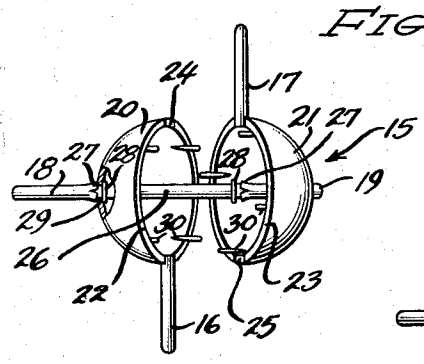
Feb. 9, 1960 J. F. BRYANT 2,924,459

PNEUMATIC TOY

Filed June 9, 1958

FIG. 3.



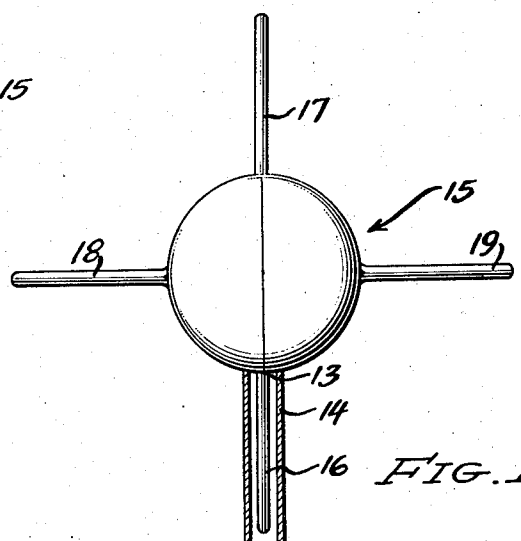
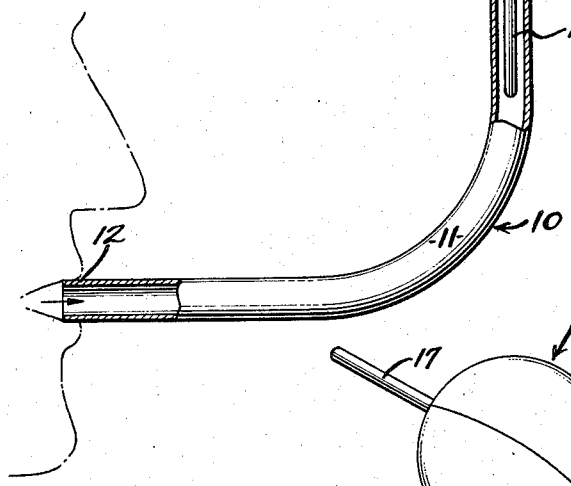


FIG. 1.



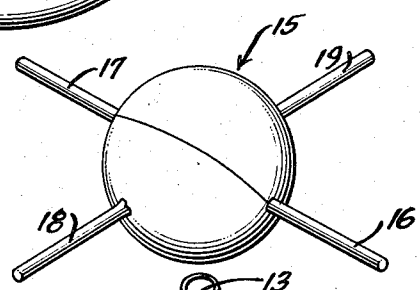
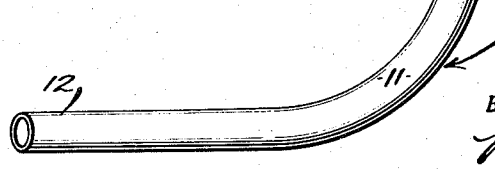


FIG. 2.



INVENTOR.
JAMES F. BRYANT
BY
ATTORNEY

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2,924,459

PNEUMATIC TOY

James F. Bryant, Los Angeles, Calif.

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4 Claims. (Cl. 273—58)

The present invention relates to a new and novel toy and more particularly to a pneumatic toy consisting essentially of a blow pipe or wind tube and a lightweight sphere or ball which can be made to hover or dance on the air stream directed through the pipe and which has radially extending prongs or legs which aid the ball in floating or dancing on the air stream.

The present interest as far as children are concerned is in reference to the orbiting of satellites in outer space, and it is contemplated that the ball construction of the present invention with, in the present instance, its four radially extending prongs which are coplanar and in equally spaced relationship has the appearance of a satellite, the prongs simulating the antennae of such satellite. In operation, the satellite will dance or hover in the air stream directed through the wind tube and will, in certain instances, spin in one direction about a vertical axis whereas in other instances it will flip-flop and gyrate in no particular fashion or order.

It is therefore a primary object of the present invention to provide a novel toy for the amusement of children.

A further object of the present invention is to provide a novel pneumatic toy which can be inexpensively manufactured, which is pleasing in design, and which will provide much amusement to children.

Other objects and advantages of the present invention will be readily apparent to those skilled in the art upon perusal of the following description and drawings wherein:

Fig. 1 is a side elevational view, with parts broken away to show details in construction, of the toy of the present invention with one of the prongs or legs of the ball being inserted in the exit end of the wind tube.

Fig. 2 is a view substantially similar to Fig. 1 showing the ball hovering in the air stream over the exit end of the wind tube.

Fig. 3 is a side view of the ball unassembled showing its details in construction.

Referring to the drawings, a wind tube **10** is provided which can be formed of any suitable material, such as for example, plastic, and the central portion of which is curved as indicated at **11** in the form of an arc of on or about 90 degrees, one end of the wind tube **10**, indicated as **12**, being intended for insertion between the lips of the person using the toy so that such person can direct an air stream through the wind tube and out an exit opening **13** formed in another end section **14**.

A ball or sphere **15**, the details of which will be described more fully hereinafter, is provided with a plurality of radially extending prongs or antennae **16**, **17**, **18** and **19**, the ball disclosed containing four such antennae and such antennae being co-planar and in equally spaced relationship with respect to the center of the ball **15**. The ball **15** plus its antennae is manufactured of such material as to be sufficiently light in weight to be carried upwardly in and to float and dance on the air stream directed by the person using the toy through the wind tube **10**. In operation, one of the antennae, for example **16**, is

inserted into the section **14** of the wind tube **10** through the exit opening **13** so that the ball rests upon the exit end of the wind tube. When the person using the toy blows through the wind tube so as to direct an air stream therein, such air stream will lift the ball **15** sufficiently upward to raise the ball and consequently the antenna **16** out of the tube and, as previously suggested, the ball and the antennae are formed of sufficiently lightweight material that the ball will float and dance and in general gyrate in the air stream being directed upwardly out of the exit opening **13**. By increasing or decreasing the force of the air stream being directed through the wind tube, the ball can be caused to rise or fall and its gyrations can be caused to be increased or decreased. The equally spaced radially extending antennae tend to stabilize the ball in the air stream and to prevent the ball from escaping from the air stream.

The ball **15** and its antennae **16**, **17**, **18** and **19** are preferably constructed of plastic and, referring to Fig. 3, the ball **15** is composed of two hollow half-spheres **20** and **21**, the half-sphere **20** having antenna **16** formed integral therewith and extending radially from the circumferential edge **22** thereof, and half-sphere **21** having antenna **17** formed integral therewith and extending radially from the circumferential edge **23** thereof, the antennae **16** and **17** in this instance being spherical in cross section and so located that substantially one-half the circumferential area extends beyond the plane of its associated circumferential edge. Spaced 180 degrees from the antenna **16**, the circumferential edge **22** has formed therein a semi-circular cutout or indentation **24**, and spaced 180 degrees from the antenna **17**, the circumferential edge **23** has formed therein a semi-circular cutout or indentation **25**. It will be appreciated, therefore, that when the half-sphere **20** and the half-sphere **21** are so located that the respective antennae **16** and **17** extend in opposite directions, that the cutout **24** formed on the half-sphere **20** will accommodate the antenna **17** formed on the half-sphere **21** and that the cutout **25** formed on the half-sphere **21** will accommodate the antenna **16** formed on the half-sphere **20**. It will also be appreciated that in this manner the antennae **16** and **17** can be formed integral with their respective half-spheres and when assembled extend radially from the center of ball **15**.

The antennae **18** and **19** are portions of a continuous member **26** which holds the half-spheres **20** and **21** in end-to-end relationship. For example, the member **26** has formed thereon a pair of spaced enlargements **27** and **28** and each of the half-spheres **20** and **21** has formed therein an opening **29**. In assembling the ball **15**, the member **26** is inserted in the opening **29** of one of the half-spheres, for example **20**, until the enlargement **27**, which is formed slightly larger in size than the diameter of opening **29** and preferably formed of material which is slightly resilient, is moved through the opening **29** and enlargement **28**, which is formed substantially larger than the diameter of opening **29**, is moved into abutting relationship with respect to the inner circumferential surface of the half-sphere **20**, the portion of member **26** extending radially out of the opening being antenna **18**. The other half-sphere **21** is inserted on the other end of member **26** so that the portion thereof, identified as antenna **19**, is inserted into the opening **29** and the half-sphere **21** is moved on the member **26** sufficiently to cause the small enlargement **27** to be forced through the opening and the inner circumferential surface of the half-sphere **21** to move into contact with the large enlargement **28**. When the half-sphere **21** is locked in such position with respect to member **26**, the circumferential edges **22** and **23** of each of the half-spheres are moved into abutting relationship. To aid in aligning these half-

spheres to move into abutting relationship, each of the half-spheres have formed thereon guide members **30**.

It will be appreciated that this construction permits the ball or sphere **15** to be manufactured as a three part element and to be easily assembled without the need for an adhesive or other means for securing the balls together. Its assembly is also so simple that the toy can be sold in an unassembled state and the child or purchaser can have the enjoyment of assembling the same. It will also be appreciated that a ball having only antennae **18** and **19** can be formed or additional antennae such as **16** and **17** can be added.

What is claimed is:

1. A lightweight hollow ball intended to hover and gyrate in an air stream comprising mating half-spherical sections which form said ball when placed in end-to-end abutting relationship, an opening formed in each of said half-spherical sections which are in aligned relationship when said sections are in abutting relationship, and an interconnecting member which has formed thereon two pairs of spaced enlargements, the outer enlargement of each of said pairs being of such a size as to be forced through the opening in one of said sections and the inner enlargement being of such a size to act as a stop member when moved into abutment with the inner circumferential surface of said one section, said pairs being so spaced as to hold said sections in end-to-end abutting relationship when each of the respective half-spheres are received on said member sufficiently to move the same beyond the outer enlargement and into abutting relationship with respect to the inner enlargement.

2. A lightweight hollow ball comprising mating half-spherical sections which form said ball when placed in end-to-end abutting relationship, an opening formed in each of said half-spherical sections which are in aligned relationship when said sections are in abutting relationship, and an interconnecting member which has formed thereon spaced enlargements, each of said enlargements being formed of such a size as to be forced through said opening in one direction, but to act as a stop member when moved in the other direction, said ball being assembled by inserting the respective sections upon the opposite ends of said interconnecting member and moving said sections thereon until said enlargements have been moved through said openings, said enlargements being so spaced as to hold said sections in end-to-end abutting relationship.

3. A lightweight hollow ball intended to hover and gyrate in an air stream comprising mating half-spherical sections which form said ball when placed in end-to-end abutting relationship, the circumferential edge of each of said sections having formed thereon a radially extending leg, substantially half of the cross-sectional mass

of said leg extending beyond said circumferential edge, and the circumferential edge of each of said sections having formed thereon a cut-out spaced substantially 180° from its associated leg to accommodate the leg of its mating section, each of said sections having formed therein an opening which is co-planar with respect to said legs and in equally spaced relationship with respect thereto, an interconnecting member which has formed thereon enlargements in spaced relationship, each of such enlargements being of such a size as to be forced to move through one of said openings in one direction but to act as a stop member with respect to movement of said member in said opening in the other direction, said ball being assembled by sliding each of said sections upon opposite ends of said member until said enlargements are forced in said one direction through said openings, said enlargements being so spaced as to hold said sections in end-to-end abutting relationship.

4. A lightweight hollow ball intended to hover and gyrate in an air stream comprising mating half-spherical sections which form said ball when placed in end-to-end abutting relationship, the circumferential edge of each of said sections having formed thereon a radially extending leg, substantially half of the cross-sectional mass of said leg extending beyond said circumferential edge, and the circumferential edge of each of said sections having formed thereon a cut-out spaced substantially 180° from its associated leg to accommodate the leg of its mating section, each of said sections having formed therein an opening which is co-planar with respect to said legs and in equally spaced relationship with respect thereto, an interconnecting member which has formed thereon a pair of spaced enlargements in spaced relationship, each of said pair of enlargements comprising an outer enlargement of such a size as to be forced to move through one of said openings in one direction and an inner enlargement which acts as a stop member with respect to further movement of said member in said one direction, said ball being assembled by sliding each of said sections upon opposite ends of said member until said outer enlargements are forced in said one direction through said openings and said inner enlargements are moved into abutment with respect to said sections, said pair of enlargements being so spaced as to hold said sections in end-to-end abutting relationship.

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