Aug. 27, 1940. H. C. HANLEY ET AL 2,212,736

AMUSEMENT DEVICE

Filed June 5, 1939 2 Sheets-Sheet 1

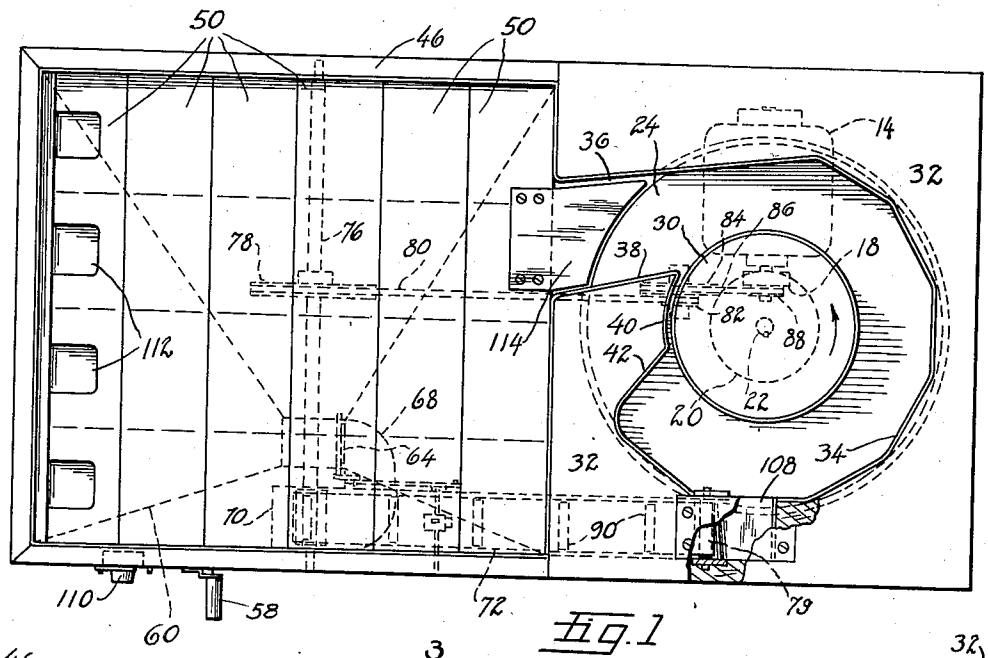


Fig. 1

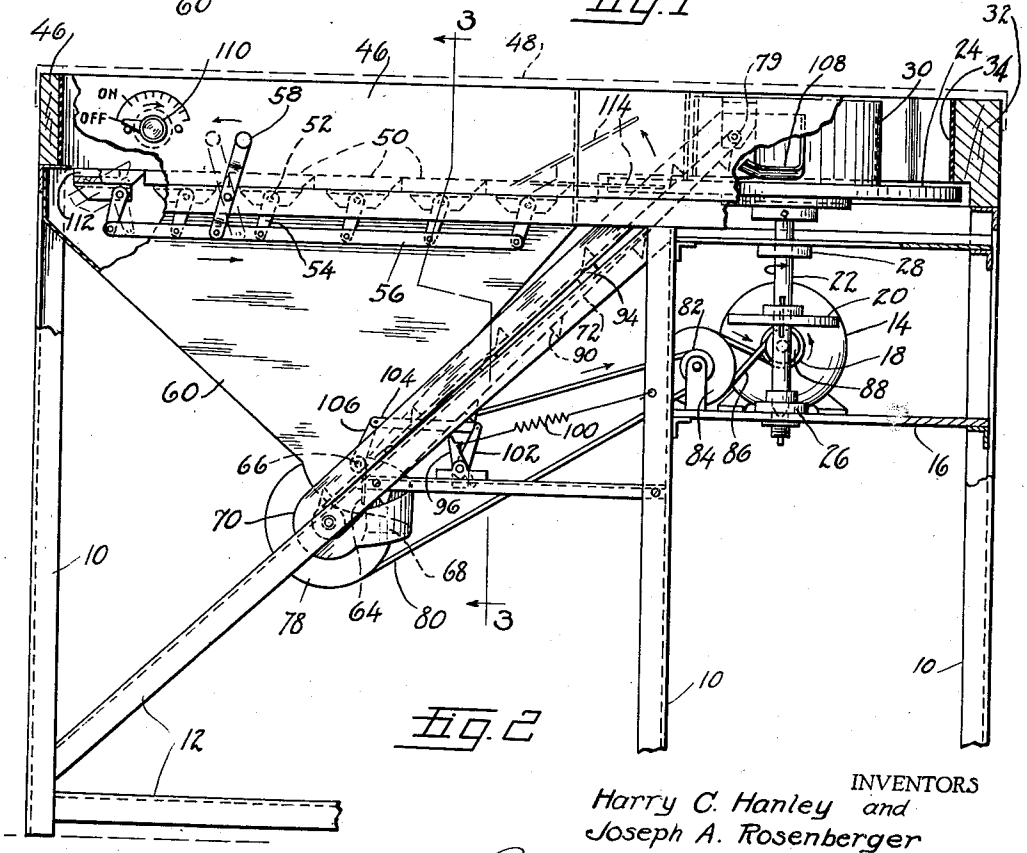


Fig. 2

INVENTORS
Harry C. Hanley and
Joseph A. Rosenberger

BY Parker & Burton ATTORNEYS

Aug. 27, 1940. H. C. HANLEY ET AL 2,212,736

AMUSEMENT DEVICE

Filed June 5, 1939 2 Sheets-Sheet 2

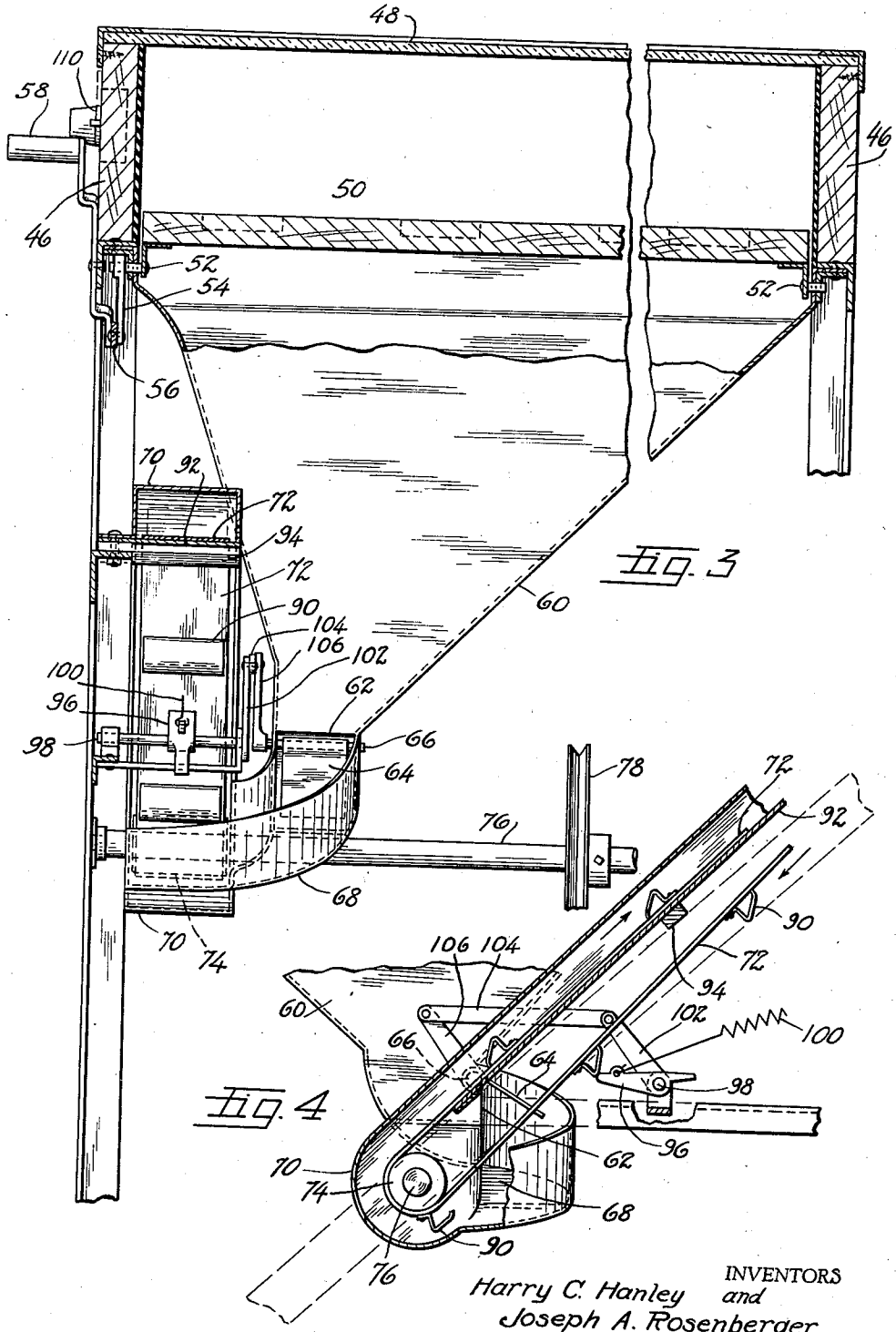


Fig. 3

Fig. 4

Harry C. Hanley and Joseph A. Rosenberger INVENTORS

BY Parker & Burton ATTORNEYS

Patented Aug. 27, 1940 2,212,736

UNITED STATES PATENT OFFICE

2,212,736

AMUSEMENT DEVICE

Harry C. Hanley, Grosse Pointe Park, and Joseph A. Rosenberger, Detroit, Mich., assignors to New Era Sales Machine Company, Inc., Detroit, Mich., a corporation of Michigan

Application June 5, 1939, Serial No. 277,532

17 Claims. (Cl. 273—145)

This invention relates to an improved amusement device. This application is a continuation of our application Serial No. 176,952, filed November 27, 1937.

An object is to provide improved amusement or game mechanism adapted for the playing of a plurality of different games and which is adaptable for use by one or any number of players.

Another object is to provide mechanism of this character which is simple, inexpensive, and interesting. A meritorious feature of the invention is that the operating parts of the mechanism are power driven but are subject to control by a player using the same.

A further object is to provide mechanism of the character set forth which will utilize game tokens which differ in kind. Dice cubes, balls, marbles, or game tokens of a different character or shape may be employed with the mechanism described. The mechanism will function to throw or distribute tokens, whichever kind may be used.

More particularly, an improved feature comprises a rotatable disc and associated walls adapted upon rotation of the disc to throw off or distribute game tokens onto a table or other receiver where the result of the throw or distribution is read. The rotatable disc and associated walls are of such a character that the tokens are thoroughly tumbled and mixed before they are thrown or distributed onto the receiver or table. The rotation of the disc is subject to control of the player whereby the character of the tumbling and throw of the tokens may be varied at will.

The rotatable disc is power driven and power driven conveyor mechanism is provided to return the playing tokens from the table or other receiver to the rotatable disc. Delivery of the tokens from the table to the conveyor is subject to the control of the player and such delivery is further synchronized with the movement of the conveyor whereby accurate functioning is at all times insured.

Other objects, advantages and meritorious features of our amusement mechanism will more fully appear from the following description, appended claims, and accompanying drawings, wherein:

Fig. 1 is a top plan view of mechanism embodying our invention.

Fig. 2 is a side elevation partly broken away of the structure shown in Fig. 1.

Fig. 3 is a cross sectional view taken on the line 3—3 of Fig. 2, and

Fig. 4 is an enlarged fragmentary elevation partly in section of the token receiving end of the conveyor and the token discharge leading thereinto.

The invention is illustrated as embodied in mechanism which comprises a stand or framework having legs 10 which are braced apart by suitable cross members. Certain of these cross elements are indicated as 12. Others not shown are provided. An electric motor 14 is supported upon a platform 16 so that its drive shaft extends horizontally as illustrated in Figs. 1 and 2. A friction driving element 18 is carried by the motor shaft. This driving element is supported in a vertical plane and frictionally engages for driving a horizontally disposed frictional element 20 which is keyed to a vertical shaft 22 as shown in Fig. 2. The upper end of this shaft 22 has a rotatable disc 24 fixed thereon for rotation therewith. The lower end of the shaft is mounted within a bearing 26. Other suitable bearings for the shaft, such as 28, are provided. The disc 24 is the disc upon which the game tokens are deposited. Upon rotation of this disc the tokens are thrown off by the disc or distributed by it as hereinafter described.

The disc 24 has associated with it inner and outer walls. The inner wall is represented by a drum 30 which is here shown as carried by the disc to rotate therewith. The outer wall is represented by an enclosure or the like 32 which forms a part of the stationary stand. This outer wall is of an irregular contour as shown in Fig. 1 but generally it is arranged about the circumference of the disc 24. The inner and outer walls may be provided with cushioning covering material such as sheet rubber or the like indicated in Fig. 2 as 34. The floor or top of the disc might be likewise so provided.

The outer wall is cut away as at 36 providing an exit for game tokens thrown off by the disc 24 and there is a wall portion 38 which is here shown as a continuation of the outer wall itself that extends from a point adjacent an edge of this exit across the disc 24 to a point adjacent the inner wall 30. This wall 38 follows for a short distance such as 40 the curvature of the wall 30 and then turns outwardly as at 42 to the line of the outer wall proper as shown in Fig. 1. This outer wall is made up of a succession of relatively angularly arranged sides as will appear from Fig. 1. These sides might be said to approximate tangents to the contour of the inner wall. Rotation of the disc is counterclockwise as illustrated.

Adjacent to the exit 36 from the disc is a playing table. This table is surrounded by an upright wall or enclosure 46. The table wall 46 and the wall 32 that surrounds the disc are shown as of the same height and may be covered with a removable glass top 48. As here shown the table or receiver for the tokens thrown from the disc 24 is made up of a plurality of tiltably supported panels 50. Six of these panels are here shown and each panel is journaled at its ends for tiltable movement as shown in dotted outline in Figs. 2 and 3. In Fig. 3 a panel 50 is shown as provided at each end with a pivot support 52. An arm 54 depends from each pivot 52 and these several arms are connected at their lower ends by a link 56, which link is adapted to be actuated by a manually operable handle 58. When the handle is in the position shown in solid line in Fig. 2 the panels lie flat and form a flat table top. When the handle is moved to the position shown in dotted outline in Fig. 2 the several panels are tilted as shown in dotted outline position of the two end panels. In Fig. 1 the panels are in position to receive the tokens thrown from the disc 24. They are then tilted to the position shown in the dotted outline indication of the handle to discharge such tokens from the table for conveyance back to the rotatable disc.

Positioned below the table is a hopper indicated as 60. This hopper is shown in Figs. 1, 2 and 3 and the delivery end thereof is shown in Fig. 4. It is carried by the frame. It receives the tokens discharged from the table upon the tilting of the panels. These tokens slide down over its walls to its delivery outlet 62. This outlet is controlled by a flap valve 64. This valve is pivoted for swinging movement upon pivot rod 66. Its actuation will be hereinafter described but the outlet from the hopper discharges onto an inclined track or plane 68 that circles about so as to discharge into the enclosure or tubular wall 70 of an elevator or conveyor mechanism.

The conveyor mechanism comprises an endless belt 72 mounted at its lower end upon a drive wheel 74 which is carried by a drive shaft 76. The belt extends at its upper end over an idler 79. The shaft 76 is suitably supported upon the frame in bearings provided therefor and carries a drive pulley 78. This drive pulley 78 is driven by a belt 80 from a pulley 82, which pulley 82 is mounted upon the same shaft as pulley 84 which pulley 84 is driven by a belt 86 from the pulley 88 which is mounted upon the motor shaft alongside of the friction disc 18.

The delivery conveyor belt 72 is provided with fins or lift devices 90 secured thereto in spaced apart relationship therealong as shown in Figs. 2 and 4. It travels through the enclosure 70 heretofore mentioned and rides over a supporting wall or sheet 92 shown in Fig. 4. This wall 92 is carried by supports 94.

The tokens which are collected in the hopper on the tilting of the table leaves 50 are held therein by the flap valve 64 until the conveyor lifts or fins 90 arrive in proper position to receive them from the inclined chute 68. The floor of this chute slopes downwardly and inwardly so as to deliver such tokens to the entrance of the enclosure 70 to be picked up by a fin 90 and carried up for delivery onto the rotatable disc. The movement of the flap valve 64 is synchronized with the movement of the conveyor so that the tokens will arrive at the point of discharge into the entrance of the enclosure 70 at the proper time to be pushed ahead by one of the fins 90 and will not arrive at such a time as to clog or jam such fin.

This synchronization of movement of the flap valve 64 with the running of the conveyor belt is accomplished by a trip arm 96 pivoted at 98 upon its support on a part of the frame. This arm is held by a spring 100 to the position shown in Fig. 2 so that the end of the arm will be in position to be engaged by each fin 90 as the fin passes thereover. The arm is tilted by the moving fin against the resistance of the spring 100 as shown in Fig. 4. The arm pivot 98 has mounted thereon an arm 102 connected by a link 104 with another arm 106, which arm 106 is secured to the end of the flap valve pivot 66 as shown in Fig. 3. This mechanism is so arranged that by virtue of the proper spacing of the fins 90 on the belt 72 the valve 64 is opened to discharge tokens held in the hopper by it onto the chute 68 to be picked up by a fin when it passes therethrough.

The conveyor lifts the tokens to its upper end adjacent the table 24 where they are discharged therefrom onto an inclined chute indicated in Figs. 1 and 2 as 108. This inclined chute extends out to a point adjacent the periphery of the disc 24 so that the tokens slide thereover onto the disc 24.

The motor is connected up in a conventional manner with a suitable source of electric current and a control switch 110 is provided which includes a rheostat so that the motor may be turned off or on and, in addition, may be speeded up from a slot on position to one of increasingly rapid rotation. This structure is conventional and is not illustrated in detail. It will be apparent that through the use of it the speed of the rotating disc 24 may be regulated and that as a result of such regulation the rapidity of tumbling and the impetus of throw of the tokens can be varied at will.

The receiving table is made up of the tiltable panels or leaves 50 and may be marked off in a series of blocks or squares as indicated by the lines shown in Fig. 1. These squares may be given different values to indicate different scores depending upon which squares the tokens come to rest. Certain of the squares or one of the panels may be provided with pockets or recesses 112. Different values may be assigned to these recesses. The panel 50 which is immediately adjacent the rotating disc has a plate portion 114 which projects into the exit from the rotating disc and has an edge that conforms with the curvature of the disc as shown in Fig. 1 and this plate portion tilts with the panel as shown in Fig. 2. This structure insures that any tokens thrown from the disc will be discharged into the hopper.

In the operation of this mechanism any number of players may play together or one player may operate it alone. Conventional dice may be used and thrown out upon the table and read in the ordinary manner without any attention being paid to the marked off blocks or to the recess 112. On the other hand, balls might be used and thrown across the table and given a reading depending upon which pocket 112 they fell into. These pockets would have different values. A further method would be to have tokens indicating other things than the markings on conventional dice and these values might be read or they might be aggregated with values assigned to the blocks on the panels. Tokens of widely varying kind and character may be employed.

It is apparent that the mechanism will lend itself to many games of this character and that it may be set going and continued as desired and that control can be regulated if and when desired and that it is capable of many uses.

The endless conveyor belt 72 with its surrounding enclosure 70 and the rotatable token delivering disc 24 with its surrounding side walls provides game token conveying and advancing mechanism which is power driven and adapted to convey and advance the playing tokens from the discharge outlet of the hopper to a level with the table top having the tiltable panels, and to throw said game tokens onto said table top for viewing.

What we claim:

1. An amusement mechanism comprising, in combination, a rotatable disc, a table arranged adjacent thereto to receive game tokens thrown off by the disc in its rotation, and a conveyor having an entrance positioned to receive tokens from said table and having a discharge positioned to deliver tokens conveyed thereby upon said disc.

2. An amusement mechanism comprising, in combination, a rotatable disc, a table arranged adjacent thereto to receive game tokens thrown off by the disc in its rotation, said table made up of a plurality of tiltably supported panels, means operable to tilt said panels, a conveyor having an intake positioned below said table to receive tokens therefrom upon tilting of the table panels, said conveyor extending to a point adjacent to said disc and having an outlet adapted to deliver conveyed tokens.

3. An amusement mechanism comprising, in combination, a rotatable disc, a table arranged adjacent thereto to receive game tokens thrown off by the disc in its rotation, said table made up of a plurality of tiltably supported panels, means operable to tilt said panels, a hopper disposed below said table to receive tokens therefrom on tilting of the table panels, said hopper having a discharge outlet, and means controlling the delivery of tokens through said outlet.

4. An amusement mechanism comprising, in combination, a rotatable disc, a table arranged adjacent thereto to receive game tokens thrown off by the disc in its rotation, said table made up of a plurality of tiltably supported panels, means operable to tilt said panels, a hopper disposed below said table to receive tokens therefrom on tilting of the table panels, said hopper having a discharge outlet, a conveyor having an intake positioned to receive the game tokens passing through said outlet, said conveyor extending to a point adjacent to the rotatable disc and having an outlet adapted to deliver said tokens upon said disc, and means synchronized with the movement of the conveyor controlling the movement of tokens through said outlet.

5. An amusement mechanism comprising, in combination, a horizontally rotatable disc, wall structure associated with the disc extending upwardly thereabove to prevent game tokens carried by the disc from leaving the disc, said wall provided with an opening affording an exit for game tokens thrown off by the disc in its rotation, a table positioned adjacent to said exit to receive game tokens thrown from the disc through said opening, said table consisting of a plurality of tiltably supported panels, means operable to tilt said panels, a hopper positioned below the table to receive tokens therefrom upon the tilting of the table panels, said hopper having a discharge outlet, a conveyor having an intake positioned to receive the tokens passing through said outlet, said conveyor extending to a point adjacent to the rotatable disc and having an outlet adapted to deliver the tokens conveyed to said disc.

6. An amusement mechanism comprising, in combination, a horizontally rotatable disc, inner and outer side walls associated with said disc extending upwardly thereover, the inner wall positioned axially thereof and carried thereby, the outer wall positioned marginally thereabout, said outer wall being stationary and having an opening providing an exit for game tokens thrown off by the disc in its rotation, a wall extending from said outer wall adjacent to said exit across the disc to a point adjacent the inner wall, a table positioned adjacent to said exit to receive game tokens thrown from the disc, said table consisting of a plurality of tiltably supported panels, means operable to tilt said panels, a hopper positioned below the table to receive tokens therefrom upon the tilting of the table panels, said hopper having a discharge outlet, a conveyor having an intake positioned to receive the tokens passing through said outlet, said conveyor extending to a point adjacent to the rotatable disc and having an outlet adapted to deliver the tokens conveyed to said disc, means operable to drive said rotatable disc and conveyor, valve means controlling the movement of tokens through the hopper outlet onto the conveyor, and mechanism synchronizing said valve means with the movement of the conveyor.

7. An amusement mechanism comprising, in combination, a horizontally rotatable disc, inner and outer side walls associated with said disc extending upwardly thereabove, the inner wall positioned axially thereof and rotatable therewith, the outer wall positioned marginally thereabout, said outer wall being stationary and having an opening providing an exit for game tokens thrown off by the disc in its rotation, a wall extending from said outer wall adjacent to said exit across the disc to a point adjacent the inner wall, a table positioned adjacent to said exit to receive game tokens thrown from the disc, said table consisting of a plurality of tiltably supported panels, means operable to tilt said panels, a hopper positioned below the table to receive tokens therefrom upon the tilting of the table panels, said hopper having a discharge outlet and an endless conveyor belt provided with spaced apart elevator fins communicating at one end with the hopper to receive tokens delivered through the hopper outlet and communicating at the opposite end with the disc to deliver said tokens through a chute to the disc, valve means controlling the delivery of tokens through said hopper outlet onto the conveyor belt, mechanism synchronizing the opening of the said valve means with the travel of the conveyor, and power means coupled with the rotatable discs and with the conveyor to drive them.

8. An amusement mechanism comprising, in combination, a horizontally rotatable disc, inner and outer side walls associated with said disc, the inner wall positioned axially thereof and rotatable therewith, the outer wall positioned marginally thereabout, said outer wall being stationary and having an opening providing an exit for game tokens thrown off by the disc in its rotation, a wall extending from said outer wall adjacent to said exit across the disc to a point adjacent the inner wall, a table positioned adjacent to said exit to receive game tokens thrown

from the disc, said table consisting of a plurality of tiltably supported panels, means operable to tilt said panels, a hopper positioned below the table to receive tokens therefrom upon the tilting of the table panels, said hopper having a discharge outlet and an endless conveyor belt provided with spaced apart elevator fins communicating at one end with the hopper to receive tokens delivered through the hopper outlet and communicating at the opposite end with the disc to deliver said tokens through a chute to the disc, valve means controlling the delivery of tokens through said hopper outlet onto the conveyor belt, power means coupled with the rotatable disc and with the conveyor to drive them, valve mechanism controlling the delivery of tokens through the hopper outlet to the conveyor, and means actuated periodically by the movement of the conveyor to actuate said valve means to deliver tokens onto the conveyor.

9. An amusement mechanism comprising, in combination, a horizontally rotatable disc, inner and outer side walls associated with said disc and extending upwardly thereabove, the inner wall positioned axially thereof, the outer wall being stationary and positioned marginally thereabout, said outer wall having an opening providing an exit for game tokens thrown off by the disc in its rotation, a wall extending from said outer wall adjacent to said exit across the disc to a point adjacent the inner wall, a table positioned adjacent to said exit to receive game tokens thrown from the disc, said table consisting of a plurality of tiltably supported panels, means operable to tilt said panels, one of said tiltable panels provided with a portion extending into said exit and terminating in a margin adjacent to said rotatable disc and conforming to the curvature thereof.

10. An amusement mechanism comprising, in combination, a horizontally disposed rotatably mounted token tumbling disc, inner and outer side walls associated with the disc extending upwardly thereabove and spaced apart radially of the disc defining an approximately annular portion of the disc over which game tokens carried by the disc are tumbled during the rotation of the disc, said outer side wall being stationary and including a circumferential succession of relatively angularly arranged side wall areas each disposed approximately parallel to a tangent to the margin of the disc, said outer wall being provided with an opening through which said tokens are thrown from and by the disc, and a token receiving and viewing table arranged adjacent to the disc and the opening through said side wall to receive game tokens from the disc through said opening.

11. An amusement mechanism comprising, in combination, a horizontally disposed rotatably mounted token tumbling disc, inner and outer side walls associated with the disc extending upwardly thereabove and spaced apart radially of the disc defining an approximately annular portion of the disc over which game tokens carried by the disc are tumbled during the rotation of the disc, said outer side wall being stationary and including a circumferential succession of relatively angularly arranged side wall areas each disposed approximately parallel to a tangent to the margin of the disc, said outer wall provided with an opening through which said tokens are thrown from and by the disc, and a token receiving and viewing table arranged adjacent to the disc and the opening through said side wall to receive game tokens from the disc through said opening, said inner side wall being rotatable with the disc, and a supplemental wall portion extending from an edge of the opening through the outer side wall across the disc to a point adjacent to the inner side wall to direct tokens being tumbled by the disc through said opening.

12. The invention as defined in claim 10 characterized in that means is provided for conveying game tokens from the table back onto the disc.

13. An amusement mechanism comprising, in combination, a game token receiving and viewing table top provided with a plurality of tiltably supported table top panels, a hopper positioned below said table to receive game tokens therefrom upon the tilting of the panels, means operable to tilt said panels, said hopper having a discharge outlet, valve means controlling said outlet, and game token advancing mechanism communicating with said outlet to receive game tokens therefrom and adapted to advance and throw said tokens onto said table.

14. An amusement mechanism comprising, in combination, a game token receiving and viewing table top provided with a tiltably supported table top panel, a side wall surrounding said table top, a hopper disposed below said tiltable panel to receive game tokens therefrom upon the tilting of the panel, means operable to tilt said panel, said hopper having a discharge outlet, game token conveying and advancing mechanism communicating with said outlet to receive game tokens therefrom and communicating through an opening in the wall about the table to deliver game tokens thereupon, said game token advancing and conveying mechanism adapted to advance game tokens received from said hopper onto said table.

15. An amusement mechanism comprising, in combination, a game token receiving and viewing table top provided with a tiltably supported table top panel, a side wall surrounding said table top, a hopper disposed below said tiltable panel to receive game tokens therefrom upon the tilting of the panel, means operable to tilt said panel, said hopper having a discharge outlet, game token conveying and advancing mechanism communicating with said outlet to receive game tokens from the hopper and communicating through an opening in the wall about the table to deliver said tokens thereupon, valve means controlling the discharge of tokens from the hopper to said conveying means, power means coupled with said valve to actuate the same, said power means coupled with said game token conveying and advancing means to advance said tokens received from the hopper and to throw them upon said table top.

16. An amusement mechanism comprising, in combination, a game token receiving and viewing table top having a tiltably supported top panel, a hopper disposed below said tiltable panel to receive game tokens discharged therefrom, said hopper having a discharge outlet, game token conveying and advancing mechanism including an enclosure extending on an upward incline from said outlet to a point adjacent to the table top, valve means controlling the discharge of tokens from the hopper to said conveying and advancing mechanism, power means controlling the operation of said valve and controlling the operation of said conveying and advancing mechanism to elevate tokens from the outlet of the hopper through the enclosure to a level with

the table top and to throw said tokens onto said table top.

17. An amusement mechanism comprising, in combination, a game token receiving and viewing table, a game token discharge passageway communicating with the table to receive game tokens therefrom, means controlling the delivery of tokens from the table to said discharge passageway, game token conveying and advancing means communicating with said discharge passageway to receive game tokens therefrom and communicating with the table to deliver game tokens thereto, and means controlling the delivery of game tokens from said discharge passageway of said game token conveying and advancing means.

HARRY C. HANLEY.
JOSEPH A. ROSENBERGER.