

[54] CONSTRUCTION TOY ELEMENT

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[58] Field of Search 46/23, 25, 26

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[57] ABSTRACT

A toy element comprising at least two cup-like parts, each of said parts having a lower portion and an upper portion, said lower portion being shorter than that upper portion, the lower portion and the upper portion of each cup-like part having such a cross-sectional surface that said lower portion may be fitted clampingly in the upper portion of each one of the cup-like parts of another toy element, the cup-like parts of the toy element being interconnected by at least one connecting part, all this in such a way that with a number of said toy elements different spatial structures and compositions may be made.

10 Claims, 4 Drawing Figures

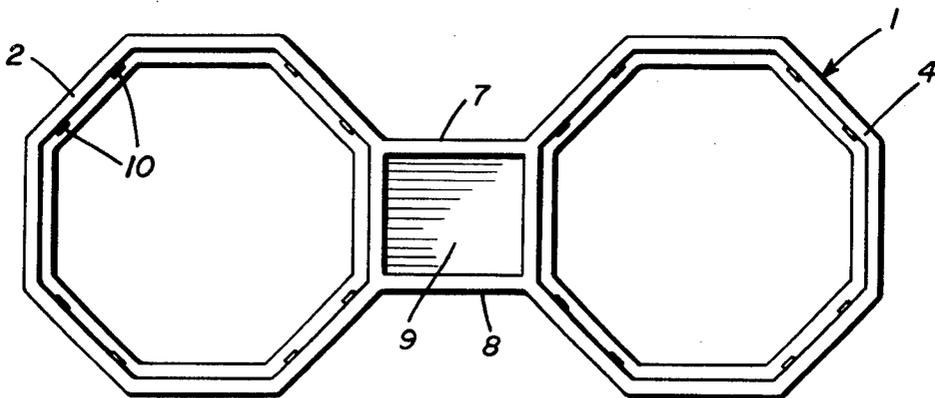


Fig. 1

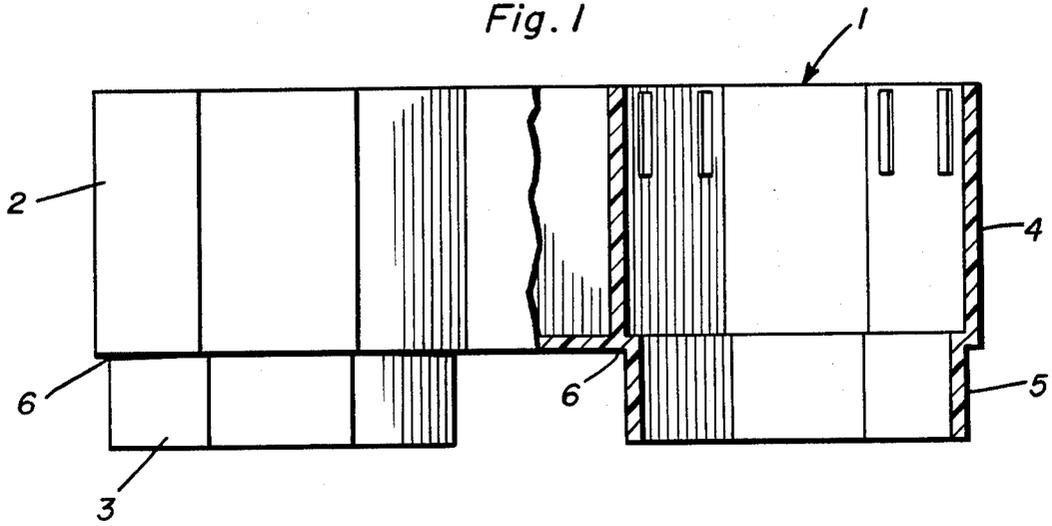


Fig. 2

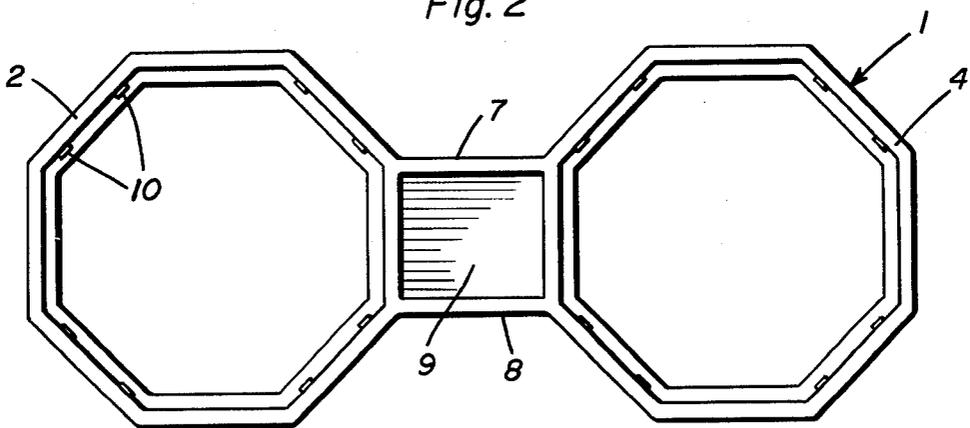


Fig. 3

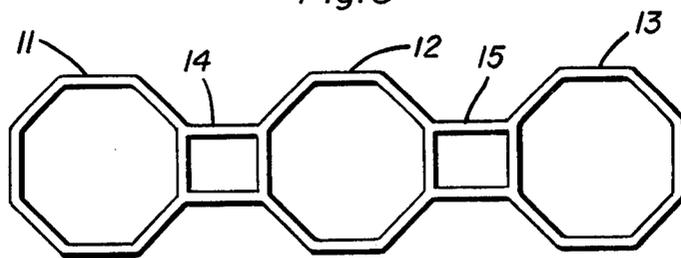
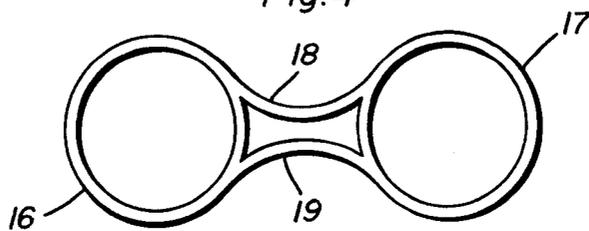


Fig. 4



CONSTRUCTION TOY ELEMENT

This invention relates to toy elements and aims at providing toy elements which can be easily, rapidly and cheaply manufactured and which are embodied in such a way that according to the fancy of a child playing with said toy elements it is possible to form with said elements combinations ranging from very simple ones to very complicated ones so that said toy elements are suitable both for small and older children.

This aim is arrived at with the toy element according to the invention in that it comprises two or more spaced cup-like parts in which each of them comprises a portion extending from the bottom and having a small height, said portion fitting clampingly in the upper portion of a cup-like part of another element, said upper portion having a height which is a few times larger than the height of the shorter portion, both portions of greater height of the cup-like parts or of each two consecutive cup-like parts of the toy element being interconnected by at least one connecting part. In view of the fact that the exterior cross-sectional surface of the portion having the smallest height is substantially equal to the interior cross-sectional surface of the portion of the largest height, said portions having the smallest height can be inserted clampingly in a portion having the largest height of another toy element. The toy element according to the invention may be manufactured, in a manner known per se, from synthetic polymer material, for example polyvinyl chloride. Since each two toy elements can be interconnected in various positions, it is possible to form many different combinations with one and the same number of toy elements according to the invention. A child having a number of toy elements may supplement said number with any number of identical toy elements so that it is capable of building more complicated representations.

According to the invention both cup-like parts may be identical and the exterior cross-sectional surface of the portion having a small height may be substantially equal to the interior cross-sectional surface of the portion of larger height of each cup-like part.

A preferred embodiment of the toy element according to the invention is characterized in that the cross-section of each of the cup-like parts has the shape of an equilateral polygon. Thus the composition of the required representations or structures is easier because the toy elements can assume a number of positions relative to each other corresponding with the number of sides of the polygon which at the maximum is equal to the number of sides of each toy element.

The toy element according to the invention is embodied such that the cross-section of each of the cup-like parts has the shape of an equilateral polygon. Such a toy element offers the advantage that the elements are adapted to interlock with comparatively broad surfaces enabling the forming of sturdy spatial structures or compositions.

If necessary the cross-section of each of the cup-like parts may be circular.

In order to arrive at a satisfactory clamping of the toy elements, when the portions of small height of the toy element are inserted in the portions of larger height, the inner wall of each cup-like part may be provided with at least one projection in the form of a rib or raised portion extending over at least part of said inner wall. It is preferred that the inner wall of the sides of each of

the cup-like parts is alternately provided with two ribs extending parallel to each other.

A sturdy toy element according to the invention is obtained if the two cup-like parts or each two consecutive cup-like parts are interconnected by two parallel sheet-like connecting members connecting two parallel sides of said cup-like parts at the angular points, said sheet-like connecting members having a width which is equal to the width of the sides of the polygonal cross-section of the cup-like parts. It is preferred that the lower ends of the two sheet-like connecting members being interconnected by a bottom, said bottom being likewise connected with the cup-like parts.

The invention will be further explained below with reference to the drawings showing by way of example some embodiments of the toy element according to the invention.

The drawings show in:

FIG. 1 a side view, partially in section of the toy element with two cup-like parts having a cross-section in the form of an equilateral octagon;

FIG. 2 a top plan view of the toy element shown in FIG. 1;

FIG. 3 diagrammatically a toy element having three cup-like parts, and

FIG. 4 diagrammatically a toy element the cup-like parts of which have a circular cross-section.

The toy element 1 shown in FIGS. 1 and 2 comprises two identical cup-like parts having an equilateral octagonal cross-section and consists preferably of a suitable synthetic material, for example polyvinyl chloride. Each cup has a portion 2 and a portion 4 respectively of greater height than the portions 3 and 5 respectively of said cup-like parts. The height of the portion 2 and 4 is in the embodiment shown in FIGS. 1 and 2 three times the height of the portions 3 and 5.

The interior cross-sectional surface of the portions 2 and 4 of the cup-like parts is substantially equal to the exterior cross-sectional surface of the portions 3 and 5 so that the portions 3 and 5 of a toy element can be inserted into the portions 2 and 4 of other toy elements. Since the cup-like parts may assume eight different positions relative to the cup-like part of another toy element into which they are inserted, it is possible to create very complicated three-dimensional structures therewith. As a result of the difference in size of cross-sectional surfaces of the portions 2, 4 and 3, 5 there is formed at the transition of the portions 3 and 5 with the smallest cross-sectional surface in the portions 2 and 4 with the largest cross-sectional surface a stop shoulder 6 serving as a stop for the portions 2 and 4 of the cup-like parts having the largest cross-section.

The portions 2 and 4 of the cup-like parts are interconnected at two consecutive ribs of said portions 2 and 4 by two connecting walls 7, 8 and a bottom 9 so that there is a cup of rectangular cross-section between said two cup-like portions 2 and 4. The width of the connecting walls equals the width of the sides of the cup-like portions 2 and 4 so that in the space formed by each of the connecting walls and the adjoining sides of the cup-like portions 2 and 4 a corresponding portion of another toy element may fit.

As is apparent from FIG. 2 the inner walls of the cup-like portions 2 and 4 are provided alternately with two parallel ribs 10. As a result the cup-like portions 3 and 5 are firmly clamped in the cup-like portions 2 and 4 of a toy element situated underneath.

FIG. 3 shows diagrammatically a toy element having three cup-like parts 11, 12, 13 interconnected by two cup-like parts 14, 15 having a rectangular cross-section, and FIG. 4 shows diagrammatically a toy element comprising two cup-like parts 16, 17 interconnected by a cup-like part with curved walls 18, 19.

It is obvious that the invention is not restricted to the embodiments described above by way of example and shown in the drawings, but that these may be constructed in many ways without departing from the scope of the invention. The cross-sections of the cup-like parts may have for example also the shape of an equilateral hexagon or some other polygon. Furthermore the sides of the portions 2 and 4 having the largest height need not be flat but from a distance from the top end down to the bottom end they may have any shape.

I claim:

1. A toy element comprising at least two cup-like parts, each of said parts having a lower portion extending upwards from the bottom and an upper portion, said lower portion having an outer cross-sectional surface which is substantially equal to the inner cross-sectional surface of the upper portion so that said lower portion clampingly fits in the upper portion of a cup-like part of another toy element, said upper portions having a height which is larger than the height of the lower portion, the portions of greater height of the cup-like parts of the toy element being interconnected by at least one connecting part forming a single piece with the upper portions of the two cup-like parts of said toy element.

2. A toy element according to claim 1, characterized in that the cup-like parts of said toy element are identical.

3. A toy element according to claim 1, characterized in that the cross-section of each of the cup-like parts of said toy element has the shape of an equilateral polygon.

4. A toy element according to claim 1, characterized in that the cross-section of each of the cup-like parts has the shape of an equilateral octagon.

5. A toy element according to claim 1, characterized in that the cross-section of each of the cup-like parts has the shape of a circle.

6. A toy element according to claim 1, characterized

in that the inner wall of each cup-like part is provided with at least one projection such as a rib and a raised portion, said projection extending over at least part of said inner wall.

7. A toy element according to claim 1, characterized in that the inner wall of the sides of each of the cup-like parts is alternately provided with two ribs extending parallel to each other.

8. A toy element according to claim 1, characterized in that the cup-like parts have an equilateral polygonal cross-section, said connecting part comprising two parallel sheet-like connecting members, each connecting members connecting two sides of said cup-like parts at the angular points and having a width which is substantially equal to the width of the sides of the polygonal cross-section of the cup-like parts.

9. A toy element according to claim 1, characterized in that the cup-like parts have an equilateral polygonal cross-section, said connecting part comprising two parallel sheet-like connecting members, said connecting members connecting two sides of said cup-like parts at the angular points and having a width which is substantially equal to the width of the sides of the polygonal cross-section of the cup-like parts, the lower ends of the sheet-like connecting members being connected by a bottom which is likewise connected with the corresponding walls of the cup-like parts.

10. A toy element comprising at least two cup-like parts, each of said parts having a lower portion and an upper portion, said lower and upper portions having complementary external and internal cross-sectional shapes, respectively, for removable frictionally resisted telescoping engagement of said lower portion into the upper portion of an identical toy element, said upper portions each being of an interior height greater than the exterior height of each lower portion, said cup-like parts being disposed in side-by-side spaced apart relation, and connecting structure formed integrally with and extending between adjacent sides of said upper portions, said connecting structure establishing a spacing between adjacent sides of said lower portions greater than the sum of the wall thicknesses of said upper portions.

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