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3,399,486

ROTARY TOY HAT

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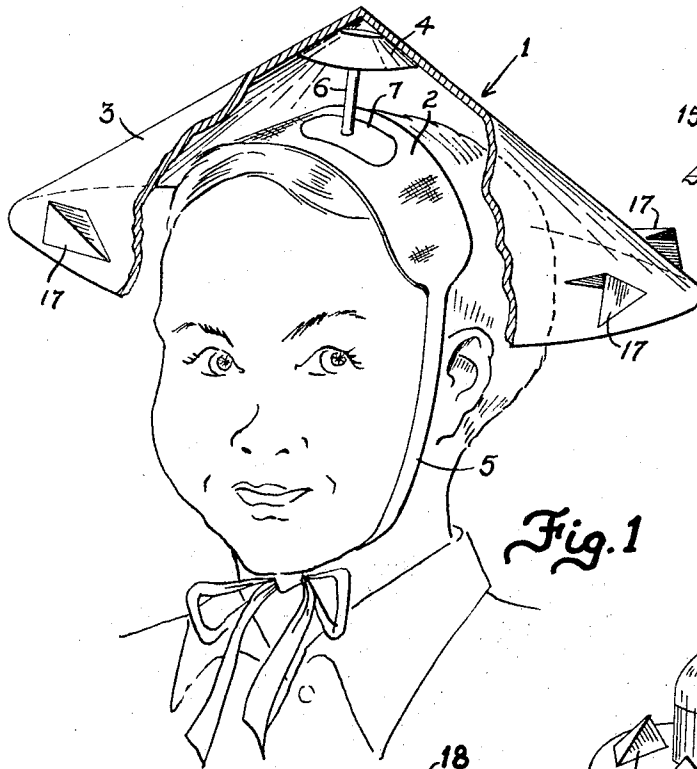


Fig. 1

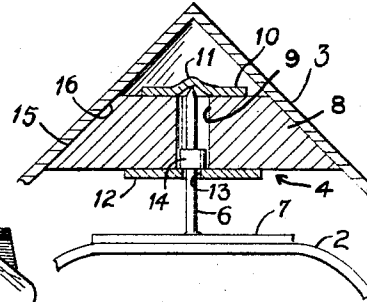


Fig. 3

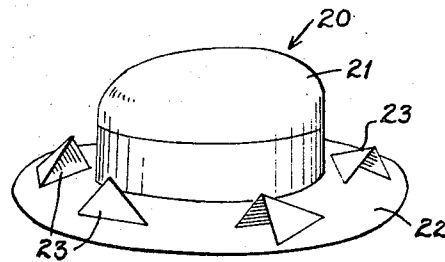


Fig. 4

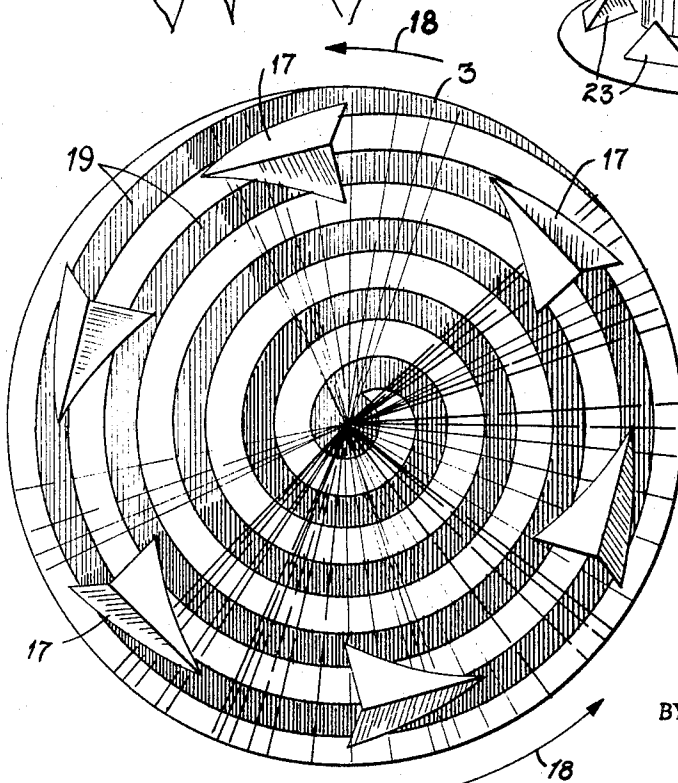


Fig. 2

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ROTARY TOY HAT
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This invention relates generally to rotary toy hats and in particular to those actuated by wind pressure.

Many various types of rotary toy hats are well known in the prior art. In some of these prior art devices the rotation of some object attached to the hat is caused by movement of the wearer's head. Typical examples of this type of hat are shown in Patents Nos. 2,960,793, 2,958,156 and 3,216,149. Another type of rotary hat structure shown in the prior art is driven by the force of the wind which rotates vanes or propellers pivotally mounted on the crown portion of a hat. Typical examples of wind driven rotary hats are shown in Patents Nos. 2,679,711 and 2,907,138.

In all the hats shown in the prior art, the head covering portion of the hat is mounted on the wearer's head in such manner that it remains stationary while a propeller or rotor of some type is pivotally attached to the head covering portion and is driven by the force of the wind reacting against vanes or propeller blades on the rotary member.

The primary object of this invention is to provide a toy hat in which the entire crown or head covering portion of the hat is pivotally mounted in spaced relationship above the wearer's head in such manner that the entire head covering portion rotates with respect to the wearer's head.

Another object of this invention is to provide a toy hat which is simple in construction, inexpensive to manufacture, and readily adaptable to fit different head sizes.

These and other objects and advantages of the invention will become apparent in the following specification and the attached drawings wherein:

FIG. 1 is a perspective view of a hat made in accordance with one form of this invention in operative position on the head of a child with a portion broken away to better show the pivot mounting assembly.

FIG. 2 is a plan view of the hat shown in FIG. 1.

FIG. 3 is a detail cross-sectional view of the pivot assembly; and

FIG. 4 is a perspective view of another embodiment of this invention.

Referring now to FIG. 1 of the drawings, a hat generally indicated by the numeral 1 is shown mounted on the head of a wearer. The hat 1 consists primarily of a stationary head engaging base member 2 adapted to engage the crown portion of a wearer's head and a head covering member 3 rotatably mounted thereon by a pivot assembly 4. The base member 2 is made from any suitable flexible material such as cloth, plastic, or the like which will permit it to bend and fit the contour of the crown of a wearer's head. As shown in FIG. 1, it is of sufficient width to provide a stable mounting for the pivot assembly 4. A chin strap 5 is attached to each end of the base member 2 to secure it on the wearer's head. A pivot pin 6 is attached to the center portion of the base member 2 and extends upwardly therefrom in a substantially vertical position. The pivot pin 6 is provided with a large flat head 7 at its lower end for attachment to the base member 2. The head 7 serves as a stiffening member for the center of the base member 2 and stabilizes the pivot pin 6 in its vertical position to prevent tilting of the pivot pin 6 with respect to the wearer's head. The flat head 7 also serves as a safety guard to prevent accidental penetration of the pin 6 into the wearer's skull.

Referring now to FIG. 3, a hub member 8 in the shape

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of a truncated cone is provided with a clearance hole 9 extending vertically through the center thereof. A dimpled plate 10 is attached to the top face of the hub 8 with a dimple 11 in alignment with the hole 9. A bottom plate 12 having a center hole 13 therethrough is fastened to the bottom surface of the hub member 8 with the hole 13 in axial alignment with the hole 9. The shaft 6 extends through the holes 13 and 9 with the upper end thereof contacting the dimple 11 in the plate 10. The upper end of the pin 6 is sharpened to a point to reduce the friction between the end of the pin 6 and the plate 10 and thereby permit easy rotation of the hub member 8. A retaining collar 14 is fastened to the shaft 6 at such a position that when the shaft 6 is inserted in the hole 9 with the upper end contacting the dimple 11, the collar 14 will be positioned in the hole 9 slightly above the plate 12. In this position the collar 14 will permit the hub member 8 to rotate on the pivot pin 6 but with the plate bottom plate 12 in position will prevent the hub member from coming off the pivot pin 6.

As shown in FIGS. 1 and 3, the head covering member 3 is attached to the hub member 8 with the inclined side wall 15 of the hub 8 contacting the inclined inner side wall 16 of the head covering member 3 near the apex thereof. The hub member 8 may be attached to the head covering member 3 by glue or any other suitable fastening means.

A plurality of cup shaped wind receiving vanes 17 are mounted around the periphery of the head covering member 3 to cause rotation of the head covering member when wind blows against the hat. As may be seen in FIG. 2, the vanes 17 are all facing in the same direction around the periphery of the head covering member 3 so that when the wind blows in the direction indicated by arrows 17a, the head covering member 3 will rotate in the direction indicated by the arrows 18.

As shown in FIG. 2, a spiral band 19 of contrasting color to the rest of the head covering member 3 starts in the center of the head covering member 3 and spirals outwardly toward the periphery thereof. Various other types of indicia may be substituted for the spiral band 19 to give unusual optical effects as the hat rotates. For example, circumferential or radial bands or a combination thereof may be used. Spots of contrasting color or random shapes of color may also be used.

Referring now to FIG. 4, the head covering member 20 is shown in the shape of a derby hat having a crown portion 21 and a brim portion 22 upon which a plurality of wind receiving vanes 23 are mounted. The base member and the pivot assembly of this hat are essentially the same as that shown on the embodiment of FIGS. 1 and 3 and will not be shown or described in further detail.

It will be obvious that the head covering portion may be of any desired hat shaped configuration and need not be a conical "coolie hat" or a "derby hat" as shown in the drawings of this application.

It will also be obvious that the overall structure of this hat may be made from plastic, paper, cloth or any suitable material which may be easily formed and still retain the desired shape. The pivot assembly shown in FIG. 3 is merely a typical example of how the head covering member 3 may be rotatably mounted on the base member 2 to suspend the entire head covering member 3 in space relationship above the wearer's head, thereby permitting rotation of the entire head covering member in response to wind pressure.

Various modifications may be made in the embodiments shown herein without departing from the scope of the invention.

I claim:

1. A rotary toy hat comprising:

(A) A stationary head engaging base member;

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(B) Pivot means extending upwardly therefrom;

(C) A rotary head covering member journaled to the base member and spaced therefrom by the pivot means; and

(D) A plurality of wind receiving vanes located in spaced relationship around the circumference of the head covering member to cause rotation thereof when wind pressure reacts against the vanes.

2. A toy hat as claimed in claim 1 wherein the head covering is of conical configuration.

3. A toy hat as claimed in claim 1 wherein the head covering member has a crown portion and a brim portion with wind receiving vanes located around the periphery of the brim portion.

4. A toy hat as claimed in claim 1 wherein the pivot means comprises an upwardly extending pivot pin having its lower end secured to the base member and its upper end rotatably supporting a hub member, said hub member being attached to the center of the head covering member.

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5. A toy hat as claimed in claim 1 wherein the base member has chin straps attached thereto for securing the hat on a wearer's head.

6. A toy hat as claimed in claim 1 wherein the head covering member has indicia imprinted thereon to create optical patterns as the head covering member rotates.

7. A toy hat as claimed in claim 1 wherein the wind receiving vanes are cup shaped.

References Cited

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