Oct. 11, 1960 J. JOSLYN 2,955,381

AMUSEMENT DEVICE

Filed Aug. 17, 1959 2 Sheets-Sheet 1

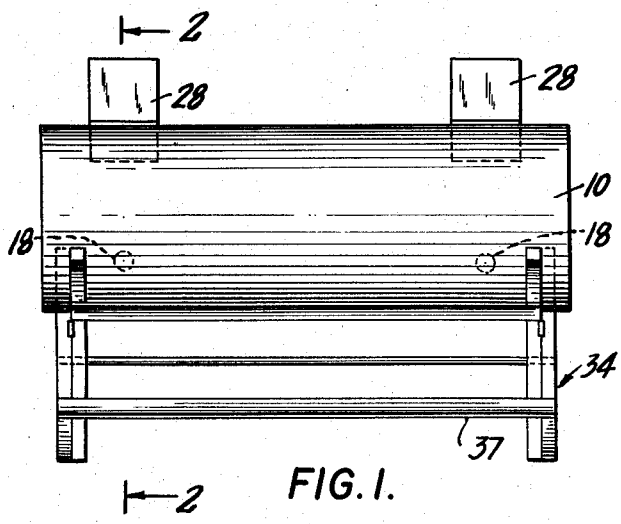


FIG. 1.

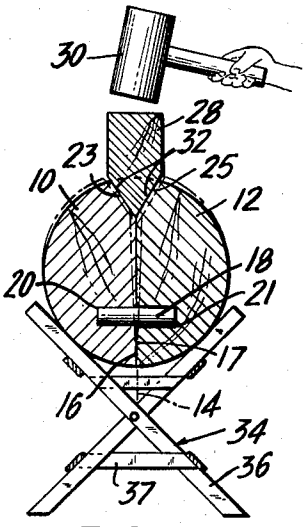


FIG. 2.

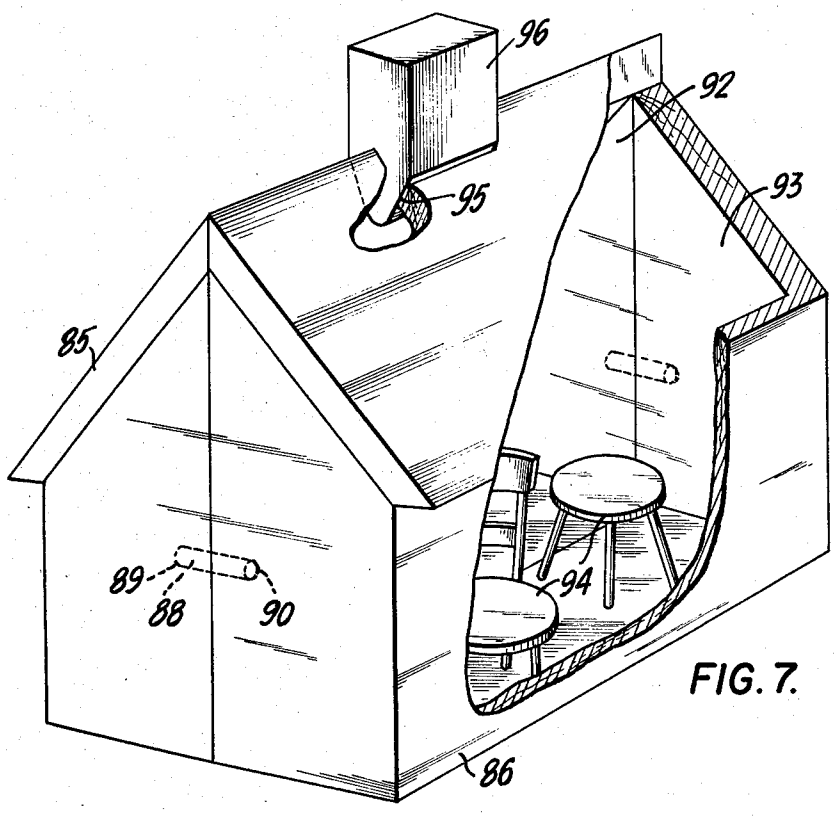


FIG. 7.

Oct. 11, 1960 J. JOSLYN 2,955,381

AMUSEMENT DEVICE

Filed Aug. 17, 1959 2 Sheets-Sheet 2

FIG. 3.

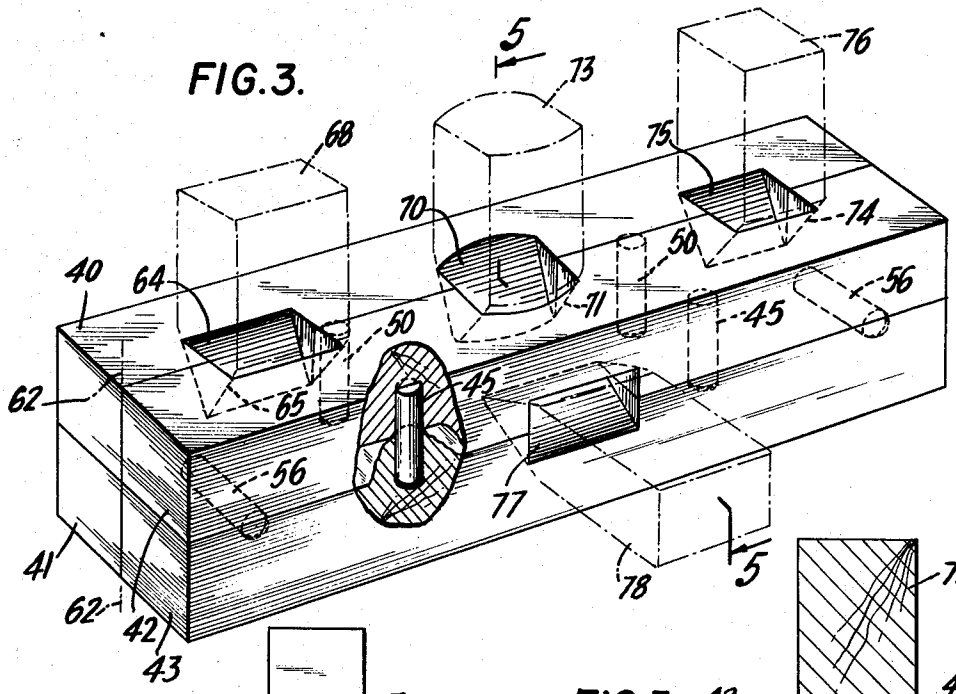


FIG. 4.

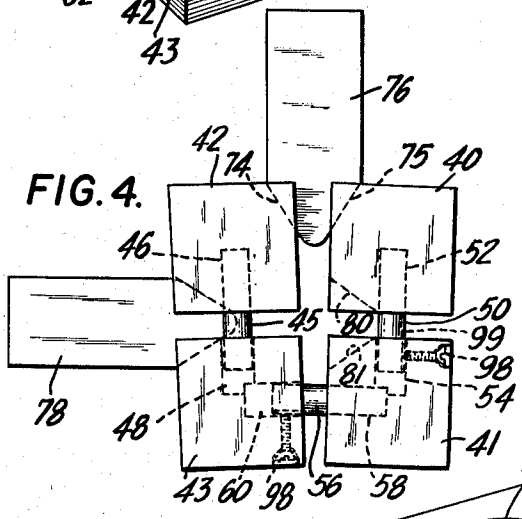
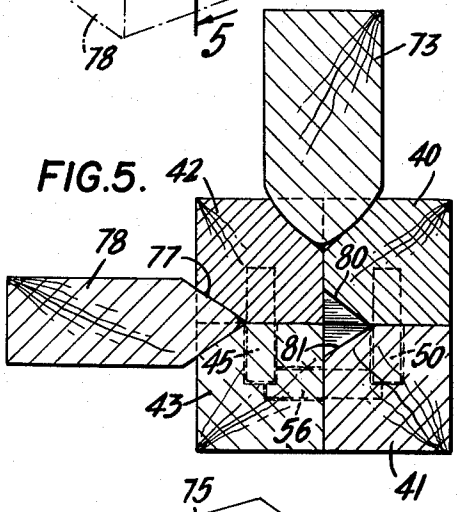


FIG. 5.



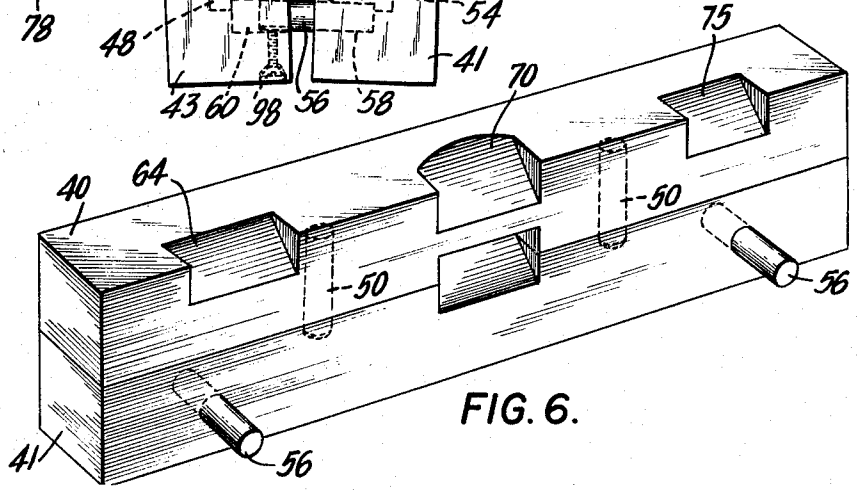


FIG. 6.

United States Patent Office 2,955,381 Patented Oct. 11, 1960

2,955,381

AMUSEMENT DEVICE

John Joslyn, 459 W. 42nd St., New York, N.Y.

Filed Aug. 17, 1959, Ser. No. 834,038

8 Claims. (Cl. 46—19)

This invention relates to an amusement device or toy and is more particularly concerned with an amusement device adapted for use by children which will permit the child to exercise his constructive talents and will at the same time safely provide an outlet for the child's natural urge to knock down what he has created. So-called pounding toys of various types have been known for many years and generally consist of a board provided with a series of slidable pegs or dowels which can be struck by a mallet and will sink into the board. The board is then reversed and the procedure repeated. Such a toy, however, has only limited use and is generally attractive only to very small children.

It is an object of the present invention to provide a novel pounding toy which not only is adapted to be struck but which also provides a challenge to the child's constructive talents.

It is another object of the present invention to provide a pounding toy of the character indicated which will be found amusing to children over a long age range.

In accordance with the invention, there is provided a toy which comprises at least two elements separably interconnected by frictionally-engaged connector units along a plane of juncture between the two elements, with each element being provided with at least one tapered recess in a surface adjacent the plane of juncture, the recess of one element mating with the recess of the other element to provide an enclosed inwardly-tapered aperture, and a wedge member removably received in the tapered aperture and having wall surfaces corresponding to the wall surfaces of the aperture.

When the wedge member is struck as with a mallet, it gradually causes the two elements to separate but, by reason of the frictional engagement of the connector units, the elements tend to resist separation but will come apart with continued pounding, the two elements first separating adjacent the tapered aperture and then separating along their entire height. The two elements thus separate much in the manner of a splitting log. As a result, the child has the opportunity of reassembling two separated elements after he has pounded on the wedge member, and the toy thus provides a variety of play operations and is not limited to a single pounding operation. As will be apparent as the description of the invention proceeds, an amusement device having the structural relationships mentioned is adapted to embody many variations which increase its complexity and more particularly adapt it for use by children of many ages.

It is a feature of the invention that the amusement device is of a type which will assist in the motor development of the young child.

It is another feature of the invention that the amusement device is of a type which will assist in the development of the child's manual dexterity.

Other objects and features of the invention will be readily apparent from the following detailed description of illustrative embodiments of the invention and from the accompanying drawings, wherein,

Fig. 1 is a side elevational view of an amusement device embodying features of the present invention;

Fig. 2 is a transverse sectional view of the device shown in Fig. 1, taken approximately along the line 2—2 of Fig. 1, and showing the device in closed and partially separated position;

Fig. 3 is a perspective view, partially cut away to show details of construction, of another embodiment of the amusement device of the invention;

Fig. 4 is an end elevational view of the embodiment shown in Fig. 3 with the parts partially separated;

Fig. 5 is a transverse sectional view of the embodiment shown in Fig. 3 taken approximately along the line 5—5 of Fig. 3;

Fig. 6 is a perspective view of a portion of the device shown in Fig. 3; and

Fig. 7 is a perspective view, partially cut away, of another embodiment of the invention.

Referring to the drawings, and more particularly to Figs. 1 and 2, the two elements 10 and 12 which, in the embodiment illustrated, have a semi-cylindrical cross-section, adjoin each other along a plane of juncture 14 defined by their inner mating walls 16 and 17, respectively. The elements 10 and 12 are removably interconnected by connector units 18 in the form of round dowels which are seated in apertures 20 and 21 in elements 10 and 12, respectively, the apertures extending at right angles to the plane of juncture 14. The units 18 are firmly secured, as by gluing, in apertures 20 but are removably received with a friction fit in apertures 21. Element 10 is formed with two recesses each having a wall 23 tapering inwardly toward wall 16 and element 12 is similarly formed with two recesses each having a wall 25 tapering inwardly toward wall 17. Each recess in element 10 is aligned with a recess in element 12 so that the pairs of mating recesses define apertures having inwardly tapering walls, as shown in the drawings, adapted to receive wedge members 28.

Each wedge member 28 is of a generally rectangular cross section and has an upper planar surface adapted to be struck by a mallet 30, or the like, and its lower portion is tapered to correspond to the shape of the aperture defined between the elements 10 and 12 as shown in the drawings, i.e. the wedge member 28 has surfaces 32 which have the same taper as the cooperating walls 23 and 25.

In the embodiment illustrated in Figs. 1 and 2, the elements 10 and 12 are, as mentioned, semi-cylindrical in form so that when they are interconnected by the dowels 18, they form a cylinder which may suitably be surfaced to resemble a log or the like. Thus, when the wedge members 28 are struck and driven toward the center of the cylinder defined by elements 10 and 12, the elements 10 and 12 are separated in the manner of a splitting log but by reason of the presence of the dowels 18 and the frictional engagement with the walls of apertures 21, continued pounding upon the wedge members 28 is required to effect complete separation since the separation is frictionally resisted by the dowels. Thus, the embodiment of Figs. 1 and 2 may be described as a rail splitting toy which differs from conventional pound toys in that the pounding does not merely drive down the portion struck with the mallet and varied play operations are provided.

Since in the embodiment illustrated, the combined elements 10 and 12 would tend to roll if placed upon a floor or other flat surfaces, there is suitably provided a cradle 34 which may take the form of a saw buck with crossing arms 36 and suitable braces 37.

It will be understood, however, that the invention is not limited to a device in which the separable elements are of semi-cylindrical configuration although the structure above-described is of a particular desirable construction

and the separable elements may have one or more planar surfaces and additional separable elements may be combined to provide an assembly of more than two separable elements corresponding to the elements **10** and **12** of Figs. 1 and 2. Similarly, it will be understood that the wedge apertures and the wedge members receivable in the apertures are not limited to the shapes shown in Fig. 1 and the tapering surfaces may be curved and the wedge members may have not only rectangular cross sections but may have other polygonal cross sections, e.g. they may be square, hexagonal, pentagonal, triangular, and the like, in cross section with one or more curved sides. By way of example, there is shown in Figs. 3 to 6 another embodiment of this invention illustrating these relationships. Referring to Fig. 3, the amusement device illustrated is composed of an assembly of four elements **40**, **41**, **42** and **43** which, in the form shown, have a substantially square cross section. The elements **42** and **43** define a first pair interconnected by connector units **45** each rigidly seated in an aperture **46** in element **42** and slidably received with a friction fit in an aperture **48** in the element **43**. Similarly, the elements **40** and **41** form a second pair interconnected by connector units **50** each rigidly seated in an aperture **52** in element **40** and slidably received with a friction fit in an aperture **54** in the element **41**. In turn the two pairs of elements are interconnected by connector units **56** each rigidly seated in an aperture **58** in element **41** and slidably received with a friction fit in an aperture **60** in the element **43**.

This assembly is adapted to be separated by wedge action into two parts, each consisting of one of the pairs of elements and each pair of elements is adapted when thus separated to be separated into its component elements in accordance with the principles of the invention described above. Thus, the two pairs of elements meet along a plane of juncture **62** and adjacent this plane the elements **40** and **42** are formed with mating recesses having inwardly sloping walls **64** and **65**, respectively, each pair of recesses cooperating to define a wedge aperture adapted to receive a wedge member. The wedge recesses may all be of the same size and shape and, therefore, adapted to receive identical wedges but preferably the wedge apertures are of different sizes and shapes so that each wedge recess requires a specific wedge member for use in it. Thus, as shown in Figs. 3 and 6, the left-hand wedge recess is of generally rectangular form and the wedge member **68** which is received in it similarly has a rectangular cross section with its long dimension parallel to the plane of juncture, its lower portion having sloped walls corresponding in taper to the walls **64** and **65**. The central wedge aperture, however, has tapering walls **70** and **71** which not only taper inwardly toward the plane of juncture but are also curved and the wedge member **73** similarly has planar and curved walls and its lower tapering portion corresponds to the taper and form of the walls **70** and **71**. The right-hand wedge aperture is similar to the left-hand wedge aperture except that it is square in cross section with tapering walls **74** and **75** and the wedge member **76** is similarly of square cross section. The advantage of the differently formed wedge apertures and wedge members is the fact that they enhance the variety of play activities by requiring the child to select the proper wedge member for each wedge aperture and the enjoyment of the toy is thus increased.

To separate the two elements forming each pair of elements, i.e. to separate the elements **40** and **41** and to separate the elements **42** and **43**, there are also provided appropriate wedge apertures adapted to receive correspondingly shaped wedge members. It will be seen, however, that one pair of elements has its wedge aperture on the exterior of the assembly whereas the other pair of elements has the wedge aperture on the interior of the assembly Thus, the pair composed of elements **42** and **43** which has the aperture **60** in which the connector units **56** are slidably received has its wedge aperture **77** on its exterior face adapted to receive wedge member **78**. The pair formed from elements **40** and **41**, however, which has the connector units **56** fixedly secured to it and extending from its inner surface, is formed with a wedge aperture having tapered walls **80** and **81** on its interior surface when considered in terms of the entire assembly of four elements. While the pair consisting of elements **42** and **43** and the pair consisting of elements **40** and **41** are shown with a single wedge aperture, it will be apparent that they may also be provided with a plurality of wedge apertures and that the wedge apertures may be of the same shape or may be of different shapes which may be the same or different from the shapes of the apertures in the top surface of the assembly. Advantageously, however, the wedge apertures in the two pairs will have the same shape of at least one of the wedge apertures in the top surface.

In using the assembly of Figs. 3 to 6, the wedge members **68**, **73** and **76** are first inserted in the wedge apertures defined by the walls **64—65**, **70—71** and **74—75** and by use of a mallet or other pounding means applied to the top surfaces of the wedge members **68**, **73** and **76**, the two pairs of elements can be separated. The pair consisting of elements **42** and **43** may then be separated by turning the pair with its inner surface downwardly and applying pounding pressure to the wedge element **78** in the wedge aperture **77**. Similarly, the pair consisting of the elements **40** and **41** can be separated by turning this pair with its outer surface downwardly and pounding a wedge in the wedge aperture defined by the walls **80** and **81**. This latter aperture may be shaped to receive the wedge **78** or one of the wedges **68**, **73** and **76**. Similarly, the wedge **78** may be dispensed with and the wedge aperture may be shaped to receive one of the wedges **68**, **73** and **76**.

There is thus provided an amusement device which provides a wide variety of play activities which not only provides an outlet for a child's normal urge to pound but which also permits the child to exercise his constructive talents and challenges his perception and teaches him differences between shapes and serves to improve his ability to match differently-shaped objects with differently-shaped apertures. In the aforegoing embodiments, the invention has been illustrated in relation to separable elements which form a solid construction. It will be apparent, however, that the elements may be formed to define a hollow construction, i.e. a construction having a cavity which becomes visible when the elements are separated. Referring to Fig. 7, for example, there is shown an embodiment of the amusement device of the invention in which the separable elements **85** and **86** are shaped to simulate a house with connector units **88** being rigidly secured in apertures **89** in the element **85** and slidably received with a friction fit in apertures **90** in element **86**. The element **85** is formed with an interior cavity **92** and the element **86** is similarly formed with a mating interior cavity **93** which may be left empty or which may be filled with furniture such as indicated at **94**, or other small items such as candy, favors, and the like. The elements **85** and **86** define between them a wedge cavity **95** which is adapted to receive a wedge member **96** which simulates the chimney of the house. While the embodiment shown in Fig. 7 has been illustrated as being formed from a single pair, it will be apparent that it may also be formed from two pairs of elements in the manner of the construction of Fig. 3 and in such a variation, it will be desirable to give the walls surrounding the cavity a greater thickness to permit the formation of the necessary wedge recess or recesses.

In the course of constant and continued use, the connector units may tend to lose some of their tightness in the apertures in which they are slidably received and if it is desired to restore substantially the initial tightness, this can readily be affected by providing tightening screws as indicated at **98** in Fig. 4, the tightening screws

having their inner ends bearing against the connector units which may, if desired, be formed with longitudinal grooves as shown at 99 in Fig. 4 to receive the screw ends. When a connector unit becomes loose in its aperture, it is merely necessary to tighten the corresponding screw so that it extends further into the aperture and this will automatically restore the original frictional resistance to withdrawal of the connector unit. It will be understood that when such tightening screws are provided, a screw will be provided for each aperture in which a connector unit is slidably received.

As will be noted from the embodiments shown in the drawings, the wedge recesses may be aligned with the connector units or they may be disposed between connector units or they may be otherwise inter-related.

It will be understood that various changes and modifications may be made in the embodiments above described and illustrated in the drawings without departing from the scope of the invention as defined in the appended claims. For example, the separable elements may be given exterior shapes other than those shown in the drawings and may be shaped to simulate objects other than houses or logs or blocks. Furthermore, while the device of the invention is preferably formed from wood, advantageously a hard wood, it may also be formed from other materials of construction, e.g. plastics, such as a phenol-formaldehyde resin, or other convenient materials, or combination of materials. Suitably, however, the material from which the connector units or dowels are formed has a limited flexibility, such as wood, in order that the connector units may bend slightly as the separable elements are wedged apart.

It is intended, therefore, that all matter contained in the foregoing description and in the drawings shall be interpreted as illustrative only and not as limitative of the invention.

What I claim and desire to secure by Letters Patent is:

1. An amusement device which comprises at least two elements separably interconnected by at least one frictionally-engaged connector unit along a plane of juncture between the two elements, each element being provided with at least one tapered recess in a surface adjacent the plane of juncture, the recess of one element mating with the recess of the other element to provide an enclosed inwardly tapered aperture, and a wedge member removably received in the tapered aperture and having wall surfaces corresponding to the wall surfaces of the aperture.

2. An amusement device which comprises at least two elements separably interconnected by at least one frictionally-engaged connector unit along a plane of juncture between the two elements, each element being provided with a plurality of tapered recesses in a surface adjacent the plane of juncture, the recess of one element mating with the recess of the other element to provide an enclosed inwardly tapered aperture, and a wedge member removably received in each tapered aperture and having wall surfaces corresponding to the wall surfaces of the associated aperture.

3. An amusement device which comprises a first pair of two elements separably interconnected by at least one frictionally-engaged connector unit along a first plane of juncture between the two elements, and a second pair of two elements separably interconnected by frictionally-engaged connector units along a second plane of juncture, said two pairs of elements being separately interconnected by frictionally-engaged connector units between one member of each pair along a third plane of juncture between the two pairs of elements, one element of each pair being provided with at least one tapered recess in a surface adjacent said third plane of juncture, and each element of said pairs being provided with at least one tapered recess in a surface adjacent one of said first and second planes of juncture, each element being provided with at least one tapered recess in a surface adjacent one of said planes of juncture, the recess of one element mating with the recess of the other element to provide an enclosed inwardly tapered aperture, and a wedge member removably received in at least one of the tapered apertures defined by said recesses and having wall surfaces corresponding to the wall surfaces of the aperture.

4. An amusement device which comprises a first pair of two elements separably interconnected by at least one frictionally-engaged connector unit along a first plane of juncture between the two elements, and a second pair of two elements separably interconnected by frictionally-engaged connector units along a second plane of juncture, said two pairs of elements being separately interconnected by frictionally-engaged connector units between one member of each pair along a third plane of juncture between the two pairs of elements, one element of each pair being provided with at least one tapered recess in a surface adjacent said third plane of juncture, and each element of said pairs being provided with at least one tapered recess in a surface adjacent one of said first and second planes of juncture, each element being provided with at least one tapered recess in a surface adjacent one of said planes of juncture, the recess of one element mating with the recess of the other element to provide an enclosed inwardly tapered aperture, and a wedge member removably received in at least one of the tapered apertures defined by said recesses and having wall surfaces corresponding to the wall surfaces of the aperture, the tapered aperture in one of said pairs of elements merging with said third plane of juncture and the aperture in the other of said pairs being on the side of said last-named pair opposite said third plane of juncture.

5. An amusement device which comprises at least two elements separably interconnected by at least one frictionally-engaged connector unit along a plane of juncture between the two elements, each element being provided with at least one tapered recess in a surface adjacent the plane of juncture, the recess of one element mating with the recess of the other element to provide an enclosed inwardly tapered aperture, and a wedge member removably received in the tapered aperture and having wall surfaces corresponding to the wall surfaces of the aperture, said connector unit being received in sockets formed in said elements, the connector unit being rigidly secured in the socket of one element and being slidably received in the socket of the adjacent element.

6. An amusement device which comprises at least two elements separably interconnected by at least one frictionally-engaged connector unit along a plane of juncture between the two elements, each element being provided wtih a plurality of tapered recesses in a surface adjacent the plane of juncture, the recess of one element mating with the recess of the other element to provide an enclosed inwardly tapered aperture, and a wedge member removably received in each tapered aperture and having wall surfaces corresponding to the wall surfaces of the associated aperture, said recesses defining tapered apertures of different shapes and the wedge member removably received in each aperture being correspondingly shaped.

7. An amusement device which comprises at least two elements separably interconnected by at least one frictionally-engaged connector unit along a plane of juncture between the two elements, each element being provided with at least one tapered recess in a surface adjacent the plane of juncture, the recess of one element mating with the recess of the other element to provide an enclosed inwardly tapered aperture, and a wedge member removably received in the tapered aperture and having wall surfaces corresponding to the wall surfaces of the aperture, said elements each being formed with a cavity merging with said plane of juncture whereby a hollow structure is defined by the interconnected elements.

8. An amusement device which comprises at least two elements separably interconnected by at least one fric-

tionally-engaged connector unit along a plane of juncture between the two elements, each element being provided with at least one tapered recess in a surface adjacent the plane of juncture, the recess of one element mating with the recess of the other element to provide an enclosed inwardly tapered aperture, and a wedge member removably received in the tapered aperture and having wall surfaces corresponding to the wall surfaces of

the aperture, and supporting means for removably holding said separable elements while pounding force is applied to said wedge member.

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