

[54] BALANCING MAZE GAME

122,157 1/1919 Great Britain..... 273/110

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[57] ABSTRACT

A balancing game wherein a maze formed with upright walls on a member supported on a spring is traversed with a moving object by counterweighting the outer edges of the support with other objects to get the moving object to pass through the maze with the fewest number of balancing objects. The unit is supported on a spring so that it will tilt, twist, and cause erratic rolling when the balancing objects are placed in position.

The moving object is initially dropped through an inlet opening in the top of a center housing on said member, which has a discharge opening on the side at the level of said member.

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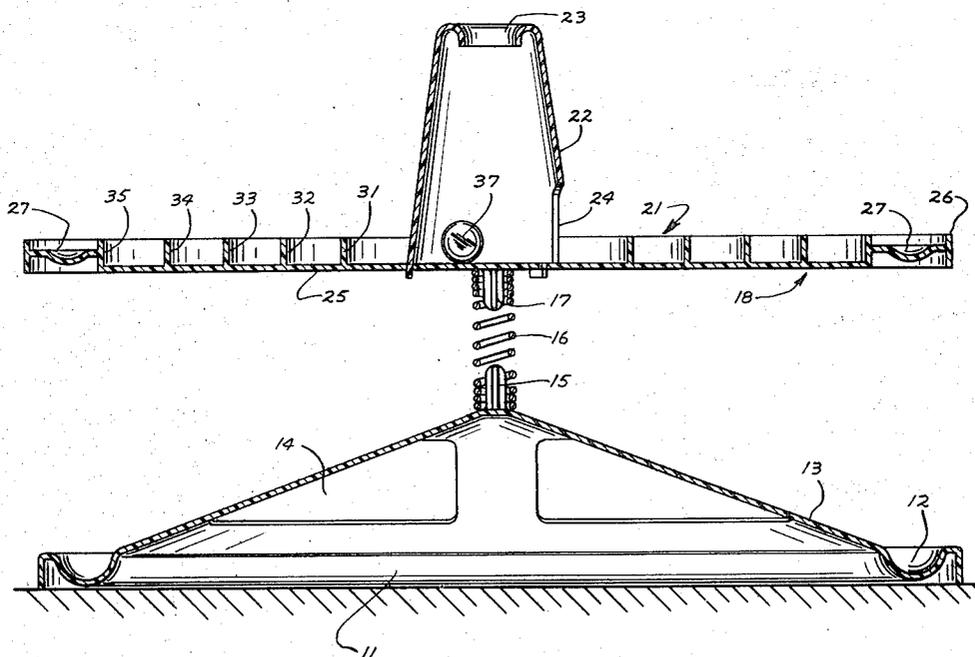
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1 Claim, 4 Drawing Figures



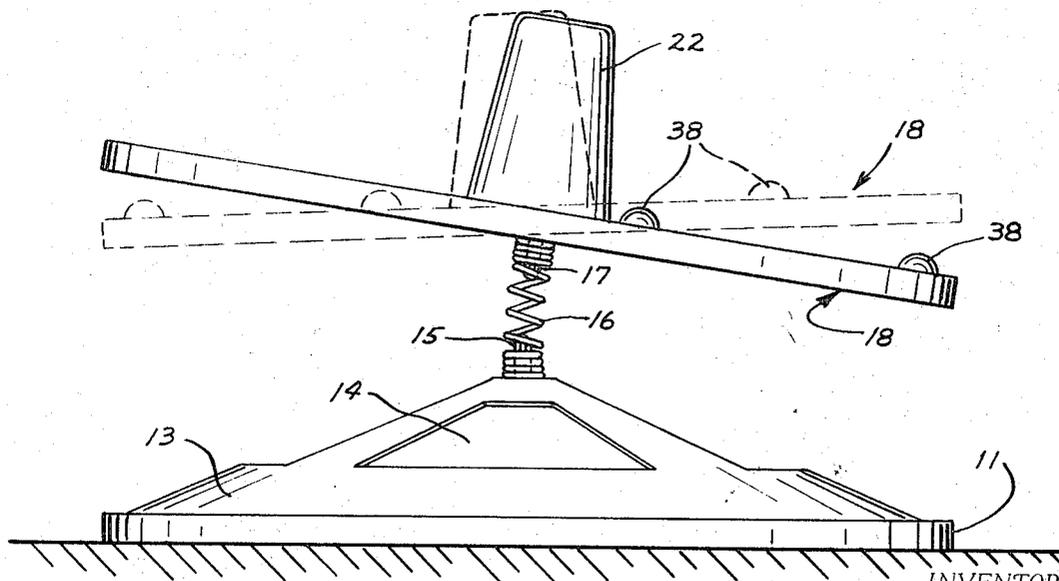
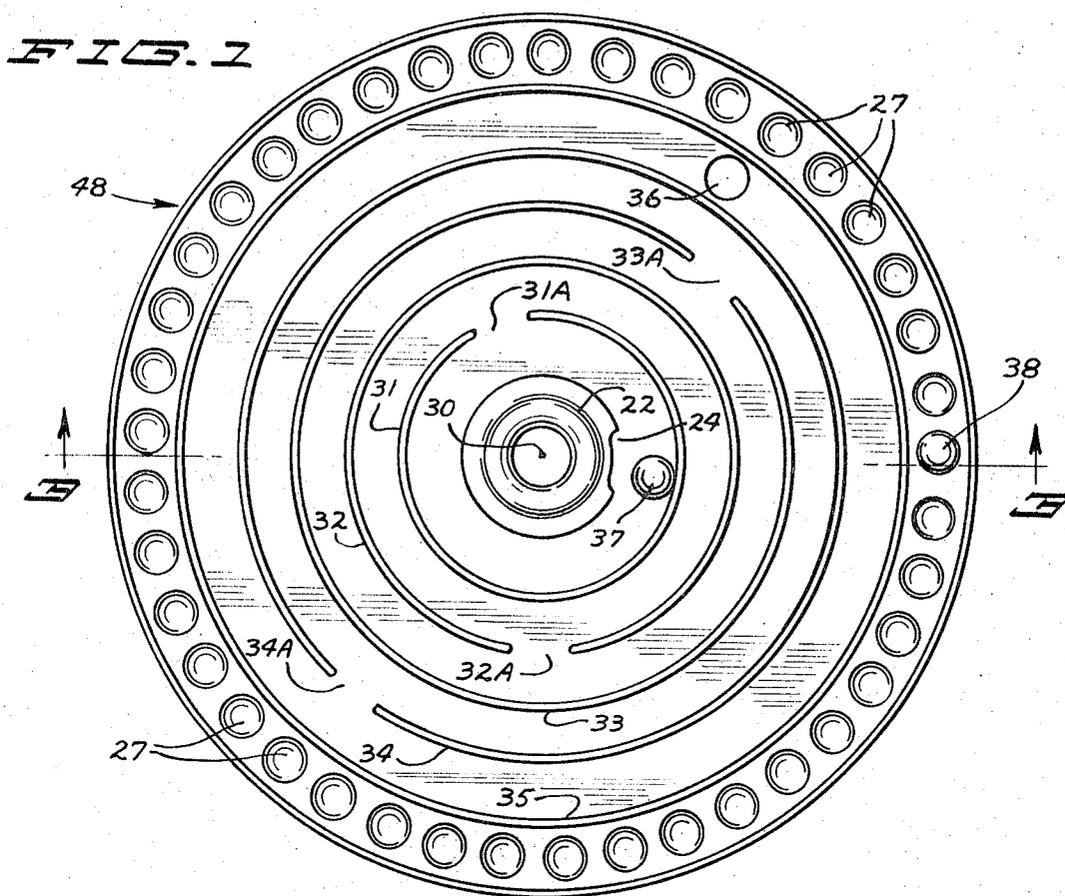
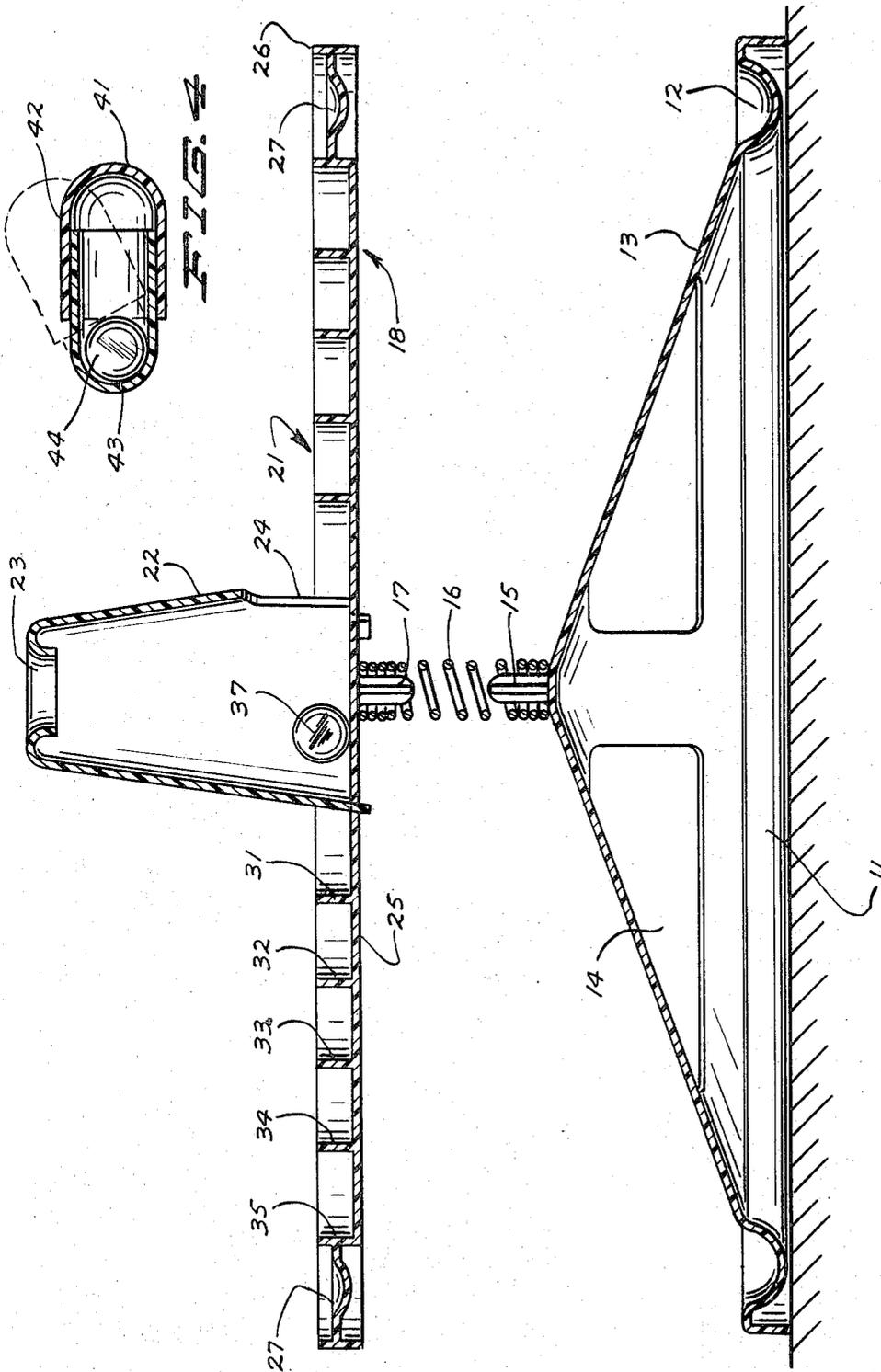


FIG. 2

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BALANCING MAZE GAME

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a balancing game to move an object from a starting position to a finishing position by balancing or counterbalancing a member.

2. Prior Art.

Maze games of course have been previously known in the art, such as games using magnetically attracted objects that are moved through a maze to amuse a child. However, the present maze game combines the elements of skill, and knowledge of physical laws of inertia and counterweighting, so that the game has attraction for all ages.

SUMMARY OF THE INVENTION

A balancing game wherein it is desired to move an object from a starting point to a finish point through obstacles by counterbalancing a member on which the object is moving. In particular, the obstacles in the present invention comprise a maze type layout on a balance plate that can be tilted in various directions about its support. The tilting is done with balancing weights placed around the periphery of the balancing plate in receptacles provided for the weights in order to move a center object, such as a rolling marble, through the maze using the smallest number of counterbalance weights possible.

The balance plate is supported on a torsion spring that permits the plate to tilt in all directions, and also to twist in torsion about an upright axis as it is being played. The rules of the game can be varied so that two players can have contests to determine who has the most skill in moving the object through the maze, or as an alternative, one player can attempt to move the object through the maze with the counterweights, and the opposing player can attempt to offset the first player's counterweight attempts by adding additional or "counter" counterweights of his own after a preselected number of moves of the first player.

The moving object can be an ordinary marble, other spherical object, or can be an erratically rolling or tumbling object such as the tumble bug disclosed, which comprises a steel marble inside an elongated plastic capsule so that the marble will roll in the capsule, and cause the capsule to tumble erratically as it moves from one place to another.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top plan view of a balancing maze game made according to the present invention;

FIG. 2 is a side elevational view of the device in FIG. 1;

FIG. 3 is a sectional view taken as on line 3--3 in FIG. 1; and

FIG. 4 is a sectional view of a tumble bug playing piece utilized with the present device.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The balancing maze game illustrated generally at 10 comprises a base member 11, which as shown has an annular trough 12 extending around the periphery thereof, and this trough runs all the way around the pe-

riphery of the base member. The center portion 13 of the base member extends upwardly in a general cone shape, and has openings 14 therein for reduction of weight and material used. A support stud 15 is positioned in the top center of the support member 11, and this stud 15 is of size to slidably receive a coil spring 16.

The spring 16 is of any desired weight, but not very stiff, and spring 16 in turn slidably receives a stud 17 that is attached to a maze balancing plate assembly 18. The plate assembly 18 includes an obstacle course 21 in the center, which will be more fully explained, and a central starting station or location comprising a center cone 22. The cone 22 has an inlet opening 23 at the top thereof, and an outlet opening 24 in its side wall positioned adjacent the top surface of the plate like member 25 of the maze plate assembly. The plate member 25 has an outer upstanding rim 26, and adjacent this outer rim there are a plurality of upwardly facing spaced depressions or pockets 27 that are positioned annularly around in spaced relationship, to provide balance weight or counterweight receptacles. The plate 25 has a number of obstacles for impeding movement of a game member along the upper surface of the plate. As shown, the obstacles comprise part annular (almost all closed) raised walls which are concentric with the central axis 30 of the unit and are spaced outwardly from the center cone member 22. There is a first wall 31, which is continuous except for an opening 31A; a second concentric wall 32 which is continuous except for an opening 32A that is positioned almost diametrically opposed from opening 31A; a third wall 33, which has an opening 33A; a fourth wall 34, which has an opening 34A; and a final outer continuous wall 35 which is inwardly from receptacles 27. Plate 25 has an opening 36 therethrough between the wall 34 and the wall 35. Each of the spaces between the adjacent walls on the top of the plate 25 defines a rolling path for the member to be moved from the starting cone 22 to the opening 36. As shown, in FIG. 3, this game member is a marble 37, which is shown inside the center cone 22. It should be noted that the opening 36 is vertically above a portion of the center portion 13 of the base 11, so that if the marble drops through this opening 36 it will strike the upper surface of the support 13 adjacent the trough 12 and will roll into the trough 12.

As can be seen, the plate assembly 18 will tilt and twist with respect to the base member 11 because of the spring 16, which is the only connection or support for this plate assembly.

The game is played by placing the marble 37 which is the object that is to be moved through the maze formed by the walls 31 through 34, into the cone 22 through the opening 23. If the unit is set up properly, the marble will stay within the cone. The plate 25 does not necessarily have to be level at this stage but it should be positioned so as to insure that the marble 37 will not roll out the opening 24. Then, a player can start by adding a balancing counterweight 38, which also is a marble as shown, into one of the pockets 27, and this will tilt the balancing plate assembly, because the spring 16 will be light enough to permit this tilting, causing the marble 37 to roll outwardly through the opening 24. Then the next marble or counterweight to be added into the pockets 27 will be positioned so that it will cause the marble 37 to roll toward the opening 31A along the inside surface of the wall 31 and out into

the path between the wall 31 and the wall 32. A third counterweight or balance weight marble will be added to one of the pockets 27 to make the object 37 roll toward opening 32A and into the path between walls 32 and 33. Another counterweight marble (or marbles if necessary) will be added to pockets 27 to make the playing object 37 roll through opening 33A, and thereafter additional counterweights will be added to the pockets 27 in selected positions to make the marble roll through opening 34A, and more counterweights will be added to different pockets 27 until the playing piece marble rolls through the discharge opening 36. One way of scoring is to determine the number of counterweight marbles or objects 38 that are placed into pockets 27 in order to make the playing object 37 move from its starting position to the discharge opening 36.

Another way of playing, using the same game apparatus is for two players to play. The first player would be the one that would be attempting to get the marble or playing piece 37 from its starting position or cone 22 to the discharge opening 36. The first player would be permitted to add two of the counterweights 38, and, every third counterweight placed in the pockets 27 would be placed there by the second player or opponent to attempt to overcome the effect of the first player's counterweights. It would be more difficult to get the object 37 over to the discharge opening 36. The number of counterweight objects used would again be the determining factor for the winner. The player that used the fewest number of counterweights to move the object 37 through the maze would be the winner after both players had attempted to move the object 37 toward the discharge opening as previously described.

In FIG. 4, an alternate playing object is shown. This object 41 can be used in place of the marble 37, and as shown, it is a plastic capsule made up of two sections 42 and 43 telescoped together, and containing a steel marble or ball 44 that can roll between the ends of this elongated capsule. When the steel marble tends to roll, one end of the capsule will raise up as shown in dotted lines and will rotate about the marble 44 in an erratic rolling action which is more like a tumbling action than a true rolling. The object 41 is more difficult to use because of its erratic action.

In addition to the maze shown, of course various outlines of maze walls could be used, or other obstacles could be used to inhibit the progress of the object.

The skill in the game comes from proper placement of the balancing counterweights 38. For example, as shown in FIG. 1, the counterweight 38 could be placed closer to the top of the figure to put more of a roll on the object marble 37 to tend to urge it toward the opening 31A initially. Then additional counterweights would be placed over in the quadrant shown generally at 48, to tend to get the marble 37 to roll toward the opening 31A and keep rolling after it has passed through the opening 31A between walls 31 and 32 toward the opening 32A.

Depending on the amount of roll from stored energy that is in the spring 16 tending to keep the plate twisting or turning, as well as tilting, the next counterweight can be placed over near where the first counterweight 38 is shown.

Dropping the counterweights into pockets 27 also plays a factor in the skill of the game so that the inertia of the rolling object tends to keep it rolling toward the

next opening in sequence, to minimize the number of counterweights that have to be used. The hand must never touch the plate assembly when the counterweights are added. The weights must be released to drop into the receptacle at a height selected by the player.

One feature of the present device that makes the game a game of skill is that the object or marble 37 also changes the balance of the plate number as the marble rolls through the obstacles. The balance point thus continually shifts. In order to have proper action with a rolling member, it has been found that the marble 37 should be of substantially equal weight to the counterweights 38, this prevents too much action from the rolling marble, and yet provides the shifting of the plate which enhances the play action.

The obstacles defining a path need not be raised from the surface of the playing plate. For example, random holes through the plate 25 could be the obstacles, and if a player dropped the marble 37 through a hole before the member got to the desired destination he would lose. Also pockets such as pockets 27 could be randomly placed in surface of plate 25. If a playing marble dropped into a pocket it would thus stick above the surface of the plate 25 and form a further obstacle to movement of a new marble 37 that would be started. Therefore the means defining an obstacle path could include randomly placed holes, raised member, or the walls shown.

The walls shown are preferably made high enough to prevent the marble 37 from jumping over the walls from path to path. The walls are also carefully spaced in relation to the size of member 37 so the path between the walls permits the playing marble 37 to roll without excessive side to side movement.

The openings in the walls are also of a selected size, about the same width as the path between adjacent walls. The opening size is such that if the marble 37 is rolling too fast it will roll right past the opening. Therefore, a further element of skill, namely controlling the rolling speed of the marble 37, is present. The openings in the walls are offset as shown on purpose to permit planning of the movement of the marble 37 when the counterweights are added. The marble 37 usually has a long way and a short way to travel in its path from an opening to the next opening. The skillful player counterweights to take advantage of this placement of the openings.

The spring 16 permits the plate 25 to gyrate, bounce, twist and tilt to influence the rolling marble 37 and thus to give elements of skill. The twisting or torque action affects the rolling marble 37 to enhance its playability.

The test of skill is present each time a player plays, and the number of counterweights utilized to move the object 37 through the maze can change each time the player plays as well. Thus it forms a game of amusement that even small children can play as well as adults and the interest is maintained at all age levels. The device can be used for amusement of only one player, or for games of skill. The unit is easily molded from plastic.

What is claimed is:

1. A balancing game comprising a support base, a balancing board member having an upper surface, a ball game member for movement on said upper surface, resilient means attached between said support

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base and said board member to support said board member for at least tipping movement about a generally central upright axis, a plurality of generally upright wall means on the upper surface of said board member forming barriers to movement of said ball member across said upper surface, said wall means being positioned to form a defined maze path between a first portion of said upper surface adjacent said central axis and a second portion of said upper surface adjacent the periphery thereof, said ball member being movable under gravity along said upper surface and of size to move in said maze path when said upper surface is tipped, a plurality of individual counterweights, a plurality of counterweight retaining means adjacent the periphery of said board member and removed from said maze path, said resilient means being of size in relation to said counterweights whereby each of said counterweights will affect the balance of said board member and will

6

cause tipping of said board member so that said ball member may be made to move along said maze path under gravity by positioning said counterweights in said counterweight retaining means, and a center housing on said board member for initial positioning of said ball member, said center housing being adjacent said central upright axis and comprising a substantially continuous upright wall extending to a level above said wall means and having a generally upwardly open ball inlet opening defined therein of size to admit said ball, and said housing having a discharge opening defined therein, said discharge opening being positioned on a level to permit said ball member to roll on said upper surface when the ball member is within said housing and to roll through said discharge opening into said maze path.

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