WATERPROOF CASING FOR FLASHLIGHTS

Filed Aug. 6, 1937
This invention relates to a waterproof casing or jacket for flashlight. This casing maybe made of rubber or other resilient, flexible, waterproof material, such, for example, as so-called artificial rubber like those known as “Thiokol” and “neoprene.” The word “rubber” as used in the claims is intended to include artificial rubber.

In carrying out the invention, the casing or jacket for flashlight is made in a plurality of sections or parts, preferably three, so that the flashlight bulb may be replaced in the flashlight at one end and the battery may be replaced at the other end without removing the flashlight from the waterproof casing. Also, the normal operation of the flashlight and the manipulations for turning on and off the light are not interfered with. The casing or jacket not only prevents water or moisture from gaining access to the flashlight but also increases the safety of it or decreases the probability of breakage or injury because this casing, being soft, protects the flashlight when it is accidentally dropped or otherwise struck.

The invention will be understood from the description in connection with the accompanying drawings, in which:

Fig. 1 is a side view of a casing illustrative of the invention;

Fig. 2 is a longitudinal section with parts broken away; and

Fig. 3 is a section along the line 3—3 of Fig. 2.

In the drawing, reference character 1 indicates the middle section of the casing or jacket which is illustrated and shown in the drawing is made up of three parts or sections. Longitudinal ribs 2 are preferably provided on the casing for purposes of ornamentation, strength and convenience in handling. The section 1 is provided with an enlarged end 3 to receive the head of a flashlight that is to be protected by the casing. A rim 4 is provided at the other end of this section and it is also recessed or undercut as shown at 5, leaving an inwardly directed flange 6 at the end. A metal ring 7 that is rectangular in cross-section is located in the undercut 5.

The end section or part 8 is cap shaped and is preferably ribbed. It is provided at its open end with a rim 9 like the rim 4, and it is also provided with an annular recess or undercut at 10 similar to the undercut 5, leaving a flange 11 like the flange 6. The end of the part 8 is closed as shown at 12, and a polygonal rim or flange 13 is provided at this end to prevent the device from rolling when it is laid down. A metal rim 55 or ring somewhat like the ring 7 is located in the undercut 10.

The third part or section 16 of the waterproof casing is in the form of a ring that is rounded along its outer edge and shaped along its inner edge as shown in section at the lower left hand corner of Fig. 2. An annular groove 19 is provided along the inside of this ring 18, leaving a lip or flange 20 to snap over the enlarged rim 21 of the part or section 1 to make a watertight joint with the rim 21 fitting tightly in the groove 19. An annular groove 22 is also provided along the inside of the ring 16 somewhat similar to the groove 19, leaving an annular flange or lip 23 to bear against the side of the disc 24 of glass or other transparent material and make a watertight joint when this ring 16 is snapped over this disc. An annular flange 25 is preferably left between the grooves 19 and 22.

A longitudinal recess 28 is provided along the inner surface of the section 1 to accommodate the switch mechanism or housing diagrammatically indicated at 29 on the flashlight casing 30. The enlarged end 31 of this flashlight casing accommodates the light bulb and reflector of the flashlight in the usual way. The disc 24 bears against the end 32 of the reflector when the parts are assembled.

An enlargement 33 of the section 1 is provided for the recess 28. Circular grooves 34 and 35 are provided in the enlargement 33, leaving thin portions 36 and 37 so that when pressure is applied from the outside on the portions inside of the grooves 34 and 35 the material will readily yield, thus permitting the usual push buttons that are provided on the flashlight to be operated. These circular portions may be appropriately marked “off” and “on.”

An annular shoulder 40 is provided near the end of the flashlight casing 30 of larger external diameter than the internal diameter of the ring 7 to provide a stop. The portion 41 of the casing 30 beyond the shoulder 40 is externally threaded as shown at 42.

A metal cap 43 is provided for the end of the casing 30 and fits sufficiently tightly in the end section 8 to be turned when this section 8 is turned. Screw threads 44 are provided on the cap 43 to screw upon the threads 42. An outwardly projecting rim 45 is provided at the open end of the metal cap 43 to fit in the undercut 10 of the section 8.

The flashlight is assembled in the waterproof casing as follows: The part or section 18 is taken off by bending the flange 20 outwardly,
and the flashlight is inserted longitudinally with its switch housing 29 entering the groove or recess 28 in the section 1. The flashlight is pushed inwardly until its shoulder 48 contacts with the ring 7. The section 18 carrying the transparent disc 24 is then placed on by snapping its flange 20 over the rim 21 of the section 1 with the side of the disc 24 pressing against the end 32 of the reflector. The cap 12 is then screwed on to the threads 42 of the end 41 of the flashlight which causes the inwardly projecting flanges 6 and 11 to be securely clamped between the ring 7 and rim 45 to make a watertight joint. The ring 18 can be removed to replace the light bulb, and the cap 8 can be removed to replace the battery cells.

What is claimed is:
1. A removable waterproof jacket for a flashlight divided transversely and having means to render the junction watertight, said means comprising a stiff ring and a flexible lip in contact with said ring.

2. A removable waterproof jacket for a flashlight comprising a plurality of disengagable parts having waterproof joints, one of said parts having an enlarged rim at one end thereof and another one of said parts being a rubber ring provided with an annular groove and lip to snap over said rim to make a watertight joint.

3. A removable waterproof jacket for a flashlight comprising a disc and a plurality of disengagable parts having waterproof joints, one of said parts having an enlarged rim at one end thereof and another one of said parts being a rubber ring provided with an annular groove and lip to snap over said rim to make a watertight joint and also being provided with an annular groove along its inner side to receive the edge of said disc.

HARRY ROTHENBERG.
LEOPOLD C. GRIMSELEY.