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SPINNING TOY BALLOON

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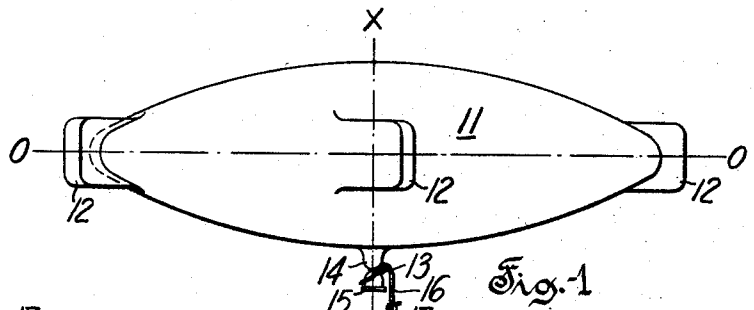


Fig. 1

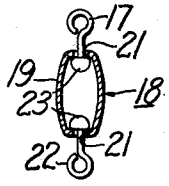


Fig. 4

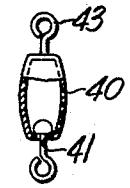


Fig. 5

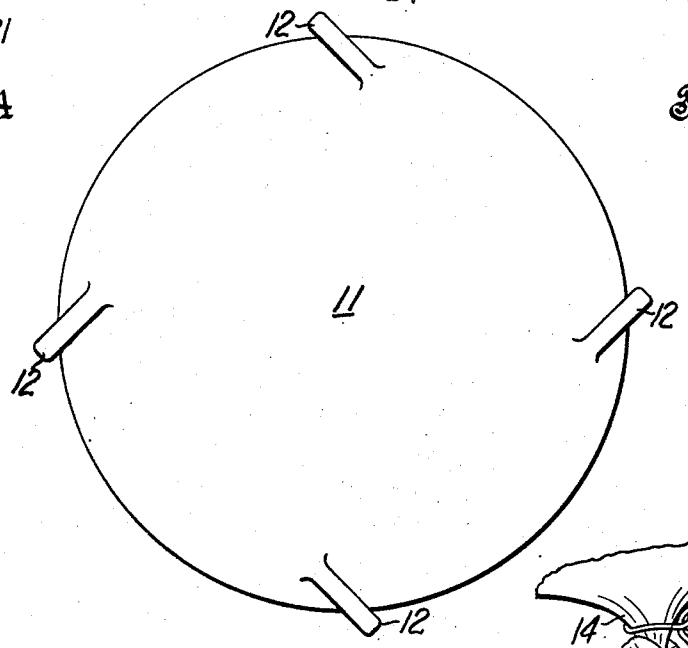


Fig. 2

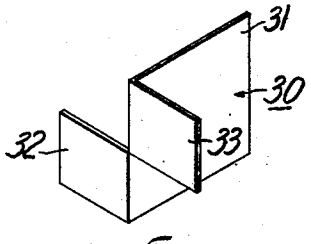


Fig. 3

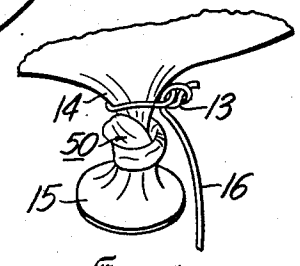


Fig. 6

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SPINNING TOY BALLOON

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1 Claim. (Cl. 46—53)

This invention relates in general to toys and more particularly to a rotatable aerial toy.

In the development of toys of the aerial type which can be held by a child to float aloft, it has been common to simulate the conventional form of airship having propellers and wings. With respect to the airship of the future, designers have illustrated a form of airship which has become well known to both adults and children as the "flying saucer" airship. This type of airship has a generally ellipsoidal shape with its horizontal axis greater than its vertical axis, and it is understood to be motivated by rotation about its vertical axis. Since this "flying saucer" airship is such a departure from the shape of a conventional airship having a long cylindrical body, propellers and large wing surfaces, children are fascinated and amused by toys which simulate the "flying saucer" shape.

It is an object of the present invention to provide a novel and useful improvement in a toy which closely resembles the well known "flying saucer" type of airship.

Another object of the present invention is to provide an aerial toy which is rotatable due to the action of the wind or forced air thereupon and simulates an airship of the "flying saucer" type.

A further object of the present invention is to provide a toy which is simple and inexpensive, yet serviceable in construction and can be easily handled by a child.

Other objects will be apparent from the following description when read in connection with the drawings, in which:

Fig. 1 is an elevational view of the aerial toy;

Fig. 2 is a plan view of the aerial toy;

Fig. 3 is an enlarged view of a modified form of fin structure;

Fig. 4 is an enlarged sectional view of the swivel connection of the aerial toy;

Fig. 5 is an enlarged view partly in section of a modified form of swivel connection;

Fig. 6 is an enlarged view of a modified form of nipple closure which prevents the escape of gas from the aerial toy.

Referring to the drawings by characters of reference, Figs. 1 and 2 illustrate a toy of the rotating aerial type comprising a balloon-like body portion **11** in a gas filled inflated condition. The configuration of body portion **11** is generally of an ellipsoidal nature wherein horizontal axis O—O has a greater dimension than vertical axis X—X. Moreover, all points of the periphery of a horizontal plane through horizontal axis O—O are spaced equidistant from vertical axis X—X.

Spaced along the outer surface of body portion **11** in the general area of a horizontal plane through horizontal axis O—O are a plurality of fins **12**, shown in the preferred embodiment as being formed integral with body portion **11**. Fins **12** are hollow so that the gas in body portion **11** will also inflate fins **12**. In Figs. 1 and 2 fins **12** are shown as being positioned at an oblique angle with

respect to the surface of body portion **11**. This angle may be varied to change the rotative characteristics of the toy. The shape of fins **12** is shown as being generally rectangular with the side adjacent body portion **11** being curved to correspond with the curved surface of body portion **11**. However, the shape of fins **12** is not critical to the operation of the toy, and the edges thereof may be semicircular, scalloped or any other configuration as long as fins **12** present a flat surface projecting from the surface of the body.

On the lower surface of balloon-like body **11** a nipple **14** is formed integral therewith. Nipple **14** extends outwardly from the surface of the body and is hollow or tubular shaped throughout with an opening at each end. The end of nipple **14** adjacent body portion **11** opens into the interior of the body, and the other end of the nipple is formed with a resilient flange **15**. The admission of gas into body portion **11** and hollow fins **12** and the expulsion therefrom are controlled by nipple **14**. When the body portion has been inflated to the desired condition, the passageway through nipple **14** is closed, as shown in the preferred embodiment in Fig. 1, by tightly tying a knot **13** thereabout with a string **16** or other flexible material intermediate the ends of nipple **14**.

In the preferred embodiment shown in Fig. 1 nipple **14** is shown as being positioned in line with vertical axis X—X. However, nipple **14** can be positioned anywhere on the lower surface of body **11**, and such off-center positioning may be advantageous where it is desired to produce a tilted flying effect of the toy.

Body portion **11**, fins **12**, and nipple **14** may be formed out of thin rubber material as is done in the usual manufacture of balloons, or thin plastic may be used or other non porous material. The nature of the material used is not critical to the invention as long as the material can be inflated and maintain an inflated condition when the passageway in the nipple is closed.

As mentioned hereinbefore, one end of string **16** is tightly tied about nipple **14**. The other end of string **16** is tied to a freely rotatable ring member **17** of a swivel **18**. As shown in the preferred embodiment in Figs. 1 and 4 swivel **18** comprises a bead portion **19** having openings **21** in each end thereof. Corresponding ring members **17** and **22** comprise shank portions attached to the end ring portions, and openings **21** are of a size which allows the shank portions but not the ring portions to slide freely therethrough. Ring members **17** and **22** terminate inside bead **19** in ball members **23**, and with respect to ball members **23** the openings **21** of bead **19** are of a size that prevents ball members **23** from passing therethrough.

Handle means, shown in Fig. 1 as a string **24**, are tied to ring member **22**. The length of string **24** may be varied, and if desired, a string sufficiently long to fly the toy as a kite may be used.

In operation the toy is inflated by admitting gas through nipple **14**. The flange **15** of the nipple may be inserted into the mouth to blow up body portion **11** with air, but it is preferable to fill body **11** with a lighter-than-air gas, such as helium. When helium is used, the toy has a tendency to rise unaided which more closely simulates a flying airship. The child takes string **24** in hand and subjects the toy to the wind or any other forced air supply. If air has been used to inflate body **11**, it is generally desirable to impart movement to the toy, such as when it is held in the hand of a running child, in order to keep the toy aloft. However, if helium or a similar gas is used, the toy will rise unaided and the rotating action can be enjoyed from a stationary position.

It should be pointed out that the rotating action of the toy can be achieved without the use of fins on the body portion **11**. In a rotatable structure of this nature a rotating action can always be effected by the wind or

forced air acting solely on the surface of body **11**. However, faster rotation and consequent greater amusement is possible when the fins are a part of the toy.

The construction of fins **12** may be varied so that a dipping action can be created as well as a rotating action in the flight of the toy. It is obvious that the fins **12** may be twisted similar to a propeller blade so that the effect of the wind or forced air supply will result in a rising or descending action of the toy airship. This is especially desirable when air is used to fill body **11** and an external lifting force is necessary to maintain the toy aloft. The amount of twist imparted to fins **12** will determine the rate at which the toy will rise, and a variable wind or forced air supply will result in a dipping action of the airship.

The modified fin structure shown in Fig. 3 illustrates a non integral type of a fin **30**. Fin **30** comprises a rectangular shaped portion **31** and flap portions **32** and **33** which are folded part way back, one on either side of rectangular portion **31**. The amount of fold back is determinative of the angle at which the fins will project from body **11**. Fin **30** may be formed of cardboard or other flexible material so that flaps **32** and **33** can be folded back and retained in place. When assembling these separate fins with body **11**, a cementing compound is applied to flaps **32** and **33**, and the flaps may be fastened to body **11** in the positions shown by the fins in Figs. 1 and 2.

In Fig. 5 a modification of the swivel means is shown wherein the bead portion **40** has a single opening **41** in the lower portion of the bead. Freely rotatable ring member **42** is constructed in the same manner as ring members **17** and **22** shown in Fig. 4 so that only the shank portion of the ring member can slide freely through opening **41**. The upper end of bead **40** terminates in an attached ring member **43** to which the string from nipple **14** can be tied.

A modified form of closure for the passageway of nipple **14** is shown in Fig. 6. Nipple **14** is formed of the same

resilient material as body **11** and can be stretched and deformed so as to be tied into a knot **50**. Body **11** will thereupon be maintained in an inflated condition when knot **50** is tied after body **11** is filled with gas.

It should also be pointed out that the passageway in nipple **14** can be closed in other ways, such as by a separate clamp or clip, and it is not intended to limit the invention to the closure embodiments shown.

The particular embodiments of the invention illustrated and described herein are illustrative only. The invention includes such other modifications and equivalents as may readily occur to those skilled in the art, within the scope of the appended claim.

It is claimed and desired to secure by Letters Patent:

An aerial toy comprising a gas filled body having a generally ellipsoidal shape, said body formed so that all points on the periphery of a horizontal plane through the horizontal axis are spaced equidistant from the vertical axis, a tubular element formed integral with and extending from a point on the surface of said body wherein an opening is formed for admission and expulsion of gas therethrough, a plurality of hollow fins associated with said body, one end of said fins integral with and opening into the interior of said body and the outer ends of said fins closed to allow said fins to be filled with gas from said body, said fins projecting from and being spaced along the periphery of said horizontal plane, means for preventing the flow of gas through said element to maintain said body and said fins in an inflated condition, swivel means having fixed and rotatable parts, means connecting one part of said swivel means to said element and handle means attached to the other part of said swivel means.

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