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**EUROPEAN PATENT APPLICATION**

21 Application number: 84304684.8

51 Int. Cl.<sup>4</sup>: **A 63 H 33/00**  
**A 63 B 43/00**

22 Date of filing: 09.07.84

30 Priority: 15.07.83 ES 273574 U

43 Date of publication of application:  
23.01.85 Bulletin 85/4

84 Designated Contracting States:  
AT BE CH DE FR GB IT LI LU NL SE

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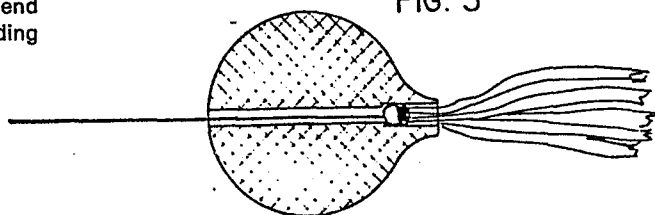
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54 Toy comet and method of making same.

57 A toy comet comprises an inertial body (1), a line (2) secured to the body (1) and the line from the user in operation, and a light, flexible tail (3) arranged to trail from the body when the body is thrown. The body (1) is made of deformable, resilient material and has a diametral hole (4) therethrough. The line (2) is secured to the tail (3) at a junction (6) which is enlarged relative to the line (2) and is larger than the width of the hole (4). The line (2) runs along the hole (4) in the body (1) and is secured to the body (1) by the enlarged junction (6) wedging in the hole (4) with the line (2) emerging from one end of the hole (4) and the tail (3) emerging from the other end (7) of the hole (4). Preferably the body (1) has a protruding neck (5) in the shape of a truncated cone.

FIG. 3



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TOY COMET AND METHOD OF MAKING SAME

The present invention relates to a toy comet, which incorporates an inertial body, or mass concentration element, from which a flexible tail, e.g. one or more thin strips of almost insignificant weight, emerges, and to which is attached an operating line, e.g. a cord, for throwing the body.

Toy comets are known which have their inertial mass constituted by a bag, preferably made of textile, the opening of which is closed by the operating cord itself, which, where it is attached to the opening of the bag, also makes the connection with the tail e.g. a strip or strips which act as adornments.

This structure made such objects into pieces of craftsmanship requiring a great deal of labour, which has practically caused them to disappear from the market.

The toy comet proposed by this invention has been specially conceived and designed to allow it to be mass-produced, with low labour needs, and to be made cheaply, consequently making it easily accessible to children.

According to the present invention there is provided a toy comet comprising an inertial body, a line secured to the body for throwing the body and the line from the user in operation, and a light flexible

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tail arranged to trail from the body when the body is thrown,

characterised in that the body is made of deformable, resilient material and the body has an  
05 elongate hole therethrough, the line being secured to the tail at a junction which is enlarged relative to the line and is larger than the width of the hole, the line running along the hole in the body and being secured to the body by the enlarged junction wedging in  
10 the hole with the line emerging from one end of the hole and the tail emerging from the other end of the hole.

Preferably the body in the region of the said one end is shaped so as to allow the enlarged junction to  
15 enter the hole more easily than the junction can pass along the hole at its middle region.

In preferred forms of the invention the body has a projection forming at the said one end of the elongate hole a tapered neck tapering towards the said one end  
20 of the hole, the said hole passing through the tapered neck.

Conveniently the said neck is in the shape of a truncated cone.

Also conveniently the said enlarged junction is  
25 wedged in the elongate hole approximately at its middle region.

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Preferably the said elongate hole is a diametral hole through the body.

Also preferably the body is substantially spherical.

05       The invention has particular application where the tail is formed of a plurality of light, flexible streamers.

          The junction between the line and the tail may be formed in a number of different ways, for example the  
10 junction may be glued, but in a convenient form the junction may be formed by a knot.

          Considering now some preferred combinations of features which may be used, the comet which is envisaged may be constituted by a practically spherical  
15 body, preferably made of solid rubber, provided with a small diametral drill-hole and prolonged in correspondance with one of the openings of said drill-hole to form a short neck with the shape of a truncated cone, in which part said body proves to be  
20 somewhat more prone to being distorted, for the reason which will be explained later.

          A group of thin strips of relatively light material, preferably formed of different coloured plastics, is joined together by the operating cord  
25 itself, which passes through one end of each of the

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strips, forming a knot of a diameter considerably greater than that of the drill-hole in the piece of rubber which acts as the inertial mass.

The free end of the cord is then passed through  
05 said diametral drill-hole, which is perfectly feasible until said knot reaches said neck, which it must distort, due to the tension effected on the cord itself, in order to enter the interior.

In this way, the knot penetrates the interior of  
10 the spherical body, after which it is easier to move it until it reaches the central part of the diametral drill-hole, in correspondance with which its final position is established.

In this way, the connection between the inertial  
15 body and the rest of the elements which integrate the comet is achieved quickly and simply, with low-cost materials and parts which are easy to obtain and join together.

There is also provided in accordance with the  
20 present invention a method of making a toy comet by securing to an inertial body a line for throwing the body and the line from a user in operation, and securing to the body a light, flexible tail arranged to trail from the body when the body is thrown,  
25 characterised by the steps of forming an elongate hole through the body which is made of deformable, resilient

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material, securing the line to the tail at a junction which is enlarged relative to the line and is larger than the width of the hole, passing the line through the hole, pulling the enlarged junction into the hole  
05 by pulling on the line, and wedging the junction in the hole with the line emerging from one end of the hole and with the tail emerging from the other end of the hole.

There will now be described by way of example,  
10 which is not limiting, a preferred embodiment, all details of which can be modified, provided that the modifications do not fundamentally alter the essential characteristics, with reference to the accompanying drawings, in which:-

15 Figure 1 shows a view in perspective of a toy comet made in accordance with the present invention;

Figure 2 shows a diametral cross-section of an inertial body of the toy comet, in which an operating cord appears in a position where it is partially in  
20 place, in such a way that a knot which joins it to a group of coloured strips is still outside said body; and

Figure 3 shows a cross-section similar to that of Figure 2, but in which the knot which connects the  
25 operating cord with the circular group of strips is in the interior of the inertial body.

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From these figures it can be seen how the toy comet which is envisaged is constituted by a body 1, which is preferably spherical and made from a solid rubber base, with which collaborate an operating cord 2  
05 and a group of very flexible coloured strips 3, which are to form the tail of the comet.

As is known, the body 1 may be given a circular movement by means of the cord 2, which is followed by the bunch of coloured strips 3, it being possible to  
10 throw the whole object, with said body 1 constituting the inertial mass which goes furthest and which precedes the bunch of coloured strips 3 in the movement.

The body 1 has a diametral drill-hole 4 and, in  
15 correspondance with one of the openings of said drill-hole, a prolongation forming a neck 5, which is generally of the shape of a truncated cone, in which part said body is easier to distort than elsewhere. The cord 2 joins together one end of the coloured  
20 strips 3, forming a knot 6 with a diameter considerably greater than that of the diametral drill-hole 4.

In accordance with this structure, as can be seen in Figures 2 and 3, the cord 2 is passed through an opening 7 through the neck 5 and passes freely through  
25 the body through the diametral drill-hole 4 until the knot 6 reaches said opening 7. At this moment, the

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material which constitutes the body 1, which, as has previously been stated, will preferably be rubber, must be distorted in order to allow said knot to enter.

This proves easy at first due to the considerably  
05 reduced thickness of the lateral wall of the opening 4 formed by the projection or neck 5, then becoming increasingly more difficult as the knot moves towards the centre of the body 1, where the thickness of the wall is greater.

10 In this way, the knot 6 is fixed in a stable position with regard to the body 1 and, consequently, the body 1, the cord 2 and the bunch of coloured strips 3 are also firmly fixed together, i.e. the different elements which constitute the toy comet are firmly  
15 fixed together.

The strips 3 may be formed by flimsy pieces of plastic material and it is, therefore, very easy to obtain them and their cost is insignificant. The cord  
20 2 may be constituted by an element which is on the market, whilst the head or inertial body 1 consists basically of a simple rubber ball with an axial drill-hole, so that it is also easy to obtain and costs very little. It is also very easy and quick to put together the different elements, and so that assembly  
25 costs do not much influence the economic considerations of the object.



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The shape, dimensions and materials can be varied, as can, in general, all accessory or secondary elements, provided that the essence of the invention is not altered, changed or modified.

05        It is to be appreciated that the term toy comet is intended to define only the general nature of the toy, in that it comprises an inertial body, a line and a light, flexible tail, arranged to be thrown in the way described. The toy is not necessarily limited to a  
10 representation of an actual comet, in that the inertial body may have some other shape, for example the shape of an airplane or a bird.

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CLAIMS

1. A toy comet comprising an inertial body, a line secured to the body for throwing the body and the said line from the user in operation, and a light flexible  
05 tail arranged to trail from the body when the body is thrown,

characterised in that the body (1) is made of deformable, resilient material and the body (1) has an elongate hole (4) therethrough, the line (2) being  
10 secured to the tail (3) at a junction (6) which is enlarged relative to the line (2) and is larger than the width of the hole (4), the line (2) running along the hole (4) in the body (1) and being secured to the body (1) by the enlarged junction (6) wedging in the  
15 hole (4) with the line (2) emerging from one end of the hole (4) and the tail (3) emerging from the other end (7) of the hole (4).

2. A toy comet according to claim 1 in which the body (1) in the region of the said one end (7) is  
20 shaped so as to allow the enlarged junction (6) to enter the hole (4) more easily than the junction (6) can pass along the hole (4) at its middle region.

3. A toy comet according to claim 1 or 2 in which the body (1) has a projection forming at the said one end  
25 (7) of the elongate hole (4) a tapered neck (5) tapering towards the said one end (7) of the hole (4),

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the said hole (4) passing through the tapered neck (5).

4. A toy comet according to claim 3 in which the said neck (5) is in the shape of a truncated cone.

5. A toy comet according to any preceding claim in  
05 which the said enlarged junction (6) is wedged in the elongate hole (4) approximately at its middle region.

6. A toy comet according to any preceding claim in which the said elongate hole (4) is a diametral hole through the body (1).

10 7. A toy comet according to any preceding claim in which the body (1) is substantially spherical.

8. A toy comet according to any preceding claim in which the tail (3) is formed of a plurality of light, flexible streamers.

15 9. A toy comet according to any preceding claim in which the tail (3) is joined to the line (2) by a knot (6) which forms the said enlarged junction.

10. A method of making a toy comet by securing to an inertial body a line for throwing the body and the line  
20 from a user in operation, and securing to the body a light, flexible tail arranged to trail from the body when the body is thrown, characterised by the steps of forming an elongate hole (4) through the body (1) which is made of deformable, resilient material, securing the  
25 line (2) to the tail (3) at a junction (6) which is enlarged relative to the line (2) and is larger than

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the width of the hole (4), passing the line (2) through  
the hole (4), pulling the enlarged junction (6) into  
the hole (4) by pulling on the line (2), and wedging  
the junction (6) in the hole (4) with the line (2)  
05 emerging from one end of the hole (4) and with the tail  
(3) emerging from the other end (7) of the hole (4).

FIG. 1

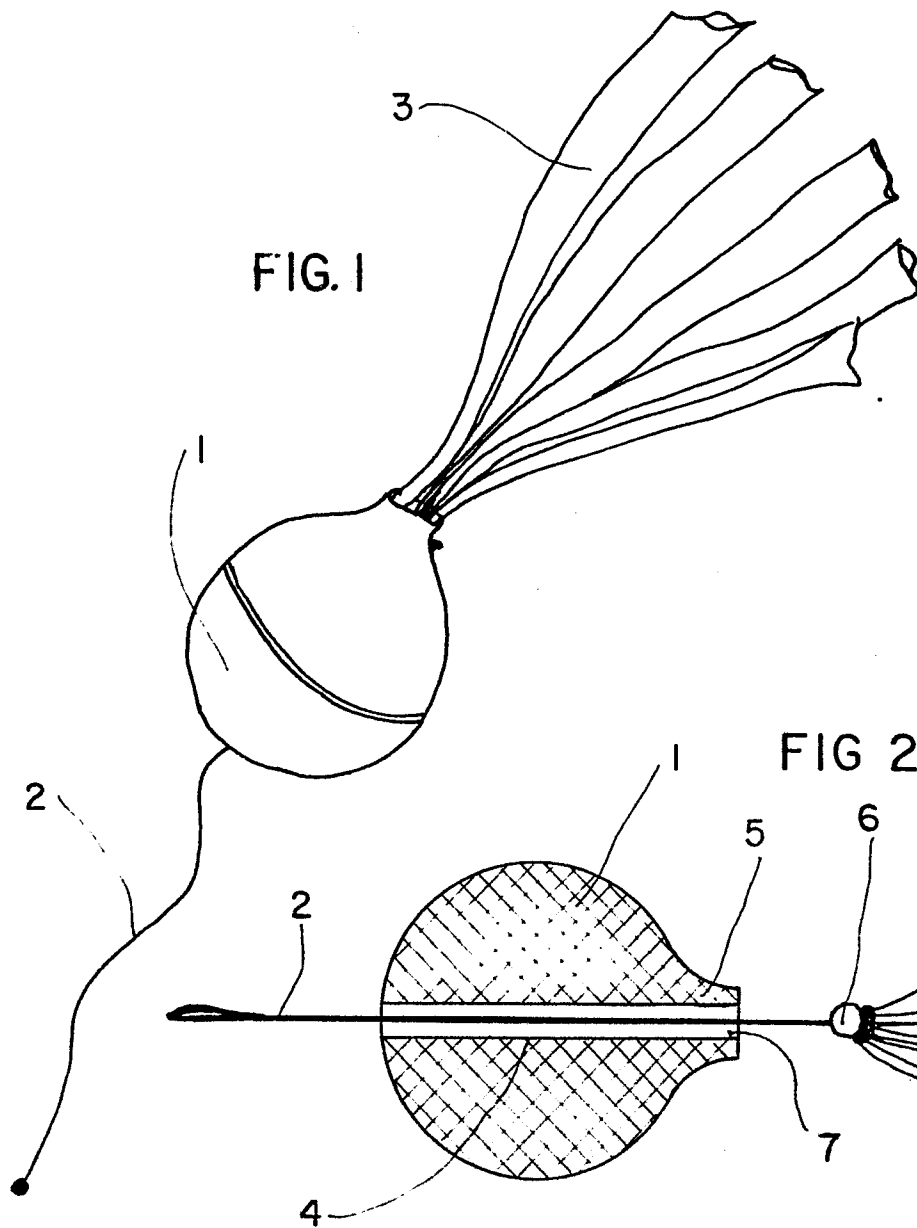


FIG. 2

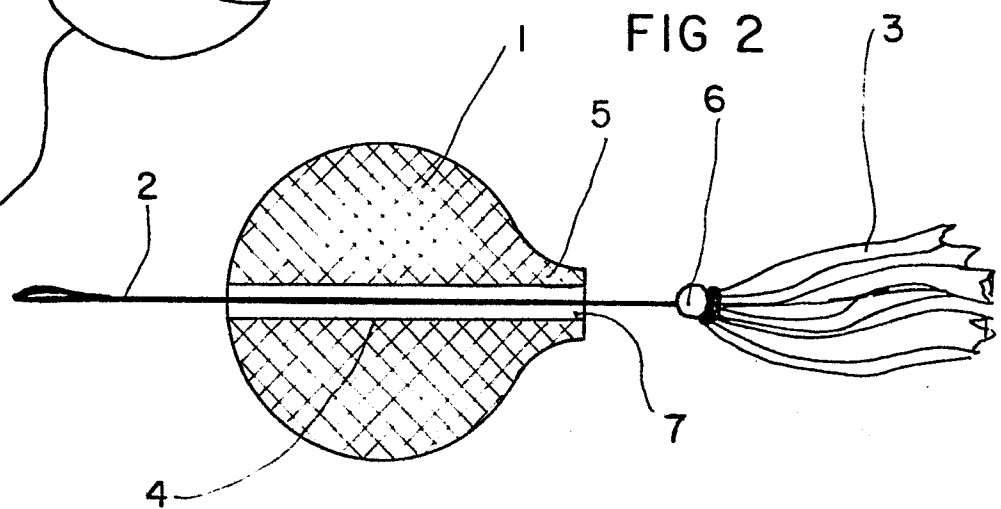
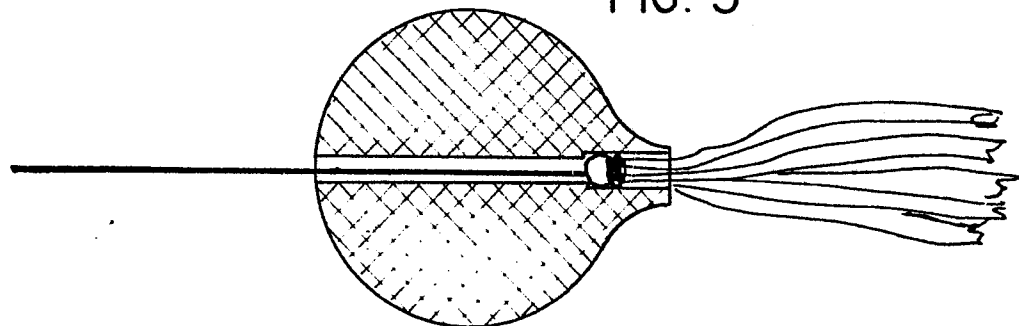


FIG. 3





European Patent  
Office

# EUROPEAN SEARCH REPORT

**0132100**

Application number

EP 84 30 4684

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
Y	US-A-4 294 447 (CLARK)  * Abstract; figure 1 *	1,2,5-8	A 63 H 33/00 A 63 B 43/00
Y	US-A-2 944 817 (STILLER)  * Column 1, lines 46-55; figures 1,3 *	1,2,5-8	
A	US-A-3 934 873 (GRIFFIN) * Column 3, lines 42-46; figure 13 *	9	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			A 63 H A 63 B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 25-10-1984	Examiner VANRUNXT J.M.A.
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  &amp; : member of the same patent family, corresponding document</p>			