Nov. 24, 1953 L. A. DURANT 2,660,434

PACKETED BALL GAME APPARATUS

Filed July 16, 1951 4 Sheets-Sheet 1

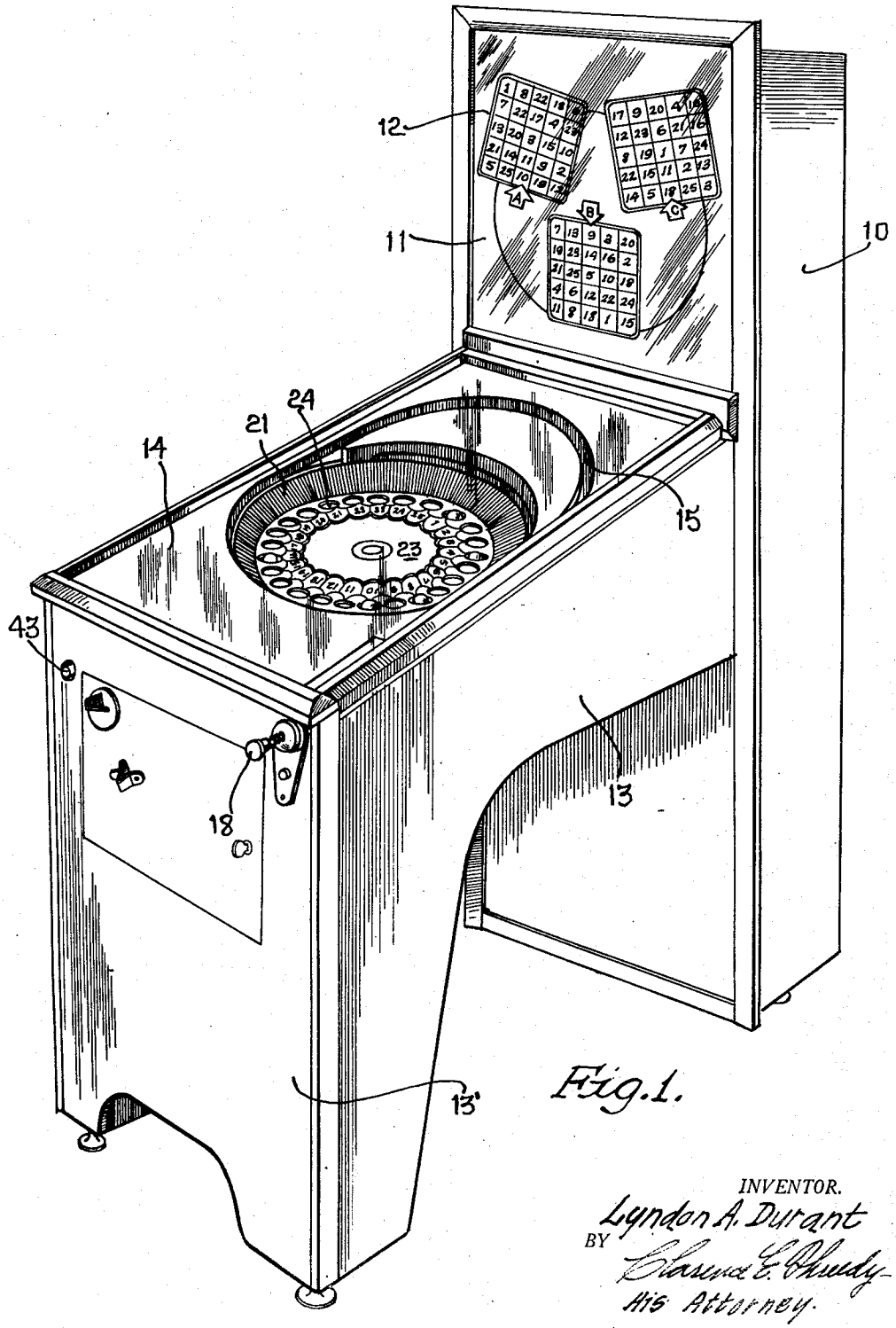


Fig. 1.

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PACKETED BALL GAME APPARATUS

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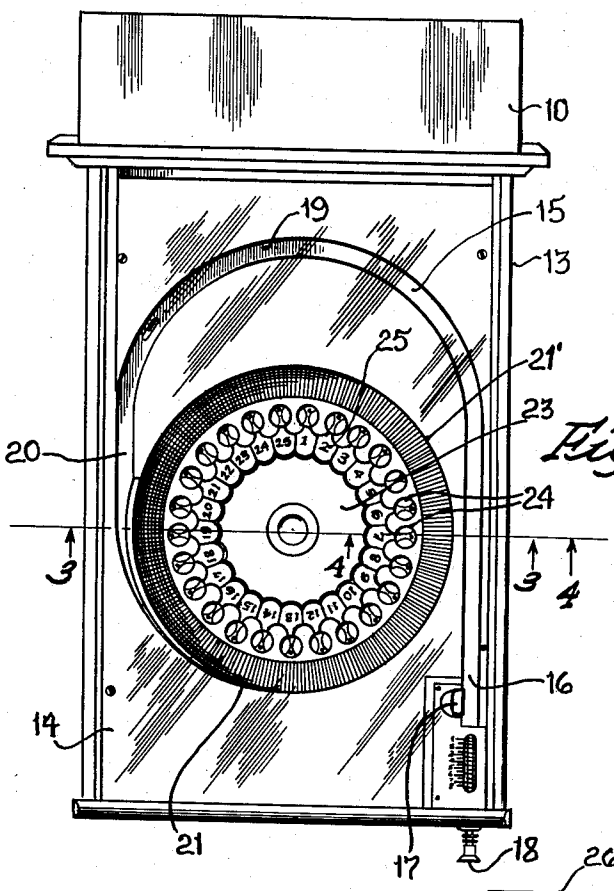


Fig. 2.

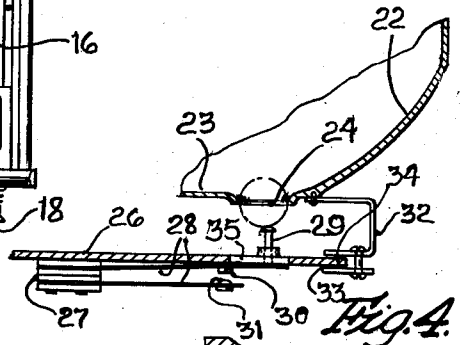


Fig. 4.

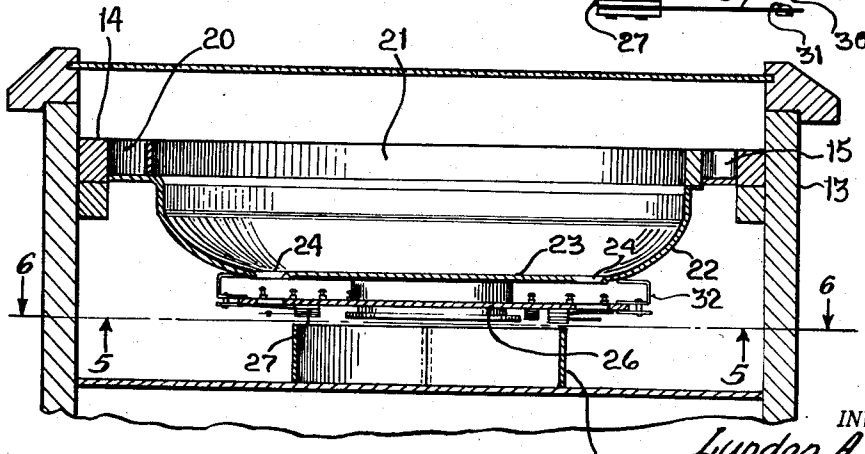


Fig. 3.

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PACKETED BALL GAME APPARATUS

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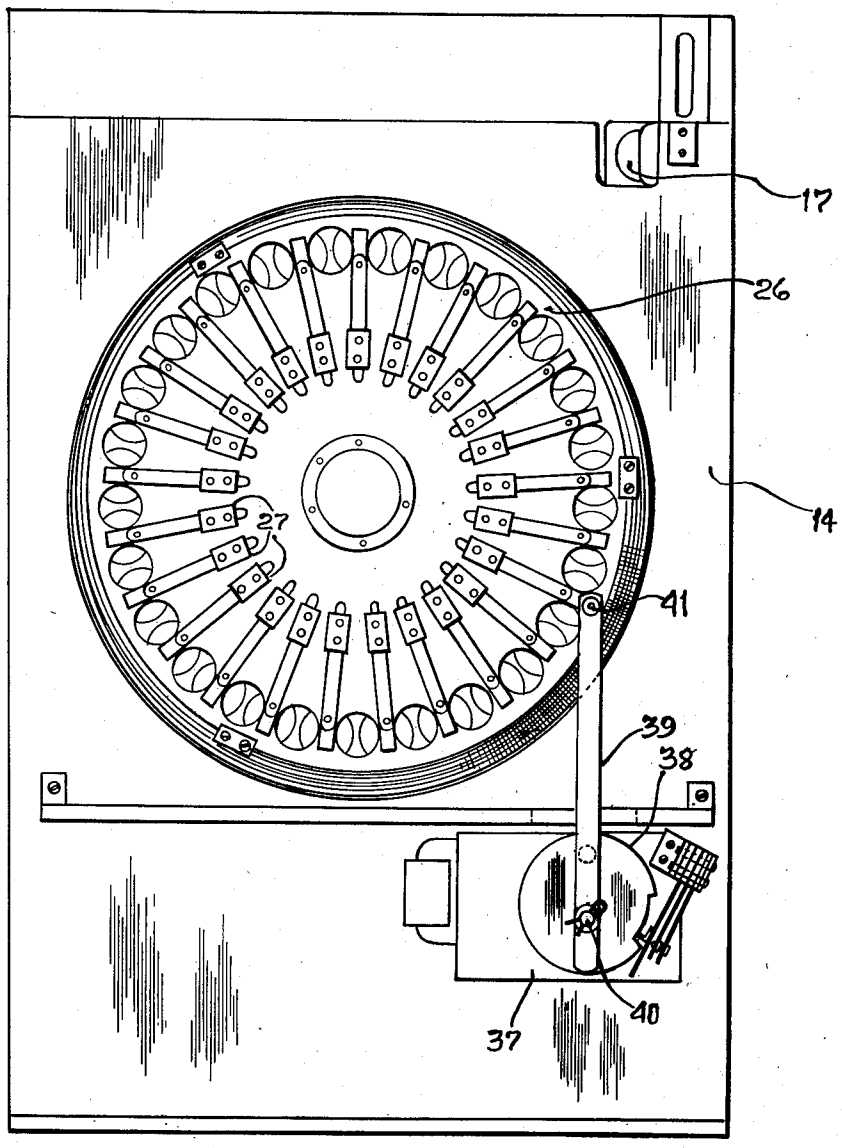


Fig. 5.

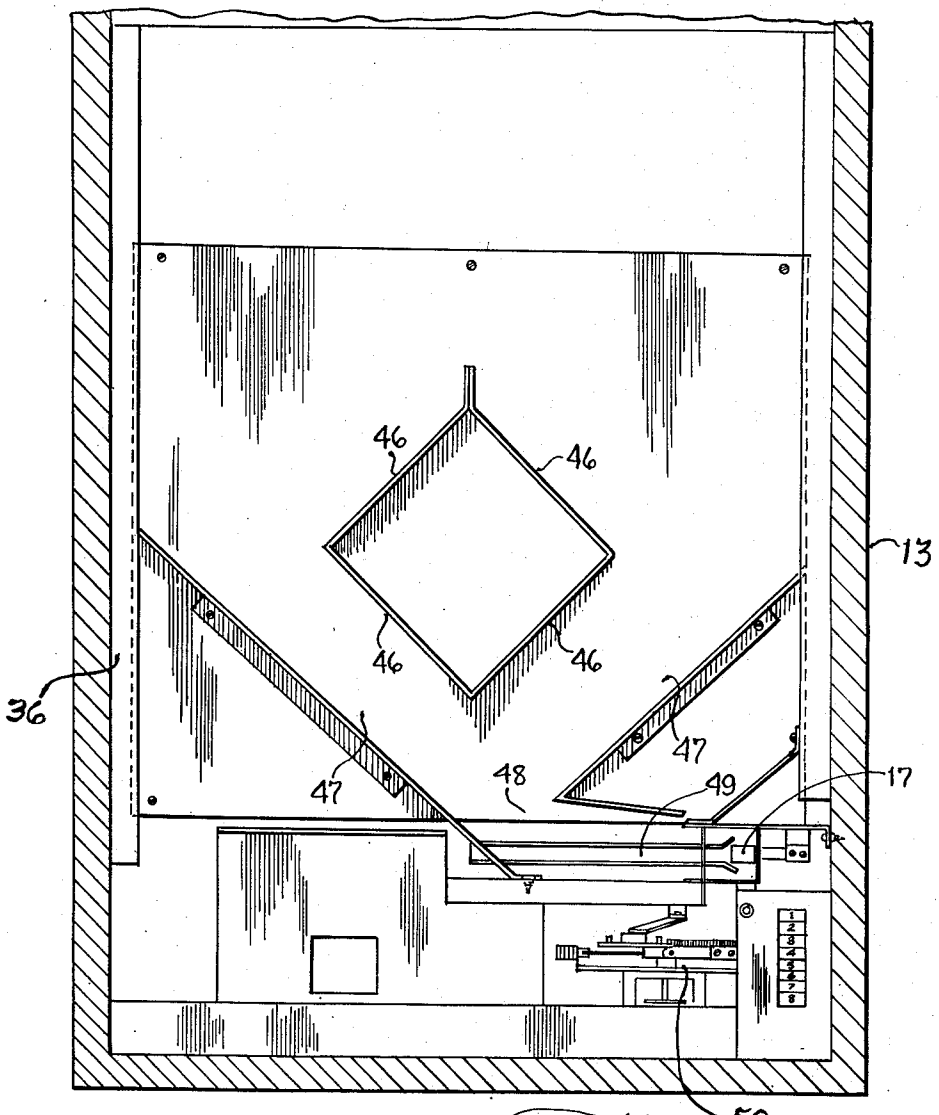
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Nov. 24, 1953 L. A. DURANT 2,660,434

PACKETED BALL GAME APPARATUS

Filed July 16, 1951 4 Sheets-Sheet 4

Fig. 6.



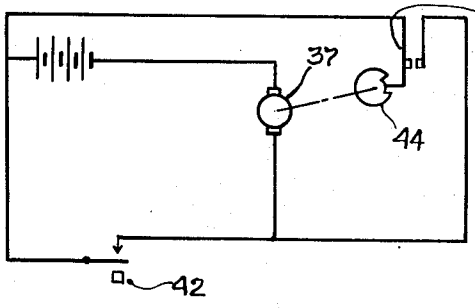


Fig. 7.

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Patented Nov. 24, 1953

2,660,434

UNITED STATES PATENT OFFICE

2,660,434

POCKETED BALL GAME APPARATUS

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Application July 16, 1951, Serial No. 236,954

4 Claims. (Cl. 273—121)

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This invention relates to certain new and useful improvements in pocketed ball game apparatus and has for its object the provision of an improved construction of this character which will afford the maximum of amusement.

An object of the invention is to provide in a game apparatus a ball raceway through which a ball is projected, and with the raceway at its outlet end communicating with a bowl, the walls of which are concave, whereby the ball leaving the raceway will by centrifugal action cling to the walls of the bowl for movement thereover until the speed of the ball is spent, at which time the ball will roll into one of several openings formed in the bottom of the bowl to close a contact switch of a score or other circuit.

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

Fig. 1 is a perspective view of an amusement game apparatus embodying my invention;

Fig. 2 is a top plan view of the same;

Fig. 3 is a fragmentary sectional detail view taken substantially on line 3—3 of Fig. 2;

Fig. 4 is an enlarged fragmentary sectional detail view taken substantially on line 4—4 of Fig. 2;

Fig. 5 is a fragmentary plan view taken substantially on line 5—5 of Fig. 3;

Fig. 6 is a plan view taken substantially on line 6—6 of Fig. 3;

Fig. 7 is a diagrammatic illustration of a suggested circuit arrangement embodied in the invention.

The several objects of my invention are accomplished by the preferred form of construction shown in the accompanying drawings and in which drawings a vertical cabinet section is indicated at 10 and within which cabinet is housed the score mechanism (not shown).

The upper front portion of the cabinet is closed by a translucent plate 11 on which may be printed symbols 12 of the scoring system.

Extending from this cabinet 10 is a horizontal cabinet 13 having a front supporting structure 13'. This cabinet portion 13 provides an inclined playboard 14 normally disposed beneath a glass top. This playboard 14 includes a ball channel 15, a straight section 16 of which communicates with a ball elevator opening 17 by which balls are elevated to the channel for projection by means of a conventional and well-known plunger 18.

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The circular portion 19 of the ball channel 15 terminates into a straight portion 20 which communicates with a bowl 21 arranged in an opening 21' formed in the playboard and having concave walls 22 and a bottom wall 23. The bottom wall 23 is provided with a plurality of openings 24 arranged in a circle and each designated by a number 25 corresponding to the numbers of the score symbols 12.

Disposed beneath the bowl 21 is a plate 26 which carries a plurality of switches 27. Each switch 27 comprises cooperating spring leaves 28 with the upper of the leaves carrying a pin 29. These pins 29 are arranged beneath the openings 24. Each pin 29 is adapted to have the weight of a ball disposed thereon, and by the weight of the ball when disposed on such pin 29, the upper spring leaf of the spring leaves 28 will be flexed to bring the contact head 30 thereof into contact with the contact head 31 of the lower spring leaf, whereby to close the switch. Each of these switches 27 is arranged in the score circuit. Inasmuch as the score circuit constitutes no part of the present invention, it has not been shown and it may be any conventional or well-known score circuit.

The plate 26 is supported for rotation by means of brackets 32 attached to the bowl in any suitable manner with each bracket providing a channel 33 within which the peripheral edge 34 of the plate 26 projects.

The plate 26 is provided with a plurality of openings 35 normally disposed out of registration with the openings 24 and arranged between the pins 29. The arrangement is such that a ball lodged in any one of the openings 24 will be supported therein by the pin 29. Upon rotation of the plate 26 by a means to be presently described, the plate is rotated in a direction to dispose the openings 35 beneath the opening 24 whereby to allow the ball or balls to pass therethrough upon a return runway 36.

The means for rotating the plate 26 comprises a standard motor 37 having mounted on its shaft a cam disc 38. The connecting link 39 is eccentrically connected as at 40 to the disc 38. The opposite end portion of the connecting link 39 is connected as at 41 to the plate 26. When the motor 37 is energized, in a manner to be presently described, the connecting link 39 will rotate the plate 26 a sufficient distance to dispose the openings 35 beneath the openings 24 to permit the balls to pass thereover onto the return runway 36 (Fig. 6).

This energization of the motor may be accom-

plished in several ways. As a suggested way, reference is made to Fig. 7 in which the initial energization of the motor 37 is accomplished by a starting switch 42 which is of the push button type with the button 43 thereof positioned to the front wall of the cabinet 13 within convenient reach of the player. Initial energization of the motor causes a cam 44 thereof to rotate a sufficient distance to close a holding switch 45 which remains closed until the cam again assumes the position shown in Fig. 7.

This circuit is merely a suggested circuit and it is to be understood that any other or approved type circuit may be used for the purpose.

The return trough comprises guide walls 46 arranged in rectangular formation centrally located with respect to the bowl 21 so that such balls falling upon the return runway 36 will contact these walls 46 and be guided to troughs 47 to an outlet 48 which communicates with a runway 49 in turn communicating with the ball elevator opening 17. The ball elevator is indicated at 50 and may be of any approved construction. The construction of such elevator has not been described as it constitutes no part of the present invention.

By the construction of a game apparatus in accordance with the description herein set forth, a ball channel is provided through which the balls are projected and delivered to a bowl disposed beneath the plane of the playboard in a manner such that the balls will contact the concave walls of the bowl and, due to their speed, will cling to the walls of the bowl and travel thereover until such time as the speed of the ball is spent, at which time the ball then will lodge in one of several openings formed in the bowl, to be supported therein by a pin through which a switch is closed by reason of the weight of a wall thereon. The balls are returned to the channel for reprojection therethrough by movement of the plate beneath the bowl. Such movement of the plate brings the openings thereof into registration with the openings in the bottom of the bowl, at which time the ball or balls will drop through the openings in the plate upon the return runway, for movement by gravity into the return runway for repositioning into the channel through the ball elevator opening.

The manner of scoring or indicating the value of the openings may be of any approved type and construction such as now used in conventional game apparatuses of the type here described.

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 of 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. An amusement game apparatus comprising an inclined playboard having an opening and a ball channel formed therein, a stationary bowl in said opening beneath the plane of said playboard and having concave side walls and a substantially flat bottom wall, said channel having open communication with said bowl at its point of junction with said side walls and through which said balls from said playboard pass, a plurality of ball receiving openings formed in the periphery of said bottom wall, a circular plate supported by said bowl beneath and in spaced parallel relation to said bottom wall, said plate providing in its peripheral edge a plurality of opening normally out of registration with the openings formed in said bottom wall, means for supporting said plate for rotation beneath said bottom wall, said last named means comprising brackets carried by said bowl adjacent the peripheral edge of said bottom wall, said brackets providing a channel through which said plate may be rotatably moved, and means for rotating said plate to position the openings thereof in registration with the ball receiving openings of said bottom wall.

2. An amusement game apparatus comprising an inclined playboard having an opening and a ball channel formed therein, a stationary bowl in said opening beneath the plane of said playboard and having concave side walls and a substantially flat bottom wall, said channel having open communication with said bowl at its point of junction with said side walls and through which said balls from said playboard pass, a plurality of ball receiving openings formed in the periphery of said bottom wall, a circular plate supported by said bowl beneath and in spaced parallel relation to said bottom wall, said plate providing in its peripheral edge a plurality of openings normally out of registration with the openings formed in said bottom wall, means for supporting said plate for rotation beneath said bottom wall, said last named means comprising brackets carried by said bowl adjacent the peripheral edge of said bottom wall, said brackets providing a channel through which said plate may be rotatably moved, and means for rotating said plate to position the openings thereof in registration with the ball receiving openings of said bottom wall, said plate rotating means including an operating arm pivotally connected to said plate and having an eccentrically operative connection to an electric motor.

3. An amusement game apparatus comprising an inclined playboard having an opening and a ball channel formed therein, a stationary bowl in said opening beneath the plane of said playboard and having concave side walls and a substantially flat bottom wall, said channel having open communication with said bowl at its point of junction with said side walls and through which said balls from said playboard pass, a plurality of ball receiving openings formed in the periphery of said bottom wall, a circular plate supported by said bowl beneath and in spaced parallel relation to said bottom wall, said plate providing in its peripheral edge a plurality of openings normally out of registration with the openings formed in said bottom wall, means for supporting said plate for rotation beneath said bottom wall, said last named means comprising brackets carried by said bowl adjacent the peripheral edge of said bottom wall, said brackets providing a channel through which said plate may be rotatably moved, and switch elements carried by said plate with each element including an actuating pin normally disposed in registration with an adjacent opening of said bottom wall, and means for rotating said plate to position said switch elements out of registration with said openings of said bottom wall whereby said balls received therein will pass therethrough.

4. An amusement game apparatus comprising an inclined playboard having an opening and a ball channel formed therein, a stationary bowl in

said opening beneath the plane of said playboard and having concave side walls and a substantially flat bottom wall, said channel having open communication with said bowl at its point of junction with said side walls and through which said balls from said playboard pass, a plurality of ball receiving openings formed in the periphery of said bottom wall, a circular plate supported by said bowl beneath and in spaced parallel relation to said bottom wall, said plate providing in its peripheral edge a plurality of openings normally out of registration with the openings formed in said bottom wall, means for supporting said plate for rotation beneath said bottom wall, said last named means comprising brackets carried by said bowl adjacent the peripheral edge of said bottom wall, said brackets providing a channel through which said plate may be rotatably moved, switch elements carried by said plate with each element including an actuating pin normally disposed in registration with an adjacent opening of said bottom wall, means for rotating said plate to position said switch elements out of registration with said openings of said bottom wall whereby said balls received therein will pass therethrough, and means for rotating said plate to position the openings thereof in registration with the ball receiving openings of said bottom wall, said plate rotating means including an operating arm pivotally connected to said plate and having an eccentrically operative connection to an electric motor.

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