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Goodwin

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[54] **ADJUSTABLE UNIVERSAL TROUBLE LIGHT SUPPORT**

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[52] **U.S. Cl.** ..... **240/54 A,** 240/52 R
[51] **Int. Cl.**..... **F21v 15/00,** F21v 21/00
[58] **Field of Search**..... 240/54 A, 54 R, 52 R, 52.1

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[57] **ABSTRACT**

An elongated track having one curved end is provided for support from the outer surface of the light shield of a conventional drop light with the curved portion of the track curving over the outer curved portion of the shield of the drop light. A slide is mounted on the track for adjustable positioning therealong and the slide and track include coacting structure operative to releasably secure the slide in adjusted positions along the track. A mount is pivotally supported from the slide for frictionally resisted rotation about a first axis transverse to the slide and extending between the slide and shield. A support arm is pivotally supported at one end to the mount for frictionally resisted oscillation about a second axis extending at generally right angles relative to the first mentioned axis and the other end of the support arm has a laterally opening hook thereon. The support arm includes opposite end sections with adjacent ends and remote ends and the adjacent ends include right angularly disposed side-by-side integral eye portions pivotally secured together for rotation of the outer end section of the support arm and the hook supported therefrom for rotation about an axis generally paralleling the longitudinal extent of the support arm.

11 Claims, 4 Drawing Figures

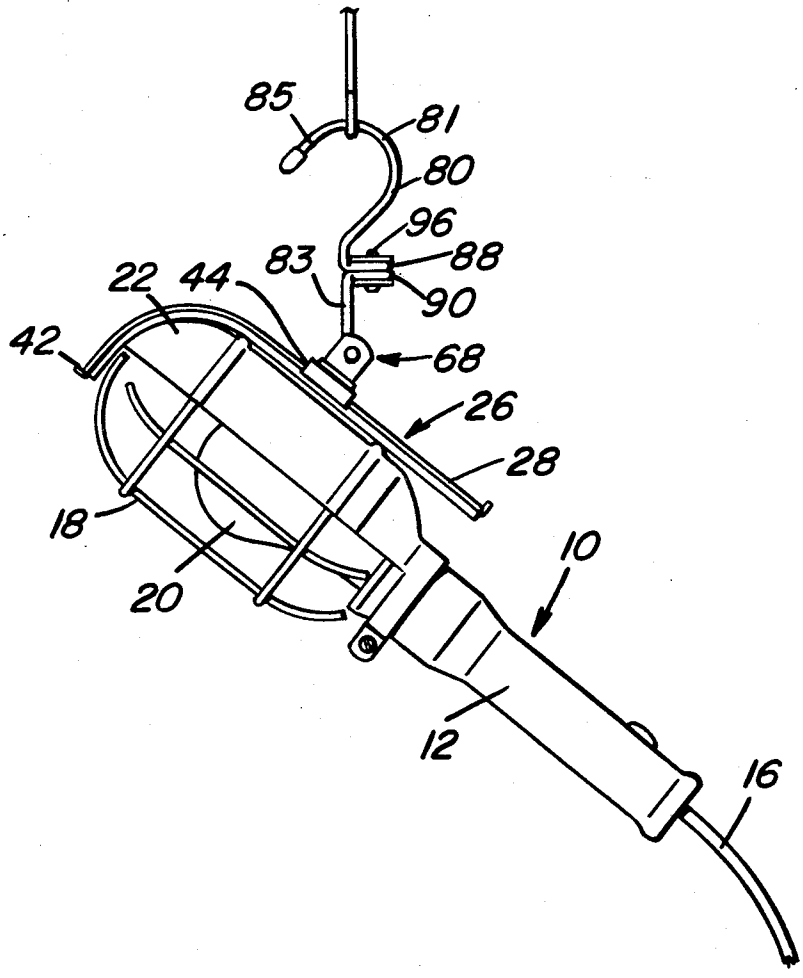


Fig. 1

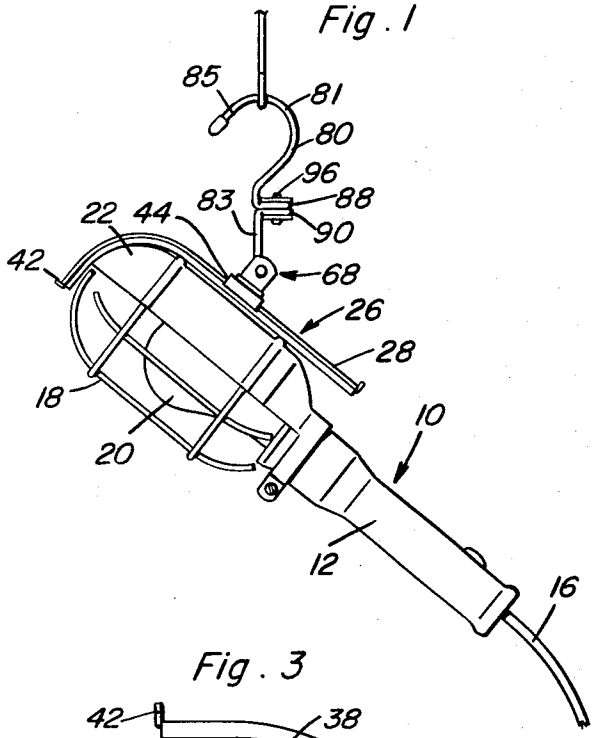


Fig. 2

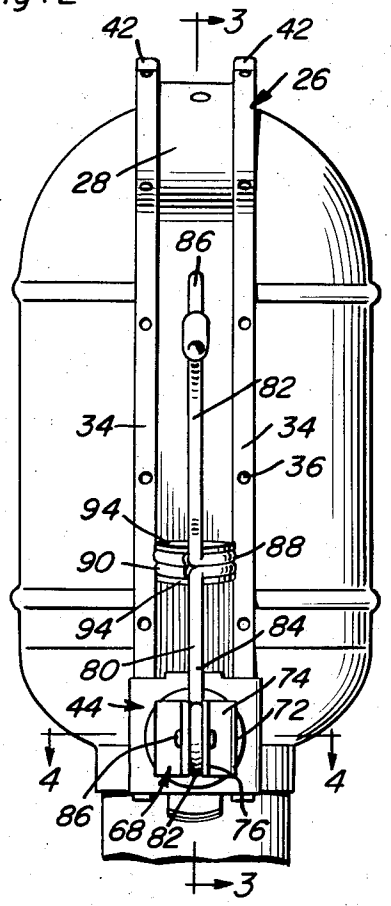


Fig. 3

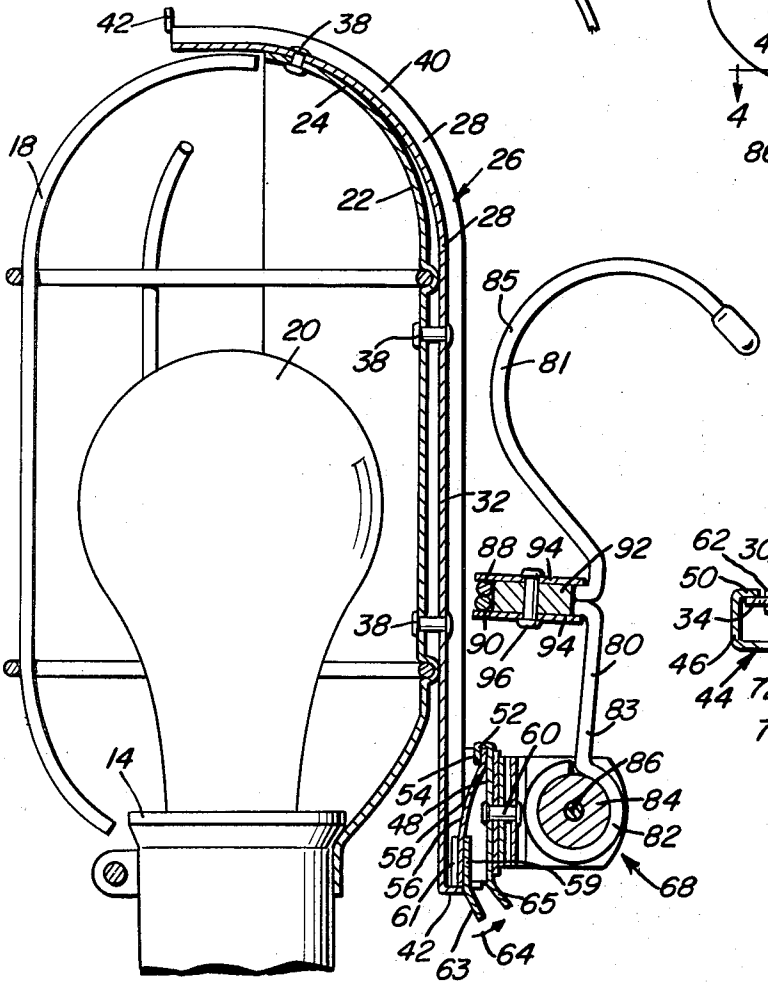
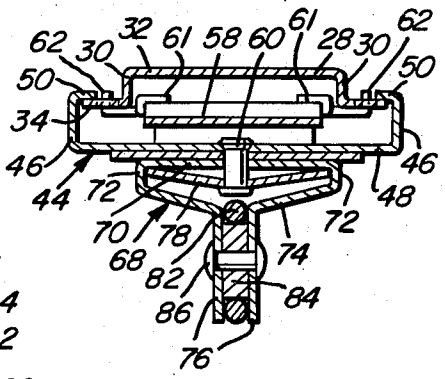


Fig. 4



ADJUSTABLE UNIVERSAL TROUBLE LIGHT SUPPORT

The trouble light support of the instant invention has been designed whereby the trouble light may be supported in substantially any position by means of the hook portions at the free end of the arm of the trouble light support. The arm is shiftable along the full length of the shield of the associated trouble light and may be secured in adjusted position along the shield. In addition, the support arm upon which the hook is provided may have its base end adjustably angularly displaced about axes disposed at right angles relative to each other and the free hook end of the arm may be angularly displaced relative to the base end of the arm about an axis generally paralleling the longitudinal extent of the arm.

The main object of this invention is to provide a support structure for a conventional trouble light whereby the trouble light may be supported in substantially any predetermined position.

Another object of this invention is to provide a trouble light support structure which may be readily incorporated into the manufacture of trouble lights and also readily manufactured as an attachment to existing trouble lights.

Yet another object of this invention is to provide a trouble light support which may be utilized, in conjunction with a remote portion of the associated trouble light, as a means to support the extension cord portion of the trouble light in a neatly coiled condition.

A final object of this invention to be specifically enumerated herein is to provide a trouble light support in accordance with the preceding objects and which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long lasting and relatively trouble free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout.

FIG. 1 is a side elevational view of a conventional form of trouble light with the support structure of the instant invention operatively associated therefrom and in use supporting the trouble light in a position so that the light cast thereby will be directed in a downwardly inclined position;

FIG. 2 is an enlarged fragmentary elevational view of the trouble light and support as seen from the rear side of the shield portion of the trouble light, the support arm and hook portions of the light support being illustrated in retracted position;

FIG. 3 is a fragmentary vertical sectional view taken substantially upon the plane indicated by the section line 3—3 of FIG. 2; and

FIG. 4 is an enlarged fragmentary horizontal sectional view taken substantially upon the plane indicated by the section line 4—4 of FIG. 2.

Referring now more specifically to the drawings, the numeral 10 generally designates a conventional form of trouble light including an elongated handle defining body 12 having a light bulb receiving socket 14 at one end and an extension cord portion 16 projecting outwardly of the other end. The socket end of the body 12 has the conventional openable generally cylindrical cage structure 18 supported therefrom and a light bulb 20 is disposed within the cage structure 18 and threadedly engaged in the socket 14.

The cage structure 18 includes a conventional generally semi-cylindrical shield 22 including a curved outer end 24.

The support assembly of the instant invention is referred to in general by the reference numeral 26 and includes a channel-shaped track 28 including opposite side longitudinal flange portions 30 interconnected along corresponding marginal edge portions by means of a bight portion 32. The free marginal edge portions of the flanges 30 terminate in oppositely outwardly directed flanges 34 provided with longitudinally spaced pairs of transversely aligned openings 36.

The track 28 is supported from the rear side of the shield 22 by means of rivets 38 secured through the bight portion 32 and the shield 22. The track 28 includes a straight end portion which slightly overlaps the socket end of the handle 12 and a curved end portion 40 which coincides with the curvature of the outer end 24 of the shield 22. The opposite ends of the flanges 34 include outwardly directed right angle stop flanges 42 and a slide 44 is mounted on the track 28 for sliding movement longitudinally therealong. The slide 44 is also channel-shaped in configuration and includes a pair of opposite side flanges 46 interconnected along corresponding marginal edge portions by means of a bight portion 48 extending therebetween. The free marginal edge portions of the flanges 46 terminate in oppositely inwardly directed flanges 50 and one end of the bight portion 48 includes an extension 52 which is bent backwardly as at 54 between the flanges 46. A spring latch assembly 56 is provided and includes a spring leaf 58 secured at one end between the bight portion 48 and the backwardly bent portion 54. The end of the spring leaf 58 remote from the reversely bent portion 54 has a clip 59 secured thereto including opposite side flanges 61 clamped about the free end of the spring leaf 58 and the clip 59 includes a finger engageable tab 63 spaced from and opposing a similar tab 65 carried by the bight portion 48. The opposite side portions of the clip 59 include laterally projecting latch portions 62, see FIG. 4, which are projectable through each pair of transversely aligned openings 36. From FIGS. 3 and 4 of the drawings it may be seen that the free end of the spring leaf 58 may be urged toward the bight portion 48 in the direction of the arrow 64 in order to retract the latch portions or tongues 62 from the openings 36 to thus enable the slide 44 to move longitudinally along the track 28. In addition, a mount referred to in general by the reference numeral 68 is provided and includes a bight portion 70 interconnecting a pair of opposite side flanges 72 terminating along their marginal edge portions remote from the bight portion 70 in convergent flanges 74 in turn terminating at their free ends in parallel slightly spaced apart flanges 76. A fastener 60 comprises a pivot fastener and is secured through not only the bight portion 48 but also the bight portion 70 and the center of a longitudinally creased spring clip 78 under tension. The opposite side edges of the spring clip 78 abut against the inner corner junctures of the bight portion 70 and the flanges 72 and thus a lighter weight spring clip 78 may be used without fear of excess stresses causing the spring clip to collapse toward the bight portion 70.

An elongated support arm **80** is provided and includes an integral eye **82** on one end having a spacer sleeve **84** disposed therein and a pivot fastener **86** is secured through the center portions of the flanges **76** and the spacer sleeve **84** in order to pivotally support the support arm **80** from the mount **68.** The free end of the support arm **80** includes an integral laterally outwardly opening hook **81** and it may be seen from FIG. **3** of the drawings that the support arm **80** includes opposite end sections **83** and **85.** The adjacent ends of the sections **83** and **85** include side-by-side right-angularly displaced integral eye portions **88** and **90** having a spacing sleeve **92** disposed therein. A pair of spring washers **94** are disposed over the remote sides of the eyes **88** and **90** and a pivot fastener **96** is secured through the washers **94** and the sleeve **92** in tension. Accordingly, the eye portions **88** and **90** are disposed in frictional contact with each other so as to frictionally resist relative angular displacement about the pivot axis defined by the pivot fastener **96.** Of course, inasmuch as the pivot fastener **86** is also secured through the flanges **76** and the spacing sleeve **84,** the eye portion **82** is frictionally gripped against angular displacement relative to the flanges **76.**

It may thus be seen that the hook **86** carried by the free end of the support arm **80** may be disposed in substantially any position. Further, inasmuch as the slide **44** may be slid longitudinally along the track **28** and secured in adjusted position therealong, further adjustable positioning of the hook **81** relative to the trouble light **10** is possible.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as new is as follows:

1. In combination with an illumination structure of the type including a body from which a light source is supported and from which a light shield is supported alongside said light source, a support assembly for said structure, said assembly including an elongated track secured to and extending along the side of said shield remote from said source, a slide mounted on said track for adjustable positioning therealong, said slide and track including coacting means operative to releasably secure said slide in adjusted positions along said track, a mount pivotally supported from said slide for frictionally resisted rotation about a first axis trasnverse to said slide and extending between said slide and shield, and a support arm pivotally supported at one end to said mount for frictionally resisted oscillation about a second axis extending at generally right angles relative to said first axis, the other end of said support arm having a hook thereon.

2. The combination of claim **1** wherein said hook opens generally in a direction extending at right angles relative to said second axis.

3. The combination of claim **1** wherein said support arm includes opposite end sections having adjacent ends, said adjacent ends being pivotally connected together for frictionally resisted rotation about a third axis generally paralleling said arm.

4. The combination of claim **3** wherein said adjacent ends include side-by-side right-angularly displaced integral eye portions disposed generally normal to said third axis, and a pivot fastener secured through said eye portions with the latter in frictional engagement with each other.

5. The combination of claim **4** including a pair of spring washers disposed over the remote sides of said eye portions, said pivot fastener being secured through said washers in tension.

6. The combination of claim **1** wherein said slide includes a spring retractable latch and said track includes a plurality of openings spaced longitudinally therealong through which a portion of said retractable spring latch is projectable to releasably secure said slide in selected predetermined positions, said latch and openings comprising said coacting means.

7. The combination of claim **1** wherein said hook opens generally in a direction extending at right angles relative to said second axis, said support arm including opposite end sections having adjacent ends, said adjacent ends being pivotally connected together for frictionally resisted rotation about a third axis generally paralleling said arm, said adjacent ends including side-by-side right-angularly displaced integral eye portions disposed generally normal to said third axis, and a pivot fastener secured through said eye portions with the latter in frictional engagement with each other.

8. The combination of claim **7** including a pair of spring washers disposed over the remote sides of said eye portions, said pivot fastener being secured through said washers in tension.

9. The combination of claim **1** wherein said illumination structure comprises a trouble light, said body defining an elongated handle portion having a bulb socket at one end opening endwise outwardly of said one end and in which a light bulb comprising said light source is disposed, said shield being supported from said one end of said body and projecting outwardly of said one end thereof alongside said bulb.

10. The combination of claim **9** wherein the outer portion of said shield curves over the outer end of said bulb, said track extending along said shield from the portion thereof adjacent said body toward the outer end of said shield and curving over the curved outer portion of said shield.

11. The combination of claim **1** wherein said slide includes a generally planar portion over which a washer is disposed, said mount including a pair of generally parallel flanges connected along one pair of corresponding edges by means of a bight portion extending therebetween, a spring panel member extending between said flanges over said bight portion and including an elevated mid-portion spaced centrally intermediate said flanges, the face of said bight portion facing away from said spring panel member being substantially surface-to-surface abutted against said washer, and a tensioned shank-type pivot fastener rotatably secured through said bight portion, planar portion, washer and spring panel mid-portion.

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