Oct. 30, 1962 M. I. GLASS ETAL 3,061,312

TOY

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Fig. 1

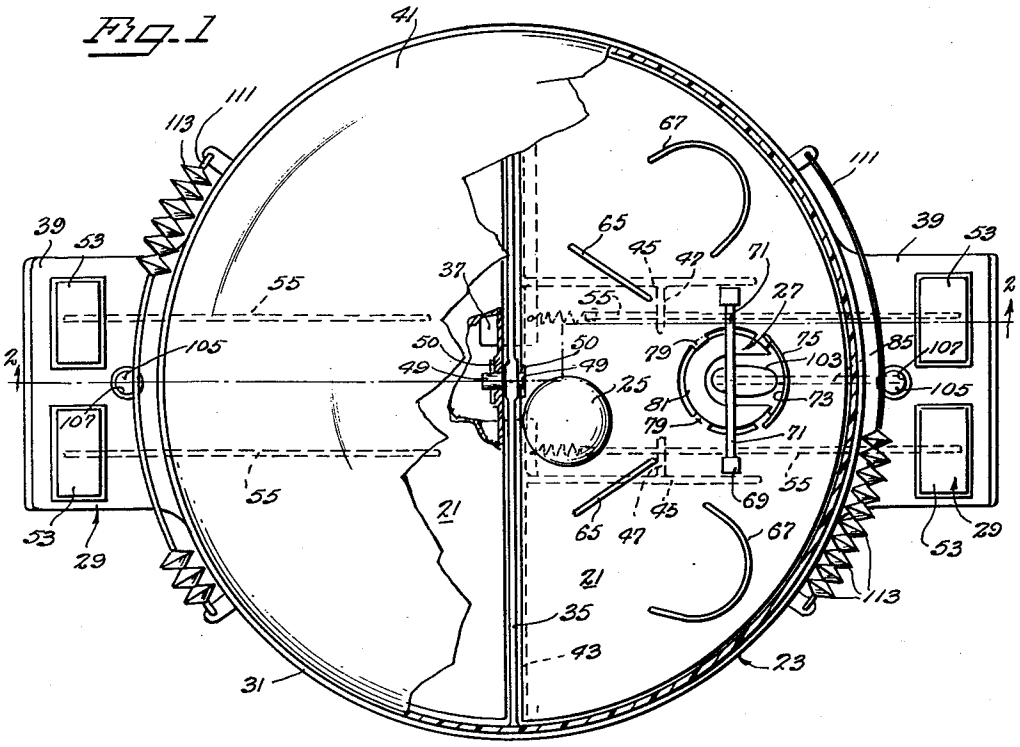
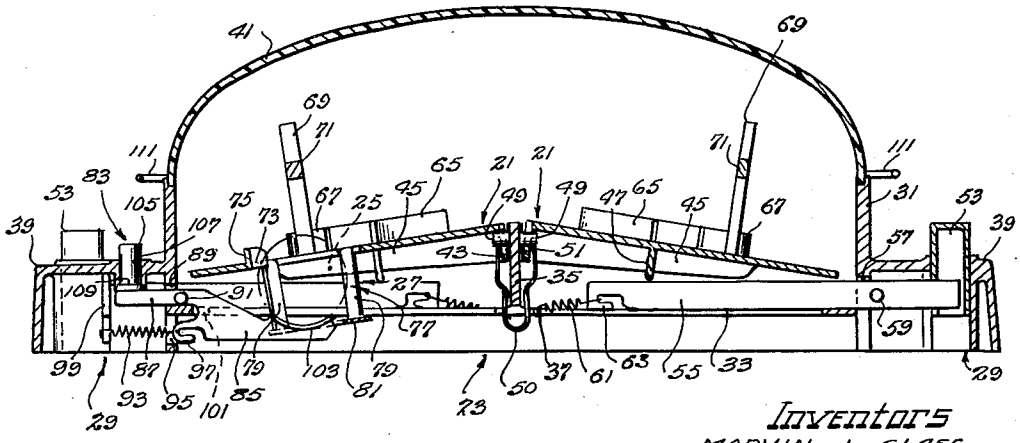


Fig. 2



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The invention relates to toys or games, and more particularly, to a toy or game which is competitively operable by a pair of opposing players or contestants. Still more particularly, the invention relates to toys or games in which the travel of a ball, or other object, is controllable by the players and in which the game is won by the scoring of one or more goals, depending upon the rules which are used.

One of the principal objects of the invention is to provide a novel, competitively operable game of the general type referred to above. Another of the principal objects of the invention is the provision of a toy or game involving movable members which are independently operable by opposing players to control the travel of an object, such as, for example, a ball, during the play of the game. Another object of the invention is the provision of a game which incorporates various of the above mentioned features, which is simple and inexpensive to manufacture, and which will provide many long hours of entertaining activity over a long period of time.

Other objects and advantages of the invention will become known by reference to the following description and accompanying drawings of one embodiment of the invention.

In the drawings:

FIGURE 1 is a partially broken away and sectioned plan view of a toy or game embodying various of the features of the disclosed invention; and

FIGURE 2 is a sectional view taken along line 2—2 of FIGURE 1.

As shown in the drawings, the disclosed game comprises a pair of opposed members or boards **21** which are pivotally mounted on suitable supporting means **23** and are independently manipulatable in opposition to each other to score a goal by controlling the travel of a freely moving ball **25** relative to the boards **21**. More particularly, the boards each include a receptacle **27** in which the ball **25** is receivable to score a goal and are mounted to afford independent and selective pivotal movement thereof about a first common axis and about separate, respectively associated second axes extending transversely of the common axis. The game also incorporates separate suitable means **29** operable by the opposing contestants to independently and selectively manipulate the boards **21** either about the common axis or about the respectively associated second axes extending transversely of the common axis.

Considering the construction of the disclosed game in greater detail, the support means **23** can be formed in various shapes and, in the disclosed construction, constitutes a ring **31** which is strengthened by the incorporation of an inner horizontally extending flange **33** and an inverted, generally T-shaped, diametric rib **35**. As shown in FIGURE 1, the cross bar **37** disposed at the bottom of the inverted T-shaped rib **35** is interrupted at the central part thereof to facilitate molding of the ring as a single piece. Extending radially from the ring **31** in diametric opposition to each other are a pair of control boxes **39** respectively housing certain components of the separate means **29** for operably manipulating the boards **21**.

Desirably, the ring **31** extends above the normal level of the boards **21** so as to provide a skirt which assists in retaining the ball **25** on the boards **21** and is covered

with a transparent dome or shell **41** which prevents loss of the ball, but permits full view of the play of the game.

The pivotally mounted boards **21** are each generally of identical construction, except for being left and right handed, and are generally flat members. In the disclosed construction, each of the boards is shaped to occupy substantially ½ of the area enclosed by the ring **31**. Thus, the boards are of semi-circular shape. However, if the support means **23** were other than of circular shape, the shape of the boards could be correspondingly changed. Moreover, each of the boards need not occupy substantially ½ of the available area within the ring. For instance, if desired, the ring **31** could be provided with a flat, level area intermediate the boards **21**.

The rigidity of each of the boards **21** is reinforced by the provision of a downwardly projecting flange **43** extending along the straight edge of each of the boards. Further rigidity is obtained, in each of the boards **21**, by the use of a pair of generally parallel ribs **45** which project outwardly from the straight side of the associated flange **43** in perpendicular relation to the straight sides of the boards, and by a pair of extensions or legs **47** which project transversely toward each other from the associated parallel ribs **45** inwardly of the receptacle **27**. In addition, the flanges **43** and the transverse legs **47** cooperate with other components of the construction to facilitate functioning of the game.

In this last regard, various arrangements can be employed to support the boards **21** for independent and selective pivotal movement about a common axis and about separate axes extending transversely of the common axis. In the disclosed construction, a pin or stud **49** extends in axial alignment from both sides of the diametric rib **35**, at the longitudinal center thereof, and projects through somewhat larger apertures **51** in the adjacent portions of the flanges **43**. The boards **21** are retained in pivotally mounted relation on the ends of the pin **49** by suitable means which, in the disclosed construction, is a spring clip **50** engaging the pin **49** outwardly of the flanges **43**.

Each of the boards **21** can be independently and selectively pivotally manipulated to control the play of the ball **25** by a pair of control buttons or keys **53** supported in the associated one of the control boxes **39**. More particularly, each of the control keys **53** is generally of hollow rectangular formation and extends through a mating aperture in the top of the associated control box **39** to permit vertical movement thereof relative to the associated control box. The lower part of the inner wall of each of the control keys **53** is apertured for receipt of the outer end of a control bar **55**.

More specifically, each of the control bars **55**, as seen best in FIGURE 2, is an elongated element which projects through a vertical slot **57** in the ring **31** and rests with its lower edge bearing upon the inwardly directed flange **33**. Extending in axial alignment from each of the sides of each control bar is a pivot pin **59**, each of which is normally engaged with the outer surface of the ring **31** by a spring **61** which is connected, at one end, to a hook **63** at the inner end of the associated control lever. In turn, each spring **61** is connected, at its other end, to the cross bar **37** of the diametric rib **35**.

Thus, the control bars **55** are each urged toward the diametric rib **35**, thereby engaging the pivot pin **59** against the ring **31** and establishing the normal control bar disposition. In this normal position, the associated one of the keys **53** is elevated with respect to the top of the associated control box **39** and the upper edge of each control bar **55** is engaged with the adjacent one of the transverse legs **47** to thereby support the boards

21 in a generally downwardly and outwardly inclined relation to each other. Accordingly, when one of the keys 53 in one of the control boxes 39 is depressed, the associated control bar 55 is rocked to thereby elevate its inner end, causing pivotal movement of the associated board 21 in one direction about the common axis which extends in axial alignment with the pivot pin 49. Of course, when the key 53 is released, the associated spring 61 will return the control bar 55 to its normal disposition, thereby permitting return movement of the associated board to its normal horizontal position.

If the other of the keys 53 is depressed, the associated board 21 is rocked in the opposite direction about the common axis extending in axial alignment with the pivot pin 49. If both keys 53 are depressed simultaneously, the associated board 21 is pivoted upwardly, toward the opposite board, about an axis which is disposed perpendicularly to the pivot pin 49 and which is located adjacent to the diametric rib 35.

Accordingly, by selectively depressing the keys 53, the associated boards 21 can be manipulated so as to oppose the sinking of the ball 25 in the receptacle 27 in the adjacent one of the boards 21, and so as to direct the ball toward the receptacle 27 in the opposing one of the boards 21.

Travel of the ball 25 relative to the boards 21 is also influenced by a series of obstacles or baffles associated with the boards. More specifically, each of the boards 21 includes a pair of spaced, upright baffles 65 located in generally converging relation to each other so as to direct the travel of the ball 25 toward the associated receptacle 27. Also located on each of the boards 21 are a pair of arcuate barriers 67 which act to deflect the ball 25 in various directions depending upon the disposition of the boards. Disposed above each of the receptacles 27 is a goal post 69 which is also adapted to deflect the ball 25 under certain circumstances. However, the cross bar 71 of each of the goal posts 69 is positioned high enough so as not to normally interfere with dropping of the ball 25 into the associated receptacle 27.

Each of the receptacles 27 is located centrally of the associated one of the boards 21 and constitutes an opening 73 in the associated board, together with an upwardly projecting partial lip 75 along the rear of the opening 73 and a pocket structure 77 which depends from the under surface of the associated board adjacent the periphery of the opening 73. Although various pocket structures 77 can be used, each of the disclosed pocket structures includes four downwardly convergent legs 79 which extend from the bottom of the associated board in generally equiangularly spaced disposition around the periphery of the associated opening 73. In addition, each of the pocket structures 77 includes a ring segment 81 which inter-connects the lower end of the associated legs 79 but is discontinuous in the area between the two outermost legs.

Preferably, the convergent disposition of the legs 79, together with the ring segment 81, will retain the ball 25 in the pocket structure 77. However, an auxiliary support member can also be utilized in each of the receptacles 27, which support member also functions as a part of a means or arrangement 83 for ejecting or projecting the ball 25 from the associated receptacle 27.

Each of the ball ejecting means 83 constitutes a lever 85 pivotally mounted intermediate its ends for movement of one end into the associated pocket structure 77 so as to eject the ball 25 therefrom. More specifically, each of the levers 85 is pivotally mounted relative to the ring 31 by reason of the projection of a radially outwardly directed arm 87 through an associated aperture 89 in the ring immediately above the inwardly extending flange 33. In addition, each of the levers 85 includes a pivot pin 91 which extends in axial alignment from each of the sides thereof and bears against the inner surface of the ring 31 and the upper surface of the flange 33. Each of the pivot pins 91 is retained in place and the associated one of the levers 85 is disposed in its normal position by a spring 93. Each of the springs 93 extends through a slot 95 in the ring 31 beneath the flange 33 and connects a hook 97 on the associated lever 85 to a cross member 99 in the adjacent control box 39.

The forward end of each of the levers 85 is partially disposed in a radial slot 101 in the flange 33 and includes, at its outer end, a spoon shaped part 103 which, as previously pointed out, is capable of serving the double function of supporting an object in the associated pocket structure 77 when the associated lever 85 is in its normal position and of ejecting the object from the associated receptacle 27 when the associated lever 85 is suitably pivoted.

Each of the levers 85 can be pivoted from its normal position so as to pivotally elevate the spoon part 103 by a button 105 supported in the adjacent one of the control boxes 39. More specifically, each of the buttons 105 is a generally cylindrical member which projects through a mating aperture 107 in the upper wall of the associated control box 39 and which includes an enlarged head 109 at its lower end to prevent loss thereof from the associated control box. Each button 105 is vertically supported by engagement of its head 109 with the upper edge of the associated radially outwardly projecting arm 87. When either one of the buttons 105 is depressed, the associated lever 85 is pivoted to expel the ball 27, or other object, from the associated receptacle 27.

Disposed outwardly of the ring 31, above each of the control boxes 39 is a counter for keeping score, which counter comprises a wire support 111 and a series of beads 113 which are movable along the wire support 111 so as to keep track of the number of goals made by each player.

As already indicated, the game is played by a pair of opposing contestants, each of which manipulates the keys 53 in one of the opposing control boxes 39 so as to pivot the associated one of the boards 21 in an attempt to sink the ball 27 in the receptacle 29 in the opposing one of the boards 21.

As already explained, the boards 21 are mounted so as to permit, incident to manipulation of the keys 53, pivotal movement about a common axis extending in alignment with the pivot pin 49 or pivotal movement of either of the boards 21 about respective axes extending perpendicularly of the common axis. When one of the contestants is successful in sinking the ball 27 in the opposing receptacle 27, the associated button 105 can be depressed to eject the ball, again making the ball 27 available for further play. A score can be kept by means of the beads 113 mounted along the outer periphery of the ring 31.

Various of the features of the invention are set forth in the appended claims.

What is claimed is:

1. A toy comprising support means, a pair of members disposed in opposing relation to each other, means pivotally connecting said members to said support means for pivotal movement of both of said members about a common axis and for pivotal movement of each of said members about separate parallel axes extending perpendicularly of said common axis, separate means on said support means for selectively pivoting each of said members about either said common axis or the associated one of said axes extending perpendicularly of said common axis, each of said member pivoting means including a first lever pivotally mounted intermediate its ends on said support means for engagement of one end thereof with the underside of the associated one of said members about either said common axis or the associated side of said common axis and in spaced relation to and on one side of the associated one of said axes extending perpendicularly to said common axis, a first element car-

ried by said support means for engagement with the other end of said first lever to cause pivotal movement thereof and of the associated one of said members in one direction about said common axis, a second lever pivotally mounted intermediate its ends on said support means for engagement of one end thereof with the underside of the associated one of said members at a point located in spaced relation to said common axis on the side thereof opposite from said one side and in spaced relation to and on said one side of the associated one of said axes extending perpendicularly to said common axis, and a second element carried by said support means for engagement with the other end of said second lever to cause pivotal movement thereof and of the associated one of said members in the direction opposite to said one direction about said common axis, whereby said members can be pivoted about said axes perpendicular to said common axis incident to common pivotal movement of the associated first and second levers.

2. A toy comprising support means, a pair of members disposed in opposing relation to each other, each of said members having a ball receiving receptacle therein, separate means on said support means for discharging a ball from each of said receptacles, each of said ball discharging means including an arm pivotally mounted intermediate its ends on said support means, said arm having one end enterable into the associated one of said receptacles incident to pivotal movement thereof, a button carried by said support means and engageable with the other end of said arm to effect ball discharging pivotal movement of said arm, means pivotally connecting said members to said support means for pivotal movement of both of said members about a common axis and for pivotal movement of each of said members about separate parallel axes extending perpendicularly of said common axis, and separate means carried by said support means for independently pivoting each of said members selectively about either of said common axis and said axes extending perpendicularly of said common axis, thereby permitting selective manipulation of said members in an attempt to sink a ball in said receptacle in the opposite member.

3. A toy comprising support means defining a ring having a diametric rib thereacross, a pair of semi-circular members pivotally connected at the center of their straight sides to said rib adjacent the center thereof for pivotal movement of both members about a common axis extending perpendicular to said rib and for pivotal movement of each of said members about separate axes extending parallel to said rib, a ball, a transparent dome mounted on said ring for confining said ball within said ring and between said members and said dome, a receptacle in each of said members for receiving said ball, separate means on said support means for discharging said ball from each of said receptacles, each of said ball discharging means including an arm pivotally mounted intermediate its ends on said support means, said arm having one end enterable into the associated one of said receptacles incident to pivotal movement thereof, means carried by said support means and engageable with the other end of said arm for effecting ball discharging pivotal movement of said arm, separate means on said support means for selectively pivoting each of said members about either said common axis or said axes extending parallel to said rib, each of said member-pivoting means including a first lever pivotally mounted intermediate its ends on said support means for engagement of one end thereof with the underside of the associated one of said members at a point located in spaced relation to and on one side of said common axis and in spaced relation to and on one side of the associated one of said axes extending parallel to said rib, a first element carried by said support means for engagement with the other end of said first lever to cause pivotal movement thereof and of the associated one of said members in one direction about said common axis, a second lever pivotally mounted intermediate its ends on said support means for engagement of one end thereof with the underside of the associated one of said members at a point located in spaced relation to said common axis on the side thereof opposite from said one side and in spaced relation to and on said one side of the associated one of said axes extending parallel to said rib, and a second element carried by said support means for engagement with the other end of said second lever to cause pivotal movement thereof and of the associated member in the direction opposite to said one direction about said common axis, whereby said members can be pivoted about said axes parallel to said rib incident to common pivotal movement of the associated first and second levers.

4. A toy comprising support means, a pair of members disposed on said support means in closely spaced, opposing relation to each other, each of said members having a ball-receiving means therein, means pivotally connecting each of said members to said support means for tilting movement relative thereto, a pair of separate means carried by said support and associated respectively with each of said members, each of said separate means being engageable with the associated one of said members to provide tilting thereof about a pair of axes extending generally horizontally and disposed perpendicular to one another, whereby said member may be manipulated toward and away from the opposing member as well as from side to side, the adjoining edges of said members being normally essentially coplanar to permit movement of the ball from one member to the other, and means carried by said support for movement relative to said ball-receiving means to eject a ball deposited therein.

5. A top comprising support means, a pair of members disposed on said support means in closely spaced, opposing relation to each other, each of said members having a plurality of ball-receiving means therein, means pivotally connecting each of said members to said support means for tilting movement relative thereto, a pair of separate means carried by said support and associated respectively with each of said members, each of said separate means being engageable with the associated one of said members to provide tilting thereof about a pair of axes extending generally horizontally and disposed perpendicular to one another, whereby said member may be manipulated toward and away from the opposing member as well as from side to side, the adjoining edges of said members being normally essentially coplanar to permit movement of the ball from one member to the other, and means carried by said support for movement relative to one of said ball-receiving means in each of said members to eject a ball deposited therein.

References Cited in the file of this patent

FOREIGN PATENTS

907,022 France ---------- June 4, 1945

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,061,312 October 30, 1962

Marvin I. Glass et al.

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, line 72, strike out "about either said common axis or the associated" and insert instead -- at a point located in spaced relation to and on one --.

Signed and sealed this 2nd day of April 1963.

(SEAL)

Attest:

ESTON G. JOHNSON

Attesting Officer

DAVID L. LADD

Commissioner of Patents