J. F. REYNOLDS.

NOVELTY WIND WHEEL.

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1,206,251.

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Fig. 1

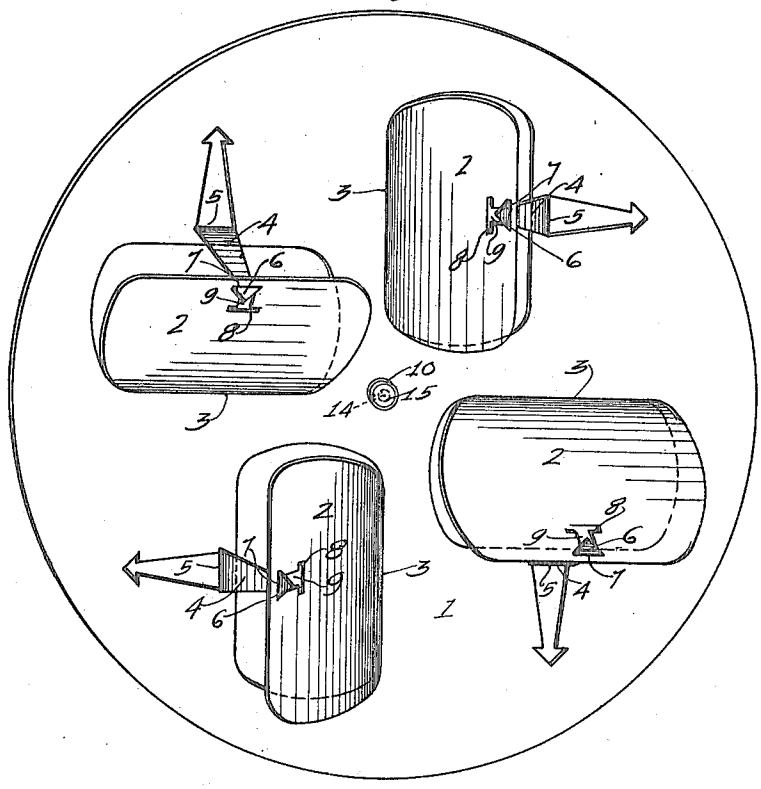


Fig. 2

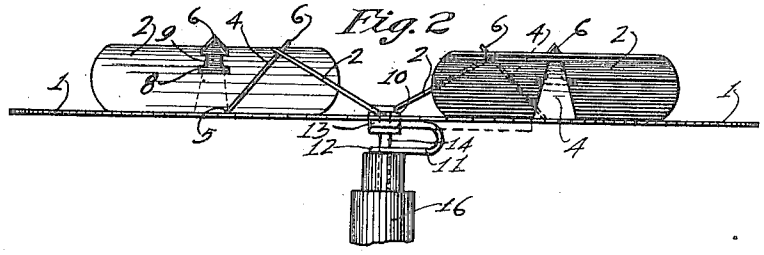
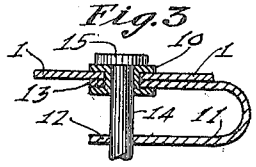


Fig. 3



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THE NORRIS PETERS CO., PHOTO LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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NOVELTY WIND-WHEEL.

1,206,251. Specification of Letters Patent. Patented Nov. 28, 1916.

Application filed September 22, 1915. Serial No. 52,115.

To all whom it may concern:

Be it known that I, JOHN F. REYNOLDS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Novelty Wind-Wheels, of which the following is a specification.

My invention relates to windwheels and particularly to a novelty device adapted to be used as a toy and for advertising purposes, the primary object of my invention being to provide a windwheel of simple form and structure and embracing but a single disk with the vanes formed thereon and bent outwardly therefrom at suitable intervals and angles, and having braces for supporting the vanes also formed on the disk and bent outwardly so as to hold the vanes at the proper angles.

Another object is to provide a structure which will occupy the minimum space when packed so that a maximum number of the articles may be closely packed in a single carton for shipping purposes.

My windwheel is designed to be made of metal or cardboard of sufficient thickness to provide ample rigidity when in action, and the material used should be preferably of a stiff but readily pliable nature so that the vanes which normally rest in the same plane with the body of the disk may be sprung outwardly from the disk and held in tension when in operating position by means of the braces.

Referring to the drawings, in which similar characters of reference indicate the same parts throughout the several views, Figure 1 is a front elevation of my device, slightly in perspective; Fig. 2 is a plan of the same, and Fig. 3 is a section through the center of the disk showing my special and improved form of bearing and connection with the handle.

The windwheel proper is integrally formed of a single piece of relatively thin metal or cardboard and comprises a circular disk 1 with a plurality of vanes 2 cut out of the disk on all but one side and arranged to occupy regularly spaced positions around the axis of the wheel. The vanes are adapted to be bent on the lines 3 which are coincident with the sides connecting them with the disk 1 and may be of any suitable form and size to conform to any special requirements for special advertising purposes. Braces 4 are also cut out of the disk 1 on all but a single side and are suitably tapered from the line 5 which is coincident with the sides not cut in the direction of the ends 6 and are adapted to be bent outwardly from the disk in the direction of the vanes 2 on the lines 5. The ends or heads 6 of the braces are provided with shoulders 7 and are adapted to be inserted through the relatively wide portions 8 of the slots 9 in the vanes and then moved upwardly in the slots so that the shoulders will engage the surface of the vanes and thus hold the vanes supported in their deflected positions.

An eyelet 10 of metal or other stiff material is riveted to and in the exact center of the disk and a flat strap 11 is riveted to the rear side of the eyelet, or may be integral therewith, as represented in broken lines in Fig. 1. When the wheels are packed for shipping or when they are not in use, these straps occupy positions adjacent to the rear side of the wheels, but when the wheels are in use they are adapted to be bent around, as shown so that the ends are directly opposite and in alinement with the eyelet 10. The outer end 12 of the strap as well as the inner end 13, is perforated to receive the nail or pivot pin 14 which has a head 15 on the forward side of the eyelet and the stem is passed through the eyelet and the ends 12 and 13 of the strap and secured in the end of the handle 16. This arrangement provides a rigid bearing for the disk and causes it to revolve always in a plane at right angles to the handle 16, which it would not do were the disk pivoted directly to the end of the handle, as in other forms of such devices.

The material used in the formation of the disk should be of such a quality that the vanes and braces which are formed thereon will be self restoring when they have been disconnected and the wheels are collapsed for the purpose of shipping and for the additional purpose of preventing their breakage at their bending points by the frequent bending thereof.

When used as an advertising novelty, the advertisements may be printed or lithographed on the face of the disk before the cutting of the vanes and braces, or afterward, and either the vanes or the main body

of the disk may be printed upon, as may be desirable.

Having thus described my invention, what I claim as new and desire Letters Patent for, is:—

1. A novelty windwheel comprising an integrally formed disk with regularly spaced vanes normally occupying planes coincident with the disk and capable of movement outwardly therefrom at one of their sides, braces also occupying planes normally coincident with the disk and capable of being bent outwardly in the direction of and for supporting said vanes in planes at acute angles to the body of the disk.

2. A novelty windwheel comprising an integrally formed disk, a plurality of regularly spaced vanes and a plurality of vane supporting braces, said disk, vanes and braces occupying normally coincident planes and said vanes and braces being capable of deflection at acute angles from said disk and supported at such angles by means of said braces.

3. A novelty windwheel comprising a revoluble disk, regularly spaced vanes integral therewith and capable of being bent outwardly therefrom at acute angles, braces integral with the disk and also capable of being bent outwardly therefrom in the direction of and for holding said vanes extended at such angles, and supporting means for the disk.

4. A novelty windwheel comprising a disk, regularly spaced vanes integral therewith and normally maintained in the same plane therewith, braces integral with the disk and normally in the same plane therewith but capable of movement for holding said vanes supported at angles relative to said disk, a handle for the disk, and means for pivotally attaching said disk to and supporting it upon said handle.

5. A novelty windwheel comprising integrally formed disk, vane and vane bracing members normally occupying coincident planes, said vanes and said braces being capable of extension so as to occupy planes at acute angles relative to said disk and self sustained at such angles, and means for supporting said disk during operation for preventing the deflection thereof from a plane at right angles to its axis.

6. A novelty windwheel comprising integrally formed disk, vane and vane bracing members, means whereby said vane and brace members may be extended outwardly from the disk and sustained in such relation, a handle for supporting said disk, and a normally extended flat strap bearing attached to the disk and capable of being bent to form a double bearing adjacent to the end of said handle for preventing the movement of the disk from a plane at right angles to said handle during the operation thereof.

Signed at Los Angeles, in the county of Los Angeles and State of California, this 21st day of August, 1915.

JOHN F. REYNOLDS.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."