May 17, 1949. P. VALENTINO 2,470,381

UMBRELLA RIB TIP PROTECTOR

Filed Dec. 19, 1945

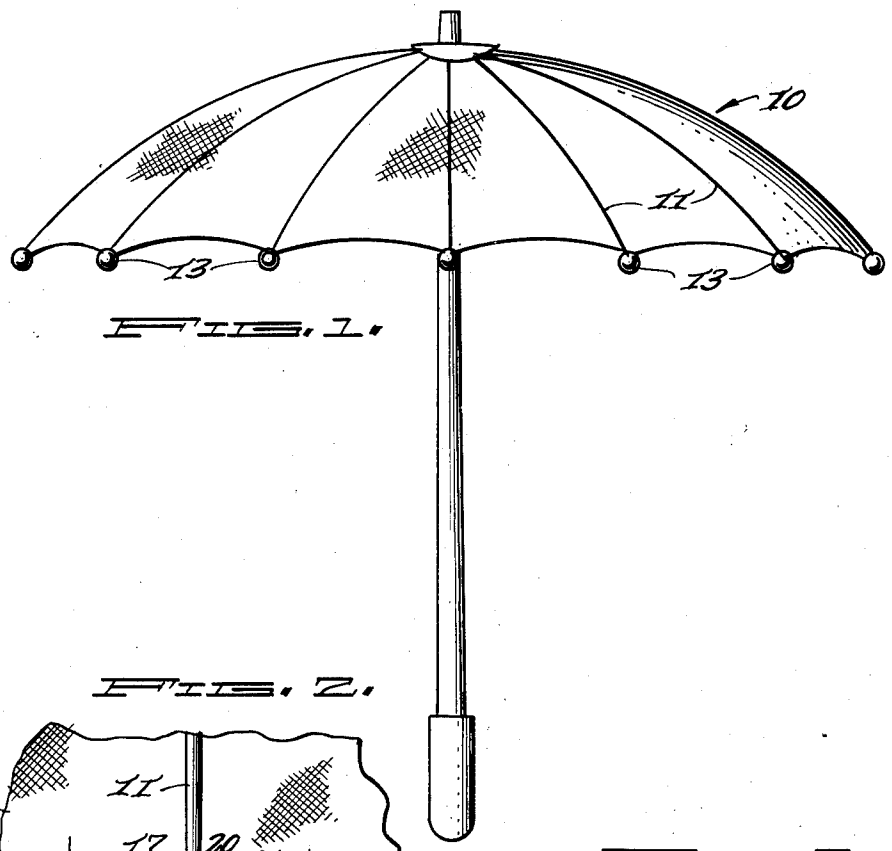

FIG. 1.

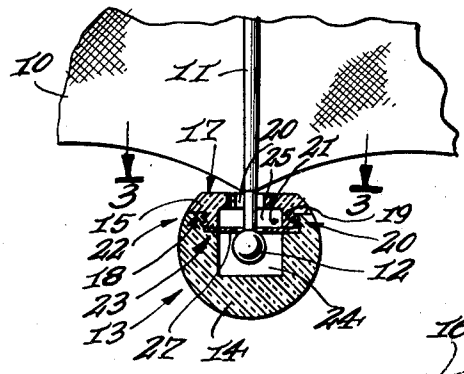

FIG. 2.

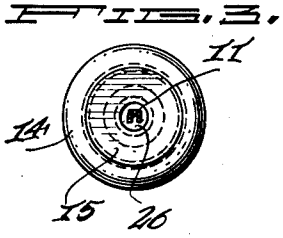

FIG. 3.

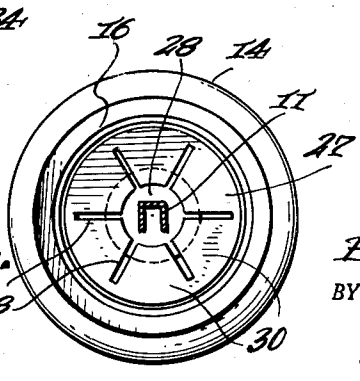

FIG. 4.

INVENTOR.
PETER VALENTINO.
BY
J. Ledermann
ATTORNEY.

Patented May 17, 1949

2,470,381

UNITED STATES PATENT OFFICE

2,470,381

UMBRELLA RIB TIP PROTECTOR

Peter Valentino, Brooklyn, N. Y.

Application December 19, 1945, Serial No. 635,901

5 Claims. (Cl. 135—36)

1

This invention relates to protective means for the extremities or tips of the ribs of an umbrella, so that when an umbrella is carried in close proximity to other people the danger of doing damage to a person's eye or eyes will be prevented. It is well known that people, especially in crowds, frequently come into contact with the umbrella of a careless passerby, and when such contact is made with the eye serious injury may result.

It is therefore one object of this invention to provide readily attachable and removable protective means over the tips of the umbrella ribs so as to cover them in such a way that if contact is made with a person's body, even with the eye, no serious injury can result.

Another object of the invention is the provision of protective members for the tips of umbrella ribs in substantially the form of a ball or sphere or the like, provided with novel and simple means whereby the protective members may be readily attached to or removed from the ribs.

Still another object of the invention is to provide such protective members which are simple in construction, effective in use, and inexpensive in cost of manufacture.

The above and other objects will become apparent in the following description, wherein characters of reference refer to like-numbered parts in the accompanying drawing. It is to be understood that the drawing is intended for the purpose of illustration only, and that it is neither desired nor intended to limit the invention necessarily to any or all of the specific details of construction shown excepting insofar as they may be deemed essential to the invention.

Referring briefly to the drawing,

Fig. 1 is a view showing an opened umbrella provided with the protective members of this invention.

Fig. 2 is a fragmentary enlarged view of the umbrella, showing a single protective member in longitudinal section secured to the tip of one of the ribs of the umbrella.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is an enlarged view similar to Fig. 3 excepting that the cover section of the ball is removed.

Referring in detail to the drawing, the numeral 10 indicates an umbrella whose ribs are shown at 11, the latter commonly having the shape of a channel and being provided on their extremities with small enlargements or tips 12. The tips 12 are small enough, as is well known, to do injury to the eye of a person upon contact with the tip.

2

The protective member or ball 13 is made in substantially the shape of a flattened sphere or ball, although such shape may be modified, if desired, and the ball may be made of any desired material such as, for instance, rubber, a phenol-resin or cellulose acetate or other plastic composition, wood, etc.

The ball comprises two sections 14 and 15, the former being substantially spherical in conformation and having a cut off portion leaving a flat surface or edge 16. The section 15 constitutes a cap-like section of a sphere, having both opposed surfaces 17 and 18 flat and mutually parallel. Projecting male threads 19 are provided on an extension 21 of the cap 15 to register in complementary female threads 20 cut into the section 14, in the inner wall of a flange 22 of the section 14. The shoulder 23 at the base of the flange 22 is flat, as is the lower surface or edge of the extension 21. Aligned cut-outs are provided in the ball 14 and the cap 15, shown at 24 and 25, respectively, and the cap 15 has a reduced opening 26 thereinto of slightly greater diameter than the rib tip 12.

A disc 27 is clamped between the members 14 and 15 when they are screwed together. This disc has a plurality of radial cut-outs 28 extending outward toward but not up to the peripheral edge of the disc, and it also has a central opening 29 therethrough. The diameter of this opening is smaller than that of the cap opening 26. This disc 27 may be made of a resilient material, such as steel, so that the radial tongues 30 formed by the slots 28 will be yieldable.

It is now apparent that an assembled protector or ball 10 may be readily applied to a rib tip 12 by passing the tip 12 through the opening 26 and through the disc opening 28; in passing through the latter the tongues 30 will first yield in a downward direction (Fig. 2) and then snap back, thereby releasably locking the tip 12 in the cut-out or compartment 24. In removing the ball 10, the reverse operation will take place. Thus, the balls 10 may be readily and quickly snapped on and off the rib tips 12. If the balls 10 are made available on the market completely assembled, the desired number to cover all the tips of an umbrella may be purchased, and applied on the tips 12. When desired, they may be removed from the umbrella, and this would be especially useful when an umbrella has worn out and must be discarded, whence the balls may be applied to the newly purchased umbrella.

Obviously, modifications in form and structure

may be made without departing from the spirit or scope of the invention.

I claim:

1. In an umbrella having ribs provided with enlarged tips, protective members adapted to be snapped on or off the enlarged tips, each of said members comprising a substantially spherical ball having a flattened surface, said ball comprising two complementary sections, one of said sections having said flattened surface thereon, said sections having means for releasably interlocking the same, said sections having complementary cut-outs forming a single compartment within the ball, said one of said sections having a reduced central opening therethrough into said cut-out thereof of a diameter slightly larger than the diameter of said rib tip, a resilient disc clamped between said sections between said cut-outs, said disc having a central opening therethrough of smaller diameter than the diameter of said rib tip, said disc having a plurality of radical slots extending from said central opening thereof toward the peripheral edge thereof thereby providing a plurality of yieldable tongues adapted to yield to the passage of said rib tip through said central opening of said disc in either direction and to snap back to their normal position coplanar with said disc after passage of said rib tip therethrough.

2. A protective member for the tip of an umbrella rib having an enlarged tip comprising a substantially spherical member formed of two complementary sections removably interlocked, said member having a compartment therein partly in each of said sections, a disc clamped between said sections and having a central opening therethrough of a smaller diameter than that of said rib tip, said disc having radial slots extending from said central opening thereof, one of said complementary sections having an opening therethrough into said compartment in axial alignment with the axis of said disc.

3. The protective member set forth in claim 2, said one of said complementary sections having a flattened outer surface surrounding said opening therethrough and coaxial with the axis of said last-named opening.

4. The protective member set forth in claim 2, means for removably interlocking said complementary sections comprising male screw threads on one of said sections and female screw threads on the other of said sections.

5. The protective member set forth in claim 2, said one of said sections having a thickness substantially smaller than the thickness of the other of said sections.

PETER VALENTINO.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,212,949	Palmer	Aug. 27, 1940

FOREIGN PATENTS

Number	Country	Date
227,225	Great Britain	Jan. 15, 1925