United States Patent

Weisbecker

[15] **3,645,534**

[45] **Feb. 29, 1972**

[54] CARD PUZZLE

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[22] Filed: **Nov. 12, 1969**

[21] Appl. No.: **875,801**

[52] **U.S. Cl.** .....**273/157 A,** 273/137 C, 273/155

[51] **Int. Cl.** **A63f 9/08**

[58] **Field of Search** .....273/137 D, 156, 157 R, 157 A, 273/155, 152.1, 137 C

[56] **References Cited**

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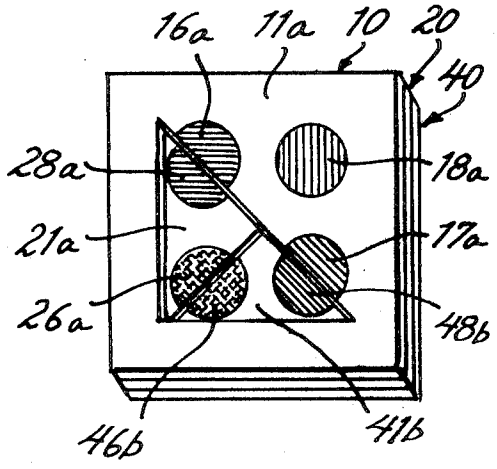
Primary Examiner—Anton O. Oechsle

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[57] **ABSTRACT**

A group of cards each having a through opening and a characteristic marking proximate to the through opening, adapted for arrangement in stacked relation to locate the markings of different cards in complementary relation with each other.

4 Claims, 10 Drawing Figures



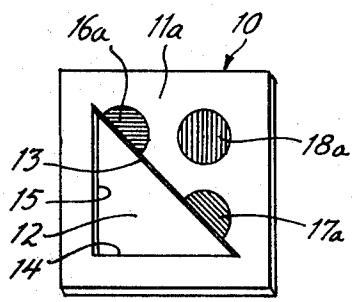


Fig. 1A.

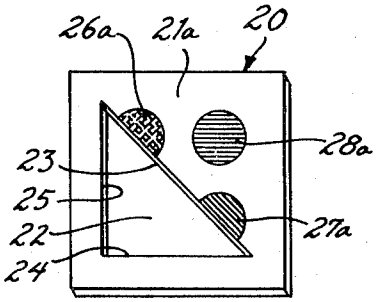


Fig. 2A.

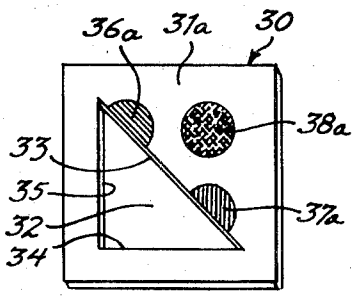


Fig. 3A.

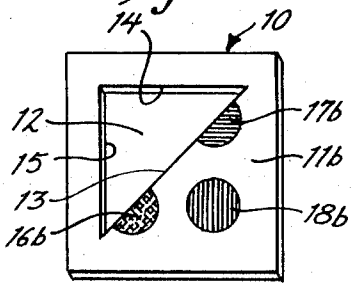


Fig. 1B.

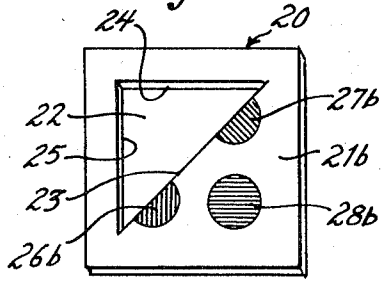


Fig. 2B.

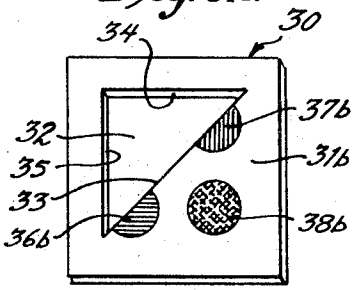


Fig. 3B.

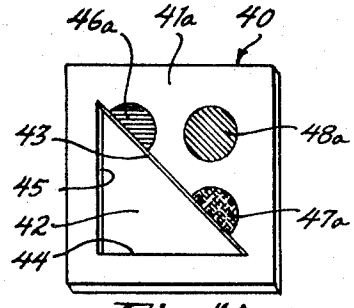


Fig. 4A.

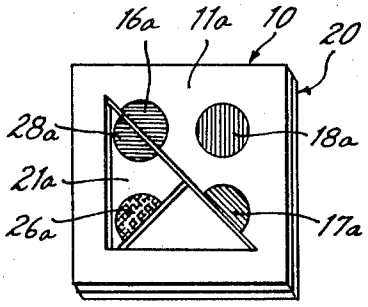


Fig. 5.

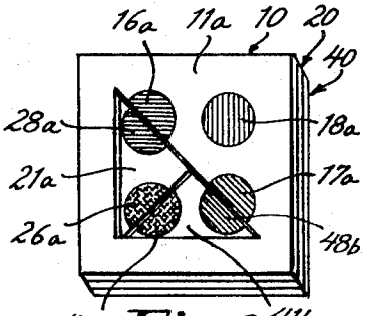


Fig. 6.

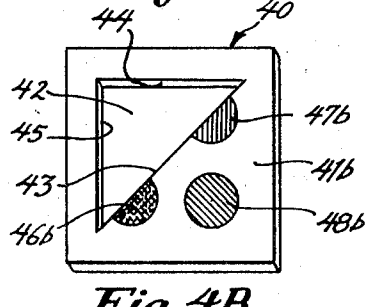


Fig. 4B.

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CARD PUZZLE

BACKGROUND OF THE INVENTION

While there have, in the past, been proposed many puzzles employing cards, prior puzzles have, in general, been unduly complex with regard to the degree of challenge presented, have been relatively expensive to manufacture, and have lacked appeal to widely different age groups.

SUMMARY OF THE INVENTION

Accordingly, it is an important object of the present invention to provide a card puzzle of the type described, which overcomes the above-mentioned difficulties and disadvantages of prior art puzzles, presents an extremely high degree of challenge without undue complexity, appeals to an extremely broad age group without regard to education and skill, is extremely inexpensive to manufacture, being highly attractive in appearance, serving to arrest the attention of users for long sustained periods of time, and which is extremely simple in construction for convenience in portability, permitting of enjoyable play at home, away and during travel.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is a perspective view showing one side of a card of the instant puzzle.

FIG. 1B is a perspective view showing the other side or obverse face of the card of FIG. 1A.

FIG. 2A is a perspective view showing one side of another card of the present invention.

FIG. 2B is a perspective view showing the other side of the card of FIG. 2A.

FIG. 3A is a perspective view showing one side of another card of the present invention.

FIG. 3B is a perspective view showing the other side or face of the card of FIG. 3A.

FIG. 4A is a perspective view showing one side of face of still another card of the present invention.

FIG. 4B is a perspective view showing the other or obverse face of the card of FIG. 4A.

FIG. 5 is a perspective view illustrating a pair of cards of the present invention in stacked relation.

FIG. 6 is a perspective view illustrating 3 of the cards of the present invention in a stacked relation.

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now more particularly to the drawings, a puzzle card is shown in FIGS. 1A and 1B, being there generally designated **10**, and having its opposite faces respectively designated **11***a* and **11***b*. Further, the puzzle card **10** is of a polygonal external configuration, preferably that of an equilateral polygon, such as a square, but may be of other external outline configuration.

The puzzle card **10** may be formed with at least one through opening, as at **12**, which may assume the form of an enclosed or circumferentially bounded aperture, say of a triangular configuration, as illustrated. While the through opening **12** may be of other than the illustrated enclosed triangular configuration, it is preferably provided with at least one internal bounding edge, as at **13**, which does not extend along an external bounding edge. Other, additional internal bounding edges of the through opening **12**, as at **14** and **15**, may extend longitudinally along respective adjacent external bounding edges of the card **10**. That is, in the illustrated embodiment, the through opening **12** may be of a right triangular configuration having its internal right angle in alignment with an adjacent right angular corner of the card **10**.

On one face **11***a* of the card **10**, adjacent to the internal bounding edge **13** of opening **12**, as along the bounding margin thereof not parallel to an external card edge, there may be provided one or more partial characteristic markings, such as a blue semicircle **16***a* and a green semicircle **17***a*, each located with its diameter coincident with the edge **13**. Also, an additional characteristic marking **18***a*, such as a red circle, may be located on the card face **11***a*, spaced from the opening **12**.

The obverse face **11***b* is similarly provided with partial characteristic markings **16***b* and **17***b*, say in the form of an orange semicircle and blue semicircle, respectively, each located with their diameter along the edge **13**. An additional characteristic marking, say a red circle **18***b* may be provided on the card face **11***b* spaced from the opening **12**.

In FIGS. **2A** and **2B** are shown opposite sides or faces of an additional puzzle card **20**, which is similar in many respect to the puzzle card **10**. For example, the puzzle card **20** of FIGS. **2A** and **2B** includes opposite sides or faces **21***a* and **21***b*, and is provided with a through opening **22**. More specifically, the card **20** may be of a polygonal external configuration, say an equilateral configuration such as that of a square, and may advantageously be externally congruent to the card **10** of FIGS. **1A** and **1B**. In addition, the through opening **22** may be of an enclosed polygonal configuration, such as that of a right triangle, as illustrated, including an internal bounding edge **23** which does not extend parallel to or longitudinally along a card edge, and an additional pair of internal edges **24** and **25** disposed at right angles with respect to each other and each extending parallel to and longitudinally along a respective adjacent external edge of the card **20**. Thus, it will now be understood, and appear in the drawings, that the card **20** is congruent to the card **10**, both externally and internally, so that such cards may be economically manufactured as the same part.

However, the card **20** is provided on one face or surface **21***a* with partial characteristic markings, as at **26***a* and **27***a*, which may differ from the corresponding markings of the first described card. For example, the partial characteristic markings **26***a* and **27***a* of card **20** may, respectively, comprise an orange semicircle and a green semicircle, the semicircles having their diameter coincident with the edge **23** of opening **22**. In addition, spaced from the opening **22**, the card face **21***a* may be provided with a characteristic marking **28***a*, such as a circular marking in blue.

On the obverse side or face **21***b* of the card **20**, along the edge **23** of opening **22**, there may be provided additional partial characteristic markings, such as red and green semicircles, respectively designated **26***b* and **27***b*, which semicircles have their diameters coincident with edge **23**. In addition, a characteristic marking **28***b*, say in the form of a blue circle, may be provided on the card face **21***b* spaced from the opening **22**.

The instant puzzle may include additional cards, say the two cards shown in FIGS. **3A** and **3B**, there being generally designated **30**, and in FIGS. **4A** and **4B**, there being designated **40**. The cards **30** and **40** may be essentially identical to the cards **20** and **10**, being congruent thereto, both externally and internally, and therefore congruent to each other. That is, the cards **30** and **40** may each be of a square or other polygonal external configuration congruent to the remaining cards, and be provided with through openings, as at **32** and **42**, which may be of triangular or other polygonal configuration congruent to the openings **12** and **22**. More specifically, the card **30** is provided with opposite sides or faces **31***a* and **31***b*, the polygonal opening **32** being bounded by an internal edge **33** which does not extend parallel to or along an external card edge, and a pair of additional internal edges **34** and **35** which do extend adjacent to and in parallelism longitudinally along respective external edges of the card.

In addition, the card **30** is provided on its face **31***a* with a pair of partial characteristic markings **36***a* and **37***a*, which may each assume the form of a semicircle, being respectively green and red, and having their diameters coincident with the internal edge **33**. Spaced from the opening **32**, the card face **31***a* may be provided with a characteristic marking **38***a*, say in the form of an orange circle.

Similarly, the obverse face **31***b* of card **30** may be provided with partial characteristic markings **36***b* and **37***b*, say in the form of semicircles of, respectively, blue and red colors. The semicircle **36***b* and **37***b* have their diameters coincident with the internal edge **33**, and an additional marking **38***b*, say an orange circle may be located on the face **31***b* adjacent to and spaced from the internal edge **33**.

The card **40** is similar to the cards **10**, **20** and **30**, the internal opening **42** being bounded within an edge **43** which does not extend along an external card edge, and a pair of right angularly disposed edges **44** and **45** which do extend longitudinally along in adjacent spaced parallelism with respective external card edges. The card face or surface **41***a* is provided with a pair of partial characteristic markings **46***a* and **47***a*, which may assume the form of semicircles, being respectively blue and orange, and located each with its diameter coincident with the edge **43** of opening **42**. Adjacent to and spaced from the internal edge **43**, the face **41***a* may be provided with a characteristic marking **48***a*, say in the form of a green circle.

The obverse side **41***b* of the card **40** is provided with a pair of partial characteristic markings, say in the form of semicircles **46***b* and **47***b*, and respectively colored orange and red, each having its diameter coincident with the edge **43** of opening **42**. In addition, a characteristic marking **48***b*, say in the form of a green circle, may be provided on the face **41***b* adjacent to and spaced from the edge **43**.

The object of the puzzle is to arrange the cards in a face-to-face or stacked relation with the partial markings of nether cards in adjacent complementary relation with the partial markings of superior cards. Toward this end, the cards may be inverted relative to each other, as desired, and may be rotated relative to each other, being congruent in their outline configuration in the stacked relation.

An intermediate step in solution of the puzzle is illustrated in FIG. **5**, wherein card **10** has been superposed on nether card **20**, with faces **11***a* and **21***a* facing upwardly. The superior card **10** is disposed in the same angular orientation in FIG. **5** as it is in FIG. **1A**, while the nether card **20** has been rotated ninety degrees counterclockwise from its illustrated position of FIG. **2A**. In this condition, the blue characteristic circular marking **28***a* is in alignment with and beneath the semicircular blue characteristic marking **16***a* of card **10**, and serves to complete the latter when viewed from above, as in FIG. **5**. The partially completed condition of FIG. **5** illustrates characteristic marking **17***a* and characteristic marking **26***a* as partial, semicircular and incomplete.

However, in the condition shown in FIG. **6**, the card **40** has been placed beneath the card **20** of FIG. **5**, with the card face **41***b* exposed upwardly. In this condition, the characteristic markings **46***b* and **48***b* of the card face **41***b* serves to respectively complement the previously incomplete markings **26***b* and **17***a* of FIG. **5**, so that there are exposed a plurality of complete characteristic markings, as illustrated in FIG. **6**.

It is an object of the present invention to employ all of the cards in the general manner described above in connection with FIGS. **5** and **6**, so that each face or end of the stack of cards presents a complete red spot, blue spot, green spot and orange spot. That is, an object of the puzzle is to arrange the cards in stacked relation so that no spot shows two different color halves, and that each spot is of a different color. Of course, other objectives may be employed, say to heighten or lessen the challenge, if desired.

From the foregoing, it is seen that the present invention provides a card puzzle which is extremely simple in structure, capable of economic manufacture by mass production techniques and which otherwise fully accomplishes its intended objects.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention.

What is claimed is:

1. A puzzle comprising a plurality of cards each having only a single through opening, said cards being configured for superposition in stacked relation with the opening of each card at least partially closed by the extension thereacross of certain of the remaining cards, and partial characteristic markings on said cards along the bounding margins of said through openings and extending to the edges of said openings, said cards being selectively oriented in said stacked relation with the partial marking of nether cards in adjacent complementary relation with the partial markings of superior cards, said openings each having at least one bounding margin which does not extend along an exterior bounding margin of the associated card, and said partial characteristic markings being along and extending to the edge of said one bounding margin.

2. A puzzle according to claim **1**, at least one other bounding margin of each opening extending along the exterior bounding margin of the associated card, said other bounding margin having no partial characteristic marking therealong.

3. A puzzle according to claim **2**, said partial characteristic markings being of halves of symmetrical figures for alignment with similar characteristic markings of other cards in said stacked relation.

4. A puzzle according to claim **3**, said cards each having the outline configuration of an equilateral polygon, for selected angular rotation in said stacked relation.

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