

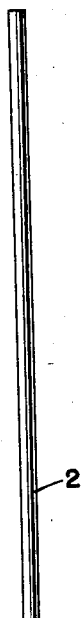
Aug. 12, 1958

E. J. MAJEWSKI
TOY CONSTRUCTION SETS

2,846,809

Filed April 17, 1956

2 Sheets-Sheet 1



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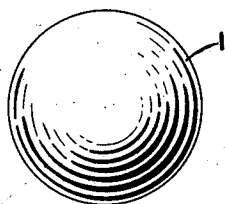


FIG. 1

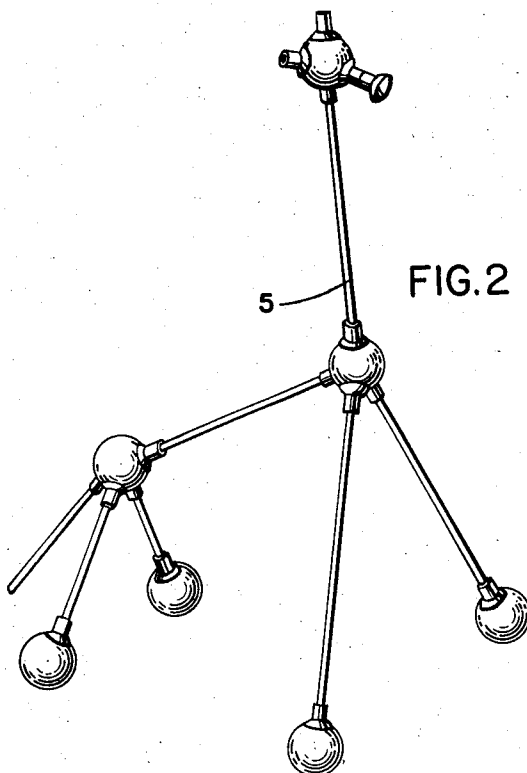


FIG. 2

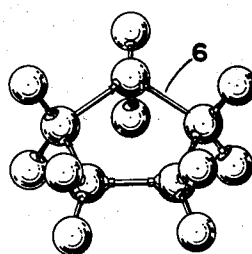


FIG. 3

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2 Sheets-Sheet 2

FIG. 4

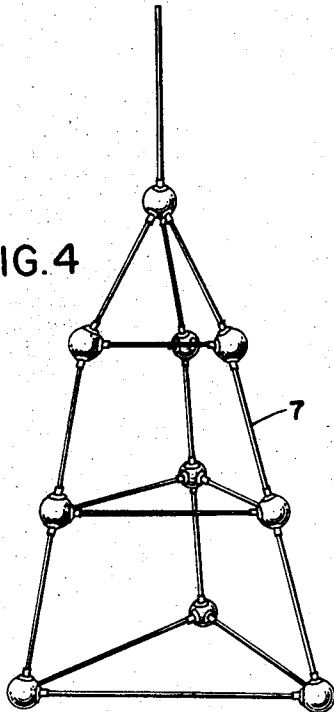


FIG. 5

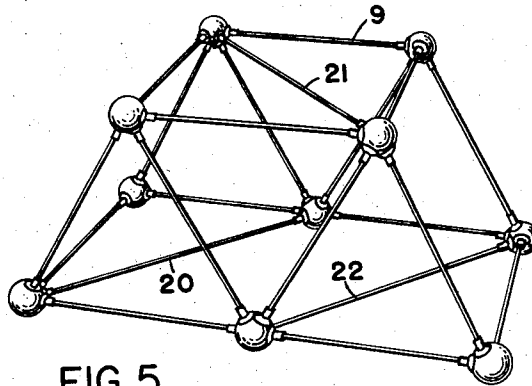


FIG. 6

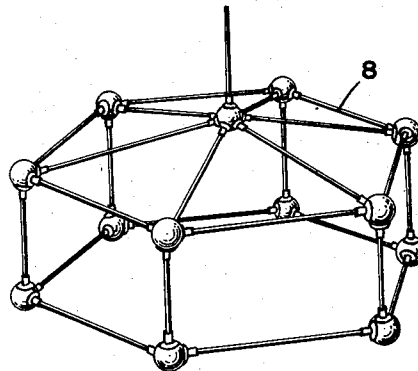
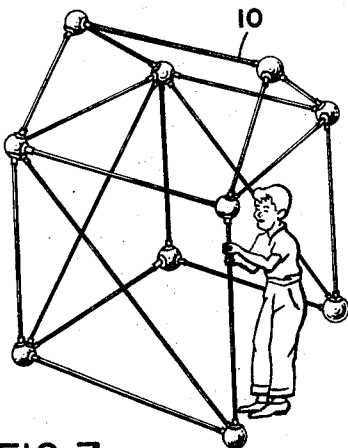


FIG. 7



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1

2,846,809

TOY CONSTRUCTION SETS

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3 Claims. (Cl. 46—29)

This invention relates in general to toys providing both entertainment and education for children.

The present invention has for its primary object the provision of an improved construction toy.

Another object of the present invention is the provision of a construction toy having a structure adapted for three dimensional instructional representation of chemical formulae.

A feature of the present invention is the provision of cellulose spheres, commonly referred to as "ping pong" balls, as connecting members.

Another feature of the present invention is the provision of lightweight rods having resilient suction cups secured at one or both ends thereof.

Other objects and features will be evident upon a perusal of the following description in which:

Fig. 1 shows the three basic elements of the present invention;

Figs. 2 and 3 are assemblies representing respectively a giraffe and the molecular structure of cyclopentane C_5H_{10} ;

Figs. 4, 5 and 6 show assemblies representing a tower and bridge and a carousel respectively; and

Fig. 7 shows an assembly of larger but relatively similar elements representing a house large enough for a small child to play in.

The preferred embodiment consists of light, hollow, spherical connecting elements 1 (Fig. 1) of cellulose material, for example well-known "ping pong balls," and thin cylindrical rods 2 of suitable material, such as wood or plastic, having rubber suction cups 3 secured to their ends. The suction cups 3 have a concave portion 4 which is more deeply arched than the outer surface of connecting element 1. The diameter at the base of said arched portion 4 is preferably of such size that three cups cover only a 90° arc when secured to the connecting element 1. This permits several rods 2 to be secured in close proximity to other in any direction. This flexibility of placement of the rods 2 herein is a primary advantage. The light weight of elements 1 permits the use of thin rods 2 and small suction cups 3 to support them. Obviously the rods need not be circular in cross-section.

In Fig. 2, rods of different lengths are connected to the spherical connecting members at many differing angles to realistically represent a giraffe 5. The extreme flexibility of location of the rods on the spheres is apparent. A distinct advantage of the invention is that it provides a challenge to the child to exercise a sense of symmetry and proportion inasmuch as there are no predetermined locations for placing the rods on the connecting elements.

Fig. 3 points up the ease with which the present invention can be utilized to accurately represent the structural formation of molecules etc., in this case cyclopentane (C_5H_{10}).

Figs. 4 and 6 again point up the flexibility of appli-

2

cant's invention—i. e. the rods can be positioned in any desired angle. Fig. 4 is a tower 7; Fig. 6, a carousel 8.

Fig. 5 points up another educational advantage of the present invention. Because applicant's rods are light and the suction cups have limited holding strength, the child will begin to grasp the significance of the use of supporting means such as rods 20, 21 and 22 in bridge 9.

In Fig. 7, applicant contemplates the use of larger but otherwise similar elements to provide a structure large enough to accommodate children, as a playhouse 10. The lightweight, spherical connecting elements, relatively lighter rods and suction cups on the ends of the rods make this feasible from a safety standpoint for the first time.

While there has been described what is believed to be the preferred embodiment of the invention, it is apparent that various changes and modifications may be made therein; and it is contemplated to cover in the appended claims all such modifications and changes as fall within the true spirit and scope of the invention.

What is claimed is:

1. A toy construction set comprising: a plurality of lightweight, substantially spherical connecting elements with a predetermined radius of curvature and having smooth, uninterrupted rigid surfaces capable of maintaining a vacuum; a plurality of rods; and resilient suction cups carried by the rods, at least some of the rods carrying suction cups at both ends, the suction cups having a radius of curvature sufficiently smaller than that of the elements to permit the suction cups to adhere to the elements by suction.

2. A toy construction set comprising: a plurality of hollow, spherical connecting elements with a predetermined radius of curvature and having smooth, uninterrupted rigid surfaces capable of maintaining a vacuum; a plurality of rods; and resilient suction cups carried by the rods, at least some of the rods carrying suction cups at both ends, the suction cups having a radius of curvature sufficiently smaller than that of the elements to permit the suction cups to adhere to the elements by suction.

3. A toy construction set comprising: a plurality of hollow, spherical connecting elements of a lightweight material, the elements having a predetermined radius of curvature and having smooth, uninterrupted surfaces capable of maintaining a vacuum; a plurality of rods; and resilient suction cups carried by the rods, at least some of the rods carrying suction cups at both ends, the suction cups having a radius of curvature sufficiently smaller than that of the elements to permit the suction cups to adhere to the elements by suction.

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