United States Patent [19]

Vennola

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[54] **TOY BEADS AND ASSEMBLY**

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[52] **U.S. Cl.** **46/16**

[51] **Int. Cl.** **A63h 33/00**

[58] **Field of Search** 46/29, 19, 16, 25

[56] **References Cited**

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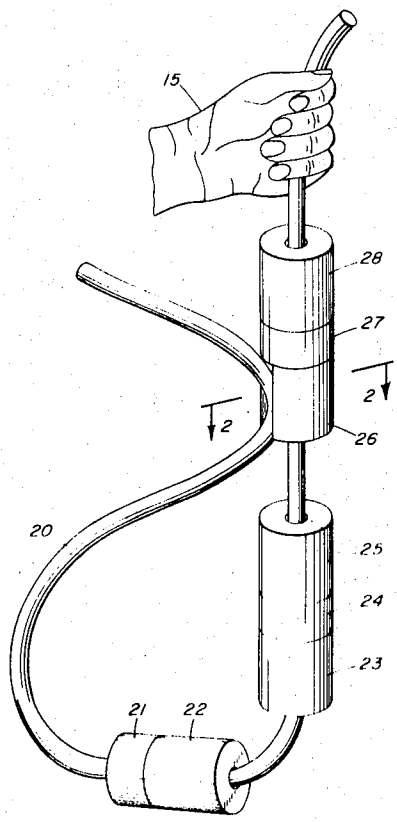
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[57] **ABSTRACT**

A toy or amusement device which is an improvement on the type of toy that is based on the concept of a string of beads. An elongated flexible and compressible support rod or string is provided. A plurality of beads are adapted to be slidably strung on the rod, the number of beads preferably being small enough to leave substantial uncovered slack on the rod. The beads have external grooves dimensioned to receive and squeeze-hold portions of the rod slack. In a preferred embodiment of the invention, the rod is cylindrical in shape and is formed of a soft vinyl material. The width of the grooves is smaller than the diameter of the rod such that the rod can be forced into the grooves and secured therein. In this manner, a large variety of stringing and looping combinations can be achieved, to the amusement of a child experimenting with the toy.

7 Claims, 3 Drawing Figures



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SHEET 1 OF 2

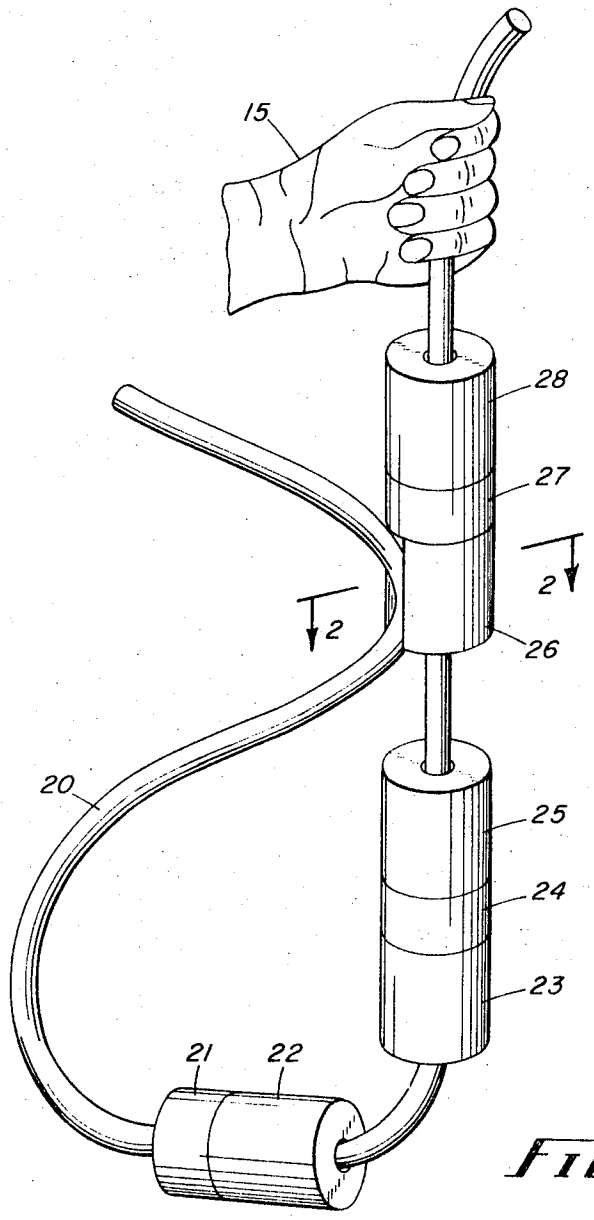


FIG. 1

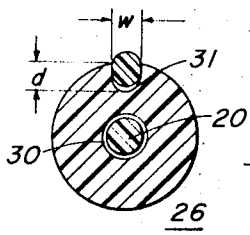


FIG. 2

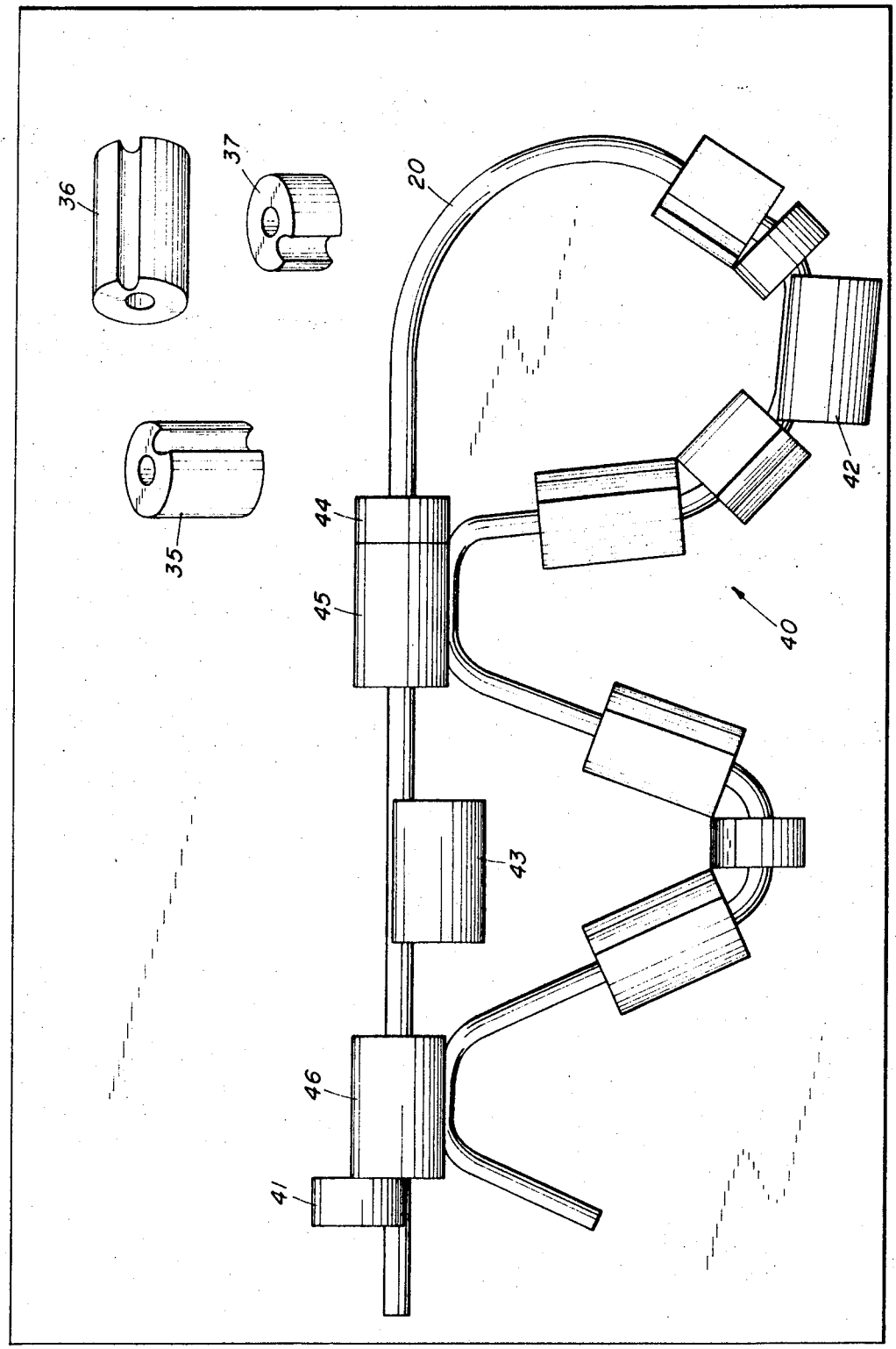


FIG. 3

TOY BEADS AND ASSEMBLY

BACKGROUND OF THE INVENTION

This invention relates to toys and, more particularly, to an improvement in the type of toy that is based on the concept of a string of beads.

An ancient form of amusement as well as ornamentation has been a set of beads on a string. The "strings" or support members have been constructed of various materials and beads have been formed in an almost unlimited variety of shapes and sizes. In the most common motif, the beads are strung on an endless fine string and their relative positions are not alterable, although, with some slack on the string, the beads can be moved around and have various separations as designated, for example, by an experimenting child. In other variations, the string may be open-ended and the beads of different shapes or colors can be strung in any order that suits the fancy of the child.

The usual level of amusement provided by the beaded-string type of toy is substantial and has accounted for this type of toy being a favorite amusement device over the years. However, it would be desirable to provide a toy of this type that has structural features which allow new and interesting variations on the usual themes of play that are available with a string of beads.

SUMMARY OF THE INVENTION

The present invention is directed to a toy which includes an elongated flexible and compressible support rod or string. A plurality of beads are adapted to be slidably strung on the rod, the number of beads preferably being small enough to leave substantial uncovered slack on the rod. At least one of the beads has an external groove dimensioned to receive and squeeze-hold a portion of the rod slack. In a preferred embodiment of the invention, the rod is cylindrical in shape and is formed of a soft vinyl material. The width of the groove is smaller than the diameter of the rod such that the rod can be forced into the groove and secured therein. In this manner, and by providing similar external grooves in additional beads, a large variety of stringing and looping combinations and structural shapes, including three-dimensional shapes, can be achieved, to the amusement of a child experimenting with the toy.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective elevational view of one configuration of the invention in assembled form;

FIG. 2 is a cross-sectional view of a bead in accordance with the invention as taken across the plane of arrows 2—2 of FIG. 1; and

FIG. 3 is an elevational view of components of the invention resting on a flat surface, some of the components being in assembled form.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1, there is shown an illustrative embodiment of the invention in assembled form. An elongated flexible and compressible rod **20** has slidably strung thereon a plurality of beads, preferably formed of hard plastic, and designated by the reference numerals **21** through **28**. The elongated rod **20** is preferably cylindrical in shape and may be solid or a tubing. It is preferably formed of a soft plastic such as vinyl and may be, for example, about 0.25 inch in diameter. In the embodiment of FIG. 1 each of the beads is provided with an axial borehole of larger diameter than the rod **20**, for example 0.29 inch. The beads are shown after having been slidably strung on the rod **20** by a child who, in FIG. **1**, is depicted as holding the beads suspended from one end of the rod **20** by a hand **15**. A portion of the other end of the rod **20** is seen to be coupled to one of the beads **26** that has a particular novel construction.

The bead **26** is pictued in cross-section in FIG. **2** and is seen to have an axial cylindrical borehole **30** that is of slightly larger diameter than the rod **20** so that the bead is slidable on the rod. The bead is also provided with an external groove **31** that runs the length of the bead parallel to the borehole **30**. The groove has a width *w* that is slightly smaller than the diameter of the rod **20** and the groove depth *d* is deep enough to accomodate and squeeze-hold the compressible rod **20** when it is pressed into the groove. In the particular embodiment shown, the groove width *w* is 0.24 inch and the depth *d* is 0.25 inch. The mechanism by which the end of rod **20** is coupled to bead **26** is thus seen to be the squeeze-hold applied by the groove **31** when the compressible rod is pushed into this groove.

Referring now to FIG. **3**, there is shown an embodiment of the invention that includes a plurality of cylindrically shaped beads that are of the same construction as the bead **26** of FIG. **2**, but have varying lengths. A typical toy set will include an elongated rod **20** and a number of beads, not all of which need be used in devising a particular stringing combination or design. In FIG. **3** some loose beads **35**, **36** and **37** are shown as resting on a table along with an assembled structure that represents one of the large variety of designs that can be made with the present invention. In the particular configuration **40**, one of the small beads **41** is attached to the rod **20** via its groove, this bead not being axially strung through its borehole. The bead is in this fashion usable as a termination or "stop" and adds even further variations to the number of possible configurations. The larger beads **42** and **43** are also shown as being attached to the rod **20** in this fashion. The remainder of the beads are axially strung through their boreholes on the rod **20** and loops are formed in the rod by coupling it to the grooves in the bead pair **44** and **45** and again coupling it to the groove in the bead **46**. The design shown has a degree of permanence in that the bead **41** acts as a termination that prevents the end of the rod **20** from slipping through the borehole of the bead **46**. The other end of rod **20** is held in place in the groove of bead **46**. Typically, the beads are made available in a variety of colors to add even further variation to the number of possible designs and ideas.

While the invention has been described with regard to particular preferred embodiments, it will be appreciated that variations can be made within the spirit of the invention. For example, the outer shape of some or all of the beads can have different shapes, such as cubical. If preferred, some or all of the grooves can be made at angles to the bead boreholes, for example perpendicular to the borehole. Also, additional grooves can be provided in one or more of the beads so that two or more external couplings to a particular bead can be achieved.

I claim:

1. A toy comprising:

a single elongated flexible and compressible support rod;

a plurality of beads slidably strung on said rod, the number of beads being sufficiently small to leave substantial uncovered slack on said rod;

at least one of said beads having an external groove which removably receives and holds a portion of said rod slack so as to form a loop in said rod.

2. A toy as defined by claim **1** wherein said at least one bead is cylindrical in shape and has an axial borehole for receiving said rod to slide thereon, said external groove being parallel to said borehole.

3. A toy as defined by claim **2** wherein said rod is cylindrical in shape and the width of said groove is smaller than the diameter than the said rod.

4. A toy as defined by claim **3** wherein said rod is formed of clear vinyl.

5. A toy as defined by claim **1** wherein each of said beads has an external groove dimensioned to receive and squeeze-hold a portion of said rod slack.

6. A toy as defined by claim **5** wherein each of said beads is cylindrical in shape and has an axial borehole for receiving said rod to slide thereon, said external grooves being parallel to said boreholes.

7. A toy as defined by claim **6** wherein said rod is cylindrical in shape and the width of said groove is smaller than the diameter of said rod.

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