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ORBITING AND SOARING SKILL TOY

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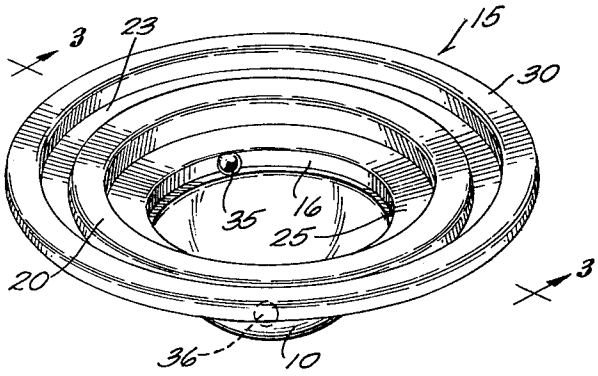


Fig. 1

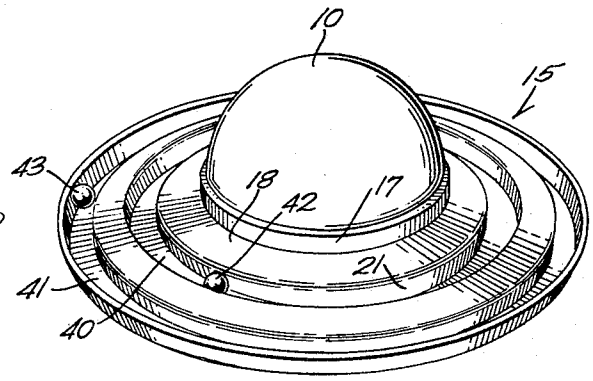


Fig. 2

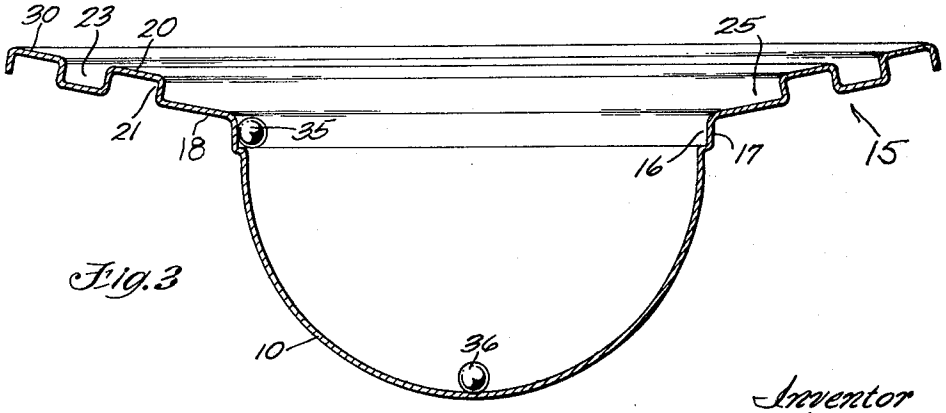


Fig. 3

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ORBITING AND SOARING SKILL TOY

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ABSTRACT OF THE DISCLOSURE

A semispherical dome shaped toy with a rim extending radially from its edge and having a plurality of annular grooves. One or more small balls are placed inside the dome which is then maneuvered to place the balls in orbit and the object is to orbit the balls into the annular grooves with each succeeding groove being of increasing difficulty to reach. For diversification, the dome may be placed on the head of the player and balls disposed in annular grooves in the rim may be placed in orbit by gyrating the head and torso. The toy may also be tossed into the atmosphere with a spinning motion to cause it to soar, and its configuration is such that a breeze will react on its surface to propel it further in intricate paths of travel.

BACKGROUND OF THE INVENTION

The invention is a toy that is provided for the amusement of human beings. It is of such nature that it may be readily operated and enjoyed by the novice but practice produces increasing skill in its use for even greater enjoyment to the participant. As a result, different competitive games of skill may be played with the toy.

With the advent of the space age a variety of toys have been developed to simulate space equipment and the maneuvering of such equipment in outer space. The improved toy of the present invention is very well adapted to represent space maneuvers with the dome portion of the toy simulating a planet and the several concentric grooves around the dome being different orbits about the planet. The small balls within the dome are the space vehicles that the players maneuvers into the different orbits about the planet with competitors striving to place the balls in the most difficult orbit.

When the toy is tossed into the atmosphere, it becomes the space vehicle or a flying saucer. If it is tossed into a breeze, the player may direct it in such a manner as to allow the breeze to propel the toy into intricate maneuvers. On the other hand, other competitive games may be played wherein the players test their accuracy in tossing the toy at a target or strive to propel the toy the greatest distance along a prescribed path.

SUMMARY OF THE INVENTION

The improved toy of the present invention is preferably formed of molded plastic shaped to provide a semispherical dome with a rim so that it has the appearance of a hat. The dome, of course, presents a circular edge and an annular recess is formed at this edge. In addition, a plurality of annular grooves are formed on both sides of the rim. A small ball, such as a glass marble or the like, is placed in the downwardly extending dome and the player grasps the toy and moves it in a path to cause the marble inside the dome to move about the wall of the dome and progress upwardly until it is maneuvered into the annular recess. The toy may then continue to be maneuvered in an effort to advance the ball from the annular recess in the dome into another annular recess on the rim to achieve a different orbit and then into succeeding grooves on the rim, with each orbital path being more difficult to achieve.

As a further display of skill, additional balls may be placed into the dome successively and advanced into the different orbital paths while one or more other balls are already in orbit.

The toy may be inverted and placed on the head of a player to present additional annular grooves in the rim, concentric with the dome. Balls are placed in these grooves and by skillfully gyrating his head and torso, the player may manage to move the balls into orbits established by the annular grooves about the dome which is encompassing the top of the head of the player.

The rim of the toy extends outwardly from the edge of the dome but also extends away from the dome. This configuration forms a pocket which causes the toy to soar into the atmosphere when it is tossed upwardly with a spinning motion. Moreover, if the toy is tossed into a breeze, the latter will further propel the toy into the atmosphere, and may actuate it into intricate maneuvers to the amusement of the player.

It is therefore a general object of the present invention to provide an improved toy that may be employed in different manners for the amusement of the players.

Another object of the invention is to provide a toy that may represent outer space, and in which the player can imagine that he is maneuvering a space vehicle into different orbits about a planet.

A further object is to provide an improved toy of simple and inexpensive but sturdy construction which may be employed to play different competitive games of skill for contestants and will also provide diverse amusements for an individual player.

DESCRIPTION OF THE DRAWING

The foregoing and other objects of this invention, which will become more fully apparent from the following detailed description, may be achieved by the exemplifying apparatus depicted and set forth in the specification in connection with the accompanying drawings, in which:

FIGURE 1 is a perspective view of a toy constructed in accordance with the teachings of the present invention with a ball being shown in an annular recess that establishes an orbital path of travel, and a second ball being depicted in the bottom of the toy;

FIGURE 2 is a perspective view of the toy illustrated in FIGURE 1 but depicted in the inverted position to show the exterior surface of the dome as well as the bottom of the rim; and

FIGURE 3 is a view in vertical section taken through the center of the toy along the plane represented by the line 3—3 in FIGURE 1.

DESCRIPTION OF A PREFERRED EMBODIMENT

Reference is now made more particularly to the drawings which illustrate a toy constructed in accordance with the teachings of the present invention. As there shown, the improved toy comprises a dome **10** that is preferably of semispherical configuration. A rim generally identified by the reference numeral **15** is secured to the circular edge of the dome **10** and extends outwardly and upwardly therefrom. Thus, the toy includes the dome **10** with its outwardly extending annular rim **15** to give it the appearance of a hat.

An annular recess **16** is formed in the dome **10** at its outer edge with an annular wall **17** defining the periphery of the recess **16**. The outer circular edge of the wall **17** establishes the edge of the dome **10** and the rim **15** is attached to this edge, extending outwardly therefrom while being tapered slightly upwardly away from the dome **10**. In this description, the dome **10** is considered as being disposed at the bottom of the toy with the rim **15** being

located at its top, such normal position being illustrated in FIGURES 1 and 3.

The rim **15** is attached to the dome **10** by an annular wall **18** that has its inner circular edge attached to the outer circular edge of the wall **17**. The wall **18** forms an obtuse angle with the annular wall **17** so that the rim **15** tapers upwardly from the dome **10**. An annular protrusion **20** extends upwardly from the rim **15** with its circular sidewall **21** extending upwardly from the annular wall **18** to form an annular recess **25** at the inner edge of the rim **15**. It will be noted that the recess **25** is contiguous with the recess **16** with the recess **16** extending upwardly about the outer edge of the dome **10** and the annular recess **25** extending laterally therefrom about the inner edge of the rim **15**.

A second annular protrusion **30** is formed at the outer extremity of the rim **15**. The annular protrusion **30** is spaced outwardly from the annular protrusion **20** to form an annular groove **23** between them.

The annular recess **16**, the annular recess **25** and the annular groove **23** form orbital paths for receiving small balls which may be moved in these annular paths of travel by maneuvering the toy. Thus, in FIGS. 1 and 3, a ball **35** is illustrated in the annular recess **16** and a second ball **36** is shown in the bottom of the dome **10**. A indicated in FIG. 1, the ball **35** is traveling in the orbital path established by the annular recess **16** and the ball **36** is at the bottom of the dome **10** ready to be maneuvered upwardly along the interior wall of the dome **10** to be moved into the annular recess **16** while the ball **35** is travelling therein without dislocating the ball **35** from its orbital path of travel. Such shifting of the ball **36** is accomplished by manually maneuvering the toy and a player can become skilled in this maneuver to successively place a large number of balls into orbital movement in the recess **16**.

The ball **35** is maintained in an orbital path of travel within the recess **16** by moving the dome **10** and its associated rim **15** in an orbit. By tipping the toy or otherwise maneuvering it while moving it in an orbit, the ball **35** can be shifted, while in its orbital movement, into the annular recess **25**. By further manuevering of the toy, the ball **35** can be shifted over the protrusion **20** and into the groove **33** while maintaining its orbital movement.

In order to create a game related to maneuvering in outer space, the dome **10** can be considered to be planet in the universe with the annular recesses **16** and **25** and the annular groove **23** being considered different orbits about the planet **10**. The operator will move the space vehicle represented by the ball **35** from a small orbit in the annular recess **16** into a larger orbit established by the annular recess **25** and then into the orbit defined by the groove **23** for achieving the greatest distance away from the planet. As the operator becomes proficient in transferring the space vehicle from one orbit to another he will successively add more balls into the dome **10** so that the number of balls, representing several space vehicles, will be in orbit simultaneously about the dome **10** which will represent the planet in the universe.

On the other hand, the player may invert the toy to the position shown in FIGURE 2. With the toy in this inverted position, the rim **15** presents two additional annular grooves **40** and **41** which actually constitute the bottom sides of the annular protrusions **20** and **30** respectively. A ball **42** is shown in the groove **40** in FIGURE 2 while another ball **43** is depicted in the groove **41**. The player may place the toy on his head in the inverted position shown in FIGURE 2 with the dome **10** encompassing his head. Then, with a ball in one of the grooves **40** or **41**, or a ball in each groove, or with several balls in one or both grooves the player can gyrate his head and torso to move the toy and thereby maneuver the balls into the orbits defined by the two grooves. Such gyrations by the player causes him to exercise muscles which are not usually used in normal daily activities.

It has also been found that the unique configuration of the toy illustrated in the drawings, with its dome **10** and outwardly and upwardly extending rim **15** having the annular protrusions **20** and **30** therein, render it especially well adapted for soaring in the atmosphere. If the toy is tossed upwardly and outwardly into the air, and given a spinning motion as it is thus tossed, it is capable of traveling great distances. Moreover, if it is caught by a breeze, the latter will further propel it and may actuate it into intricate maneuvers, as for example, into sharp curves, or under other conditions, it may move the toy into graceful curves through the air.

This characteristic of the toy renders it adaptable for other forms of amusement besides placing the small balls in orbit. Thus, merely tossing the toy into the atmosphere with a spinning motion provides amusement in observing it soar through the air in the manner of a space vehicle and to further observe the intricate maneuvers it may go through when caught by a breeze. This feature also enables other competitive games to be developed, as for example, the contestants may determine who can toss the toy the greatest distance through the air and skills may be developed to achieve long distances of travel through the air. In addition, an operator may develop the skill of controlling its flight to achieve accuracy in throwing it at a target. Thus, accuracy contests may be had for throwing the toy at the target a specified distance.

From the foregoing detailed description of the illustrative embodiment of the invention set forth herein it will be apparent that there has been provided an improved orbiting and soaring toy that is especially adapted for playing a variety of games by contestants as well as providing diverse amusements for an individual player and that will also afford a player an opportunity to exercise his muscles.

Although the illustrative embodiment of the invention has been described in considerable detail for the purpose of disclosing a practical operative structure whereby the invention may be practiced advantageously, it is to be understood that the particle article described is intended to be illustrative only and that the various novel characteristics of the invention may be incorporated in other structural forms without departing from the spirit and scope of the invention as defined in the subjoined claims.

The principles of this invention having now been fully explained in connection with the foregoing description, I hereby claim as my invention:

1. In a toy, a dome of substantially semispherical configuration; an annular recess formed in the wall of said dome to extend outwardly of its inner surface at the circular edge of said dome so that a ball may be placed in the interior of said dome and moved into an orbital path of travel within said annular recess by maneuvering said dome; a rim extending radially outwardly from said dome; and an annular recess in said rim establishing a second orbital path of travel for a ball.

2. A toy according to claim **1**; including an annular groove in said rim for establishing a third orbital path of travel for a ball.

3. A toy according to claim **2** wherein said annual recess and said annual groove are formed in the top side of said rim; and including at least a second annular groove formed in the opposite side of said rim for receiving balls and guiding them in the orbital path of travel established by said grooves.

4. A toy according to claim **1**; wherein said rim is tapered upwardly from said dome to adapt the toy for soaring through the atmosphere when tossed outwardly and upwardly while imparting a spinning motion to it.

5. In a toy, a dome of substantially semispherical configuration; an annular recess formed in the wall of said dome to extend outwardly of its inner surface at the circular edge of said dome so that a ball may be placed in the interior of said dome and moved into an orbital

path of travel within said annular recess by maneuvering said dome; a rim extending radially outwardly from said dome; and an annular groove in said rim for establishing a second path of travel for a ball.

6. In a toy, a dome of substantially semispherical configuration; a rim extending radially outwardly from said dome; an annular recess in said rim; and a bill resting freely in the concave side of said dome so that it may be moved into an orbital path of travel within said dome and then from said dome into said annular recess by maneuvering said dome with its associated rim.

7. A toy according to claim 6 wherin said rim is tapered upwardly away from said dome to adapt the toy for soaring through the atmosphere when tossed upwardly and outwardly while imparting a spinning motion to it.

8. A toy according to claim 6 including an annular groove in said rim for receiving said ball to be guided in the annular path of said groove.

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