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H. McCLELLAN

2,026,902

GAME APPARATUS

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Fig. 1.

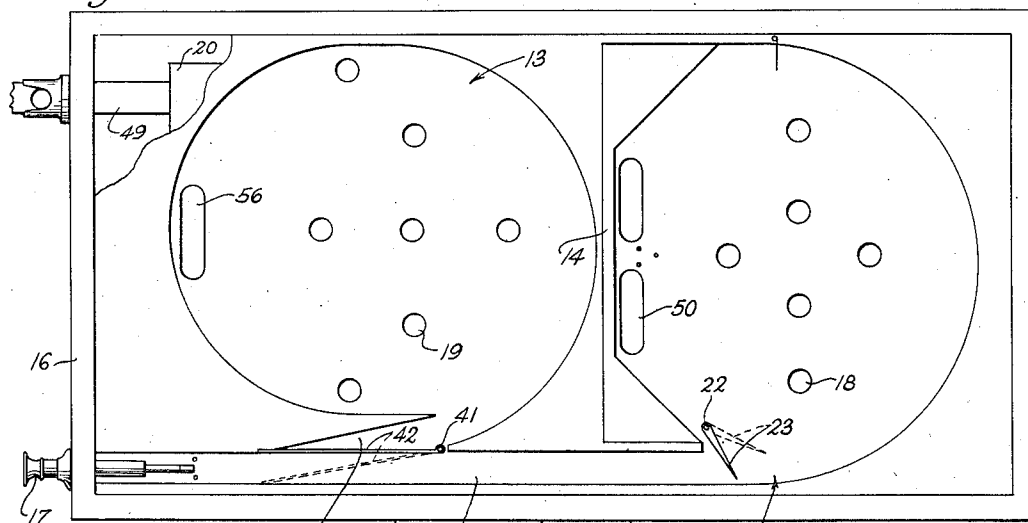


Fig. 2.

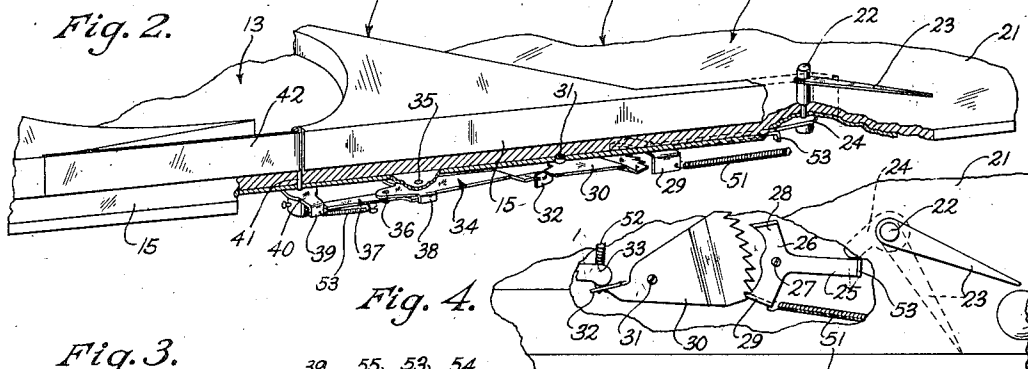


Fig. 4.

Fig. 3.

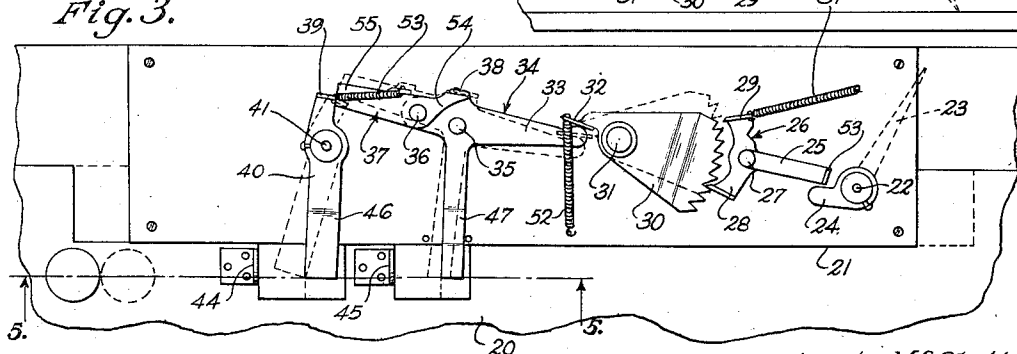
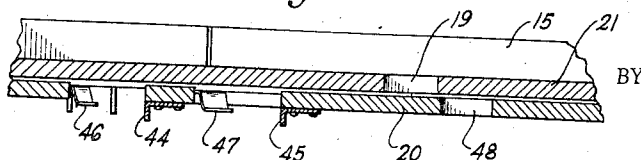


Fig. 5.



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UNITED STATES PATENT OFFICE

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GAME APPARATUS

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7 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.

Another object of the invention is to provide, in a game apparatus, of the so-called pin and marble game type, the combination of; a member providing a ball playing surface having spaced ball playing areas thereon; means for propelling balls onto said playing surface so that they will normally enter into one of said playing areas; and means actuated by balls entering the said one of said playing areas to direct balls from said propelling means into the other of the said playing areas.

An additional object of the invention is to provide, in a game apparatus, of the so-called pin and marble game type, the combination of; a member providing an inclined ball playing surface having an upper ball playing area and a lower ball playing area thereon spaced or separated from each other; means for propelling balls onto said playing surface so that they will normally enter the said upper one of said playing areas; and means actuated by balls entering the said upper one of said playing areas to direct balls from the said propelling means into the said lower one of said playing areas.

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

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

Fig. 2 is a fragmentary longitudinal, vertical sectional view of the same;

Fig. 3 is a bottom plan view of the new device;

Fig. 4 is a fragmentary top plan view; and

Fig. 5 is a fragmentary sectional view on line 5—5 in Fig. 3.

A game apparatus embodying a preferred form of the invention is illustrated in the drawing, is therein generally indicated at 10, and comprises a cabinet 11 in which is arranged an inclined playing board 21, which includes two playing areas or surfaces 12 and 13 which are separated from each other by a wall or portion 14 which extends transversely across the cabinet 11, relative to the axis of the same, between the upper and lower ends thereof.

Provided in the cabinet 11, and extending sub-

stantially parallel to one longitudinal or side edge 14 thereof, is a ramp or runway 15 and mounted in the lower end wall 16 of the cabinet is a propelling device or plunger 17 by means of which balls may be propelled, one at a time, up the ramp 15 into or onto the upper playing area or surface 12; or, as will be explained hereinafter, into or onto the lower area or playing surface 13; the played balls being adapted to enter into ball exit or scoring openings 18 which are formed in the inclined playing board 21, in the upper playing area 12, or into ball exit or scoring openings 19, which are formed in the inclined playing board 21, in the lower playing area 13, and the balls are temporarily retained in these ball exit or scoring openings 18 and 19 by means of a ball-retaining member or panel 20 which is slidably mounted in the cabinet 11 below the inclined playing board 21; the sliding panel 21 being provided with ball exit openings 48 which are normally disposed out of registration with the ball exit openings 18 and 19 in the inclined playing board 21, as is well understood in the art.

The ramp or runway 15 opens at its upper end (Fig. 1) into the upper area 12 and pivotally mounted upon the inclined playing board 21, at the mouth or upper end of the ramp 15 is an arm or gate 23; this arm or gate 23 being mounted upon a shaft or pin 22 which projects vertically through the inclined playing board 21.

Attached to the vertical pin or shaft 22, below the inclined playing board 21, is a laterally extending arm 24 (Figs. 2, 3 and 4) and this arm 24 is engageable with a depending extension 53 of an arm 25 of a pawl 26, the pawl 26 being pivotally mounted as at 27, below the inclined playing board 21.

The pawl 26 has oppositely extending arms 28 and 29 and these arms are engageable, at different times, with the teeth of a ratchet 30; the ratchet 30 being pivotally mounted as at 31, below the inclined playing board 21.

Attached to the arm 29 of the pawl 26 so as normally to urge the latter in a counterclockwise direction (Fig. 2) is a spring 51, and attached to a depending arm 32 of the ratchet 30, so as to urge the latter in a counterclockwise direction, (Fig. 3) is a spring 52.

The depending extension or arm 32 of the ratchet 30 is engageable with an arm 33 of a member 34 which is pivotally mounted between its ends, as at 35, below the inclined playing board 21.

Pivotally mounted on the lower or bottom side of the member 34, as at 36, is a trip member 37.

One end portion 54 of the trip member 36 is engageable with a depending flange or extension 38 of the member 34, and the other end portion 55 of the trip member 37 is engageable with a depending flange or extension 39 of a member 40 which is pivotally mounted between its ends upon a vertical shaft or pin 41 which extends through the inclined playing board 21.

Pivotally mounted upon the shaft 41, upon the upper side of the inclined playing board 21, and in a runway 43 which provides communication between the lower playing area 13 and the ramp or runway 15, is a ball deflecting member or gate which is movable into and out of the ball ramp or runway 15, that is from full to dotted line position, Fig. 1, and vice versa, so as to open and close the inlet or runway 43 to the lower playing area 13.

Attached to and depending from the ball-releasing member or sliding panel 20, are arms 44 and 45 (Fig. 5) which are engageable, respectively, with laterally extending arms 46 and 47 of the members 40 and 34, respectively.

Mounted in the lower end wall 16 of the cabinet 11 is a coin slide 49 which is engageable at its inner end with the sliding panel 20, at the lower end or edge of the latter, so as to move the same into ball-releasing position (left to right, Fig. 1, right to left, Fig. 5).

Operation

The gate or ball deflector 42 and the gate or arm 23 are normally disposed as in full lines, Fig. 1, so that a ball propelled up the ramp 15, by the propeller or plunger 17, will pass the closed gate or deflector 42 and will continue on up the ramp or runway 15, past the gate 42, and will strike against the gate or arm 23 and pivot the latter (counterclockwise, from full to dotted line position, Fig. 1), thus allowing the played ball to pass from the ramp 15 into the upper playing area 12, whereupon it may gravitate over the inclined playing board 21 and enter into one of the ball exit or scoring openings 18 or enter into one of the "out" openings 50, which are provided in the inclined playing board 21 within the upper playing area 12.

When a played ball strikes the arm 23 and pivots the latter (counterclockwise, from full to dotted line position, Fig. 1, or from dotted to full line position, Fig. 3), this motion of the arm 23 and its supporting shaft 22 pivots the arm 24, which is carried by the shaft 22, into engagement with the depending extension 53 of the arm 25 of the pawl 26 thereby pivoting the pawl 26 (clockwise, Fig. 4) against the action of spring 51, which normally acts upon the pawl 26 to urge the arm 28 thereof into engagement with the teeth of the ratchet 30. This movement of the pawl 26 moves the arm 28 thereof, against the action of the spring 51, out of engagement with the teeth of the ratchet 30, whereupon the spring 52 pivots the ratchet 30 (counterclockwise, Fig. 4), a distance equal to the circumferential distance between two of the teeth on the ratchet 30. The spring 51, then again urges the pawl 26 (in a counterclockwise direction, Fig. 4), so as to re-engage the arm 28 thereof with the teeth of the ratchet 30.

The foregoing movement of the ratchet 30 (clockwise, Fig. 4, counterclockwise, Fig. 3) causes the depending arm or extension 32 thereof to engage the arm 33 of the member 34, thereby pivoting the member 34 (in a clockwise direction

as seen in Fig. 3). This movement of the member 34 causes the depending arm or extension 38 thereof to engage the trip member 37, thereby pivoting the trip member 37 in a clockwise direction (Fig. 3). The foregoing movement of the trip member 37 releases the end portion 55 thereof from engagement with the depending extension 39 of the member 40, whereupon the tensioned spring 53 pivots the member 40 and its supporting shaft 41 (in a clockwise direction, 10 from full to dotted line position, Fig. 1), and this movement of the shaft 41 pivots the ball deflector or gate 42 carried thereby (in a counterclockwise direction, from full to dotted lines, Fig. 1), thus projecting the gate 42 across the lower end portion of the ramp 15 and thereby opening the inlet or runway 43 to the lower playing area 13.

Consequently, when the gate 42 is thus positioned, (as in dotted lines, Fig. 1) a ball propelled up the ramp 15 by the propeller 17 will be deflected by the gate 42 into the lower area or playing surface 13, whereupon it may gravitate over the inclined playing board 21 into one of the ball exit scoring openings 19 or into the opening 56 which is provided in the inclined playing board 21 at the lower end of the playing area 13, and balls entering these openings 19 or 56, will be temporarily held therein by the ball-releasing member 20 until such time as the slidable panel 20 or ball-releasing member 20 is moved (left to right, Fig. 1, right to left, Fig. 5), by operation of the coin slide 49 as will now be explained.

This movement of the ball-releasing member 20 is effected by the operation of the coin slide 49 (left to right, Fig. 1), the inner end of the coin slide 49 engaging the lower end or edge of the ball-releasing member 20 (Fig. 1). During this movement of the sliding panel 20 (right to left, Fig. 5, left to right, Fig. 3) the depending arms or extensions 44 and 45 thereon engage the arms 46 and 47, respectively, of the members 40 and 34, respectively, thereby pivoting the members 40 and 34 (from dotted to full line positions, Fig. 3), and thereby pivoting the gate or ball deflector 42 (clockwise, from dotted to full line position, Fig. 1) into closed position. During this movement of the members 40 and 34 the spring 53 acts upon the latch member 37 to pivot the same (counterclockwise, from dotted to full line position, Fig. 3), thereby moving the end portion 55 of the latch member 37 into latching engagement with the depending arm or extension 39 of the gate-operating member 40, thereby latching the ball-deflector or gate 42 in closed position (as in full lines, Figs. 1 and 2).

The foregoing motion of the member 34 (counterclockwise, from dotted to full line position, Fig. 3) also causes the end portion 33 thereof to engage the arm or extension 32 of the ratchet 30, thereby pivoting the ratchet 30 (from dotted to full line position, clockwise Fig. 3, counterclockwise, Fig. 4), against the action of the spring 52, whereupon the spring 51 acts upon the pawl 26 to pivot the same (counterclockwise, Fig. 4) so as to reengage the arm 28 thereof with the ratchet 30. During this movement of the pawl 26 the depending extension 53 of the arm 25 thereof engages the arm 24 and thereby pivots the latter and the gate 23 (counterclockwise, 70 from full to dotted line position, Fig. 1, counterclockwise, from dotted to full line position, Fig. 4) so as to open the outlet from the ramp 15 into the upper playing area 12.

While I have illustrated and described the pre-

ferred 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. In a game apparatus, the combination of: a member providing a playing surface having spaced ball playing areas thereon; means for propelling balls onto said playing surface so that they will normally enter into one of said playing areas; and means automatically actuated by balls entering the said one of said playing areas, after a predetermined number of balls have entered the same, for directing subsequently played balls from said propelling means into the other of said playing areas.

2. In a game apparatus, the combination of: a member providing an inclined ball playing surface having an upper ball playing area and a lower ball playing area thereon; means for propelling balls onto said playing surface so that they will normally enter into the said upper one of said playing areas; and means automatically actuated by balls entering the said upper one of said playing areas after a predetermined number of balls have entered the same, for directing subsequently played balls from said propelling means into the said lower one of said playing areas.

3. In a game apparatus, the combination of: a cabinet including an inclined playing board having spaced upper and lower ball-playing areas thereon; a ramp or runway extending along one edge of said inclined playing board for conducting balls at different times into each of said playing areas; means for propelling balls one at a time along said ramp or runway so that they will normally enter into the upper one of said playing areas; and means including a device automatically actuated by balls entering the said upper one of said playing areas after a predetermined number of balls have entered the same from said ramp or runway for deflecting subsequently played balls from said ramp or runway into the lower one of said playing areas.

4. In a game apparatus, the combination of: a cabinet including an inclined playing board having spaced upper and lower ball-playing areas thereon and said inclined playing board having ball exit openings formed therein in each of said playing areas; a ramp or runway extending along one edge of said inclined playing board for conducting balls at different times into each of said playing areas; means for propelling balls one at a time along said ramp or runway so that they will normally enter into the upper one of said playing areas and gravitate thereover into the said ball exit openings provided therein; means including a device actuated by balls entering the said upper one of said playing areas from said ramp or runway for deflecting balls from said

ramps or runway into the said lower one of said playing areas so that they may gravitate thereover and enter into the said ball exit openings provided therein; means arranged below said inclined playing board for temporarily retaining therein balls which enter into said ball exit openings; means for moving said third-named means into position to release balls from said exit openings; and means coacting with said third-named or ball-retaining means when the latter is moved into ball-releasing position to reset said second-named or ball-deflecting means into its initial position so as to prevent balls propelled along said ramp or runway from entering into the lower one of said playing areas.

5. In a game apparatus, the combination of: a cabinet including a member providing a ball playing surface including spaced ball-playing areas and said member having ball exit openings formed therein in each of said playing areas; means for propelling balls onto said playing surface so that they will normally enter into one of said playing areas and so that they may enter into the said ball exit openings in the said one of said playing areas; means including a device actuated by balls propelled into the said one of said ball-playing areas for directing balls subsequently propelled by said propelling means onto said playing surface into the other of said playing areas; and means for resetting said second-named means into its initial position including a member arranged below said playing surface for temporarily retaining therein balls which enter into said ball exit openings.

6. In a game apparatus, the combination of: a cabinet including a member providing a ball playing surface including spaced ball-playing areas and said member having ball exit openings formed therein in each of said playing areas; means for propelling balls onto said playing surface so that they will normally enter into one of said playing areas and so that they may enter into the said ball exit openings in the said one of said playing areas; means including a device actuated by balls propelled into the said one of said ball-playing areas, after a predetermined number of balls have entered the same, for directing balls subsequently propelled by said propelling means onto said playing surface into the other of said playing areas; and means for resetting said second-named means into its initial position including a member arranged below said playing surface for temporarily retaining therein balls which enter into said ball exit openings.

7. In a game apparatus, the combination of: a cabinet including a member providing a ball-playing surface; a ball runway or ramp in said cabinet for conducting balls onto said playing surface; an operating mechanism in said cabinet including a member movably mounted upon said playing surface; and means including a device automatically actuated by balls entering onto said playing surface from said ball ramp or runway, after a predetermined number of balls have entered onto said playing surface from said ramp, for actuating said second-named member.

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