Dec. 5, 1933. A. L. PAULIN ET AL 1,938,495

GAME APPARATUS

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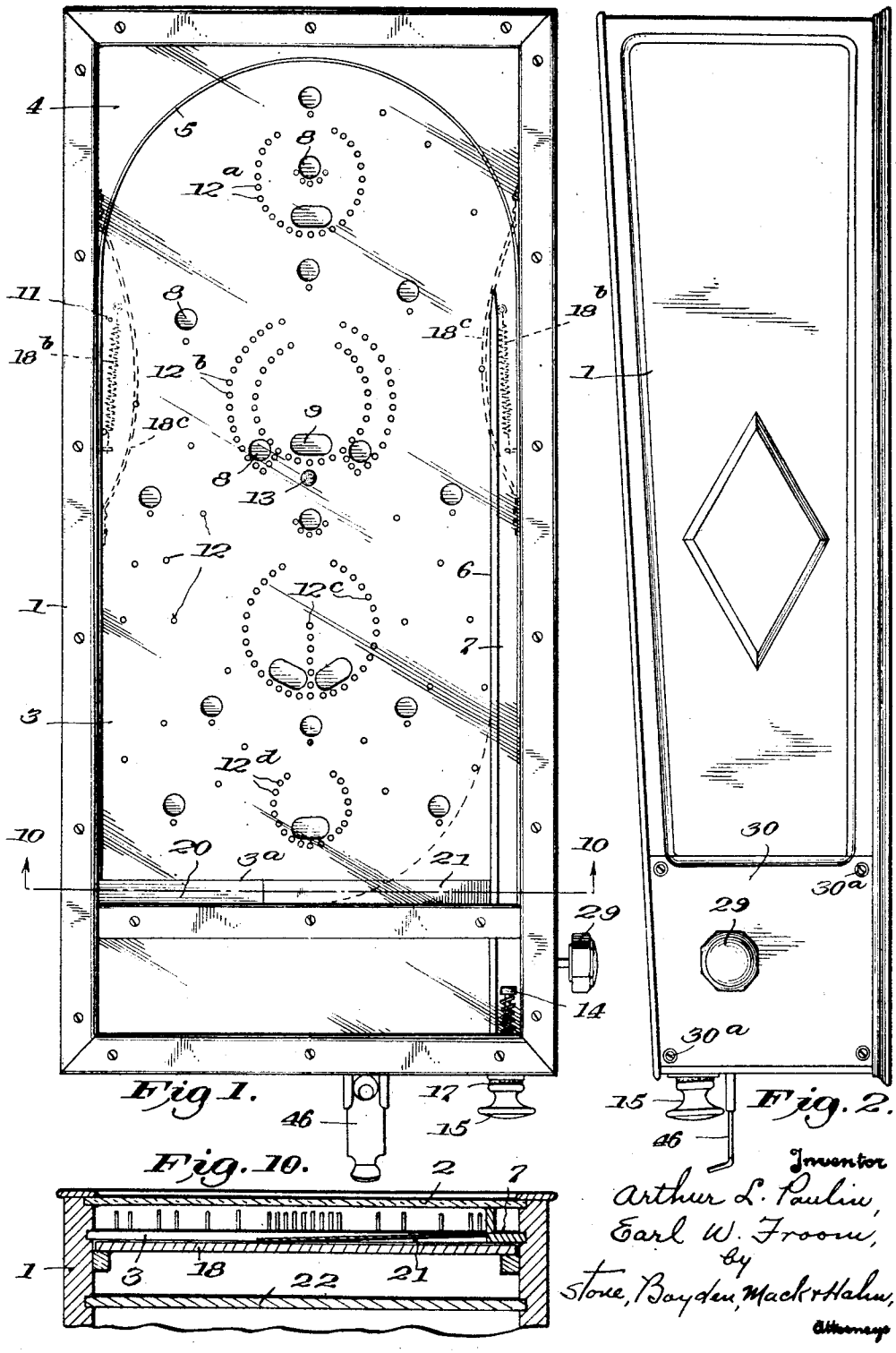

Fig. 1.

Fig. 10.

Fig. 2.

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GAME APPARATUS

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Fig. 8.

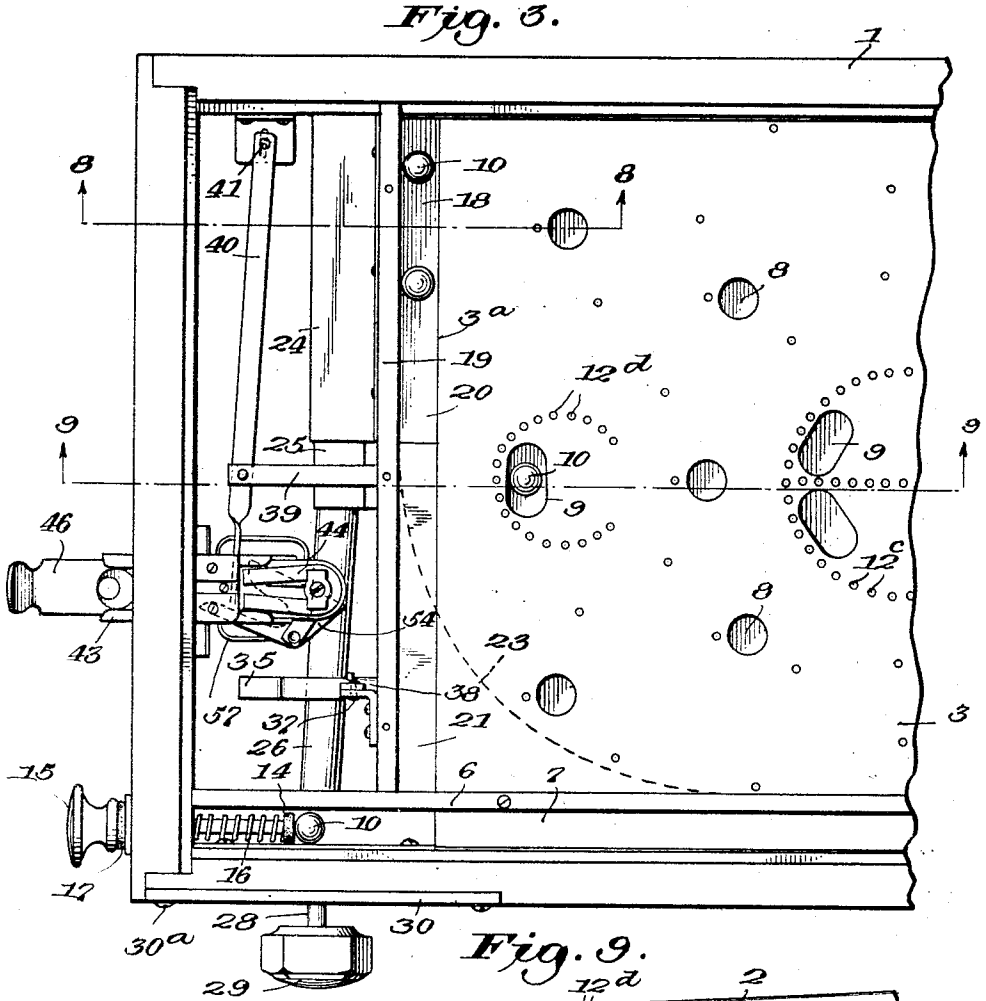
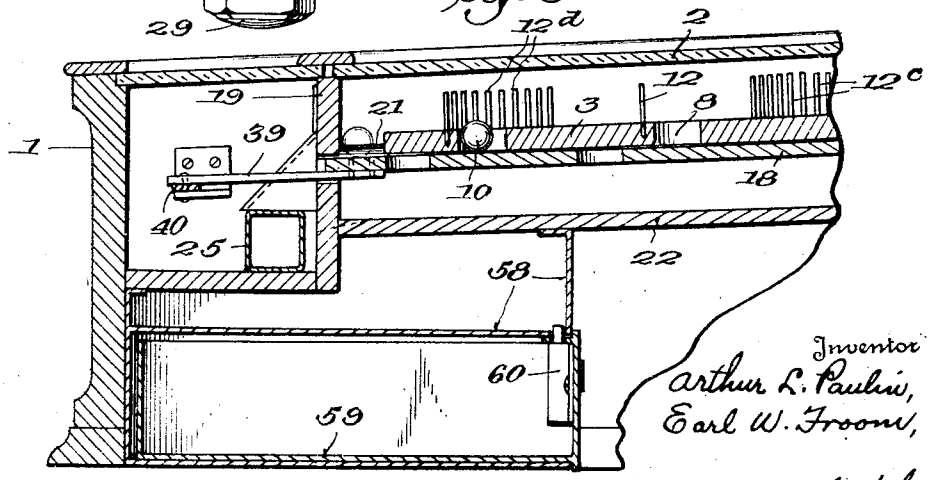


Fig. 9.



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GAME APPARATUS

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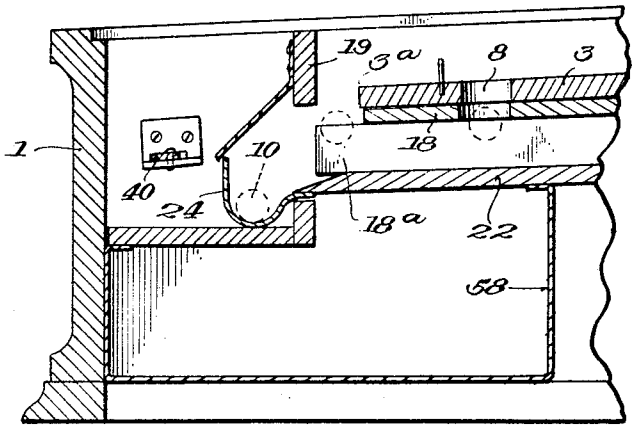
Fig. 8.



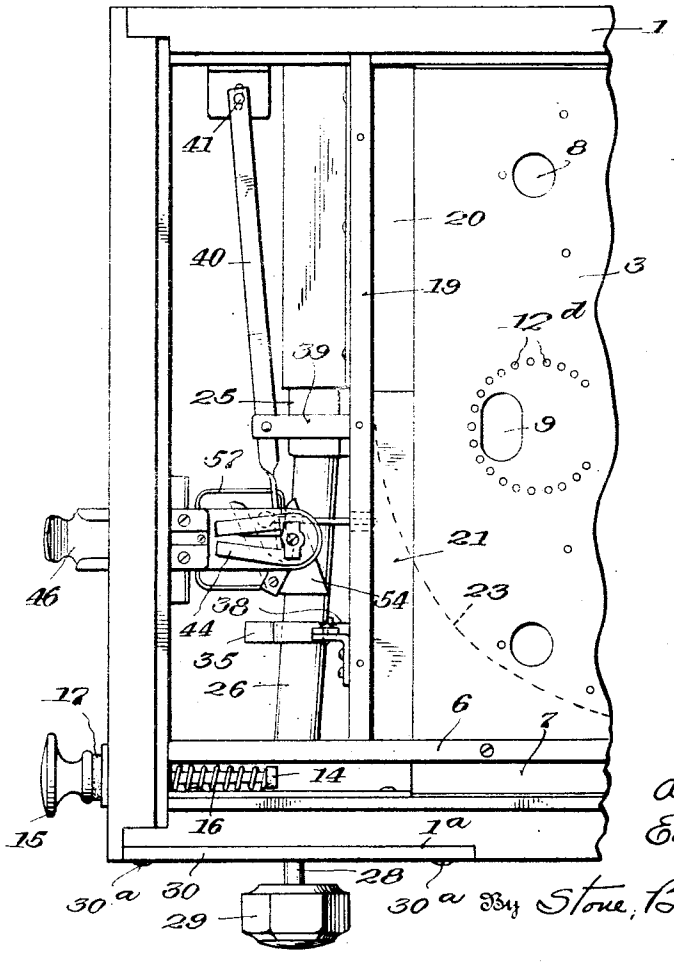


Fig. 4.

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GAME APPARATUS

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Fig. 5.

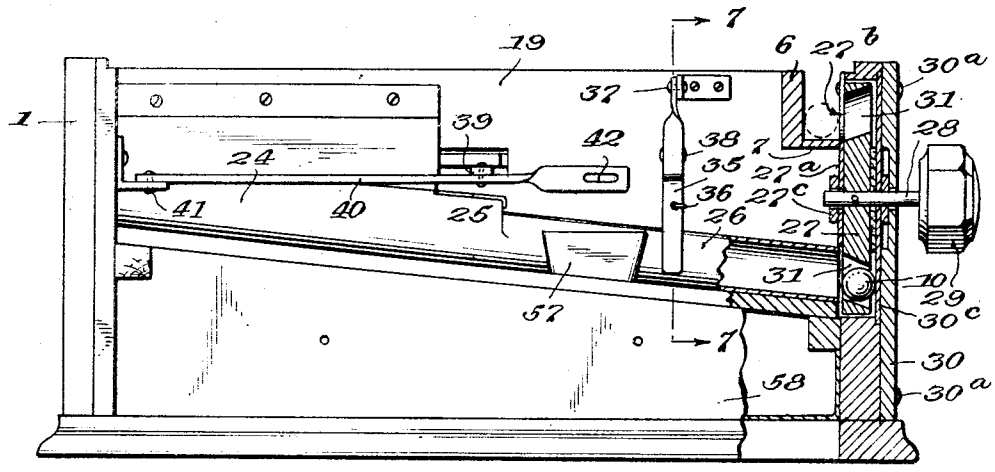

Fig. 6.

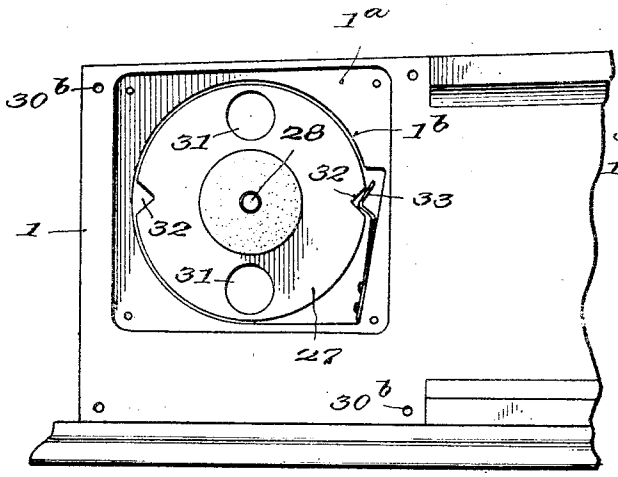

Fig. 7.

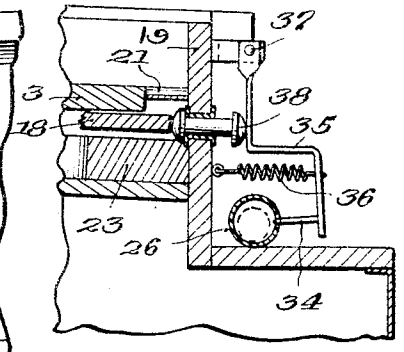

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Fig. 11.

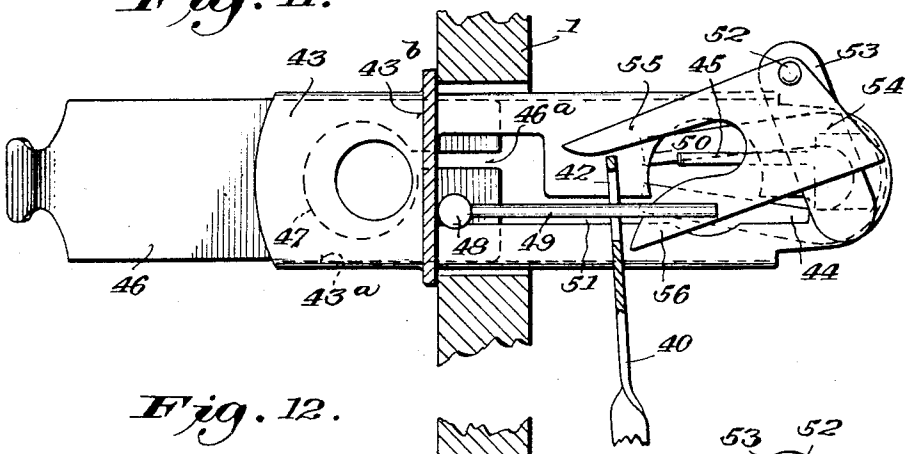


Fig. 12.

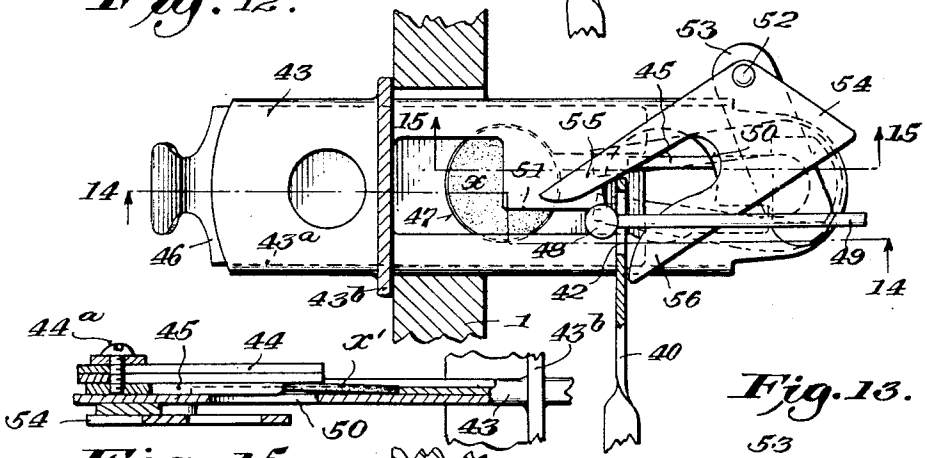


Fig. 13.

Fig. 15.

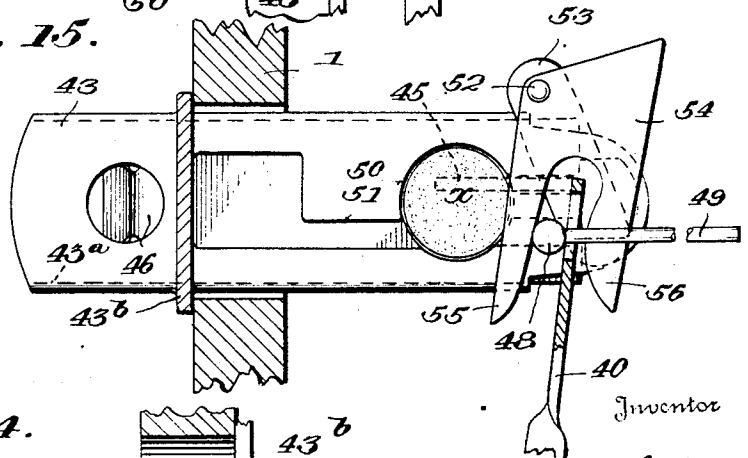
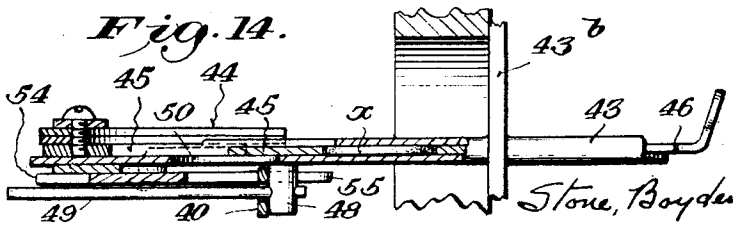


Fig. 14.



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Patented Dec. 5, 1933

1,938,495

UNITED STATES PATENT OFFICE

1,938,495

GAME APPARATUS

Arthur L. Paulin and Earl W. Froom, Youngstown, Ohio, assignors, by direct and mesne assignments, of one-eighth to J. Hanson Boyden, Washington, D. C., and seven-eighths to B. P. Higby, Kansas City, Mo.

Application January 19, 1932. Serial No. 587,550

23 Claims. (Cl. 273—121)

This invention relates to game apparatus, and more particularly to coin-controlled amusement devices of the surface projectile type. The game comprises a cabinet having a glass top under which is disposed a board or deck, having a plurality of holes therein and also carrying a plurality of upstanding pins. A projector is arranged at one side of the board for shooting or projecting balls over the board.

Games of this general type have long been old and well known. An object of the present invention, however, is to devise a game of this character in which improved means for collecting and returning the balls to projecting position are provided. Another object is to devise improved means whereby the balls, after having been projected, are impounded in the apparatus and can only be released for further play by the deposit of a coin. Other objects are to provide improved details of construction, with a view to making the apparatus certain and positive in operation, so that the deposit of a coin will always result in the releasing of a definite number of balls, and so that it will be impossible to release the balls by any means other than a suitable coin.

The present application constitutes a continuation in part of application Serial No. 528,474, filed April 8, 1931.

In order that the invention may be readily understood, reference is had to the accompanying drawings, forming part of this specification, and in which:

Fig. 1 is a plan view of our improved game apparatus, complete;

Fig. 2 is a side elevation thereof;

Fig. 3 is a fragmentary plan, on an enlarged scale, of the operating end of the apparatus, the top panels being removed to show the mechanism;

Fig. 4 is a similar view showing the parts in a different position;

Fig. 5 is a view looking into the end of the cabinet, the end wall being removed, and parts being shown in section;

Fig. 6 is a fragmentary side elevation on an enlarged scale of one end of the cabinet, the outer panel being removed to show the elevating mechanism;

Fig. 7 is a vertical section substantially on the line 7—7 of Fig. 5, looking in the direction of the arrows;

Fig. 8 is a vertical section substantially on the line 8—8 of Fig. 3, looking in the direction of the arrows;

Fig. 9 is a central longitudinal section substantially on the line 9—9 of Fig. 3, looking in the direction of the arrows;

Fig. 10 is a transverse section substantially on the line 10—10 of Fig. 1, looking in the direction of the arrows;

Figs. 11, 12 and 13 are inverted plan views on an enlarged scale, showing the under side of the improved coin mechanism, parts being shown in section, and the elements being illustrated in successively different positions in the three views;

Fig. 14 is a longitudinal section substantially on the line 14—14 of Fig. 12, the mechanism, however, being shown right side up; and

Fig. 15 is a fragmentary similar section substantially on the line 15—15 of Fig. 12, the parts, however, being shown in a slightly further advanced position.

Referring to the drawings in detail, our improved apparatus comprises a cabinet 1 which may be conveniently made of wood, and as shown, is preferably higher at one end than the other, so as to present an inclined upper edge, as shown in Fig. 2. The top of the cabinet is closed by means of a glass or other transparent panel 2, which completely encloses the playing surface.

Beneath this glass panel is rigidly mounted a board or deck 3, which is preferably inclined, as shown. The upper end of this deck is surrounded by a semi-circular upstanding flange or shoulder, preferably formed by a block 4, which fills in the corners of the cabinet, as illustrated in Fig. 1, the curved edge of this block being lined or faced with a strip 5 of smooth wear resisting material such as sheet metal.

Extending parallel with one side of the cabinet is an upstanding rib or flange 6, spaced from the adjacent side wall a short distance so as to form a ball channel 7 open at its upper end.

The board or deck 3 is provided with a plurality of holes or openings extending therethrough, and preferably located as shown in Fig. 1, some of these being round, as illustrated at 8, and others being oblong, as shown at 9. These holes are of such a size as to freely permit balls 10 to pass therethrough. A number of these balls in different positions are shown in the drawings.

Set into and projecting up from the surface of the board or deck 3 are a plurality of pins. One of these, located in the position indicated at 11, in Fig. 1, is highly resilient, and serves as a spring buffer against which the balls impinge and from which they bounce. The other pins indicated at 12, are substantially rigid. Some are scattered over the board, while others are preferably formed into circular groups, such as

illustrated at 12^a, 12^b, 12^c and 12^d, in Figure 1. It will be particularly noted that one of these groups, such as shown at 12^b, comprises parallel rows of pins forming a ball channel between them, and that one of the holes 8 is located at the lowermost point of this channel. Other arrangements of pins may, of course, be employed without departing from the invention.

13 designates a post which rises from the center of the deck 12 and serves to support the glass panel 2.

At the lower end of the ball channel 7 is disposed a shooter or projector. This preferably comprises a plunger 14 working freely through the end wall of the cabinet and having an operating knob 15 on its outer end. The plunger is surrounded by a helical spring 16, which forces it forward, and a cushion 17 of sponge rubber or the like is preferably interposed between the knob 15 and the cabinet to deaden the noise of the impact.

Immediately beneath the board 3 is slidably mounted a panel or gate 18, supported on strips 18^a. This panel has a plurality of holes corresponding with the holes 8 and 9 in the board 3 and adapted to register therewith. When this gate or panel is in the position shown in Figs. 3 and 9, the holes are out of registry with the holes in the board, and the latter are closed, thus constituting ball seats. The gate is normally held in this position by means of springs 18^b attached at one end to the panel and at the other end to the side walls of the cabinet. These springs are preferably enclosed by arcuate guards or shields 18^c.

Across the cabinet adjacent the operating end thereof extends a wall or partition 19, which separates the playing field from the operating mechanism. The board 3 terminates a little short of this partition so that a space 20 is provided between the edge 3^a of the board and the partition, this space being of such size that the balls can pass through it. The right hand portion of this space, however, as viewed in Fig. 1, or the lower portion, as viewed in Figs. 3 and 4, is closed by an inclined strip 21. When the gate or panel 18 is in its normal position, as shown in Fig. 3, it abuts against the partition 19 and thus extends under the opening 20 and closes the same. Therefore, any balls which roll down the board or deck 3, and which do not enter the seats or holes 8 or 9, find their way into the opening 20, in which they are supported by the gate 18, and accumulate there. It will also be noted that the balls which roll down on the right hand side of the board, as viewed in Fig. 1, adjacent the strip or rib 6, encounter the inclined element 21 by which they are directed toward the left hand side of the board and into the opening 20.

Underneath the board 3 and gate 18 is disposed a fixed bottom or floor 22, also inclined as shown. The balls falling through the registering holes in the board and gate drop upon and roll down this inclined floor. In order to deflect these balls also toward the left hand side of the cabinet, as viewed in Fig. 1, we provide, in the space between the floor and gate, and adjacent the right hand corner of the board, an inclined or curved deflector indicated in dotted lines by 23 in Figs. 3 and 4. This may either be a wooden block or a strip of sheet metal.

When the gate 18 is shifted from the position shown in Fig. 3 to the position shown in Fig. 8, so as to cause the holes therein to register with the holes in the board, and thus open the latter, the end portion of the gate is also withdrawn from beneath the opening 20, and the balls previously retained in this opening are released and discharged downwardly, it being understood, of course, that the balls are released simultaneously from the opening 20, and from the several openings 8 and 9 in the board into which the balls may have entered. When the balls are released, they are discharged into a ball receiving trough 24, positioned below the floor 22 and adjacent the opening 20, (see Fig. 8). Tube portions 25 and 26 form a continuation of the trough 24, and constitute with it an inclined transversely extending runway of a length substantially equal to the full width of the board. This is well shown in Figs. 3 and 5.

Disposed adjacent the lower end of this transversely extending runway is mechanism for elevating the balls therefrom and returning them one at a time to projecting position. Many forms of elevating mechanism may be employed, without departing from the spirit of the invention, but, as shown, our improved elevating means comprises a wheel or disc 27, secured to a shaft 28, to the other end of which is secured an operating knob 29. This wheel or disc is confined between an inner wall or panel 27^a, and an outer wall or panel 30, the inner wall having openings at its top and bottom, as shown at 27^b, to permit the balls to pass to the wheel and to be discharged therefrom. The panel 30 is removable and is held in position on the outer wall of the cabinet, as by means of screws 30^a, which are received in holes 30^b. Inside of this wooden panel is preferably disposed an inner panel 30^c, and a bearing block 27^c is secured to the inner face of the panel 27^a. The inner panel 30^c fits within a countersunk seat 1^a, as shown in Fig. 6. Thus, when the screws 30^a are removed, the panel 30 can be taken off and the wheel 27, with its shaft and operating knob, can be withdrawn from the panel 27^a and bearing 27^c, and from a circular opening 1^b formed in the wall of the cabinet to receive it. The elevating wheel 27 is provided with a pair of oppositely disposed axially inclined openings or pockets 31, each adapted to receive a ball. By reason of the inclination of these pockets to the axis, it will be seen, from an inspection of Fig. 5, that when one of the pockets is in registry with the lower end of the tube 26, a ball can readily pass from such tube into said pocket and that the ball is retained in the pocket by reason of the inclination of the latter. As the wheel is rotated by the knob 29, and the pocket reaches the uppermost position, which is 180° from the tube 26, the inclination of the pocket is such that the ball rolls out of the same laterally and into the ball channel 7 immediately in front of the plunger 14, or, in other words, into projecting position.

In order to enable the operator to determine when the pockets 31 come into registry with the tube 26, and when they reach the uppermost or discharge position, a pair of diametrically opposed notches 32 is preferably formed in the edge of the wheel, and a spring detent 33 is arranged to snap into and out of these notches, as the wheel rotates, and thus, accurately position the pockets.

In order to prevent improper or unauthorized use of the apparatus, as will hereinafter more fully appear, it is necessary to prevent, at times, the passage of balls down the runway 26 to the elevating mechanism. We therefore provide a cut-off device for controlling the passage of balls

through the tube or runway 26. As shown in Fig. 7, this comprises a pin 34 carried by a lever 35, pivoted at 37, to a fixed bracket and adapted to project into the tube 26 through a hole in the side thereof. The normal position of the parts is as shown in Fig. 7, that is to say, a position in which the pin 34 is withdrawn, leaving the tube or runway clear and permitting free passage of the balls along the same. The pin 34 is held in such position by means of a plunger 38, slidably mounted in the partition wall 9, and engaged at its inner end by the edge of the gate or panel 18, which, in turn, it will be remembered, is held in the position shown in Figure 7 by means of the springs 18^b (see Fig. 1). When, however, the gate 18 is shifted back to the position shown in Figs. 4 and 8, it is moved away from the plunger 38, leaving this plunger free, and a spring 36, attached to the lever 35, then serves to swing the lever on its pivot and project the pin 34 into the tube 26, thus blocking the passage of balls therethrough. When the gate 18 returns to normal position, it operates through the plunger 38 to withdraw the pin 34, it being understood, of course, that the springs 18^b are stronger than the spring 36.

While we have shown this specific mechanism for operating the detent or cut-off 34, it will, of course, be understood that the invention, in its broader aspects, is not limited to this particular mechanism, but that many different ways will suggest themselves to those skilled in the art by means of which the cut-off or detent may be moved into operative position when the gate is shifted to ball releasing position.

Referring now to Figs. 3, 4 and 9, it will be seen that we secure a short bar 39 to the gate 18 at the lower edge thereof to constitute a connection by means of which the gate may be operated. The outer end of this bar is pivotally connected to a lever 40, the remote end of which is itself pivoted at 41 to a fixed bracket. The free end of the lever adjacent the bar 39 is provided with an elogated slot 42 (see Fig. 5).

Our improved game apparatus, above described, is operated by suitable coin-controlled mechanism. A well known form of coin mechanism is illustrated in the drawings and comprises a fixed guide member 43, extending through an opening in the end wall of the cabinet and supported thereon by means of an escutcheon plate 43^b (see Figs. 11 to 14). The side edges of the plate 43 are folded over on themselves, as shown at 43^a, to provide guide ways in which a manually movable slide 46 is freely mounted. This slide has the usual coin pocket 47 formed therein. The slide is normally locked by a suitable latch, (not shown), so that it cannot be operated so long as the coin pocket is empty. When, however, a coin of the requisite size and thickness is placed in the coin pocket, this coin serves to release the latch and permit the slide to be pushed in, all as is well known in the art.

Secured to the guide plate 43, on the inside of the cabinet, is a horse shoe magnet 44, and beneath this magnet is fixed a stop member 45. This stop member is disposed immediately over a coin-discharge opening 50, formed in the plate 43, as clearly shown in Figs. 11, 14 and 15, such opening being adapted to register with the coin pocket 47 when the slide 46 has completed its stroke. The slide 46 has a slot 46^a to fit over the stop 45. A proper coin, as indicated at x in Fig. 14, will dip under the stop 45, as it reaches the opening 50, and fall through such opening. Should, however, a magnetic slug be used instead of a coin, this slug will be held up by the magnet 44, so that its edge will engage against the end of the stop 45, as shown at x' in Fig. 15, and further movement of the slide 46 will be thus prevented.

We adapt the above well-known form of coin mechanism to our special purposes, in the following manner. We secure to the inner end of the slide 46 a downwardly projecting stud or post 48, and we set into this post a rearwardly extending rod or finger 49, disposed parallel with the plate 43, but spaced slightly therefrom, as shown in Fig. 14. These parts are assembled with the previously described game apparatus in such a way that the rod or finger 49 extends through the slot 42 in the end of the lever 40, and when the slide 46 is pushed in, the post 48 engages the side of the lever 40 and swings the same on its pivot, thus, through the medium of the bar 39, shifting the gate 18 to ball releasing position. A slot 51 is, of course, provided in the plate 43, to permit the passage of the post 48. Fig. 3 shows the mechanism in its normal position, while Fig. 4 shows the parts in the position which they occupy after the slide 46 has been pushed in. Figs. 11, 12, and 13 show successive positions of the coin mechanism itself, the last view illustrating the parts at substantially the end of the stroke of the slide 46, in which position the coin x is about to be discharged through the opening 50.

It will be noted that, with the mechanism so far described, the coin slide 46 is capable of considerable movement without shifting the gate 18, and that the gate 18 is free to move entirely independent of the coin slide. In other words, there is no positive coupling between these two elements. This being the case, it has been found in practice that, by the use of a magnetic slug, it is possible to improperly operate, jam, or damage the apparatus. It will be seen that the stop 45 does not engage the slug x' until the slide 46 has traveled beyond the position shown in Fig. 12, that is to say, until after the post 48 has engaged the lever 40 and thus started to move the gate 18. It has been found that if the coin slide, carrying such a slug, be pushed in with excessive force and speed, the gate 18 will thereby be given such a momentum that, when the slide is suddenly arrested by the engagement of the slug with the stop 45, as shown in Fig. 15, the gate, by reason of its momentum, will over run or continue to move, and thus movement may be sufficient to release the balls, or at least to jam them in the openings.

In order to prevent releasing or jamming of the balls by the use of a magnetic slug, as above described, we provide means for positively coupling the gate and coin slide together during the last part of the stroke of the latter, so as to hold the gate against further movement, when the coin slide stops. This improved coupling means comprises a member 54, pivoted at 52 to a bracket 53, and having a pair of arms 55 and 56 between which the end of the lever 40 is received and embraced when the coin mechanism is operated, as clearly shown in Figs. 11, 12 and 13. That is to say, from about the position shown in Fig. 12, to the end of the stroke of the coin slide, as shown in Fig. 13, both the post 48 and lever 40 lie within the space between the arms 55 and 56 of the member 54, and are thus positively coupled or bound together, so that it is impossible for the gate to over run the coin slide.

The coin slide is, of course, returned to the normal position shown in Fig. 11 by the pressure of the lever 40 against the post 48, this lever being actuated by the springs 18b secured to the gate.

While we have shown coin mechanism of the sliding plate type, it will, of course, be understood that the invention, in its broader aspects, is not limited to this specific mechanism, but that other types of coin mechanism may be employed. Whatever the exact construction, it will be understood that the invention comprises a movable gate and a normally locked manually operated coin-controlled member operatively connected with such gate, whereby, upon the deposit of a coin, the gate may be shifted to ball releasing position.

Referring again to the cut-off device for the passage of balls down the inclined runway, so as to prevent them from being returned to the projecting means, it will now be clear that the purpose of this arrangement is to limit the number of balls made available to the player upon the deposit of a coin. If it were not for some cut-off device of this character, it would be possible, by holding the coin slide 46 in its innermost position, to maintain the gate in ball releasing position, so that the balls could be continuously projected over the board and would continuously fall into the inclined runway and be returned to projecting position. By reason of the cut-off device, however, it will be seen that after the coin slide has been pushed in, only that number of balls contained in the runway 26 between the cut-off device 34 and the elevating wheel can be brought up to projecting position, the remaining balls being held in the runway above or at the left of the cut-off device. In order to release these balls which are thus held in the runway, it is necessary to again return the coin slide to normal position, so as to withdraw the detent or cut-off. It is thus impossible for a player to use more than the predetermined number of balls, for each coin deposited.

While we have shown and described the cut-off device as being operated through the medium of the gate 18, it will now be apparent that it is, in fact, operated by the coin slide 46, which in turn operates the gate. Control of the cut-off device by means of the coin mechanism is the essential thing, and it is obvious that, although we have shown the cut-off device as operated by the coin mechanism through the gate 18, the coin mechanism could easily be designed to operate the cut-off device directly. In its broader aspects, therefore, the invention contemplates means for temporarily retaining the balls on the board, and a coin-controlled manually operated member for moving the retaining means to ball releasing position and at the same time interposing a cut-off device in the runway to prevent the free passage of the balls back toward projecting position.

When the coin x is discharged through the opening 50, in the plate 43 of the coin mechanism, it falls into a funnel or hopper 57, and thence into a coin box 58, in which is fitted a removable drawer 59, equipped with a lock 60 (see Fig. 9).

In this connection, it will be noted that the cabinet 1 has no bottom, strictly speaking, the space between the walls being entirely open below the floor 22. The coin box 58 is fitted within this open space and is thus wholly concealed while at the same time readily accessible without disturbing any of the mechanism.

What we claim is:

1. Game apparatus comprising an inclined board down which balls may roll by gravity, means for projecting a ball toward the upper end of said board, a main inclined runway extending transversely of the board adjacent the lower edge thereof, means at the lower end of said runway for elevating the ball into projecting position, and a reversely inclined auxiliary runway at a higher level than said main runway and serving to direct the ball into the latter at a point spaced a substantial distance from said elevating means.

2. Game apparatus comprising an inclined board down which balls may roll by gravity, means for projecting a ball toward the upper end of said board, an inclined runway extending transversely of the board below and adjacent the lower edge thereof, means communicating with the lower end of said runway and located at one side of the board for elevating the ball into projecting position, and means for directing the ball away from the side of the board where said elevating means is located and delivering it into said runway at a point substantially spaced from said elevating means.

3. Game apparatus comprising an inclined board having holes therethrough, means for projecting balls one at a time over said board toward the upper end thereof, an inclined floor beneath said board down which balls passing through said holes roll by gravity, an inclined runway extending transversely of the board below and adjacent the lower edge of said floor, means located at one side of the board adjacent the lower end of said runway, for elevating the balls into projecting position, and means for deflecting away from that side of the board adjacent said elevating means the balls rolling down said floor on that side and directing them into the higher portions of said runway.

4. Game apparatus comprising a board having holes therethrough, means for projecting balls one at a time over said board, whereby such balls may enter said holdes, gate means movably mounted beneath said board and serving normally to support the balls within said holes, means for moving said gate means to release the held balls and permit them to fall through said holes, an inclined runway extending transversely of said board below the same and adapted to receive the balls passing through said holes, means adjacent the lower end of said runway for elevating the balls one at a time into projecting position, and a cut-off device operatively connected with said gate means and serving, when said gate means is in ball releasing position, to prevent the passage of balls down said runway to said elevating means.

5. Game apparatus comprising a board having holes therethrough, means for projecting balls one at a time over said board, whereby such balls may enter said holes, gate means movably mounted beneath said board and serving normally to support the balls within said holes, means for moving said gate means to release the held balls and permit them to fall through said holes, an inclined runway extending transversely of said board below the same and adapted to receive the balls passing through said holes and direct them toward said projecting means, and a cut-off device operatively connected with said gate means and serving, when said gate means is in

ball releasing position, to block the passage of balls down said runway and thus prevent their return to said projecting means.

6. Game apparatus comprising a board having holes therethrough, means for projecting balls one at a time over said board, whereby such balls may enter said holes, gate means movably mounted beneath said board and serving normally to support the balls within said holes, a normally locked coin-controlled manually operated member for moving said gate means to release the held balls and permit them to fall through said holes, an inclined runway extending transversely of said board below the same and adapted to receive the balls passing through said holes, means adjacent the lower end of said runway for elevating the balls one at a time into projecting position, and a cut-off device associated with said gate means and coin-controlled member and serving, when the latter is shifted to move said gate means into ball releasing position, to prevent the passage of balls down said runway to said elevating means.

7. Game apparatus comprising an inclined board having holes therethrough, means for projecting balls one at a time over said board whereby some of such balls may enter said holes, means for temporarily retaining at the lower edge of the board such balls as do not pass into said holes, an inclined runway extending transversely of said board below and adjacent the lower edge thereof, a slidably mounted member operatively associated with said ball retaining means, means whereby said member, when shifted, serves to operate said ball retaining means to release the retained balls and discharge them into said runway, means adjacent the lower end of said runway for elevating the balls into projecting position, and a cut-off device operatively connected with said slidable member and serving, when said member is shifted to ball releasing position, to prevent the passage of balls down said runway to said elevating means.

8. Game apparatus comprising an inclined board having holes therethrough, means for projecting balls one at a time over said board whereby some of such balls may enter said holes, means for temporarily retaining at the lower edge of the board such balls as do not pass into said holes, an inclined runway extending transversely of said board below and adjacent the lower edge thereof, a manually operated movably mounted coin-controlled member operatively associated with said ball retaining means, means whereby said member, when shifted, serves to operate said ball retaining means to release the retained balls and discharge them into said runway, means adjacent the lower end of said runway for elevating the balls into projecting position, and a cut-off device operatively connected with said coin-controlled member and serving, when said member is shifted to ball releasing position, to prevent the passage of balls down said runway to said elevating means.

9. Game apparatus comprising a board having holes therethrough, means for projecting balls one at a time over said board, whereby such balls may enter said holes, gate means movably mounted beneath said board and serving normally to support the balls within said holes, a coin-controlled, manually actuated, movable member for operating said gate means to release the held balls and permit them to fall through said holes, an inclined runway extending transversely of said board below the same and adapted to receive the balls passing through said holes and direct them toward said projecting means and a cut-off device operatively connected with said coin-controlled member and serving, when said gate means is in ball releasing position, to block the passage of said balls down said runway and thus prevent their return to said projecting means.

10. Game apparatus comprising a board having holes therethrough, means for projecting balls over said board, gate means movably mounted beneath said board, normally closing said holes, means for moving said gate means to permit the balls to fall through said holes, an inclined runway extending transversely of said board and adapted to receive the balls passing through said holes, means adjacent the lower end of said runway for elevating the balls one at a time into projecting position and a cut-off device associated with said gate means and serving when said gate means is in hole-opening position, to prevent the passage of balls down said runway to said elevating means.

11. Game apparatus comprising a board having holes therethrough, means for projecting balls over said board, gate means movably mounted beneath said board, normally closing said holes, means for moving said gate means to permit the balls to fall through said holes, an inclined runway extending transversely of said board and adapted to receive the balls passing through said holes, and direct them toward said projecting means, and a cut-off device associated with said gate means, and serving, when said gate means is in hole opening position to block the passage of balls down said runway and thus prevent their return to said projecting means.

12. Game apparatus comprising an inclined board having holes therethrough, means for projecting balls over said board, whereby some of the balls enter said holes and others roll to the lower edge of the board, means below said board for collecting said balls and means for returning the collected balls to projecting position, said means comprising an elevating wheel mounted for rotation on a horizontal axis and having in one face thereof radially inward of the periphery a pocket adapted to receive a ball, said pocket being axially inclined, whereby when said pocket is in its lower position, the balls will roll into the same by gravity, and when in its upper position the contained ball will roll out of said pocket and be discharged laterally.

13. Game apparatus comprising a cabinet, an inclined playing board within said cabinet, means above the board for projecting balls over the surface of the same, whereby some of said balls may roll to the lower edge of the board, means for collecting said balls below the board, and means for returning the collected balls, one at a time, to projecting position, said means comprising elevating mechanism operating within a recess in one of the side walls of the cabinet, said mechanism having means whereby the balls are discharged laterally from the upper portion thereof.

14. Game apparatus comprising a cabinet, an inclined playing board within said cabinet, means above the board for projecting balls over the surface of the same, whereby some of said balls may roll to the lower edge of the board, means for collecting said balls below the board, and means for returning the collected balls, one at a time, to projecting position, said means comprising an elevating device housed within a recess in one of the side walls of the cabinet, said device having means whereby the balls are discharged laterally therefrom, and a removable

panel secured to the outside of the said wall, in which panel said elevating device is mounted.

15. Game apparatus comprising a cabinet, an inclined playing board within said cabinet, means above the board for projecting balls over the surface of the same, whereby some of said balls may roll to the lower edge of the board, means for collecting said balls below the board, and means for returning the collected balls, one at a time, to projecting position, said means comprising an elevating wheel housed within a recess in one of the side walls of the cabinet and lying substantially in the plane thereof, said wheel having a plurality of ball receiving pockets in the inner face thereof, said pockets being arranged to communicate, when in their lower position, with said ball collecting means, to receive balls therefrom, and, when in their upper position, to discharge the balls laterally at a point adjacent said projecting means.

16. Game apparatus comprising a board having holes therethrough, means for projecting balls one at a time over said board, whereby such balls enter said holes, gate means movably mounted beneath said board and serving normally to support the balls within said holes, a manually actuated, movable member for operating said gate means to release the held balls, and permit them to fall through said holes, said gate means being normally movable independent of said manually actuated member, and means for positively coupling together said manually actuated member and said gate means during the latter part of the stroke of the former.

17. Game apparatus comprising an inclined board having holes therethrough, means for projecting balls one at a time over said board whereby some of such balls enter said holes, a slidably mounted gate for temporarily retaining at the lower edge of the board such balls as do not pass into said holes, a manually operated, slide for operating said gate, said slide and gate being normally capable of independent movement, and means brought into operation during the latter part only of the stroke of said slide for positively coupling said slide and gate together.

18. Game apparatus comprising an inclined board having holes therethrough, means for projecting balls one at a time over said board, an inclined floor beneath said board down which balls passing through said holes roll by gravity, an inclined runway extending transversely of the board below and adjacent the lower edge of said floor, means located at one side of the board adjacent the lower end of said runway, for elevating the balls into projecting position, and means for deflecting away from the side of the apparatus adjacent said elevating means the balls rolling down said floor on that side and directing them into the higher portions of said runway.

19. Game apparatus comprising a board having holes therethrough, means for projecting balls over said board, gate means normally closing said holes, means for moving said gate means to permit the balls to fall through said holes, an inclined runway extending transversely of said board and adapted to receive the balls passing through said holes, and direct them toward said projecting means, and a cut-off device associated with said gate means, and serving, when said gate means is in hole opening position to block the passage of balls down said runway and thus prevent their return to said projecting means.

20. Game apparatus comprising a board having holes therethrough, means for projecting balls over said board, gate means normally closing said holes, a normally locked, coin-controlled, manually operated member for moving said gate means to permit the balls to fall through said holes, an inclined runway extending transversely of said board and adapted to receive the balls passing through said holes, means adjacent the lower end of said runway for elevating the balls, one at a time, into projecting position, and a cut-off device associated with said gate means and coin-controlled member and serving, when the latter is shifted to move said gate means into hole opening position, to prevent the passage of balls down said runway to said elevating means.

21. Game apparatus comprising an inclined board having ball seats therein, means for projecting balls over said board toward the upper end thereof, means for retaining near the lower end of the board the balls which roll down the same and do not enter said seats, a normally locked, coin-controlled, manually operated member for shifting said retaining means to release the balls held thereby, an inclined runway extending transversely of said board and into which said balls fall when released, means adjacent the lower end of said runway for elevating the balls, one at a time, into projecting position, and a cut-off device associated with said retaining means and coin-controlled member, and serving, when the latter is operated to shift said retaining means to ball releasing position, to prevent the passage of balls down said runway to said elevating means.

22. Game apparatus comprising an inclined board having ball seats therein, means for projecting balls over said board toward the upper end thereof, means for retaining near the lower end of the board the balls which roll down the same and do not enter said seats, a normally locked, coin-controlled, manually operated member for shifting said retaining means to release the balls held thereby, an inclined runway extending transversely of said board and adapted to receive the released balls and direct them toward said projecting means, and a cut-off device associated with said retaining means and coin-controlled member, and serving, when the latter is operated to shift said retaining means to ball releasing position, to block the passage of balls down said runway and thus prevent their return to said projecting means.

23. Game apparatus comprising an inclined board down which balls may roll by gravity, means for projecting balls toward the upper end of said board, means for retaining on the board the balls thus projected, a manually operated member for shifting said retaining means to release the balls held thereby, an inclined runway extending transversely of the board and into which said balls are received when released, means adjacent the lower end of said runway for elevating the balls, one at a time to projecting position, a cut-off device associated with said retaining means and manually operated member and serving, when the latter is actuated to shift said retaining means to ball releasing position, to obstruct the passage of balls down said runway to said elevating means, and means for directing the balls into the portion of said runway above the point where said cut-off device is located.

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