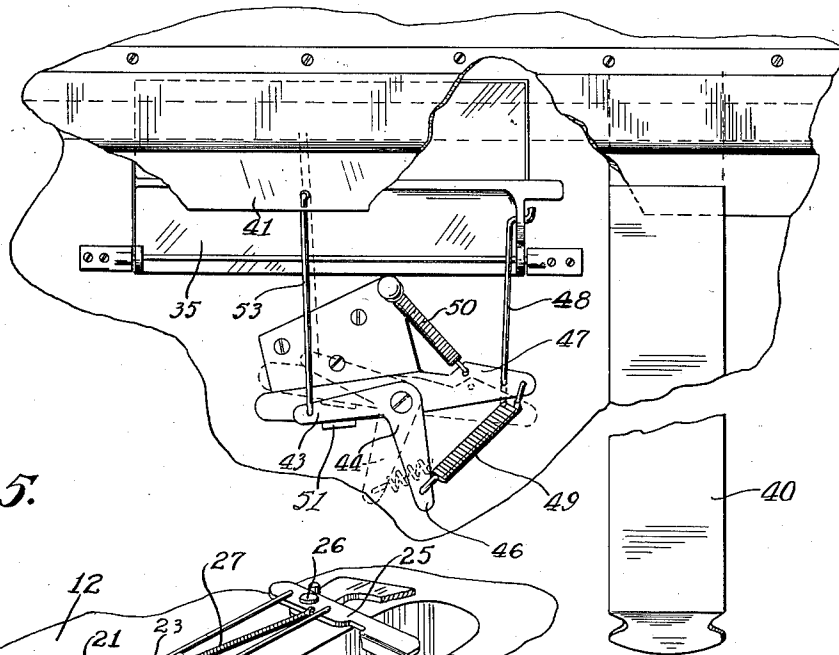
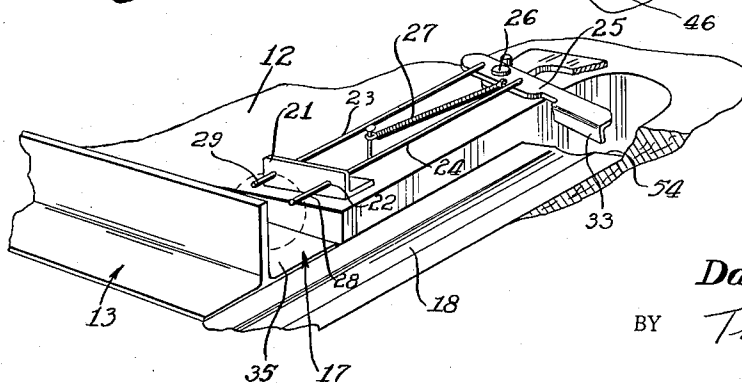


Fig. 5.



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UNITED STATES PATENT OFFICE

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GAME APPARATUS

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6 Claims. (Cl. 273—121)

This invention relates to a game apparatus.

It is an object of this invention to provide an improved game apparatus which is relatively simple and inexpensive in construction and efficient in use.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be understood best by reference to the accompanying drawings, showing the preferred form of construction and in which:

Fig. 1 is a fragmentary top plan view of a game apparatus embodying a preferred form of the present invention;

Fig. 2 is a sectional view of the same on line 2—2 on Fig. 1;

Fig. 3 is a sectional view on line 3—3 in Fig. 1;

Fig. 4 is a bottom plan view on line 4—4 in

Fig. 3, showing the gate-operating mechanism embodied in the present apparatus; and

Fig. 5 is a perspective detail view of the ball-stopping and cut-off members embodied in the invention.

A game apparatus embodying a preferred form of the present invention is shown in the drawings, is therein generally indicated at 10, and comprises a cabinet 11 which includes an inclined playing board 12 having ball runways 13 and 14 provided thereon.

Arranged at one side of the inclined playing board 12 is a ball runway or ramp 15 and arranged at the lower end of the ramp 15 is a ball-propelling device or plunger 16 by means of which balls may be propelled, one at a time, onto the upper portion of the inclined playing board 12 so that they may gravitate thereover and enter into the runways 13 and 14 or into a playing area 19 which is provided upon the inclined playing board 12 between the runways 13 and 14, (Fig. 1).

Provided upon the inclined playing board 12, adjacent the lower end thereof, is a ball-receiving pocket 17 which opens at one end into the playing area 19 of the inclined playing board 12, and which opens at its other end into a runway 18; the bottom of this pocket 17 being provided by a trap door or ball-retaining member 35 which is pivotally mounted in the cabinet 11, as at 36, (Fig. 2). Arranged in the cabinet 11 at the lower end of the runway 18 is a ball-reprojecting device which is generally indicated at 20; this device 20 including an electromagnet 32 and a member 37 which is attractable by the electromagnet 32 into engagement with a ball 52 (Fig.

2), this member 37 being pivotally mounted at its lower end, in the cabinet 11, as at 38, (Fig. 2).

Arranged upon the inclined playing board 12, adjacent the pocket 17, is a supporting bracket 21 and slidably projected through openings 22 which are provided in this bracket 21 are two slide rods 23 and 24; these slide rods 23 and 24 being attached, at their other ends, to a member 25 which is pivotally mounted upon the inclined playing board 12, as at 26, (Fig. 1).

The pivotal member 25 is normally urged, by a spring 27, in a direction to project the lower end portion 28 of the slide rod 24 into, or across, the pocket 17 and at the same time to retract the lower end portion 29 of the slide rod 23 out of the pocket 17, and these two slide rods 23 and 24 function, respectively, as a cut-off member and as a ball-stopping member, as will be explained more fully hereinafter.

Slidably mounted in the lower end wall 39 of the cabinet 11 is a coin slide 40 and the inner end portion of this coin slide 40 is engageable with an arm 41 which is attached to a ball return runway or floor 42 which is slidably mounted in the cabinet 11 below the inclined playing board 12. Attached to the arm 41 of the slidable member 42 is a wire rod 53, (Figs. 3 and 4) and this rod 53 is attached to an arm 43 of a bell crank 44; the other arm 46 of the bell crank 44 having a coil spring 49 attached thereto, (Fig. 4). This spring 49 is attached to one end portion of a pivotal member 47 and the member 47 is operatively connected, by means of a wire rod 48, to the pivotal gate or trap door 35.

The member 47 has an upwardly extending arm 51 and the movement of the ball crank 44 by the spring 49 is limited by the engagement of the arm 43 of the bell crank 44 with the stop portion 51 of the member 47.

Operation

The foregoing arrangement is such that when a ball enters the playing area 19 of the inclined playing board 12 it will roll by gravity down the latter into the pocket 17 and will be prevented by the end or stop portion 28 of the slide rod 24 from entering into the runway 18.

However, when a ball travels down either of the runways 13 or 14, it will enter into the runway 18, and will travel by gravity down the latter into engagement with the contact 30 of the ball-reprojecting device 20, thereby forcing the contact 30 into engagement with the contact 31 and thus closing the circuit (not shown) to the electromagnet 32 which operates the arm 37 of the

ball-reprojecting device 20; thus propelling the ball up the runway 18 and into engagement with the end portion 33 of the pivotal member 25.

This engagement of a ball thus re-projected up the runway 18 with the end portion 33 of the pivotal member 25 causes the latter to pivot (in a counterclockwise direction, as seen in Fig. 1), against the action of the spring 27, thereby withdrawing the end or stop portion 28 of the slide rod 24 out of the pocket 17, while at the same time projecting the end or cut-off portion 29 of the slide rod 23 across the pocket 17. In this manner the first ball 34 which enters the pocket 17 (Fig. 1) is allowed to travel into the runway 18, whence it will travel down into engagement with the reprojecting device 20; while at the same time the end or stop portion 29 of the slide rod 23 acts as a cut-off device to prevent more than one ball from entering the runway 18 from the pocket 17 at one time.

At the end of the game any balls which are disposed in the pocket 17 will be held therein, upon the pivotal gate or trap door 35, until such time as the coin slide 40 is again operated, whereupon the inner end portion of the coin slide 40 will engage the arm 41 of the slidable member 42 and move the latter (right to left, Fig. 3). This movement of the pivotal member 47 acts, through the wire rod 48, which is attached to the pivotal member 47, to pivot the gate or trap door 35 into open position, thereby dropping any balls which may be disposed in the pocket 17 upon the gate 35 into the cabinet 11 and to a point below the inclined playing board 12.

When the coin slide 40 is released, for return to its initial position, (which is accomplished by a spring not shown), the spring 50 acts upon the member 47 to pivot the latter (from dotted to full line position, Fig. 4), and this movement of the member 47 acts, through the wire rod 48, to pivot the gate 35 back into raised or closed position.

During the foregoing operation, the movement of the bell crank 44 relative to the member 47 is limited by the upwardly extending arm 51 of the member 47 against which the arm 43 of the bell crank 44 is urged by the spring 49.

After the ball reprojected up the runway 18 engages the member 25 it drops off from the upper end 54 of the runway 18 (Fig. 2) into the cabinet 11 to a point below the inclined playing board 12 for return to a point adjacent the propelling device or plunger 16.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification, without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself for such variations and modifications as come within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:

1. In a game apparatus, the combination of: a cabinet including a member providing a ball playing surface having a ball-receiving pocket provided thereon and said playing surface being provided with a ball runway arranged adjacent to, and in communication with said pocket; a second ball runway arranged upon the said ball-playing surface and upon the opposite side of said pocket from said first-named runway for

directing balls into said pocket; means for propelling balls, one at a time, over said playing surface so that they may enter into one of said runways; a ball-stopping member movably mounted in said cabinet and having an end portion normally projecting into said pocket so as to prevent a ball from passing out of said pocket into said first-named runway; a cut-off member movably mounted in said cabinet and having an end portion adapted to be projected across said pocket so as to prevent more than one ball at a time from passing from said pocket into said runway; means for simultaneously actuating said ball-stopping member and said cut-off member so as to retract the said end portion of said ball-stopping member out of said pocket, and thereby allow a ball to pass from the said pocket into said first-named runway, while at the same time projecting the said end portion of said cut-off member across said pocket so as to prevent more than one ball at a time from passing from said pocket into said first-named runway; said second-named means including a member movably mounted in said cabinet and having a portion projecting into said first-named runway and actuated by a ball traveling therealong; and said second-named means also including a ball-reprojecting device arranged in said first-named runway for reprojecting balls, one at a time, along the said first-named runway into engagement with the said portion of said fourth and last-named member.

2. In a game apparatus, the combination of: a cabinet including a member providing a ball-playing surface having a ball-receiving pocket provided thereon and provided with a ball runway arranged adjacent to and in communication with said pocket; a second ball runway arranged upon the said ball-playing surface and upon the opposite side of said pocket from said first-named runway for directing balls into said pocket; means for propelling balls one at a time, over the said playing surface so that they may enter into one of said runways; a ball-stopping member movably mounted in said cabinet and including a portion normally projecting into said pocket so as to prevent a ball from passing out of said pocket into said first-named runway; means for moving the said ball-stopping member so as to retract the said end portion thereof out of said pocket and thereby allow a ball to pass from the said pocket into the said first-named runway; said second-named means including a member movably mounted in said cabinet and having a portion projecting into said first-named runway and actuated by a ball traveling therealong; and said second-named means also including a ball-reprojecting device arranged in said first-named runway for reprojecting balls, one at a time, along said first-named runway into engagement with the said portion of said third and last-named member.

3. In a game apparatus, a cabinet including a member providing a ball-playing surface provided with a ball-receiving pocket and with a ball runway arranged below the said ball-playing surface and adapted to receive balls from said pocket, means including a member disposed in said runway for stopping balls from passing from the said pocket into the said runway, and means including a device actuated by a ball disposed in the said runway for propelling a ball along the said runway into engagement with said second-named member so as to move the said ball-stopping means into ineffective position and thus release

a ball stopped thereby in said pocket for movement from the said pocket into the said runway.

4. In a game apparatus, a cabinet including a member providing a ball-playing surface provided with a ball-receiving pocket and with a ball runway adapted to receive balls from said pocket, means normally stopping balls from passing from the said pocket into the said runway, means including a device actuated by a ball disposed in the said runway for moving the said ball-stopping means into ineffective position so as to release a ball stopped thereby in the said pocket for movement from the said pocket into the said runway, and a cut-off device movably mounted in said cabinet and including a portion movable into said pocket by said second-named or moving means when the said stopping means is moved into ineffective position so as to prevent more than one ball at a time from passing from said pocket into said runway.

5. In a game apparatus, a cabinet including a member providing a ball-playing surface provided with a ball-receiving pocket and with a ball runway arranged below the said ball-playing surface and adapted to receive balls from said pocket, means including a member disposed in said runway for stopping balls from passing from the said pocket into the said runway, and means in-

cluding a ball-reprojecting device actuated by a ball disposed in the said runway for reprojecting a ball along the said runway into engagement with the said second-named member so as to move the said ball-stopping means so as to move the latter into ineffective position and thus release a ball stopped thereby in said pocket for movement from the said pocket into the said runway.

6. In a game apparatus, a cabinet including a member providing a ball-playing surface provided with a ball-receiving pocket and with a ball runway adapted to receive balls from said pocket, means normally stopping balls from passing from the said pocket into the said runway, means including a ball-reprojecting device actuated by a ball disposed in the said runway for moving the said ball-stopping means into ineffective position so as to release a ball stopped thereby in said pocket for movement from the said pocket into the said runway, and a cut-off device movably mounted in said cabinet and including a portion movable into said pocket by the said second-named or moving means when the said stopping means is moved into ineffective position so as to prevent more than one ball at a time from passing from said pocket into said runway.

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