United States Patent [19]

Werner

[11] **3,907,293**

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[54] **GAME APPARATUS**

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[73] Assignee: **Fred N. Schwend**, Arcadia, Calif. ; a part interest

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[52] **U.S. Cl.** ..... **273/85 A**; 273/85 F; 273/119 R; 273/129

[51] **Int. Cl.²** **A63F 7/06**; A63F 7/10

[58] **Field of Search** ..... 273/85 A, 85 F, 129 R, 273/119 R, 119 A, 122

[56] **References Cited**

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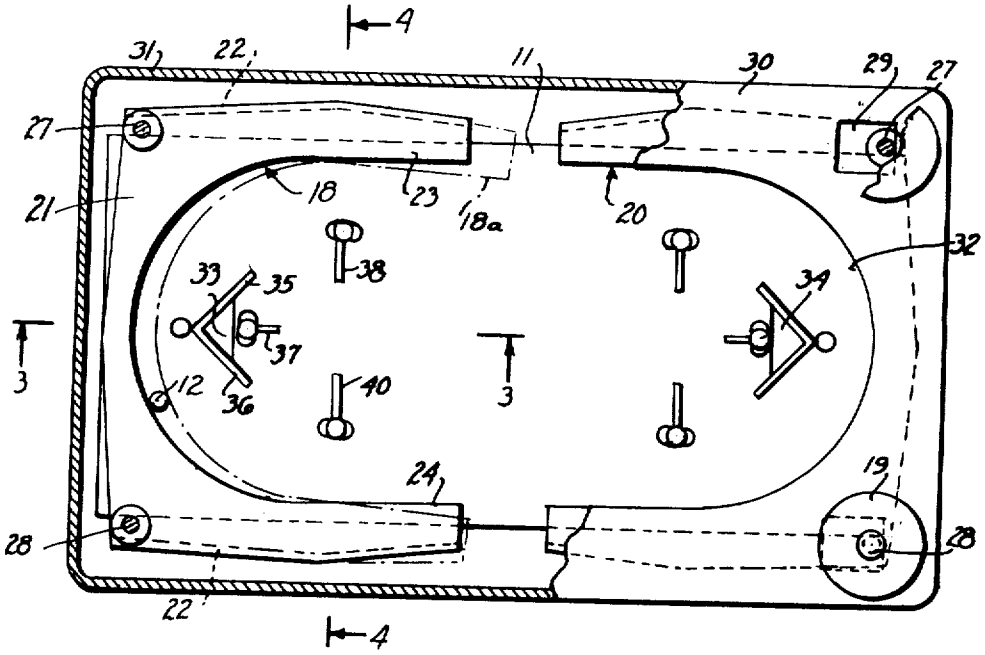
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[57] **ABSTRACT**

A game comprising a playing board and two opposing U-shaped ball driving members located adjacent opposite ends of the board and moveable thereover in different directions to propel a ball over the board and toward goals located adjacent the opposite ends of the board. Swinging paddles simulating hockey players or the like are connected to the driving members in such a manner that movement of the drive members in certain directions actuate certain of the paddles and movement of the driving members in other directions actuate certain others of the paddles.

10 Claims, 5 Drawing Figures



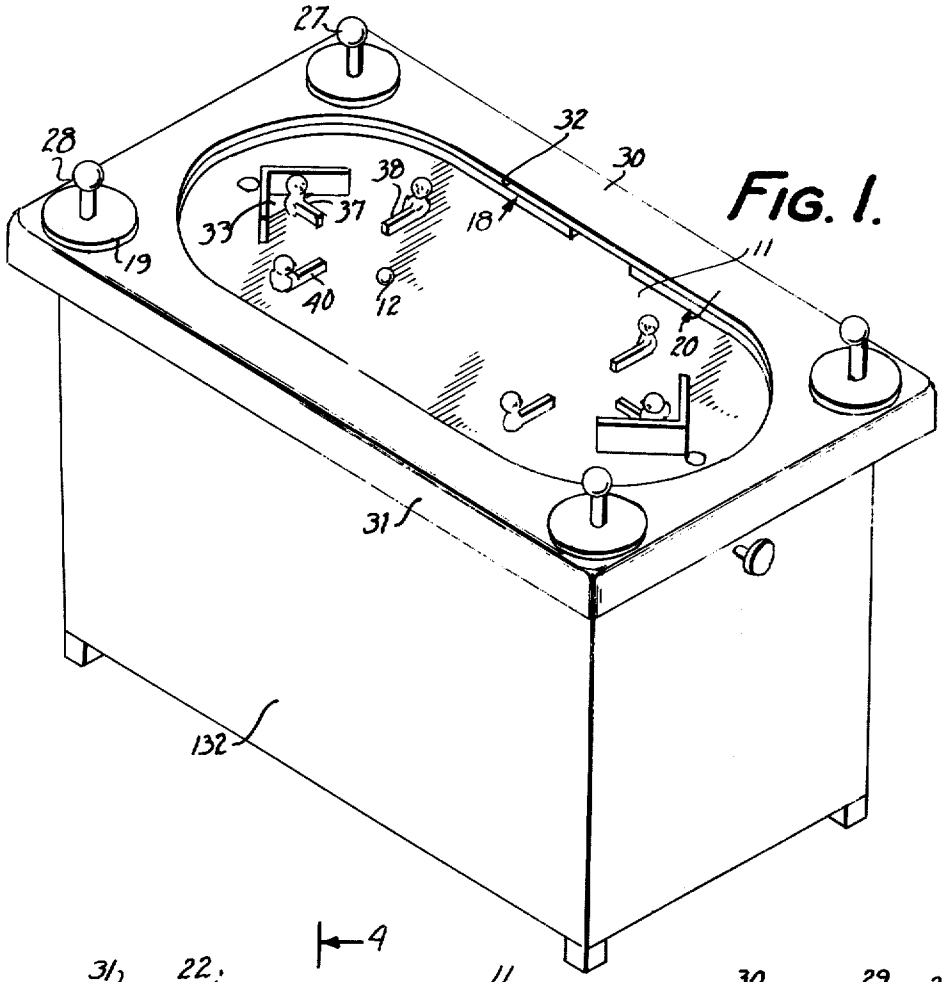

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FIG. 1.

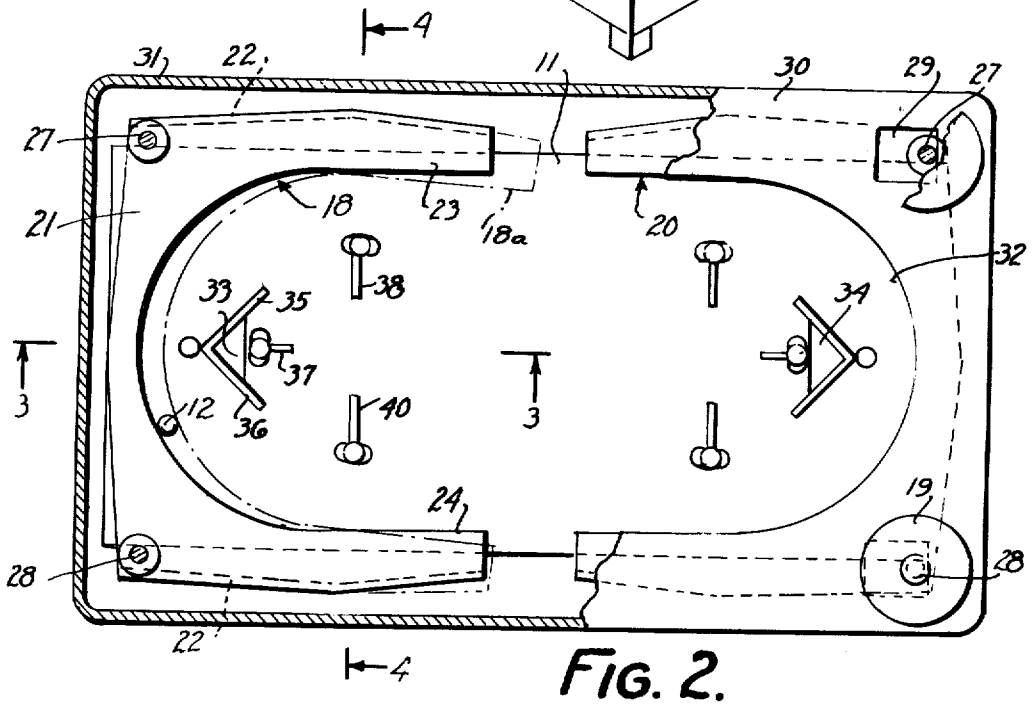

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FIG. 2.

FIG. 3.

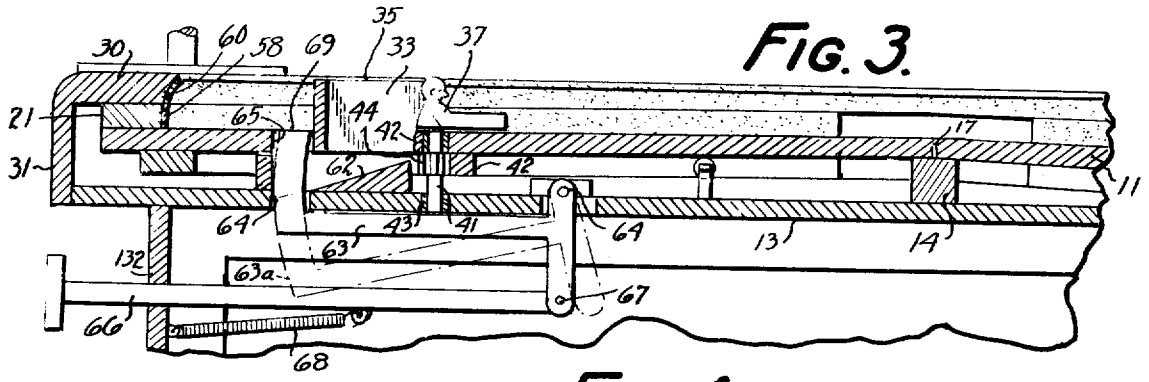


FIG. 4.

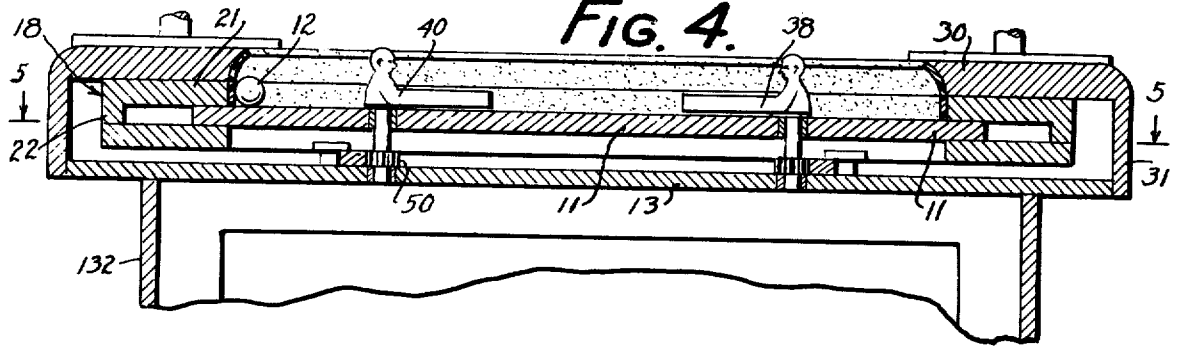
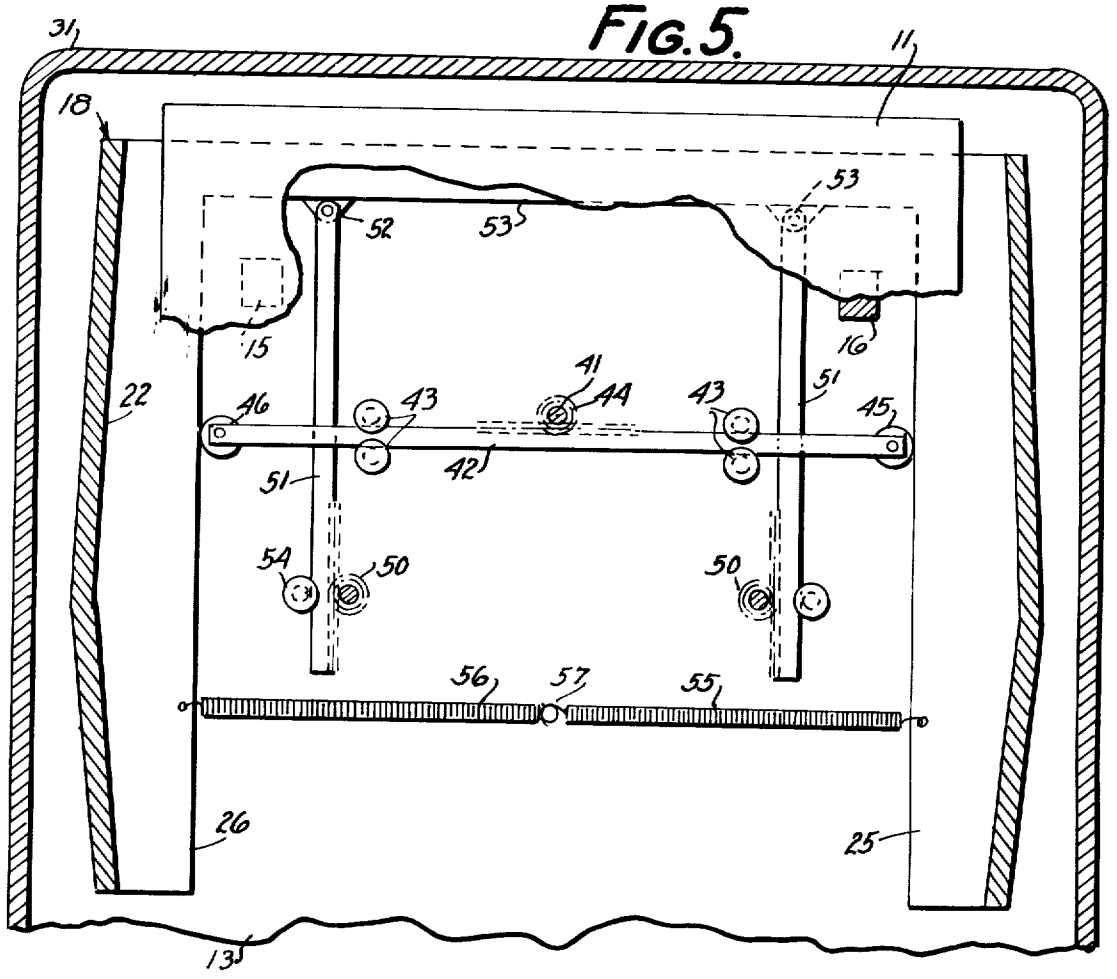


FIG. 5.



GAME APPARATUS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to games and has particular reference to a competitive game in which two players oppose each other and actuate devices to propel a ball or puck to certain goals.

2. Description of the Prior Art

Games simulating hockey games are well known in which swinging paddles, simulating hockey players or the like, are located in different positions on a playing board and are swung by actual players to strike a ball in an attempt to drive the same toward certain goals. Such games are generally complicated and those of which applicant is aware of, have dead spots or areas out of reach of the swinging paddles. These are generally near the outer boundaries of the game board. Thus, if the ball happens to move into such a dead spot, the board must either be tilted to move the ball within the zone of movement of one of the paddles or the ball must be picked up and placed within the zone of a paddle.

SUMMARY OF THE INVENTION

The present invention provides a game apparatus having a game board with two substantially U-shaped drive members movable thereover. The members face each other to substantially define an enclosure for a ball and are movable limited amounts in all directions by the players to propel the ball over the board toward certain goals. That is, the U-shaped members may be moved directly toward each other or they may be moved transversely, causing the legs thereof to strike or deflect the ball and thus drive the same at different angles toward appropriate goals.

Swinging paddles are also driven by the U-shaped members to additionally strike and propel the ball toward a desired goal or to prevent the ball from reaching such goal.

In order to make connected game more interesting and challenging, the paddles are so coinnected to respective ones of the U-shaped drive members that endwise movement of the members will actuate certain only of the paddles whereas transverse movement of the drive members will actuate certain others only of the paddles.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a game apparatus embodying a preferred form of the present invention.

FIG. 2 is a plan view of the apparatus, with parts in section.

FIG. 3 is a longitudinal sectional view through one end of the apparatus and is taken along line 3—3 of FIG. 2.

FIG. 4 is a transverse sectional view taken along the line 4—4 of FIG. 2.

FIG. 5 is a sectional plan view of one end of the apparatus and is taken substantially along the line 5—5 of FIG. 4.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The game apparatus comprises a rectangular game board 11 having a smooth upper surface over which a ball 12 may roll. The board 11 is supported above a

base member or panel 13 by a spacer block 14, FIG. 3, at its center and by blocks 15 and 16 at each end. The center block 14 has a slightly greater height than the blocks 15 and 16 and a kerf or slot 17 is cut across the underside of the board 11, enabling the board to bend across its mid portion so that both ends thereof slope downward slightly, enabling the ball to roll from the center toward either end.

Two opposing substantially U-shaped drive members 18 and 20 are slideably mounted on the game board 11 adjacent opposite ends thereof. Each drive member comprises an upper U-shaped slide 21 which slideably rests on the board 11. Outer depending walls 22 are integral with the legs 23 and 24 of each member, to which are suitably attached retainer slides 25 and 26, the latter being slideably engageable with the undersurface of the board 11.

Each of the members 18 and 20 has a pair of handles 27 and 28 secured thereto and extending upwardly through openings formed in a cover wall or panel 30. The latter extends over the members 18 and 20 and has depending side walls 31 which are suitably attached to the base member 13. The base member 13, in turn, is suitably secured to the top of a box-like supporting base 32 to maintain the apparatus at a convenient operating height above the floor.

The openings 29 are preferrably rectangular, allowing a greater endwise movement of the members 18 and 20 than lateral movement. However, the shape of such openings may be readily changed to change the operating characteristics of the members 18 and 20. lengths 19 are fitted over the handles 27 and 28 to cover the openings 29. Also, it will be noted that the openings 29 permit rocking or curvilinear movement of the drive members 18 and 20 as well as rectilinear endwise and lateral movement. For example, a drive member i.e. 18, may be moved into its alternate position shown by the dot-dash lines 18a in FIG. 2 enabling the leg 23 thereof to deflect the ball 12 toward different points along the board 11. Preferably, the legs 23 and 24 of the drive members 18 and 20 are of such lengths that such members may be advanced toward each other their fullest extent, as limited by the edges of the openings 29, without striking each other.

The cover panel 30 has an oblong opening 32 therein which defines the playing field. Such opening is directly aligned with the inner surfaces of the drive members 18 and 20 when the latter are retracted and centered laterally, as shown in FIGS. 1 and 2.

Two triangular openings 33 and 34 are formed in the playing board 11 adjacent opposite ends thereof to form opposing goals. Each opening is bounded along the two lateral sides thereof by converging walls 35 and 36 so that the ball 12 can only be driven into the opening from the opposite end of the field.

Three swinging paddles, 37, 38 and 40 simulating hockey players and their sticks, are located adjacent each end of the board 11. Each paddle is mounted on a shaft 41 journaled in bearings 42 and 43 provided in the board 11 and base 13, respectively. Paddle 37, which simulates a goalie, is located directly in front of one of the triangular openings, i.e. 33, and has a pinion 44, FIGS. 3 and 5 attached to the shaft 41 thereof, the pinion meshing with a gear rack 42 slideably supported for endwise movement by spaced guide studs 43 secured to the base member 13. Rollers 45 and 46 are rotatably mounted on the outer ends of the rack 42 and

ride along the inner edges of the retaining slides **25** and **26**, respectively of the member **18**. Thus as the drive member **18** is moved laterally, the rack **42** will impart a swinging movement to the goalie paddle **37**. However, when the drive member **18** is moved endwise toward the opposing drive member **20**, no movement will be imparted to the paddle **37**.

Preferably, the pinion **44** is of such diameter that full transverse movement of the member **18** from its central position shown in FIGS. **1, 2** and **5** will cause the goalie paddle **37** to swing through an arc of **90** from its illustrated centered position. Thus, if properly manipulated the goalie paddle **37** could prevent the ball **12** from being driven into the opening **33**.

The paddles **38** and **40** are supported for swinging movement in a manner similar to that of the goalie paddle **37**, as will be seen in FIG. **4**. and each carries on the shaft thereof a pinion **50** meshing with a gear rack **51** which is pivotally connected at **52** to a crosspiece **53** forming part of the associated drive member, i.e. **18**. A guide stud **54** attached to the base member **13** maintains the rack **51** in mesh with the pinion **50** and also permits a small rocking movement of the rack when the drive member **18** is moved laterally. It will be noted that when the member **18** is moved endwise the racks **51** will impart counter rotating movements to the paddles **38** and **40**. However, lateral movement of the member **18** will not impart appreciable rotation to either of such paddles.

A pair of tension springs **55** and **56**, FIG. **5**, are tensioned between a post **57** extending from a base member **13** and respective ones of the retainer slides **25** and **26** to normally hold the member **18** in its centered lateral position depicted in FIGS. **1, 2** and **5** and to return the same to such position following movement thereof.

It is essential that the diameter of the ball **12** be greater than the thickness of the slide **21**. Therefore, if the ball should attempt to roll between the opposing ends of the legs of members **18** and **20** it will be prevented from doing so by the overlying edge of the opening **32** in the cover panel **30**.

Thin strips **58** and **60** of rubber or other elastomeric material are preferably attached to the inner edges of the members **18** and **20** and the opening **32** in the cover panel to reduce noise of contact and to aid in impelling the ball **12** from engagement therewith.

An inclined ramp **62** is mounted on the base member **13** directly below each of the openings forming a goal, i.e. **33**, effective to direct the ball **12** as it passes through the opening, against the upwardly extending portion of a ball return lever **63**. The latter is pivoted at **64** in a bearing mounted on the base member **13** and its upwardly projecting portion extends through holes **64** and **65** in the base member **13** and board **11**, respectively, normally terminating flush with the upper surface of the board **11**. A plunger **66** extends through a slide bearing in the wall of the base **32** and is pivotally connected at **67** to a depending extension of the ball return lever **63**. A spring **68** is tensioned between the plunger **66** and the wall of base **32** to normally maintain the lever **63** in its upper illustrated position. When the plunger **66** is pressed inward, the lever **63** will be rocked into its dot-dash line position **63a** permitting the ball to further roll onto the upper surface **69** of the return lever. Thus, when the plunger is released, the spring **68** will cause the lever to raise the ball through opening **65**, whereupon it may roll into contact with the inner surface of the drive member **18**, to be propelled thereby.

In operating the apparatus, the ball will first roll by gravity to the nearest end of the table. The players grasp adjacent handles **27** and **28** and by manipulating the drive members **18** and **20**, then propel the ball **12** back and forth, each attempting to drive the same into the opposite goal opening **33** or **34**.

I claim:

1. A game comprising

a game board for supporting a ball for rolling movement,

a pair of substantially U-shaped ball propelling members adjacent opposite ends of said board and supported for movement over said board,

said members being separated from each other,

each of said members having a pair of legs integral therewith and spaced apart a distance substantially greater than the diameter of said ball,

said legs extending at least substantially parallel to each other along the length of said board,

the legs of one of said members facing the legs of the other of said members to substantially form an enclosure for said ball,

each of said members being movable relative to the other to propel said ball over said board toward the other said member.

2. A game as defined in claim **1** wherein said members have a thickness less than the diameter of said ball,

a cover panel extending over said members,

said cover panel having an opening therein defining a playing field.

3. A game as defined in claim **2** wherein said opening has substantially the same width as the distance across said legs.

4. A game as defined in claim **2** comprising

cooperating means on said members and on said cover panel for permitting relative limited movement only of said members relative to each other and to said cover panel.

5. A game as defined in claim **2** comprising

additional openings in said cover panel, and

manipulating handles connected to said members and extending through said additional openings for manipulating said members,

said additional openings permitting limited movement of said members relative to each other.

6. A game as defined in claim **2** comprising

spring means for normally maintaining said members in predetermined positions relative to each other and to said opening.

7. A game as defined in claim **1** comprising

means for limiting movement of said members relative to each other.

8. A game as defined in claim **1** comprising

means for limiting movement of said members in a first direction toward and away from each other, and

means for limiting movement of said members laterally relative to each other by an amount different than said first mentioned means.

9. A game as defined in claim **1** comprising

paddles,

means supporting said paddles for swinging movement over said board,

and means connecting said paddles to said members whereby movement of said members causes swinging of said paddles.

10. A game as defined in claim **1** comprising

a plurality of paddles,

means supporting said paddles for swinging movement over said board,

means connecting certain of said paddles to a first one of said members whereby movement of said first member toward the other of said members causes swinging of one of said paddles only, and

means connecting certain other of said paddles to said first member whereby movement of said first member transversely of said other member will cause swinging of said other of said paddles only.

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