March 29, 1966 D. W. HARLING 3,243,152

LUMINAIRE MOUNTING ASSEMBLY

Filed June 30, 1964

Fig. 1

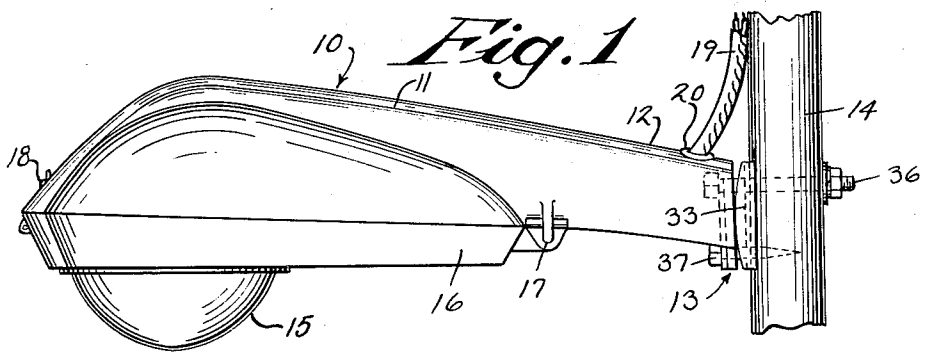


Fig. 2

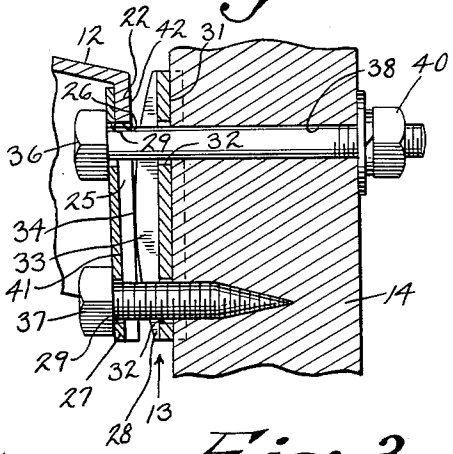


Fig. 4

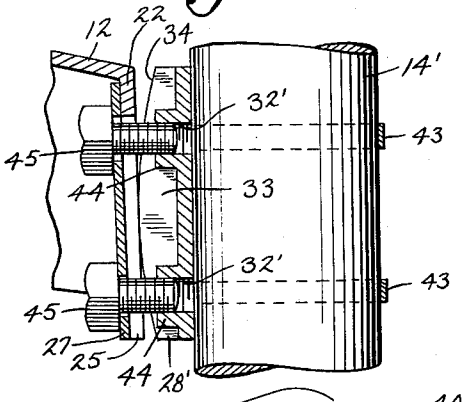
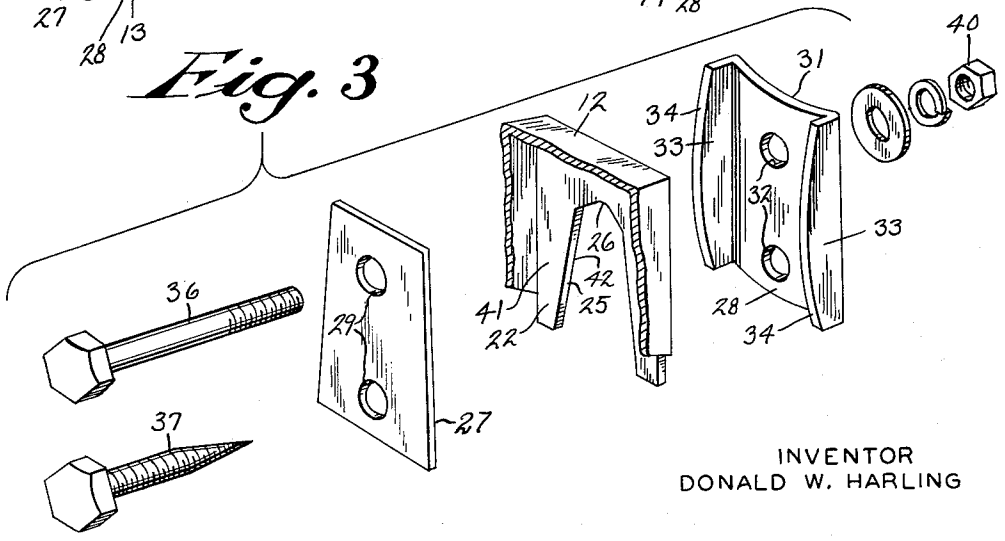


Fig. 3



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LUMINAIRE MOUNTING ASSEMBLY

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This invention relates to a mounting assembly for luminaires and, more particularly, to new and improved means for directly mounting a luminaire on a vertical support.

One type of prior art outdoor lighting fixture is constructed and arranged to be mounted adjacent a vertical support pole and to extend toward the area to be illuminated. For this purpose, a generally horizontally extending support pipe or mast arm is affixed at one end to the pole while the lighting fixture is secured to the terminal of the support pipe by a sliding clamp called a slipfitter.

An object of the invention is to provide a new and improved luminaire mounting assembly.

It is another object of the invention to provide a luminaire which is constructed and arranged to be horizontally mounted adjacent a vertical support pole without a support pole or mast arm.

Another object of the invention is to provide a simple and inexpensive luminaire mounting and leveling assembly.

A further object of the invention is to provide luminaire mounting means which includes a member adapted to be mounted on a vertical support pole and having a vertically curved surface engageable by an end face of the luminaire and clamping means for tilting the end wall on the curved surface to level the luminaire and to clamp the end wall to the member.

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

FIG. 1 shows a horizontally mounted luminaire incorporating the instant support structure;

FIG. 2 is a fragmentary, sectional view showing the mounting structure according to the instant invention;

FIG. 3 is an exploded perspective of the new and improved mounting structure; and

FIG. 4 shows an alternate embodiment of the instant invention.

Referring now to the drawings in greater detail, FIG. 1 shows a luminaire or lighting fixture **10**, which includes the generally ovate housing **11** having an elongate mounting portion **12** integrally formed at one end for cooperative engagement with a mounting assembly **13** attached to a vertical wooden support pole **14**. It will be understood by those skilled in the art that a light modifying reflector (not shown) is disposed within the housing **11** for reflecting light rays in a generally downward direction as viewed in FIG. 1, whereupon they are further modified by a cooperating refractor **15**.

The refractor **15** is mounted on a bottom closure member **16** which is supported at one end beneath the housing **10** by a hinge assembly **17** to permit pivotal movement in a counterclockwise direction as viewed in FIG. 1 so that the underside of the housing **10** may be exposed for relamping and other maintenance purposes. A latch assembly **18** is provided at the opposite side of the closure member **16** so that the latter may be affixed in its closed position shown in FIG. 1, whereby the refractor **15** is held in cooperative position relative to the reflector (not shown).

Energy may be supplied to the luminaire **10** from an overhead power source by conductors **19** which pass

through an aperture **20** in the mouting portion **12** of the housing **11**.

As seen particularly in FIG. 3, the mounting portion **12** of the housing **11** has an open bottom and an inverted U-shaped vertical cross-sectional configuration. A generally vertical, planar end wall **22** is provided in the mounting portion **12** for engagement with the mounting assembly **13**. For this purpose, an elongate slot **25** is formed in the end wall **22** and extends from the lower end thereof for substantially its entire height to terminate at its upper end in an inverted V-shaped notch **26**.

The mounting assembly **13** includes a mounting plate **27** and a pole plate **28**. The mounting plate **27** is a generally flat, trapezoidal member having a pair of vertically aligned clearance holes **29**. The central portion **31** of pole plate **28** is horizontally curved for embracing the pole **14** and has a pair of vertically aligned clearance holes **32** formed therein. A bearing arm **33** extends forwardly from each side of the central portion **31** and each terminates in a vertically curved edge **34**.

The mounting assembly **13** also includes a through bolt **36** and a lag bolt **37**. When the luminaire **10** is to be mounted, the through bolt **36** is passed through the upper-most clearance holes **29** and **32** in the support plate **27** and the pole plate **28**, respectively, while the lag bolt **37** is extended through each of the lower holes thereof. The through bolt **36** is then passed through a suitable aperture **38** in the pole **14** and a nut **40** is loosely secured to its opposite end. The lag bolt **37** is then patrially driven into the pole **14**, at a point vertically beblow the hole **38**. The mounting portion **12** of the housing **11** is then slid over the mounting plate **27**, so that the slot **25** in the end wall **22** passes around the bolts **36** and **37** with the notch **26** resting on the through bolt **36** to center end wall **22**. This places the mounting plate **27** against the inner face **41** of the end wall **22** and the rear face **42** of said end wall against the edges **34** of the pole plate **28**.

Because the trough bolt **36** and the lag bolt **37** will initially be loose when the rear wall **22** of the luminaire is placed between the mounting plate **27** and the pole plate **28**, the front end of the luminaire **10** will tilt downwardly as viewed in FIG. 1 with the end wall **22** and the mounting plate **27** resting against the head of bolt **36**. The nut **40** on the through bolt **36** is then tightened to tilt the front end of the luminaire **10** upwardly as the rear surface of the end wall **22** tilts on the curved bearing edges **34**. When the luminaire is in a level position, the lag bolt **37** is tightened to lock the luminaire in position. The mounting plate **27** serves the purpose of equalizing pressure on the opposite faces of the end wall **22**.

FIG. 4 shows an alternate embodiment of the invention wherein the luminaire is mounted on a metallic pole **14'**. Here the pole plate **31'** is rigidly affixed to the pole by means of a pair of clamping bands **43** in a manner well-known in the art. A pair of embossments **44** are provided in vertically spaced relation on the central portion **31'** and each has a central threaded opening **32'** for receiving the threaded end of one of a pair of machine bolts **45** which extend through the openings **29** in the mounting plate **27**. The luminaire is mounted in an identical manner, by sliding the central slot **25** in the rear wall **22** over the loosened bolts **45**. The upper bolt **45** is first tightened until the luminaire is level and the lower bolt **45** is then tightened to lock the luminaire in position.

It can be seen from the foregoing that the mounting assembly **23**, according to the instant invention, provides an economical means for mounting a luminaire directly to a vertical support pole without the necessity for additional mast arms or supporting pipes.

While only two embodiments of the invention have been shown and described, and while the invention has been described with respect to a particular type of luminaire, it is not intended to be limited thereby but only by the scope of the appended claims.

I claim:

1. The combination of, a luminaire and mounting means for affixing said luminaire to a substantially vertically extending support, said mounting means including a member mountable on a support and having a generally vertical surface portion, said luminaire having an end wall provided with an outer face engaging said surface portion, at least one of said surface portion and said outer end wall face being generally vertically curved, and the other being differently configured to provide substantially horizontal straight line engagement therebetween, and clamping means having a pair of individually adjustable vertically spaced apart portions for tilting said end wall on said surface portion to level said luminaire and for clamping said end wall to said member.

2. The combination of, a luminaire and mounting means for affixing said luminaire to a substantially vertically extending support, said mounting means including a first member mountable on a support and having a generally vertically curved surface portion, said luminaire having an end wall provided with inner and outer faces, said outer face engaging said curved surface portion, a second member engaging the inner face of said end wall, and clamping means for tilting said outer face on said curved surface portion to level said luminaire and to clamp said end wall between said first and second members.

3. The combination of, a luminaire and mounting means for affixing said luminaire to a substantially vertically extending support, said mounting means including a first member mountable on a support and including a generally vertically curved surface portion, said luminaire having an end wall provided with inner and outer faces, said outer face engaging said curved surface portion, a second member engaging the inner face of said end wall, and a pair of clamping members disposed in vertically spaced relation for tilting said outer face on said curved surface portion to level said luminaire and for clamping said end wall between said first and second members.

4. The combination of, a luminaire and mounting means for affixing said luminaire to a substantially vertically extending support, said mounting means including a first plate constructed and arranged for being mounted on a support and including a generally vertically curved surface portion, said luminaire having an end wall provided with inner and outer faces and a vertical slot which is open at its lower end, said outer face engaging said curved surface portion, a second plate engaging the inner face of said end wall, a pair of vertically aligned apertures formed in each of said plates and being opposed to said slot, corresponding ones of the apertures in each plate being in registry, and bolt means extending through each pair of registered apertures in said plates for tilting said end wall on said curved surface portion to level said luminaire and for clamping said end wall between said first and second plates.

5. The combination of, a luminaire and mounting means for affixing said luminaire to a substantially vertically extending support pole, said luminaire including an elongate housing having light modifying means adjacent one end thereof, said mounting means including a first plate having a horizontally curved surface on one side thereof for engaging a pole and a pair of generally vertically curved surface portions on the other side thereof, said luminaire having an end wall opposite said light modifying means and provided with inner and outer faces, said outer face engaging said vertically curved surface portions, a second plate engaging the inner face of said end wall and a pair of clamping members engaging said first and second plates and disposed in vertically spaced relation for tilting said end wall on said vertically curved portions to level said luminaire and for clamping said luminaire in its leveled position.

6. The combination of, a luminaire and mounting means for affixing said luminaire to a substantially vertically extending support pole, said luminaire including an elongate housing having light modifying means adjacent one end thereof, said mounting means including a first plate having a horizontally curved surface on one side thereof for engaging a pole and a pair of generally vertically curved surface portions on the other side thereof, said luminaire having an end wall opposite said light modifying means and provided with inner and outer faces and a vertical slot which is open at its lower end, said outer face engaging said vertically curved surface portions, a second plate engaging the inner face of said end wall, a pair of vertically aligned apertures formed in each of said plates and being opposed to said slot, corresponding ones of the apertures in each plate being in registry, first bolt means extending through the uppermost aperture in each plate for tilting said end wall on said vertically curved portions to level said luminaire, and second bolt means extending through the lowermost of said apertures for clamping said luminaire in its leveled position.

7. The combination set forth in claim 6 wherein said first and second bolt means adjustably engage a pole for mounting said plates and luminaire thereon.

8. The combination set forth in claim 6 wherein pole embracing means are provided for securing said first plate to a pole, the apertures in said first plate being threaded for adjustably receiving each of said first and second bolt means.

9. The combination set forth in claim 1 wherein said end wall includes an inner face and including a second member engaging the inner face of said end wall and engageable by said clamping means wherein said end wall is clamped between said members.

10. The combination set forth in claim 9 wherein said end wall has a vertical slot which is open at its lower end and wherein a pair of vertically aligned apertures are formed in each of said members and opposed to said slot, corresponding ones of the apertures in each member being in registry, and wherein said clamping means comprises bolt means extending through each pair of registered apertures in said members.

11. The combination set forth in claim 1 wherein the other of said surface portion and said outer end wall face being substantially planar.

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