March 20, 1928. 1,663,024

H. W. NOYES

GAME APPARATUS

Filed Oct. 1, 1926 2 Sheets-Sheet 1

Fig. 1

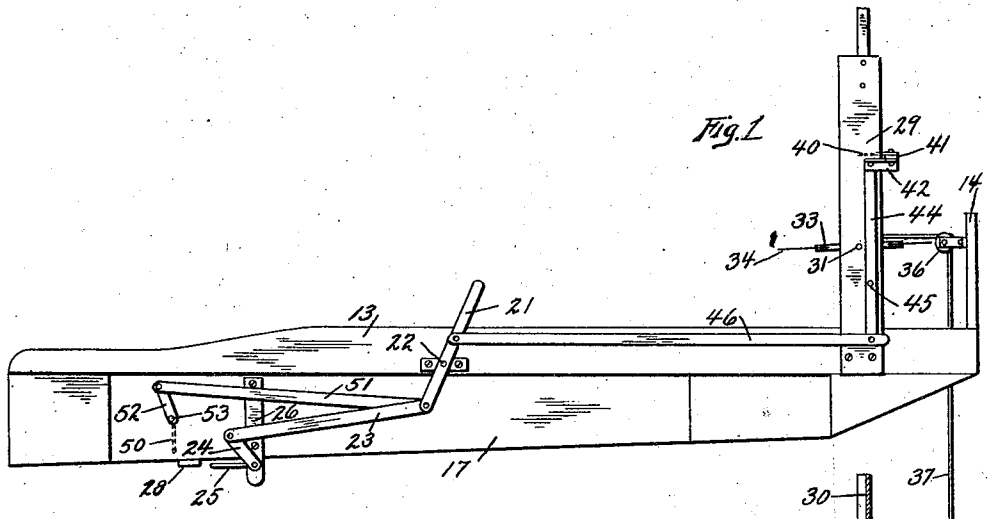
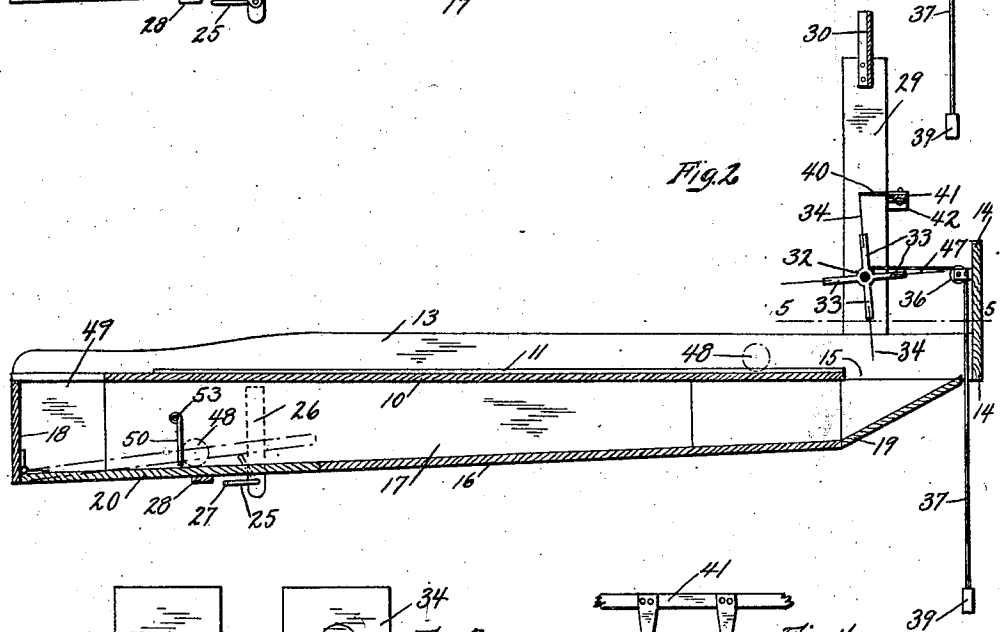



Fig. 2



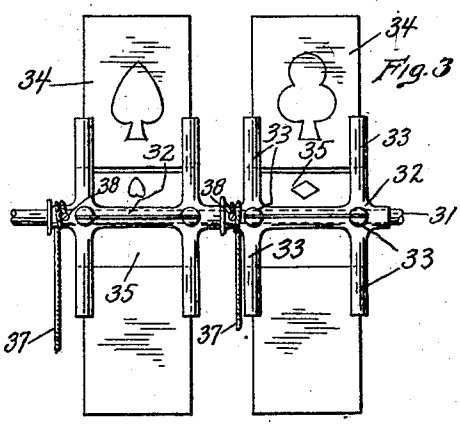




Fig. 3




Fig. 4

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March 20, 1928.

1,663,024

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2 Sheets-Sheet 2

Fig. 5

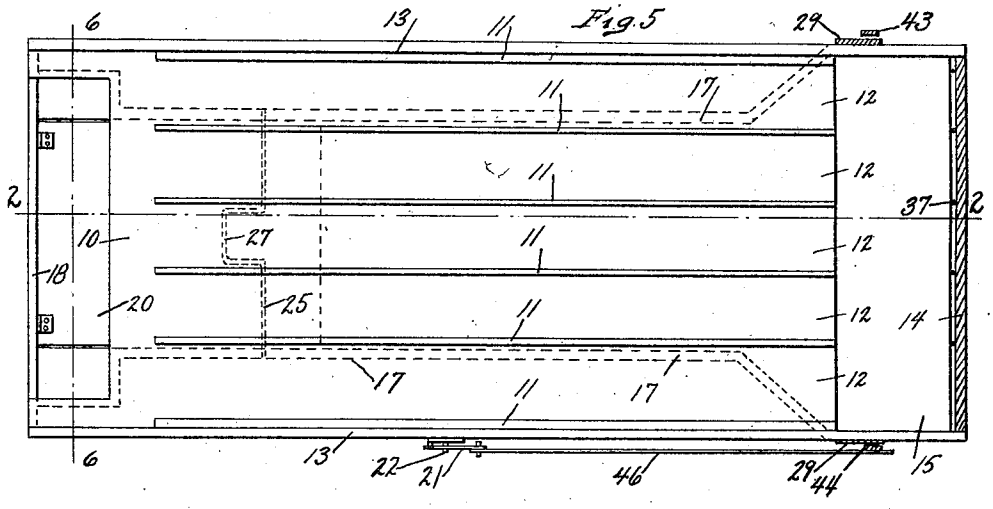
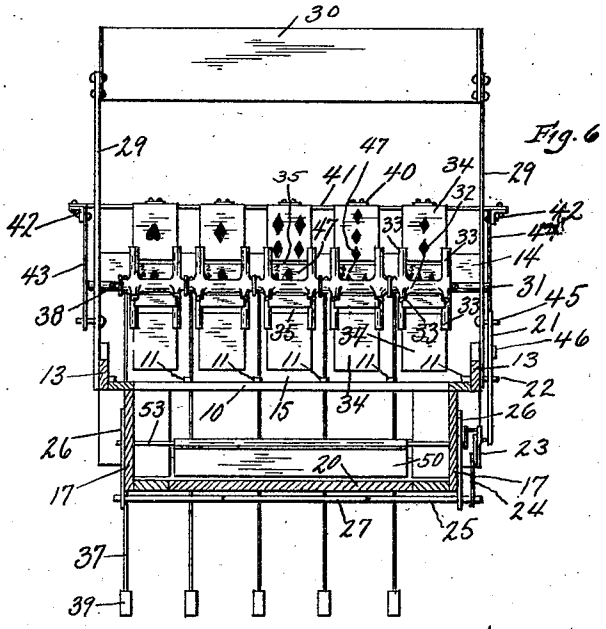



Fig. 6




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Patented Mar. 20, 1928. 1,663,024

# UNITED STATES PATENT OFFICE.

HARRY W. NOYES, OF WEST HAVEN, CONNECTICUT.

## GAME APPARATUS.

Application filed October 1, 1926. Serial No. 138,995.

This invention relates to a new and improved game, its object being, among other things, to provide an apparatus wherein a novel form of amusement may be provided through the exercise of skill and dexterity.

My improved game, in the preferred form herein disclosed, consists of certain details of construction and combinations of parts, as will be apparent from an inspection of the accompanying drawings in connection with the description hereinafter contained.

In the drawings;

Figure 1 is a side elevation of my new and improved game;

Figure 2 is a vertical sectional elevation thereof, taken upon line 2—2 of Figure 5;

Figure 3 is an enlarged elevation of some of the carrier wheels and adjacent parts;

Figure 4 is a fragmentary plan view of the stop fingers and adjacent parts;

Figure 5 is a fragmentary plan view, the parts in section being taken generally upon line 5—5 of Figure 2; and

Figure 6 is a sectional elevation thereof, the parts in section being taken generally upon line 6—6 of Figure 5.

In the practice of my invention, I provide a body member, which is constructed with a table portion 10, upon the upper surface of which are the strips 11, which divide the table into a plurality of alleys 12.

Upon opposite sides of this table are the side plates 13, which at one end project beyond the table and are joined by the end plate 14, between the inside wall of which and the table 10 is an opening 15.

Beneath the table is a runway constructed with a bottom plate 16, which lies at an angle to the table 10, two side plates 17, and an end plate 18.

Held in a fixed position at one end of the bottom plate 16, and forming an extension thereof, just below the opening 15, is the guide plate 19, and at the opposite end is a movable platform 20 hinged to the end plate 18.

A manually operated lever 21 is journaled upon a stud 22 and connected by links 23 and 24, with a lifter rod 25 that is journaled in the plates 26, and the offset portion 27 thereon is just below the movable platform 20.

Movement of the lever 21 in one direction causes the offset portion 27 to engage the underside of the movable platform 20 and lift the same to its up position substantially as shown by the broken lines in Figure 2. Gravity returns this movable platform to its closed position, resting upon the fixed bar 28 and its upper surface flush with and forming an extension of the upper surface of the plate 16.

Secured upon both sides of the body are the standards 29, which are joined at their upper ends by a cross head 30, the face of which may be used for display purposes or otherwise, as desired.

Supported in the standards 29 is a shaft 31, upon which are rotatably mounted a plurality of carrier wheels 32. Each of these wheels is provided with a plurality of pairs of radiating arms 33, shown herein as four in number, but a greater or less number may be used if desired. The outer ends of the arms 33 are slotted to receive one end of a card 34 or the like, the inner ends of the cards being spaced from the hub of the wheel, so as to leave an open space 35 therebetween. These cards may be of metal or other material sufficiently strong to withstand the impact of the balls hereinafter referred to, or may be playing cards of the conventional type or cards containing letters or symbols of an unlimited variety, and backed by a rigid, strong card or plate.

Fixed to the end plate 14 are a plurality of pulleys 36, corresponding in number with the carrier wheels 32, and over which run the cords 37 that are fixed at one end to the hub of the wheel 32 by a screw or pin 38 or the like, and at the other end having a weight 39 thereon. These weights provide motive power for rotating the carrier wheels 32 in a clockwise direction. Rotation of the carrier wheels in the direction just described for more than a limited distance is prevented by the spring stop fingers 40, one for each carrier wheel, which are secured to the cross bar 41 that is connected by the plates 42 at one end with the rock member 43, and at the other end to the rock lever 44 journaled upon a stud 45 in one of the standards 29. This rock lever is connected with the manually operated lever 21 by the link 46. The carrier wheels are arranged so that there is a wheel opposite the end of each of the alleys 12, and in their rest position two of the oppositely disposed cards 34 are at a slight angle to the perpendicular, substantially as shown in Figure 2. The lower end of the under card is above the

opening 15 and the face of the card 47 therein is opposite the opening 35 between the inner edge of the upper card in this wheel and the hub thereof, so that it may be seen therethrough.

The player utilizes a series of balls 48 in playing this game, two of which are shown in the drawing. At the beginning of the game these are grouped on the top of the movable platform 20 adjacent to the end plate 18 and below the opening 49 at the inner end of the table 10. These balls, one at a time, are rolled over the table through the alleys 12 and come into contact with the lower card in the carrier wheel and strike this card with sufficient force to cause the same to rotate in an anti-clockwise rotation against the tension of the weight 39. After the ball drops through the opening 15 onto the guide plate 19, it travels by gravity over the bottom plate 16 onto the movable platform 20, where its movement is arrested by the door 50, substantially as shown in Figure 2.

The speed with which the ball is rolled determines the extent of rotation of the carrier wheel actuated thereby. As soon as the force of the blow by the ball is spent, the weight 39 then exerts its influence and rotates the carrier wheel in the opposite direction until one of the cards therein engages the end of the stop finger 40, which limits further movement thereof. This stop finger being of yielding material it does not prevent, however, the rotation of the carrier wheel under the influence of the ball.

The game consists in so rotating two or more of the carrier wheels by the balls 48 that the cards in each of the several wheels, when positioned substantially as shown in Figure 6, will be in the desired sequence—if playing cards, a hand may be exposed of certain value or count in the game; if letters, a word will be spelled, etc.

The door 50 is so arranged as to prevent the premature return of the balls to a point below the opening 49 until all have been rolled. After the completion of the play by one of the players, this door is moved to a position substantially as shown by broken lines in Figure 2 by reason of the connection with the lever 21 through the links 51 and 52 that are connected with the rod 53 upon which the door is fixed. This door is moved to its open position at the same time that the movable platform 20 is lifted, thus forming an inclined plane, over which the balls roll and under the rod 53 into the open space below the opening 49. Reverse movement of the lever 21 closes the door.

When the lever 21 is moved, as just described, the spring fingers, through the rock lever 44 and link 46, are moved to a position out of the path of movement of the card 34, which can now rotate clockwise to their zero position under the influence of the weight 39. As the lever 21 is returned to the position shown in Figure 1 these spring fingers are moved forwardly again so as to prevent rotation of the carrier wheels in one direction, after movement has been imparted thereto by a ball 48.

There are minor changes and alterations that may be made within my invention, aside from those herein suggested, and I would therefore have it understood that I do not limit myself to the exact construction herein shown and described, but claim all that falls fairly within the spirit and scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A game apparatus having an alley partitioned table; a ball; a rotary carrier adjacent to the alley and in the path of and engaged and actuated by the ball from the alley; cards connected with the carrier; tension means for moving the carrier in a direction opposite to that by which it was moved under the impact of the ball; and means engaging the cards to stop the rotation of the carrier in one direction.

2. A game apparatus having an alley partitioned table; a ball; a rotary carrier; a plurality of cards on the carrier, the carrier being positioned adjacent to the alley with the cards in the path of and engaged by the ball from the alley and whereby the carrier is rotated; tension means for moving the carrier in a direction opposite to that by which it was moved under the impact of the ball; and a spring stop in the path of the cards for limiting the movement of the carrier in a direction opposite to that imparted thereto by the impact of the ball.

3. A game apparatus having a table provided with one or more alleys, each of which terminates at its forward end at an opening; a ball; an independently movable carrier adjacent to one end of each of the alleys and the adjacent opening and in the path of and engaged and actuated by the ball from the alley just before it escapes into the opening; and a runway with an inclined bottom under the table for guiding the balls to that end of the table opposite to the carrier, said runway having as a part thereof a movable platform, which in one of its positions forms an inclined surface over which the said balls may roll, and at an angle to the remaining portion of the runway.

4. A game apparatus having a table provided with one or more alleys, each of which terminates at its forward end at an opening; a ball; an independently movable carrier adjacent to one end of each of the alleys and the adjacent opening and in the path of and

engaged by and actuated by the ball from the alley just before it escapes into the opening; a runway with an inclined bottom under the table for guiding the balls to that end of the table opposite to the carrier, said runway having as a part thereof a movable platform, which in one of its positions forms an inclined surface over which the said balls may roll, and at an angle to the remaining portion of the runway; and means for limiting the extent of the movement of the balls in the runway.

5. A game apparatus having a table provided with one or more alleys, each of which terminates at its forward end at an opening; a ball; an independently movable carrier adjacent to one end of each of the alleys and the adjacent opening and in the path of and engaged by and actuated by the ball from the alley just before it escapes into the opening; a runway with an inclined bottom under the table for guiding the balls to that end of the table opposite to the carrier, said runway having as a part thereof a movable platform, which in one of its positions forms an inclined surface over which the said balls may roll, and at an angle to the remaining portion of the runway; means for limiting the extent of the movement of the ball in the runway; and means for releasing the ball from the limiting means so that it may travel to the end of the runway.

6. A carrier of the character described having connected therewith a plurality of cards or the like, arranged so as to leave an open space between the inner end of the card and an adjacent wall of the carrier.

7. A game apparatus having a table provided with one or more alleys; a ball; a rotary carrier moved about its axis in one direction by said ball; a plurality of cards or the like mounted in said carrier, each card being positioned so as to leave an open space between the inner end thereof and an adjacent wall of the carrier; and means for limiting the movement of the carrier so that the faces of at least two of said cards are exposed to vision along the alley.

8. A game apparatus having a table provided with one or more alleys, each of which terminates at its forward end at an opening; a ball; an independently movable carrier adjacent to one end of each of the alleys and the adjacent opening and in the path of and engaged by and actuated by the ball from the alley just before it escapes into the opening; a runway with an inclined bottom under the table for guiding the balls to that end of the table opposite to the carrier, said runway having as a part thereof a movable platform, which in one of its positions forms an inclined surface over which the said balls may roll, and at an angle to the remaining portion of the runway; means for limiting the movement of the ball in the runway; and means for actuating said limiting means whereby the ball may be released and continue its travel through the runway to a point below the opening at the opposite end of the table.

9. A game apparatus having a table provided with one or more alleys, each of which terminates at its forward end at an opening; a ball; an independently movable carrier adjacent to one end of each of the alleys and the adjacent opening and in the path of and engaged by and actuated by the ball from the alley just before it escapes into the opening; a runway with an inclined bottom under the table for guiding the balls to that end of the table opposite to the carrier, said runway having as a part thereof a movable platform, which in one of its positions forms an inclined surface over which the said balls may roll, and at an angle to the remaining portion of the runway; a barrier member adjacent to the platform that limits movement of the ball in the runway; and means for moving the barrier whereby the balls may be released to continue their travel over the runway.

10. A game apparatus having an alley partitioned table; one or more balls; a plurality of carriers adjacent to one end of the table, there being one carrier opposite to the end of each of the alleys, said carriers being independently rotated by a ball from the adjacent alley; means for moving the carrier in a direction opposite to that by which it is moved under the impact of the ball, which means applies tension to the carrier while rotating under such impulse; and a plurality of cards or the like having identifying indicia thereon mounted in each of said carriers.

11. A game apparatus having an alley partitioned table; a ball; a rotary carrier adjacent to the alley and in the path of and engaged and actuated by the ball from the alley; cards connected with the carrier; tension means for moving the carrier in a direction opposite that by which it was moved under the impact of the ball; a stop to prevent the rotation of the carrier in one direction; and means for moving the stop into and out of its operative position.

12. A game apparatus having an alley partitioned table; a ball; a rotary carrier adjacent to the alley and in the path of and engaged and actuated by the ball from the alley; cards connected with the carrier; tension means for moving the carrier in a direction opposite that by which it was moved under the impact of the ball; a stop to prevent the rotation of the carrier in one direction; and manually actuated lever means for moving the stop into and out of its operative position.

13. A game apparatus having a table provided with one or more alleys; a ball; an

independently movable carrier adjacent to each end of one of the alleys and in the path of and engaged and actuated by the ball from the alley; a runway, with an inclined bottom, under the table for guiding the balls to the end of the table opposite the carrier, said runway having as a part thereof a hinged platform which in one position forms an inclined surface over which the balls may roll at a more acute angle than the other portion of the runway; hinged means for limiting the movement of the ball in the runway; and means for synchronously actuating the platform and limiting means.

14. A game apparatus having a body member provided with a table portion and having an opening at each end of the table portion; a ball; a runway beneath the table whereby the ball after it has passed over the table at one end may be guided toward the opposite end of the table and having a movable platform forming a part thereof; a barrier member adjacent to the platform that limits the movement of the ball in the runway; means for actuating the barrier whereby the ball may be released to continue its travel over the runway; and means for actuating the movable platform whereby the angle of inclination of that portion of the runway formed by the movable platform is increased.

15. A game apparatus having a body member provided with a table portion and having an opening at each end of the table portion; a ball; a runway beneath the table whereby the ball after it has passed over the table at one end may be guided toward the opposite end of the table and having a movable platform forming a part thereof; a barrier member adjacent to the platform that limits the movement of the ball in the runway; means for actuating the barrier whereby the ball may be released to continue its travel over the runway; means for actuating the movable platform whereby the angle of inclination of that portion of the runway formed by the movable platform is increased; and means for actuating said barrier and platform at one and the same time.

16. A game apparatus having a body member provided with a table portion and having an opening at each end of the table portion; a ball; a runway beneath the table whereby the ball after it has passed over the table at one end may be guided toward the opposite end of the table and having a movable platform forming a part thereof; a barrier member adjacent to the platform that limits the movement of the ball in the runway; means for actuating the barrier whereby the ball may be released to continue its travel over the runway; means for actuating the movable platform whereby the angle of inclination of that portion of the runway formed by the movable platform is increased; a lever; a connection between the lever and barrier; and a connection between the lever and movable platform.

17. A game apparatus having a body member provided with a table portion and having an opening at each end of the table portion; a ball; a runway beneath the table whereby the ball after it has passed over the table at one end may be guided toward the opposite end of the table and having a movable platform forming a part thereof, which in one of its positions provides a surface over which the ball may travel at an angle greater than that of the remaining portion of the runway; a barrier member adjacent to the platform that limits the movement of the ball in the runway; and means for actuating the movable platform and barrier by the movement of a single member.

18. A game apparatus having a body member provided with a table portion and having an opening at each end of the table portion; a ball; a runway beneath the table, whereby the ball after it has passed over the table at one end may be guided toward the opposite end of the table and having a movable platform forming part thereof; a barrier member adjacent to the platform that limits the movement of the ball in the runway; means for actuating the movable platform whereby the angle of inclination of that portion of the runway formed by the movable platform is increased; a rotary carrier moved about its axis in one direction by said ball and in the opposite direction by tension means; means for limiting the extent of movement of the carrier when actuated by the tension means; and means for actuating the barrier member, movable platform and carrier limiting means at one and the same time.

19. A game apparatus having a body member provided with a table portion and having an opening at each end of the table portion; a ball; a runway beneath the table whereby the ball after it has passed over the table at one end may be guided toward the opposite end of the table and having a movable platform forming part thereof; a barrier member adjacent to the platform that limits the movement of the ball in the runway; means for actuating the movable platform whereby the angle of inclination of that portion of the runway formed by the movable platform is increased; a rotary carrier moved about its axis in one direction by said ball and in the opposite direction by tension means; means for limiting the extent of movement of the carrier when actuated by the tension means; and means for actuating the barrier member, movable platform and carrier limiting means at one and

the same time, comprising a lever, a connection between the lever and barrier member, another connection between the lever and the movable platform, and another connection between the lever and said carrier limiting means.

20. A game apparatus having a table provided with one or more alleys; a ball; an independently movable carrier adjacent to each end of one of the alleys and in the path of and engaged and actuated by the ball from the alley; a runway, with an inclined bottom, under the table for guiding the balls to the end of the table opposite the carrier, said runway having as a part thereof a hinged platform which in one position forms an inclined surface over which the balls may roll at a more acute angle than the other portion of the runway; hinged means for limiting the movement of the ball in the runway; and lever means for synchronously actuating the platform and limiting means.

In testimony whereof, I have hereunto affixed my signature.

HARRY W. NOYES.