

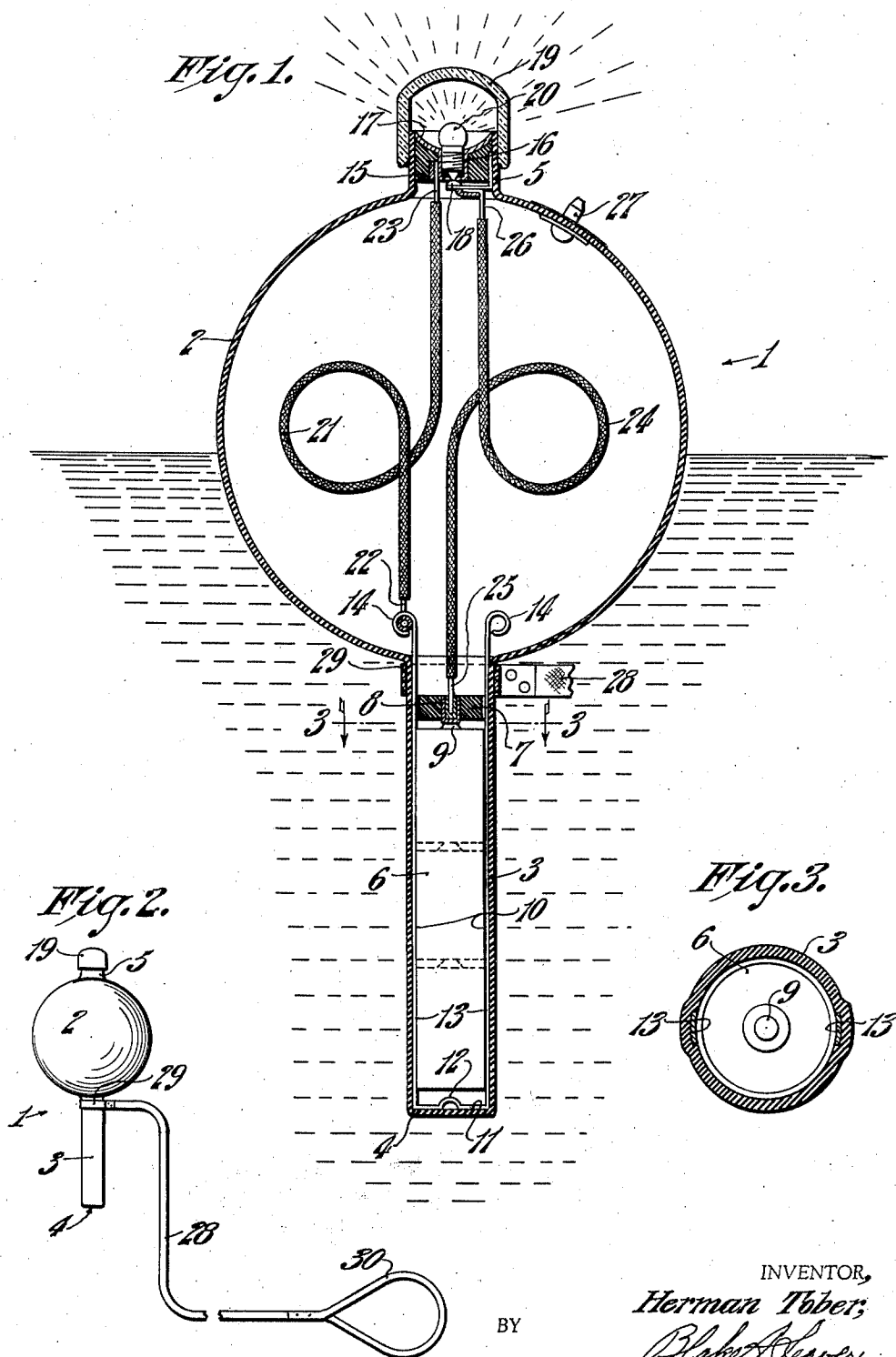
Nov. 19, 1940.

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2,222,246

BEACON LIGHT OR LIFE BUOY

Filed June 6, 1939



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## UNITED STATES PATENT OFFICE

2,222,246

## BEACON LIGHT OR LIFE BUOY

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Application June 6, 1939, Serial No. 277,650

5 Claims. (Cl. 9—8.3)

This invention is an improvement in beacon lights, or life buoys.

An object of this invention is to provide a portable, buoyant, beacon light, or buoy, for use by persons who may be cast adrift from a ship in distress, or by the pilot of a life boat or the like, which will indicate the position of the survivors, or life boat, at night.

A further object of the invention is to provide a convenient, lightweight, buoyant marker for use in water, which may be stored in a compact space when not in use, and which is at all times ready for immediate use.

A still further object of this invention is to provide a buoyant, watertight beacon light, in which the light is operated by storage batteries, and in which the light may be easily turned on or off when the device is afloat in water.

Another object of this invention is to provide a device of the character described which is simple of construction, economical of manufacture, and in which the storage batteries and lamp are so arranged as to be easily and quickly renewed or replaced.

These, and other objects and advantages of this invention, will be more completely disclosed and described in the following specification, the accompanying drawing, and the appended claims.

Broadly, this invention comprises an inflatable body portion, an integral, cylindrical extension on the body portion for receiving storage batteries, an integral, open-ended, cylindrical extension on the body portion and opposite the first-named extension for receiving an electric lamp, a watertight, transparent or translucent cap removably secured over the open-ended extension, a lamp removably secured in said open-ended extension, a battery removably secured in said first-named extension, a switch device frictionally engaged between the battery and the wall of the battery extension, and electrical connecting means between the lamp and the switch.

A preferred embodiment of this invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a sectional view of the device, as it would appear when inflated and afloat,

Fig. 2 is an elevational view of the device, showing an anchoring strap, and

Fig. 3 is a cross sectional view taken on the line 3—3 of Fig. 1.

Referring now to the drawing in detail, in which like numerals refer to like parts throughout,

A casing 1, of waterproof, elastic material, such as rubber, includes an inflatable body portion 2, an integral, cylindrical extension 3 provided with a closed end 4, and an integral, open-ended, cylindrical extension 5 opposite the extension 3. The extensions 3 and 5 are of approximately the same internal diameter, which is preferably slightly less than the diameter of a battery 6, which may be inserted through the extension 5 and frictionally secured within the extension 3. A plug member 7, provided with a battery contact element 8, is pushed into the extension 3, after the battery 6 is inserted, until the element 8 is in contact with a terminal 9 of the battery 6.

A novel switch device is provided for the battery 6. A U-shaped member 10, formed with a transverse portion 11 provided with a contact button 12, and side portions 13 terminating in coiled ends 14, is frictionally secured in the extension 3 by engagement of the sides 13 with the side wall of the part 3. When the battery 6 is in place, the sides 13 of the switch 10 are securely held against accidental displacement, between the battery 6 and the wall of the extension 3, as clearly shown in Fig. 3. A push against the closed end 4 of the extension 3 will force the button 12 into engagement with the battery 6 for closing the circuit, and the switch 10 will be held in contact position by frictional engagement with the battery 6 and side wall 3. The switch 10 may be returned to open circuit position, as indicated in Fig. 1, by a push downwardly against the coiled ends 14, through the wall of the inflated portion 2.

A plug member 15, of insulating material, provided with a screw shell 16, reflector 17, and contact strip 18, is frictionally and removably secured within the extension 5, and the open end of the extension 5 is covered by a transparent or translucent cap 19 which is pushed tightly over the extension 5 and held thereon by frictional engagement with the outer wall of the extension 5. A lamp 20 is removably secured in the screw shell 16 in the usual manner.

A wire 21 has one end 22 electrically connected to a coiled end 14 of the switch 10 and the opposite end 23 electrically connected to the screw shell 16. A second wire 24 has one end 25 electrically connected to the contact element 8 and the opposite end 26 electrically connected to the contact strip 18. Thus, the electrical circuit is closed through battery 6, terminal 9, contact element 8, wire 24, lamp 20, screw shell 16, wire 21, switch 10, button 12, to battery 6.

The inflatable body portion 2 of the casing 1 is provided with a standard valve 27, by means of which the portion 2 may be inflated and deflated, as desired. A strap 28, having a ring portion 29 encircling the part 3 of the casing 1, preferably adjacent the juncture of the part 3 with the part 2, is formed with a loop 30, by means of which the beacon 1 may be removably secured to an anchoring device, or around the neck or shoulder of a person, or to a boat or other convenient object. Preferably, the ring portion 29 is made of elastic fabric, of somewhat smaller normal diameter than the outside of the extension 3, thereby providing a constricting element about the portion 3 which assists in holding the battery 6 and plug 7 in proper position.

In use, the portion 2 of the casing 1 is inflated, and, when the device is thrown or placed in the water, the battery 6 acts as a weight to hold the device in an upright position, with the lamp 20 at the top, as indicated in Fig. 1. The lamp 20 may be changed by removing the cap 19. The battery 6 may be changed by removing the cap 19 and pulling out the plugs 15 and 7 through the open end 5, then removing the battery 6 through the same opening and inserting a new battery, then replacing the plugs 7 and 15 and cap 19. The plugs 7 and 15 are made of a suitable insulating material, such as rubber, Bakelite, or the like. The wires 21 and 24 are purposely made long enough for such operations, and the excess length coiled within the body portion 2. The cap 19 may be colored, if desired.

The beacon lights, as above described, may be stored in quantity, in a deflated condition, in a very small space, and quickly inflated, ready for immediate use, as required.

Having thus described my invention,

What I claim is:—

1. A buoyant beacon device comprising an inflatable, resilient watertight casing provided with a pocket in the wall thereof for receiving a storage battery, means in said casing opposite said pocket for receiving an electric lamp, a battery removably supported in said pocket, a lamp removably secured in said lamp-receiving means, a switch adjustably and frictionally supported by the wall of said pocket in cooperation with said battery, electrical connections between said battery, said lamp, and said switch.

2. A buoyant beacon device comprising an inflatable, watertight casing formed with a pocket in the wall thereof and an opening opposite said pocket, a U-shaped switch member frictionally secured in said pocket by engagement with the walls of said pocket, a battery removably secured in said pocket, said opening being large enough to permit entrance and removal of said battery, an electric lamp removably secured in said opening, a transparent, watertight cap removably secured over said lamp and said opening, electrical connections between said battery, said lamp, and said switch.

3. A buoyant beacon device comprising an inflatable, watertight, elastic casing formed with a pocket in the wall thereof and an open-ended extension located remote from said pocket, an electrical storage battery removably secured in said pocket, said open-ended extension being of a size to permit entrance into and removal from said casing and said pocket of said battery, an electric lamp removably secured in said extension, a watertight, translucent cap removably secured over said extension, electrical connections between said battery and said lamp, means included in said connections and frictionally and adjustably secured between said battery and the wall of said pocket for opening and closing the electrical circuit.

4. A buoyant electric beacon comprising an inflatable, watertight, elastic casing formed with a battery-receiving pocket in a wall thereof and an open-ended extension located remote from said pocket, said extensions being large enough to permit entrance of a battery, a battery removably supported in said pocket, a U-shaped switch member frictionally and adjustably supported in said pocket by engagement with the wall of said pocket, said switch member being formed with a contact button for contacting the battery supported in said pocket, the sides of said switch member arranged to project from said pocket into said casing, a plug removably secured in said pocket and provided with a contact element for contacting a battery in said pocket, a plug removably secured in said extension and provided with a screw shell, a lamp threadably secured in said screw shell, a contact strip secured on said last named plug for contacting the terminal of the lamp, wires loosely coiled within said casing and connecting said switch with said screw shell and said lamp contact strip with said contact element in said battery plug, and a watertight, translucent cap removably secured over said extension.

5. A buoyant beacon device comprising an inflatable, watertight, elastic casing formed with a pocket in the wall thereof and an open-ended extension located remote from said pocket, an electrical storage battery removably secured in said pocket, said open-ended extension being of a size to permit entrance into and removal from said casing and said pocket of said battery, an electric lamp removably secured in said extension, a watertight, translucent cap removably secured over said extension, electrical connections between said battery and said lamp, means included in said connections and frictionally and adjustably secured between said battery and the wall of said pocket for opening and closing the electrical circuit, a strap secured to said casing and provided with a loop for attaching or anchoring said beacon to an object or person.

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