

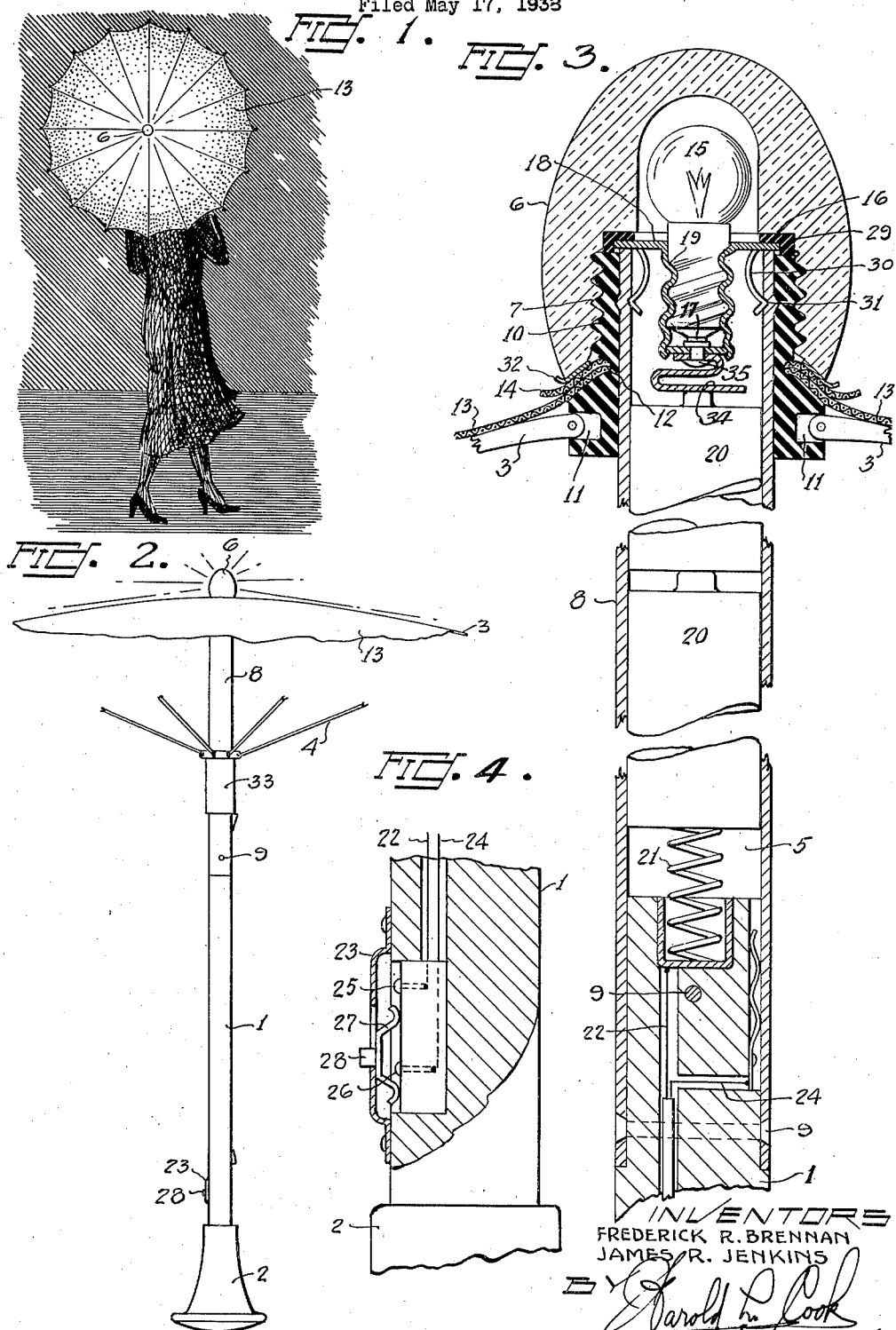
March 25, 1941.

F. R. BRENNAN ET AL

2,235,864

UMBRELLA

Filed May 17, 1933



UNITED STATES PATENT OFFICE

2,235,864

UMBRELLA

Frederick R. Brennan, Oswego, and James Ross
Jenkins, Portland, Oreg.

Application May 17, 1938, Serial No. 208,370

1 Claim. (Cl. 240—6.42)

This invention relates to improvements in umbrellas and the like, and has particular reference to an umbrella which may be illuminated by rays from a light carried as an integral part thereof to indicate the position of the person carrying the umbrella.

Umbrellas equipped with signal lights to give warning in the dark to the drivers of automobiles, street cars and the like, are disclosed in the patents to Thomases, No. 1,795,268, and Carmody, No. 2,104,340. It is a matter of common knowledge, however, that the presence of a point of light in the darkness does not reveal its approximate locality. For example, it is difficult to judge the distance to a pair of headlights on an oncoming automobile until after the rays therefrom touch the roadway, or until some other object can be discerned which discloses the relative position of the source of light. Therefore, the provision of a signal light upon the end of an umbrella staff has not afforded the measure of safety which was intended, for the reason that it is difficult to determine the distance to the light and, consequently, to the person carrying it.

Applicants have discovered that by providing a light upon the tip of an umbrella staff, so that the rays therefrom illuminate the covering of the umbrella, as well as being directly visible to an approaching motorist, the umbrella covering provides a visible background by means of which the position of and approximate distance to the person carrying the umbrella may readily be determined.

It is, therefore, an object of the invention to provide an umbrella for the use of pedestrians in crossing streets or walking along highways in fog or after nightfall, which may be illuminated to disclose the position of and the approximate distance to the person carrying the same.

A further object of the invention is to provide an umbrella having an electric light bulb disposed within the tip of the staff, and having batteries for supplying energy to the bulb, whereby the umbrella may be illuminated, without affecting the sizes or shapes or interfering with the trend of modern designs in umbrella hardware.

The invention also consists in certain other features of construction, and in the combination and arrangement of the several parts, to be hereinafter more fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claim.

In the drawing:

Figure 1 is a perspective view of our improved umbrella in raised position in use.

Figure 2 is a fragmentary side elevation of the umbrella.

Figure 3 is an enlarged vertical sectional elevation of the tip end of the staff.

Figure 4 is a fragmentary side elevation of the handle end of the staff, particularly illustrating the means for completing the electric circuit to supply energy to the light bulb.

The drawing illustrates an umbrella having a staff 1, a handle 2, and the usual complement of ribs 3 and stays 4. At the upper end of the staff is an elongated axial chamber 5 having an opening at the tip end of the staff and adapted to be closed by a ferrule 6 threaded, as at 7, for engaging an external thread on the upper end of the staff. In the construction illustrated the chamber 5 is formed by a length of tubing 8 secured to the end of the staff as by pins or rivets 9—9. Preferably, the threads at the upper end of the staff are formed in an annular block 10 of hard rubber or other suitable insulating material which is molded onto the end of the tubing, the annular block also carrying the notches 11 for securing the inner ends of the ribs. The inner ends of the stays 4 are likewise insulated from the sleeve 33, the ribs and stays being thus completely insulated from the tubing 8. A groove 12 is cut into the block 10 adjacent the notches 11 to receive the covering 13, an annular guard 14 of fabric being provided between the covering and the threaded portion of the block as a shield for preventing water from running down the cover and seeping into the ferrule 6 when the umbrella is closed. A conical metal friction ring 32 is provided to be placed over the fabric guard 14 to protect the covering of the umbrella from wear incident to repeated removal and replacement of the ferrule 6.

The annular block 10 is flush with the upper end of the tubing 8, and overlying the end of the tubing is a disc 18 having a central aperture therethrough and being provided with a depending socket 19 which is adapted to be threadedly engaged by an electric light bulb 15. Affixed to the bottom of the socket 19 is a disc of insulating material, and attached thereto, by means of rivet 35, is a spring clip 34, which serves as a cushioning element between the bulb 15 and the battery 20 for absorbing the shock of the sudden downward movement of the battery 20 when the umbrella is set down hard upon its tip. One end of the clip 34 is positioned to contact the terminal of the battery 20, the rivet 35 extending inwardly of the socket for contacting the carbon pole 17 of the light bulb. The disc 18 and socket 19 com-

prise an adaptor for supporting the light bulb 15 within the ferrule 6 and in position wherein the carbon pole 17 of the light bulb is in circuit with the terminal of the battery 20. The disc also provides contact between the bulb and the tubing 8 to complete the electrical circuit between the light bulb and the switch, being held in contact with the upper end of the tubing by means of a shoulder 16 on the ferrule which bears upon the disc when the ferrule is threaded onto the end of the staff. By merely unscrewing the ferrule 6 from the end of the staff, the light bulb 15 and adaptor may be lifted from the end of the tubing 8, whereupon the batteries may be discharged from the chamber 5 and fresh batteries placed therein. The disc may be equipped with spring clips 30 adapted to engage notches 31 near the end of the tubing, providing an additional means of support for the bulb and an additional means of contact with the tubing.

A resilient sealing ring 29 is interposed between the shoulder 16 and the disc 18 and insures a pressure upon the disc to cause it to make contact with the end of the tubing 8, even though the ferrule be not accurately machined at this point. The ring 29 overlies both the upper surface and edge of the disc, so that at least a portion thereof is compressed between the shoulder 16 of the ferrule and the annular block 10 onto which the ferrule is threaded, and effectively seals the interior of the ferrule 6 and chamber 5 against the entrance of moisture.

Contained within the tubing 8 is a dry cell battery or batteries 20, an expansible spring 21 being interposed between the lower end of the battery and the end of the staff to hold the terminal of the battery in engagement with the spring clip 34. The battery is insulated from the tubing 8, and is connected through the spring 21 and wire 22 to a switch 23, from which a wire 24 leads to the tubing 8 or to the bulb 15, as the case may be.

In the switch 23 the terminus of the wire 22 is a pin 25, and the terminus of the wire 24 is a pin 26. A spring clip 27, movable through the medium of a button 28, may be caused to simultaneously engage said pins to close the circuit to supply energy to the light bulb.

The housing or shield for the light bulb 15 is the hollow ferrule 6 which, being of a translucent refractory material such as phenol formaldehyde, so effectively diffuses the rays of light from the light bulb as to cause a luminous suffusion of light over the entire covering of the umbrella. This is particularly true if the covering is a fabric with a lustrous surface, such as silk, or is made of cellulosic material. When used in combination with a lustrous covering the lighted ferrule becomes a luminous center of a lighted area which renders the entire umbrella visible. A red ferrule produces a luminosity similar to the glow of a red hot iron, from which the covering of the umbrella reflects a soft, rosy flush. This is an effect which is produced only by a wide diffusion of the rays from the light bulb and for which there is provided a lustrous background.

Such a light is plainly visible on the darkest open highway at a distance of approximately one-quarter mile, and is a clear warning to motorists for the reason that not only is the lighted tip of the umbrella visible at the extreme distance, but the remainder of the umbrella becomes visible within the space of 300 feet and serves to localize the light produced by the tip.

Having now described our invention and in what manner the same may be used, what we claim as new and desire to protect by Letters Patent is:

In an umbrella having a staff and the usual complement of ribs, stays and covering, a hollow, battery-carrying tube on one end of said staff, an externally threaded element surrounding the end of said tube, said element having means for pivotally attaching said ribs, an annular shoulder on said element, a translucent hollow ferrule secured on the threads of said element and clamping said covering against said shoulder, a socketed disc containing a light bulb disposed within said hollow ferrule, said disc being seated on the end of said tube and having a spring contact on the end of said socket for absorbing the impact of a battery carried in said tube, and a resilient gasket effecting a seal between said ferrule and said disc, and also between said ferrule and said element.

FREDERICK R. BRENNAN.
JAMES ROSS JENKINS.