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Stafford

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[54] **HIDDEN MAZE PUZZLE CONTAINED BALL**

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[51] **Int. Cl.** **A63f 7/00**

[58] **Field of Search** ..... 273/1 R, 1 M, 108–117, 273/123 R, 153 R, 153 S; 46/1 R

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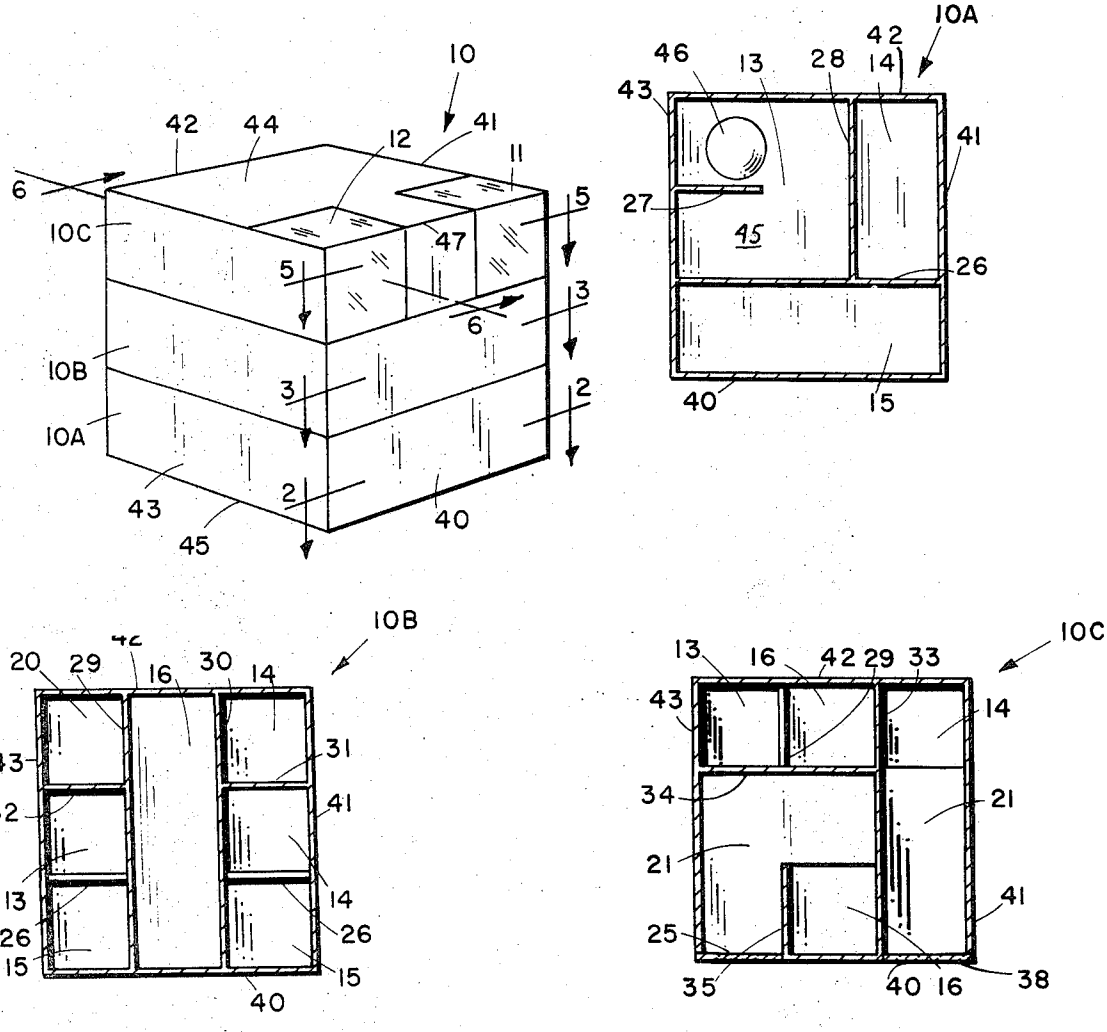
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Primary Examiner—Anton O. Oechsle
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[57] **ABSTRACT**

A puzzle having a maze through which a contained ball traverses. A cubicle main body is provided with nontransparent outer walls with a plurality of inner walls mounted therein defining a single noncontinuous tortuous passage having a start and finish without any dead end passages. A pair of transparent windows mounted to the outer walls of the main body are positioned at the start and finish of the passage. A ball is positioned within the main body and is movable from the start window through the passage to the finish window. The ball is unremovable from the main body. In one embodiment, the inner walls are nontransparent thereby preventing visual determination through the windows of the tortuous passage. In another embodiment, some of the inner walls are transparent allowing a person to visually determine through the windows a portion of the tortuous passage. In another embodiment, all of the inner walls are transparent.

2 Claims, 6 Drawing Figures



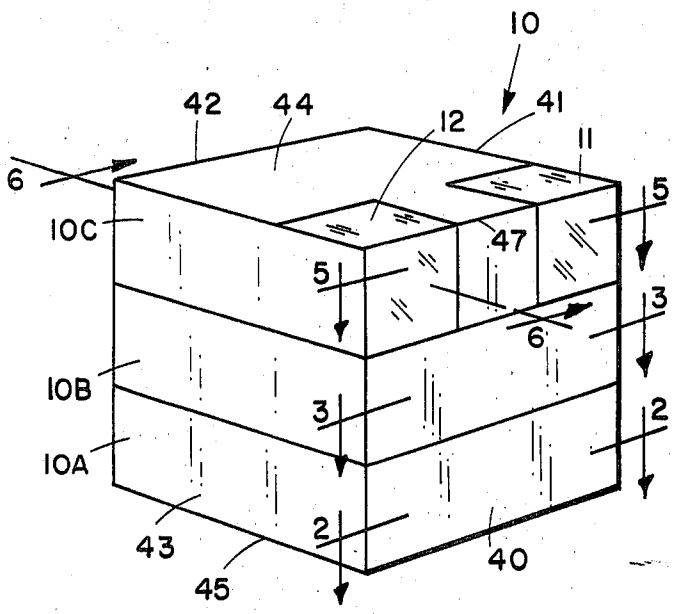


FIG. 1

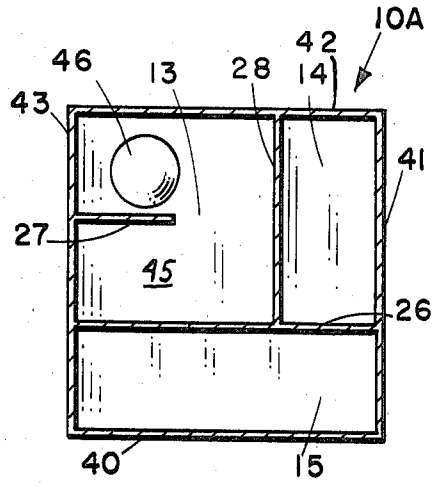


FIG. 2

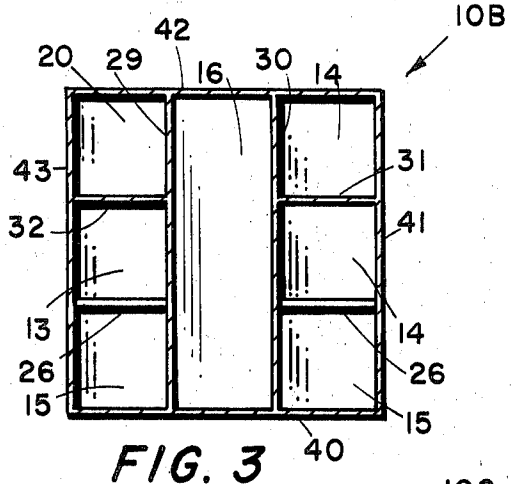


FIG. 3

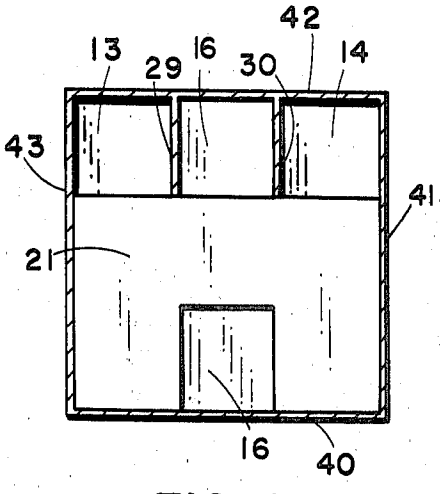


FIG. 4

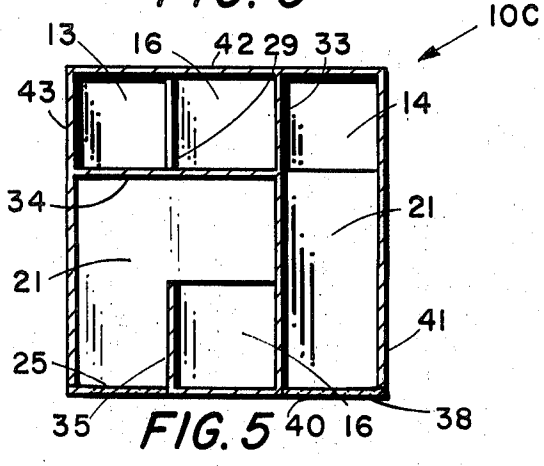


FIG. 5

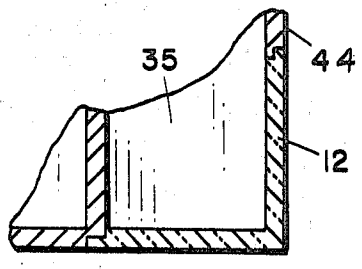


FIG. 6

HIDDEN MAZE PUZZLE CONTAINED BALL

BACKGROUND OF THE INVENTION

1. Field of the Invention: This invention is in the field of puzzles.

2. Description of the Prior Art: Mazes are frequently constructed or printed so that the entire path can be traversed by the eye. That is, the movable member be it the advancing end of a pencil line or a ball, is always under observation by the person seeking to solve the maze. In contrast to the above described prior art mazes, the puzzle described herein is concerned with a hidden maze which offers a much greater challenge to the hopeful solver. In seeking the correct path through the maze, the person must use the auditory and kinesthetic senses to some degree and may benefit from the ability to visualize in three dimensions.

Another prior art puzzle which is rectangular with a maze formed inside the main body of the puzzle has a transparent main body through which a ball travels a tortuous passage. The puzzle disclosed herein has a hidden and therefore a much more challenging pathway as compared with this prior art. In addition, the ball which travels through the puzzle disclosed herein is not removable from the main body of the puzzle as contrasted to the Milton-Bradley device wherein the ball is removable from the main puzzle body. In addition, the puzzle disclosed herein does not have false or dead end pathways as compared with the prior art devices.

SUMMARY OF THE INVENTION

One embodiment of the present invention is a puzzle device comprising a ball, a cubicle main body containing the ball being completely closed without exterior openings for the ball to escape, the main body having nontransparent outer walls and a plurality of inner walls, the inner walls being arranged to define a noncontinuous tortuous passage having a start and a finish, the ball being sized to pass freely through the passage from the start to the finish, the outer walls of the main body have at least two transparent windows mounted thereto with one of the windows being positioned at the start and the other of the windows being positioned at the finish of the passage.

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

It is a further object of the present invention to provide a puzzle having a hidden maze.

Yet another object of the present invention is to provide a hidden maze puzzle having an inescapable ball.

Yet a further object of the present invention is to provide a maze puzzle wherein portions of the tortuous passage are visually determinable.

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 a cross sectional view taken along the line 2—2 of FIG. 1 and viewed in the direction of the arrows.

FIG. 3 is a cross sectional view taken along the line 3—3 of FIG. 1 and viewed in the direction of the arrows.

FIG. 4 is the same view as FIG. 3, only with a partition 21 shown positioned within the main body of the puzzle.

FIG. 5 is a cross sectional view taken along the line 5—5 of FIG. 1 and viewed in the direction of the arrows.

FIG. 6 is a fragmentary enlarged view rotated 90° clockwise being taken along the line 6—6 of FIG. 1 and viewed in the direction of the arrows.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

For the purposes of promoting an understanding of the principles of the invention, reference will now be made to the embodiments 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 modifications 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 device having a cubicle main body **10** with side walls **40, 41, 42, 43, 44** and **45** integrally joined together. Walls **40** through **45** are nontransparent and may be made from a material such as plastic. Integrally joined to walls **40** through **45** are a plurality of inner walls which are arranged to define a noncontinuous tortuous passage. A ball **46** is positioned within main body **10** which is completely closed without exterior openings thereby preventing the ball from escaping from the main body. At least 2 transparent windows **11** and **12** are mounted to body **10** with the start of the tortuous passage being located at window **12** whereas the finish of the tortuous passage is located at window **11.** The object of the puzzle is to rotate and move main body **10** in such a way that the ball traverses the tortuous passage from window **12** to window **11** and back.

For ease of manufacture, main body **10** may be produced by forming a bottom tray **10*a***, a middle tray **10*b*** and a top tray **10*c***. The three trays are then secured together by conventional adhesives. FIG. **2** is a cross sectional view of main body **10** illustrating bottom tray **10*a***. The side walls **40, 41, 42** and **43** are integrally joined together and to the bottom wall **45.** A partitioning wall **26** extends across the tray being integrally joined to walls **41** and **43.** A second partitioning wall **28** is perpendicular to wall **26** and is integrally joined to wall **42** and wall **26.** Tray **10*a*** is therefore partitioned into compartments **13, 14** and **15.** Wall **27** extends partially into compartment **13** being integrally joined and perpendicular to wall **43.**

The intermediate tray **10*b*** likewise has walls **40** through **43** integrally joined together with each wall having an equal length. A pair of parallel dividing walls **29** and **30** are integrally joined to side walls **40** and **42** with a horizontal wall **16** being integrally joined to the bottom edges of walls **29** and **30** which do not extend into tray **10*a***. Likewise, walls **29** and **30** do not extend into tray **10*c***. A pair of parallel walls **31** and **32** are respectively joined to walls **41** and **30** and walls **29** and **43.** Thus, it is possible to see compartments **14** and **15** by looking down through walls **30** and **41.** Likewise, compartments **13** and **15** are visible by looking down between walls **29** and **43.** Wall **26** from tray **10**a is visi-

ble respectively between walls **43** and **29** and walls **30** and **41** being partially concealed by wall **16.**

A horizontal wall **21** (FIG. **4**) is positioned between trays **10***c* and **10***b* thereby concealing portions of compartments **13** and **14** as well as covering the middle section of wall **16.**

Tray **10***c* has walls **40, 41, 42** and **43** integrally joined together with wall **33** being parallel with wall **41** and **43** and being integrally joined to walls **40** and **42.** A second wall **34,** perpendicular to wall **33,** is integrally joined thereto and to wall **43.** A portion of compartment **14** is visible at the upper right hand corner of tray **10***c* between walls **33** and **41.** Likewise, a portion of compartment **13** is visible in the upper left hand corner between walls **43** and **29.** Wall **35** is integrally joined to wall **40** and extends inwardly to the position where wall **21** extends over wall **16.**

Although a specific maze has been described and illustrated for the puzzle incorporating the present invention, it should be understood that the maze may be varied greatly. Windows **11** and **12** are located at different corners of the cubicle main body with each window extending only around the same edge **47** of the main body. By looking through windows **11** and **12,** a portion of the interior of the main body is visible. Wall **21** is the first wall which is visible when one looks downwardly through windows **11** and **12.** In one embodiment of the present invention all of the inner walls including wall **21** are nontransparent therefore preventing visual determination of any portion of the tortuous passage by a person looking through the windows. In another embodiment, wall **21** is transparent with the remaining inner walls being nontransparent thereby allowing visual determination through the windows of a portion of the tortuous passage. And yet in another embodiment, all of the inner walls are transparent allowing visual determination of the complete tortuous passage by looking through windows **11** and **12.**

To aid in the understanding of the puzzle, the tortuous path will now be described. Assuming ball **46** to be positioned atop wall **21** and adjacent to the start of the tortuous passage at window **12,** the ball then is rolled from wall **25** of window **12** (FIG. **5**) around wall **35** thereby dropping from tray **10***c* to tray **10***b* and resting atop wall **16.** The ball is then moved from wall **40** to wall **42** atop wall **16** (FIG. **3**). The ball is then rolled up over wall **29** of tray **10***b* until the ball falls through passage **20** (FIG. **3**) to the position in compartment **13** illustrated in FIG. **2.** The ball is then rolled around wall **27** (FIG. **2**) and up walls **43** and **26** into tray **10***b* and moved into compartment **15** (FIG. **2**) and then rolled down compartment **15** until the ball contacts wall **41.** The ball is then rolled up over wall **26** into compartment **14** (FIG. **2**) and up wall **42** through tray **10***b* to tray **10***c*. The ball is then rolled along wall **33** (FIG. **5**) so as to rest atop wall **21** until eventually the ball contacts wall **38** of window **11.** Walls **40** and **44** are indented to receive the tongue shaped edges of windows **11** and **12** as shown in FIG. **6.**

The inner walls are integrally connected to the outer walls and form a passage with a generally squarish cross section. The ball is sized considerably smaller than the width of the cross section so that the ball will rattle against the inner walls and outer walls as it traverses the length of the passage. It is anticipated that trays **10***a*, **10***b* and **10***c* would be of different color. It is anticipated that additional windows could be positioned in the side walls of the main body at different locations along the path of the tortuous path. It is to be noted that no blind alleys or traps exist in the tortuous path and that the path is noncontinuous in that the path has two ends which are connected together only through the path.

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 embodiments have been shown and described and that all changes and modifications that come within the spirit of the invention and the scope of the claims are also desired to be protected.

The invention claimed is:

1. A puzzle device comprising a ball, a cubicle main body containing said ball being completely closed without exterior openings for said ball to escape, said main body having outer walls and a plurality of inner walls, said inner walls being arranged to define a single noncontinuous tortuous passage having a start and finish, said outer walls of said main body being nontransparent with the exception that said outer walls having at least two transparent windows mounted thereto with one of said windows being positioned at said start and the other of said windows being positioned at said finish, said inner walls being arranged so said ball moves only through said single noncontinuous tortuous passage with said inner walls not forming any dead end passage other than said single noncontinuous tortuous passage, said tortuous passage having a generally squarish cross section from start to finish, said ball being sized to pass freely through said passage from said start to said finish, said main body including a top tray, a middle tray and a bottom tray secured together with said inner walls being positioned on each tray forming said single noncontinuous tortuous passage which extends between said top tray and said middle tray and back and forth between said middle tray and said bottom tray and said passage traversing directly back to said top tray from said bottom tray with both said start and said finish located on said top tray, said device further including a transparent plate extending between said top tray and said middle tray allowing visual observation through said windows and said plate into said middle tray to enable visual observation of multiple portions of said single noncontinuous tortuous passage beneath both windows, all of said inner walls except for said plate being nontransparent.

2. The puzzle device of claim **1** wherein said windows are located at different corners of said main body with each window extending only around the same edge of said main body, said inner walls are integrally connected to said outer walls and form said passage with said cross section which is generally squarish, said ball is round and is sized considerably smaller than said cross section so said ball will rattle against said inner walls as it traverses the length of said passage.

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