March 29, 1932. M. MARGOLITH 1,851,285

AMUSEMENT DEVICE

Filed Dec. 14, 1929

Fig. 1.

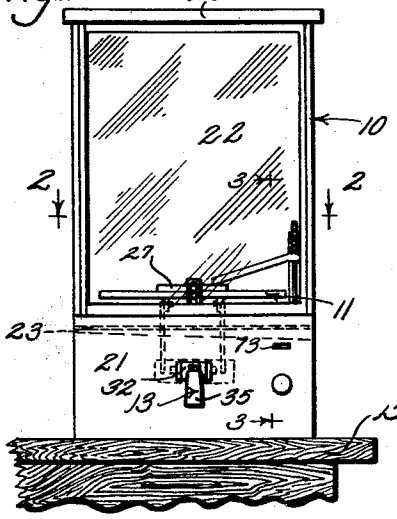


Fig. 2.

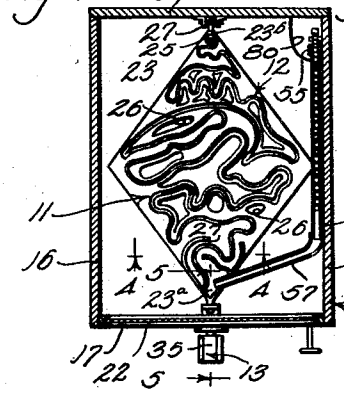


Fig. 6.

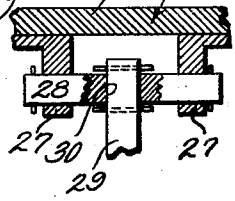


Fig. 3.

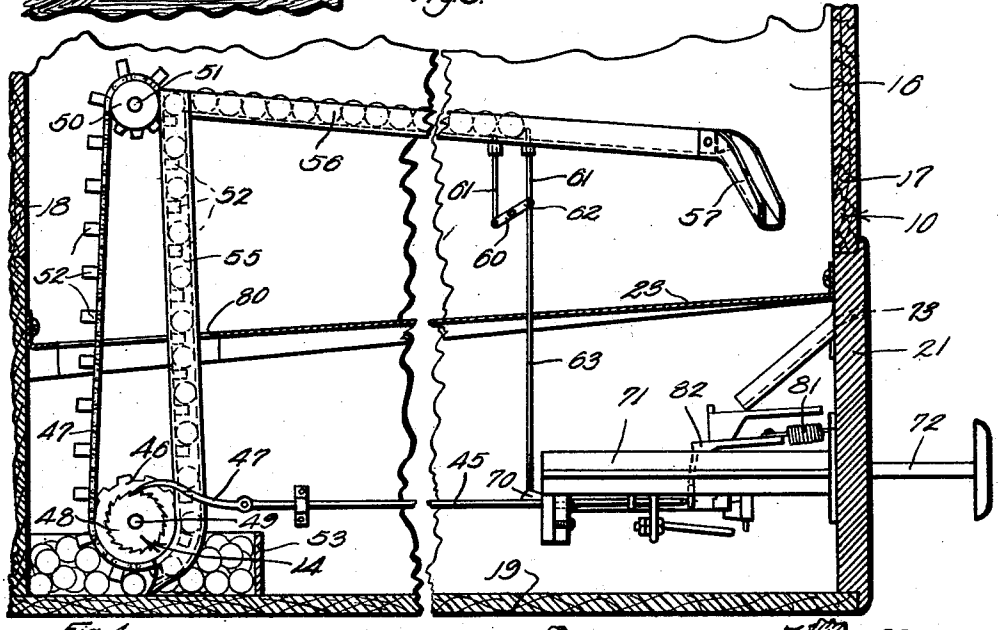


Fig. 4.

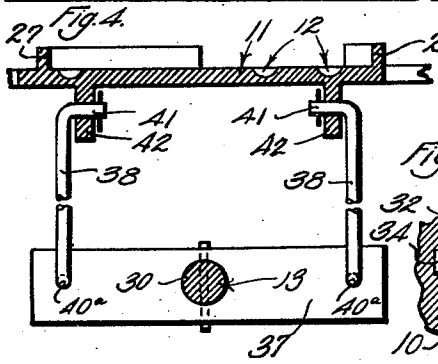


Fig. 5.

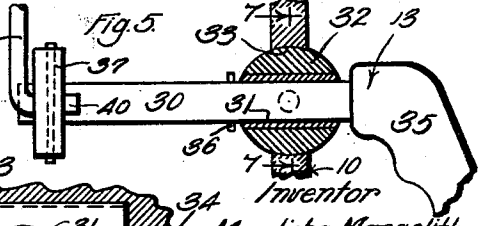
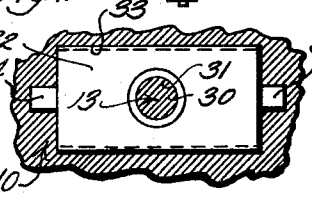


Fig. 7.



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UNITED STATES PATENT OFFICE

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AMUSEMENT DEVICE

Application filed December 14, 1929. Serial No. 414,091.

This invention relates to an amusement device and it is a general object of the invention to provide a novel and attractive game or amusement device.

The present invention is primarily concerned with an amusement device embodying means whereby a person employing skill is enabled to guide a ball or a like object over a track or course on a tiltable board. The device is of a type that may be mounted in a case or cabinet so that it may be operated by a person at the exterior of the cabinet.

It is an object of the invention to provide an amusement device of the character mentioned above that includes a board having a course over which balls, or the like, may be rolled and to provide a means for tilting or operating the board to cause the balls to roll over the course.

It is another object of the invention to provide an improved means for tilting or operating the board of an amusement device of the character mentioned above.

It is a further object of the invention to provide an amusement device of the character mentioned embodying means for putting a ball, or the like, into play on the course.

It is a further object of the invention to provide an amusement device of the character mentioned embodying means whereby only a single ball is put into play upon the operation of an actuating member.

The various objects and features of my invention will be best and more fully understood from the following detailed description of a typical preferred form of the invention, throughout which description reference is had to the accompanying drawings in which:

Fig. 1 is a front elevation of the device provided by this invention showing it enclosed or mounted in a case or cabinet. Fig. 2 is a horizontal detailed sectional view taken as indicated in line 2—2 on Fig. 1, showing the board and other parts in elevation. Fig. 3 is an enlarged vertical detailed sectional view being a view taken as indicated by line 3—3 on Fig. 1. Fig. 4 is an enlarged vertical detailed sectional view of a portion of the device being a view taken as indicated by line 4—4 on Fig. 2. Fig. 5 is an enlarged vertical detailed sectional view taken as indicated on line 5—5 on Fig. 2 showing the mounting of the operating part of the device. Fig. 6 is an enlarged horizontal detailed sectional view of the swivel mounting of the rear end of the board on the cabinet. Fig. 7 is a horizontal detailed sectional view taken as indicated by line 7—7 on Fig. 5.

The amusement device provided by this invention includes generally a suitable case or cabinet 10, a tiltable board 11 mounted in the cabinet 10 and having a course 12 over which a ball, or like object, may be rolled, means 13 whereby a person at the exterior of the cabinet 10 may operate or tilt the board 11, and means 14 for putting a ball in play on the track 12.

The device provided by this invention may be arranged or mounted in any suitable form of case or cabinet or may be mounted on various types of supports. In the particular form of the invention illustrated the device is designed to be arranged within a cabinet, or the like, and is constructed so that it may be operated by a person at the exterior of the cabinet. The device is also shown as including a coin actuated device that permits the operation of the amusement device only after a coin has been dropped in the coin device. It will be obvious that the device provided by this invention may be mounted in manners differing somewhat from that illustrated in the drawings and may be constructed so as to be operable at all times. It is to be understood, therefore, that the invention is not to be construed as limited to the particular form of mounting or operating control about to be described but is to be taken as including any features or modifications that may fall within the scope of the claims.

The particular form of cabinet 10 illustrated is a box like structure mounted on a support 15. The cabinet 10 is rectangular and is provided with sides 16, a front 17, a back 18, a bottom 19 and a top 20. The front 17 preferably consists of a base panel 21 and an upper transparent portion 22. The portion 22 may be formed of glass and is provided so that the board 11 and other parts

of the device disposed within the cabinet 10 can be readily viewed from the front of the cabinet 10. A tray 23 is provided within the cabinet to extend between the sides 16 and the front 17 and back 18. The tray is spaced somewhat above the bottom 19 and slopes rearward and downward from the front 17 and slopes downward from one side 16 to the other side 16. The tray 23 preferably extends completely over the bottom 19.

The board 11 which is arranged within the cabinet 10 may be of any desired proportioning, shape, or formation. The board 11 is provided to supply a course over which an object, such as a ball, may be rolled and is arranged in the cabinet so that it may be shifted or tilted to cause the ball, or the like, to roll over the course. The board 11 is shown as being a substantially flat quadrilateral member and is arranged in the cabinet so as to be normally substantially horizontal. The board 11 may be disposed so that it is in a plane somewhat above the lower edge of the transparent portion of the front. In the particular form of the invention illustrated the board 11 is arranged so that one of its corners is adjacent the back 18 of the cabinet and the opposite corner of the board is at the inner side of the front 17. The other two corners of the board are shown adjacent the opposite sides 16 of the cabinet.

The upper side of the board is provided with a course 12 which may be in the nature of a groove. The course 12 is illustrated as being a groove of substantially semi-circular cross section. The course 12 may extend from the forward corner 23^a of the board to the rear 23^b of the board. The course 12 is preferably tortuous having a number of curves and contortions. An opening 25 is provided in the course 12 at the rear corner 23^b of the board to allow a ball to fall out of play after rolling over the entire course. In the particular form of the invention illustrated the course is shown as being a single continuous course.

It will be obvious that the course may be otherwise arranged or formed if desired. A plurality of openings 26 is provided in the board 11 adjacent the course 12 to allow a ball to drop out of play onto the tray 23 in the event that it leaves the course 12. A barrier or guard 27 is provided at the forward corner 23^a of the board to initially retain the balls in the course 12.

The board is swivelly mounted in the cabinet by means of a stationary swivel connection at one of its corners and is supported at an opposite corner by a movable swivel connection. In the particular form of the invention illustrated the board 11 is supported at its rear corner 23^b by a stationary swivel connection and is supported at its forward corner 23^a by the means 13. The swivel connection between the board 11 and the back 18 may be of any construction that allows the board to be tilted to various positions. In the preferred form of the invention the connection between the board and the back 18 of the cabinet includes two spaced brackets 27 fixed on the inner side of the back 18, a pin 28 extending between and rotatably carried by the brackets 27 and a horizontal stud 29 attached to the board 11 and extending through a transverse opening 30 in the pin 28. The stud 29 is rotatable in the opening 30. With the connection just described the board 11 is adapted to be tilted vertically as well as to be turned or rotated on an axis extending between its corners 23^a and 23^b.

The means 13 is provided to permit the board 11 to be tilted about the vertical and horizontal axes of the connection at the rear of the board described above and acts to normally support the forward corner 23^a of the board. The means 13 includes an operating rod 30 extending through and swivelly supported by the panel 21 at a point spaced below the forward end of the board. The rod 30 is preferably of round cross sectional configuration and is rotatably carried in a transverse opening 31 in a roller 32 rotatably carried by the panel 21. The roller 32 is arranged in an elongated horizontal opening 33 in the panel and is provided at its opposite ends with pins 34 rotatable in openings in the panel 21. The rod 30 extends in opposite directions from the roller 32 and is provided at its forward or outer end with a handle 35. The handle 35 which is arranged at the exterior of the cabinet 10 may be in the nature of a pistol grip handle. The rod 30 is prevented from shifting longitudinally in the opening 31 by the handle 35 at the forward edge of the roller 32 and a retaining pin 36 extending transversely through the rod at the inner edge of the roller 32.

A cross head 37 is fixed on the inner end of the rod 30. The cross head 37 may be in the form of an elongated plate and extends laterally in opposite directions from the rod 30. A connecting link 38 extends upwardly from each end of the head 37 and is connected with the board 11. Each link 38 has a part 40 carried in an opening 40^a in the head and has a finger 41 extending through an opening in a lug 42 on the lower side of the board 11. The parts 40 and fingers 41 are rotatable in their respective openings so that the board 11 is free to tilt when the handle 35 is shifted. By turning the handle 35 the board 11 is tilted or turned about a substantially horizontal axis extending between its corners 23^a and 23^b and by raising or lowering the handle 35 the board 11 is tilted or swung vertically about the pin 28.

The means 14 for putting the balls in play on the board operates to deliver the balls to the forward end of the course 12. The means 14 provides for moving the balls to a point

above the board 11 and for releasing a single ball upon the board when an operating member is actuated. In the particular form of the invention illustrated the means 14 operates to convey the balls from the bottom of the cabinet 11 and operates to drop or release them at the forward end of the course 12 at the forward corner 23a of the board. The means 14 includes an operating member 45 to be operated from the exterior of the cabinet 10 in a manner hereinafter described and operatively connected with a sprocket 46 driving a conveyer chain 47 which operates to raise the balls above the board 11.

The operating member 45 may be in the nature of a rod near the bottom of the cabinet and arranged adjacent and parallel to one side 16 of the cabinet. The member 45 is supported so as to be shiftable longitudinally. The inner or rear end of the member 45 is provided with a pivoted pawl 47 adapted to cooperate with a ratchet 48 fixed on a shaft 49 carrying the sprocket 46. The conveyer chain 47 extends upwardly over the sprocket 46 and extends over a second sprocket 50 fixed on a shaft 51 carried by the side 16 of the cabinet. The conveyer chain extends through an opening 80 in the tray 23. The opening 80 is comparatively large and is located in the lower or depressed portion of the tray 23. The opening 80 allows the balls that drop from the board 11 to fall onto the bottom 19 and the opening is located so that the balls fall onto the bottom 19 adjacent the sprocket 46.

A plurality of spaced buckets 52 is provided on the chain 47 and the buckets are adapted to carry round objects such as balls, or the like. The sprocket 46 and the buckets 52 are arranged so that the buckets 52 are effective in picking up the balls from the bottom 19 when the shaft 49 is rotated. A flange part 53 may be provided on the bottom 19 around the sprocket 46 to retain the balls in position so that they will be engaged by the buckets 52. A suitable guard 55 may be provided around the portion of the chain 47 that operates to lift the balls to the upper sprocket 50. The buckets 52 are formed so that the balls become displaced from them very easily and the guard 55 acts to retain the balls on the buckets until they reach the upper sprocket 50.

A delivery chute or guideway 56 is provided along one side 16 and is positioned to receive the balls as they are discharged from the buckets 52 at the upper sprocket 50. The guideway 56 extends forward and downward from the sprocket 50 and has an inwardly extending portion 57 at the forward corner 23a of the board 11. The buckets 52 are spaced on the chain so that each time the member 45 is actuated, and the sprocket 56 is partially rotated, a bucket 52 moves into position to discharge a ball into the guideway 56.

The invention provides means whereby a single ball is discharged from the guideway 56 on to the board 11 upon the member 45 being actuated. A lever 60 is pivotally mounted on a side 16 of the cabinet. The lever 60 is pivoted intermediate its ends and has arms 61 extending upwardly from its opposite ends. The lever 60 is arranged below the guideway 56 and the arms 61 project upwardly through openings in the floor of the guideway 56. The arms 61 are of the same length and the lever 60 is arranged so that when its forward end 62 is in an up position, the forward arm 61 projects into the guideway 56 to prevent the balls from leaving the guideway and the rear arm 61 is free of the interior of the guideway. The arms 61 are spaced apart just sufficient distance to permit a single ball to be disposed between them in the guideway.

It will be obvious from an inspection of Fig. 3 of the drawings that when the lever 60 is shifted so that the forward arm 61 is depressed and the rear arm is raised, that the ball that was immediately adjacent the forward arm or resting against the forward arm will be allowed to roll down the guideway and that any balls that may be above the rear arm are prevented from movement in the guideway.

A rod 63 extends downward from the forward end of the lever 60 to immediately above the upper edge of the member 45. A cam 70 is provided on the upper side of the member 45. The cam 70 normally engages the lower end of the rod 63 to hold the lever 60 in a position where the forward arm 61 extends into the guideway and prevents the balls from leaving the guideway 56. The cam 70 is formed so that when the member 45 is actuated rearwardly the rod 62 is allowed to move downward to shift the lever 60 to a position when the rear arm 61 projects into the guideway 56. The weight of the rod 63 is sufficient to shift the lever 60 to the position where a ball is allowed to roll from the guideway. When the lever 45 returns to its normal position the cam 70 again raises the rod 63 so that the forward arm 61 is moved into the guideway 56.

The operation of the member 45 may be controlled by a coin receiving mechanism 71. The invention is not concerned with the particular construction of the coin mechanism as various forms of devices may be used to control the operation of the member 45. Therefore the mechanism 71 has not been shown in detail. A push handle 72 projects forwardly from the panel 21 and extends into the mechanism 71. The mechanism 71 is constructed so that when a coin has been inserted in a slot 73 in the panel and the push handle 72 is moved inward the operating member 45 is moved rearwardly. A spring 81 is provided in the device 71 to return the member 45 and the handle 72 to their normal positions

after being actuated. The spring 81 is shown attached to inner side of the panel 21 and is attached to a part 82 which is connected to the member 45. When the handle 72 is moved inward the spring 81 is put under tension and tends to return the handle 72 and member 45 to their normal positions.

In operation the means 14 is preferably primed, that is, several balls are placed in the guideway above the forward arm 61 and a ball is placed in each of the upwardly facing buckets. When a coin is dropped in the slot 73 and the handle 72 is pushed inward, the member 45 is actuated inward. Upon the member 45 being actuated the sprocket 46 is rotated and a bucket 52 is moved into position where it discharges a ball into the guideway, and a bucket passing over the sprocket 46 picks up a ball from the bottom of the cabinet. At the same time the cam 70 is moved from the position where it supports the rod 62 in the up position and the lever 60 is allowed to drop so that the forward arm 61 is lowered and allows a ball to roll from the guideway and the rear arm is moved into the guideway to prevent other balls from leaving the guideway. When the handle 72 is released the spring 81 returns the member to its unactuated position and the arms 61 assume their normal positions where the forward arm extends into the guideway. It will be apparent how the ball after leaving the guideway falls onto the forward end of the board and into the course 12. The person operating the device may then cause the ball to roll along the course 12 by moving the handle 35 in various directions. After the ball has rolled over the entire course and falls through the opening 25, or has left the course and fallen through one of the openings 26, it drops onto the tray 23 and passes through the opening 80 to the enclosure around the sprocket 46. The ball is put into play by operating the single member 45 and returns to its former out of play position within the enclosure upon leaving the board 11. The amusement device or game provided by this invention embodies many novel and attractive features and is particularly simple of operation and construction.

Having described only a typical preferred form of my invention I do not wish to limit myself to the specific details set forth, but wish to reserve to myself any changes or variations that may appear to those skilled in the art or fall within the scope of the following claims.

Having described my invention, I claim:

1. An amusement device of the character described including, a member over which a ball is adapted to pass, and means supporting the member so that it is tiltable, said means including a stationary part, a swivel connection between the member and the stationary part, a link attached to the member at a point spaced from said connection and a swivelly mounted rod supporting the link.

2. An amusement device of the character described including, a board over which an object is adapted to roll, and means supporting the board so that it is tiltable to various positions including, a swivelly mounted rod spaced from the board, a head on the rod, and a link extending between the board and the head.

3. An amusement device of the character described including, a board over which an object is adapted to roll, and means supporting the board so that it is tiltable to various positions including, a swivelly mounted rod spaced from the board, a head on the rod extending in opposite directions from the rod, and spaced links connected to the head and the board.

4. In an amusement device of the character described, a swivelly mounted board having a course, and means for placing objects on the course including, an actuating member, a conveying chain, a sprocket driving the chain, and a connection between the member and the sprocket.

5. In an amusement device of the character described, a swivelly mounted board upon which objects are adapted to roll, an actuating member, and means for placing a single object on the board upon the member being actuated, said means including a guideway, a conveyor chain adapted to discharge objects at the guideway, and a driving connection between the chain and the actuating member.

6. In an amusement device of the character described, a swivelly mounted board upon which objects are adapted to roll, an actuating member, and means for placing a single object on the board upon the member being actuated, said means including an inclined guideway discharging onto the board, a conveying element adapted to deliver objects to the guideway, a driving connection between said element and the actuating member, and means normally preventing objects from leaving the guideway.

7. In an amusement device of the character described, a single swivelly mounted board upon which objects are adapted to roll, means for tilting the board, an actuating member, and means for placing a single object on the board upon the member being actuated, said means including a guideway discharging onto the board, a conveying element adapted to deliver objects to the guideway, a driving connection between said element and the actuating member, and means normally preventing objects from leaving the guideway and operable upon movement of the said member to permit a single object to leave the guideway.

8. In an amusement device of the character described, a swivelly mounted board upon

which objects are adapted to roll, an actuating member, and means for placing a single object on the board upon the member being actuated, said means including an inclined guideway discharging onto the board and adapted to carry a plurality of objects, a conveying element operable to convey objects from a point removed from the guideway and to release objects into the guideway, a driving connection between the actuating member and the said element, two spaced arms one normally extending into the guideway and one normally free of the guideway, and cam means on the actuating member operable to move the first mentioned arm free of the guideway and move the second arm into the guideway to retain the remaining objects in the guideway.

9. An amusement device of the character described including, a cabinet, a board disposed within the cabinet having one corner swivelly attached to the cabinet, a swivelly mounted rod extending through one side of the cabinet, spaced links carried by the rod and attached to the opposite corner of the board, an actuating member projecting from the cabinet and means whereby an object is placed on the board upon the member being operated.

10. An amusement device including, a cabinet having transparent portions, a quadrilateral board in the cabinet visible through said portions, means swivelly mounting one corner of the board on the cabinet, means supporting the opposite corner of the board so that the board may be tilted from the exterior of the cabinet, there being a tortuous course on the board over which an object may pass, and means operable from the exterior of the cabinet for putting an object in play on the course.

11. In an amusement device of the character described, a single swivelly mounted board upon which objects are adapted to roll, manual means for tilting the board in two directions, an actuating member, and means for placing a single object on the board upon the member being actuated, said means including a guideway adapted to carry a plurality of objects and discharge them onto the board, an arm extending into the guideway to retain the objects in the guideway, and a cam on the member adapted to shift the arm out of the guideway to release an object.

In witness that I claim the foregoing I have hereunto subscribed my name this 12th day of November, 1929.

MORDICHA MARGOLITH.