March 5, 1968 E. J. KRANZ 3,371,932

RANDOM MIXING AND DISPENSING AMUSEMENT DEVICE

Filed March 17, 1965 3 Sheets-Sheet 1

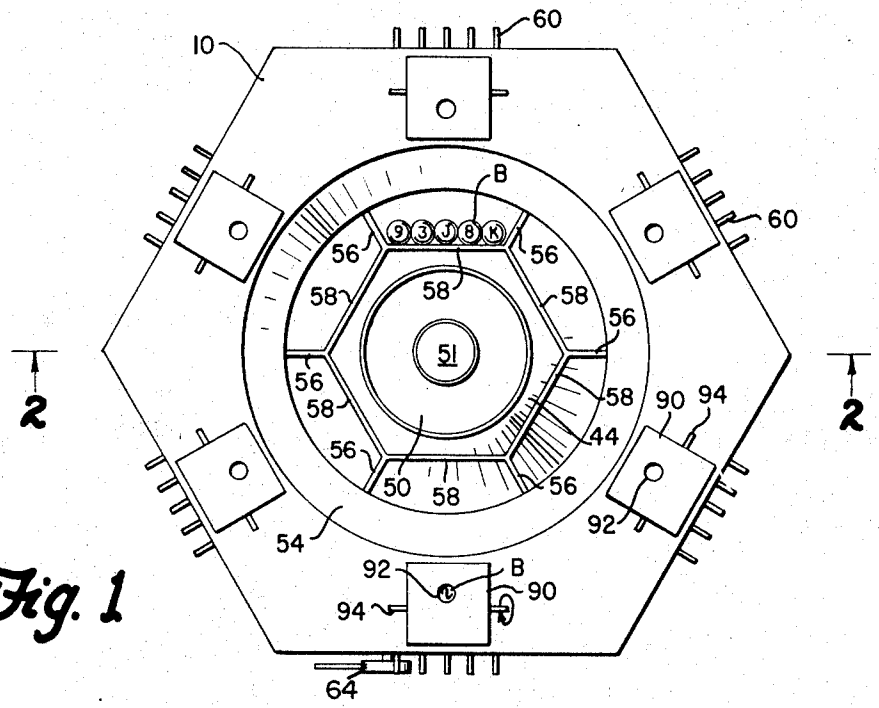

Fig. 1

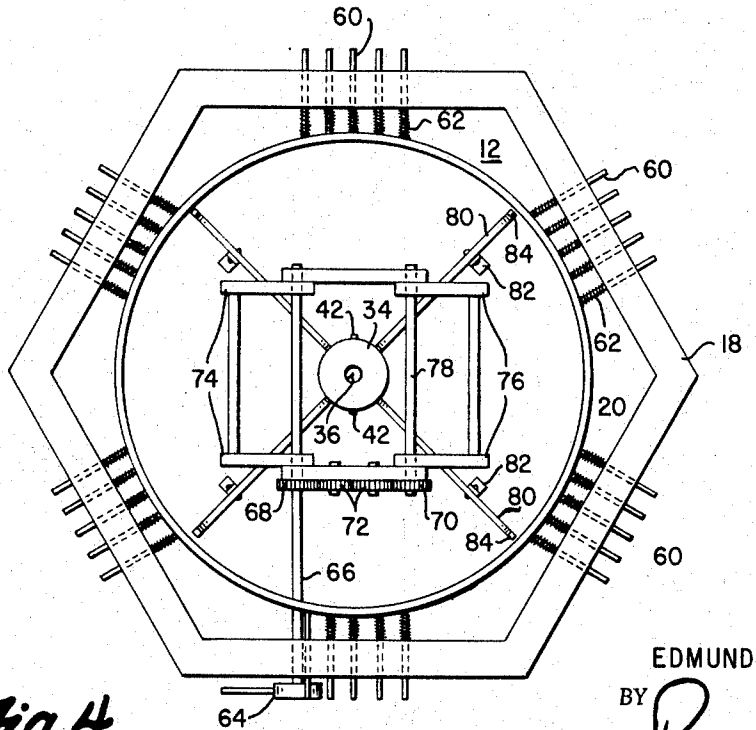

Fig. 4

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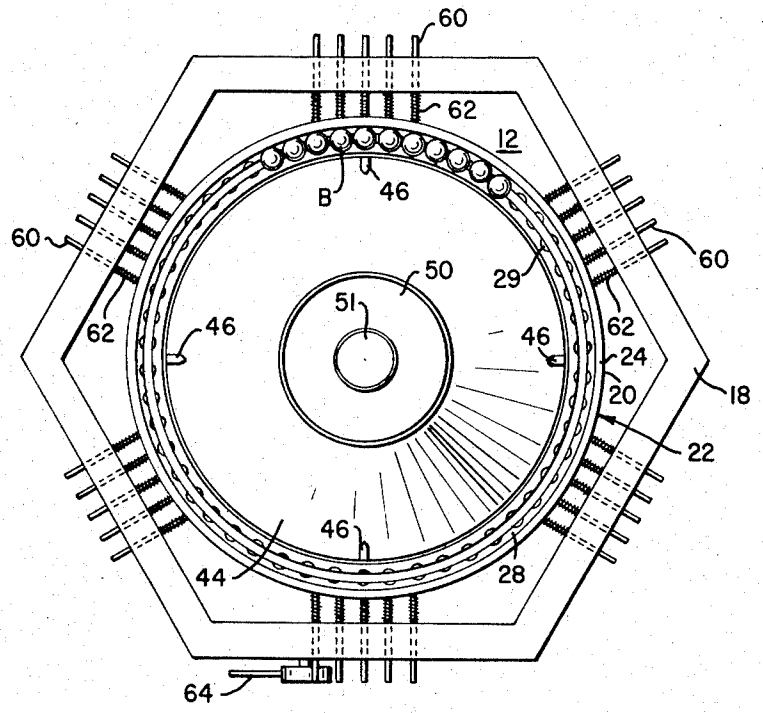

Fig. 3

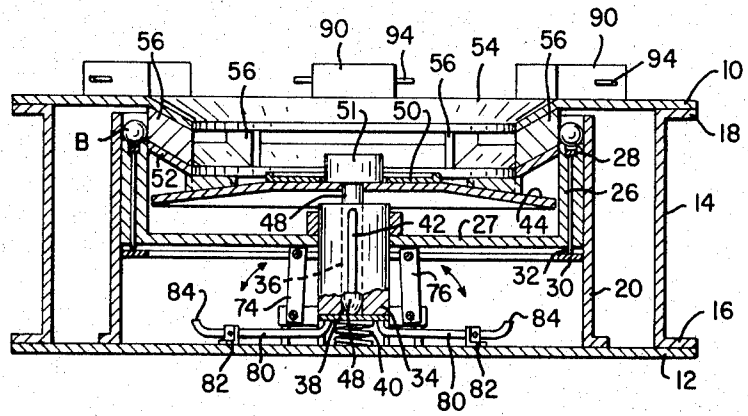

Fig. 2

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RANDOM MIXING AND DISPENSING AMUSEMENT DEVICE

Filed March 17, 1965 3 Sheets-Sheet 3

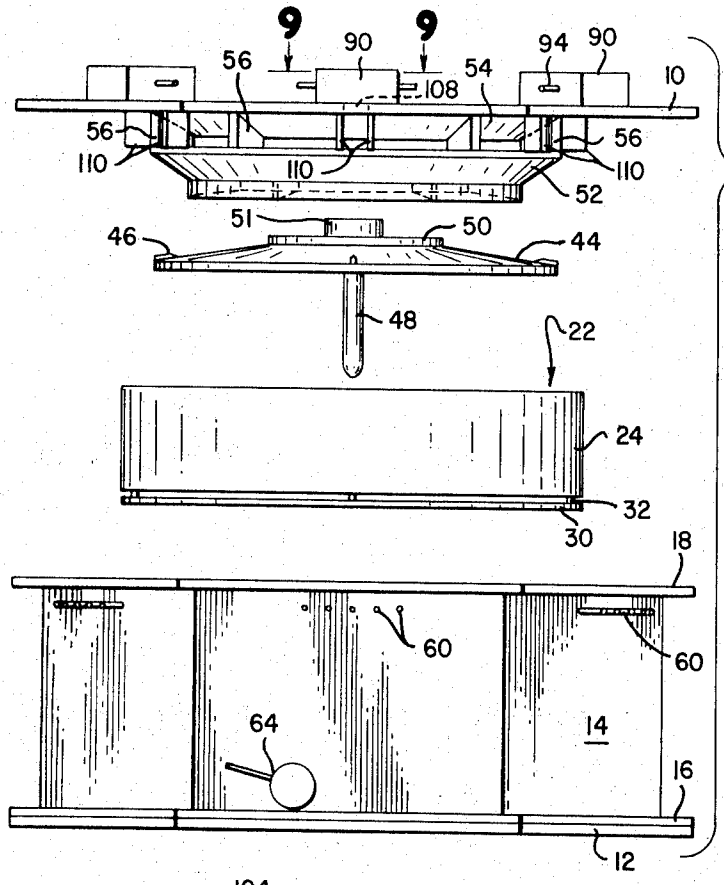

Fig. 5

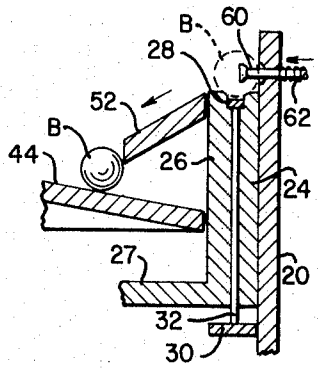

Fig. 6

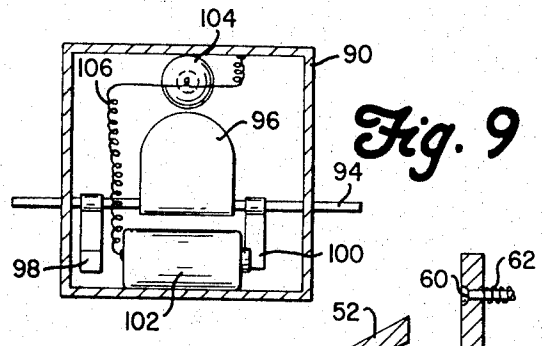

Fig. 9

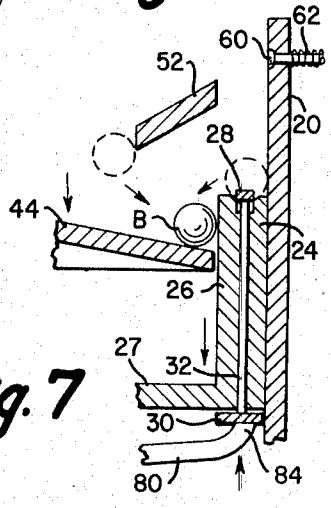

Fig. 7

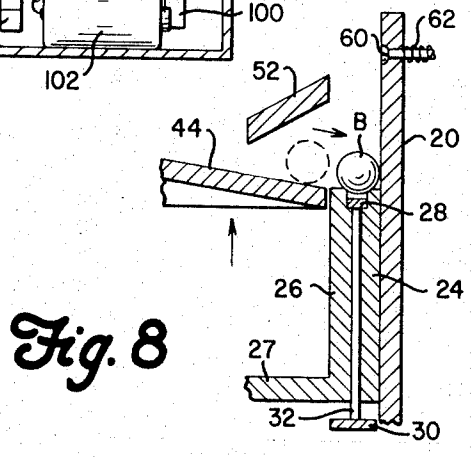

Fig. 8

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RANDOM MIXING AND DISPENSING AMUSEMENT DEVICE

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Filed Mar. 17, 1965, Ser. No. 440,360
6 Claims. (Cl. 273—144)

ABSTRACT OF THE DISCLOSURE

An amusement device having a plurality of spherical playing pieces supported on an annular supporting member and a plurality of sets of playing piece propelling means for forcing selective ones of the playing pieces off of the supporting member to a visible position. Typically, the playing pieces are provided with indicia of a conventional deck of playing cards.

The present invention relates to an amusement device, and more particularly to a game having playing pieces or balls with indicia thereon, representing a conventional deck of playing cards.

An object of the invention is to produce an amusement device for playing the game of poker with spherical playing pieces rather than the conventional deck of cards.

Another object of the invention is to produce a game apparatus in which the element of chance cannot be eliminated.

Still another object of the invention is to produce an amusement apparatus which may be readily and economically manufactured; can be played without difficulty; and has the new and improved features of construction, operation and arrangement hereinafter described.

In one aspect, the invention comprises a plurality of playing pieces; a base; an upstanding wall member, the wall member and the base defining a chamber having an open top; a playing piece supporting member mounted coaxially within the chamber defined by the wall member and adapted to move vertically, means for selectively and vertically positioning the supporting member between a first position and a second position; a conical disc mounted for rotation about an axis substantially normal thereto and disposed concentrically within the chamber defined by the wall member, the peripheral edge of the disc being spaced slightly inwardly of the playing piece supporting member; playing piece ejecting means connected to the playing piece supporting member for ejecting the playing pieces when the supporting member is in the second position; and a plurality of propelling means positioned in spaced relation in the wall member to force respective ones of the playing pieces off the supporting member when the member is in the first position.

The above and other objects and advantages of the invention will become readily apparent from reading the following detailed description of a preferred embodiment of the invention when considered in the light of the accompanying drawings, in which:

FIGURE 1 is a top plan view of the amusement device showing the playing pieces of one of the players being in the final, or played position;

FIGURE 2 is an elevational view in vertical section of the amusement device taken along line 2—2 of FIGURE 1;

FIGURE 3 is a top plan view of the amusement device with the cover thereof removed, showing only a portion of the complete number of playing pieces for the sake of simplicity;

FIGURE 4 is a top plan view of the amusement device with the playing piece supporting member and the associated conical disc removed, thereby more clearly illustrating the means for elevating the playing piece supporting member and the means for actuating the playing piece ejecting means;

FIGURE 5 is an exploded view of the apparatus, more clearly illustrating the relative position and relationship of the parts thereof;

FIGURE 6 is an enlarged fragmentary sectional view showing the apparatus in the position just after the playing piece has been propelled by the associated plunger means;

FIGURE 7 is an enlarged fragmentary sectional view of the amusement device after the playing piece supporting member has been shifted to its lowermost position and the associated conical disc element has been lowered to allow the playing piece to assume a position adjacent the supporting member;

FIGURE 8 is an enlarged fragmentary elevational view of the amusement device after the conical disc has been allowed to return to its uppermost position, thereby causing the playing pieces once again to be received by and supported on the playing piece supporting member; and

FIGURE 9 is a sectional view showing, along line 9—9 of FIGURE 5, an adjunct whereby a single "hold" playing piece may be viewed by the respective players.

Referring to the drawings, and more particularly to FIGURES 1 to 5 inclusive, there is shown an embodiment of the invention including a top panel member **10** and a base member **12** and an upstanding outer side wall member **14**, disposed between the top panel **10** and the base **12**. The upstanding outer side wall **14** has a lower outwardly extending flange **16** which cooperates with and rests upon the base **12**, and a similar outwardly extending flange **18** at the top portion thereof, which is adapted to provide support for the top panel **10**. An upstanding inner wall **20** of annular configuration is disposed concentrically or coaxially within the chamber defined by the top panel **10**, the base **12** and the side wall **14**. A playing piece or ball supporting and receiving annulus **22** is disposed coaxially within the upstanding inner wall **20**. The ball receiving annulus **22** includes an outer annular wall member **24**, an inner annular wall member **26** and a lower or bottom wall **27**, clearly illustrated in FIGURE 2. The bottom wall **27** is provided with a centrally disposed aperture which is adapted to receive an upstanding bearing post **34**, having ribs **42** disposed to extend axially of the cylindrical post **34**. The ribs **42** are adapted to engage within suitable slots within the central aperture formed in the bottom wall **27** of the ball receiving annulus **22** to aid in guiding the annulus **22** vertically up and down with respect to the cylindrical bearing member **34**.

It will be observed in FIGURE 3 that the upper surface of the ball receiving annulus **22** is provided with a circular series of ball receiving cavities **29** which are formed on the uppermost marginal edge portions of the cooperating outer annular wall member **24** and the inner annular wall member **26** of the ball receiving annulus.

Associated with the ball receiving annulus **22** is a ball ejecting mechanism comprised of an upper ball ejecting ring **28**, a lower ball ejecting ring **30** and a plurality of tie rods **32**, the opposite ends of which are connected to the respective upper and lower ball ejecting rings. The operation of the upper and lower ball ejecting ring mechanism will be explained in greater detail hereinafter with reference to FIGURES 6, 7 and 8.

Continuing with the description of the structure of the amusement device, it will be noted that the cylindrical bearing post **34** contains a central bore **36**, having a spider element **38** disposed at the bottom portion thereof which is biased upwardly by helical spring **40**. The bore **36** of the

bearing post 34 is adapted to receive therein a spindle 48 depending from a frusto conically shaped disc 44. The upper peripheral marginal surface of the disc 44 is provided with a plurality of spaced upstanding guide fingers 46, the function of which will be explained in more detail hereinafter. The frusto conically shaped disc 44 has a substantially flat planar upper surface 50 and a central knob-like operating handle 51. The arrangement thus far described enables the disc 44 to be rotatably supported by the cylindrical bearing post 34 and can be caused to be rotated by grasping the handle 51 and imparting a spinning motion thereto.

The top panel 10 is provided, on the under surface thereof, with a depending inverted frusto conical chute 52 disposed in parallel spaced relation to a downwardly extending central portion 54 of the top panel 10. The space between the upper surface of the chute 52 and the under surface of the downwardly extending central portion 54 is broken up by a plurality of spaced apart guide walls 56 which cooperate with respective end walls 58, as illustrated in FIGURE 1, to create a plurality of separate compartments.

The upstanding outer side wall 14 is provided with a plurality of spaced groups of apertures therein which receive respective plunger elements 60. The upstanding inner wall 20 is provided with similar groups of apertures for receiving the innermost ends of the plunger elements 60. Normally the plunger elements 60 are biased to the positions shown in FIGURES 1, 3, 4, 7 and 8 by respective helical springs 62 which cooperate with cotter pins or the like (not shown) extending through the plungers 60.

As mentioned earlier, the ball receiving annulus 22 is adapted to shift vertically up and down on the cylindrical bearing post 34. The vertical movement of the ball receiving annulus 22 is effected by a positioning means which includes an elevating and lowering lever member 64, illustrated in FIGURES 1, 3, 4 and 5. The lever 64 is suitably fixed to one end of a shaft 66 which in turn has a drive pinion 68 keyed thereto. The pinion 68 effectively drives a driven pinion 70 through a series of idler pinions 72. A pair of camming levers 74 are carried by the shaft 66; while a similar pair of camming levers 76 are carried by a shaft 78 keyed to the driven pinion 70. Movement of the pinions 68 and 70 are caused to impart opposite swinging motions to the respective camming levers 74 and 76. The uppermost surfaces of the camming levers 74 and 76 are adapted to engage the under surface of the bottom wall 27 of the ball receiving annulus 22. It will be readily apparent that when the lever 64 is in the position shown in FIGURE 4, the ball receiving annulus 22 is adapted to be in its lowermost position; but, when the lever is moved through approximately 90° in an upward direction, the ball receiving annulus 22 is moved to the upper position shown in FIGURE 2.

To effect ejection of the playing pieces or balls B from the ball receiving annulus 22 after the balls have been propelled by the respective plungers, there is provided a plurality of generally outwardly extending bars 80 (FIGURE 4) which are pivotally mounted on brackets 82. The inner ends of the bars 80 are disposed beneath the spring biased spider element 38; while the outer ends 84 of the bars 80 are positioned immediately below the lower ball ejecting ring 30. Normally the bars 80 are in the position shown in FIGURE 2. However, when the handle knob 51 of the disc 44 is pushed downwardly the lower end of the spindle 48 forces the spider downwardly against the bias of the spring 40 and thereby forces the inner ends of the bar downwardly, causing the opposite ends 84 to pivot upwardly and contact the lower ball ejecting ring 30 and force it upwardly. As the ring 30 is forced upwardly, this motion is transmitted to the upper ring 28 through the tie rods 32 causing the upper ring 28 to push the balls resting in the respective ball receiving cavities 29 upwardly and thereby causing them to drop downwardly onto the

outer peripheral edge of the disc 44. This operation will be more clearly defined hereinafter.

A plurality of housings 90 are disposed in fixed space relation on the upper surface of the top panel 10 and are in general alignment with apertures 108 in the top panel (FIGURE 5). The apertures 108 in the top panel 10 are adapted to be positioned directly above the ball receiving annulus 22 and in alignment with respective ones of the ball receiving cavities 29. The top wall of each of the housings 90 is provided with an aperture 92. A shaft 94, having an associated cover 96 mounted thereon, is pivotally mounted in the housing 90 to effect an opening or closing of the aperture 92 from the interior of the housing 90. Normally, the cover 96 is maintained in a closed position over the aperture 92 by a weighted arm 98 carried by the shaft 94. It will be appreciated that the cover 96 may be manually swung to an open position by the manipulation of the shaft 94.

When the shaft 94 is turned to open the aperture 92, a switch contact 100 makes electrical contact with one terminal of the battery 102 which is electrically connected to a light bulb 104 through a conductor 106. In the open position of the aperture 92, the light bulb 104 is energized causing illumination of a single playing piece or ball B resting on the ball receiving annulus 22. The viewing of adjacent playing pieces B is obviated by employing a pair of spaced apart shield members 110, which depend downwardly from the undersurface of the top panel 10, adjacent each of the openings 108, as clearly illustrated in FIGURE 5.

In operation, the herein described apparatus may be employed to play a game of the type normally played with a conventional deck of playing cards. Accordingly, there are typically 52 playing pieces B, each carrying indicia representing one card of a conventional deck of playing cards. At the commencement of the game, the lever 64 is moved to cause the camming levers 74 and 76 to raise the ball receiving annulus 22 to an elevated position wherein certain of the playing pieces B are in alignment with respective ones of the plungers 60, as illustrated in FIGURES 2, 3, and 6. In this position, the shaft 94 is turned to open the aperture 92 in the housing 90 to expose one of the playing pieces B as illustrated in FIGURE 1. The exposed and illuminated playing piece B is typically referred to as the "hold" piece, and may be observed only by the single player of each of the various playing positions. The "hold" playing piece B is in alignment with the center plunger 60 and two playing pieces on either side of the "hold" playing pieces are in alignment with the respective ones of the other plungers 60. The respective players sequentially force the plungers in an inwardly direction causing the playing pieces to travel down the inclined surface 52 to become visible and rest within the compartments formed by the dividing guide walls 56 and the respective end wall 58. The latter position of the playing pieces B is illustrated in FIGURE 6. At the end of one complete game, after all of the five plungers have been forced inwardly, the lever 64 is moved or turned to cause the camming levers 74 and 76 to return to their lowermost position, allowing the ball receiving annulus 22 to move downwardly to the position illustrated in FIGURE 7. In this position, the handle knob 51 of the disc 44 is forced downwardly allowing the played playing pieces B to roll downwardly on the inclined surface of the disc 44 and against the inner surface of the inner annular wall member 26. Simultaneously, the outer ends 84 of the radially extending pivotally mounted bars 80 urge the lower ball ejecting ring 30 and the upper ball ejecting ring 28 upwardly, thereby effecting the unseating of the playing pieces B which were unplayed. The unplayed pieces B, as well as the played pieces B, are then in effect shuffled by the rotation of the disc 44 about the axis of the spindle 48. During the rotation of the disc 44, the upstanding guide fingers 46 aid in moving the balls about to assume relatively new positions. The disc is then allowed to

return to its uppermost position as indicated in FIGURE 8 and is rotated rather slowly, allowing the playing pieces B to drop into the playing piece cavities **29** of the ball receiving annulus **22** and the game apparatus is ready for another playing cycle.

While the apparatus specifically illustrated and described is generally hexagonal, it will be understood that other shapes could be likewise employed without departing from the spirit of the invention. For example, an apparatus employing the principles of the invention could be fabricated in an octagonal shape, permitting eight playing positions. Manifestly, an annularly shaped construction would have the advantage of modifying the apparatus for a large variety of players by merely positioning properly the sets of plungers **60**.

According to the patent statutes I have explained the principles and mode of operation of my invention, and have illustrated and described what I now consider to represent its best embodiment. However, I desire to have it understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

What I claim is:

1. In a game comprising:

a plurality of spherical playing pieces;

a base;

an upstanding wall member, said wall member and said base defining an open top chamber;

a playing piece supporting member mounted concentrically within the chamber defined by said wall member and adapted to move vertically;

means for selectively vertically positioning said supporting member between a first position and a second position;

a conical disc mounted for rotation about an axis substantially normal thereto and disposed concentrically within the chamber defined by said wall member, the peripheral edge of said disc being spaced slightly inwardly of said playing piece supporting member and rotatable with respect thereto;

playing piece ejecting means connected to said playing piece supporting member, said ejecting means including manually operable means for ejecting said playing pieces when said supporting member is in the second position; and

a plurality of propelling means positioned in spaced relation to said wall member, said propelling means being manually operable to force respective ones of said playing pieces off said supporting member when said member is in the first position.

2. In a game comprising:

a plurality of spherical playing pieces;

a base;

an upstanding annular wall member, said wall member and said base defining a chamber having an open top;

an annular supporting member for supporting said playing pieces, said supporting member mounted coaxially with and adjacent to said wall member and adapted to move vertically;

means for selectively vertically positioning said supporting member between a first, upper position and a second, lower position;

a conically shaped disc mounted for rotation about an axis substantially normal thereto and disposed coaxially within and having the peripheral edge thereof spaced slightly inwardly of said supporting member and rotatable with respect thereto;

playing piece ejecting means connected to said supporting member, said ejecting means including manually operable means for ejecting said playing pieces when said supporting member is in the second lower position; and

a plurality of propelling means positioned in spaced relation in said wall member, said propelling means being manually operable to force respective ones of said playing pieces off said supporting member when said member is in the first upper position.

3. The invention defined in claim **2** wherein said plurality of propelling means includes groups of spring biased plunger elements.

4. The invention defined in claim **3** wherein said means for selectively vertically positioning said supporting means includes a camming means adapted to contact the undersurface of the supporting member.

5. The invention defined in claim **3** wherein said disc includes a downwardly extending spindle for rotatably mounting said disc and for engagement with said ejecting means whereby when said disc is forced downwardly said spindle operatively engages said ejecting means to eject thereby said playing pieces from said supporting member.

6. The invention defined in claim **5** wherein said disc and spindle are spring biased against downward movement thereof.

References Cited

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216,566 5/1924 Great Britain.

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A. W. KRAMER, *Assistant Examiner.*