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A. BERNDT ET AL

2,418,922

TOY

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Fig. 1

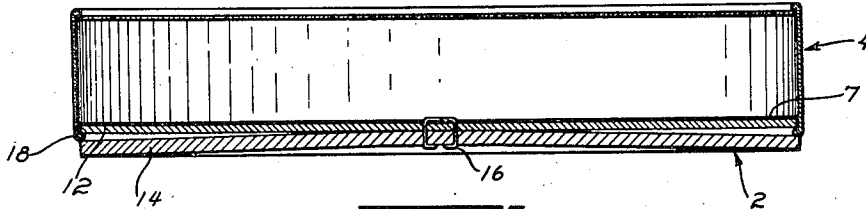
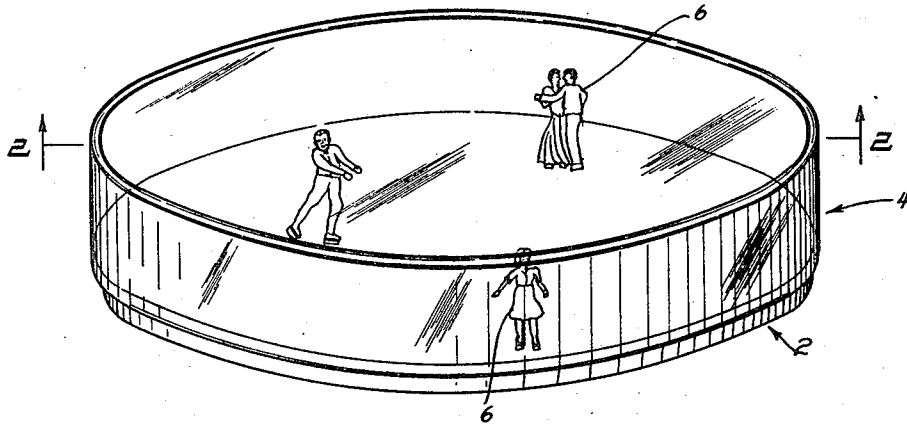


Fig. 2

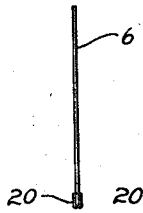
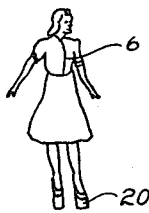


Fig. 3

Fig. 4

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2 Claims. (Cl. 46-45)

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This invention relates to toys of the type in which mobile elements, which may be formed in any desirable shape, are freely positioned within a casing having parts formed of materials which take electrostatic charges of different sign, whereby the elements are caused to move about when an electrostatic field is set up between such parts by imposing an electrostatic charge on one of them.

The principal object of this invention is to provide a toy of the described type having parts of novel construction and arrangement and formed of materials not heretofore used in such toys, whereby the freely movable elements will move for longer periods of time, with more freedom, and in more erratic paths than the corresponding elements of known toys of the same general type. Another object is to provide a toy of the described type which is constructed in a novel manner whereby it may be more easily and cheaply manufactured and whereby easier and quicker access may be had to the movable elements within the casing. Another object is to provide mobile figures for toys of the described type, which are of new and improved construction and provide new results in the operation of such toys.

Other objects and features of novelty of the invention will be made apparent by the following description and the annexed drawing which disclose one embodiment of the invention and impose no limitation on the invention not imposed by the appended claims.

Referring to the drawings, in which similar reference numerals refer to like parts,

Fig. 1 is a perspective view of a toy formed in accordance with this invention;

Fig. 2 is a sectional view taken along any diameter of the toy disclosed in Fig. 1, and

Figs. 3 and 4 are front and side views showing one of the movable elements provided by the invention.

The embodiment of our invention disclosed in the drawings comprises a circular bottom 2, a cup-shaped cover 4, the open end of which is attached to the periphery of the bottom whereby an enclosing casing is provided, and one or more movable elements 6 which are positioned within the casing for free movement therein. The cover 4 is formed of acetate. The bottom 2 is preferably formed of cardboard and its upper surface, interiorly of the casing, is provided with a metallic coating 7 which may be metal foil. The bottom may be formed of two superposed, abutting cardboard discs 12, 14 of the same size and shape

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which are attached together at their centers by a staple 16, thus permitting their peripheral edges to be sprung apart to receive a bead 18 which is formed on the free peripheral edge of the cover, thus providing a particularly simple and cheap construction permitting easy assembly and disassembly. The movable elements 6 are formed of non-metallic material, preferably paper, and may be shaped to simulate any known figure, for example, a human being. The lower extremity or extremities of each element 6, for example the feet of the figure disclosed in Figs. 3 and 4 are covered on one or both sides with metal, as shown at 20. The weight of metal which is so added is more fully described hereinafter.

When the parts of the toy are assembled with the cover 4 attached to the bottom 2 and the movable figures within the casing, the toy is operated by striking the cover 4 one or more glancing, or swiping, blows with the hand. Charges of static electricity of opposite sign are thereby generated within the cover and bottom and an electrostatic field is set up between them, causing attraction and repulsion of the paper figures whereby these move in erratic paths within the casing in a suspended, or vertical, position, producing a dancing movement. The metal applied to the lower part of each figure prevents the figures from sticking to either the cover or the bottom. The metal is applied in such quantity that the weight thereof is greater than the attraction of the charged casing but is not so great as to cause the pull of gravity to completely overcome such attraction and hold the figure in a fixed position, and the figures therefore remain in a vertical position so long as the electrostatic field exists.

It has been found that a toy constructed in accordance with this invention is much preferred to known toys of the same type as it produces more prolonged and erratic movement of the figures, is not subject to sticking of the figures to the cover or bottom, is easily and cheaply manufactured, and may be easily and quickly assembled or disassembled. Further, the provision of an acetate cover increases the strength of the electrostatic field to such an extent that the amount and duration of movement of the figures are far greater than in known toys.

While we have described and illustrated but one embodiment of our invention it will be apparent to those skilled in the art that other embodiments, as well as modifications of that disclosed, may be made without departing in any way from the scope of the invention, for the

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limits of which reference must be had to the appended claims.

We claim:

1. An electrostatically-operated toy comprising a casing formed of a cup-shaped cover formed of non-metallic material in which static electricity of negative sign is produced by rubbing and a bottom closing the open end of the cover and having a metallic coating on its upper surface within the casing, and at least one element positioned within the casing for free movement therein and being formed of non-metallic material and having a metallic coating applied to one extremity thereof in an amount sufficient so to lower the center of gravity of the element that it will assume a vertical position when an electrostatic field is established between the casing and the coating but insufficient in amount to prevent the element from assuming such a vertical position and from having free movement, whereby such element will freely move in an erratic path within the casing in a vertical position with the metallic coating at the lower end thereof when an electrostatic field is produced between said cover and said bottom.

2. As a new article of manufacture, a part for

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an electrostatically-operated toy comprising a body formed of a sheet of non-metallic material shaped to simulate a known figure, such as that of a human being, and metal coated on one extremity thereof only in an amount sufficient so to lower the center of gravity of the element that it will assume a vertical position when placed in an electrostatic field but insufficient in amount to prevent the element from assuming such a vertical position and from having free movement.

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15 The following references are of record in the file of this patent:

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