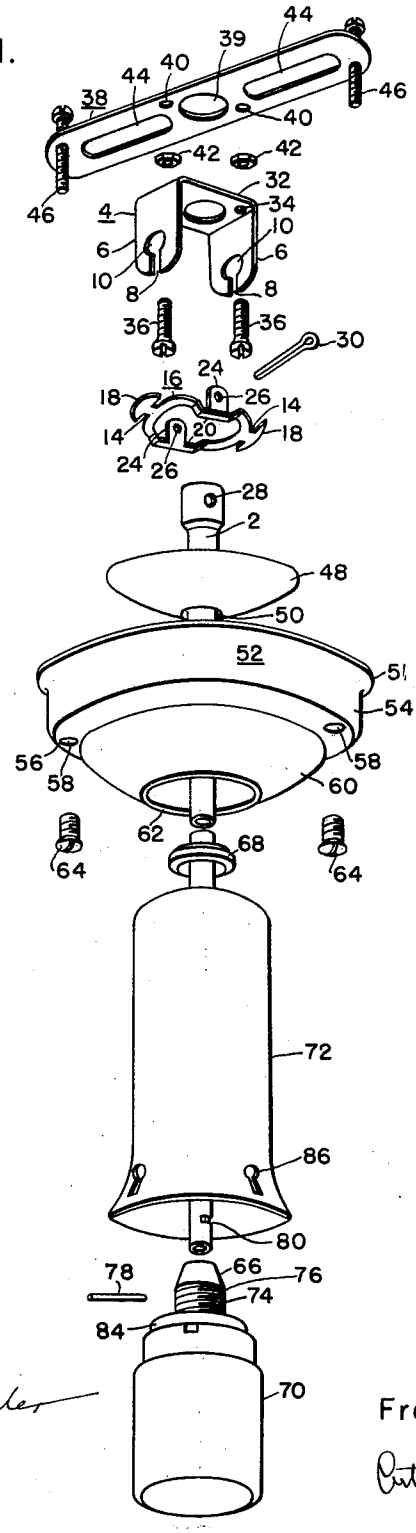
Nov. 24, 1959 F. C. WINKLER 2,914,661

LUMINAIRE

Filed May 28, 1954 2 Sheets-Sheet 1

Fig. 1.



WITNESSES

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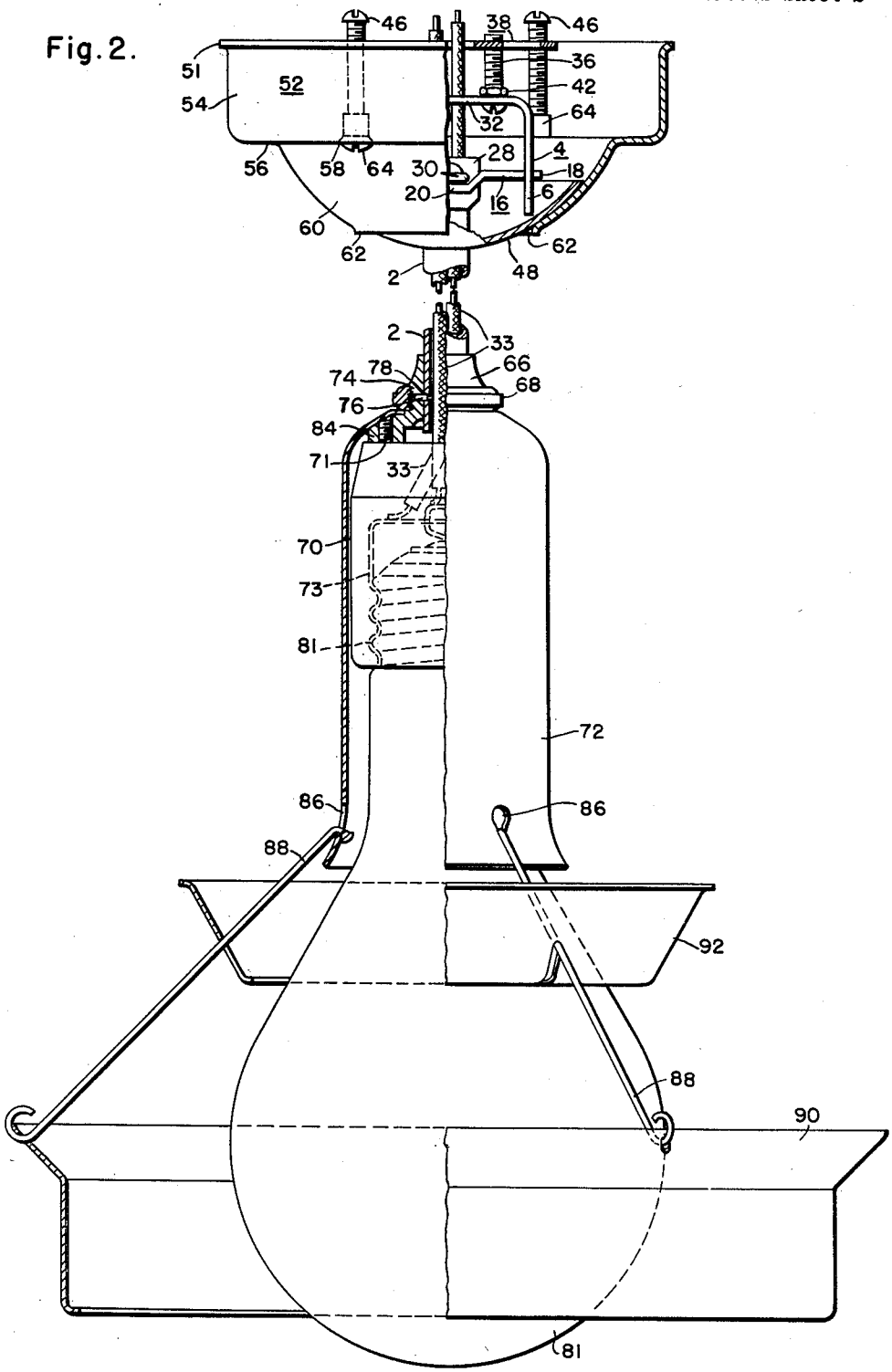
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LUMINAIRE

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Fig. 2.



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2,914,661

LUMINAIRE

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Application May 28, 1954, Serial No. 432,964

13 Claims. (Cl. 240—78)

My invention relates to luminaires and more particularly to luminaires which are suspended from an upper surface.

In recent years the application of suspended type luminaires which are low in cost, simple and easy to install and readily maintained, has been in increasing demand. In view of the modern trend of architecture wherein ceilings and surfaces with considerable slope or angle are often encountered, a suspended luminaire with a moveable stem which, under gravity alone, will always allow the luminaire to hang in a vertical position is particularly desirable. Such a feature is equally desirable in ceilings which have a slight slope, as it eliminates the labor required to align the fixtures properly. A still further application for such a luminaire is in reference to buildings which are subject to shocks or vibrations, where rigid or fixed type of suspended luminaires are subject to fracture due to the shock or, over a period of time, due to the vibration. Heretofore, attempts to provide such a luminaire have not been entirely satisfactory in that in order to provide an inexpensive luminaire a moveable joint means has been provided which allows vertical suspension along one axis only. Such a fixture is unsatisfactory in that in many cases the stem portion will not always be perpendicular. Other luminaires which have been constructed to obtain a movement in several directions by means of a universal type joint have also proven to be unsatisfactory in view of the expensive components utilized to obtain this feature. Further, most luminaires of this type are not designed to mount on both an outlet box stud and ears, neither do they have facilities for using a canopy or pull switch. In addition they provide no means for attachment when the outlet box protrudes from the ceiling which very often happens.

Accordingly, one object of my invention is to provide a new and improved luminaire having a universal type of mounting.

Another object of my invention is to provide a new and improved universally mountable luminaire which may be easily installed.

Another object of my invention is to provide a new and improved universally mountable luminaire which may be easily maintained.

A still further object of my invention is to provide a new and improved luminaire which may be swiveled in any direction within a certain fixed spherical angle.

A still further object of my invention is to provide a new and improved universally mountable luminaire whose stem length may be quickly and readily adjusted to various shorter lengths in the field.

Still another object of my invention is to provide a new and improved universally mountable luminaire which allows a full open raceway for the line leads through entire length of stem.

A still further object is to provide a new and improved universally mountable luminaire which is provided with means to accept outlet boxes which protrude from the ceiling.

Another object is to provide a new and improved universally mounted luminaire which may be utilized for a variety of lamp sizes and types.

These and other objects of my invention will become more apparent upon consideration of the following detailed description of a luminaire incorporating various components constructed in accordance with the principles of my invention when taken in connection with the following drawings in which:

Figure 1 is an exploded perspective view of the component parts of a luminaire constructed in accordance with the principles of my invention, with the ring or basin assembly and light source removed; and

Fig. 2 is a partial side elevational view and partial sectional view of one luminaire constructed in accordance with the principles of my invention.

With reference to the drawings, it will be noted that a luminaire constructed in accordance with the principles of my invention comprises an upper mechanism which supports a downwardly extending hollow stem **2** and which permits the stem **2** to assume any angle within a certain fixed spherical angle. In order to accomplish such spherical movement, the upper mechanism comprises an uppermost U-shaped bracket **4** having downwardly extending arms **6**. Each arm **6** of bracket **4** is provided with a centrally disposed vertically extending slot **8** from its lower edge which terminates in an upwardly disposed enlarged circular opening **10**.

An irregularly formed swivel plate **16** is positioned between arms **6** of bracket **4** by means of opposed outwardly extending projections **14** which are of a width so that when placed approximately parallel to slot **8**, projections **14** may be moved upwardly in slots **8** to the upper opening **10**. Thereafter, projections **14** of plate **16** may be rotated within the enlarged openings **10** so that the flanges **14** project over the upper edges of slots **8**, whereby plate **16** may be rotated on projections **14** in an approximately parallel plane to arms **6**. It is obvious that the total angular rotation of plate **16** within the arms **8** in either direction as indicated is limited only by the angle at which projections **14** will enter the slots **8**. In order to prevent plate **16** from falling out of the bracket **4** due to movement of plate **16** transversely to the arms **6**, each projection **14** is provided with an enlarged head **18** which extends beyond the greatest width of the associated opening **10** so that a transverse movement will cause the inner surface of head **18** to engage the outer surface of arms **6**.

The portion of plate **16**, between projections **14**, comprises a pair of spaced arms **20** which extend transversely to the arms **6** of bracket **4** and each of which is provided on its inner edge with a centrally located upwardly extending ear **24**. Each ear **24** is provided with an opening **26** adjacent its upper edge, which openings **26** are in alignment. In order that stem **2** may be movably suspended from plate **16**, its upper end is provided with transverse openings **28** which are aligned and spaced from the uppermost edge of stem **2** so they may be aligned with openings **26**. Thus, once plate **16** is mounted on bracket **4**, stem **2** may be easily secured in position by inserting the upper end of stem **2** between ears **24** and aligning openings **26** with openings **28** and inserting any suitable pin connection, such as a cotter pin **30** through the aligned openings. Thereafter, in order to prevent accidental withdrawal of the cotter pin **30**, either or both of the arms of the cotter pin **30** may be turned over against the outer surface of the adjacent ear **24**.

Thus, movement of stem **2** transversely of arms **20** will be transmitted through cotter pin **30**, ears **24** to the plate **16**; which will cause plate **16** to rotate as previously described. Stem **2** may also be rotated in a plane substantially parallel to arms **20** around the cotter pin **30**

as a pivot, until limited by the engagement of the stem 2 in the manner hereinafter discussed. It should further be noted that, if desired, the upper end of stem 2 may be enlarged as shown in order to minimize any end play of the stem 2 with reference to the ears 24 along the cotter pin 30, and for wiring purposes, as hereinafter discussed.

In order that bracket 4 may easily and suitably be secured to an outlet box, its bight portion 32 is provided with a pair of clearance holes 34 through which any suitable securing means such as machine screws 36 may be inserted so that they threadedly engage threaded holes 40 in a bridge 38 designed to fit standard outlet boxes. As is well known, the installation of outlet boxes is not uniform; and, accordingly, vertical adjustment of bridge 38 may be required. By this construction, it is obvious, that within limits, by using sufficiently long machine screws 36, the distance between the bight portion 32 of bracket 4 and the bridge 38 may easily be varied. Thereafter, to firmly secure screws 36 to the bight portion 32 of bracket 4, a nut 42 may be turned down to engage the upper surface of bight portion 32. Bridge 38 may be similar to the standard construction of commercially available bridges having elongated slots 44, whereby the bridge may be secured to various sizes of outlet boxes in any suitable manner. Bridge 38 is also provided with a centrally located opening 39 so that it may be secured to a stud by any suitable means for such purposes. Bridge 38 may also be provided at each of its ends with a threaded opening, which openings are located a sufficient spaced distance apart so that screws 46 will extend beyond the sides of a standard outlet box for a purpose to be described. The outlet boxes, as utilized, may be secured properly in place by any of a variety of standard constructions.

In order to enclose the upper supporting mechanism, once stem 2 has been secured to plate 16 as indicated, a cup 48, having a clearance hole 50 centrally located therein, is freely positioned over the stem 2 and thereafter a circular canopy 52 having a downwardly projecting dome 60 with an enlarged circular opening 62 therein is also freely positioned on stem 2. It is, of course, to be realized that canopy 52 may take many forms. As it is desirable that canopy edge 51, when installed be flush with the surface of the ceiling, regardless of the protrusion of the outlet boxes from the ceiling, canopy 52 is provided with a vertical skirt 54, which terminates in an inwardly facing flange 56. Flange 56 is provided with a spaced pair of clearance holes 58 having a spacing corresponding to the spacing of the downwardly extending machine screws 46; and, as has been indicated, the inner edge of flange 56 terminates in the downwardly projecting dome 60.

In installing the canopy 52 to enclose the hanger mechanism as previously discussed, a pair of barrel nuts 64, which are tapped approximately 90 percent of their length, are secured to the lower threaded end of machine screws 46 after canopy 52 has been placed against the ceiling so that machine screws 46 extend through openings 58 in flange 56 of canopy 52. When so assembled, barrel nuts 64 are inserted through openings 58, and screwed onto the bottom end of machine screws 46. Barrel nuts 64 are provided with a slotted head whereby they may be turned by means of a screw driver until the barrel nuts 64 become locked with the screws 46. Further driving of barrel nuts 64 causes the machine screws 46 to back out of their threaded position in bridge 38 upwardly beside the outlet box thereby drawing canopy 52 up tightly against the ceiling. When so assembled, the cup 48 falls into the dome 60 against its upper inner surface so as to cover the bottom opening 62 in dome 60 of canopy 52. The radius of curvature of cup 48 is slightly less than the radius of curvature of dome 60 whereby cup 48 always closes opening 62 by sliding action alone. Thus, the canopy 52 provides a complete cover for all mechanisms, an enclosure for power wires and an overall unitary appearance. It should further be noted that opening 62 in dome 60 is provided with a diameter so that stem 2 engages the edge of opening 62 to limit the spherical angle through which the stem 2 may travel. By such limitations, the plate 16 will be limited in travel so that plate 16 cannot accidentally enter slots 8 of bracket 4 within the canopy 52.

The lower end of stem 2 is secured to an adapter 66 which is provided with external threads 74 to receive a knurled internal threaded ring 68. Adapter 66 is also provided with an internal centrally located opening to receive stem 2 and with an integral structure 84 whereby any desired lamp holder 70 may be secured to the adapter 66. For the purposes of my invention, it is immaterial what type of lamp holder 70 may be secured to the adapter 66, and it is obvious that various types may be secured in any one of a variety of well known manners, such as by screws 71 extending through the base of lamp holder 70 and engaging the supporting plate 84. In order to provide a support for the light controlling means, and to cover the lamp holder 70, an elongated husk 72 is provided with an upper opening whereby the husk may be inserted over the stem 2. Adapter 66 is provided with a transversely extending opening 76 which is outwardly displaced on the threaded portion 74 in order that it may align with a slot 80 provided in the side of stem 2 adjacent the lower end of stem 2. In securing adapter 66 to stem 2, knurled ring 68 and husk 72 are obviously initally inserted over stem 2, respectively. Thereafter opening 76 in adapter 66 is aligned with slot 80 in stem 2 so that a pin 78 may be inserted through opening 76 and slot 80. Pin 78 is of sufficient length so that it does not extend beyond the sides of adapter 66. By this means husk 72 may be dropped over the adapter 66 and the knurled ring 68 threaded over threads 74 so that the knurled ring 68 will enclose the opening 76, pin 78 and slot 80.

In many instances it is necessary to shorten the stem 2 in the field in order to make the luminaire adaptable to various ceiling heights. To do this, it is only necessary to use a hacksaw and cut off the end of stem 2 to the desired length and with the same hacksaw add a new slot 80 which engages the pin as previously described. As holes 76 in adapter 66 guide pin 78, it is not necessary that a new slot 80 be cut with a high degree of accuracy.

In order to provide light control means, husk 72 is provided with a plurality of spaced formed openings 86 adjacent its lower edge in order that any suitable light control means may be secured in any desirable manner. As shown, a concentric louver assembly is provided which comprises a plurality of extending rods 88 which engage openings 86 at one end and the other ends of which engage a concentric ring 90. If desired, an upper shield ring 92 may also be secured to rods 88 in any suitable desirable manner. It is of course obvious that arrangements other than a concentric louver could be utilized, such as glass or plastic basins of various transmissions, decorations, sizes etc.

In constructing a luminaire in accordance with the principles of my invention, the various component parts may be formed from various suitable materials. It is believed obvious that many standard items generally commercially available can be employed in this luminaire. Bracket 4 and plate 16 may readily be formed illustratively from steel while the tubing 2, cup washer 48 and canopy 52 and husk 72 may be formed from various materials such as aluminum which may be easily fabricated into the desired shape.

It should also be noted that a luminaire constructed in accordance with the principles of my invention may easily be wired with suitable conductors, such as insulated wires 33 in that the stem 2 is hollow and the pin 78 at the lower restricted end of stem 2 is displaced outwardly at one side so that it does not interfere with

the downwardly descending wires **33** within the stem **2**. Further, the upper end of stem **2** may be enlarged so that the downwardly extending wires may be easily spaced on either side of the through extending cotter pin **30**. As shown, lamp holder **70** is provided with a screw base socket **73** for receiving the threaded base of a lamp **81** and that conductors **33** are secured to suitable terminals on socket **73**. It is obvious that my luminaire is equally suitable for other types of lamps and that other lamp holding means may be utilized.

By this construction, it may readily be seen that I have provided a luminaire which aligns itself perpendicularly with the earth's surface by gravity alone. It will be noted that all of the component parts are of simple construction and may readily be produced at small cost. Also, it should particularly be noted that a lamp may be rotated relative to the holder **70** without causing any part of the luminaire to twist, as all parts of the luminaire are engaged to lock together when any rotational force is applied. This feature is particularly desirable in that the electrical conductors would otherwise tend to be twisted.

Having described a preferred embodiment of my invention, it is desired that my invention be not limited to the specific arrangement described and illustrated herein, as it will be readily apparent to 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 my invention. Accordingly, it is desired that my invention be given an interpretation consistent with the spirit and scope of its broad principles.

I claim as my invention:

1. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a generally inverted U-shaped support for said other end of the stem and adapted to be mounted on a fixed structure, a connecting member of a size to be received between the arms of said U-shaped support and having an opening, said other end of the stem being of a size to be received in said opening, means pivotally connecting said connecting member to said other end of the stem on one axis with said other end of the stem in said opening, pivot projections having a flattened cross section projecting outwardly from said connecting member on an axis at an angle to said one axis, pivot openings in the arms of said pivot support and a relatively narrow slot extending from each pivot opening to the outer end of each arm, and said flattened sections of the pivot projections being pivotally mounted in said pivot openings and being of a size to be received in said slots when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said projections so that the pivot projections can then be moved through the slots into and out of said pivot openings but being incapable of doing so when said stem is at a lesser angle to the vertical.

2. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a generally inverted U-shaped support for said other end of the stem and adapted to be mounted on a fixed structure, a connecting member of a size to be received between the arms of said U-shaped support and having an opening, said other end of the stem being of a size to be received in said opening, means pivotally connecting said connecting member to said other end of the stem on one axis with said other end of the stem in said opening, pivot projections having a flattened cross section projecting outwardly from said connecting member on an axis at an angle to said one axis, pivot openings in the arms of said pivot support and a relatively narrow slot extending from each pivot opening to the outer end of each arm, said flattened sections of the pivot projections being pivotally mounted in said pivot openings and being of a size to be received in said slots when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said projections so that the pivot projections can then be moved through the slots into and out of said pivot openings but being incapable of doing so when said stem is at a lesser angle to the vertical, and means adapted to be releasably mounted on said fixed structure limiting the spherical angle through which said stem can move to an angle to the vertical less than said predetermined angle.

3. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a support for said other end of the stem and adapted to be mounted on a fixed structure, a connecting member, means pivotally connecting said connecting member to said other end of the stem on one axis, a pivot portion on said connecting member removably pivotally engaging a pivot portion on said support on an axis at an angle to said one axis, one of said pivot portions having a flattened cross section and the other having a pivot opening with a relatively narrow slot extending from the opening to the outer end of its portion, and said flattened portion being pivotally mounted in said pivot opening and being of a size to be received in said slot when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said flattened portion so that the flattened portion can then be moved through said slot into and out of said pivot opening but cannot be removed when said stem is at a lesser angle to the vertical.

4. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a support for said other end of the stem and adapted to be mounted on a fixed structure, a connecting member, means pivotally connecting said connecting member to said other end of the stem on one axis, a pivot portion on said connecting member removably pivotally engaging a pivot portion on said support on an axis at an angle to said one axis, one of said pivot portions having a flattened cross section and the other having a pivot opening with a relatively narrow slot extending from the opening to the outer end of its portion, said flattened portion being pivotally mounted in said pivot opening and being of a size to be received in said slot when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said flattened portion so that the flattened portion can then be moved through said slot and into said pivot opening but cannot be removed when said stem is at a lesser angle to the vertical, and means adapted to be releasably mounted on said fixed structure and surrounding the stem in spaced relation for limiting the spherical angle through which said stem can move to an angle to the vertical less than said predetermined angle.

5. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a support for said other end of the stem and adapted to be mounted on a fixed structure, a connecting member, means pivotally connecting said connecting member to said other end of the stem on one axis, a pivot portion on said connecting member removably pivotally engaging a pivot portion on said support on an axis at an angle to said one axis, one of said pivot portions having a flattened cross section and the other having a pivot opening with a relatively narrow slot extending from the opening to the outer end of its portion, said flattened portion being pivotally mounted in said pivot opening and being of a size to be received in said slot when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said flattened portion so that the flattened portion can then be moved through said slot into and out of said pivot opening but cannot be removed

when said stem is a a lesser angle to the vertical, a canopy also adapted to be secured to said fixed structure and being of a size to enclose the supporting elements for said other end of the stem and having an enlarged opening through which said stem projects of a size to limit the spherical angle through which said stem can move to an angle to the vertical less than said predetermined angle.

6. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a support for said other end of the stem and adapted to be mounted on a fixed structure, a connecting member, means pivotally connecting said connecting member to said other end of the stem on one axis, a pivot portion on said connecting member removably pivotally engaging a pivot portion on said support on an axis at an angle to said one axis, one of said pivot portions having a flattened cross section and the other having a pivot opening with a relatively narrow slot extending from the opening to the outer end of its portion, said flattened portion being pivotally mounted in said pivot opening and being of a size to be received in said slot when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said flattened portion so that the flattened portion can then be moved through said slot into and out of said pivot opening but cannot be removed when said stem is at a lesser angle to the vertical, a canopy also adapted to be secured to said fixed structure and being of a size to enclose the supporting elements for said other end of the stem and having an enlarged opening through which said stem projects of a size to limit the spherical angle through which said stem can move to an angle to the vertical less than said predetermined angle, the portion of the canopy having said enlarged opening being dome-shaped, and a dome-shaped cup member having a central opening closely slidably receiving said stem and located within said canopy and being substantially larger than the enlarged opening in said canopy to overlie and close the enlarged opening at various angular positions of said stem.

7. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a support for said other end of the stem and adapted to be mounted on a fixed structure, a connecting member, said other end of the stem being formed to have a pivot opening therethrough, a pivot pin extending through said opening and through an opening in said connecting member for pivotally connecting said connecting member to said other end of the stem on one axis, a pivot portion on said connecting member removably pivotally engaging a pivot portion on said support on an axis at an angle to said one axis, one of said pivot portions having a flattened cross section and the other having a pivot opening with a relatively narrow slot extending from the opening to the outer end of its portion, said flattened portion being pivotally mounted in said pivot opening and being of a size to be received in said slot when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said flattened portion so that the flattened portion can then be moved through said slot into and out of said pivot opening but cannot be removed when said stem is at a lesser angle to the vertical, said lamp holding means having an opening receiving said one end of the stem, said one end of the stem having a transverse notch in one side thereof, said lamp holding means having a pair of opposed aligned passages extending laterally of and communicating with said stem-receiving opening, and a securing pin inserted through said aligned passages and said notch for securing the lampholding means to the stem.

8. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a bridge member having spaced substantially aligned elongated openings therethrough for the reception of a pair of securing means for securing the bridge member across the open face of various sizes of outlet boxes, a support for the other end of said stem, means adjustably securing said support to said bridge member so that the distance between the support and bridge member can be varied, a connecting member, means pivotally connecting said connecting member to said other end of the stem on one axis, a pivot portion on said connecting member removably pivotally engaging a pivot portion on said support on an axis at an angle to said one axis, one of said pivot portions having a flattened cross section and the other having a pivot opening with a relatively narrow slot extending from the opening to the outer end of its portion, and said flattened portion being pivotally mounted in said pivot opening and being of a size to be received in said slot when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said flattened portion so that the flattened portion can then be moved through said slot into and out of said pivot opening but cannot be removed when said stem is a a lesser angle to the vertical.

9. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a bridge member having spaced substantially aligned elongated openings therethrough for the reception of a pair of securing means for securing the bridge member across the open face of various sizes of outlet boxes, a support for the other end of said stem, means adjustably securing said support to said bridge member so that the distance between the support and bridge member can be varied, a connecting member, means pivotally connecting said connecting member to said other end of the stem on one axis, a pivot portion on said connecting member removably pivotally engaging a pivot portion on said support on an axis at an angle to said one axis, one of said pivot portions having a flattened cross section and the other having a pivot opening with a relatively narrow slot extending from the opening to the outer end of its portion, said flattened portion being pivotally mounted in said pivot opening and being of a size to be received in said slot when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said flattened portion so that the flattened portion can then be moved through said slot into and out of said pivot opening but cannot be removed when said stem is at a lesser angle to the vertical, and means secured to said bridge member and having an enlarged opening receiving said stem for limiting the spherical angle through which said stem can move to an angle to the vertical less than said predetermined angle.

10. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a bridge member having spaced substantially aligned elongated openings therethrough for the reception of a pair of securing means for securing the bridge member across the open face of various sizes of outlet boxes, a support for the other end of said stem, means adjustably securing said support to said bridge member so that the distance between the support and bridge member can be varied, a connecting member, means pivotally connecting said connecting member to said other end of the stem on one axis, a pivot portion on said connecting member removably pivotally engaging a pivot portion on said support on an axis at an angle to said one axis, one of said pivot portions having a flattened cross section and the other having a pivot opening with a relatively narrow slot extending from the opening to the outer end of its portion, said flattened portion being pivotally mounted in said pivot opening and being of a size to be received in said slot when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said flattened portion so that the flattened portion can then

be moved through said slot into and out of said pivot opening but cannot be removed when said stem is at a lesser angle to the vertical, a canopy secured to said bridge member and being of a size to enclose the supporting elements for said other end of the stem and having an enlarged opening through which said stem projects of a size to limit the spherical angle through which said stem can move to an angle to the vertical less than said predetermined angle.

11. A luminaire comprising, an elongated supporting stem having lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a bridge member having spaced substantially aligned elongated openings therethrough for the reception of a pair of securing means for securing the bridge member across the open face of various sizes of outlet boxes, a support for the other end of said stem, means adjustably securing said support to said bridge member so that the distance between the support and bridge member can be varied, a connecting member, means pivotally connecting said connecting member to said other end of the stem on one axis, a pivot portion on said connecting member adapted to removably pivotally engage a pivot portion on said support on an axis at an angle to said one axis, one of said pivot portions having a flattened cross section and the other having a pivot opening with a relatively narrow slot extending from the opening to the outer end of its portion, said flattened portion being pivotally mounted in said pivot opening and being of a size to be received in said slot when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said flattened portion so that the flattened portion can then be moved through said slot into and out of said pivot opening but cannot be removed when said stem is at a lesser angle to the vertical, a canopy secured to said bridge member and being of a size to enclose the supporting elements for said other end of the stem and having an enlarged opening through which said stem projects of a size to limit the spherical angle through which said stem can move to an angle to the vertical less than said predetermined angle, the portion of the canopy having said enlarged opening being dome-shaped, and a dome-shaped cup member having a central opening closely slidably receiving said stem and located within said canopy and being substantially larger than the enlarged opening in said canopy to overlie and close the enlarged opening at various angular positions of said stem.

12. Supporting means for a luminaire comprising, an elongated supporting stem adapted to have lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a generally inverted U-shaped support for said other end of the stem, said support being adapted to be mounted on a fixed structure, a connecting member received between the arms of said U-shaped support and having a central opening, said other end of the stem being received in said opening, means pivotally connecting said connecting member to said other end of the stem on one axis, pivot projections having a flattened cross section projecting outwardly from said connecting member on an axis at an angle to said one axis, pivot openings in the arms of said pivot support and a relatively narrow slot extending from each pivot opening to the outer end of each arm and said flattened sections of the pivot projections being pivotally mounted in said pivot openings and being of a size to be received in said slots when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said projections so that the pivot projections can then be moved through the slots into and out of said pivot openings but being incapable of doing so when said stem is at a lesser angle to the vertical, thereby connecting said connecting member pivotally to the arms of said U-shaped support on an axis extending at an angle to said one axis.

13. Supporting means for a luminaire comprising, an elongated supporting stem adapted to have lamp holding means secured to one end thereof and adapted to be movably supported at its other end, a generally inverted U-shaped support for said other end of the stem, said support being adapted to be mounted on a fixed structure, a connecting member received between the arms of said U-shaped support and having an opening, said other end of the stem being received in said opening, means pivotally connecting said connecting member to said other end of the stem on one axis, pivot projections having a flattened cross section projecting outwardly from said connecting member on an axis at an angle to said one axis, pivot openings in the arms of said pivot support and a relatively narrow slot extending from each pivot opening to the outer end of each arm, and said flattened sections of the pivot projections being pivotally mounted in said pivot openings and being of a size to be received in said slots when said stem is located at a predetermined angle to the vertical relative to the pivot axis of said projections so that the pivot projections can then be moved through the slots into and out of said pivot openings but being incapable of doing so when said stem is at a lesser angle to the vertical, thereby connecting said connecting member pivotally to the arms of said U-shaped support on an axis extending at an angle to and substantially intersecting said one axis.

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