

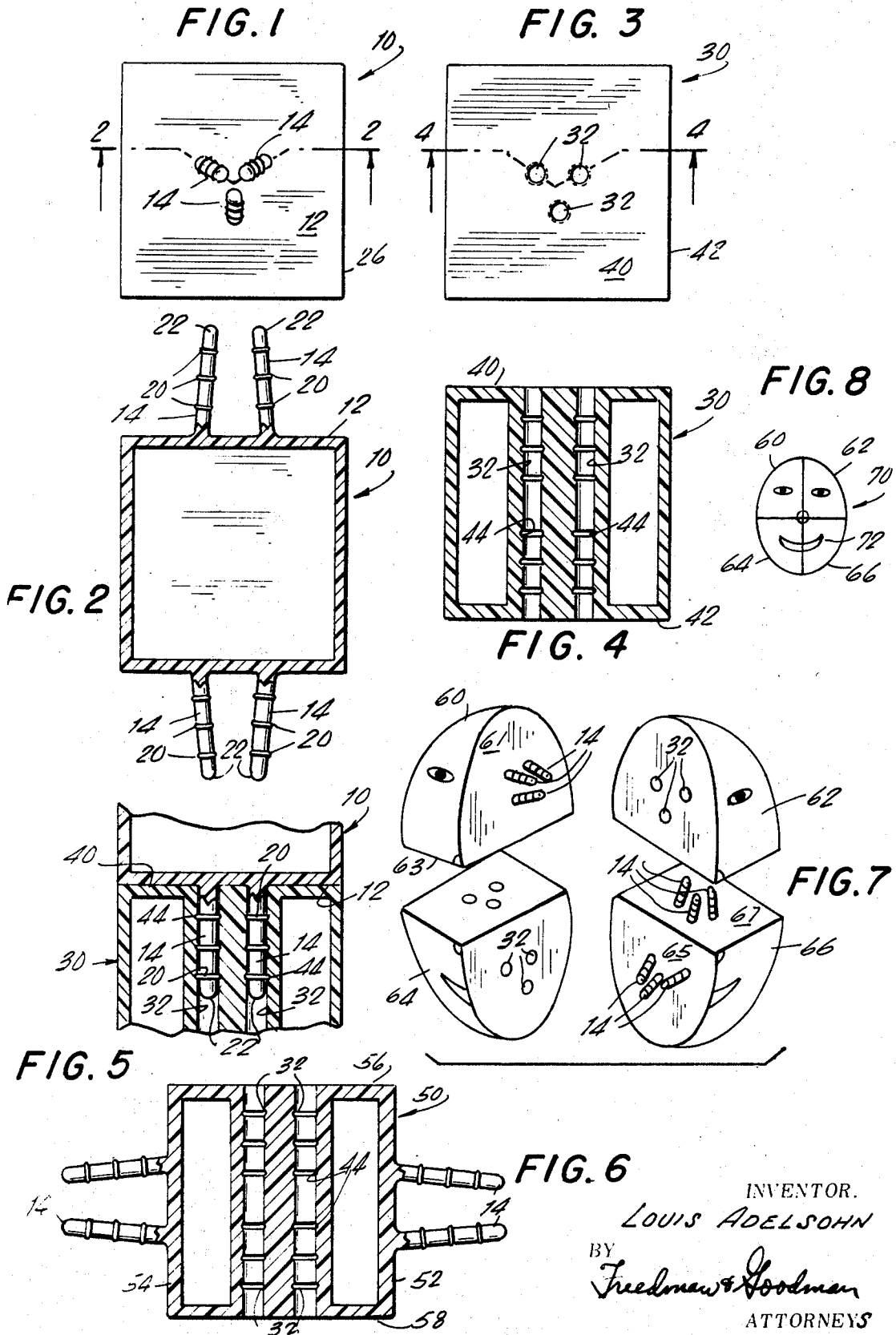
Aug. 11, 1970

L. ADELSON

3,523,384

FASTENABLE THREE-DIMENSIONAL PUZZLE PIECES

Filed Dec. 13, 1967



INVENTOR.
LOUIS ADELSON
BY
Friedman & Goodman
ATTORNEYS

1

3,523,384
**FASTENABLE THREE-DIMENSIONAL
PUZZLE PIECES**

Louis Adelson, 4302 Manhattan Ave.,
Brooklyn, N.Y. 11222

Filed Dec. 13, 1967, Ser. No. 690,322

Int. Cl. A63h 33/08; A63f 9/12

U.S. Cl. 46—25

2 Claims

ABSTRACT OF THE DISCLOSURE

The invention is directed to novel three-dimensional puzzles, which comprise a plurality of puzzle members, each of said puzzle members being associatingly adapted to be detachably engageable with one another, wherein one puzzle member is provided with at least a triad of prongs, said triad being detachably engageable with a triad of bores associatingly provided on another puzzle member. Each triadic prong is angularly inwardly disposed and each triadic bore is non-angularly disposed being in vertical relationship to each of said prongs. Each of said bores has a plurality of spaced annular enlargements therealong and each of said prongs has a plurality of associated annular beads provided therealong, said beads being adapted to seat firmly in the associated spaced annular enlargements.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates generally to puzzles and more particularly to three-dimensional puzzles whose individual members are fastenable.

Description of the prior art

Puzzle games are of course well known. In the flat, essentially one dimensional variety, the individual members of the puzzle are each associatingly carved so that when the various members are joined together a scene of some sort will emerge, or a photograph, or a ship, or the like. Three-dimensional puzzle games are also known, such as for example, when various blocks are assembled, each block containing a letter on a face or faces thereof, the object of the game being to form words having high point values. Children's blocks containing letters and figures are another example of such three dimensional puzzles; or, similarly, a toy house, or object, cut into various configurations, so that when correctly joined it will form the desired object. However, it is a serious disadvantage in all these three-dimensional puzzle games or toys that when the individual pieces are assembled together, they are easily jarred apart since there is nothing to hold them together, other than gravity.

It would, therefore, be of tremendous advantage if three-dimensional puzzle games could be provided which would not jar apart during use.

SUMMARY OF THE INVENTION

It is, therefore, among one of the principal objectives of the invention to provide three-dimensional puzzle pieces which are adapted to be fastened together during use but will readily come apart when the play or game is over.

In accordance with the present invention, novel fastenable, three-dimensional puzzle members are provided which are each associatingly adapted to be detachably engageable with one another. This is accomplished by providing at least one triad of prongs on one puzzle member which triad is adapted to be associatingly and detachably received by triad of bores on another puzzle member. The novel puzzle members are molded of any suitable

2

plastic commercially available, such as Bakelite, Lucite, polytetrafluoroethylene, and the like.

BRIEF DESCRIPTION OF THE DRAWING

The invention will be hereinafter more fully described with reference to the accompanying drawing, in which:
FIG. 1 is a top plan view of a puzzle member adapted according to the invention.

FIG. 2 is a view taken along line 2—2 of FIG. 1.

FIG. 3 is a top plan view of another puzzle member adapted according to the invention.

FIG. 4 is a view taken along line 4—4 of FIG. 3.

FIG. 5 is a fragmented view, in cross-section, showing a pair of puzzle members detachably joined together.

FIG. 6 is a view in cross-section of yet another embodiment of the invention.

FIG. 7 is an exploded view, in detached relationship, of a puzzle toy adapted according to the invention.

FIG. 8 shows the toy of FIG. 7 in attached relationship.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the figures of the drawing, FIG. 1 depicts a puzzle member 10, which is shaped substantially cubically, such as toy block or a word block would be, however, it is to be understood that the cubic form is merely illustrative and not intended to limit the invention to any particular shape puzzle piece, as FIGS. 7 and 8 will demonstrate. In at least one face 12 of member 10, and integrally emerging therefrom, is provided a triad of prongs 14. Each triadic prong 14 emerges from a corner of what would be an equilateral triangle if each prong 14, at its base, were connected by an imaginary straight line, and the resulting imaginary equilateral triangle would be in an approximate central location in face 12 of member 10. The prongs 14 extend upwardly from face 12 and are angularly disposed towards one another, such that an imaginary line drawn from the end of each prong would intersect at some point above the plane of face 12. The angular disposition X is not of any critical size, it being critical only that the prongs 14 converge towards each other (for a reason to be described), however, preferably angle X is about 75°. Each of said prongs is preferably serrated along its length as at 20, and tapers at its upper most end to a cone 22. In the embodiment as shown in FIGS. 1 and 2 another like triad of prongs 14 is provided on opposing face 26 of member 10, however, it is to be understood that this is not necessary, since, as will be seen, only one triad of prongs will also be workable e.g. a puzzle end piece.

FIGS. 3 and 4 define another puzzle member 30 which is associatingly adapted to detachably engage member 10. This is accomplished by providing a triad of bores 32 which are associatingly disposed in member 30, as that the cones 22 of prongs 14 are in substantial registry therewith when face 12 is brought in face to face relationship with bores 32 emerging on face 40 of member 30; member 30 also being cubically formed as is member 10. Each triadic bore 32, however, is not angularly disposed, as are prongs 14 and instead extends a perpendicular relationship through member 30, that is perpendicular to faces 40 and 42 of member 30, emerging at each end therefrom. The walls of bores 32 are preferably serrated as at 44, so that when prongs 14 are inserted into bores 32, said bores being of slightly larger diameter than said prongs so that the prongs may be concentrically received therein, as shown in FIG. 5, the puzzle members 10 and 30 are resultingly detachably, tightly, serratingly engaged, prongs 14 (it will be recalled) along being serrated as at 20. It will be noted that when members 10 and 30 are so engaged, that is when prongs 14 are inserted into bores

32, and faces 12 and 40 are in smooth abutting relationship, that a juncture of two puzzle pieces has been accomplished which will resist their accidental detachment by jarring, as in the prior art. It is also to be noted that by virtue of the fact that prongs 14 are angularly disposed and bores 32 are not, that the aforementioned juncture is even more tightly accomplished, the prongs 14 resistingly yielding to the perpendicular conformity of bores 32.

FIG. 6 describes yet another embodiment of the invention wherein a puzzle member 50 is provided with both triadic prongs 14 and triadic bores 32, prongs 14 emerging from faces 52 and 54, and bores 32 extending from face 56 to face 58 through puzzle member 50. Thus puzzle member 50 is adapted to both receive other prongs 14 and engage other bores 32 on other similarly adapted puzzle pieces.

FIGS. 7 and 8 illustrate the invention as applied to a puzzle suitable for young children. Therein is shown a puzzle comprising 4 equal parts 60, 62, 64 and 66, suitably decorated, so that when they are detachably joined they will unite to form an oval 70 having a smiling face painted thereon. Parts 60 and 66 are provided with prongs 14 on their flat surfaces 61 and 63 and 65 and 67, respectively, while parts 62 and 64 are provided with associatingly adapted and disposed bores 32 for detachably receiving prongs 14. Parts 60 and 62 have an eye painted thereon, while parts 64 and 66, each have one-half of a smiling mouth painted thereon; each part also has one-quarter of a round nose also painted thereon, so that when all the prongs 14 are engaged in all the bores 32 in proper fashion, a funny face 72 is formed (FIG. 8) on an oval shaped head 70. This type of puzzle is not only amusing to young children, but it also aids in their motor development. Bores 32, in this puzzle need not extend throughout the respective part, but need only be deep enough to receive prongs 14 so that the whole will result in a substantially smooth oval. It is also clear that the prongs and bores may be varied from part to part so that for example bores and prongs may be provided on the same part, as described for FIG. 6.

Having thus described the invention as applied to a specific embodiment thereof, it is to be understood that various changes may be made by those skilled in the art without departing from the spirit and scope thereof.

What is claimed is:

1. Three-dimensional puzzles comprising a plurality of puzzle members, each of said puzzle members being associatingly adapted to be detachably engageable with one another wherein one puzzle member is provided with at least a triad of prongs, said triad being detachably engageable with a triad of bores associatingly provided on another puzzle member, wherein each triadic prong is angularly inwardly disposed, wherein each triadic bore is non-angularly disposed being in vertical relationship to each of said prongs, and wherein each of said bores has a plurality of spaced annular enlargements therealong and each of said prongs has a plurality of associated annular beads provided therealong, said beads being adapted to seat firmly in the associated spaced annular enlargements.

2. Three-dimensional puzzles comprising a plurality of puzzle members formed of a resilient material, each of said puzzle members being associatingly adapted to be detachably engageable with one another wherein one puzzle member is provided with at least a triad of prongs, said triad being detachably engageable with a triad of bores associatingly provided on another puzzle member, wherein each triadic prong is angularly inwardly disposed, wherein each triadic bore is non-angularly disposed being in vertical relationship to each of said prongs, and wherein each of said bores has a plurality of spaced annular enlargements therealong and each of said prongs has a plurality of associated annular beads provided therealong, said beads being adapted to seat firmly in the associated spaced annular enlargements.

References Cited

UNITED STATES PATENTS

610,577	9/1898	Baldwin.	
1,460,700	7/1923	Buffington	273—156
1,958,508	5/1934	Audet	46—25
2,808,681	10/1957	Arenstein	46—22

FOREIGN PATENTS

345,116 3/1931 Great Britain.

ANTON O. OECHSLE, Primary Examiner

U.S. Cl. X.R.

46—22; 273—157