

[54] **DICE MAZE PUZZLE**

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[51] Int. Cl. **A63b 67/00**

[58] Field of Search **273/1 R, 195 R, 108-117, 273/153 R, 153 S, 155, 156, 157 R, 157 A, 146; 46/1 R**

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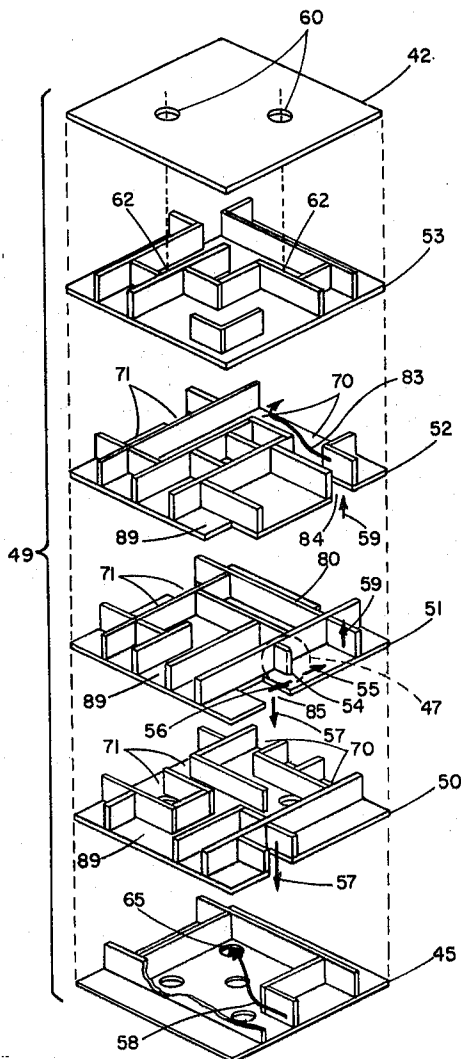
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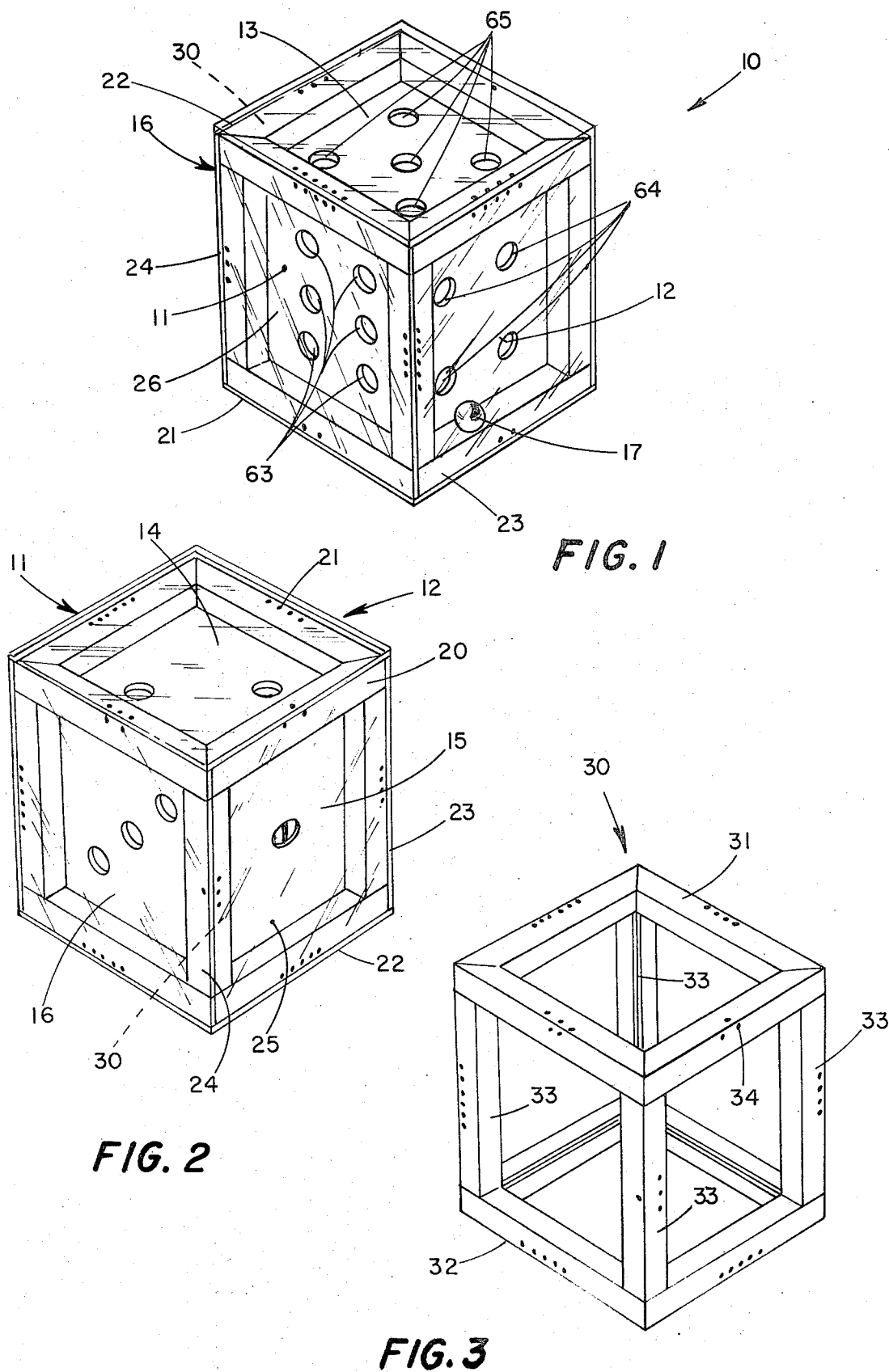
[57] **ABSTRACT**

A cube having a maze contained therein through which a ball is movable. The puzzle has a transparent outer enclosure containing the maze and ball. Non-transparent intermediate walls are positioned inwardly of each transparent wall providing a space on each side of the cube in which the ball is freely movable. The nontransparent intermediate walls are provided with the holes through which the ball is passable to the maze within the intermediate walls. One hole is bisected by an inner wall thereby allowing the ball to go in one of two opposite directions. The maze extends vertically and horizontally through the cube.

8 Claims, 5 Drawing Figures



SHEET 1 OF 2



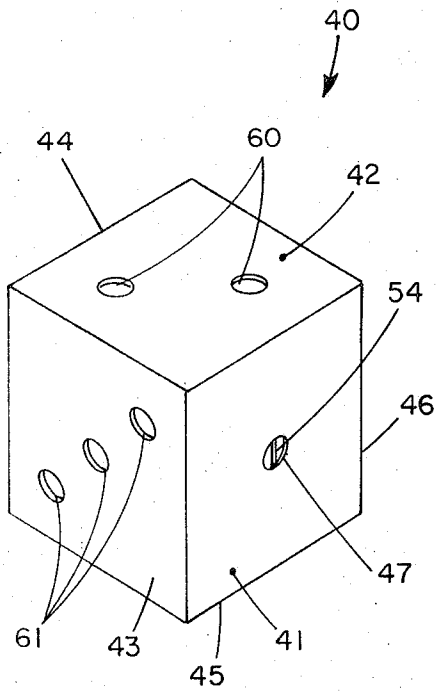


FIG. 4

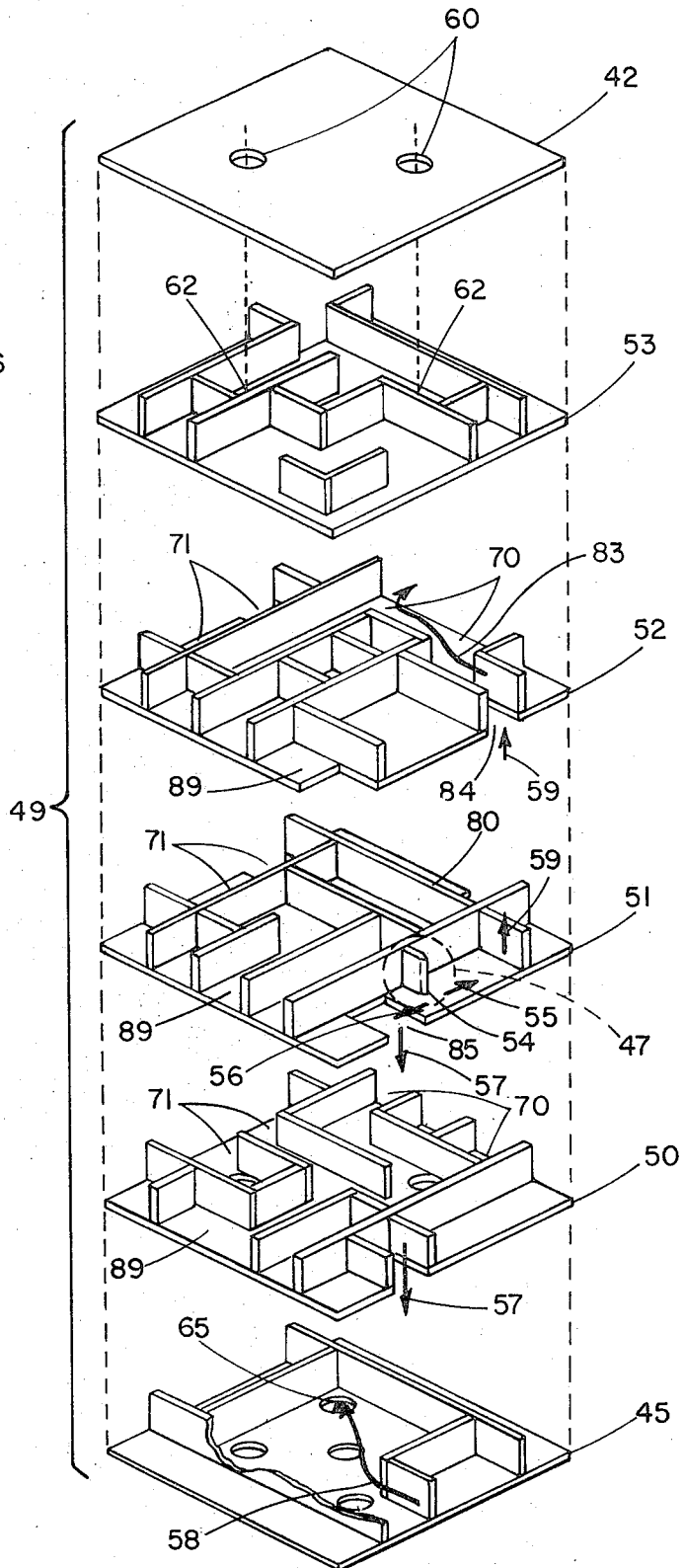


FIG. 5

DICE MAZE PUZZLE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention is in the field of maze puzzles.

2. Description of the Prior Art

Disclosed herein is yet another puzzle having a maze therein with a ball movable through the maze. The puzzle disclosed herein is better than the prior art puzzles in that the ball is movable to each side of the cubical main body of the puzzle. Each side of the cubical main body is provided with a different number of holes thereby giving an appearance of a die. In addition, a wall bisects one of the holes thereby providing for the travel of the ball in one of two opposite directions depending on which side of the hole the ball enters. Also, markings are provided on the main body so as to indicate the number of holes on the adjacent sides which are not visible to a person unless the main body is turned over.

SUMMARY OF THE INVENTION

One embodiment of the present invention is a puzzle comprising a ball, a main body having a plurality of inner walls arranged in a maze and a plurality of non-transparent intermediate walls positioned outwardly of and enclosing the inner walls to conceal the maze with each intermediate wall having at least one hole for the ball to pass from the maze and through the intermediate wall, the body having a plurality of transparent outer walls spaced outwardly from and enclosing the intermediate walls forming storage areas, the ball is rollable from a first position between one of the outer walls and one of the intermediate walls by tilting and moving the puzzle until the ball drops through one of the holes in the one intermediate wall and then through the maze and out a hole in another one of the intermediate walls to a second position between one of the intermediate walls and one of the outer walls.

One object of the present invention is to provide a new and improved puzzle.

It is yet another object of the present invention to provide a hidden maze puzzle having a self contained ball which is movable through and to each side of the puzzle.

A further object of the present invention is to provide a hidden maze puzzle having a plurality of holes through which a ball is movable with at least one of the holes having a divider so as to direct the ball in one of two opposite directions depending upon the side of the hole the ball enters.

Related objects and advantages of the present invention will be apparent from the following description.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of a puzzle incorporating the present invention.

FIG. 2 is an opposite end view of the puzzle of FIG. 1 with the puzzle being turned upside down.

FIG. 3 is a perspective view of the spacing frame 30 positioned between the outer walls and intermediate walls of the puzzle of FIG. 2.

FIG. 4 is a perspective view of the intermediate wall assembly positioned within the frame of FIG. 3.

FIG. 5 is an exploded fragmentary view of the maze within the intermediate wall assembly of FIG. 4.

DESCRIPTION OF THE PREFERRED EMBODIMENT

For the purposes of promoting an understanding of the principles of the invention, reference will now be made to the embodiment illustrated in the drawings and specific language will be used to describe the same. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended, such alterations and further modification in the illustrated device, and such further applications of the principles of the invention as illustrated therein being contemplated as would normally occur to one skilled in the art to which the invention relates.

Referring now more particularly to FIG. 1, there is shown a puzzle 10 which has the overall appearance of a die. The die is cubical having six identical sides 11 through 16. A transparent plastic container 20 provides the outer walls of the puzzle and includes a top wall 21 and bottom wall 22 secured to side walls 23, 24, 25 and 26 by means such as adhesives. Positioned immediately inward and adjacent transparent container 20 is a frame 30 which may be made from a material such as wood or plastic. Frame 30 includes a square top wall 31 and bottom wall 32 spaced apart and connected together by vertical struts 33. The struts are spaced apart forming square openings therebetween. Likewise, a square opening is provided in walls 31 and 32. It is understood that although square openings are shown, any type of rectangular opening, circular opening or any other shape of opening is included in the present invention. Spaced immediately inward and adjacent frame 30 is a cubical box 40 which includes six identically sized walls 41 through 46, each of which has a hole for freely receiving a spherical ball 17. A plurality of inner walls are mounted within box 40 and are arranged in a maze for ball 17 to traverse in order for the ball to move from one side of the puzzle to another side of the puzzle.

The number of holes on each of the intermediate walls 41 through 46 is different. The number of holes on each intermediate wall ranges from one hole to six holes with the holes positioned on the body in a dice arrangement. For example, wall 41 is provided with a single hole 47, wall 42 is provided with a pair of holes 60 and wall 43 is provided with three holes 61. Likewise, walls 44, 45 and 46 are provided respectively with six holes, five holes, and four holes.

Frame 30 is made of bars which extend along each edge of box 40 and container 20. The frame bars contact both the intermediate walls of box 40 and the outer walls of container 20 forming a separate rectangular space on each side of the puzzle. Ball 17 is freely movable in each space and may pass from one side of the puzzle to another side of the puzzle only by first passing through a hole in one of the intermediate walls, and then through the maze within box 40 until eventually it exits an intermediate wall. Frame 30 separates each space from every other space so that the ball may move from one space to another space only by passing through the intermediate walls of the maze.

FIG. 5 is an exploded view of box 40 with sides 41, 43, 44 and 46 removed for sake of clarity. Box 40 includes four separate walls 50 through 53 which are connected to and between walls 42 and 45. Walls 45 and 50 through 53 are each provided with a plurality of inner walls arranged in a maze. The maze is not visi-

ble since the intermediate walls 41 through 46 are non-transparent. Walls 50 through 53 are provided with holes to allow the ball to pass from one level to another level. The upstanding walls mounted atop walls 45 and 50 through 53 are respectively secured to the bottom surfaces of walls 50 through 53 and 42 providing an assembly 49 to which intermediate walls 41, 43, 44 and 46 are secured by means, such as adhesives. An inner wall 54 (FIG. 4) bisects hole 47 and is adjacent to the inside surface of wall 41. Thus, when ball 17 drops through hole 47, wall 54 will divert the ball in either the direction of arrow 55 or the direction of arrow 56. That is, the ball will be diverted in either of two opposite directions. Hole 47 is the only hole which is elliptical and bisected by a wall. In the event that the ball moves in the direction of arrow 55, then it will hit wall 80. The ball will then travel upwardly in the direction of arrow 59 through space 84 of wall 52. The ball may then move in the direction of arrow 83 passing through one of the holes 64 (FIG. 1) of wall 46. Two of the holes of wall 46 are aligned with locations 70 of wall 52 whereas the other two holes 64 are aligned with locations 70 of wall 50. Alternatively, the ball may travel in the direction of arrow 56 and then through space 85 of wall 51 in the direction of arrow 57. The ball will continue in the direction of arrow 57 through wall 50 thereby contacting wall 45 and eventually passing through one of the holes 65 of wall 45 as shown by arrow 58. Thus, it may be seen that the ball is movable from a first position such as located between walls 25 and 41 to a second position located between walls 45 and 22. The inner walls are arranged in five separate subassemblies such as shown by walls 45, 50, 51, 52 and 53 which are then stacked together.

A plurality of passages from each side leading to all the other sides are provided by the inner walls. The outer walls are transparent and plastic but do not have any openings thereby preventing the ball from escaping from the puzzle. Holes 64 by side 12 (FIG. 1) are aligned with locations 70 of FIG. 5. Holes 63 by side 11 (FIG. 1) are aligned with locations 71 (FIG. 5) of walls 50 through 52. The three holes 61 of intermediate wall 43 (FIG. 4) are aligned with locations 89 of walls 50 through 52. Holes 60 of wall 42 are positioned immediately over areas 62 of wall 53.

Markings 34 are provided on frame 30 to indicate the number of holes on the adjacent cube side. For example, when viewing the puzzle from the top as shown in FIG. 2, two holes are visible on side 14. Three dots are located on frame 30 as viewed from the top thereby indicating that the adjacent side 16 is provided with three holes. Likewise, a single dot is provided on the frame as viewed from the top thereby indicating that the adjacent side 15 is provided with only a single hole.

By slanting and tilting the puzzle, the ball will roll into any hole. Several games may be played utilizing the puzzle. For example, turn the ball side of the cube up, with this side remaining up, roll the ball into any hole at random. The ball will then fall into your number for the game (at any time the sum of 2 loses, 1 wins). Turn the ball side up and attempt to roll the sum of your game numbers. Do this with ease then start the following games.

Seven-Eleven — Rotate the cube to bring the ball side up, with the ball side remaining up, roll the ball into a selected hole (noting the hole's relative location for future reference). The ball will then fall into your

first score. Now with the ball side up, roll the ball into another selected hole which will add to your first score (seven or 11 wins, two or 12 and over loses).

Craps — Craps is played in the same manner as Seven-Eleven except that you can stop at any time with your score, up to and including 12, and attempt to match that score with a second series of rolls (a sum of 2 anytime loses, seven or 11 does not win on the second series).

Four Ball — Roll the numbers 1, 2, 3, 5, and 6 in any order, and then 4. Number 4 is a loser any other time during the game.

While the invention has been illustrated and described in detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all changes and modifications that come within the spirit of the invention are desired to be protected.

The invention claimed is:

1. A puzzle comprising a ball, a six sided main body having a plurality of spaced apart parallel inner walls each having arranged thereon upstanding walls in a maze configuration, at least one of said upstanding walls of at least one of said inner walls having at least one maze opening, and a plurality of nontransparent intermediate walls positioned outwardly of and enclosing said inner walls to conceal said inner walls with each intermediate wall having at least one hole, and having said at least one hole aligned with said at least one inner wall and said at least one maze opening for said ball to pass from said at least one inner wall and through said intermediate wall, said body having a plurality of transparent outer walls spaced outwardly from and enclosing said intermediate walls forming six separate storage areas with one of said six separate storage areas located on each side of said six sided main body, said body having means mounted thereon separating said storage areas apart and preventing said ball from passing from one storage area to another storage area without first passing through a maze configuration, said ball being rollable from a first position between one of said outer walls and one of said intermediate walls by tilting and moving said puzzle until said ball drops through said at least one hole in said one of said intermediate walls onto said at least one of said innerwalls and then through said maze configuration, then onto at least one other inner wall and through its maze configuration until it reaches said maze opening therein aligned with a hole in another one of said intermediate walls and then out to a second position between said another one of said intermediate walls and another one of said outer walls.

2. The puzzle of claim 1 wherein said body is a cube with the number of holes of each of said intermediate walls is different and ranging from one to six and with the holes positioned on said body in a die arrangement.

3. The puzzle of claim 2 wherein one of said holes is bisected by one of said upstanding walls to divert said ball in either of two opposite directions.

4. The puzzle of claim 3 wherein the hole bisected is the only hole on one of said intermediate walls.

5. The puzzle of claim 4 wherein said means includes spacing bars extending along each end of the cube, said bars contact said outer walls and said intermediate walls forming said storage areas on each side of the

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cube in which said ball is freely movable, said bars separate each space from every other space with said ball being movable from one space to another space only by passing through said intermediate walls and said maze configuration.

6. The puzzle of claim 5 and further comprising markings on each side of the cube to indicate the number of holes on the adjacent cube sides, said markings being arranged in 24 different sets with four sets positioned on each side of said six sided main body.

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7. The puzzle of claim 6 wherein said maze configuration includes a plurality of passages per each side which lead to other sides, and said outer walls being imperforate thereby preventing said ball from escaping said main body.

8. The puzzle of claim 6 wherein said markings include a number of dots marked on said bars ranging from one dot to six dots in each set.

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