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PLASTIC BUOYS

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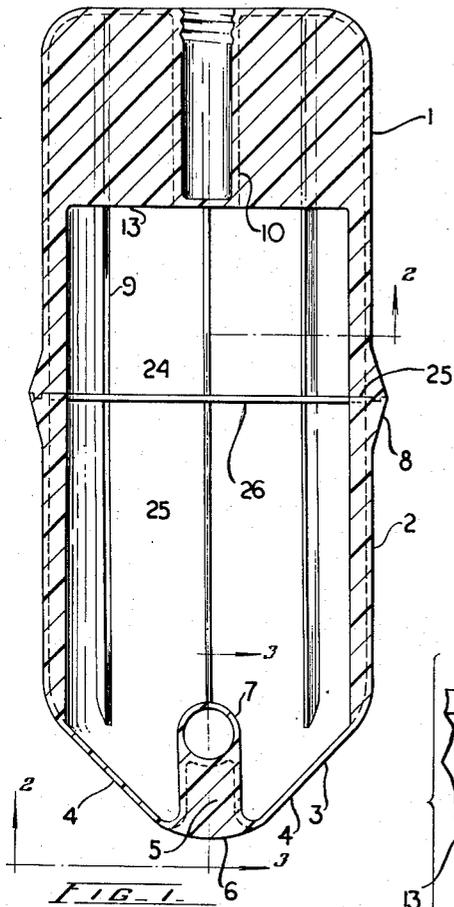


FIG. 1.

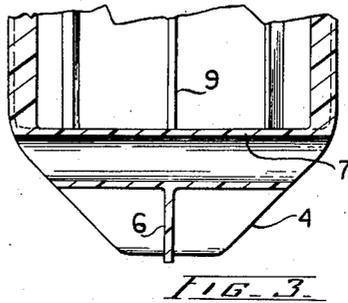


FIG. 3.

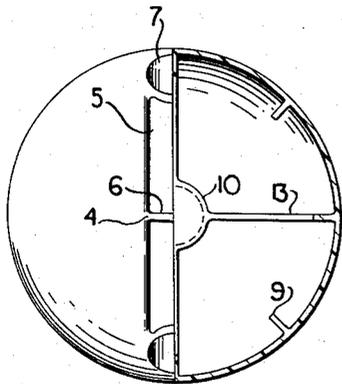


FIG. 2.

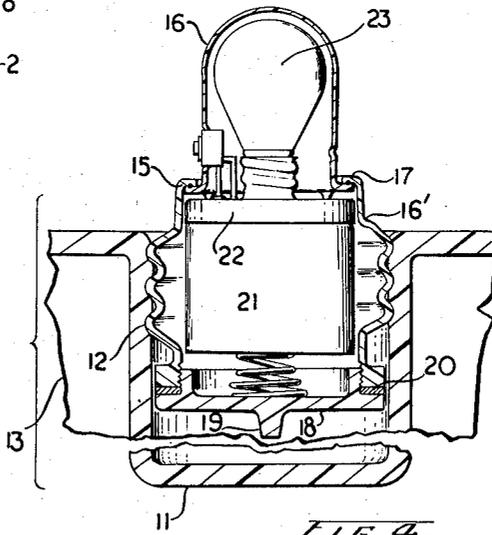


FIG. 4.

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PLASTIC BUOYS

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5 Claims. (Cl. 9-8.3)

My invention relates to buoys, an object being to provide novel structural means whereby a buoy may be manufactured of plastic with all the attendant advantages which flow from the use of such material such as permanent lightness of weight (due to the same not becoming waterlogged with time) high maximum buoyancy (and variable buoyancy due to the practicability of admitting ballast), pliability and economy of manufacture.

A further object of the present invention is to provide a buoy of the character herewithin described which will possess greater strength and general resistance to the effects of hard usage than conventional buoys, and yet which, notwithstanding, will appear, and remain, more attractive than conventional buoys, and will not warp with time.

A further object of the present invention is to provide a buoy of the character herewithin described which includes a signal receiving socket at the top thereof, such socket being secured in such a way as to impart maximum strength thereto.

With the foregoing objects in view, and such other objects as may appear as this specification proceeds, my invention consists in the following arrangement and construction of parts all as hereinafter more particularly described, reference being had to the accompanying figures in which:

FIGURE 1 is a longitudinal cross-section of my plastic buoy.

FIGURE 2 is a section on the line 2—2 of FIGURE 1.

FIGURE 3 is a section on the line 3—3 of FIGURE 1.

FIGURE 4 is a predominately cross-sectional representation of a novel signal lamp which I employ either in association with the buoy of FIGURE 1, or with a slight modification thereof in terms of the depth of socket.

In the drawings like characters of reference indicate corresponding parts in the several figures.

While my buoy has particular application to use in connection with the lobster industry, the same has wide applicability to other marine uses such as for the marking of channels, the mooring of small craft and the like. Proceeding therefore to describe the same in detail, it is to be observed that my buoy comprises upper and lower parts collectively designated 1 and 2 respectively, both parts being predominately and co-terminously cylindrical. Part 2 however includes a base collectively designated 3 which is predominately of inverted conical configuration as clearly depicted from the accompanying FIGURE 1.

Considered in detail, the base 3 embodies a pair of tapering spaced and parallel jaw portions 4 presenting an open gap 5 therebetween save and excepting for the existence of the stiffening portion 6 the inclusion of which could probably, for most uses be safely dispensed with.

At the trough of gap 5 is a transverse open-pended sleeve 7 normal to the longitudinal axis of my buoy. This sleeve is employed for anchorage purposes as for example by the passage therethrough of a rope which, in the case of lobster fishing will extend downwardly to a trap.

By best reference to the accompanying FIGURE 1 it will be observed that the co-terminous rims of parts 1 and 2 are thickened as at 8 to facilitate the mating of the two parts and the strengthening thereof. Internally my buoy is strengthened by the provision of a set of spaced, parallel and inwardly projecting ribs 9.

Within the top of my buoy is located a socket or well

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10, a somewhat shallower and wider version whereof is depicted at 11 of FIGURE 4. In both instances the interior surface of the socket is notched so that a flagpole may be securely held therewithin. Such notching may take the form of ratcheting as I have depicted in FIGURE 1 or any other form of circular racking. Preferably however the interior is screw-threaded as at 12 of FIGURE 4.

The aforesaid socket is strengthened by means of the set of radially disposed stiffening panels 13 which extend outwardly to the surrounding wall of my buoy and are co-terminous with the upper ends of the ribs 9.

Ballast preferably in the form of sand or shot will usually be provided in the lower part or compartment 2 of my buoy, since otherwise its extreme buoyancy will cause it to ride too high out of the water and tip over.

In the accompanying FIGURE 4 I have depicted a signal lamp collectively designated 15. It comprises the transparent glass or plastic protector 16, a battery case collectively designated 16' sealed thereto via the flange 17 in water-tight connection. A removable base 18 provided with the turn-lug 19 is in screw-threaded connection with case 16' and suitably gasketed as at 20 thereto. Within the case is a battery 21, and it will particularly be observed that the diameter of case 16' is greater than that of the base 18 whereby the unit may be inserted into socket 11 and there rotated against the screw-threaded central portion of the downwardly flanged member 22 which, as will clearly be apparent, is designed to fit over the surrounding shoulder of battery 21 and thus hold lamp 23 properly centred within protector 16.

Finally it will be observed that I may, if desired, divide my buoy into an upper compartment 24 and lower ballast containing compartment 25 by means of the transverse plastic diaphragm or partition 26 which, as will be observed, lies on the plane of the junction 25 of the upper and lower parts 1 and 2. By this means ballast is confined to the lower part of the buoy which keeps it more stable and upright for handling out of the water.

Since various modifications can be made in the invention hereinbefore described, and as illustrated in the accompanying drawings, and numerous variations made thereto all within the spirit and scope of the invention without departing from such spirit and scope, it is intended that the said description and drawings are to be interpreted as illustrative only, and not in a limiting sense, and that only such limitations should be placed upon my invention as are specifically contained in the definition thereof as expressed in the accompanying claims.

What I claim as my invention is:

1. A plastic buoy of predominately cylindrical external configuration provided with a base of predominately inverted conical configuration, a signal receiving socket in the top of said buoy, a set of spaced, parallel, internal, and inwardly projecting ribs, a set of radially disposed stiffening panels between said socket and said ribs, said panels being co-terminous with said ribs, said base including a pair of spaced and parallel jaw portions presenting an open gap therebetween, and a transverse, open-ended sleeve at the trough of said gap normal to the longitudinal axis of said buoy.

2. A plastic buoy of predominately cylindrical external configuration provided with a base of predominately inverted conical configuration, a signal receiving socket in the top of said buoy, a set of spaced, parallel, internal, and inwardly projecting ribs within said buoy, a set of radially disposed stiffening panels between said socket and said ribs, said panels being co-terminous with said ribs, and a transverse diaphragm also within said buoy to divide the same into upper and lower compartments, said lower compartment being ballast-containing.

3. A plastic buoy formed of separate upper and lower

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parts to form an annular buoy of predominantly cylindrical configuration, with a base of predominantly inverted conical configuration, said base including a pair of spaced and parallel jaw portions presenting an open gap there-between, and a transverse open-ended sleeve at the trough of said gap, parallel with said gap and normal to the longitudinal axis of said buoy.

4. The buoy according to claim 3 in which the interior of said buoy is longitudinally and co-terminously ribbed, a socket within the top of said upper part, and a set of radially disposed stiffening panels between said socket and said ribs, said panels being co-terminous with said ribs.

5. The buoy according to claim 3 in which the interior of said buoy is longitudinally and co-terminously ribbed, an interiorly notched socket within the top of said upper part, and a set of radially disposed stiffening panels between said socket and said ribs, said panels being co-terminous with said ribs.

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