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3,523,385

BEEHIVE PUSH TOY

Filed March 27, 1967

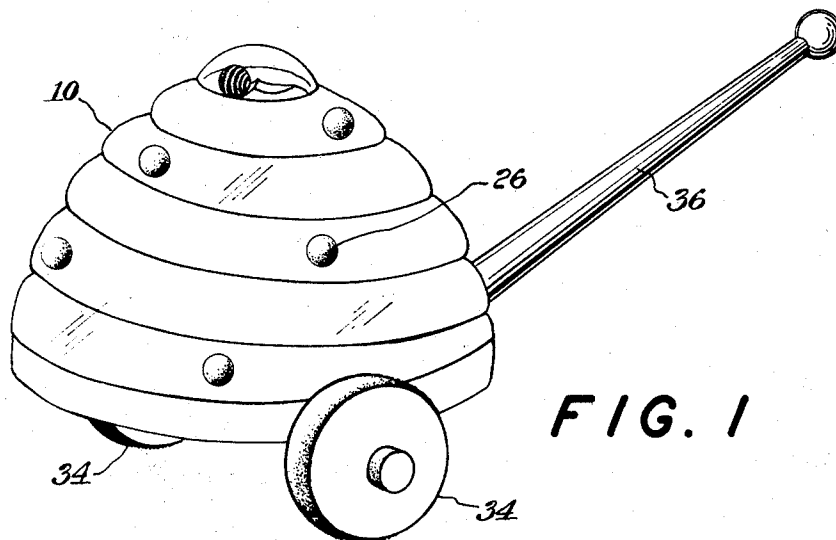


FIG. 1

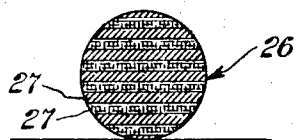


FIG. 2

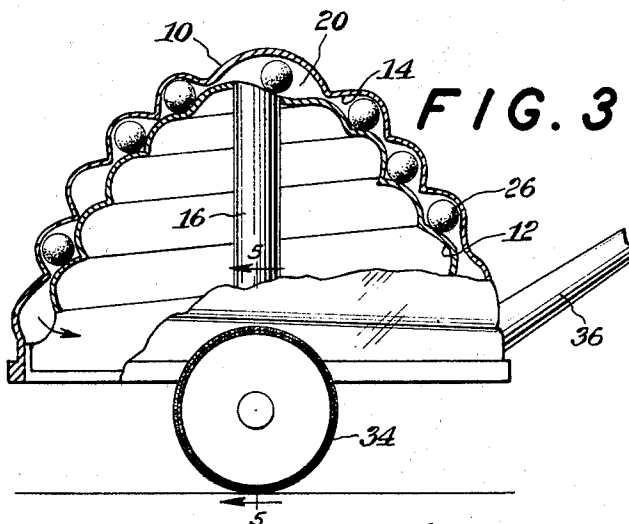


FIG. 3

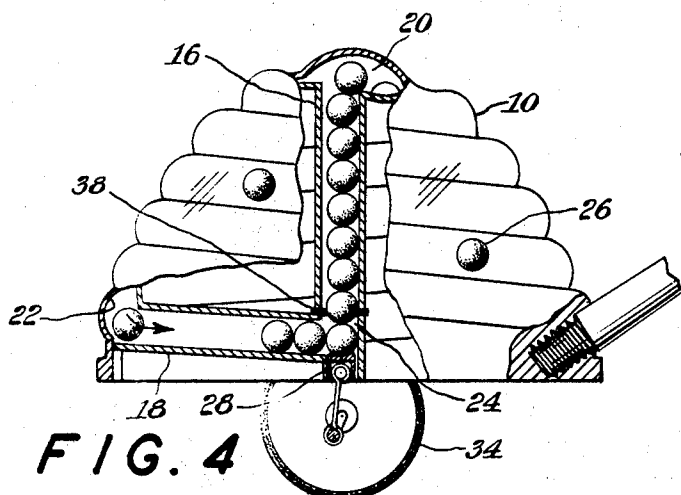


FIG. 4

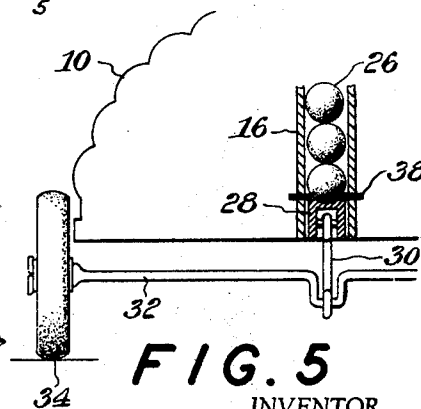


FIG. 5

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1

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BEEHIVE PUSH TOY

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6 Claims

ABSTRACT OF THE DISCLOSURE

A push toy to be used by small children and adapted to resemble a beehive. It consists of a dome shaped hive having a helical path for balls to circle downwardly on its periphery. The balls are striped to resemble bees. When the balls reach the bottom, they roll to the center of the hive through a tube and are forced upwardly through a vertical tube to the top of the hive by means of a cam connected to the wheels of the toy.

My invention relates to toys used by young children.

It is an object of my invention to provide a new and improved toy which simulates the appearance and action of bees in a hive.

Another object is to provide a new and improved toy of the character indicated wherein marbles colored to resemble bees appear and disappear within a simulated hive as the toy is pushed or pulled along a surface.

Still another object is to provide a new and improved toy of the character indicated which can be manufactured easily and inexpensively.

All of the foregoing and still further objects and advantages of my invention will now be explained with reference both to this specification and to the accompanying drawings wherein:

FIG. 1 is a perspective view of my toy;

FIG. 2 is a side view of a marble used therein;

FIG. 3 is a side view thereof shown partially in cross section;

FIG. 4 is a view similar to FIG. 3 but showing additional parts in cross section; and

FIG. 5 is a detail cross sectional view illustrating the action of a portion of the ball feeding mechanism used in my toy.

Referring now to FIGS. 1-5, there is shown a clear plastic outer shell 10 which is dome shaped and curved to resemble a beehive.

Shell 10 encases another plastic or wood dome shaped member 12 having a similar contour whereby a ball conducting channel 14 is formed between shell and member and spirals downward about the outer surface of the member. Member 12 also contains a centrally disposed vertical hollow tube 16 communicating at its top end 20 with the top of channel 14. A second hollow tube 18 is disposed within the member being connected at one end at 22 to the bottom of channel 14 and slopes downward to connect at 24 with the bottom end of the tube 16. The tubes and channel contain a plurality of marbles 26 each of which has a plurality of vertically spaced stripes 27 alternating in black and yellow to resemble the colors of bees.

A plunger 28 is disposed in the bottom end of tube 16 and is adapted to move vertically up and down under the action of a vertical crank arm 30 secured at one end to the base thereof. The other end of arm 30 is secured to the center of a horizontal crank shaft 32 which functions as a lifting means also serves as a horizontal axle for wheels 34 disposed at opposite ends thereof. Member 12 rests on shaft 32. A handle 36 is secured at one end to the base of the shell. Tube 16 is provided intermediate its ends with a hollow rubber ring 38 which acts as a gate

2

to permit marbles to pass upward therethrough under action of the upwardly moving plunger but prevents any marble from falling downward therethrough when the plunger moves downward. The plunger 28 and the rubber ring 38 thus function as a means in the tube for raising and retaining the balls in the vertical tube.

The marbles once moved to the top of the channel 14 move downward by gravity and are discharged into tube 18 where they move by gravity into the bottom of tube 16. As the toy is pulled, the wheels and axle rotate, and the plunger forces the marbles upward one at a time to the top of channel 14.

As a result the marbles appear, disappear and reappear as bees appear, disappear and reappear in an actual hive and children (and adults) are delighted to observe the operation with fascinated enjoyment.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A toy comprising a vertical dome shaped member, a ball conducting channel spiralling downward about the outer surface of the dome, a vertical ball conducting channel disposed within said dome shaped member, the top of the vertical channel being connected to the top of the spiral channel, said dome shaped member having a substantially continuous outer surface, said spiral channel having an outside edge lower than the inside edge, means for holding the balls in the spiral channel, whereby the balls are exposed and made readily visible at all times while in the spiral channel, means connecting the bottom of the vertical channel to the bottom of the spiral channel in such manner that any ball rolling downward by gravitational action in the spiral channel is conducted automatically by gravitational action to the bottom of the vertical channel, means to automatically raise each ball in the vertical channel, one at a time, to the top thereof, whereby each ball is in turn supplied to the top of the spiral channel and rolls downward therein and means disposed in the vertical channel intermediate the ends which permits balls to pass upward therethrough but prevents any downward passage of balls therethrough.

2. A toy comprising a dome-shaped mound, said mound having a ball conducting tube therein opening at the top to the exterior of said mound and extending downwardly therethrough and opening at the bottom thereof, a ball conducting channel spiralling downward about the outer surface of the dome-shaped mound, at least one supporting wheel mounted for rotation at the bottom of the toy, a lifting means mounted for rotation with the wheel, whereby said lifting means is adapted to rotate with the wheel as the toy is pushed across the floor, said lifting means being located in the vicinity of the lower end of the ball conducting tube in the mound, said toy including means for conveying balls from the base of the spiral channel at the mound centrally to the lower end of the ball conducting tube and into operative relationship with the lifting means, the operative relationship of the lifting means with the balls being adapted to elevate the balls through the tube to the top of the dome-shaped mound and said balls being adapted upon emerging from the top of the tube to roll downwardly by gravitational action to the bottom of the mound, means in said tube including a moving member secured to said lifting means to raise a vertical column of balls in said ball conducting tube to feed one of said balls out of said tube at the top and in through said spiralling channel, and means for holding said column to admit a ball into said conducting tube at the bottom thereof.

3. A toy as set forth in claim 1, said means for holding said balls in the spiral channel including a transparent outer dome-shaped housing encasing said dome-shaped member.

3

4. A toy as set forth in claim 1 including a plurality of balls, each of said balls being painted to simulate bees.

5. The toy set forth in claim 2, said holding means being the base of said dome-shaped mound operatively associated with the balls which permits the balls to pass upwardly through the ball-conducting tube but prevents any downward passage of the balls therethrough.

6. The toy according to claim 5 wherein the said means for permitting the balls to pass upwardly comprising a deformable resilient material mounted at substantially the lower end of the ball-conducting tube to provide a restricted passage which acts as a gate to permit the balls to pass upwardly through the ball-conducting tube.

5

10

4

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F. BARRY SHAY, Primary Examiner

U.S. Cl. X.R.

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