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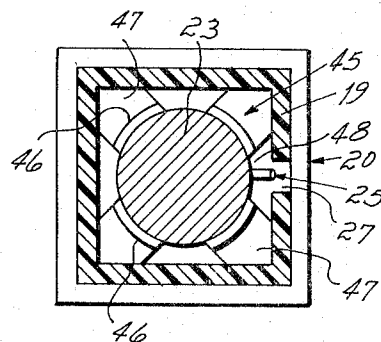
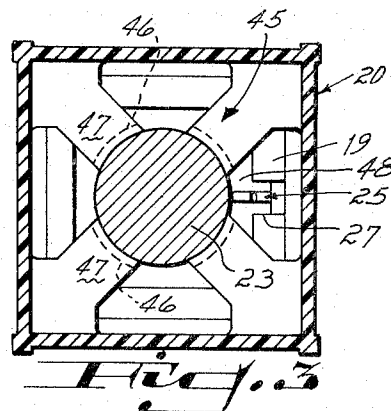
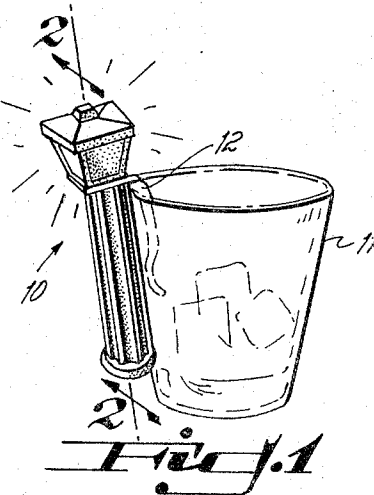
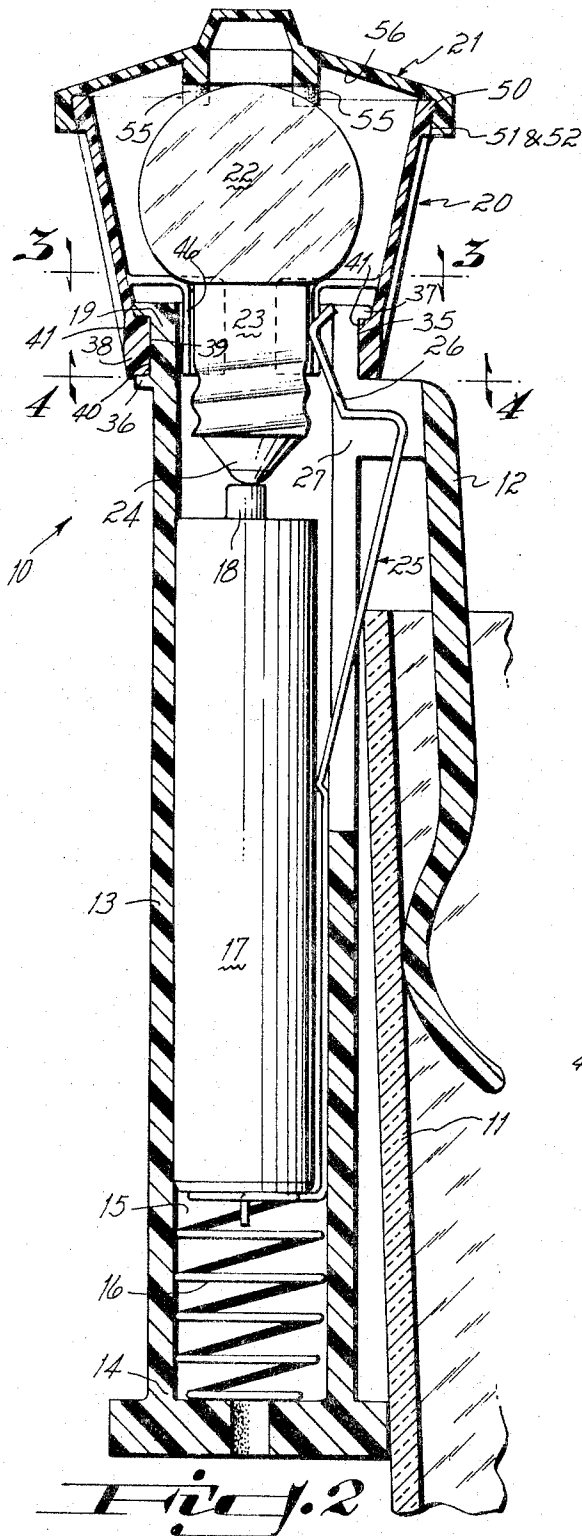
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3,368,069

GLOBE AND BULB MOUNTING FOR SIGNAL LIGHT

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2 Sheets-Sheet 1



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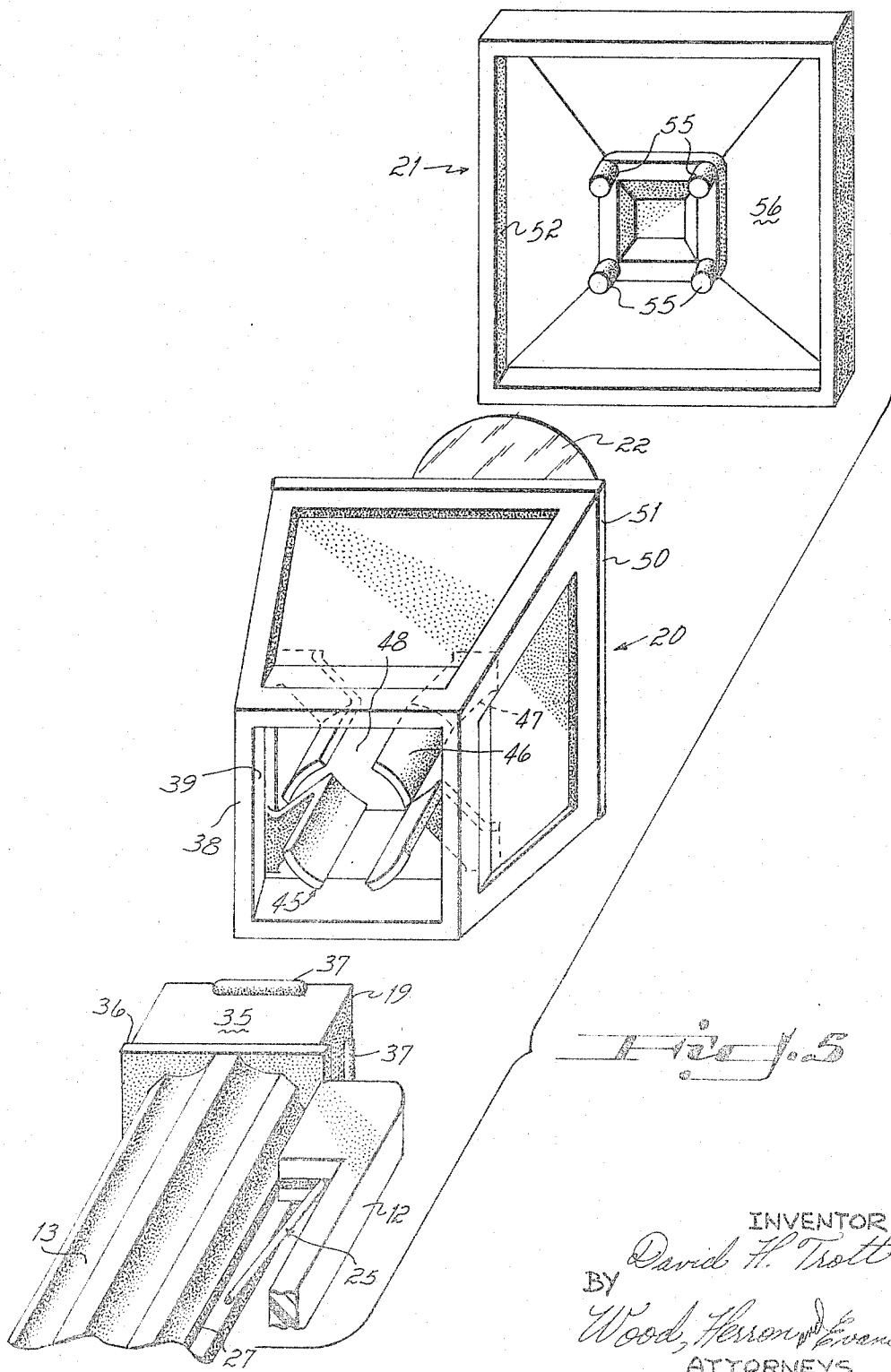
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3,368,069 GLOBE AND BULB MOUNTING FOR SIGNAL LIGHT

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ABSTRACT OF THE DISCLOSURE

A globe and light bulb mount for a signal light having an open ended barrel, the globe and barrel having a snap on connection, the globe having prongs which hold the bulb, and a cap for said globe which has centrally located pins engaging and centering the bulb.

Background of the invention

This invention relates to a signal light and more particularly the invention relates to an elongated signal light having a clip lying alongside the barrel of the light for mounting the light on the drinking glass or the like in order to signal one's host or a waiter that a refill is desired. The present invention is an improvement in the signal light shown in Patent No. 3,316,396 issued to Trott et al. That light includes an elongated barrel having a spring at one end and a battery resting on the spring. A light bulb has a base projecting into the open opposite end of the barrel, the central electrode of the light bulb contacting the central battery post. A conductor is provided to close the circuit between the bottom of the battery and the base of the bulb. A translucent globe surrounds the bulb and is mounted on the upper end of the barrel.

In the patent, the base of the bulb is secured in the open end of the barrel by means of an adapter which frictionally engages the inside surfaces of the barrel thus providing the retention means.

An objective of the present invention has been to provide an improved globe structure and means for mounting the bulb in the signal light, the mounting means eliminating the requirement of the adapter.

In accordance with the present invention, the globe is, at least initially, formed in two parts namely a globe and a cap for the globe, the removable cap permitting a bulb to be introduced into the globe through the upper end of the globe. A socket formed integrally with the inside surface of the globe is adapted to receive the base of the bulb, the socket being spaced inwardly from the lower edge or rim of the globe. As the globe is applied to the barrel of the signal light, the rim of the globe snaps over the outside of the barrel and the socket projects into the barrel carrying the base of the bulb into contact with the battery. The cap engages the top of the bulb and resists any tendency of the bulb to move away from contact with the battery.

It has been another objective of the invention to provide a signal light of the type described above wherein the cap is provided with downwardly depending pins which engage the top of the bulb and space it away from the inside surface of the cap, thereby centering the bulb within the globe while still permitting the cap to perform its retention function.

In the preferred form of the invention, electrical contact between the bottom of the battery and the base of the bulb is made by an electrical conductor which is movable into engagement with the base of the bulb. To accommodate the conductor, it is a feature of the invention to provide a slot in the bulb socket through which the conductor can pass. A still further feature of the invention is to provide a rectangularly configured upper end for the barrel and a mating rim for the globe, with the slot

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in the socket, which is carried by the globe, being oriented for alignment with the conductor when the globe is snapped onto the barrel. Thus, with the present invention, assembly of the signal light is facilitated, for the assembler is required only to assemble the bulb with the globe and snap it into position on the barrel, the alignment of the conductor with the slot in the socket being automatically attained.

The several objectives of the invention will become more readily apparent with the following detailed description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a perspective view of the invention showing the manner in which it is applied to a drinking glass when in use.

FIG. 2 is a longitudinal sectional view of the invention taken along line 2—2 of FIG. 1.

FIG. 3 is a cross sectional view taken along line 3—3 of FIG. 2.

FIG. 4 is a cross sectional view taken along line 4—4 of FIG. 2.

FIG. 5 is a disassembled perspective view of the upper end portion of the signal light.

As shown in the drawings, a signal light indicated at 10 is adapted to be mounted on a drinking glass 11 by means of a clip 12 secured to and forming part of the signal light. Except for the parts of the electrical system, the signal light is preferably made of plastic.

The signal light, as shown in FIG. 2, includes a barrel 13 having a lower end 14, the barrel being hollow as indicated at 15 and receiving a spring 16 in its lower end. A battery 17 rests on top of the spring, the battery having a central electrode or post 18 projecting from its upper end. The barrel has an upper end 19 to which a globe 20 is secured, the globe including a cap 21. The globe carries a light bulb 22 having a base 23 which projects down into the barrel. The light bulb has a central electrode 24 which contacts the central electrode 18 of the battery. A conductor 25 preferably consisting of a single wire extends from the bottom of the battery to a position adjacent the base of the bulb, the wire having an inwardly projecting end 26 which is normally resiliently held out of contact with the base of the bulb but is forced into contact with the base of the bulb when the signal light is supplied to a glass or the like as illustrated in FIG. 2. To permit the passage of the conductor 25 into contact with the base of the bulb, the barrel is slotted as at 27.

The upper end 19 of the barrel is preferably square in cross-section providing the generally rectangular surface 35 for mounting the globe. The surface 35 is terminated at its lower end by a shoulder 36 upon which the globe seats. Transverse ribs 37 are integrally molded to the upper end of the surface 35 to provide a detent by which the globe is secured.

The globe has, at its lower edge, a rim 38 whose internal surface 39 mates with the surface 35. The surface 39 is formed by an inwardly projecting flange 40 having an upper edge 41 which snaps under the ribs 37. The rib 37 and flange 41 constitute a detent means by which the globe is secured to the upper end of the barrel.

A socket 45 is formed within the globe by four prongs or straps 46 secured at their upper ends 47 integrally with the globe. The prongs provide at least one slot 48 through which the upper end 26 of the conductor 25 may pass to engage the base 23 of the bulb which is mounted in the socket. Preferably, four such slots 48 are provided so that the globe is properly oriented with respect to the conductor 26 of the slot 27 in the barrel in any one of the four positions which the globe can take when it is seated on the barrel.

The upper end of the globe has an external flange 50 which presents an outwardly flaring surface 51 as best il-

illustrated in FIG. 2. That surface cooperates with a mating surface 52 on the cap 21 to provide a snap fit of the cap 21 with respect to the globe. When the bulb 22 is seated in the socket, the cap may be sealed to the globe as by heat sealing or solvent sealing so as to provide a unitary bulb and globe assembly (a sealed beam unit) to facilitate the assembly of the device.

The cap has four centrally located pins 55 which are equiangularly spaced from each other and depend from the internal surface 56 of the cap. The pins engage the top surface of the bulb 22 and space it from the internal surface 56 of the cap. Thus, through the use of the pins it is possible to maintain the bulb in a centrally located position with respect to the globe while at the same time resisting any tendency of the bulb to move outwardly with respect to the battery.

In assembling the signal light, the globe, cap and bulb are preferably assembled as a unit, and the barrel spring conductor and battery are assembled as a unit. The globe assembly is snapped into position over the upper end of the barrel with the flange 40 snapping under the transverse ribs 37. The snap fit is permitted by the resiliency of the plastic material of which the globe and cap are formed. The square upper end of the barrel and the square lower end of the globe provides assurance that when the globe is fitted on the barrel the slot 48 will be properly oriented with respect to the slot 27 and the conductor 25.

The device is operated by applying it to a glass or other walled structure which permits the clip 12 to support the signal lamp. Preferably the act of applying the signal light to the walled structure effects the closing of the circuit to the bulb as shown in FIG. 2 by forcing the end 26 of conductor 25 into engagement with the base of the bulb.

I claim:

1. In a signal light having an open ended barrel which receives a battery, a globe and bulb structure comprising:

- a translucent globe having an open lower end defined by a rim receiving the open end of said barrel,
- detent means associated with said globe and barrel to secure said globe on said barrel,
- socket-forming means secured to said globe and spaced from said rim, said socket-forming means projecting into said barrel,
- a bulb having its base secured in the socket-forming means, and
- a cap closing the upper end of said globe

said cap having a plurality of centrally located pins engaging the top of said bulb.

2. In a signal light according to claim 1 which has a circuit-making conductor selectively engageable with the base of said bulb,

said socket having a slot adjacent said conductor through which said conductor passes to make contact with the base of said bulb.

3. A signal light according to claim 1 in which said centrally-located pins are constituted by four equiangu-

larly-spaced pins depending from the inside surface of said cap,

said pins assuring contact of said bulb with a battery in said casing and spacing said bulb away from the inside surface of said cap.

4. A signal light according to claim 1 in which said detent means comprises at least one transverse rib at the upper end of said barrel,

said rim of said globe having an internal flange providing an internal dimension less than the external dimension of the end of said barrel which includes said rib, whereby said globe is snap fitted over said rib and resiliently retained thereon.

5. A signal light comprising an elongated barrel for receiving a battery, said barrel having a square upper end, a translucent globe having a square lower rim snapped onto the upper end of said barrel,

means integral with the internal surface of said globe forming a socket, said socket being spaced inwardly from said rim and projecting into the upper end of said barrel,

a light bulb having its base inserted in said socket, and

a cap secured on the upper edge of said globe, said cap having means engaging said bulb to assure its contact with a battery in said barrel.

6. A signal light according to claim 5 further comprising a spring in the base of said barrel, a battery in said barrel and having a lower end engaging said spring, said spring urging said battery into engagement with said bulb, and said cap resisting movement of said bulb away from said battery.

7. A signal light according to claim 5 in which a conductor extends from the bottom of said barrel to a position adjacent the base of said bulb, said socket providing at least one slot through which said conductor can pass to engage the base of said bulb.

8. A signal light according to claim 5 in which said cap is sealed to said globe.

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