

Oct. 25, 1932.

C. M. GRAVATT

1,885,036

GAME APPARATUS

Filed Sept. 14, 1932

2 Sheets-Sheet 1

Fig. 1.

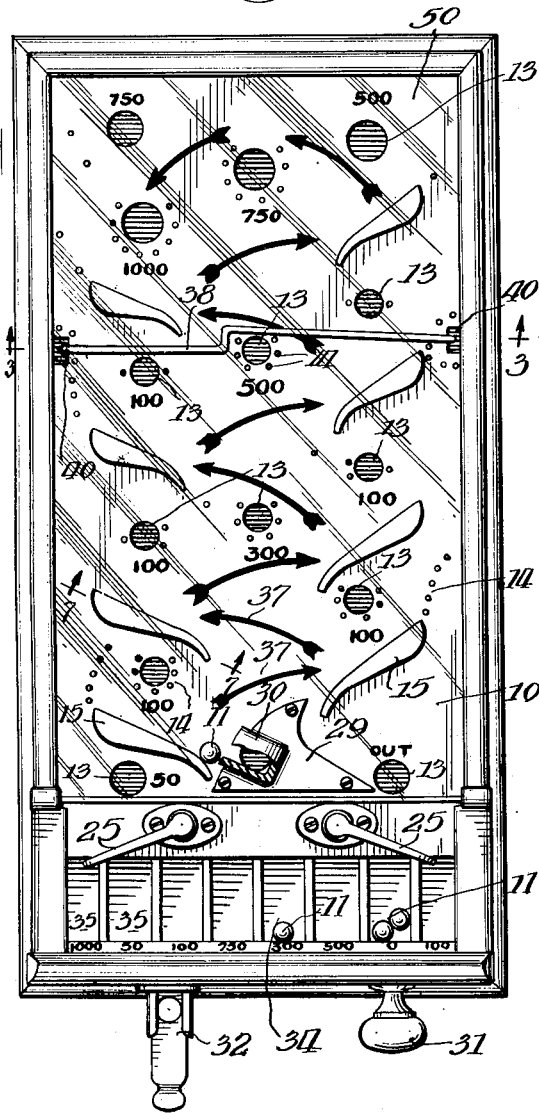
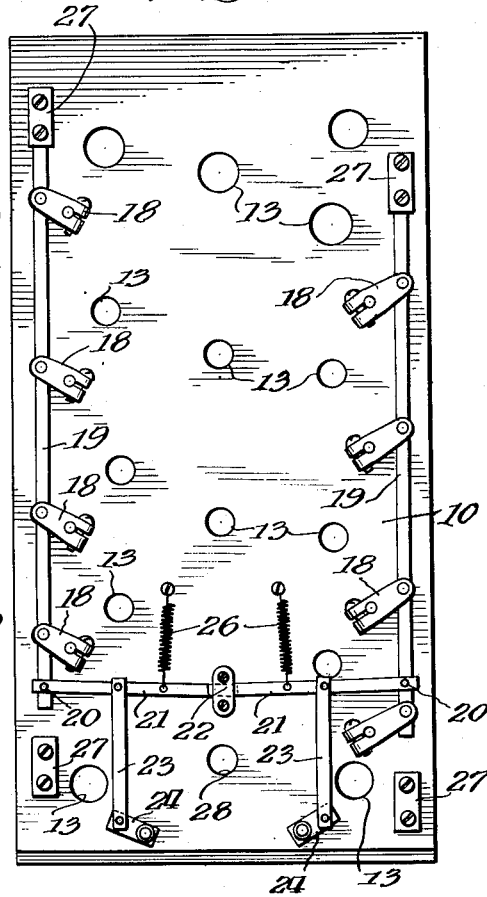


Fig. 2.



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2 Sheets-Sheet 2

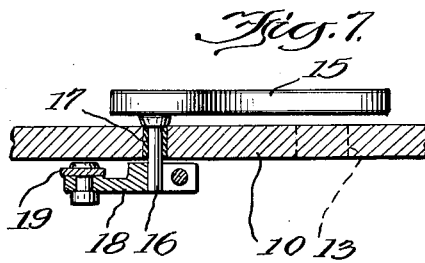
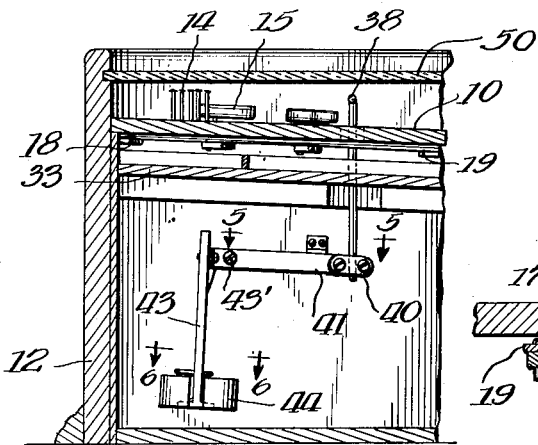
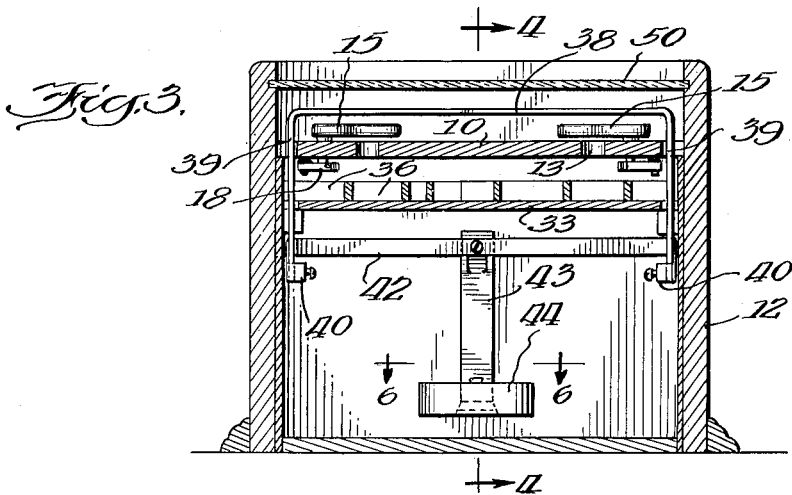


Fig. 4.

Fig. 5.

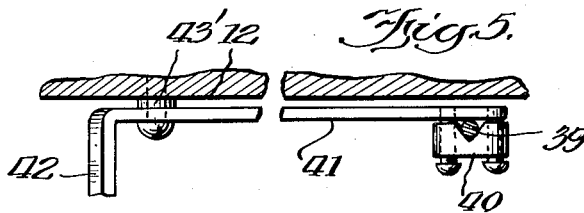
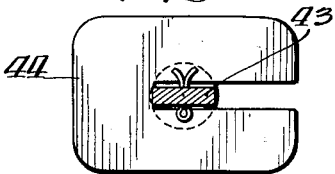


Fig. 6.



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UNITED STATES PATENT OFFICE

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GAME APPARATUS

Application filed September 14, 1932. Serial No. 633,146.

This invention relates to a game apparatus of the type in which objects, such as balls or the like are caused to be projected over a playing surface, which is provided with suitably arranged openings, suitably guarded for rendering it somewhat difficult to cause the objects to enter said openings. The said openings are provided with certain numerical designations so as to render the game amusing and entertaining, and to cause the player to endeavor to obtain as high a score as possible.

One of the objects of the present invention resides in the provision of novel mechanism entirely under the control of the operator for controlling the paths of travel of the objects, hence requiring a comparatively large degree of skill in operating the mechanism for directing the objects in a path for entering openings of high numerical designations.

Another object of this invention resides in the provision of a novel game board, having a plurality of suitably arranged openings provided therein and moveable means entirely under the control of the operator, whereby the path of travel of the object along the surface of the board may be regulated and controlled so as to direct the object in a path for entering openings of high numerical designations.

Another object of this invention resides in the provision of a game board having a plurality of suitably arranged openings adapted for permitting the passage therethrough of a projectile, means associated with said board adapted for directing the travel of the projectile along the board, said last mentioned means being entirely under control of the operator, and means disposed across said board adapted for blocking the passage to the upper portion thereof when said board is tilted from its normal operating position.

A further object of this invention is to provide a game apparatus of the character described, which will be simple in construction,

assembly and operation, which may be produced along lines convenient for low cost manufacture, and which will be highly efficient for carrying out the purposes for which it is designed.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention consists in certain novel features of construction, arrangement and combination of parts, hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

For the purpose of facilitating an understanding of my invention, I have illustrated in the accompanying drawings a preferred embodiment thereof, from an inspection of which when considered in connection with the following description, my invention, its mode of construction, assembly and operation and many of its advantages should be readily understood and appreciated.

Referring to the drawings in which the same characters of reference are employed to indicate corresponding or similar parts throughout the several figures of the drawings:

Figure 1 is a plan view of the game apparatus embodying the present invention;

Figure 2 is a plan view of the under side of the playing board showing the arrangement of the mechanism mounted thereon;

Figure 3 is a transverse vertical section taken substantially as indicated at line 3—3 of Figure 1;

Figure 4 is a vertical section through a fragmentary portion taken substantially as indicated at line 4—4 of Figure 3;

Figure 5 is a detail view taken substantially as indicated at line 5—5 of Figure 4

and looking in the direction of the arrows;

Figure 6 is a top plan view of the counterweight taken substantially as indicated at line 6—6 of Figure 4; and

5 Figure 7 is a sectional view through one of the operating levers taken substantially as indicated at line 7—7 of Figure 1.

Referring now in detail to the drawings, the numeral 10 designates a playing board or table over which spherical objects, such as metal balls, marbles, etc., indicated at 11, may be projected. The playing board for convenience is mounted in a casing indicated at 12, and is disposed at a substantial inclination to horizontal, the direction of tilt being upward from the end at which the operator stands. The surface of the playing board is provided with a plurality of openings indicated at 13, said openings being of a size to permit the passage therethrough of the spherical objects 11. A plurality of studs or nails 14 driven into the surface of the board are suitably arranged around certain of said openings so as to provide said openings with an entrance at the upward or forward end. Certain others of said studs or nails are disposed along desired points on the surface of the board to render it difficult to direct the projectile into the openings of high numerical designations without the exercise of skill on the part of the operator.

The following novel mechanism is provided for controlling the path of travel of the projectiles, this mechanism comprises a plurality of pivotally mounted levers 15, said levers being disposed in two rows adjacent each side of the board, and the levers in each row being disposed one above the other. These levers 15 are pivoted adjacent their outer ends by means of the pivot 16 extended through openings 17 in the board 10, as shown in Figure 7 of the drawings. The lower ends of said pivots 16 have secured thereto the bifurcated arms 18, the free ends of which arms are pivotally connected to a rod 19 disposed on the under side of the board 10, as shown in Figure 2. Each of said rods 19 are pivotally connected adjacent their forward ends, as shown at 20 in Figure 2, to the cross rods 21, the free ends of which cross rods are received for sliding movement in the guide member 22, mounted on the under side of said game board. The rod 23 has one end thereof secured to the transverse rod 21 intermediate the ends thereof, and the other end secured to an arm 24 pivoted to the game board and having connected thereto an operating handle 25, which handle extends through the game board and is disposed on the outer surface thereof as shown in Figure 1, in position to be grasped by the operator for actuating the levers 15.

A spiral spring 26, having one end thereof secured to the horizontal rod 21 and the other

end thereof secured to the under side of the board, is provided for normally urging said levers 15 to the position shown in Figure 1. Suitable stops 27 are provided adjacent each corner of the board on the underside thereof for limiting the forward and rearward movement of the rods 19, thereby limiting the movement of the said levers 15 which are connected to said rods 19.

The board 10 is also provided adjacent its forward end with an opening 28, over which opening is disposed the plate member 29, having a chute 30 associated therewith, which chute communicates with the opening 28 to permit the projection of a ball through the opening 28 onto the playing surface of the board. A suitable elevator of any well known construction may be employed for projecting the ball onto the playing surface. A handle 31 is provided at the forward end of the casing 12 for actuating said elevator. In addition to the elevator there is also provided a coin control mechanism of any suitable and well known construction, the operation of which is well known in the art, said coin control mechanism being controlled by the coin slot 32 for releasing the balls to bring the same into position to be projected onto the playing surface by the elevator 31. As the coin control mechanism and elevator form no part of the present invention it is not thought necessary to describe the same in more detail.

Disposed below the board 10, is a second board 33, the forward end of which is disposed adjacent the board 34, which is provided with a plurality of courts 35, each of said courts being given a numerical designation. The board 33 is provided with a plurality of runways 36, which runways communicate with corresponding courts of the board 34 and are adapted to cause the balls dropped into said runways to travel downwardly on the board 33 to be deposited in their corresponding courts. The runways on the board 33 are arranged so as to be disposed directly below the openings 13, so that the projectile dropping through any of said openings will be received in the proper runway to be deposited in the proper court, or in the court whose numerical designation corresponds to the numerical designation of the opening through which the projectile had dropped.

In operation the elevator handle 31 is actuated to deposit the ball 11 through the chute 30 onto the playing surface. The operator then actuates the handles 25 to direct the ball upwardly, first with one lever and then with the other until the projectile is caused to be deposited into one of the openings provided on the game board. The openings are so arranged as to render it comparatively difficult to cause the balls to enter therein, and preferably the most difficult are given the higher numerical designation. As may be seen in Figure 1, the opening at the lower extreme

right end of the board is designated as an "Out", because with practically no effort the balls may be caused to enter this opening, and hence a certain amount of skill is required in operating the handles 25 for striking the ball and projecting it along the playing board so as to control their paths of travel to direct them in a path for entering openings of high numerical designations. In order to facilitate the operation of the mechanism, the playing surface of the board may be provided with a plurality of arrows, which arrows indicate the direction the ball should take when struck by the lever 15.

In order to prevent the disposition of the balls into the openings of high numerical designations provided adjacent the upper end thereof by tilting of the casing 12, there is provided a transversally disposed rod 38, of substantially U shaped formation, said rod extending directly across the game board and having the depending side arms 39 thereof extending through openings 40 provided in the side edges of the game board. The lower ends of the side arms 39 of the rod 38 are secured to brackets 40 provided on the pivoted arms 41 of a U shaped member 42. Said arms 41 are pivoted to the side of the casing 12, as shown at 43.

The horizontal portion of the U shaped member 42 has connected thereto, intermediate the ends thereof, a rod 43, to the lower end of which is connected a counterweight 44. As shown in Figure 3 of the drawings, when the casing 12 is in its normal position, the counterweight will be disposed in position to raise the rod 38 a sufficient distance above the playing surface of the board 10 to permit the passage thereunder of the balls 11. However, when the said casing is tilted by lifting the forward end thereof, the counterweight 44 will swing backwardly, tilting the member 42 about its pivots 43, thereby moving the rod 38 towards the playing surface of the board 10 and bringing it to such a position where it will not permit the passage of a ball between it and the playing surface, thus preventing the passage of any projectiles past the said rod 38 when the said casing is tilted backwardly.

A glass panel 50 is mounted above the game board 10 in the casing 12, said glass panel preventing direct access to the balls and thus insures that their use be entirely controlled by the coin operated device associated with the apparatus.

It is believed that my invention, its mode of construction and assembly and operation, and many of its advantages should be readily understood from the foregoing without further description, and should also be manifest that while a preferred embodiment of the invention has been shown and described for illustrative purposes, the structural details are, nevertheless, capable of wide variation

within the purview of my invention as defined in the appended claims.

What I claim and desire to secure by Letters Patent of the United States is:

1. In a game apparatus including a playing board normally inclined to the horizontal, and having a number of openings through which a projectile may pass, mechanism arranged for directing and controlling the path of travel of a projectile over the surface of the board until dropped into one of said openings, said mechanism including a plurality of levers pivotally mounted on the board, and means for actuating said levers.

2. In a game apparatus including a playing board normally inclined to the horizontal and having a plurality of openings through which a projectile may pass, means for depositing a projectile onto the surface of the board, means for directing and controlling the path of travel of the projectile until the same is dropped into one of said openings, said last mentioned means including a plurality of suitably arranged levers pivotally mounted in the board and disposed in position to direct and control the path of travel of the projectile as the same passes over the surface of the board and until it is dropped into one of said openings, and operating handles connected with said levers, whereby said levers may be positively actuated and controlled by the operator.

3. In a game apparatus including a playing board normally inclined to the horizontal, and having a number of openings through which a projectile may pass, means for depositing a projectile onto the surface of the board, mechanism for directing and controlling the path of travel of the projectile as the same passes over the surface of the board until it is dropped into one of said openings, operating handles disposed at a point remote from the surface of the board for actuating the first mentioned mechanism, said means for depositing a projectile onto the surface of the board being coin-controlled.

4. In a game apparatus including a playing board normally inclined to the horizontal, and having a number of openings through which a projectile may pass, studs driven into the surface of the board and arranged to make it somewhat difficult to enter certain of said openings, pivotally mounted levers arranged on the surface of the board and disposed in position to direct and control the path of travel of the projectile over the board, and operating means for actuating said levers.

5. In a game apparatus including a playing board normally inclined to the horizontal, and having a plurality of openings through which a projectile may pass, studs driven into the surface of the board and arranged to make it somewhat difficult for said projectile to enter certain of said openings, mechanism for directing and controlling the path of travel

of the projectile as it passes over the surface of the board until dropped into one of said openings, means for depositing said projectiles one at a time onto the surface of the board, and means under the absolute control of the operator for actuating said first mentioned mechanism. 70

6. In a game apparatus including a playing board normally inclined to the horizontal and having a plurality of openings through which a projectile may pass, studs driven into the surface of the board and arranged to make it somewhat difficult for said projectile to enter certain of said openings, rows of pivotally mounted levers arranged on the board, said levers being disposed so as to direct and control the path of travel of the projectile when actuated by the operator, and means whereby the operator may actuate each row of levers in unison. 75

In testimony whereof, I affix my signature.
CHARLES MARSHALL GRAVATT. 80

7. In a game apparatus including a playing board normally inclined to the horizontal and having a number of openings through which a projectile may pass, studs driven into the surface of the board and arranged to make it somewhat difficult to enter certain of said openings, rows of pivotally mounted levers provided on the surface of the board adapted for striking the projectile as it passes over the board to direct and control its path of travel until dropped into one of said openings, and an operating member for each row of levers. 85

8. In a game apparatus including a playing board normally inclined to the horizontal and having a number of openings through which a projectile may pass, means provided on the surface of the board and arranged to make it somewhat difficult to cause said projectile to enter certain of said openings, mechanism including pivotally mounted levers on the surface of the board for directing and controlling the path of travel of the projectile, and operating means under the direct control of the operator for actuating said mechanism. 90

9. In a game apparatus including a playing board normally inclined to the horizontal and having a number of openings through which a projectile may pass, said openings being provided with numerical designations, those openings disposed adjacent the upper portion of the board bearing the higher numerical designations, mechanism for directing and controlling the path of travel of the projectile over the surface of the board until it is dropped into one of said openings, and means for preventing the passage of the projectile to the upper portion of the board when the latter is tilted from its normal position. 95

10. In a game apparatus including a playing board normally inclined to the horizontal and having a number of openings through which a projectile may pass, a casing within which said board is mounted, certain of said openings being arranged adjacent the upper portion of said board, mechanism for directing and controlling the path of travel of the projectile until dropped into one of said openings, a transverse rod disposed across the face of the board intermediate the ends thereof, said rod normally being in position to permit the passage thereunder of a projectile, and means connected with said rod for automatically depressing the same to prevent the passage thereunder of a projectile when the casing is tilted from its normal position. 100

11. In a game apparatus including a playing board normally inclined to the horizontal and having a number of openings through which a projectile may pass, a casing within which said board is mounted, certain of said 105