Nov. 10, 1953 A. G. TRAPANI, JR 2,658,467

WARNING BULB

Filed Nov. 26, 1951

Fig.1

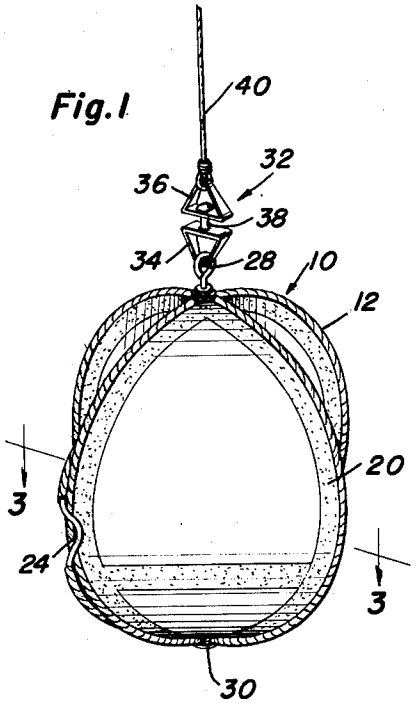


Fig.3

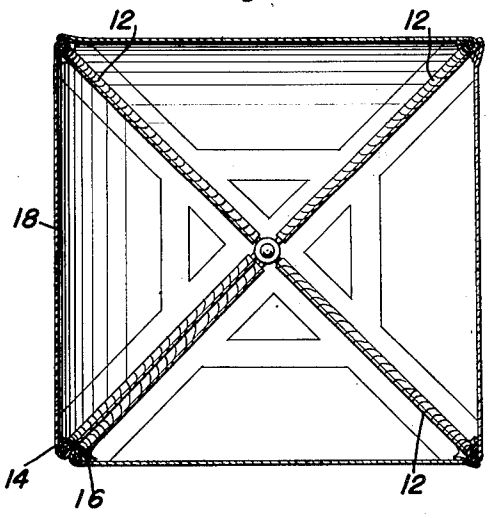


Fig.2

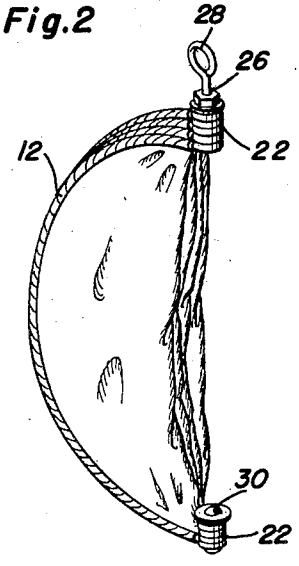
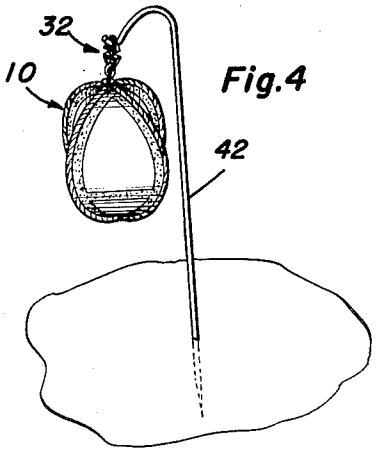


Fig.4



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WARNING BULB

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1 Claim. (Cl. 116—63)

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This invention relates to signal devices and more particularly to a warning bulb to replace flags, flares and reflectors as presently used in the transportation industry.

The principal purpose of this invention and the fundamental concept thereof is to provide a collapsible warning bulb that will permit standardization of warning devices used by commercial, public and private vehicles.

A further important object of the invention is to provide a warning bulb that will be readily collapsible to occupy a minimum of space, such as a glove compartment in a vehicle.

An important feature of the invention resides in the provision of a warning bulb that will be readily discernible.

Still another feature of the invention is the provision of a warning bulb that will be rotated by the passage of air thereover and thus be easily perceived.

A still further feature of the invention resides in the provision of a warning bulb that will be attractive of design, simple in operation and highly economical of manufacture.

These, together with various ancillary features and objects of the invention which will later become apparent as the following description proceeds, are attained by this device, a preferred embodiment of which is to be illustrated by way of example only in the accompanying drawings, wherein:

Figure 1 is a perspective view of the warning bulb in its expanded position, showing a satisfactory embodiment of the invention illustrating the principles thereof;

Figure 2 is a perspective view of the bulb in its collapsed position and showing certain features of the bulb fastening means;

Figure 3 is a sectional view of the interior of the warning bulb, taken substantially along the section line 3—3 of Figure 1; and

Figure 4 is a perspective view of the warning bulb mounted on a rigid, ground engaging support.

Referring now more specifically to the accompanying drawings, wherein like numerals designate similar parts throughout the various views, the numeral 10 designates a warning bulb in its entirety.

Referring now more particularly to the details of the warning bulb of the signal device, the numeral 12 designates identical ribs or strips forming the frame of the bulb. For convenience of description, the first and the last ribs of the frame have been given the numerals 14 and 16, respectively, as shown in Figure 3.

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As shown in the preferred embodiment of the warning bulb these ribs are of arcuate shape and substantially semicircular. Preferably, these ribs are of hard drawn galvanized wire of approximately No. 9 gauge. An eye 22 is formed in each end of each rib and the rib ends are positioned along a common longitudinal axis and superposed upon one another as clearly shown in Figure 2. Fastening means in the form of pins 26 and 30 extend through the aligned openings formed by the superposed eyes at each end of the frame. The frame ends are rotatably journaled on the fastening pins whereby the frame may be collapsed and expanded. The pin 26 has an eye 28 formed in its outer end for supporting the warning bulb.

Reference will now be had to Figures 1 and 3 wherein the relationship of covering 18 and its relation with the frame ribs 12, 14 and 16 is clearly shown. The cover 18 may be of any suitable fabric such as canvas, cotton or the like and extends from the first rib 14 over the intermediate ribs 12 through the last rib 16 and is secured to each of the ribs between the first and last ribs in such a manner that when the warning bulb is in its expanded position with the first and last ribs 14 and 16 respectively abutting one another the remaining ribs 12 are equidistant from one another. As shown in the drawings, the fabric is simply stitched to each of the ribs so that upon expansion of the warning bulb identical amounts of fabric will expand between each pair of ribs. The fabric may be coated on its outer surface with luminous coating such as that designated by the numeral 20, whereby the bulb will be clearly visible at night.

The first rib 14 has an indentation 24 intermediate its length, which indentation extends toward the interior of the warning bulb when the warning bulb is in its expanded position. This indentation 24 forms a resilient catch which overlies a portion of the last rib 16 and detachably secures the bulb in expanded position. To collapse the bulb, the catch is simply biased outwardly and disengaged from the last rib and the first and last ribs are collapsed toward their adjacent ribs.

Upon complete collapse of the bulb, the bulb assumes the shape shown in Figure 2. It will be noted that the collapsed bulb is very compact and may be stored in a minimum of space.

With reference again being had to Figure 1, it will be seen that the eye 28 of fastening pin 26 engages a swivel 32 whereby the warning bulb will freely rotate.

The swivel 32 comprises a lower triangular por-

tion 34 with the apex of the triangle secured to the fastening pin by means of the eye 28; an upper triangular portion 36 is spaced from the lower portion 34 by means of a swivel pin 38 so that the triangular portions are freely rotatable with respect to one another.

A tie rope 40 is shown secured to the apex of the upper triangle to attach the bulb to a structure.

Finally, Figure 4 shows the warning bulb mounted on a rigid, ground-engaging support whereby the bulb may be used as a signal device to warn of stationary obstacles such as road blocks, stalled automobiles and the like.

From the foregoing description it can readily be seen that the applicant has provided an improved signal device that permits the maximum of surface to be visible at all times; one that is simple of design and economical of manufacture and one that may be collapsed to occupy a minimum of space.

However, since numerous modifications and changes will readily occur to those skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not

desired to limit the invention to the exact construction shown and described, but all suitable modifications and equivalents may be resorted to falling within the scope of the appended claim.

Having described the invention, what is claimed as new is:

A signal device comprising a collapsible bulb, said bulb including a collapsible frame, a covering on said frame, said frame comprising identical ribs including first and last ribs and a plurality of ribs therebetween, said ribs being of equal length and having spaced ends disposed on a common axis and means fastening said ribs to one another, said ribs being collapsible into abutting side-by-side relation with one another.

AUGUST G. TRAPANI, JR.

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