United States Patent

[11] **3,565,443**

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[54] **DECORATIVE CUBE PUZZLE**
5 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **273/157**
[51] **Int. Cl.** **A63f 9/08**
[50] **Field of Search** 273/157

[56] **References Cited**

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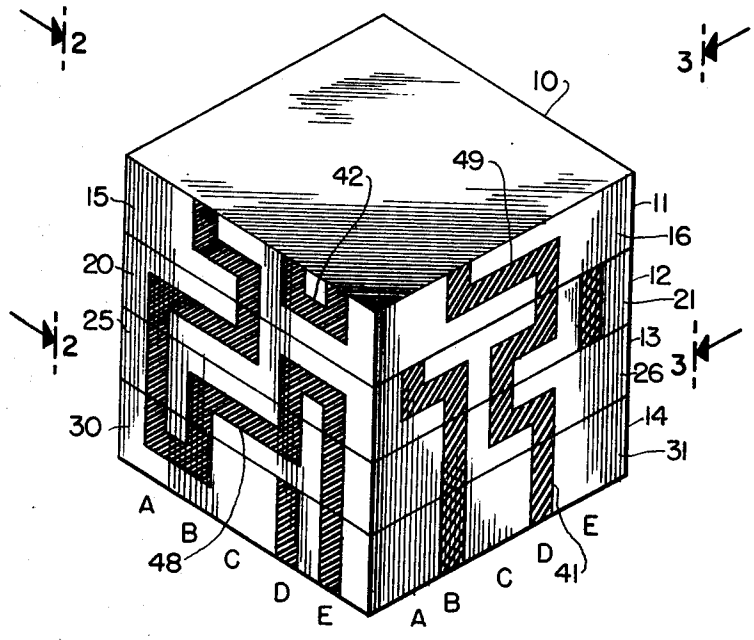
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ABSTRACT: A cube is formed in four horizontal layers having edges which form the cube's lateral faces, the edges having portions of mazelike paths formed thereon so that the four layers of the cube may be assembled with a mazelike path leading from top to bottom of each lateral face of the cube.



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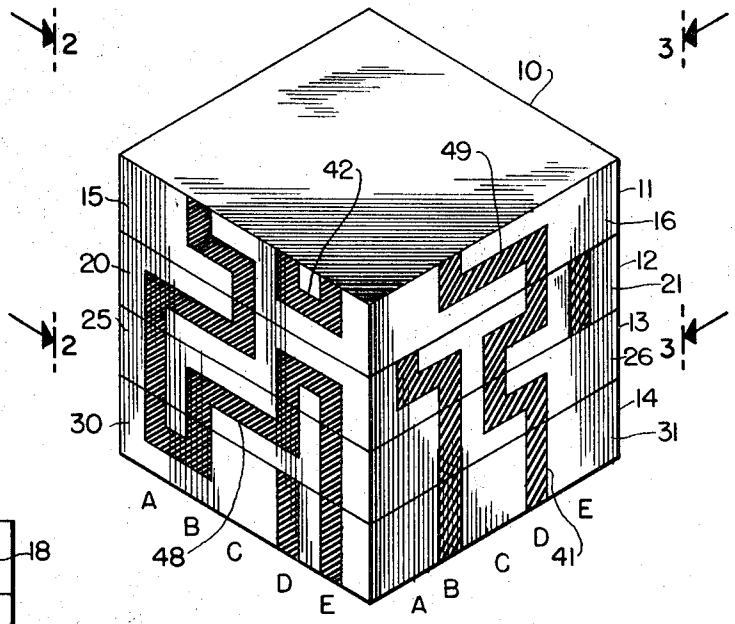


Fig. 1.

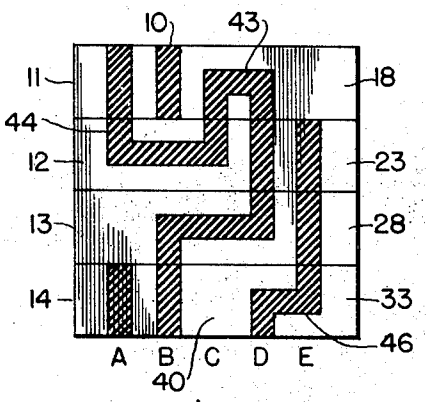


Fig. 2.

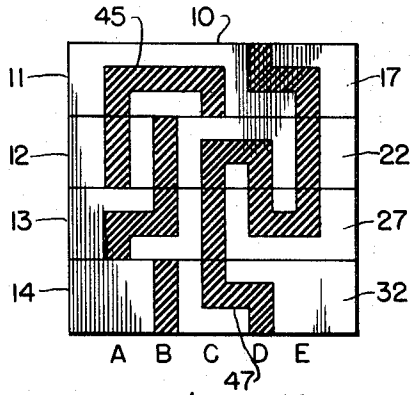


Fig. 3.

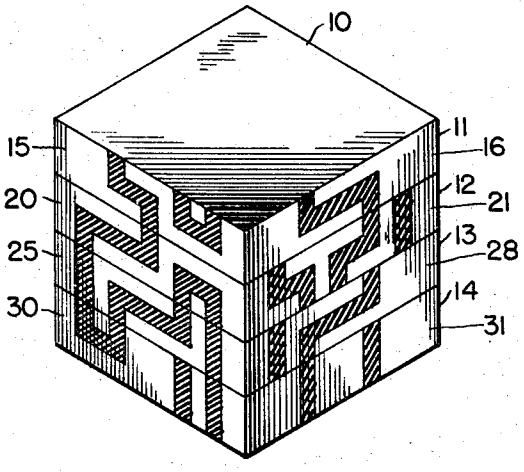


Fig. 4.

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DECORATIVE CUBE PUZZLE

BACKGROUND OF THE INVENTION

Intriguing BRIEF of beauty are always in demand. This invention provides such an object of beauty that also functions as a fascinating puzzle of reasonable difficulty.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of the cube puzzle of my invention with the layers thereof arranged in a solved orientation;

FIGS. 2 and 3 are side views taken on lines 2–2 and 3–3 of FIG. 1; and

FIG. 4 is a perspective view of the cube puzzle of my invention with the layers thereof arranged in an unsolved orientation.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The cube puzzle of this invention consists of a cube **10** formed of four horizontal layers **11—14**. The layer **11** has the edges **15—18**; the layer **12** has the edges **20—23**; the layer **13** has the edges **25—28**; and the layer **14** has the edges **30—33**. Each of these edges has five laterally spaced zones or areas A, B, C, D, and E in which a mazelike design may start to extend at the top and/or bottom of each edge as will be described.

When the cube **10** is assembled from the four layers **11—14** in a solved configuration as shown in FIGS. **1—3**, the mazelike design will form unbroken paths from the bottom to the top of each side face of cube **10**. The elements of the mazelike design which are formed on the edges of the layers **11—14** take several specific forms.

There are areas A, B, C, D or E containing no design markings thereon, an example of which is indicated by the reference numeral **40**. There are vertical paths in areas A, B, C, D, or E as at **41**. Considering the markings from bottom to top, there are right and left single offsets **46** and **47** extending from one area A, B, C, D, or E to an adjacent area. There are also right and left double offsets **48** and **49** extending between alternate areas A, B, C, D or E. There are upward and downward facing single return bends **42** and **43** extending from one area A, B, C, D or E to an adjacent area. There are also upward and downward facing double width return bends **44** and **45** extending between alternate areas A, B, C, D or E.

These unique design markings **40—49** on the edges of the layers **11—14** of a cube **10** provide a challenging puzzle and an aesthetically pleasing cube **10**. When the layers **11—14** are unstacked and rotated and inverted at random, there are a large number of restacked combinations which are not the solution. Many attempts at solution will provide paths from bottom to top on one, two, or three side faces of cube **10**. An example is shown in FIG. **4** in which layer **13** is inverted. Thus, in FIG. **4**, edges **15**, **20**, **25**, and **30** show a path extending from bottom to top of cube **10** while edges **16**, **21**, **28**, and **31** do not. As has been stated, the solution of the puzzle requires that each side face of cube **10** show a path extending from bottom to top.

The layers **11—14** of the cube **10** may be molded from plastic, fabricated from hardwood, or made in any other suitable manner. The design markings **40—49** may be cut into the edges of the layers **11—14**, they may be formed in relief thereon, they may be screened, painted, or printed, or they may be formed in any other suitable manner.

While this invention has been shown and described in the best form known to me, it will nevertheless be understood that this is purely exemplary and that modifications may be made without departing from the spirit and scope of the invention.

I claim:

1. A cube puzzle comprising, in combination, a cube formed from horizontal layers having edges forming the side faces of said cube, and design markings on said edges forming paths extending from the bottom to the top of each side face of said cube only when said layers are arranged in a solved configuration, said edges having laterally spaced areas, said design markings in said areas being at least blanks, vertical lines, right and left offsets, and upward and downward facing return bends.

2. The combination according to claim **1** wherein there are four of said layers.

3. The combination according to claim **2** wherein there are five of said laterally spaced areas of each edge.

4. The combination according to claim **3** wherein said offsets are single and double offsets extending between adjacent areas and alternate areas and wherein said return bends are single and double return bends extending between adjacent and alternate areas.

5. The combination according to claim **4** wherein, in a solved configuration, the lowermost of said layers has on a first edge a single upward facing return bend, a blank, and two vertical lines, on a second edge a blank, a vertical line, a blank, a vertical line and a blank, on a third edge, a blank, a vertical line, a single offset, and a blank, and on a fourth edge two vertical lines, a blank, and a single offset; the second lowermost of said layers has on a first edge a vertical line, a double offset, and a vertical line, on a second edge a blank, a vertical line, a single offset, and a blank, on a third edge a single offset, a vertical line, and a single upward facing return bend, and on a fourth edge a blank, a double offset, and a vertical line; the third lowermost of said layers has on a first edge a double offset and a single downward facing return bend, on a second edge two single offsets and a vertical line, on a third edge two vertical lines, a single downward facing return bend, and a vertical line, and on a fourth edge a double upward facing return bend and two vertical lines; and the uppermost of said layers has on a first edge a blank, a single offset, and a single upward facing return bend, on a second edge a blank, a double offset, and a blank, on a third edge a double downward facing return bend and a single offset, and on a fourth edge two vertical lines, a single downward facing return bend, and a blank.