Dec. 21, 1965 P. J. CURTIN 3,225,187

LUMINAIRE ASSEMBLY

Filed March 29, 1963 3 Sheets-Sheet 1

Fig. 1

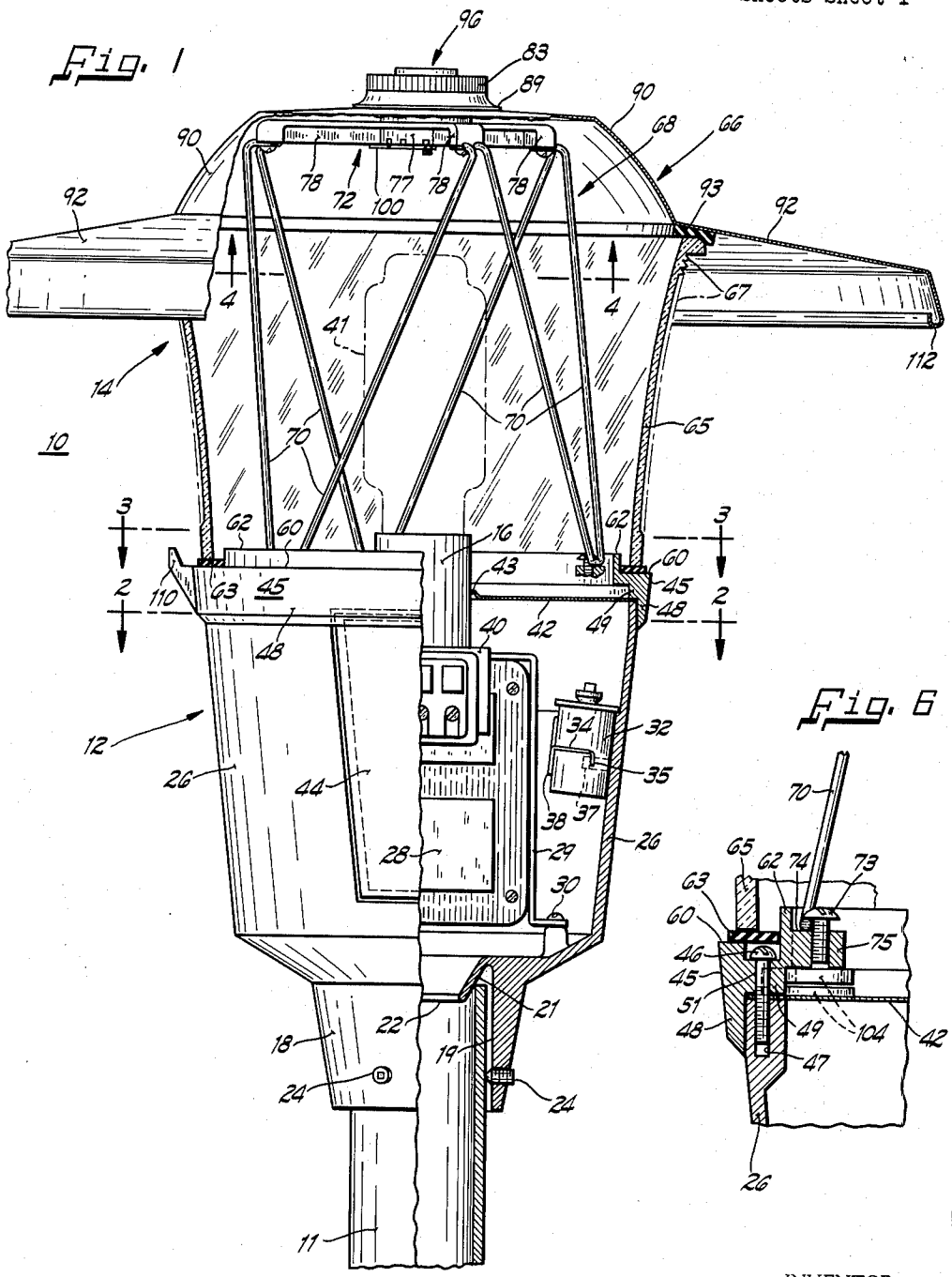


Fig. 6

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LUMINAIRE ASSEMBLY

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Fig. 2

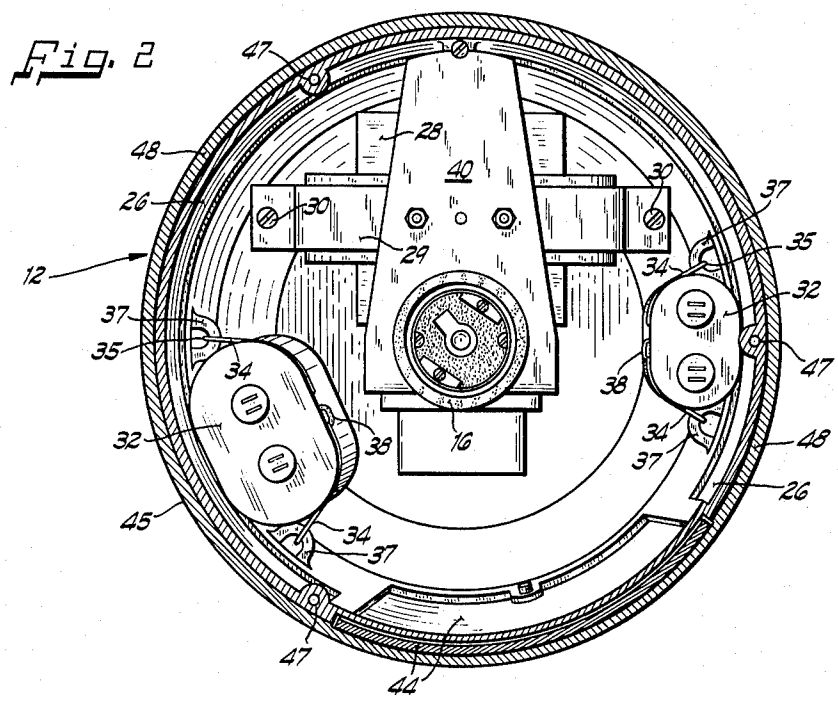
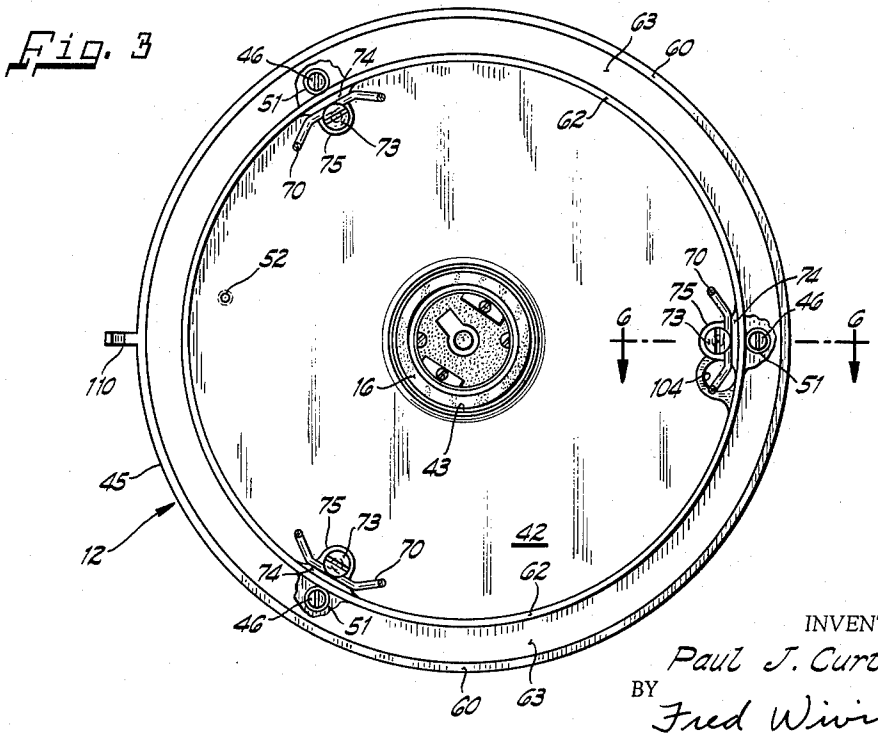


Fig. 3



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LUMINAIRE ASSEMBLY

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Fig. 4

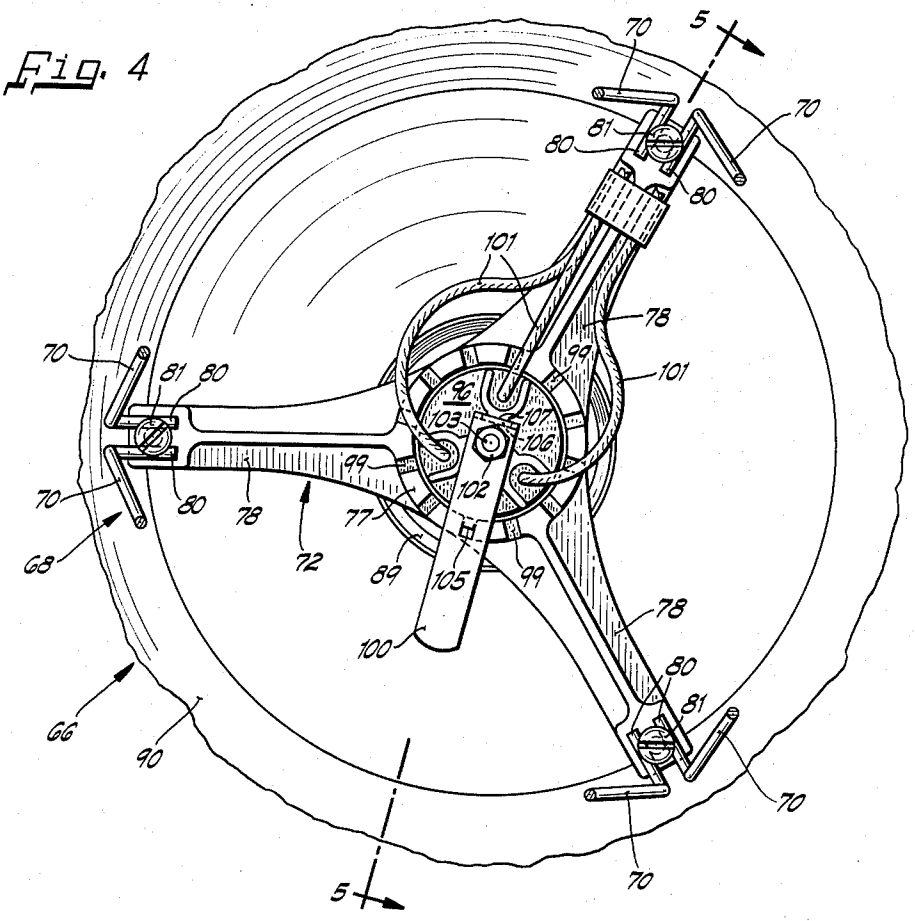
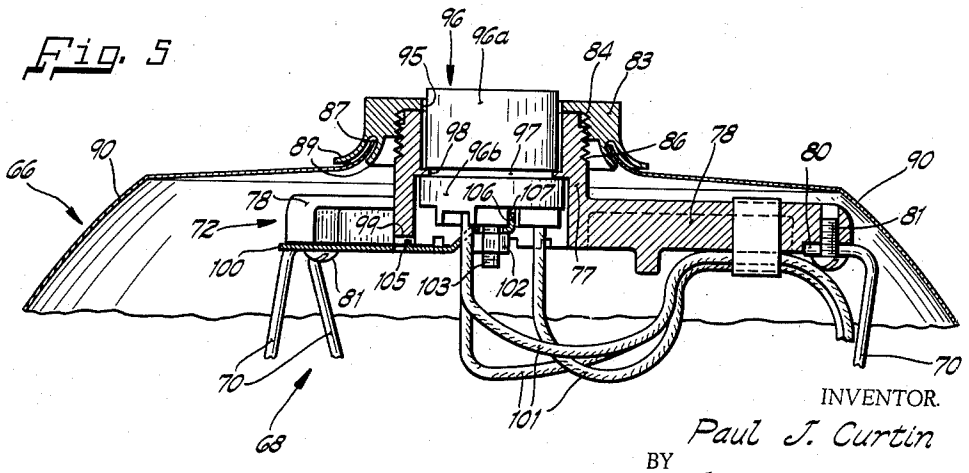


Fig. 5



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United States Patent Office 3,225,187 Patented Dec. 21, 1965

3,225,187

LUMINAIRE ASSEMBLY

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Filed Mar. 29, 1963, Ser. No. 268,885
19 Claims. (Cl. 240—25)

This invention relates to luminaires and more particularly to a pole top mounted lighting unit for street or area lighting purposes.

It is an object of the invention to provide a new and improved post top mounted lighting unit which is economical with respect to initial fabrication and maintenance.

A further object of the invention is to provide a new and improved lighting unit wherein a large degree of refractor expansion and contraction may occur without significant change of refractor clamping pressure. Another object of the invention is to provide such lighting unit with a relatively thin resilient reflector which acts as a spring member to resiliently clamp the refractor.

Yet another object of the invention is to provide a luminaire wherein removal of the refractor and reflector for maintenance requires the removal of only a single clamping element. Another object of the invention is to provide such a luminaire wherein said single clamping element is integral with the reflector.

Another object of the invention is to provide a luminaire with a reflector support assembly having a relatively high strength-weight ratio and which is capable of sustaining the reflector independently of the refractor.

Still another object of the invention is to provide a luminaire with new and improved photo-control mounting means.

It is another object of the invention to provide a lighting unit with new and improved pole top receiving adapter means.

These and other objects and advantages of the instant invention will become more obvious from the detailed description thereof taken with the accompanying drawings, wherein:

FIG. 1 is a side elevational view, with parts broken away, of a luminaire according to the instant invention;

FIG. 2 is a view taken along lines 2—2 of FIG. 1;

FIG. 3 is a view taken along lines 3—3 of FIG. 1;

FIG. 4 is a view taken along lines 4—4 of FIG. 1;

FIG. 5 is a view taken along lines 5—5 of FIG. 4; and

FIG. 6 is a view taken along lines 6—6 of FIG. 3.

Referring to the drawings in greater detail, FIG. 1 shows a luminaire, designated generally by the reference numeral 10, which is shown mounted atop a pole 11 of suitable height and suitably anchored at its lower end. The luminaire 10 includes a base assembly 12, an optical assembly 14 and a light socket assembly 16. The base assembly 12 secures the luminaire 10 to the pole 11, encloses various electrical components, and supports the optical assembly 14 and the light socket assembly 16 in the proper relative positions.

The base assembly 12 includes a slipfitter 18 integral with its lower end and which has a cylindrical internal recess 19 for telescopingly engaging the upper end of the pole 11. An integral frustro-conical surface 21 slopes downwardly and inwardly from the upper end of the surface 19 to form a V-in-section groove 22 intermediate the ends of the slipfitter 18 and which is engaged by the upper end of the pole 11 to center the luminaire 10 relative thereto. In addition, the lower end of the frustro-conical surface 21 terminates in a cup-shaped portion 22 which resides within the interior of the pole 11 as an aid in centering luminaire 10. A plurality of set screws 24 are positioned in spaced relation adjacent the lower end

of the slipfitter 18 and extend through threaded apertures formed therein to positively clamp the luminaire 10 to the upper end of the pole 11.

The base 12 also includes a hollow frustro-conical housing 26 disposed above the slipfitter 18 for receiving various circuit components in the energizing circuit of the light source 41. As seen in FIGS. 1 and 2, these components include a ballast 28 mounted within the housing 26 by a bracket 29 and screws 30. The electrical components within the housing 26 also include a plurality of capacitors 32 which are resiliently mounted against the inner surface of the housing 26 by elongate spring clips 34 each of which has a hook 35 at its ends for resiliently engaging a pair of eyelets 37 integrally formed on the inner surface of the housing 26. Each of the springs 34 has a loop 38 intermediate its ends for resiliently embracing one side of its associated capacitor 32 and for urging the opposite side thereof against the housing 26. In this manner the capacitors 32 are physically separating from the ballast 28 and a relatively large heat absorbing and dissipating member in the form of the housing 26 is provided in an abutting relation to each of said capacitors whereby cooler capacitor operation is achieved.

The light socket 16 is suitably mounted above the ballast 29 by a bracket member 40 and extends upwardly from the housing 26 into the interior of the optical assembly 14 for supporting a lamp 41 therein. An access door 44 is removably mounted on the housing 26 to facilitate connection and maintenance of the electrical components.

The interior of the housing 26 is separated from the optical assembly 14 by a circular plate 42 whose outer periphery is coextensive the upper end of the housing 26 and which has a central aperture 43 for receiving the upper end of the light socket 16. A refractor ring 45 is affixed to the upper end of the housing 26 by a plurality of circumferentially distributed screws 46 which extend through countersunk holes 51 in the ring 45 and engage corresponding taped holes 47 in the upper end of the housing 26. The ring 45 also has an annular downwardly extending collar 48 which telescopingly engages the upper end of the housing 26 and an annular shoulder 49 which engages the outer periphery of the plate 42 for clamping the latter to the upper end of the housing 26. The plate 42 not only physically separates the optical assembly from the housing 26 but also performs the functions of reflecting heat generated by the lamp 41 away from the ballast 29 and the capacitors 32 and preventing condensed water vapors from within the optical assembly 14 from running onto the electrical components within the housing 26. Any condensate that does collect on the plate 42 is allowed to drain through a drain hole 52 into a remote area of the base 12.

The refractor ring 45 has an annular refractor receiving surface 60 formed on its upper end which terminates at its inner periphery in an upwardly extending positioning rim 62. An annular gasket 63 of any suitable compliant material, such as Dacron felt, is disposed on the refractor receiving surface 60.

The optical assembly 14 includes a refractor 65 and a reflector or hood 66. The refractor 65 is a generally tubular open ended light transmitting member having a plurality of light redirecting prisms 67 formed on its surface and is provided to redirect the generally horizontally directed light rays from the lamp 41 into a predetermined light pattern. The reflector 66 is secured in an overlaying relation to the open upper end of the refractor 65 and serves to redirect upwardly directed light rays downwardly and into the desired light pattern.

A reflector support assembly 68 supports the reflector 66 in an abutting relation against the upper edge of the refractor 65 and includes a plurality of V-shaped wire form members 70 which diverge outwardly from their

lower to their upper ends. The support assembly 68 also includes a reflector support member 72 upon which the reflector 66 is affixed and which engages the upper ends of the wire form members 70. The wire form members 70 are disposed interiorly of the refractor 65 and are equidistantly spaced from each other with each having its convergent lower end held by large-headed screws 73 in grooves 74 formed in equidistantly spaced lugs 75 extending integrally inward from the rim 62 of the refractor ring 49.

As seen in FIGS. 1 and 3, the reflector support member 72 has a tubular central hub 77 and three equally spaced arms 78 radiating from the hub 77. A pair of radial grooves 80 are formed in the under surface of each of the arms 78 and adjacent their outer ends for receiving one of the upper ends of adjacent wire form members 70, which are secured therein by large-headed screws 81 threadably received in tap holes formed on the ends of each arm 78 and between the grooves 80. It can be seen that the reflector support assembly 72 presents a relatively rigid truss-like assembly which provides a high degree of support strength even though the individual members 70 may be formed of thin wire and which is capable of sustaining the reflector 66 independently of the refractor 65 should the latter be removed by breakage or the like.

While the wire form members 70 are shown to be joined at their lower ends and disjoined at their upper ends, it will be understood by those skilled in the art that they could take a variety of forms without deviating from the invention. For example they could be joined at their upper ends and disjoined at their lower ends, both ends could be disjoined, or it could be formed of a continuous member joined at both ends.

The reflector 66 is mounted on the reflector support member 72 by a screw cap 83 having internal threads 84 which threadably engage external threads 86 formed on the upper outside surface of the hub 77. The screw cap 83 is rotatably mounted in a central aperture 87 formed in the reflector 66 and is rotatably held in such said aperture by a pair of annular retaining lips 89 which are integral with the cap 83 and which are formed over each of the opposite surfaces of the reflector 66 and adjacent the periphery of the aperture 87.

The reflector 66 is generally dish-shaped and has a central inverted bowl-shaped portion 90 and a relatively shallower outer portion 92 extending from the central portion 90 and which terminates in a downwardly oblique annular peripheral rim. The reflector 66 may also include a relatively compliant angular gasket 93 which is coextensive with the upper edge of the refractor 65 and is secured to the underside of the reflector 66 adjacent the juncture of the portions 90 and 92. The reflector 66 is fabricated of a relatively thin resilient sheet metal, such as aluminum, which is spun or pressed into shape. When the cap 83 is screwed onto the threaded portion 86 of the sleeve 77 until it engages the upper edge thereof, the reflector 66 is forced downwardly to resiliently engage the upper edge of the refractor 65. If the reflector 66 includes a gasket 93, the latter will be compressed somewhat against the refractor 65 as the cap 83 is tightened down. Thus, the central portion 90 of the reflector 66 acts as a Belleville washer to provide positive spring pressure to the upper periphery of the refractor 65.

This spring washer action of the central portion 90 of the reflector 66 allows substantial expansion and contraction of the refractor 65 while maintaining a relative tightness between the components. This spring action is aided to some extent by the gasket 93 although gasket 93 is not necessary for this purpose since the resiliency of the reflector 66 will normally be sufficient. This is extremely important when there is a relatively large difference between the thermal expansion coefficient of the refractor 65 and the metallic components of the luminaire. This difference is particularly acute when the refractor is composed of acrylic plastic and created serious problems

in prior art luminaires which had a fixed clamp for the refractor because such assemblies would become loose during cold weather and the whole assembly would tend to rattle and vibrate sometimes to the extent where serious damage resulted. On the other hand, an acrylic refractor that is tightly clamped may become permanently deformed during high temperature operation.

The screw cap 83 has a central aperture 95 to permit a photo-control socket 96 which is rotatably mounted within the hub 77 to pass therethrough. As shown in FIGS. 1, 4 and 5, the photo-control socket 96 consists of upper and lower portions 96*a* and 96*b* which are joined by screw 103. A non-metallic washer 97 is disposed between the portions 96*a* and 96*b* to provide a groove 97*a* which is rotatably mounted on an annular guide flange 98 extending radially inward from the hub 77. Engagement between the groove 97*a* and the flange 98 supports the photo-control socket 96 within the hub 77 and also allows relative rotational movement therebetween. Leads 101 from the photo-control socket 96 extend downwardly along the reflector support assembly 68 and through an aperture 104 in the plate 42 to the housing 26.

As seen in FIGS. 4 and 5 the lower edge of the hub 77 is provided with a plurality of radial slots 99 which are spaced at 30 degree intervals therearound. An arm 100 is affixed to the socket 96 by a nut 102 on the screw 103. The arm 100 extends radially outward from the screw 103 so that its upper surface engages the lower edge of the hub 77 where a tongue 105, pressed into the arm 100 adjacent the lower edge of the hub 77, may extend into one of the slots 99. A driving connection between the arm 100 and the photo-control socket 96 is provided by a lug 106 formed on the inner end of the arm 100 and which extends into a suitable recess 107 formed in the lower end of the photo-control socket 96.

The slots 99 and the arm 100 allow the photo-control socket 96 to be oriented relative to the northern sky. This is accomplished by pressing the end of arm 100 upwardly as viewed in FIG. 5 wherein the resulting flexure thereof moves the tongue 105 out of whichever of the slots 99 it may reside so that the photocontrol socket 96 may be rotated until the arm 100 points south. This orients the photo-control socket 96 so that release of the arm 102 will return the tongue 105 into the appropriate slot 99 and thereby prevent rotation of the photo-control unit out of its oriented position.

It can be seen that both the reflector and the refractor are secured to the base 18 of the luminaire by the screw cap 83. Thus, by loosening the screw cap, 83, the reflector 90 may be removed from the luminaire and the refractor then removed over the wire form members 70. Thus, the entire optical assembly may be removed from the luminaire for cleaning and other maintenance purposes by loosening a single member. This is in contrast with prior art devices which required the removal of a relatively large number of screw fasteners for accomplishing this purpose. This ease of removal of the refractor and the reflector permits relatively rapid and economical maintenance procedures.

A hook 110 is integrally formed on one side of the refractor ring 45 so that the reflector 90 may be hung therefrom by engaging its upturned peripheral edge 112 thereon. This allows the installer to have both hands free to perform other maintenance operations on the luminaire.

While only a single embodiment has been shown and described it is not intended that the invention be limited thereby but only by the scope of the appended claims.

I claim:

1. A lighting unit including a base portion having refractor support means on its upper end, open-ended refractor means having a lower end engaging said support means and extending upwardly therefrom, hood means including an inverted dished reflector disposed above and extending generally outwardly from the upper end

of said refractor means reflector, support means secured at one end to said base portion and extending upwardly therefrom, coupling means spaced from the upper end of said refractor for releasably securing said hood means to said support means and for drawing said hood means downwardly toward said base, said reflector comprising a relatively thin resilient metallic member, said coupling means holding said reflector in resilient engagement with the upper end of said refractor to resiliently clamp said refractor to said base and to permit expansion and contraction thereof without the loss of clamping pressure.

2. A lighting unit including a base portion having refractor support means on its upper end, a generally tubular refractor means having a lower end engaging said refractor support means and extending upwardly therefrom, a hood including a relatively thin resilient metallic member and having an inverted bowl shaped portion, said hood being disposed adjacent the upper end of said refractor, elongate support means secured at one end to said base portion and extending upwardly therefrom coupling means spaced from the upper end of said refractor for resiliently securing said hood to said support means and for drawing said hood into resilient engagement with the upper end of said refractor so that the spring force of said bowl shaped portion will be transmitted to said refractor to resiliently clamp said refractor against said refractor support means and to permit expansion and contraction thereof while said clamping pressure is maintained.

3. A vertically supportable lighting unit including vertical support engaging adapter means, a base portion secured to said adapter means and having a refractor supporting ring on its upper end, a generally tubular refractor having a lower end engaging said supporting ring and extending upwardly therefrom, hood means engaging the upper end of said refractor and including an inverted dished reflector comprising a relatively thin resilient metallic member, elongate support means secured at one end to said base portion and extending upwardly therefrom and interiorly of said refractor to releasably engage said hood means inwardly of its point of engagement with said refractor, said support means including means for adjustably drawing said hood means against the upper end of said refractor so that said reflector will act as a spring member to resiliently clamp said refractor against said supporting ring and to permit expansion and contraction thereof while said clamping pressure is maintained.

4. A vertically supportable lighting unit including vertical support engaging adapter means, a base portion secured to said adapter means and having a refractor supporting ring on its upper end, a tubular refractor having a lower end engaging said supporting ring and extending upwardly therefrom, an inverted dished reflector comprising a relatively thin resilient metallic member, elongate support means secured at one end to said base portion and extending upwardly therefrom and interiorly of said refractor, attachment means for releasably affixing a central portion of said reflector to said support means and for drawing said central portion downwardly toward said base to resiliently urge said reflector against the upper end of said refractor to resiliently clamp said refractor against said supporting ring and to permit expansion and contraction thereof while said clamping pressure is maintained.

5. A post top lighting unit including pole top engaging adapter means, a base portion secured to said adapter means, said base portion including refractor support means on its upper end, a generally tubular refractor having a lower end engaging said support means and extending upwardly therefrom, an inverted dished reflector including a relatively thin resilient metallic member engaging the upper end of said refractor, said reflector also including a compliant gasket disposed between said metallic member and said refractor, a plurality of elongate support members affixed at their lower ends to said base portion and extending upwardly therefrom, a reflector support member for releasably engaging the upper ends of said support members, and means for releasably securing said reflector to said reflector support member and for resiliently drawing said reflector downwardly against the upper end of said refractor so that said reflector will act as a spring member to resiliently clamp said refractor against said refractor support means and to permit expansion and contraction thereof while said clamping pressure is maintained.

6. A post top lighting unit including pole top engaging adapter means, a base portion secured to said adapter means, said base portion including refractor support means on its upper end, open-ended refractor means having a lower end engaging said refractor support means and extending upwardly therefrom, an inverted dished hood including a relatively thin resilient metallic member engaging the upper end of said refractor, a plurality of V-shaped support members affixed at their lower ends to said base portion and diverging upwardly therefrom and interiorly of said refractor, a hood support member for releasably engaging the upper ends of said support members, and means for threadably engaging said hood support member to resiliently urge said hood against the upper end of said refractor, the bowl shaped portion of said resilient metallic member acting as a spring member to resiliently clamp said refractor against said refractor support means and to permit expansion and contraction thereof while said clamping pressure is maintained.

7. A post top lighting unit including pole top engaging adapter means, a base portion secured to said adapter means and including a refractor clamping ring on its upper end, a tubular refractor having a lower end engaging said clamping ring and extending upwardly therefrom, a reflector including a relatively thin resilient metallic member having an inverted bowl shaped portion, said reflector engaging the upper end of said refractor adjacent the periphery of said portion, said reflector also including a compliant gasket disposed between said metallic member and said refractor, a plurality of V-shaped wire-like support members affixed at their lower ends to said base portion and diverging upwardly therefrom, and interiorly of said refractor, a reflector support member having a central hub and a plurality of radiating arms of releasably engaging the upper ends of said support members, and means for threadably engaging said hub to resiliently urge said reflector against the upper end of said refractor, the bowl shaped portion of said resilient metallic member acting as a spring to resiliently clamp said refractor against said clamping ring and to permit expansion and contraction thereof while said clamping pressure is maintained.

8. A post top lighting unit including pole top engaging adapter means, a base portion secured to said adapter means and including a refractor clamping ring on its upper end, a tubular refractor having a lower end engaging said clamping ring and extending upwardly therefrom, a reflector comprising a relatively thin resilient metallic member having an inverted bowl shaped portion, said reflector engaging the upper end of said refractor adjacent the periphery of said portion, said reflector including a compliant gasket disposed between said metallic member and said refractor, a plurality of V-shaped wire-like support members being affixed at their lower ends to said base portion and diverging upwardly therefrom and interiorly of said refractor, a reflector support member having a central hub and a plurality of radiating arms for releasably engaging the upper ends of said support members, attachments means for threadably engaging said hub to urge said reflector against the upper end of said refractor so that said bowl shaped portion will act as a spring member to resiliently clamp said refractor against said clamping ring and to permit expansion and contraction thereof while said clamping pressure is maintained,

said attachment means having an aperture therein, photo-control means rotatably mounted in said hub and extending through said aperture, said hub having a plurality of indexing means on one side thereof, an indexing member on said photo-control means for selectively engaging said indexing means so that said photo-control means may be oriented.

9. A lighting unit including a base portion having reflector support means on its upper end, open-ended refractor means having a lower end engaging said refractor support means and extending upwardly therefrom, hood means including a generally dished member having a relatively thin resilient metallic portion disposed above the upper end of said refractor, elongate support means affixed at its lower end to said base portion and extending upwardly therefrom, a hood support member spaced from said refractor and releasably engaging the upper end of said elongate support means, said hood means including means releasably engageable with said hood support member to couple said hood to said support member and to urge said relatively thin resilient portion toward engagement with the upper end of said refractor so that said hood and said refractor are secured to said base portion.

10. A vertical support mounted lighting unit including vertical support engaging means and a base portion affixed to said engaging means and having refractor support means on its upper end, open-ended refractor means having the lower end engaging said refractor support means and extending upwardly therefrom, a hood including an inverted generally dished member having a relatively thin resilient metallic portion disposed above the upper end of said refractor, elongate support means affixed at its lower end to said base portion and extending upwardly therefrom and interiorly of said refractor, a hood support member spaced from said refractor for releasably engaging the upper end of said elongate support means, said hood including means releasably engageable with said hood support member to urge said metallic portion toward resilient engagement with the upper end of said refractor so that said hood and refractor are secured to said base portion.

11. A lighting unit including a base portion having refractor support means on its upper end, open-ended refractor means having a lower end engaging said refractor support means and extending upwardly therefrom, hood means including an inverted generally dished member having a relatively thin resilient metallic portion disposed above said refractor, a plurality of elongate support members affixed at their lower ends to said base portion and extending upwardly therefrom, a hood support member spaced from said refractor and having a central hub and a plurality of radiating arms releasably engaging the upper ends of said support members, and means operatively associated with said hood means for engaging said hub to urge said resilient metallic portion toward the upper end of said refractor so that said hood and refractor are secured to said base portion.

12. A vertical support mounted lighting unit including vertical support engaging means and a base portion affixed to said vertical support engaging means and having refractor support means on its upper end, an open-ended tubular refractor having a lower end engaging said refractor support means and extending upwardly therefrom, a hood including a generally dished member of a relatively thin metallic material, a plurality of V-shaped wire-like support members affixed at their lower ends to said base portion and diverging upwardly therefrom and interiorly of said refractor, a hood support member spaced from said refractor and having a central hub and a plurality of radiating arms for releasably engaging the upper ends of said support members, and means mounted on a central portion of said hood for threadably engaging said hub to urge said metallic member toward resilient engagement with the upper end of said refractor so that said reflector and refractor are secured to said base portion.

13. A vertically supportable lighting unit including vertical support engaging adapter means, a base portion secured to said adapter means and having refractor support means on its upper end, an open-ended refractor having a lower end engaging said refractor support means and extending upwardly therefrom, hood means disposed above the upper end of said refractor and including an inverted generally dished member comprising a relatively thin resilient metallic material, elongate support means secured at one end to said base portion and extending upwardly therefrom to releasably engage said metallic member within the periphery of said refractor, said support means including means for adjustably drawing said metallic member toward resilient engagement with the upper end of said refractor so that said metallic member will act as a spring member to resiliently clamp said refractor against said refractor support means.

14. A vertically supportable lighting unit including vertical support engaging adapter means, a base portion secured to said adapter means and having refractor supporting means on its upper end, an open-ended refractor having a lower end engaging said supporting means and extending upwardly therefrom, an inverted, generally dished reflector comprising a relatively thin resilient metallic member, elongate support means secured at one end to said base portion and extending upwardly therefrom, attachment means for releasably affixing a central portion of said reflector to said support means and for drawing said central portion downwardly toward said base to resiliently urge said reflector toward engagement with the upper end of said refractor to resiliently clamp said refractor against said supporting means.

15. A vertically supportable lighting unit including vertical support engaging adapter means, a base portion secured to said adapter means, said base portion including refractor support means adjacent its upper end, open-ended refractor means having a lower end engaging said refractor support and extending upwardly therefrom, an inverted dished hood including a relatively thin resilient metallic member disposed above said refractor, a plurality of elongate support members affixed at their lower ends to said base portion and extending upwardy therefrom and interiorly of said refractor, a hood support member for engaging the upper ends of said support member, said hood including means for engaging said hood support member to move said resilient metallic member toward engagement with the upper end of said refractor to act as a spring member and urge said hood into resilient clamping engagement with said refractor and to resiliently clamp said refractor against said refractor support means.

16. A post top lighting unit including pole top engaging adapter means, a base portion secured to said adapter means and including refractor support means on its upper end, open-ended refractor means having a lower end engaging said refractor support means and extending upwardly therefrom, a reflector disposed above said refractor, elongate support members affixed at their lower ends to said base portion and extending upwardly therefrom, a reflector support member having a central hub and a plurality of radiating arms for releasably engaging the upper ends of said support members, attachment means mounted on said reflector for threadably engaging said hub to support said reflector thereon, said attachment means having an aperture therein, photo-control means rotatably mounted in said hub and extending through said aperture, said hub having a plurality of indexing means on one side thereof, an indexing arm extending outwardly from said photo-control means for rotating said photo-control means and for selectively engaging said indexing means so that said photo-control means may be oriented,

and locking means for releasably securing said indexing arm in one of said indexing means.

17. A post top mounted lighting unit including pole top engaging adapter means having an internal cylindrical wall for telescoping pole top engagement, said adapter means including a cup shaped portion disposed coaxially within said cylindrical wall and having an outer surface which diverges upwardly to integrally merge with the upper end of said wall, a base portion secured to said adapter and having refractor support means at its upper end, tubular refractor means engaging said refractor support means and extending upwardly therefrom, a hood disposed above said hood, and refractor support means engaging said base and extending upwardly therefrom to supportingly engage said hood.

18. A lighting unit including a base portion having refractor support means on its upper end, refractor means having a lower end engaging said refractor support means and extending upwardly therefrom, a hood disposed above the upper end of said refractor and including a relatively thin resilient metallic member, relatively thin elongate support means having a plurality of divergent upper and lower portions to provide a truss-like structure, said lower portions being affixed to said base portion, and coupling means spaced from said refractor for releasably mounting said hood to the upper portions of said support members so that said hood is secured to said base portion, said hood being supported by said support means independently of said refractor, said resilient metallic member engaging the upper end of said refractor in spaced relation to said coupling means for resiliently holding said refractor on said base.

19. A lighting unit including a base portion having refractor support means on its upper end, a refractor having a lower end engaging said refractor support means and extending upwardly therefrom, an inverted dished hood disposed above the upper end of said refractor and comprising a relatively thin resilient metallic member, a plurality of relatively thin support members affixed at their lower ends to said base portion and diverging upwardly therefrom to terminate in upper ends disposed adjacent to and being coupled with the end of another of said support means to provide a continuous truss-like structure, a hood support member for releasably engaging the upper ends of said support members, and coupling means spaced from said refractor for releasably attaching said hood to said hood support member to secure said hood to said base and to resiliently urge said hood into clamping engagement with the upper end of said refractor to hold said refractor on said base, said hood being supportable by said support members and said hood support member independently of said refractor.

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NORTON ANSHER, *Primary Examiner.*

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,225,187 December 21, 1965

Paul J. Curtin

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 5, line 1, for "means reflector," read -- means, reflector --; column 6, line 45, for "of", second occurrence, read -- for --; line 70, for "attachments" read -- attachment --; column 8, line 44, for "upwardy" read -- upwardly --; column 9, line 13, for "hood, and refractor" read -- refractor, and hood --.

Signed and sealed this 25th day of October 1966.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents