

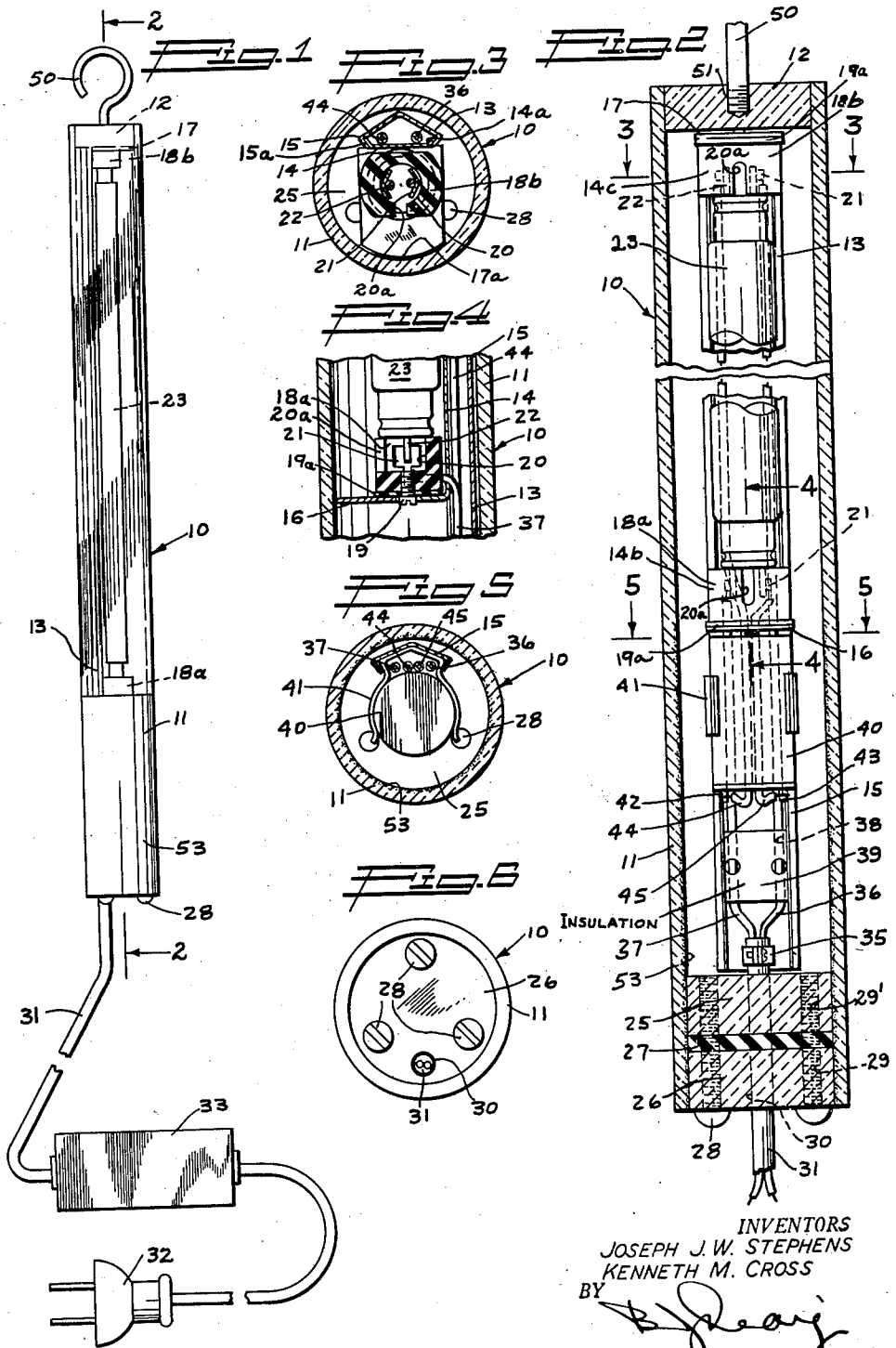
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INSPECTION LIGHT

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INSPECTION LIGHT

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This invention relates to inspection lights.

The general object of our invention is to provide a novel inspection light wherein the lighting element is securely mounted and wherein the housing is free from all outside obstructions.

A more specific object of this invention is to provide a novel means for securing the element of an inspection light within a tube.

A further object of the invention is to provide a novel support bar for an inspection light wherein the supporting bar is hollow so that the leads may pass therethrough.

Another object of the invention is to provide an inspection light wherein the working parts of the light are hermetically sealed against gases, moisture, dust and other foreign material.

An additional object of the invention is to provide a novel closure member for inspection lights.

Other objects and the advantages of our invention will be apparent from the following description taken in connection with the accompanying drawing, wherein:

Fig. 1 is a side elevation of an inspection light embodying the features of our invention;

Fig. 2 is an enlarged, sectional, detailed elevation taken on line 2—2, Fig. 1;

Fig. 3 is a transverse sectional view taken on line 3—3, Fig. 2;

Fig. 4 is a longitudinal, fragmentary, sectional view taken on line 4—4, Fig. 2;

Fig. 5 is a section taken on line 5—5, Fig. 2, and Fig. 6 is a bottom plan view of our inspection light.

Referring to the drawing by reference characters, we have shown our invention as embodied in an inspection light which is indicated generally at 10. As shown the device includes a cylindrical, tubular, transparent body portion 11 having one end thereof closed by cylindrical plug 12. The body 11 and plug are preferably made of non-frangible plastic material such as Lucite and the plug is preferably retained in place by cementing or fusing it to the body.

Enclosed within the body we provide an elongated, hollow, supporting bar 13. This bar 13 includes a front portion 14 having outwardly flaring edge portions 14a and a rear portion 15 which has converging edge portions 15a. The portions 14a and 15a interlock so that the member is held in assembled form. The rear portion 15 is bent so that it substantially conforms to the inner surface of the tubular body 11.

The member 15 extends substantially the full length of the tube while the member 14 extends from the inner end of the member 15 to a loca-

tion spaced from the other end of the member 15. At its inner end the member 14 is provided with an upwardly directed end flange 16 and at its outer end the member 14 is provided with an upwardly directed flange 17. The flanges 16 and 17 have curved free ends 17a which substantially correspond to the inner configuration of the body 11. As a result of the flanges 16 and 17 the supporting bar 13 is held against undue movement within the body 11.

The exposed surface of the front portion 14 is finished to provide a reflecting surface for light from a tube to be hereinafter described so that the light will be reflected forwardly.

On the flanges 16 and 17 we mount socket members 18a and 18b. These socket members are held in place by screws 19 which pass through the flanges. Insulating plates 19a are arranged between the socket members and their associated flanges. Each of the sockets has an aperture 20 with a slot 20a leading thereto. Within each of the apertures 20 a pair of resilient electrical contact members 21 are secured. These contacts 21 are engaged by contact points 22 on a fluorescent tube 23. The particular construction of the socket members and of the lamp form no part of the present invention.

The end of the body 11 which is opposite to the plug 12 is hermetically sealed by a removable closure which consists of an inner and an outer plug 25 and 26. The plugs have a diameter slightly less than the internal diameter of the body 11. Between the plugs we arrange a resilient washer 27 made of rubber or other suitable material. The washer has a diameter which approximates the internal diameter of the body 11.

A plurality of screws 28 pass through cylindrical holes 29 in the plug 26 and engage threads 29' in the plug 25. When the screws are tightened the washer 27 is compressed and is expanded peripherally so that it forms a hermetic seal for the body 11.

The plugs 25 and 26, as well as the washer 27, have aligned apertures 30 through which a cable 31 extends. This cable includes a plug 32 and a ballast box 33. The cable 31, just inside the plug 25, is engaged by a clamp 35 which is suitably secured to the member 14. The cable 31 includes two individual wires 36 and 37 which are separated beyond the clamp 35. The wires 36 and 37 pass through holes 38 in an insulating block 39 which is secured to the member 14.

The wire 36 extends through the hollow supporting bar and is attached to one contact of

the socket member 14c. The wire 37 is connected to one contact of the socket member 14b. Arranged between the outer end of the tube 23 and the insulating block 39 is a starter 40 which is held in place by spring tongues 41 on the member 15. The starter has terminals 42 and 43 which are engaged by wires 44 and 45. The wire 44 extends to the other terminal of the socket 14c and the wire 45 extends to the other terminal of the socket 14b.

The particular type of ballast box and the details of the circuit by means of which current is supplied to the tube form no part of the present invention.

The plug 12 is shown as provided with a hook 50 which engages threads 51 in the plug. The hook 50 has a diameter less than that of the body 11 so that the inspection light may be readily inserted through openings.

The lower inside surface of the tube 11 is coated with a suitable opaque coating 53 which serves to indicate what is the handle portion of the light and also serves to hide the non-illuminated interior details.

From the foregoing description it will be apparent that we have invented a novel inspection light which is compact, sturdy, free from exterior obstruction and is free from all outside metallic members and is hermetically sealed.

Having thus described our invention, we claim:

1. An inspection light comprising a hollow, transparent, cylindrical body, an elongated supporting bar in said body, said bar including a front portion and a rear portion secured together, said front and rear portions being spaced to provide a lead receiving chamber, spaced upwardly directed flanges on said bar, said flanges having portions arranged to engage the inner surface of the tubular member, a pair of spaced socket members supported on said bar, the socket members being opposed, and a fluorescent light tube having terminals engaging said socket members.
2. An inspection light comprising a hollow, transparent, cylindrical body having one end thereof hermetically closed, a removable plug hermetically sealed at the other end of said body, an elongated supporting bar in said body, said bar comprising a front portion having outwardly flaring side walls and a rear portion having converging side walls engaging the front flaring walls, to hold the front and rear in spaced relation, said front portion having spaced upwardly directed flanges thereon, each flange having a curved free edge shaped to substantially correspond to the inner surface of the tubular member, a socket member mounted on each of said flanges, and a fluorescent light tube having terminals engaging said socket members.
3. An inspection light comprising a hollow, transparent body which is cylindrical, an elongated supporting bar in said body, said bar comprising a front portion having a reflecting outer surface and having outwardly flaring side walls and a rear portion having converging side walls engaging the front flaring walls to hold the front and rear together, said front and rear portions being spaced to provide a lead receiving chamber, said front portion having an upwardly directed flange at each end thereof, a socket member mounted on each of said flanges, and a fluorescent light tube having terminals engaging said socket members.
4. An inspection light comprising a hollow, transparent, cylindrical body having one end

thereof hermetically closed, a removable plug hermetically sealed at the other end of said body, an elongated supporting bar in said body, said bar comprising a front portion having outwardly flaring side walls and a rear portion having converging side walls engaging the front flaring walls to hold the front and rear in spaced relation, said front portion having spaced upwardly directed flanges thereon, each flange having a curved free edge shaped to substantially correspond to the inner surface of the tubular member, a socket member mounted on each of said flanges, a fluorescent light tube having terminals engaging said socket members, said socket members each including spaced wire terminals, a pair of leads extending through said closure, a starter switch, said rear portion having a pair of spring jaws thereon, said starter switch releasably engaging said jaws, clamping means on said front portion and engaging said leads adjacent the inner end of said closure, said leads connecting the starter switch and said wire terminals.

5. An inspection light comprising a hollow, transparent body which is cylindrical throughout and has one end thereof hermetically closed, a closure at the other end of said body, an elongated supporting bar in said body, said bar comprising a front portion having a reflecting outer surface and having outwardly flaring side walls and a rear portion having converging side walls engaging the front flaring walls to hold the front and rear together, said front and rear portions being spaced to provide a lead receiving chamber, the said rear portion extending substantially the full length of the tube and the front portion terminating at its inner end adjacent the inner end of the rear portion, said front portion at its outer end terminating at a location spaced from the end of the rear portion, each end of said front portion having an upwardly directed flange thereon, a socket member mounted on each of said flanges, and a fluorescent light tube having terminals engaging said socket members.

6. An inspection light comprising a hollow, transparent body which is closed at each end, an elongated supporting bar in said body, said bar comprising a front portion having outwardly flaring side walls and a rear portion having converging side walls engaging the front flaring walls to hold the front and rear together, said front and rear portions being spaced to provide a lead receiving chamber, the said rear portion extending substantially the full length of the body and the front portion terminating at its inner end adjacent the inner end of the rear portion, said front portion at its outer end terminating at a location spaced from the end of the rear portion, each end of said front portion having an upwardly directed flange thereon, a socket member mounted on each of said flanges, a fluorescent light tube having terminals engaging said socket members, a starter, said rear member having a pair of spring jaws thereon, said starter releasably engaging said jaws and leads connecting said socket members and said starter.

7. An inspection light comprising a hollow, transparent, cylindrical body having one end thereof hermetically closed, a removable plug hermetically sealed at the other end of said body, an elongated supporting bar in said body, said bar comprising a front portion having outwardly flaring side walls and a rear portion having converging side walls engaging the front flaring walls to hold the front and rear in spaced rela-

tion, said rear portion extending substantially the full length of the body and the front portion terminating at its inner end adjacent the inner end of the rear portion, said front portion at its outer end terminating at a location spaced inwardly from the end of the rear portion, each end of said front portion having an upwardly directed flange thereon, a socket member mounted on each of said flanges, a fluorescent light tube having terminals engaging said socket members, said socket members each including spaced wire terminals, a pair of leads extending through said plug, a starter switch, one of the leads including a wire extending to a terminal on one socket member, the other terminal of the one socket member having a wire extending to one terminal of the starter switch, the other terminal of the starter switch having a wire extending to one terminal of the other socket and the other terminal of the other socket being connected to the other lead.

8. An inspection light comprising a hollow, transparent body which is cylindrical throughout and has one end thereof hermetically closed, a removable plug at the other end of said body, an elongated supporting bar in said body, said bar comprising a front portion having a reflecting outer surface and having outwardly flaring side walls and a rear portion having converging side walls engaging the front flaring walls to hold the front and rear together, said front and rear portions being spaced to provide a lead receiving chamber, the said rear portion extending substantially the full length of the body and the front portion terminating at its inner end adjacent the inner end of the rear portion, said front portion at its outer end terminating at a location spaced from the end of the rear portion, each end of said front portion having an upwardly directed flange thereon, each flange having a free edge substantially adapted to engage the inner surface of the tubular body, a socket member mounted on each of said flanges, a fluorescent light tube having terminals engaging said socket members, said socket members each including spaced wire terminals, a pair of

leads extending through said plug and operatively connecting said socket members, said leads including a starter switch, said rear portion having a pair of spring jaws thereon, said starter switch releasably engaging said jaws and means on said front portion and engaging said leads adjacent the inner end of said plug.

9. An inspection light comprising a hollow, transparent, cylindrical body having one end thereof hermetically closed, a removable closure hermetically sealed at the other end of said body, an elongated supporting bar in said body, said bar comprising a front portion having outwardly flaring side walls and a rear portion having converging side walls engaging the front flaring walls to hold the front and rear in spaced relation, said rear portion extending substantially the full length of the body and the front portion terminating at its inner end adjacent the inner end of the rear portion, said front portion at its outer end terminating at a location spaced inwardly from the end of the rear portion, each end of said front portion having an upwardly directed flange thereon, each flange having a curved free edge shaped to substantially correspond to the inner surface of the tubular body, a socket member mounted on each of said flanges, a fluorescent light tube having terminals engaging said socket members, said socket members each including spaced wire terminals, a pair of leads extending through said closure, a starter switch, said rear member having a pair of spring jaws thereon, said starter switch releasably engaging said jaws, clamping means on said front portion and engaging said leads adjacent the inner end of said closure, one of the leads including a wire extending to a terminal on one socket member, the other terminal of the one socket member having a wire extending to one terminal of the starter switch, the other terminal of the starter switch having a wire extending to one terminal of the other socket and the other terminal of the other socket being connected to the other lead.

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