March 15, 1932. N. ROBIN 1,849,956

GAME

Filed Nov.7, 1931 2 Sheets-Sheet 1

Fig. 1.

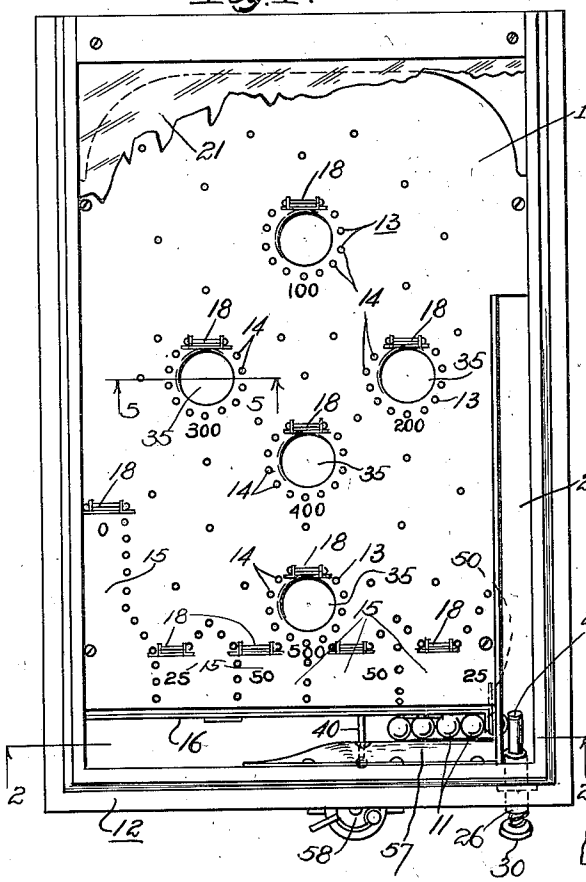


Fig. 3.

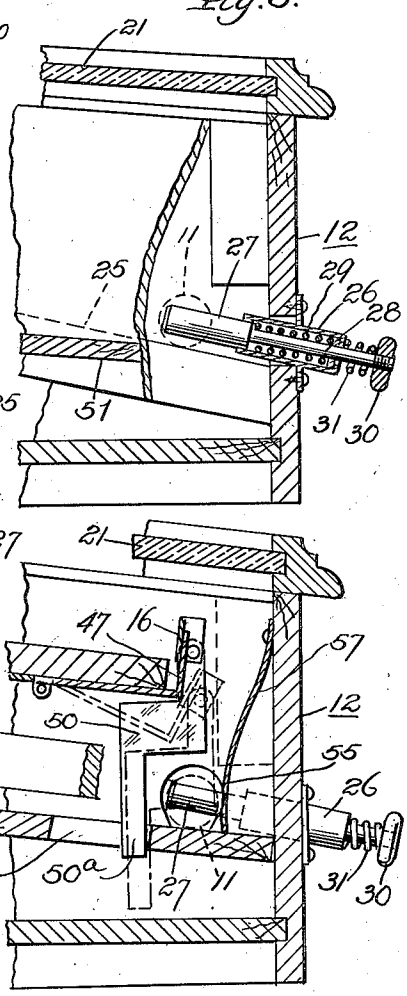


Fig. 2.

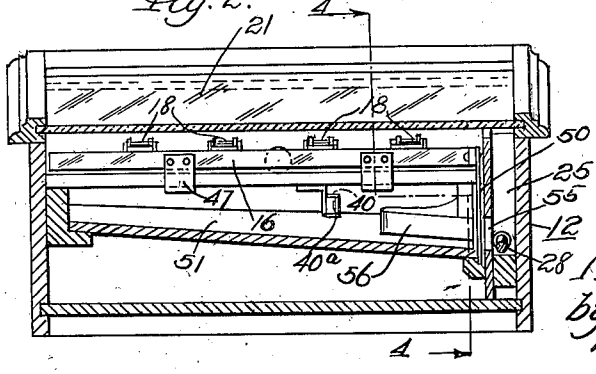


Fig. 4.

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Fig. 5.

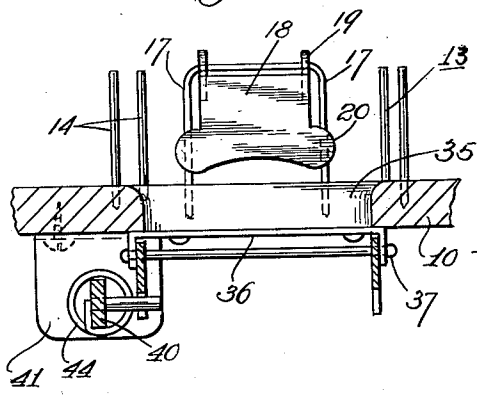


Fig. 6.

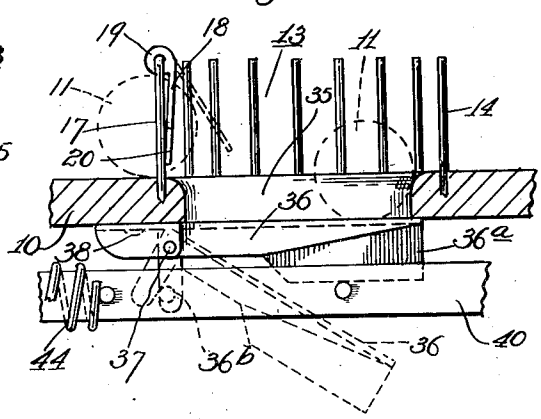
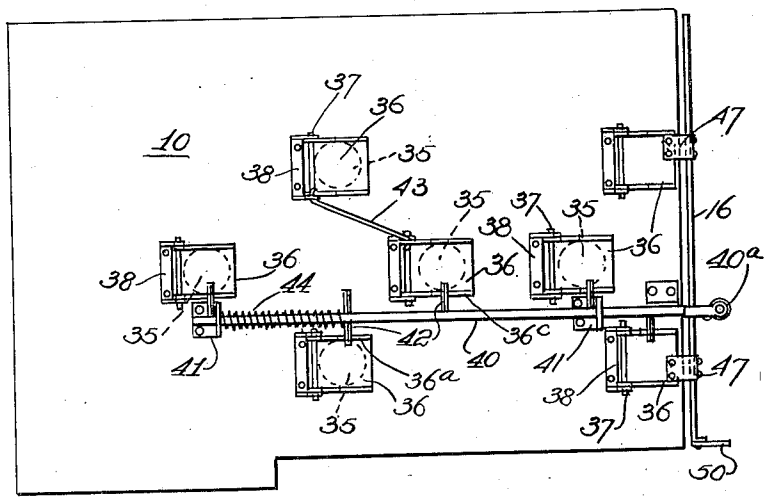


Fig. 7.



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Patented Mar. 15, 1932

1,849,956

UNITED STATES PATENT OFFICE

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GAME

Application filed November 7, 1931. Serial No. 573,592.

This invention relates to a game apparatus of the type in which objects, such as balls, are caused to be projected over a playing surface which is provided with courts or pens suitably arranged for rendering it somewhat difficult to cause the objects to enter therein. The courts or pens 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 under control of a coin-operated device whereby the balls are retained in the courts and are released for return to the projection chute only when a coin has been introduced in the control device and the mechanism completely operated. A further object of this invention resides in the provision of a novel one-way gate arranged for controlling the entrance to the courts or pens, and adapted to hold the balls captive therein, and thus prevents said balls from being shifted accidentally or intentionally out of one court or pen into another by tilting of the playing board. The invention consists in certain features and elements of construction, in combination, as herein shown and described and as indicated by the claims.

In the drawings:

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

Figure 2 is a transverse vertical section taken substantially as indicated at line 2—2 on Figure 1.

Figure 3 is an enlarged vertical section through the lower end of the projection chute, showing the plunger mechanism in section.

Figure 4 is a vertical section taken substantially as indicated at line 4—4 on Figure 2.

Figure 5 is an enlarged transverse section taken at line 5—5 on Figure 1, showing in detail a gate for controlling the entrance to a court, and also a controlled trap door for the opening in the bottom of the court.

Figure 6 is a longitudinal sectional view through one of the courts.

Figure 7 is a plan view of the under side of the playing board or table showing the arrangement of the trap doors and control mechanism therefor.

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 slight 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 courts or pens indicated at 13, which are formed by a series of studs or nails, 14, driven into the surface of the board. These studs forming the courts are spaced so as to provide each court with an entrance at the upward or forward end and otherwise form complete closures for retaining a ball, 11, that may enter therein. At the lower end of the board the area is divided up into a plurality of courts or pens, 15, formed by the studs, 14, which are spaced in a manner to form upwardly open entrances while the opposite ends of the courts are arranged to open at the lower edge of the board, but are normally closed by a movable rail or fall bar indicated at 16. The courts or pens are arranged in a manner 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 court at the lower extreme left end of the board is designated as zero, because with practically no effort the balls may be caused to enter this court, and hence a certain amount of skill is required in operating the mechanism for projecting the ball onto the playing board so as to at least partially control their paths of travel, to direct them in a path for entering courts of high numerical designations.

At the entrance of each of the courts or pens there is provided a one-way gate which permits the balls to enter the courts and hold them captive therein. This arrangement precludes accidental or willful shifting of the ball from one court to another, such as might

possibly be accomplished in certain forms of the game by merely tilting the rear end of the playing board in an upward direction. This one-way gate includes a support, 17, of horseshoe or inverted U-shape formation positioned to straddle the entrance to the court.

The gate proper indicated at 18, which is a metal stamping, is provided with a pair of laterally extending ears, 19, which are hingedly supported on the intermediate portion of the support, 17, as seen in Figure 5. The lower portion of the gate, 18, is formed with a pair of oppositely extending lugs, 20, which are positioned to engage the leg portions at the rear side of the supporting member, 17, and thus prevent the gate from swinging forwardly with respect to the court. Mounted in close proximity above the board, 10, in the casing 12, is a glass panel, 21, which is positioned so as to prevent the gate, 18, from turning over about its hinge axis, in the event that the gate is struck rather hard by a ball as it enters the court. This glass panel also prevents direct access to the balls and thus insures that their use be entirely controlled by the coin operated device hereinafter described.

Located at the right hand edge of the playing board is an inclined projection chute or alleyway indicated at 25, which extends for a substantial portion of the length of the board and at its lower end is provided a projecting device by means of which the balls are, literally speaking, "shot" onto the surface of the playing board. This projecting device, as may be seen in Figure 3, includes a bearing sleeve, 26, secured to the end of the case, 12, and slidably mounted in the sleeve is the plunger, 27, which has a reduced shank portion, 28. Circumscribing the reduced shank portion is a coil spring, 29, reacting against the under side of the plunger head, 27, and the closed end of the sleeve, 26, and secured to the outer end of the shank, 28, is a knob, 30, which is adapted to be withdrawn, for retracting the plunger head against the reaction of the coil spring, 29, which builds up sufficient potential energy so that when released the plunger will engage one of the balls, 11, and forcibly project it up the alleyway, 25, onto the surface of the playing board. Interposed between the outer end of the sleeve, 26, and the knob, 30, and circumscribing the shank, 28, is a coil spring, 31, which serves to cushion the impact of the plunger head with the ball and tends to minimize the noise incident to the return of the plunger to normal position.

As shown in Figure 1 of the drawings, each of the closed courts or pens, 13, has a large central aperture, 35, which is normally closed by a trap door indicated at 36. The trap door is hingedly connected at 37 to a supporting bracket, 38, secured to the under side of the board. These trap doors are preferably controlled for simultaneously opening to release the spherical objects therein by means of a control rod, 40, slidably supported in brackets, 41, secured to the under side of the board, 10. Extending laterally from said rod are projections, 42, which are adapted to engage with the cam surfaces of the lugs, 36^a, extending downward from one edge of each trap door, 36, so that when said projections, 42, are in engagement with the cam surface, 36^a, the trap doors are held in closed position. One of the trap doors is located a short distance farther away from rod, 40, than the others, and for convenience the operation of this door, as may be seen in Figure 7, is controlled through a link, 43, connecting it with one of the other doors, so that the swinging of the door adjacent the rod will positively impart corresponding movement to the door remote therefrom. Each of the doors is formed with a projection, 36^b, located forwardly of the cam lug, 36^a, so that when the control rod, 40, is shifted forwardly the projections, 42, engage the lugs, 36^b, and thereby positively swing the trap doors downwardly about their hinges, 37, to a position as indicated in dotted lines in Figure 6. A coil spring, 44, on the forward portion of the rod, 40, acts against the forward supporting bracket, 41, and the adjacent projection, 42, for normally urging the rod in a rearward direction, thus holding the trap doors in closed position. The movable fall bar, 16, controlling the openings at the lower edge of the courts, 15, is preferably connected for simultaneous operation with the trap doors and for this purpose I may utilize as hinges for the fall bar two trap doors and supporting brackets substantially the same as those used for controlling the apertures, 35, of the courts, 13, and provide a rigid connection by means of a bracket, 47, between each of said doors, 36, and the bar, 16, so that the bar is caused to swing downwardly about the hinge connection provided by said pair of doors, as may be seen in Figure 7.

Secured to the right hand end of the movable bar, 16, is a gate, 50, pivoted at its upper end to said bar and having a downwardly extending leg portion, 50^a, guided in a slot, 51^a, of a bottom or return board, 51, which is secured in the case, 12, just below the playing board, 10. This board, 51, is tilted in a manner, as may be seen in Figures 2 and 4 to cause the balls when they are released from the courts or pens, to be directed toward the operator and toward the projection chute, 25. The gate, 50, normally occupies the position seen in Figure 4 but when the trap doors and fall bar, 16, are operated to release the balls from the courts or pens, this gate is moved with the fall bar so as to assume the position indicated in dotted lines in Fig. 4, overlapping or closing the inlet aperture, 55, by means of which the balls,

11, enter the projection alley. Secured to the right hand wall of the casing above the return board, 51, is a curved guide block, 56, which assists in directing the balls toward the chute when they are released from the courts. A sheet metal guard, 57, is secured to the front inner wall of the casing, 12, as seen in Figures 1 and 4, and serves to guide and direct the balls toward the aperture, 55, leading to the projection chute.

The rearward end of the bar, 40, is provided with a roller, 40ª, which is adapted to engage a cam (not shown) of a suitable coin control device indicated generally at 58, by virtue of which the bar, 40, when the coin operated device is actuated causes said bar to be shifted in a forward direction, opening all the trap doors, 36, and dropping the fall bar, 16, to the position indicated in dotted lines in Figure 4 so that all of the balls will be permitted to return by way of the inclined board, 51, to accumulate against the gate, 50; and when the gate, 50, is raised by the raising of the fall bar and closing of trap doors, 36, by the spring, 44, the balls under the influence of gravity will be fed through the aperture, 55, into the projection chute, one by one, for engagement by the plunger, 27.

Although I have shown and described a preferred embodiment of my invention, it is to be understood that it is capable of modification and rearrangement of parts without departing from the spirit and scope thereof. I do not, therefore, wish to be understood as limiting myself to the particular embodiment herein shown and described, except as limited by the appended claims.

I claim:—

1. In a game apparatus including a board or table having its surface provided with a court or pen formed with an entrance through which a properly directed object may enter, means for controlling said entrance and adapted for holding the object captive in said court, said means including a support and a gate hingedly connected to said support for swinging inwardly toward the court, said gate having a lug remote from said hinged connection adapted to engage the support for preventing said gate from swinging in an outwardly direction from the court, and a panel of transparent material disposed in spaced relation to the board and in close proximity to the gate for preventing said gate from swinging over its hinge connection in opposite relation to its support when it is struck by the object.

2. In a game apparatus including a playing board normally inclined slightly to horizontal, and having the main portion of its surface provided with one or more courts or pens, and the lower edge provided with one or more courts or pens, said courts being formed with an entrance at the upper portion through which properly projected projectiles may enter, trap doors controlling openings located in the courts of the main portion of the board, a member constituting a part of the courts at said lower edge and serving in one position to retain the projectile therein, and movable to another position for releasing the projectiles from said courts, a projection chute at one edge of the board having a lateral opening for receiving spherical projectiles, a gate for the inlet opening, operating means for simultaneously opening the trap doors, shifting the movable member at the end of the board to release the projectiles, and shifting the gate to close the inlet to the chute, an inclined board disposed below the playing member for directing the projectiles when discharged from the playing board toward the inlet opening of the chute, and spring means associated with the operating means for closing the trap doors, shifting the movable member to operative position and swinging said gate clear of said inlet opening.

3. In a game apparatus including a playing board normally inclined slightly to horizontal and having its surface provided with one or more courts or pens formed with an upwardly open entrance through which a properly directed projectile may enter said courts, trap doors controlling openings in each of said courts, a projection chute at one edge of the board having an inlet opening for receiving a spherical projectile, means below said board for directing said projectile toward the inlet opening of the chute, a normally open gate for said inlet opening, mechanism arranged for opening said trap doors and simultaneously shifting said gate to close the inlet opening of the chute, spring means acting on said mechanism for holding the doors closed and the gate open, and a coin operated device arranged for controlling the operation of said mechanism.

4. In a game apparatus including a playing board normally inclined slightly to horizontal, and having the main portion of its surface provided with one or more courts or pens and the lower edge of said board with one or more courts or pens, said courts each being formed with an entrance at the upper portion through which properly directed projectiles may enter, trap doors controlling openings located in the courts of the main portion of the board, a member constituting a part of the courts at said lower edge and serving in one position to retain the projectiles therein, and movable to another position for releasing the projectiles from said lower courts, a projection chute at one edge of the board having a lateral opening for receiving the projectiles, operating means for opening the trap doors and simultaneously shifting the movable member to release the projectiles from the courts at the lower edge of the board, and an inclined member dis-

posed below the playing board for directing the projectiles when discharged from the playing board toward the inlet opening of the chute.

5. In a game apparatus including a playing board normally inclined slightly to horizontal, and having the main portion of its surface provided with one or more courts or pens and the lower edge of said board with one or more courts or pens, said courts each being formed with an entrance at the upper portion through which properly directed projectiles may enter, trap doors controlling openings located in the courts of the main portion of the board, a member constituting a part of the courts at said lower edge and serving in one position to retain the projectiles therein, and movable to another position for releasing the projectiles from said lower courts, the projection chute at one edge of the board having a lateral opening for receiving the projectiles, operating means for opening the trap doors and simultaneously shifting the movable member to release the projectiles from the courts at the lower edge of the board, an inclined member disposed below the playing board for directing the projectiles when discharged from the playing board toward the inlet opening of the chute, spring means associated with the operating means for urging the trap doors and movable member to operating position, and a coin operated device for controlling the operation of said operating means.

6. In a game apparatus including a playing board, normally inclined slightly to horizontal and having a main portion of its surface provided with one or more traps comprising apertures communicating with the under side of said board, trap doors for controlling said apertures, the lower edge of said board being provided with one or more courts or pens formed with an entrance through which properly directed projectiles may enter, a movable member constituting a part of all of the courts at said lower edge of the board, and serving in one position to retain the projectiles therein, and movable to another position for releasing the projectiles from said courts, a projection chute at one edge of the board having a lateral opening for receiving the projectiles, means disposed below the board for directing the projectiles when discharged from said traps and courts toward the inlet opening of the chute, and operating means for opening said trap doors and simultaneously shifting the movable member to release the projectiles from said traps and from the courts at the lower edge of the board.

7. In a game apparatus including a playing board normally inclined slightly to horizontal and having a main portion of its surface provided with one or more traps comprising apertures communicating with the under side of said board, the lower edge of said board being provided with one or more courts or pens formed with an entrance through which properly directed projectiles may enter, a movable member extending across the lower edge of the board and constituting a part of all of said courts at said lower edge of the board, and serving in one position to retain the projectiles therein, and movable to another position for releasing the projectiles from said courts, a projection chute at one edge of the board having a lateral opening for receiving the projectiles, means disposed below said board for directing the projectiles when discharged through said apertures or from said courts, toward the inlet opening of the chute, and means for shifting said movable member in a downward direction, below the surface of the board, to release projectiles from said courts.

NATHAN ROBIN.