June 27, 1967 W. M. WALDBAUER 3,328,575

STREETLIGHTING LUMINAIRE

Original Filed Dec. 28, 1961 4 Sheets-Sheet 1

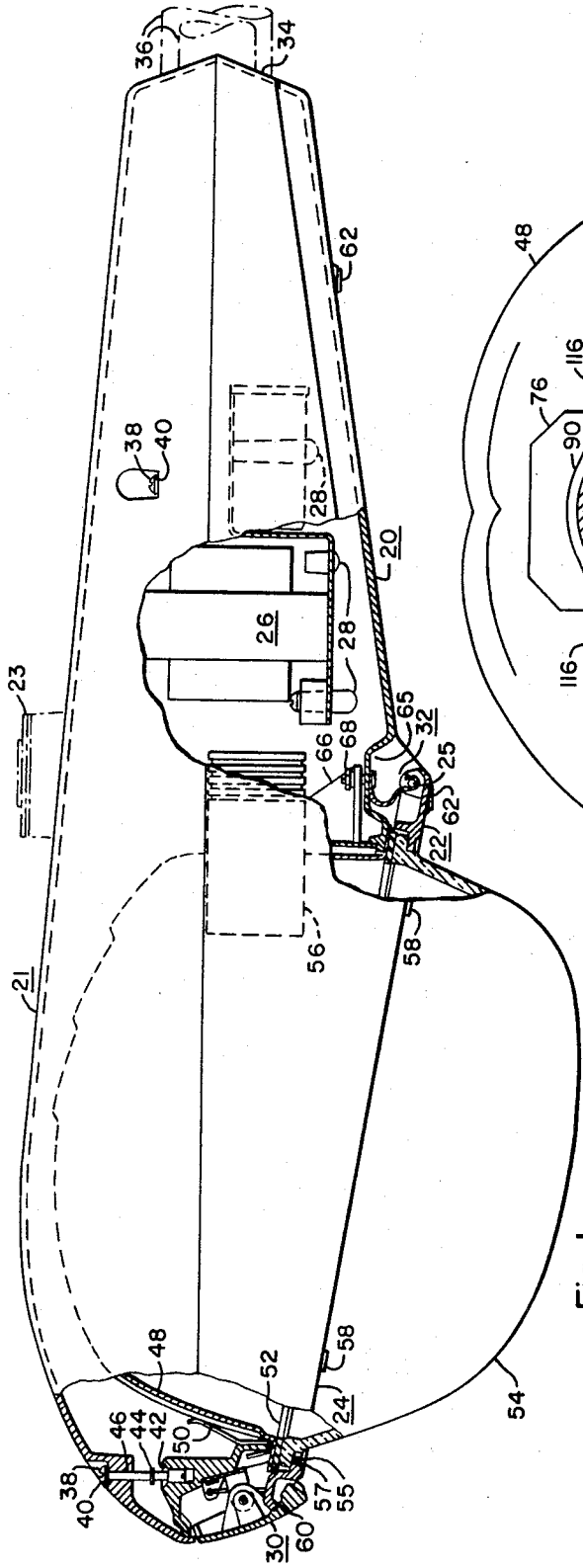


Fig. 1.

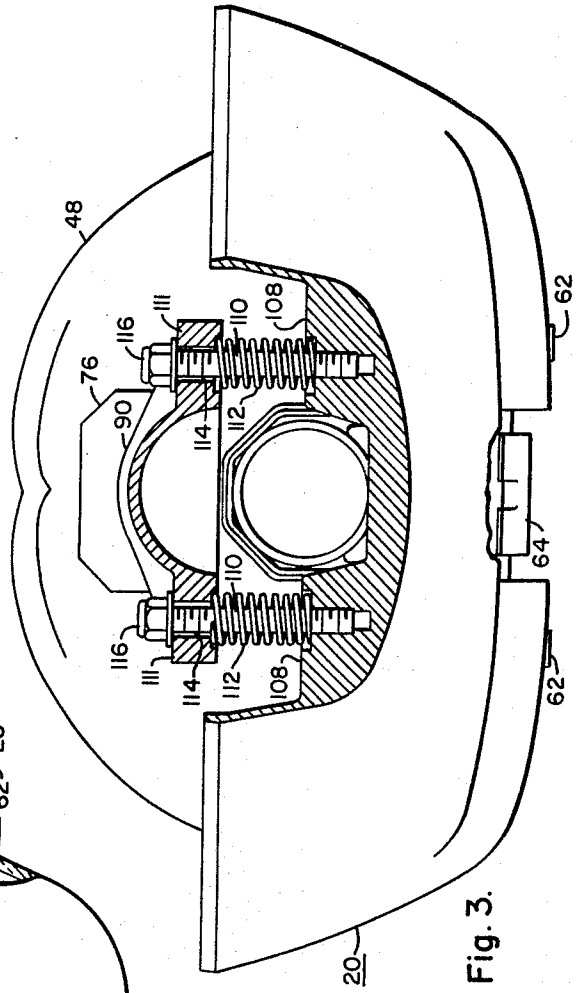


Fig. 3.

INVENTOR
Walter M. Waldbauer
BY
ATTORNEY

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STREETLIGHTING LUMINAIRE

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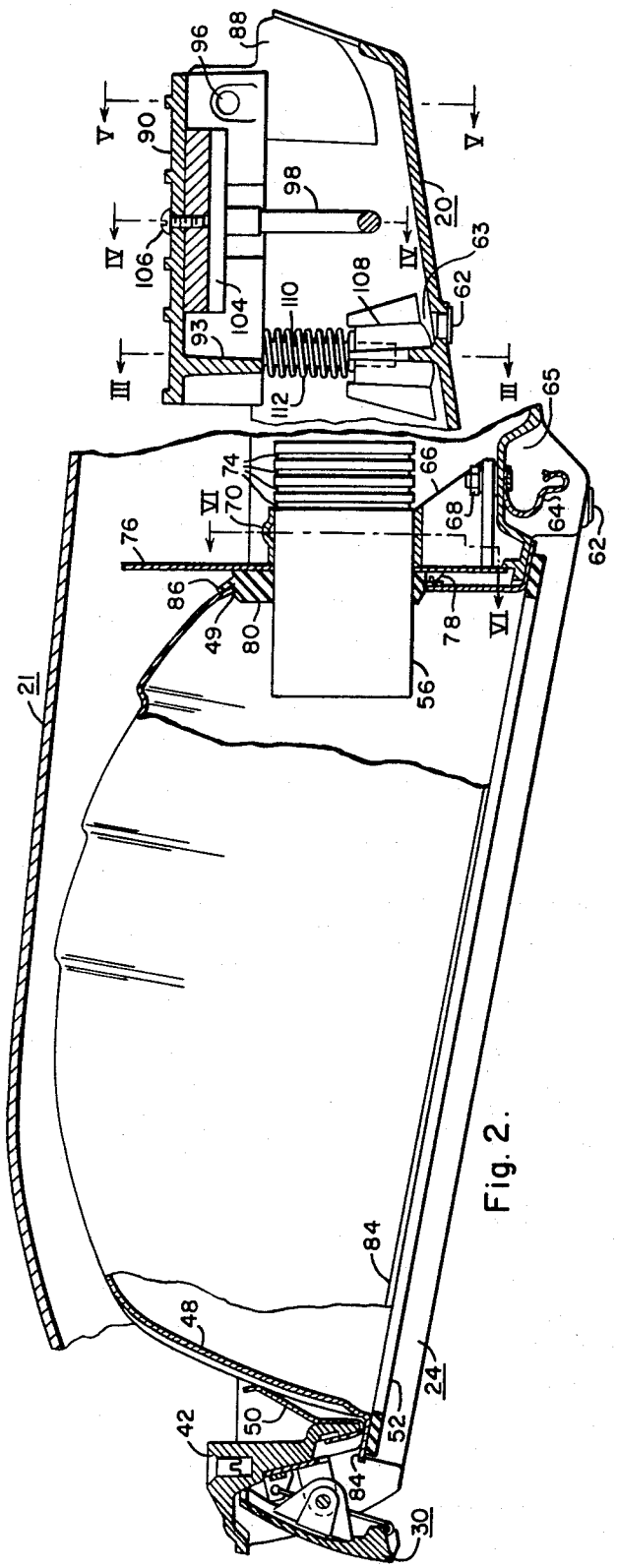


Fig. 2.

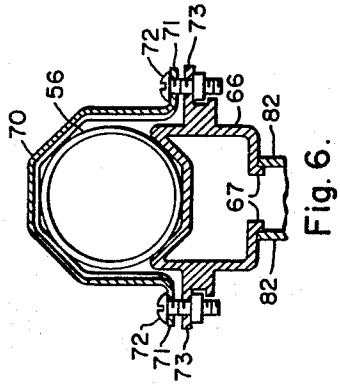


Fig. 6.

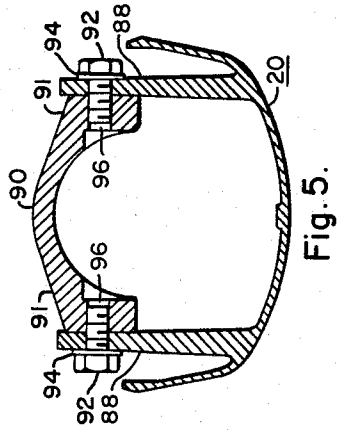


Fig. 5.

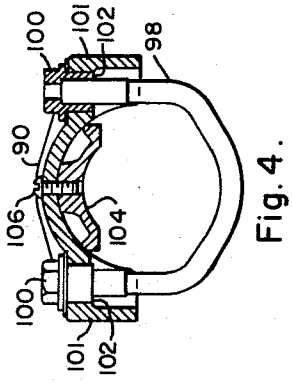


Fig. 4.

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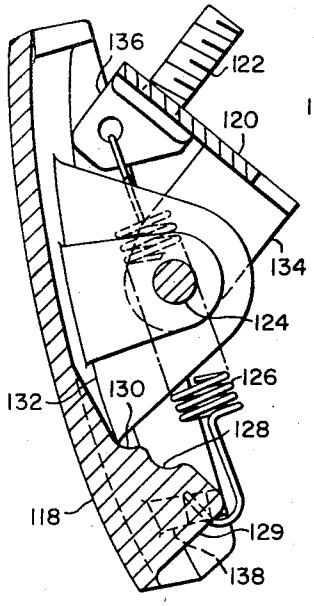


Fig. 8.

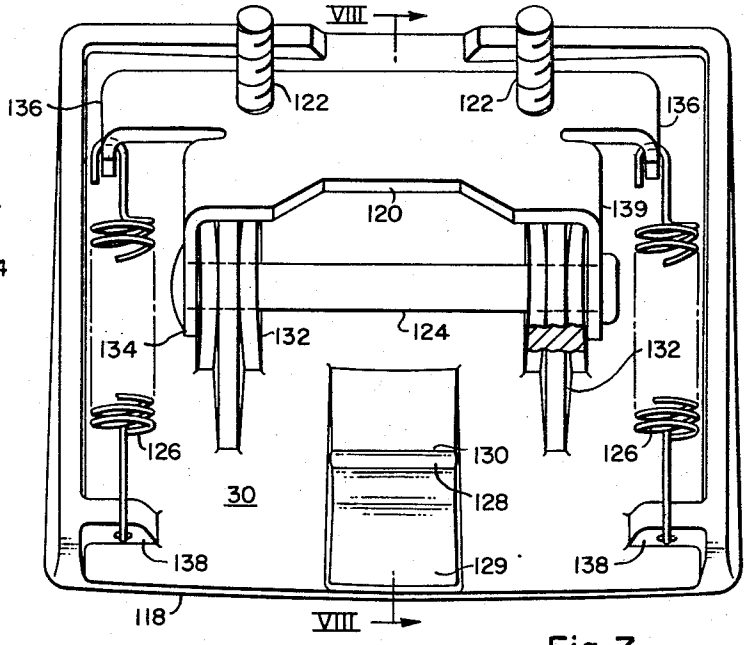


Fig. 7.

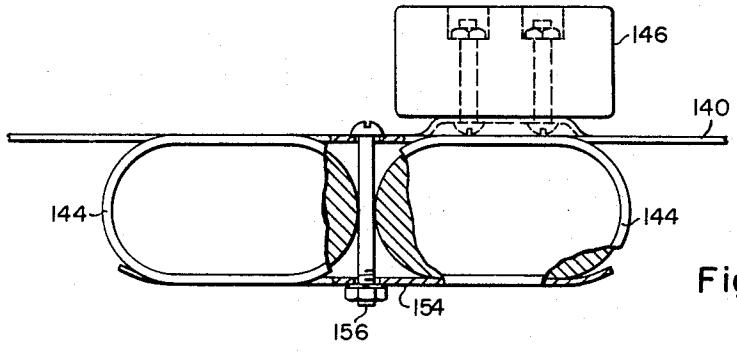


Fig. 10.

Fig. 11.

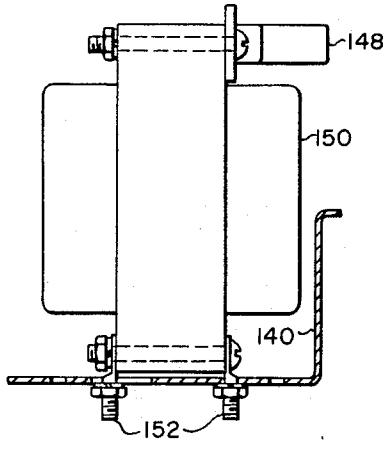
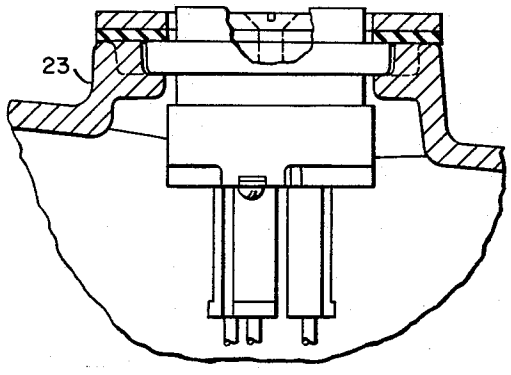


Fig. 12.



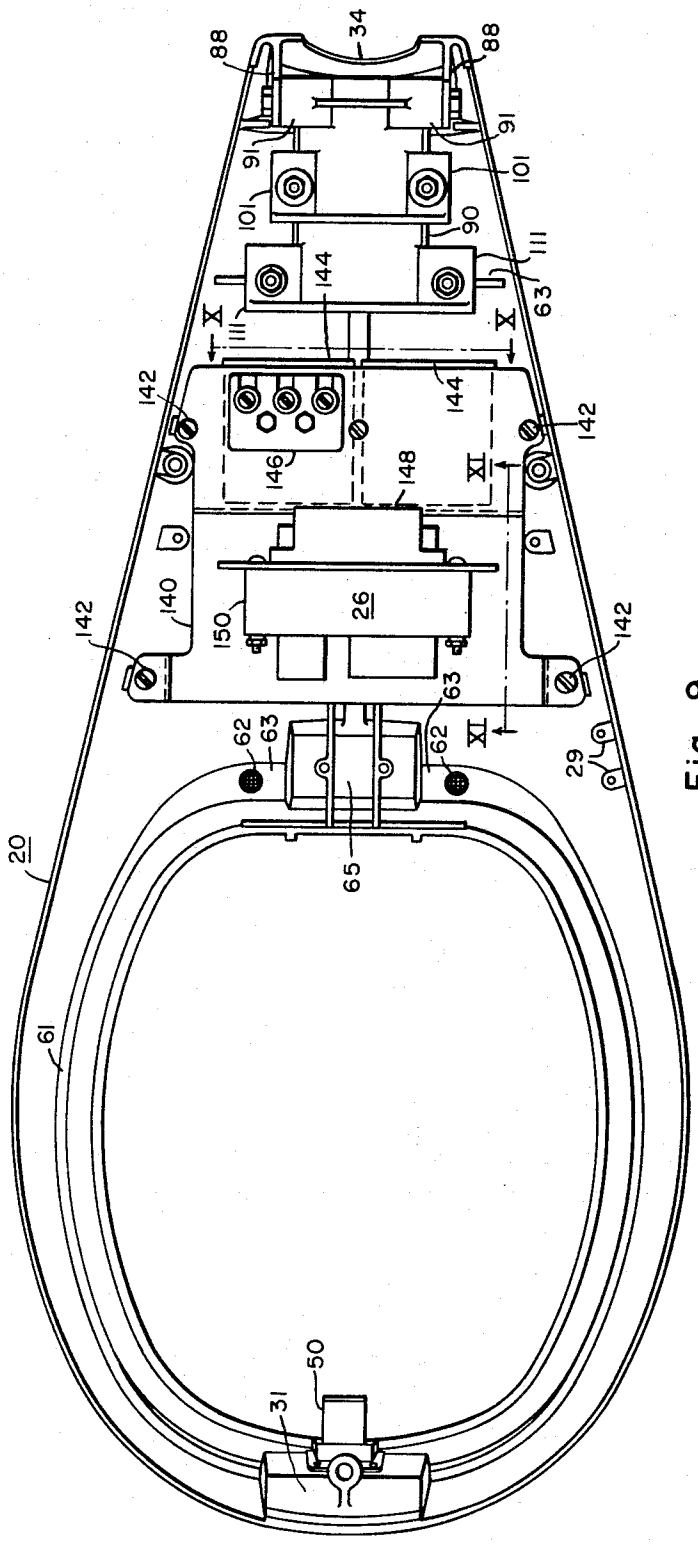

34
88
88
91
91
101
101
90
111
63
144
144
142
142
146
148
XI
26
140
150
142
142
63
62
63
62
XI
29
20
65
61
50
31

Fig. 9.

United States Patent Office 3,328,575 Patented June 27, 1967

3,328,575

STREETLIGHTING LUMINAIRE

Walter M. Waldbauer, North Olmsted, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Continuation of application Ser. No. 162,751, Dec. 28, 1961. This application Nov. 16, 1964, Ser. No. 412,593

4 Claims. (Cl. 240—25)

This application is a continuation of application Ser. No. 162,751, now abandoned filed Dec. 28, 1961, and assigned to the same assignee as this application.

The present invention relates to structural features of a lighting fixture luminaire and more particularly to a luminaire of the character described for use in streetlighting applications.

Previously proposed luminaires employed for the aforementioned purpose and other exterior applications have generally been so constructed that installation of the luminaire had to be accomplished by means beneath and within the luminaire, similarly, power supply components installation, maintenance, and relamping also had to be conducted from the underside of the luminaire, and the luminaire was so constructed that opening of the entire luminaire housing was necessitated. Such arrangement rendered relamping, maintenance, and installation of the luminaire time-consuming and unnecessarily expensive.

With the advent of the longer internal ballast mercury street luminaire, a better slip-fitter arrangement for fastening the fixture to its support became necessary in order to take up loads arising from luminaire weight, downward wind, vibratory and/or shock loads and to prevent deforming the support pipe at the slip-fitter, while still permitting leveling adjustments to be made.

Accordingly, it is an object of the invention to provide a novel and efficient luminaire structure. Another object of this invention is to provide a new and improved outdoor luminaire which makes possible installation and major electrical servicing from an advantageous position above the unit while optical system cleaning and relamping are still maintained from the desired position below the unit, wherein both refractor and reflector can be demounted from below the unit.

Another object is to provide an efficiently serviced luminaire with a unitized power supply assembly.

It is a further object of this invention to provide a packaged power supply assembly having a plate which serves as a mounting plate and a thermal shield between the transformer and condenser.

Another object of this invention is to provide a luminaire having a novel form of adjustable mounting which is shock absorbing, and prevents support pipe deforming.

Still another object of this invention is to provide a luminaire in which both the housing and the optical system are sealed against the entry of dirt, insects and the elements.

Still a further object of this invention is to provide a sealed three-part luminaire housing having a tilted optical system.

An ancllary object is the provision of means for collecting and eliminating condensed moisture from the interior of the luminaire.

Briefly, the present invention accomplishes the above-cited objects by providing a luminaire consisting of three major sub-assemblies which are the top cover, the housing assembly, and the refractor and ring assembly. The housing sub-assembly is so constructed that it is opened at the top and installation and major electrical service are accomplished from above the unit. Optical system cleaning and relamping are maintained from below the unit through a hinged refractor and ring assembly. After installation the

top cover is fitted to the housing for purposes of sealing the top opening of housing. The luminaire is further arranged for the provision of a tilted and/or sealed optical system in a novel and efficient manner. Where the luminaire is furnished with internal ballast and other electrical components the same are arranged in a pre-packaged assembly for ready installtion and removal and for operation in a more efficient manner.

Further objects, features and advantages of this invention will become apparent as the following description proceeds and features of novelty which characterize the invention will be pointed out in particularity in the claims annexed to and forming a part of this specification.

For a better understanding of the invention, reference may be had to the accompanying drawings in which:

FIGURE 1 is a side view of an assembled luminaire constructed in accordance with the invention and to show the invention more clearly partially cut away and sectioned;

FIG. 2 is a side view of the luminaire of FIG. 1 showing internal features thereof;

FIG. 3 shows a cross-sectional view of the luminaire housing taken along line III—III of FIGURE 2;

FIG. 4 shows a cross-sectional view of the slip-fitter taken along line IV—IV of FIG. 2;

FIG. 5 is a cross-sectional view taken along line V—V of FIG. 2;

FIG. 6 shows a cross-sectional view taken along line VI—VI of FIG. 2;

FIG. 7 is an enlarged rear view of the latch assembly;

FIG. 8 shows a cross-sectional view taken along line VIII—VIII of FIG. 7.

FIG. 9 is a top plan view of the luminaire housing;

FIG. 10 shows a cross-sectional view of the power supply assembly taken along line X—X of FIG. 9;

FIG. 11 is a longitudinally sectioned view of the power supply assembly taken along line XI—XI of FIG. 9;

FIG. 12 shows an enlarged cross-section of the photocell mounting of FIG. 1.

While the invention is herein specifically disclosed as embodied in a streetlighting type of luminaire, it should be understood that the invention in its various aspects may find application in types of luminaires other than that specifically herein disclosed.

Referring now more particularly to the drawing, the exemplary form of the invention illustrated therein comprises a luminaire having a main structural unit, the housing **20** which is generally open at the top and has a bottom opening **24**, the periphery of which is recessed complementally to receiving a refractor ring **57**, a top cover assembly **21** for substantially sealing the top opening of the housing **20**, and a ring and refractor assembly **22** for covering the recessed bottom opening **24**.

As better shown in FIG. 9, the groove or trough **61** formed in the housing **20** and circumferentially surrounding the recessed bottom opening **24** serves also to collect any moisture condensed in the luminaire and to evacuate the same through screened openings **62** in the bottom of the trough **61**.

As better shown in FIG. 1 of the drawings, the housing structure **20** makes provision for mounting a unitized power supply assembly **26** on internally screw threaded lugs or bosses **28** which are integral with the housing.

A latch assembly **30** is securably fastened to the housing **20** at one end thereof to permit opening and closing of the ring and refractor assembly **22** about its hinge **32** which is located approximately midway along the length of the housing. At the end of the luminaire opposite the latch assembly **30** is an opening **34** partially formed in the housing and partially in the top cover through which

is inserted the pipe support **36** which may be one of several standard sizes. The top opening of the housing **20** is tapered outwardly about its periphery to provide a tightly fitting, tapered wedge seal with the top cover assembly **21**.

In order to seal the top opening of the housing **20**, the top cover **21** is positioned in overlapping and abutting relationship with the housing so that the outwardly tapered edge of the periphery of the housing **20** engages with the matingly tapered peripheral edge of the cover **21**. The top cover **21** is held securely in place by means of suitable screw threaded fasteners **38** which are inserted through holes **46** of the cover into female screw threaded holes **42** which are integral with the housing. The screw **38** is held captive to the cover **21** by means of a suitable spring clip **44** which prevents complete removal of the screws **38** from the hole **46**. A washer **40** which may be of nylon or any other suitable similar material is inserted between the head of the screw **38** and the hole **46** to provide a moisture seal when the screw is tightened. As the screw **38** is tightened the tapered internal periphery of the top cover **21** is drawn tightly and uniformly over the tapered outer peripheral edge of the top opening of the housing **20** to provide a closely fitting, tapered wedge fit which effects substantial sealing of the joint between the two subassemblies with the exception of the rear opening **34**, and at the same time the washers **40** effectively seal the holes **46** in the top cover. The opening **34** can be sealed with a flexible boot (not shown) around the pipe support **36** to provide a weatherproof and insect proof luminaire.

A reflector **48** is inserted through the recessed bottom opening **24** and engages a spring **50** positioned near the front end of the opening **24** which frictionally holds the reflector in place and urges it rearwardly toward a gasket **80** mounted around the lampholder socket **56**. A gasket **52** of a compressible material is interposed between the reflector **48** and the refractor **54** to provide a completely sealed optical system.

Refractor **54** has an outwardly extending flange **55** which is securably fastened to ring **57** by means of removable spring clips **58** to comprise the ring and refractor assembly **22** which is hinged at its rearward end by a hinge assembly **32** so that rotation of the ring and refractor assembly **22** will swing it into the recessed bottom opening **24** resulting in a positive alignment of the refractor flange **55** with the gasket **52**. The refractor ring **57** is provided with an integrally cast tongue **60** which is outwardly and downwardly extended from the ring at a position generally opposite the hinge so that the action of the latch assembly **30** forces the tongue **60** upwardly to provide a tight seal between the refractor flange **55** and the gasket **52**. The novel latch assembly **30** will be discussed in detail later.

As the ring and refractor assembly **22** is rotated about its hinge assembly **32** into its closed position in the recessed bottom opening **24**, the bottom exterior of the ring **57** is virtually flush with the outer periphery of the recessed bottom opening **24**. This construction provides a compact construction in that very little space exists between the outer periphery of the ring **57** and the adjacent inward surface of the housing **20** the recessed bottom opening **24** and so that there is practically no space for dead insects or other foreign matter to be trapped about the ring and refractor assembly **22**.

In order to drain off any condensation which may accumulate in the housing **20** during normal operation of the luminaire there is a peripheral drip channel **61** formed between the recessed opening **24** and the housing **20** which guides the water to a trough **63** having openings **62** for its discharge. A second trough **63** with an opening **62** is located near the rear opening **34** for removal of moisture in the event that the opening **34** is not sealed. By inserting screens within the openings **62** (shown in FIGURE 9) and a flexible boot in the opening **34** around the support **36**, in combination with the advantages of the recessed bottom opening **24**, it can be seen that the luminaire is substantially weatherproof and insect proof.

In order to better show the interior details FIG. 2 shows the luminaire with the ring and refractor assembly removed and portions of the housing **20**, the reflector **48**, and the top cover **21** broken away or sectioned. As can be seen from this figure in conjunction with FIGURE 1, the main structural unit of this luminaire, the open top housing **20**, provides means for attachment of the luminaire to the pipe bracket support **36**, mounting space for the power supply assembly **26**, a lampholder socket **56** together with means for its support and adjustment in reflector **48**, plus a hinge assembly **32** and a latch assembly **30**.

In this arrangement installation of the electrical components and of the luminaire itself can be effected from above the luminaire, which is less awkward and more efficient since tools and parts are less likely to be dropped.

Moreover, in a luminaire of this type the particular construction of this invention reduces the overall size of the ring and refractor assembly **22** to a minimum and consequently makes its removal for cleaning, relamping, repair or replacement less awkward and bulky. When the ring **57** is in a nearly vertical position, by urging the ring and refractor assembly **22** upwardly and reardwardly it can be readily removed from its hinge **64**, and if so desired it can be cleaned as a unit or replaced as a unit during the process of routine maintenance, thus eliminating the necessity of removing the refractor **54** from the ring **57** or the attendant removal of the spring clips **58** which may be broken or deformed during removal. This operation obviously then cuts down on maintenance time.

The hinge assembly **32** for the refractor and ring assembly **22** includes a hinge pivot pin **25** which is affixed to a suitable projection at the end of the ring **57** opposite the latching tongue **60** and a hinge **64** which is secured to the housing. The hinge **64** is so shaped to provide snap insertion and snap removal and free rotation of the ring and refractor assembly **22** about the hinge pivot pin **25**. The combination of the shape of the hinge **64** (better shown in FIGURE 3) and the recess **65** in the housing **20** at the location of the hinge assembly **32** prevents accidental removal of the ring and refractor assembly **22** while in its free hinging position, but still permits easy removal or assembly when the ring **57** is opened to a position nearly vertical or beyond.

The ring hinge **64** and the mounting support **66** for the tubular lampholder socket **56** are secured to opposite sides of the housing wall by means of a common suitable fastener such as a nut and bolt **68**. FIGURE 6 better shows the mounting support **66** as a modified V-shaped extrusion with downwardly extending flanges **67** closely abutting channel walls **82**, which are integral with the housing **20** to provide additional rigidity for the socket support **66**. The socket **56** is frictionally retained in the mounting support **66** by means of an inverted U-shaped clamping bracket **70** which has horizontally outwardly extending portion **71** at its outer ends and suitable fastening means **72** securing the bracket **70** to horizontally outwardly extending flanges **73** of the mounting support **66**. This novel arrangement for mounting the lampholder socket **56** permits rotation of the socket **56** about its axis, plus movement in either direction axially to obtain optimum optical results for a given luminaire system as by centering or otherwise positioning a light source (not shown) relative to the reflector **48**. The outer periphery of the lampholder socket **56** provides visual index reference points by means of annular grooves **74** formed therein. A vertical plate **76** having an opening therein of an inner diameter slightly larger than the outer diameter of the socket **56** to permit free movement of the socket **56** within the opening is fastened to the mounting support **66** by suitable fastening means **78**. The plate **76** serves as a rigid support for a reflector aperture gasket **80** and may also serve to dissipate heat from the lampholder **56**.

The reflector 48 is an inverted dished or generally ovate structure with an integral horizontally outwardly extending flange 84 about its periphery. The flange 84 generally conforms to the peripheral shape of the recessed bottom opening 24. The dished portion of reflector 48 is both removable and insertable through the recessed bottom opening 24, with the rearward end of the reflector 48 having an aperture 49 of oval configuration through which lampholder 56 projects. Prior to insertion of the reflector 48 the reflector aperture sealing gasket 80 is urged over the lampholder 56 toward the gasket support plate 76. The outer periphery of the gasket 80 conforms to the size of the reflector aperture 49 with the exception of the thin flexible lip portion 86 which is of the same oval configuration but of slightly larger overall size to prevent its being extended through the aperture 49. The circular opening in the gasket 80 is approximately of the same outer diameter as the lampholder 56 and its center is located below the center of the gasket 80, and consequently a larger portion of the gasket 80 lies above the lampholder 56 than below it, as is correspondingly true for the aperture 49 for reasons which will be made apparent.

For insertion of the reflector 48 the rearward portion of the reflector flange 84 is positioned at the rearward end of the recessed bottom opening 24 and the reflector 48 is pivoted upwardly about this point into the recessed bottom opening 24. The axially offset, oval shape of the aperture 49 permits the reflector 48 to be readily inserted or removed in this manner. With the reflector 48 thus positioned, it is urged upwardly and rearwardly by the spring 50, which serves to hold the reflector in place and force it against the aperture sealing gasket 80 causing the gasket lip 86 to assume the contour of the outside surface of the reflector 48 in the vicinity of the aperture 49. This arrangement in conjunction with the gasket 52 which is interposed between the reflector flange 84 and the refractor and ring assembly 22 results in a completely and reliably sealed optical system.

The optical system as disclosed in this arrangement is a tilted optical system whereby the longitudinal axis of the reflector 48 is displaced at an angle to the axis of the lampholder 56 and its lamp, and it is to be understood that it is shown here for illustrative purposes and the invention in its broader aspects is not to be limited thereby. However, the particular construction of the housing 20 with its top opening, as viewed in the drawings, and the downward, angular displacement of the lower housing opening permits the use of a tilted optical system without detracting from the pleasing appearance of the luminaire. Furthermore, the relatively larger top opening of the luminaire housing provides ready access to the electrical components of the luminaire, which otherwise might be obstructed by the displaced reflector and lampholder of the tiled optical system. In addition, the use of a relatively small refractor ring provides ready access to the optical components particularly when employed in a tilted optical system.

As shown in FIG. 2 the slipfitter is fastened to the housing by means of vertical rib bosses 88 and the mounting lugs 108 which are cast integrally with the housing 20. The slipfitter has a pipe saddle 90 with three pairs of horizontally outwardly extending flanges 91, 101, and 111 (shown in FIG. 9) and is pivotally secured to the vertical rib bosses 88 by insertion of bolts 92 through the vertical rib boss 88 into horizontal tapped holes 96 in flanges 91. Lock washers 94 are inserted between the bolts 92 and the vertical rib bosses 88. At the central portion of the pipe saddle 90 means are provided for clamping the mounting pipe support 36 to the slipfitter, the means consisting of a U-bolt 98 extending upwardly through holes 102 in flanges 101 and secured thereto by washer head nuts 100. An adapter 104 may be fastened to pipe saddle 90 by suitable fastening means 106 to accommodate a smaller size mounting pipe.

FIGS. 2 and 3 show the resilient mounting arrangement of the forward portion of the pipe saddle 90. Studs 110 extend vertically from screw threaded holes in lugs 108, preloaded springs 112 are positioned over studs 110 into recesses in lugs 108, the studs extending upwardly through holes 114 in flanges 111, with each of the flanges 111 also having a recessed portion at the underside thereof to receive the spring 112, and the pipe saddle 90 is secured to the studs 110 by means of suitable stop nuts 116 which may be of the type that have a fibrous or plastic insert to prevent vibratory loosening.

This novel slipfitter permits the use therein of independent clamping means and adjusting means, and prevents deformation of the mounting pipe 36 at the slipfitter. To install the luminaire the cover 21 is removed and the housing 20 is slid onto the bracket pipe suport 36 until the vertical stop plate 93 on the pipe saddle 90 is reached. The U-bolt 98 is then tightened by means of the washer head nuts 100 to clamp pipe support 36 to the pipe saddle 90. Leveling is accomplished by turning down stop nuts 116 on studs 110 to adjust the longitudinal axis of the housing 20 with respect to the pipe saddle 90 until the top peripheral edge or rim of the housing 20 is level. The pivot bolts 92 are then tightened. Loads arising from luminaire weight, downward wind, vibratory and/or shock loads are taken through the studs and nuts. Upward forces (wind and vibration) are absorbed by the preload spring 112 and the friction developed by clamping the pivot bolt 92.

FIGS. 7 and 8 are enlarged detailed drawings of the latch assembly 30 employed in the invention. The latch assembly 30 consists of a mounting bracket 120, a latch 118, hinge springs 126 and a latch pivot pin 124. The mounting bracket 120 has two sets of normally extending flanges, with the hinge flanges 134 being pivotally secured to the latch 118 through hinge lugs 132 which are integral with the latch 118 and normal thereto, by means of a latch pivot pin 124. The other set of flanges 136 retain one end of the hinge spring 126, the other end of the spring being retained by lugs 138 which are integral with the latch 118. Two closed positions of the latch assembly 30 are provided by a twin step latch bar 129 cast into the latch 118 and having discrete steps 128 and 130 engaging the refractor ring tongue 60. This provides two degrees of latching pressure. The two hinge springs 126 provide hold-open and hold-closed forces as a result of over-center action relative to the latch pivot. The latch assembly 30 is mounted in a recess 31 in the housing 20 by means of suitable fasteners such as studs 122 extended through the mounting bracket 120.

The top plan view of the housing 20 is shown in FIG. 9 as having a roughly teardrop shape and in this arrangement is made of die cast aluminum but it is to be understood that the luminaire of this invention may be of any configuration, material, size, or construction consistent with the spirit of the invention.

All points on the periphery of the top opening of the housing 20 are in a common plane with the exception of the recessed portion at the rearward end which forms the bottom part of the opening 34 through which is inserted the mounting pipe 36. The housing 20 is of a generally shell type cast construction with integral mounting lugs and bosses and recesses 65 and 31 for securing the hinge assembly 32 and the latch assembly 30, respectively, to provide functionality and a pleasing outward appearance to the assembled luminaire. FIG. 9 shows the mounting of the slipfitter pipe saddle 90 to the vertical rib bosses 88 in the housing 20, and the mounting of a unitized power supply assembly 26 by means of suitable screw-type fasteners 142.

The power supply and ballast assembly 26 is designed to be inserted or removed as a unit and comprises a stepped plate 140 which doubles as a mounting plate and

a heat shield, a transformer **150** secured to the upper side of the lower step of the plate **140** by suitable fastening means **152** (shown in FIG. 11), capacitors **144** secured to the underside of the upper step of the plate **140** by suitable means such as a support bracket **154** and a fastener **156** (shown in FIG. 10), and suitable terminal blocks such as the line terminal block **146** secured to the upper side of the upper step and transformer connection terminal block **148** secured to the transformer housing. The stepped plate **140** serves as a heat baffle between the transformer **150** and capacitors **144** and also aids in the dissipation of heat which can become a problem in an enclosed, internally ballasted luminaire of this type.

The power supply and ballast assembly **26** can be installed or removed as a unit by manipulation of the fastening means **142** which in this case includes four screws engageable with housing lugs **28**, and to facilitate such installation or removal the electrical wiring can include quick-release connectors and terminal blocks. Thus, an assembly **26** can be readily installed initially or for replacement purposes, thereby reducing unit luminaire construction or maintenance time. A defective assembly can then be bench-tested as a complete unit in the shop.

A top cover **21** can be utilized having provisions for a photocontrol unit **23** such as shown in dotted lines in FIG. 1 and the enlarged sectional detail in FIG. 12. Quick release connections can likewise be used and secured to extra mounting lugs **29** provided for this purpose in the top cover **21** and the housing **20**.

As can be seen from the foregoing, the luminaire of the present invention, while having a pleasing outward appearance is additionally functional in the utilization and placement of components in a novel manner to provide a fixture designed for ease and simplicity of maintenance servicing, and installation by means of an open top housing **20** so that installation and major electrical service can be accomplished from above the unit while relamping and cleaning of the optical system are performed from below the unit, which is further simplified by a uniquely arranged, minimum-size refractor ring **57** which is only slightly larger about its periphery than the refractor **54**.

I claim as my invention:

1. In a streetlighting luminaire adated to be mounted substantially horizontal on a support means affixed to one end thereof, the combination comprising:

(a) an elongated main structural unit having a channel-like configuration with longitudinal upwardly disposed open face;

(b) securing means mounted on said elongated main structural unit proximate one end thereof, said securing means adapted to engage said support means for securing said luminaire in a substantially horizontal position with said longitudinal open face disposed upwardly;

(c) an opening provided proximate the other end of said elongated main structural unit;

(d) a refractor member engaging said structural unit proximate said opening, said refractor member extending over and covering said opening from the outside of said luminaire;

(e) a concave reflector member also engaging said main structural unit proximate said opening, said reflector member extending over and covering said opening from the inside of said luminaire, the concave surface of said reflector member facing said refractor member thereby forming an enclosure comprising said refractor member and said concave reflector member;

(f) lampholding means secured to said luminaire and extending into said enclosure;

(g) electrical components mounted on said main structural unit between said securing means and said lampholding means; and

(h) a removable top cover engaging said main structural unit, said top cover extending over and substantially enclosing said longitudinal upwardly disposed open face, said securing means, said electrical components, and said concave reflector member.

2. In a streetlighting luminaire adapted to be mounted substantially horizontal on a support means affixed to one end thereof, the combination comprising;

(a) an elongated main structural unit having a channel-like configuration with a longitudinal upwardly disposed open face;

(b) slip-fitter means mounted on said main structural unit proximate one end thereof, said slip-fitter means adapted to engage said support means for securing said luminaire in a substantially horizontal position with said longitudinal open face disposed upwardly;

(c) an opening provided proximate to the other end of said main structural unit;

(d) a concave refractor member engaging said main structural unit proximate said opening, said refractor member extending away from said luminaire in an outward direction with the concave surface thereof facing said luminaire;

(e) a concave reflector member also engaging said main structural unit proximate said opening, said reflector member extending into said luminaire with the concave surface of said reflector facing said concave surface of said refractor member thereby forming an enclosure comprising said concave refractor member and said concave reflector member;

(f) lampholding means secured to said luminaire and extending into said enclosure;

(g) electrical components mounted on said main structural unit between said slip-fitter and said lampholding means; and

(h) a removable top cover engaging said main structural unit, said top cover positioned over and substantially enclosing said longitudinal upwardly disposed open face, said slip-fitter means, said electrical components, at least part of said lampholding means, and said concave reflector member.

3. In a streetlighting luminaire adapted to be mounted substantially horizontal on a supporting means affixed to one end thereof, the combination comprising;

(a) an elongated main structural unit having a channel-like configuration with a longitudinal upwardly disposed open face;

(b) slip-fitter means adjustably hingedly mounted on said main structural unit proximate one end thereof, said slip-fitter means adapted to engage said support means securing said luminaire in a substantially horizontal position with said longitudinal open face disposed upwardly, the horizontal inclination of said luminaire being adjustable by means of said slipfitter means,

(c) an opening provided proximate the other end of said main structural unit;

(d) a concave refractor member engaging said main structural unit about the periphery of said opening, said refractor member extending away from said luminaire in an outward direction with the concave surface thereof facing said luminaire;

(e) a concave reflector member also engaging said main structural unit about the periphery of said opening, said reflector member extending into said luminaire with the concave surface of said reflector member facing said concave surface of said refractor member thereby forming an enclosure comprising said concave refractor member and said concave reflector member;

(f) lampholding means adjustably secured to said luminaire and extending into said enclosure to an adjustable depth thereof;

(g) electrical components mounted on said main structural unit between said slip-fitter and said lampholding means; and

(h) a removable top cover engaging said main structural unit, said top cover extending over and substantially enclosing said longitudinal upwardly disposed open face, said slip-fitter means, said electrical components, at least part of said lampholding means, and said concave reflector member.

4. In a streetlighting luminaire adapted to be mounted substantially horizontal on a support means affixed to one end thereof, the combination comprising;

(a) an elongated main structural unit having a channel-like configuration with a longitudinal upwardly disposed open face;

(b) slip-fitter means mounted on said main structural unit proximate one end thereof, said slip-fitter means adapted to engage said support means for securing said luminaire in a substantially horizontal position with said longitudinal open face disposed upwardly;

(c) a bottom opening proximate the other end of said main structural unit opposite said upwardly disposed face;

(d) a concave refractor member engaging said main structural unit about the periphery of said bottom opening, said refractor member extending downwards with the concave surface thereof facing upwards;

(e) a concave reflector member also engaging said main structural unit about the periphery of said bottom opening, said reflector member extending upwards with the concave surface thereof facing downwards;

(f) lampholding means mounted on said main structural unit at the other end thereof and extending into said concave reflector member;

(g) electrical components mounted on said main structural unit between said slip-fitter and said lampholding means; and

(h) a removable top cover engaging said main structural unit, said top cover positioned over and substantially enclosing said longitudinal upwardly disposed open face, said slip-fitter means, said electrical components, at least part of said lampholding means, and said concave reflector member, whereby when said top cover is removed ready access is provided in the interior of said luminaire for maintenance and repair thereof.

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NORTON ANSHER, *Primary Examiner.*

F. L. BRAUN, *Assistant Examiner.*