March 29, 1932. J. F. BROWN 1,851,806

ORNAMENT

Filed Sept. 19, 1930

Fig. 1.

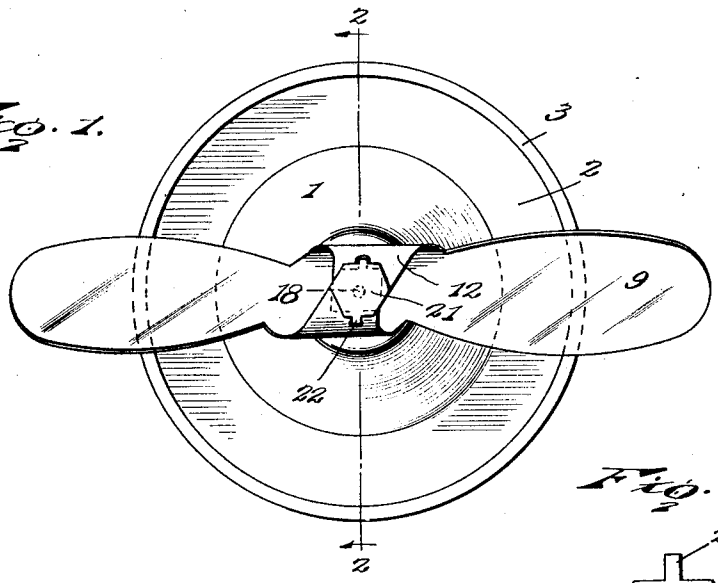


Fig. 4.

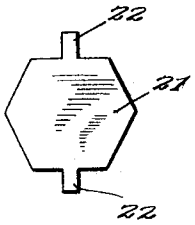


Fig. 2.

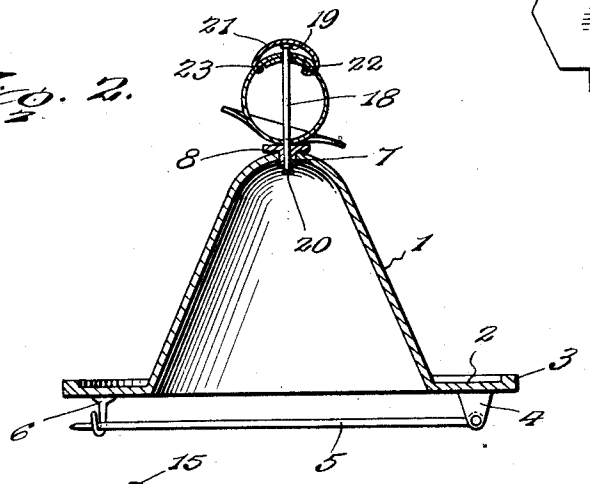
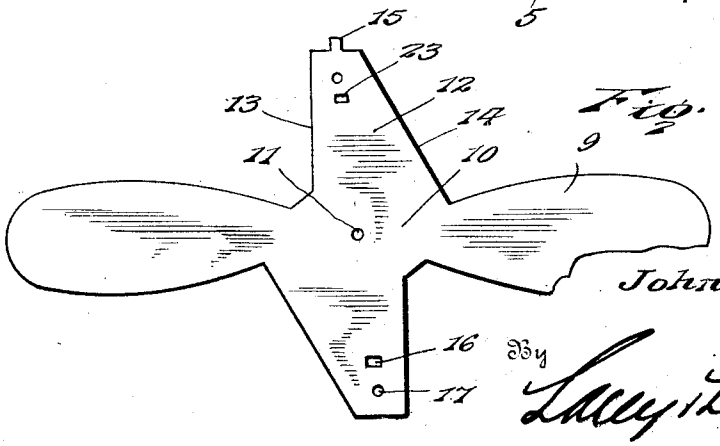


Fig. 3.



Inventor

John F. Brown.

By Lacey & Lacey,

Attorneys

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UNITED STATES PATENT OFFICE

JOHN F. BROWN, OF WEST WARWICK, RHODE ISLAND

ORNAMENT

Application filed September 19, 1930. Serial No. 483,076.

This invention relates to an improved ornament for personal wear, and seeks, among other objects, to provide a device of this character, embodying a propeller, or pin wheel, the main body of which may be stamped from a single piece of sheet material and bent into shape.

Another object of the invention is to provide a pin wheel employing three bearings, one of which is a thrust bearing for preventing accidental inward shifting of said pin wheel and consequent wear upon the hub thereof.

A further object of the invention is to provide a pin wheel wherein the thrust bearing will also serve as a protecting cap and therefore prevent mutilation of the end of the pin wheel shaft employed.

A still further object of the invention is to provide a pin wheel which may be manufactured with the utmost facility and which will present a pleasing appearance.

Other and incidental objects of the invention not mentioned in the foregoing will appear during the course of the following description.

In the drawings,

Figure 1 is a top plan view of the device,

Fig. 2 is a vertical sectional view of the device on the line 2—2 of Fig. 1 looking in the direction indicated by the arrows,

Fig. 3 is an enlarged detail plan view showing the blank of the pin wheel before being bent into shape, and

Fig. 4 is an enlarged detail plan view showing the plate which forms the thrust bearing employed.

Referring now more particularly to the accompanying drawings, the numeral 1 indicates a preferably frusto-conical base having its lower margin turned outwardly to provide a base flange 2, the outer edge of which is thickened to provide a reinforcing rim 3. Mounted on the lower surface of the base flange 2 is a lug 4 and swingingly connected with the lug and extending transversely of the base is a pin 5 which is pointed at its free end. Mounted on the lower surface of the base flange diametrically of the lug 4 is a U-shaped hook 6 which normally receives the end portion of the pin 5. The hook and pin, of course, are utilized for connecting the device with the clothing and maintaining the device in an operative position. As best seen in Figure 2 of the drawings, the upper end of the base is rounded and extending axially therethrough is a bushing 7 suitably fixed to the base. Formed integrally on the upper end of said bushing is a washer 8.

Associated with the base is a pin wheel comprising blades 9 connected at their inner ends by a hub 10, which hub is provided with a centrally disposed opening 11 which forms a bearing. The pin wheel is preferably stamped from a blank of resilient sheet metal. Extending laterally from the hub 10 at right angles to the blades 9 and integral with said hub are oppositely disposed arms 12. Each of the arms is provided with a straight edge 13 and an inclined edge 14, the straight and inclined edges of the arms being disposed in diagonal relation to each other. Formed on the end portion of one of the arms 12 is a lug 15 and formed in the opposite arm 12 near its free end is a rectangular opening 16. Formed in the end portions of the arms 12 are openings 17. The arms 12 are rolled upwardly, as best shown in Fig. 2 of the drawings, so that their end portions are disposed in overlapping relation with the openings 17 in registration and in alignment with the opening 11, the openings 17 providing a bearing. The lug 15 is projected into the opening 16 and is bent to overlie the lower surface of the end portion of the lowermost arm so that accidental displacement of the arms will be prevented. Extending through the bearings defined by the opening 11 and the openings 17 of the arms 12 and through the washer 8 and the bushing 7 is a shaft or pin 18 and formed on the upper end of said shaft is a head 19. The opposite or lower end of said shaft is upset at 20, thereby preventing accidental outward movement of said shaft. The shaft 18 is, of course, freely rotatable on the shaft.

Overhanging the head 19 is a substantially hexagonal plate 21 having lugs 22 formed thereon, one of the lugs 22 being engaged in the opening 16 and bent inwardly. Formed in the uppermost of the arms 12 is an opening

23 and, as will be observed, the other of said lugs is engaged in said opening. Thus the plate will be held in position and the inner surface thereof will abut the head 19 of the shaft 18 and provide a thrust bearing for the pin wheel so that the force of air currents acting on the pin wheel will be sustained by said plate while also the plate will hold the hub 10 of the pin wheel away from the washer 8 to insure free and easy rotation of the pin wheel. As best seen in Fig. 2 of the drawings, the plate 21 is slightly concavo-convex in cross section and substantially conforms to the shape of the rolled arms of the pin wheel.

In use, the device may be fastened to any desired article and when exposed to a draft of air, the pin wheel will be caused to rotate, thus causing a pleasing effect. If desired, the blades 9 may be colored in various shades so that the rotating movement of the pin wheel will cause various designs to be formed which will, of course, contribute to the attractiveness of the device. Attention is directed to the fact that inasmuch as I have provided a thrust bearing for the pin wheel, said pin wheel will be limited against inward movement on the shaft 18 and thus wear upon the shaft and hub of the pin wheel will be greatly lessened and wobbling obviated. Attention is further directed to the fact that the plate 21 will not only serve as a thrust bearing, but will also provide protecting means for the head 19 of the shaft so that mutilation of said head and shaft will be prevented. It is to be noted, of course, that, while I have employed a pin wheel comprising two blades, a greater number of blades may be employed if desired.

Having thus described the invention, I claim:

1. A device of the character described including a pin wheel having blades connected by a hub provided with an opening, said hub having laterally extending arms rolled so that their end portions are disposed in overlapping relation and said end portions being provided with registering openings in alignment with said first mentioned opening, a shaft extending through said openings and rotatably mounting the pin wheel, and a plate overlying the shaft and provided with lugs connecting said plate with said arms, said plate coacting with the shaft to provide a thrust bearing for the pin wheel.

2. A device of the character described including a shaft, a pin wheel rotatable thereon, and means carried by the pin wheel to coact with one end of the shaft and provide a thrust bearing for the pin wheel.

3. A device of the character described including a pin wheel having arms, a shaft rotatably mounting the pin wheel and extending through said arms, and a plate connected to said arms to coact with one end of the shaft and provide a thrust bearing for the pin wheel.

4. A device of the character described including a base, a pin wheel rotatably mounted on the base and comprising blades connected at their inner ends by a hub having an opening and provided with arms, said arms being formed with openings, a shaft mounted on said base and extending through the openings, said shaft being formed with a head, and a plate connected with the arms and having its inner surface cooperating with the head to provide a thrust bearing, said head and thrust bearing coacting to limit the pin wheel against longitudinal shifting movement on the shaft.

5. A device of the character described including a base, a pin wheel stamped from a blank of resilient material and having blades connected at their inner end portions by a hub, said hub being provided with laterally extending arms which are rolled so that their end portions overlap each other and overhang the central portion of the hub, a shaft extending through the hub and the overlapping end portions of said arms and being provided with a head, and a plate overlying the head, said plate and head cooperating to limit the pin wheel against longitudinal displacement in either direction upon the shaft.

6. A device of the character described including a base, a pin wheel having blades connected by a hub, said hub being formed with arms having openings, a shaft extending through the hub and formed with a head, and a plate carried by the arms and having lugs extending through the openings and bent for securing the plate in position on the arms, said plate coacting with the shaft to provide a thrust bearing limiting the pin wheel against inward movement on the shaft.

In testimony whereof I affix my signature.

JOHN F. BROWN.