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A. E. RICHEY
LIGHT REFLECTING CANE
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2,561,228

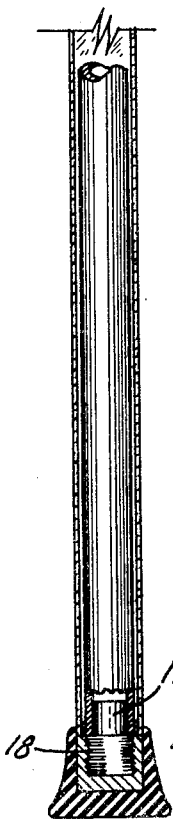
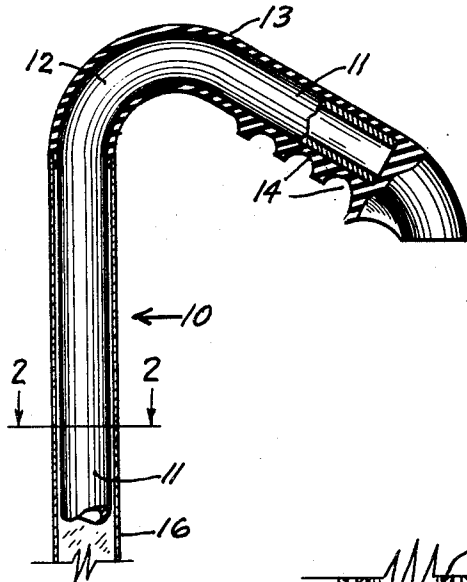


FIG. 1.

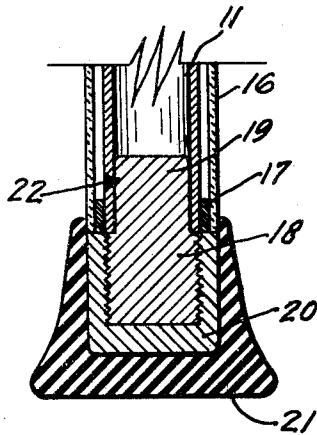


FIG. 3.

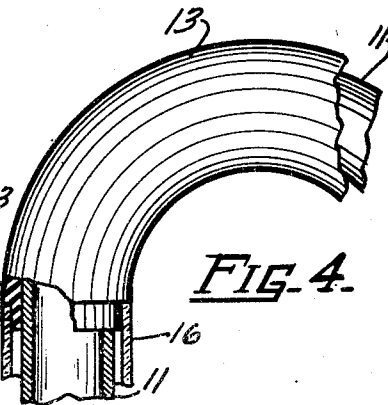


FIG. 4.



FIG. 2.



FIG. 5.

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LIGHT REFLECTING CANE

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3 Claims. (Cl. 135—45)

1

This invention relates to improvements in canes and has reference more particularly to canes of the type that reflect light and therefore serve as a safety device.

The density of our present day automobile traffic and the high speed at which automobiles travel make the crossing of roads or streets, and more particularly the walking along the highways at night, very hazardous.

It is the object of this invention to produce a cane of a pleasing appearance and of a substantial and rugged construction that will serve the usual function of a walking cane and also serve as a signal or safety device.

The above and other objects that may become apparent as this description proceeds are attained by means of a construction and an arrangement of parts that will now be described in detail, for which purpose reference will be had to the accompanying drawing in which the invention has been illustrated, and in which:

Figure 1 is a longitudinal section through a cane constructed in accordance with this invention, the tubular core being shown in side elevation with small portions shown in section;

Figure 2 is a section taken on line 2—2, Figure 1;

Figure 3 is an enlarged section showing the construction of the lower end of the cane;

Figure 4 is a fragmentary elevational enlargement of a section of the handle portion; and

Figure 5 is a view showing the cane in use.

In the drawing, reference numeral 10 designates the cane in its entirety and 11 designates the tubular metal core whose major portion is straight and connected with the straight handle portion 11 by a curved portion 12.

The straight portion of the core that extends downwardly from the curved part 12 has a coating of luminous material or paint, of which there are many on the market. Any luminous paint will serve, but the best results so far have been obtained from a coating known as Flash-Back manufactured by the Flash-Back Company of Big Bear Lake, California, from whom the processed core is purchased. The formula of the luminous coating is unknown, as is also the method by which the core is processed. The handle portion 11 and the curved portion 12 down to the beginning of the straight downward portion is preferably scraped and sanded so as to present a clean metallic surface, which is then covered with a suitable plastic material 13 cast in molds designed to give the handle the desired shape. The plastic is preferably of the

2

thermo setting type and hardened by the application of heat before the mold is opened. In the design illustrated the plastic handle has been shaped to provide grooves 14 for the reception of the fingers. The shape and appearance is immaterial as far as this invention is concerned.

Referring now to Figure 4, it will be seen that the plastic covering 13 terminates in a flange 15 of smaller diameter than the handle forming a rabbet for the reception and centering of the upper end of the transparent plastic tube 16.

The transparent plastic tube has an inside diameter somewhat greater than the outside diameter of core 11 and flange 15 serves to center its upper end with respect to the core. A ring 17 serves to space the lower end of tube 16 as shown in Figure 3. Transparent tube 16 terminates in the plane of the lower end of core 11 and is preferably slightly longer. A difference in length of one-hundredth of an inch is sufficient.

Tube 16 is held in place by a metal plug 18 having a cylindrical portion 19 of a diameter to fit the inside of core 11 with a driving fit and is held in place by friction or by spot weld 22. The lower end of plug 18 has an outside diameter slightly smaller than the outside of the core and is preferably threaded as shown.

An interiorly threaded cap 20 is threaded onto the plug and has an outside diameter at least as large as the outside diameter of tube 16. When cap 20 is in place, its upper edge forms a stop for tube 16, holding the parts in fully assembled position. A crutch cap 21 of rubber is positioned over cap 20.

Plug 18, in addition to having a pressed fit with tube 11, may also be spot welded thereto as indicated at 22 in Figure 3.

The cane, having a tubular metal core 11, is strong and reliable in every way. The surface of tube 11 serves to reflect light from automobile headlights and makes the cane visible for a distance of four hundred feet which is sufficient to enable an automobile traveling at legal speed to stop.

The coating on tube 11 may be of the type that absorbs light and emits it slowly in the dark, such as a phosphorescent paint, or it may be simply a light reflecting material that reflects light when struck by light from an emitting source.

The threaded connection between plug 16 and cap 20 is the preferred way of holding the two parts from relative longitudinal movement but is merely illustrative of means and if desired may

3

be replaced by equivalent means such as that employed to prevent relative rotation between the plug and pipe 11.

The cane is admirably adapted for use by the blind, in which case the outer luminescent or luminous surface of tube 11 is white.

Having described the invention, what I claim as new is:

1. A safety cane comprising a straight metal tube, a handle extending laterally from the upper end thereof, the outer surface of the straight portion having a luminescent coating, the lower end of the tube having a closure plug provided with a threaded surface, a cap having a threaded surface in cooperative engagement with the threaded surface of the plug, a transparent protector tube surrounding the straight portion of the metal tube, annular spacers at the upper and the lower ends of the transparent tube for holding it in concentric spaced relation with the metal tube, the cap having an annular end surface for engaging the lower end of the transparent tube forming a limit stop therefor.

2. A cane in accordance with claim 1 in which the upper end of the metal tube is curved laterally to form a handle portion and in which said handle portion has a molded plastic covering.

3. A safety cane comprising a straight metal tube having a portion of its upper end curved laterally to form a handle portion, a molded

4

plastic covering for the handle portion, the end of the covering at the upper end of the straight portion terminating in an annular shoulder, a spacer ring adjacent the shoulder, a closure plug for the lower end of the metal tube, a portion of said plug extending below the end of the tube, the last named portion being threaded, a cup-shaped cap having its inner wall threaded for engagement with the threaded portion of the plug, a transparent protector tube enclosing the straight portion of the metal tube, the outer surface of the straight portion of the metal tube having a luminescent coating, the upper end of the transparent tube being spaced from the outer surface of the metal tube by said spacer ring, a spacer ring at the lower end of the transparent tube, the end of the cup-like cap engaging the lower end of the transparent tube forming a stop for the transparent tube and holding it in engagement with the annular shoulder on the plastic handle.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
90,498	Chapman	May 25, 1869
341,715	Allen	May 11, 1886
2,269,029	Lounsbury	Jan. 6, 1942