

Oct. 13, 1959

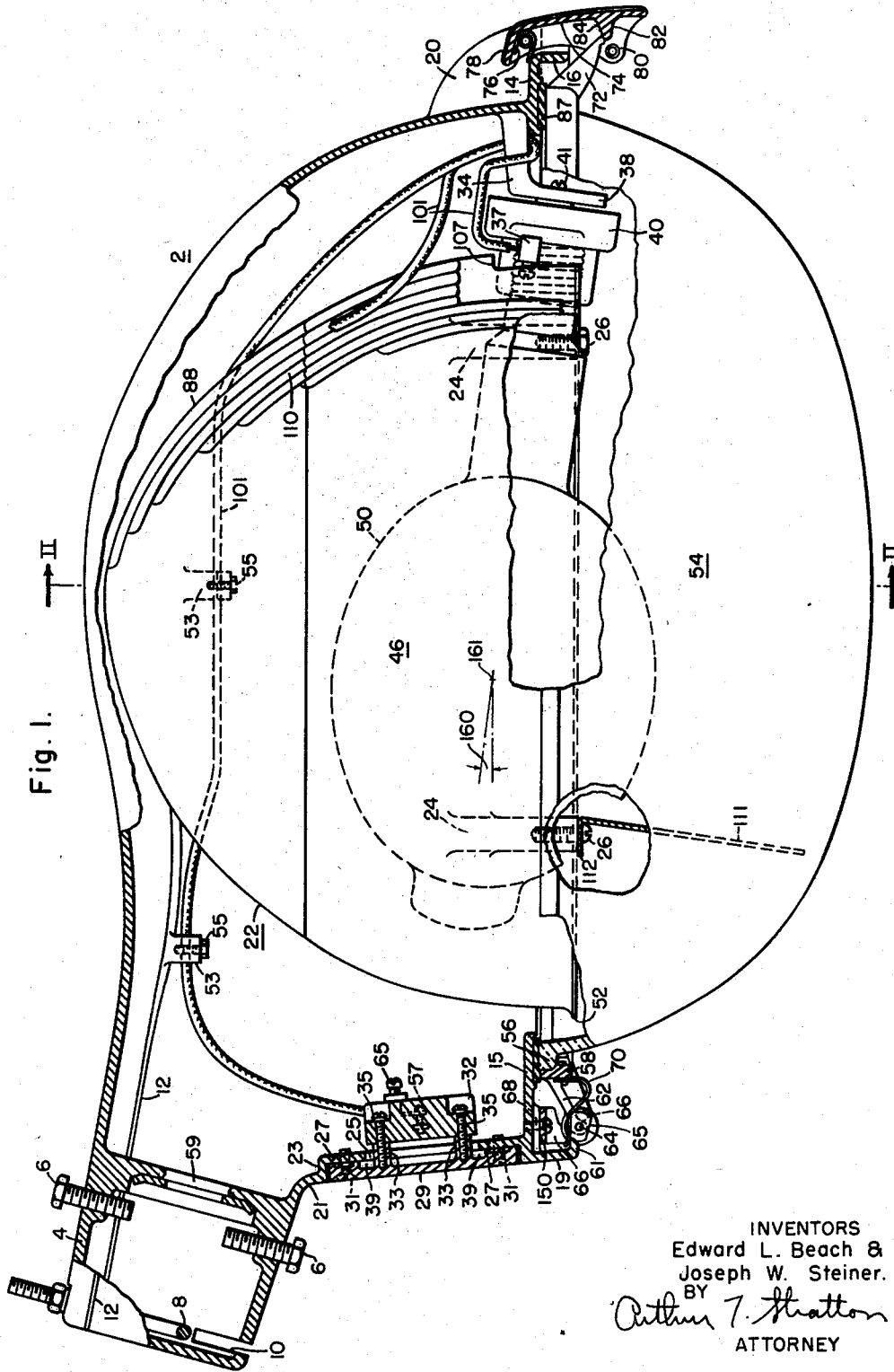
E. L. BEACH ET AL

2,908,809

STREET LIGHT

Filed June 25, 1954

3 Sheets-Sheet 1



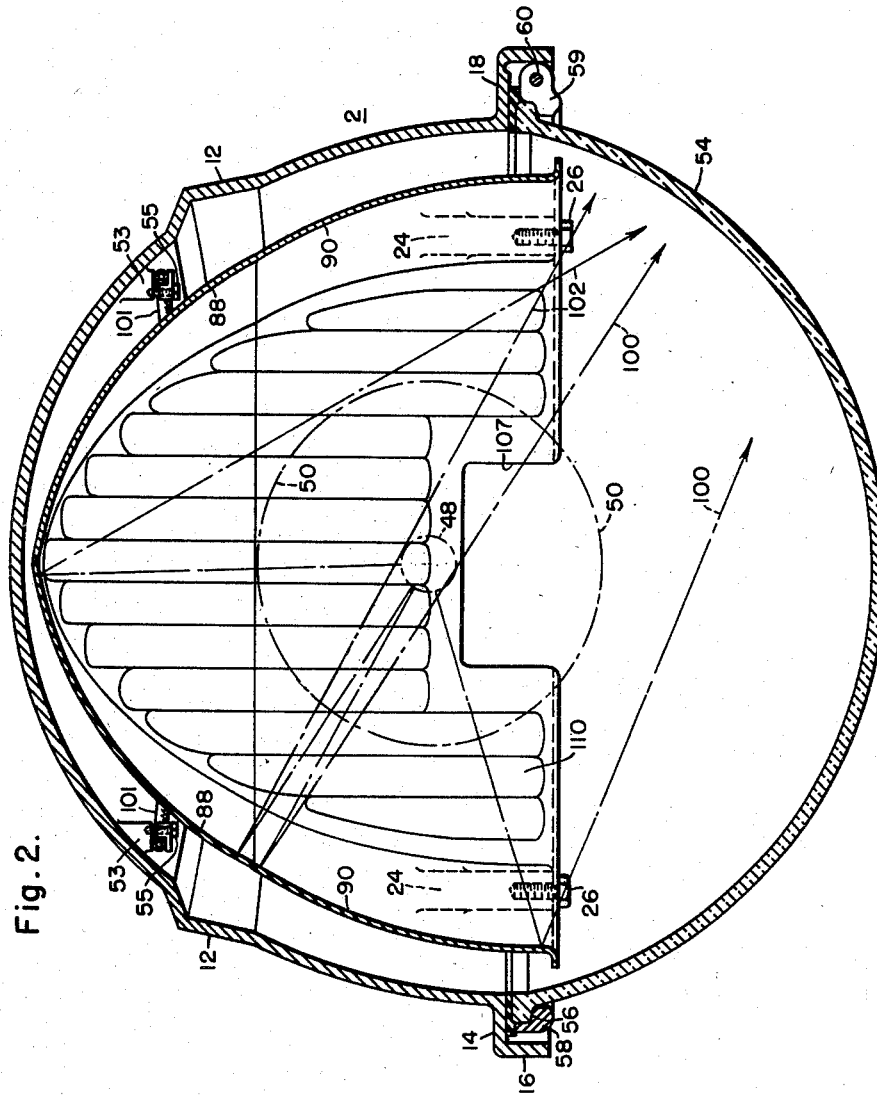
Oct. 13, 1959

E. L. BEACH ET AL
STREET LIGHT

2,908,809

Filed June 25, 1954

3 Sheets-Sheet 2



Oct. 13, 1959

E. L. BEACH ET AL
STREET LIGHT

2,908,809

Filed June 25, 1954

3 Sheets-Sheet 3

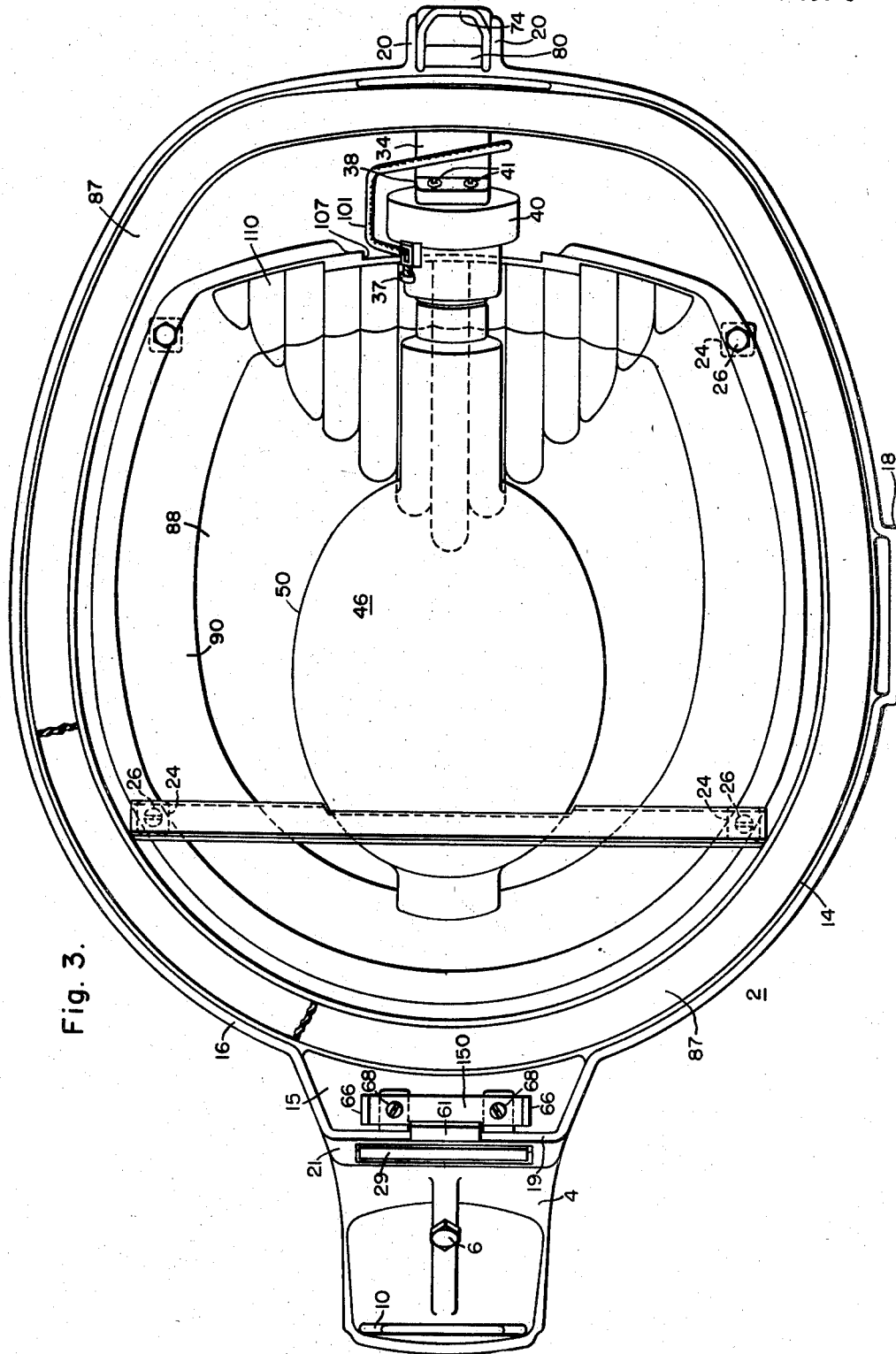


Fig. 3.

1

2,908,809

STREET LIGHT

Edward L. Beach, Fairview Park, and Joseph W. Steiner, North Olmsted, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application June 25, 1954, Serial No. 439,298

4 Claims. (Cl. 240—25)

This invention relates generally to luminaires and more particularly to a reflector type of luminaire which employs a high intensity elongated light source.

Luminaires of this general type may obviously be used in various types of installations, however, one particularly desirable use for such luminaires is in street lighting installations wherein certain requirements of light distribution must be obtained in order to have a competitive product. Our luminaire has been designed primarily for street lighting purposes but may be utilized in any installation where a similar light distribution is desirable. Prior luminaires of this type have not, in general, been designed to obtain the maximum lighting efficiency economically feasible, or to be readily serviced. In view of the elevated location of street lighting luminaires, it can be realized that servicing may represent a substantial cost in maintaining a lighting system. Also, the failure of prior luminaires to obtain improved lighting efficiency, requires the use of additional luminaires to meet a given illumination level, and this represents additional initial and maintenance costs. Further, the luminaire of our design is ideally suited for illuminating wide areas such as the wide streets.

Accordingly, one general object of our invention is to provide a new and improved luminaire for illuminating large areas.

Another object of our invention is to provide a new and improved reflector for a luminaire whereby an improved light distribution is obtained.

Another object of our invention is to provide a new and improved reflector for a luminaire whereby a high lighting efficiency is obtained.

Another broad object of our invention is to provide a new and improved luminaire for illuminating elongated areas.

Still another object of this invention is to provide a simplified form of luminaire for street lighting or like service, employing an elongated high intensity light source so as to obtain a substantially uniform light distribution pattern.

A further object of our invention is to provide a simplified form of luminaire for street lighting or the like service employing an elongated high intensity light source which may easily be serviced.

A more specific object of this invention is to provide a luminaire of generally ovate form having a unitary housing and mounting portion with a unitary reflector located therein, which comprises a plurality of differently shaped portions for efficiently directing reflected light in a predetermined manner.

These and other objects of this invention will become more apparent upon consideration of the following detailed description of a preferred embodiment thereof, when taken in connection with the attached drawings, in which:

Fig. 1 is a side elevation view of a luminaire constructed in accordance with this invention, with certain of the parts shown in section;

2

Fig. 2 is a transverse cross-section view of the luminaire shown in Fig. 1, and taken substantially on the line II—II of Fig. 1; and

Fig. 3 is a bottom plan view of the luminaire shown in Fig. 1, with the refractor of globe removed.

The luminaire shown on the drawings comprises a housing 2, which is generally ovate in form, being provided with a bottom opening so that it forms in effect one-half of an ovate spheroid. The housing 2 is formed of one integral piece of material, preferably a single metal casting, such for example as aluminum or an aluminum alloy. The housing 2 has integral therewith at one end a mounting sleeve 4 which is adapted to receive a mounting bracket. Sleeve 4 is provided with an opposed set of machine bolts 6 for engaging such an inserted bracket whereby the position of the luminaire thereon may be adjusted. In order to obtain better light distribution, sleeve 4 is inclined with relation to the plane of the bottom opening of the housing 2, as will be more fully described hereinafter. A U-bolt 8 is mounted to be movable in a slot 10 provided adjacent the outer end of mounting sleeve 4 of the housing at the under side thereof, and is adapted to be drawn up into clamping engagement with a mounting bracket when such is inserted in the mounting sleeve 4, to firmly secure the housing 2 on any such bracket.

The housing 2 has also formed integrally therewith a pair of spaced reinforcing ribs 12, which extend from each side of the mounting sleeve 4 of the housing, and generally longitudinally over the major part of the length of the housing in divergent relation. The bottom opening of the housing 2 is provided with an outwardly extending integral flange 14 which has a downwardly extending lip 16 at its outer end. A portion of the flange 14 at one side of the housing 2 is offset as at 18, for a purpose to be described. At the end of the housing 2 opposite the mounting sleeve 4, there are provided spaced outwardly extending ears 20, also for a purpose which will be hereinafter described.

A dished reflector 22 is adapted to be mounted within the housing 2, and is formed of one piece of sheet material, and while generally of the same form as the housing 2, it differs specifically in details of form, as will be hereinafter described. Preferably, the reflector 22 is formed from a single sheet of metal which is capable of being provided with good reflecting characteristics, such as aluminum sheet which can be polished and treated to provide an efficient reflecting surface. In order to secure reflector 22 to housing 2 and to provide a stiffer reflector 22, it is provided at its lower edge with an outwardly extending flange 52. Housing 2 has a plurality of spaced, integral supporting bosses 24 depending from the inner surface thereof, which are internally threaded for receiving screws 26, which extend through flange 52 for mounting the reflector 22 in operative position in the housing.

As more clearly shown in Figs. 1 and 3, flange 14 is provided with an integral outwardly extending flat support area 15 adjacent sleeve 4 in order to provide a pivot supporting means, for a purpose hereinafter described. In order to enclose the sides of area 15, lip 16 is accordingly extended outward at each side of area 15, which extensions are joined together with an integral downwardly extending lip 19, which is approximately transversely disposed with relation to the sleeve 4. It will be noted that housing 2 is provided with a substantially flat wall 21 which is integral with the lower wall of sleeve 4 and which extends downwardly and outwardly from the sleeve 4 so that it terminates flush and integral with lip 19. Wall 21 is provided with an inwardly disposed offset 23 having a centrally disposed opening 25 therein of any desired shape, so that an inwardly projecting flange 27

is formed around the periphery of opening 25. A mounting plate 29 having approximately the same contour as offset 23 may be removably secured to the outer side of flange 27 by any suitable means, such as recessed flat headed machine screws 31 engaging tapped openings in flange 27. Plate 29 may be fabricated from any suitable material, such as aluminum, and is provided with inwardly extending bosses 33. A terminal block 32, which may be formed from any suitable insulating material, is secured to the plate 29 in any suitable manner, such as by machine screws 35 threadedly engaging the spaced threaded bosses 33 in plate 29. If desired, flange 27 of housing 2 may be provided at its periphery with a recess 39 in which may be located any suitable gasket means, such as graphitized asbestos rope packing, in order that opening 25 is weather proof. By this construction, terminal block 32 may easily be removed from the outside of housing 2 by removing screws 31 and withdrawing plate 29 from the opening 25. If desired, plate 29 may be provided with some suitable means (not shown) whereby it may be grasped in order that it may readily be removed. Plate 29 may easily be properly positioned by merely placing it into the opening of offset 23 and rotating plate 29 until screws 31 are in proper alignment.

At the opposite end of housing 2, within the housing 2, there is provided a horizontally extending supporting projection 34 integral with the end of the housing 2 having a downwardly extending support 38 which is at an angle to the horizontal axis of reflector 22. Support 38 has tapped openings for receiving mounting screw 41 for mounting thereon a lamp socket 40, which extends within reflector 22 through an opening 107 therein. The lamp socket 40 is herein illustrated as being of the screw base type for receiving a lamp 46 having a screw base which is elongated in form, and is preferably of the high intensity mercury vapor type. The particular lamp 46 illustrated, when mounted in the lamp socket 40, lies substantially in the vertical plane passing through the longitudinal center line of the housing 2 and reflector 22, and has its free end inclined upwardly above the lower edge of the reflector 22. It is, of course, obvious that other types of sockets and lamps than those shown could also be used in this design.

Referring to Fig. 1, it will be noted that the socket 40 is provided with suitable means, such as terminals 37 (only one of which is shown) whereby wiring connections may easily be made to the socket 40. As shown, insulated conductors 101 are secured at one end, by any suitable means such as screws 57, to the terminal block 32, and at their other end are secured to the terminals 37. It should be noted that conductors 101 extend on either side of the horizontal center line of the reflector 22 and are held adjacent the upper inner surface of housing 2 by means of a pair of spaced downwardly extending bosses 53 on each side of the housing 2. Bosses 53 are each provided with a tapped opening, whereby any suitable means such as clips and screws 55 may be utilized to engage the conductors 101 and secure the conductors 101 to the bosses 53. Although not shown, it is readily apparent that power line conductors projecting from the luminaire support may be drawn inward through the center opening 59 of the sleeve 4, and downwardly to the terminal block 32, whereat they may be secured to the terminal block 32 by any suitable means such as integral pressure terminals 65. Conductors 101 and the power line conductors are provided with sufficient additional length so that when the plate 29 is removed from the opening 25 all of the conductors may be pulled outwardly through opening 25 while still being connected to the terminal block 32. By this construction it is a simple matter to service the electrical portions of the luminaire without unnecessarily disturbing the lamp 46, reflector 22 or even lowering the globe 54. When the terminal block 32 is so removed with all the conductors

attached, electrical connections may easily be made by a man at the exterior of the luminaire. This feature is particularly desirable and important in view of the fact that luminaires of the type described are usually elevated above the street level and supported from a pole. Also, initial wiring or repairs may be effected without requiring the polished inner surface of reflector 22 to be exposed, which may otherwise be damaged by careless workmanship. Another feature of this design is that wiring repairs may be made without touching the lamp 46 or socket 40, thereby eliminating any necessity to ascertain if the light distribution of the luminaire has been affected by the repairs. Further, if desired, in view of the heat generated by lamp 46, the conductors 101 and those entering the sleeve 4 may be provided with additional separate insulation or may be fabricated from a suitable heat-resistant insulating material, such as asbestos.

As previously mentioned, the lamp 46 is preferably of the high intensity mercury type having an inner tubular envelope 48 of a high temperature-resistant transparent material, such for example as fused quartz, and having a larger outer envelope 50 of a transparent material, such as glass. In a lamp of this type, the illumination originates, of course, within the inner tubular envelope 48. In some instances, this type of lamp may have an inner envelope of a material which is less resistant to high temperatures than quartz, in which case it may be desirable to provide an arc stabilizing magnetic coil (not shown) located, for example, transversely of the housing 2 and reflector 22, at the upper portion thereof, being accommodated in a transversely extending slot cut in the upper wall of the reflector 22. Such a stabilizing coil is adapted to be connected in series with the lamp and to produce a magnetic field such that the elongated arc within the lamp is not permitted to bow upwardly into contact with the inner lamp envelope. For a more complete description of such a coil reference is made to the copending application Serial No. 328,958 filed December 31, 1952 by R. W. Loehr, now Patent No. 2,778,929, and which has been assigned to the same assignee as the assignee of this invention.

In most cases, it will be desirable to provide a globe 54 over the bottom opening in the housing 2, with this globe to be made of any desired transparent material, such as glass, and it may be additionally formed with various interior and/or exterior formations, such as stippling or prisms for obtaining a more diffused or controlled light pattern. The upper open end of the globe 54 has an integral outside flange 56 which is adapted to be engaged by a clamping band 58 which surrounds the upper open end of the globe 54 and has laterally extending apertured ends 59 for receiving a clamping bolt 60 to securely clamp the band 58 to the upper end of the globe 54.

The globe 54 is adapted to be releasably supported in closed relation with the bottom opening in the housing 2 by a pivot support at one end adjacent the housing mounting sleeve 4. As shown in Figs. 1 and 3, a U-shaped bracket 150 is secured to the under side of housing 2 below cover 29 in any suitable manner such as screws 68 extending through the bight portion thereof and threadedly engaging housing 2. Each arm 66 of bracket 150 extends downwardly from housing 2 and is formed in a hook shape so as to support a pivot pin therebetween. A pair of spaced supporting arms 62, having a fixed pivot pin 64 extending therebetween, are provided integral with clamping band 58 and which extend outwardly thereof. Pivot pin 64 extends outwardly beyond the sides of each arm 62 and is adapted to engage and be removably supported by arms 66 of bracket 150. There is also provided a leaf spring 70 which is secured at one end to the clamping band 58 intermediate the pivot supporting arms 62, and which has its free end engageable with a lip 61 formed integral with the housing.

5

At the other end of the housing and the globe 54, the clamping band 58 for the glass bowl 54 is provided with an integral latch projection 72 extending outwardly therefrom for engagement with a movable latch 74, which is generally U-shaped in cross-section. The movable latch 74 is adapted to be mounted on a pivot pin 76 and is biased in a clockwise direction, as viewed in Fig. 1, to latching position by a coil spring 78 mounted on the pivot pin 76 and reacting against the housing and the movable latch 74 at its opposite ends, respectively. The movable latch 74 is also provided with a latch reset roller 80 mounted on a pin connecting the sides thereof, and with an integral latch projection 82 also located between the sides thereof, preferably formed with transverse ridges 84 on the upper side thereof.

The globe 54 is illustrated in Fig. 1 as being latched in position where its upper rim is in engagement with a sealing gasket 87, which in turn engages the lower flange 14 of the housing 2. Preferably the gasket 87 is of a weather-proof material, such as a water repellant compressible material or the like, and is in compressed condition at the closed position of the globe 54, to exclude the elements from the luminaire, and it will be observed that the downwardly extending lip 16 on the housing flange 14 further acts to protect the seal between the globe 54 and the housing 2. If it is desired to open the luminaire for lamp replacement or for cleaning purposes, it is merely necessary to release the movable latch member 74 by moving the lower end to the right as viewed in Fig. 1, until its latch projection 82 and reset roller 80 clear the latch projection 72 on the housing. The globe 54 is then freed so that its pivot pin 64 can drop down to the bottom of the slot in bracket 66 and the bowl can then pivot downwardly about the pivot pin 64. During such downward movement the leaf spring 70, previously referred to, moves up and away from the lip 61 on the housing. The globe 54 may then be readily replaced by rotating it a further amount until flat surface 65 on arms 62 it at a position to clear screws 68 whereupon the globe may be merely lifted to move its pivot pin 64 out of the slots in support 66 on the housing, and a new globe inserted in its place. Thereafter, the luminaire may be closed merely by swinging the refractor globe 54 back to the position shown in Fig. 1, and this results in automatically latching it in closed position, as the latch projection 72 on the refractor globe will engage the reset roller 80 on the movable latch 74 during closing movement of the glass globe, to move the movable latch member 74 in a counterclockwise direction to enable the latch projection 72 to slip past the roller and latch projection 82, whereupon the biasing spring 78 for the movable latch member 74 will cause it to move back where its latch projection 82 engages beneath the latch projection 72 on the globe ring 58, to thereby latch it in the closed position shown in Fig. 1 of the drawings. During closing movement of the globe, the free end of spring 70 ultimately engages the lip 61 on the housing. Thereafter, pivot pin 64 is lifted in the slots of support 66 while pivotal movement continues about the free end of spring 70. When the adjacent edge of globe 54 engages gasket 87, spring 70 is stressed, and the gasket is placed under spring pressure.

Referring to the reflector 22, it will be observed that it is of a special form so that the incident light rays emanating from the lamp 46 are reflected in a particularly useful and efficient manner. As more clearly shown in Fig. 2, the reflector 22 is asymmetrical and is preferably fabricated as an integral unit having in cross section an upper dome portion located in the upper portion of housing 2 including downwardly extending sidewalls 88, the lower edges of which each terminate in an integral downwardly extending curved portion 90. The cross sections of the lower portions 90 are preferably parabolic in form for a purpose more fully discussed hereinafter, while the cross section of sidewalls 88 of the

6

dome are preferably formed with a smooth curvature which will direct light in the manner hereinafter described. As more clearly shown in Fig. 3, each lower portion 90 in plan follows a smooth curvature which follows the general outline of housing 2, from a point spaced inwardly from the latch end of housing 2 along each side thereof toward the sleeve 4 end of housing 2 at which latter end the portions 90 are integrally joined together. Sidewalls 88 are also similarly disposed in plan and, as indicated, are integral with lower portions 90.

The purpose of the particular formation of the reflector 22 can be best realized by reference to Fig. 2 of the drawings, wherein reflected ray traces are illustrated for one side of the reflector. It will be observed that the rays 100 reflected from the lower side portions 90 of the reflector are directed downwardly at a substantial angle above the nadir. Due to the curvature of portions 90, the angle that such rays are reflected above nadir will vary, however, as such curvature is slight, such variation is slight. As shown the reflected rays are at an angle of approximately 70°, and all of the reflected rays pass just below the inner lamp envelope 48 and the point of cut off, at the opposite side, defined by the lower edge of the reflector, and impinge on the refractor or globe 54 at the opposite side of the luminaire.

Referring to Figs. 1 and 3, it will be noted that the end part of lower portion 90 adjacent the sleeve 4 (i.e., the house side of the luminaire) is available for directing light at the indicated high angles outwardly from the luminaire whereby a relatively wide street area may be illuminated. In a similar manner, the side portions of lower portion 90 are available for directing light at the indicated high angles from each side of the luminaire, whereby the spacing between the luminaires may be increased. The final part of lower portion 90 adjacent the street side of the housing 2 is available for directing light at the indicated high angles toward the area adjacent the street, such as for sidewalk or building front illumination. In general, it is not necessary that the sidewalk lighting be of as high intensity as that on the street, and accordingly, the placement of socket 40 in this area with a loss of a corresponding portion of the area for directing such light, does not appreciably affect the overall efficiency of the luminaire. To further effect a wider distribution of light along the sidewalk and adjacent area on the house side of the luminaire, that portion of the reflecting surface 90 containing the opening for the lampholder is preferably fluted. Such fluting consists of a series of adjacent vertically extending cylindrically shaped surfaces 110 projecting inwardly and extending upward from the flange 52 to the top of the reflector at the center, and of progressively shorter length toward the sides. The flutes assume the curved shape of surfaces 88 and 90. If desired, in order to reduce the amount of light directed to the house side of the luminaire, a shield 111 may be secured to the lower side of reflector 22 to extend downwardly within globe 54. Shield 111 is provided with an upper transverse flange 112 having openings therein, whereby it may be secured in position by means of screws 26 extending therethrough and engaging bosses 24, previously described. Shield 111 is preferably formed from any suitable reflecting material, such as aluminum, whereby it may reflect light rays outwardly therefrom toward the street side of the luminaire.

It will also be observed from Fig. 2 that the rays 102 reflected from sidewalls 88 of the upper dome are reflected at a lesser angle above nadir and downwardly. The limiting reflected rays 102 are illustrated at angles of approximately 25° and 65° above nadir and are so directed as to avoid passage through the inner lamp envelope 48 and yet emerge below the point of cutoff defined by the lower edge of the reflector. That portion of the reflector between the angles illustrated directs the rays in the intermediate angles, also avoiding the arc

tube 48. By this construction, a fairly uniform light distribution is obtained, as rays 102 illuminate the area between that of the rays 100 and the luminaire. Inasmuch as direct light rays (not shown) from lamp 46 illuminate the area directly below the luminaire, no reflected light is required therein.

It will be noticed that substantially all of the reflected rays are thus within the cutoff angle provided by the lower edges of the reflector 22 and housing 2, and that the reflector 22 has its lower edge extending below the lower edge of the housing 2 and into the globe 54 when in operative position. Such construction obviously prevents loss of direct light from the lamp by absorption by the inner faces of clamping band 58. The fact that this particular reflector is capable of directing substantially all reflected light rays in a manner to avoid the inner envelope 48 of the lamp prevents absorption of reflected light by the envelope which immediately surrounds the light source. The light source is thus located in an isolated zone through which no reflected light passes and thereby efficiency of the luminaire is further increased.

Another feature of our invention, more clearly shown in Fig. 1, resides in the fact that sleeve 4 is angularly disposed with relation to housing 2. In substantially all street lighting installations the support member which enters sleeve 4 and which is engaged by bolt 8 is horizontally disposed above the street that is to be illuminated. In many installations it is particularly desirable to illuminate an area a considerable distance beyond the luminaire on the opposite side of the street from which the luminaire is supported. In order to accomplish this purpose, in addition to the rays 100 from the house side of the luminaire, previously discussed, the sleeve 4 is located with respect to the bottom plane of the reflector 22 at an angle, illustrated at 15 degrees, so that when sleeve 4 is horizontally mounted the street side of the luminaire will be elevated above the house side of the luminaire. By this construction, it will be obvious that a greater area of the reflector 22 will face outwardly toward the street from the luminaire, so that additional light may be reflected from this area outwardly toward the street from the luminaire. Also, this construction permits a greater percentage of direct light from lamp 46 to illuminate areas of a greater distance across the street from the base of the luminaire. All of the rays 100 and 102 will be effected in a similar manner when the street side of the reflector is elevated. Further, by locating the socket 40 on the street side of the luminaire, the entire reflector area of the luminaire adjacent the sleeve 4 of the housing is available to distribute light from the lamp 46 to the side of the street opposite that where the luminaire is mounted.

Another feature of our invention shown in Fig. 1 is in the fact that lamp 46 may be mounted within the reflector 22 at various horizontal angles 160. It is well known that optical systems of this general type produce two main beams extending in opposite directions from the luminaire and downwardly toward the surface of the street below. Each of these main beams has a high vertical candle power distributed essentially in a lateral plane extending downwardly and outwardly from the luminaire, which plane will rotate about the central axis of the main beam if the longitudinal axis of the lamp 46 is changed in vertical attitude, or if the entire optical system of the luminaire is similarly rotated. For most installations it is desirable that the intersections of the lateral planes of high candle power with the surface of the street be at substantially right angles to the curb. As has been previously discussed, the entire optical system has been elevated 15° at the street side in order to produce a greater illumination directly across the street. Such elevation of the optical system changes the angle of the intersection of the lateral planes of high candle power with the street relative to the curb to an angle other than 90°. In order to restore such angle of intersection to substantially 90° the lamp 46 is inclined in the reverse direction, illus-

tratively 10°. Inasmuch as the optical system remains tilted at 15°, the inclination of the lamp has no effect on the illumination which is provided at the opposite side of the street but such inclination of the lamp does provide proper illumination distribution in the region of the lines of intersection of the lateral planes of high candle power with the street.

Thus, it will be apparent that by our design a high efficiency of the light emanating from the light source 46 is obtained, as essentially no reflected light rays are absorbed by the light source. Further, the distribution of such a luminaire has been improved by providing a greater reflector area for reflecting light rays outwardly from the support upon which the luminaire is secured. Also, as the mounting of the socket for supporting the lamp is in a zone which does not direct light to the opposite side of the street from which the luminaire is supported, it permits all of the reflector facing the opposite side of the street to be utilized to direct reflected light rays away from the luminaire support. As has previously been discussed, the plate 29, its location and its design also contribute to ready servicing of the luminaire from the pole with a minimum of effort, inasmuch as all connections can be made at a convenient level rather than at some extended position.

In view of the foregoing description of a preferred embodiment of our invention, it will be apparent that we have provided a luminaire of extremely simple construction which may readily be serviced and relamped and which obtains a high utilization of the light from a light source. It is desired, however, that this invention be not limited to the particular form of luminaire specifically described herein, as it will be readily apparent to those persons skilled in the art that various changes and modifications may be made in the particular construction shown, without departing from the broad spirit and scope of our invention. Thus the luminaire may have various forms of housings or support means and may be used with or without a globe. If desired the housing 2 may be made non-symmetrical about its axis. Also by changing the location of sleeve 4, the distribution of the reflected light from the light source may be varied in accordance with various desired conditions. Such modifications are illustrative, but not limiting as to other forms which this invention may take and of various manners in which the principles of our invention may be utilized. Accordingly, it is desired that this invention be given a broad interpretation limited only as required by the prior art.

We claim as our invention:

1. A street-lighting luminaire adapted to be mounted at one side of a street comprising an elongated inverted one-piece shallow dish housing having a bottom opening located substantially in one plane, a sleeve portion integral with said housing at one end thereof adapted to receive a support for said luminaire, said sleeve extending at an angle with relation to said one plane so that when said sleeve is horizontally mounted the other end of said housing is elevated above said one end, an elongated inverted dish reflector mounted longitudinally within said housing adjacent the inner surface thereof and with its bottom opening located adjacent and substantially parallel to said one plane, said reflector having at least longitudinally extending lower side portions formed to reflect beams of light at relatively high vertical angles and intermediate longitudinally extending portions formed to reflect light generally at lower vertical angles, and means for supporting an elongated light source at one of its ends within said housing so that said light source extends generally longitudinally and centrally with respect to said reflector at an angle intermediate said one plane and the angle of said sleeve.

2. A luminaire comprising an elongated one-piece shallow dish housing having a bottom opening located substantially in one plane, a sleeve portion integral with said housing at one end thereof adapted to receive a

support for said luminaire, said sleeve extending at an angle with relation to said one plane so that when said sleeve is horizontally mounted the other end of said housing is elevated above said one end, an elongated dished reflector mounted within said housing adjacent the inner surface thereof and with its bottom opening located adjacent and substantially parallel to said one plane, lamp-holding means mounted in said housing and located solely adjacent the other end of said housing for supporting an elongated light source at one of its ends within said housing so that said light source extends at an angle intermediate said one plane and the angle of said sleeve, and said lamp holding means being angularly disposed with relation to said one plane so that said light source extends upwardly within said reflector.

3. A luminaire of generally ovate form and including a reflector which is ovate in form and of inverted cup-shape with a bottom opening located in one plane, a mounting sleeve at one end of the luminaire and having an axis extending at an angle to said one plane so that when the sleeve is mounted on a horizontal support the opposite end of the reflector will be elevated, means for supporting an elongated light source at one end longitudinally in said reflector adjacent its bottom opening but at an angle intermediate said one plane and the angle of said sleeve, and said reflector having fluted light dispersing surfaces solely at the other end thereof.

4. A luminaire comprising a dished housing having a bottom opening located substantially in one plane, a sleeve portion integral with said housing adapted to receive a support for said luminaire, said sleeve extending at an angle with relation to said one plane so that when said

5
10
15
20
25
30

sleeve is horizontally mounted the opposite portion of said housing is elevated above the part of the housing having said sleeve, a dished reflector mounted within said housing, lamp-holding means located adjacent said opposite portion of the housing for supporting an elongated light source at one of its ends within said housing so that said light source extends generally longitudinally with respect to said reflector at an angle intermediate said one plane and the angle of said sleeve, said one end of said housing having a removable portion below said sleeve portion, a plurality of electrical conductors extending between said lamp-holding means and said removable housing portion, and said removable housing portion having terminal means adapted to be connected to an electrical source of energy and said electrical conductors.

References Cited in the file of this patent

UNITED STATES PATENTS

2,035,215	Bean	Mar. 24, 1936
2,140,646	Mitchell	Dec. 20, 1938
2,289,160	Yost	July 7, 1942
2,318,536	Stern	May 4, 1943
2,584,671	Cator et al.	Feb. 5, 1952
2,599,285	Rex	June 3, 1952
2,619,584	Hathaway	Nov. 25, 1952
2,739,226	Rex	Mar. 20, 1956
2,778,929	Loehr	Jan. 22, 1957

FOREIGN PATENTS

667,085	Great Britain	Feb. 27, 1952
706,496	Great Britain	Mar. 31, 1954