May 31, 1927.

O. KUESTER

1,630,852

PINWHEEL TOY

Filed Sept. 11, 1925

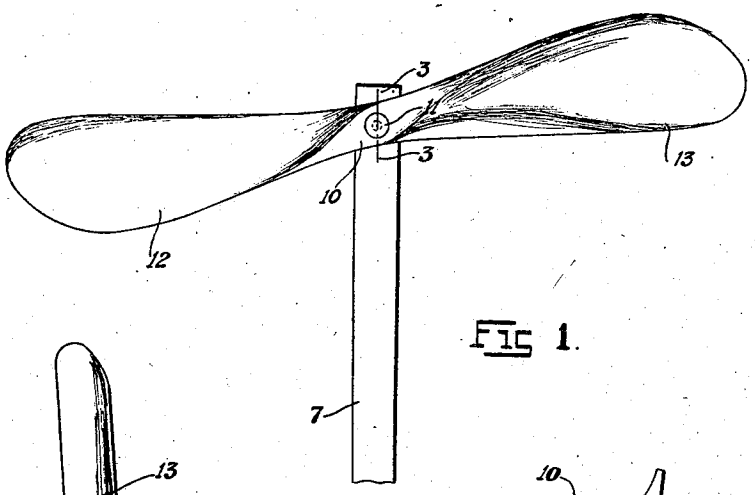


Fig 1.

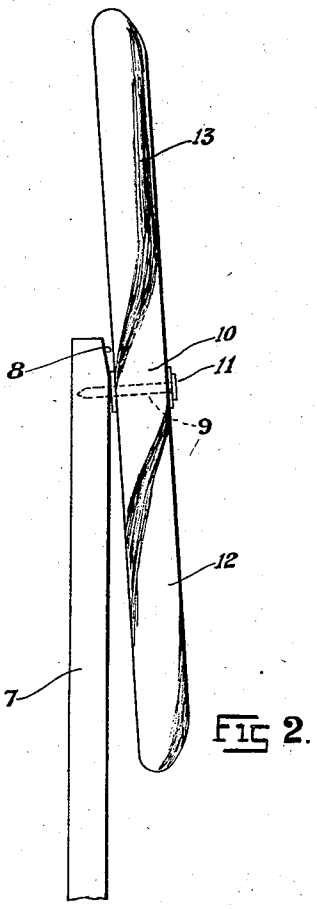


Fig 2.

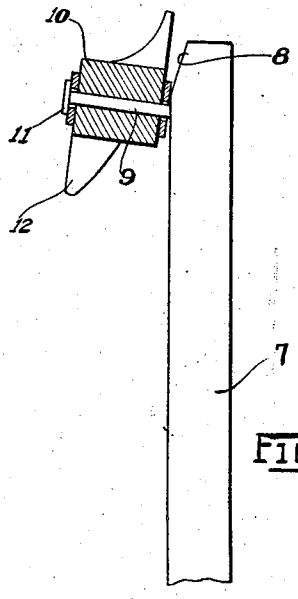


Fig 3.

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UNITED STATES PATENT OFFICE.

OTTO KUESTER, OF DETROIT, MICHIGAN.

PIN-WHEEL TOY.

Application filed September 11, 1925. Serial No. 55,723.

My invention relates to a new and useful improvement in a toy, and has for its object, the provision of a toy, which will be simple in structure, economical of manufacture and highly efficient in use.

Another object of the invention is the provision of a toy having a staff, provided with a rotatable member mounted thereon, so arranged and constructed as to assure the efficient operation of said rotatable member under normal conditions.

Another object of the invention is the provision in a toy of this kind of a staff having a rotatable member, rotatably mounted on a shaft, projected at an inclination to the longitudinal axis of said staff.

Other objects will appear hereinafter.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood from a reference to the accompanying drawings, which form a part of this specification and in which,

Fig. 1 is a fragmentary front elevational view of the invention,

Fig. 2 is a fragmentary side elevational view of the invention,

Fig. 3 is a view taken on substantially line 3—3 of Fig. 1, showing the rotatable member in section and the staff in fragmentary elevation.

As shown in the drawings, the invention comprises a staff 7, having one face, adjacent the upper end thereof, cut away, to provide the beveled surface 8. Secured in the staff 7 and projecting outwardly from adjacent the upper end thereof is a shaft or pin 9, upon which is rotatably mounted a hub 10, having propeller blades 12 and 13 projecting outwardly from opposite sides thereof. Suitable washers are mounted on the pin 9 for spacing the hub 10 from the staff 7 and from the head 11 on the pin 9. It will be noted that the pin 9 is secured to the staff 7 at an inclination to the longitudinal axis of the staff 7.

The device is intended as a toy to be either carried in the hand of a child and operated while the child is running, or to be mounted upon a vehicle such as an automobile, or the like, so that, when the vehicle is being propelled, the air striking the propeller blades 12 and 13 will effect a rotation of these blades about the pin 9, as an axis.

It has been found, in operation of the device described herein, that if the pin 9 is extended at right angles to the longitudinal axis of the staff 7, when the toy is carried through the air at a high speed, the propeller blades will be forced inwardly, so as, in their rotation, to engage against the staff 7, this engagement retarding and often preventing the rotation of the blades on the pin 9. Consequently, it is evident that it is necessary to always assure a clearance between the propeller blades and the staff 7, so that no interference will be had with the rotation of the blades. To effect this, I have mounted the pin 9 at an inclination to the longitudinal axis of the staff 7 and to compensate for this inclined mounting of the propeller blades on the staff 7, I have cut away a portion as at 8 on the staff 7. It, therefore, is apparent that when the staff 7 is mounted in an upright position, the propeller blades will be inclined to the vertical. If, however, it is desired to have the propeller blades vertical, it will be necessary to incline the staff 7 to the vertical. In either event, there is always a clearance between the ends of the propeller blades and the staff 7, so that an efficient operation of the device is assured.

While I have illustrated and described the preferred form of construction, I do not wish to limit myself to the precise form of structure shown, but desire to avail myself of such variations and modifications as come within the scope of the appended claim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

A toy of the class described comprising: a staff having one face cut away at one end for providing a beveled surface; a pin mounted in said staff, adjacent said end, at the base of said beveled surface, and projecting outwardly from said face and upwardly inclined relatively to the longitudinal axis of said staff; a propeller blade mounted on said pin, said pin being projected through said propeller blade midway between the ends thereof, at right angles thereto; and a washer mounted on said pin between said propeller blade and said staff for spacing said propeller blade from said staff.

In testimony whereof, I have signed the foregoing.

OTTO KUESTER.