United States Patent

Porter et al.

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[45] **July 18, 1972**

[54] LIGHTING FIXTURE SUPPORT

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[73] Assignee: **Thomas Industries Inc.,** Fort Atkinson, Wis.

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[52] **U.S. Cl.** **240/84,** 240/25

[51] **Int. Cl.** **F21s 1/10,** F21s 3/10, F21s 13/10

[58] **Field of Search** 240/25, 52, 64, 84

[56] **References Cited**

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[57] **ABSTRACT**

The lighting fixture is adapted to be supported on a pole, or post top or the like and has a generally cylindrical body portion or hub portion from which extends laterally one or more arms. The arms carry the necessary lamp supporting means and wires thereto. The body portion in the preferred form has a downwardly opening tapered socket, preferably conical, which may be nested with and supported on a mating stud. There is a stop to limit the nesting of the body portion with a supporting stud and, preferably, each body portion has an upwardly extending stud with an external configuration which conforms to the internal configuration of the socket of a lighting fixture whereby the fixtures may be nested to supply more than one lighting fixture supported on a pole, post, or the like. The conical socket is, in each case, provided with one or more set screws. Three set screws permit free lateral as well as vertical adjustment of the unit. The conical socket may be telescoped with and joined to a cylindrical support such as a pole top as well as to the conical stud portion of an associated fixture unit. The studs are preferably hollow and conductors for the associated lamp or lamps and may be extended vertically through an opening in the top wall of the stud to enter a cooperating fixture unit. Hollow laterally extending lamp fixture supporting arms are extended from the body portions and communicate with the interior of the body portion.

13 Claims, 7 Drawing Figures

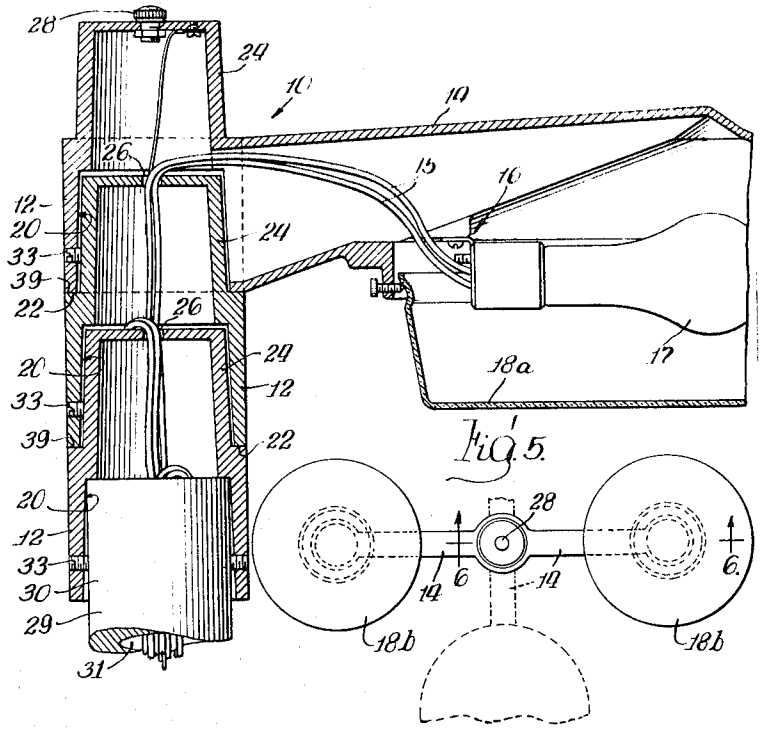


Fig. 5.

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SHEET 1 OF 3

Fig. 1.

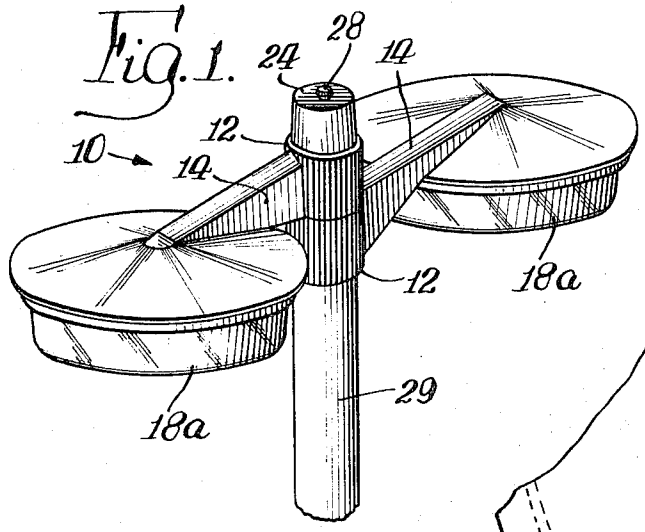
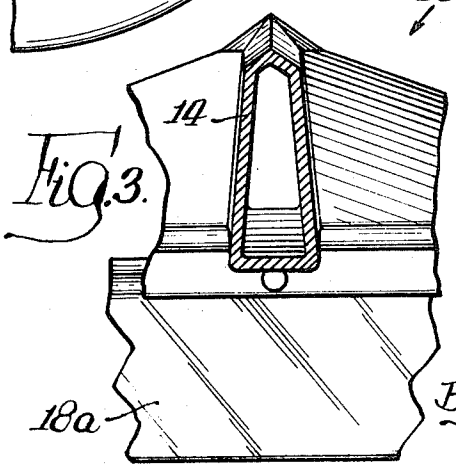


Fig. 2.

Fig. 3.



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Fig. 4.

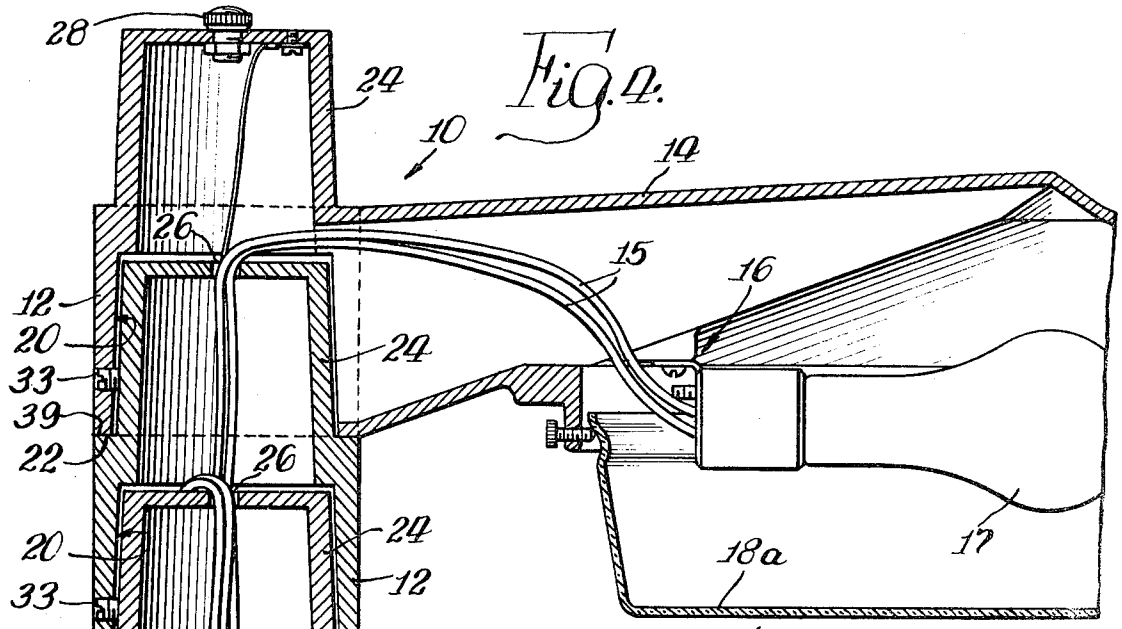


Fig. 5.

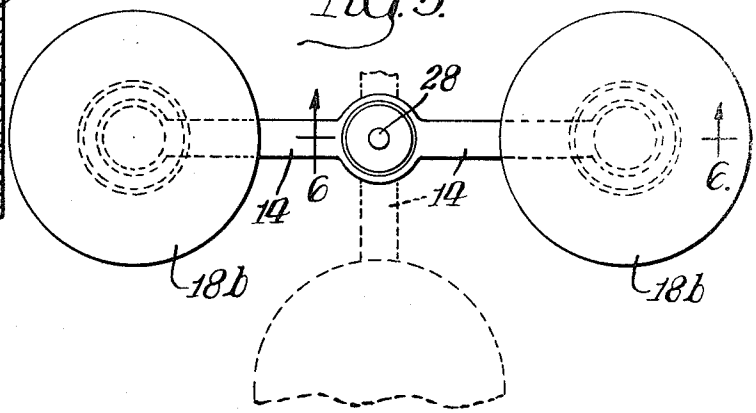


Fig. 6.

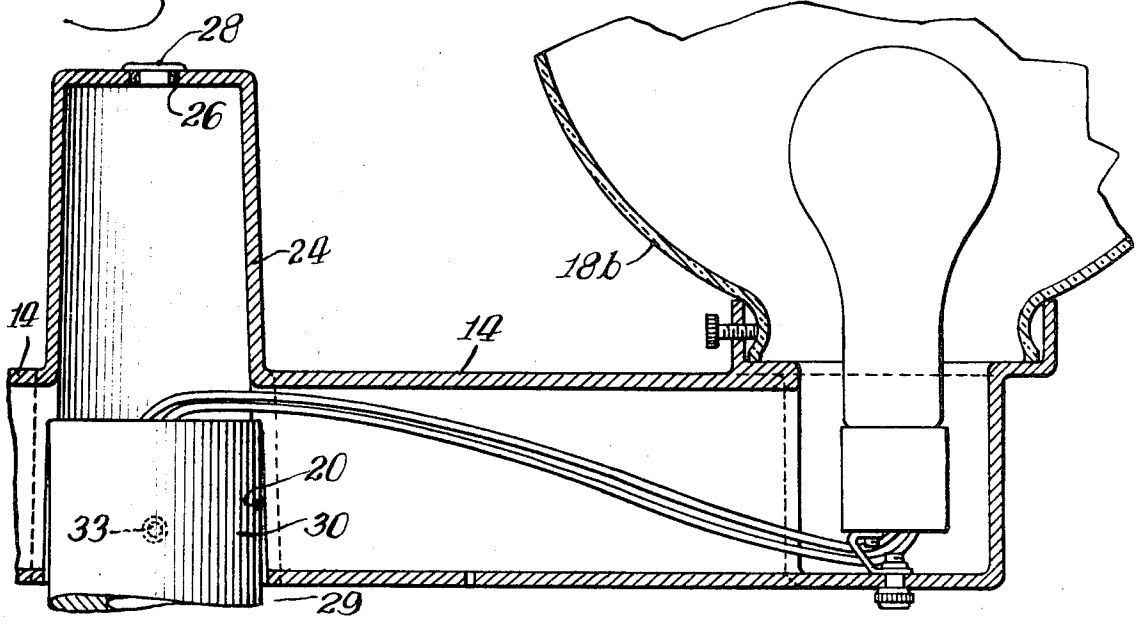
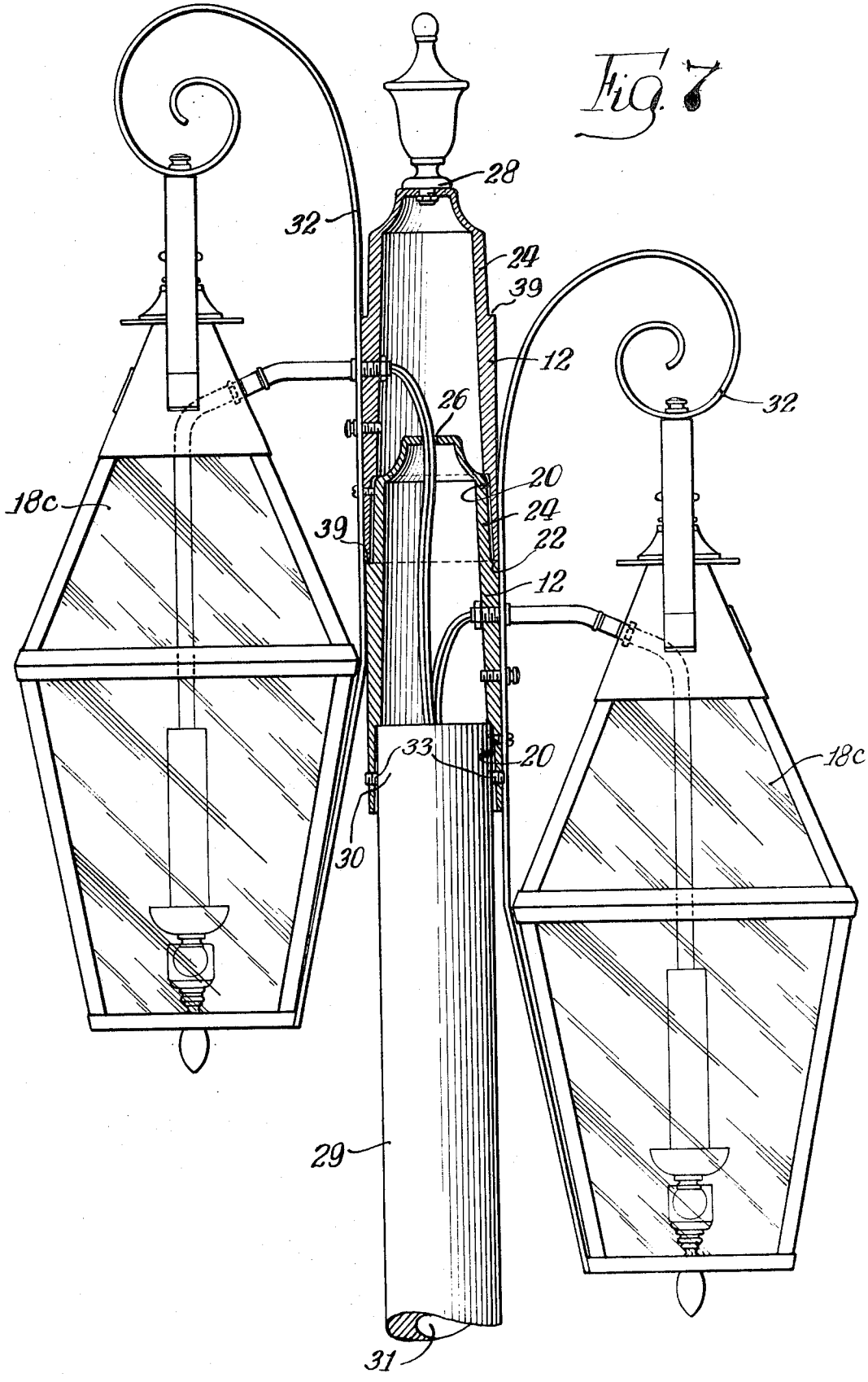


Fig. 7



LIGHTING FIXTURE SUPPORT

BACKGROUND OF THE INVENTION

Heretofore it has been most common to make pole top or post top lighting fixtures with a single lamp and diffuser or shade. Many customers prefer a plurality of lamps and diffusers, so it has been necessary for the manufacturers and dealers to make and carry a variety of fixtures.

It is an object of this invention to alleviate that problem both for the manufacturer and dealer while yet permitting the customer to have a plurality of lamps and diffusers.

In shipping and warehousing lighting fixtures it is an advantage to provide a plurality of easily conveyed and assembled units rather than a bulky and fragile complex unitary article. Also it permits the assembly of several forms of complete multiple lamp fixtures from a plurality of units or sets of units.

It is a more specific object to provide lighting fixtures which will nest on top of each other in an easy and simple way on a pole top, post top, or the like.

Other objects and advantages will appear from the following description and appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an isometric view on reduced scale of one form of the invention;

FIG. 2 is a view, in plan and on larger scale of fixtures similar to those shown in FIG. 1;

FIG. 3 is a sectional view taken substantially on the line 3—3 of FIG. 2;

FIG. 4 is a view, partially in section, taken generally on the line 4—3 of FIG. 2;

FIG. 5 is a top plan view of a modification, on a smaller scale; showing two double ended lamp supports crossed to form a four globe fitting;

FIG. 6 is on a larger scale and is taken generally on the line 6—6 of FIG. 5; and

FIG. 7 is a side elevation of yet another modification, partially in section.

GENERAL DESCRIPTION

Referring first to FIGS. 1 through 4 each lighting fixture is indicated generally by the reference numeral 10. Each lighting fixture has a hollow generally cylindrical body portion, or hub portion indicated generally by the reference numeral 12. Referring now principally to FIG. 4 there is a radial, laterally extending hollow arm 14 on each body portion and each arm has wires 15 leading to terminals of the usual sort on the usual form of lamp supporting means 16.

Associated with the lamp supporting means 16 is a lamp 17. Each lamp may have a diffuser or shade operatively associated with the arm 14*a*. In FIGS. 1 through 4 the diffuser is shown as a pan shaped diffuser 18*a*. In FIGS. 5 through 6 the diffuser is shown as a globular member 18*b* and in FIG. 7 it is shown as a lantern 18*c*.

Preferably each body portion or hub portion 12 of FIG. 4 and the other figures has a conical stud extension 24 which is a hollow extension of the body portion 12 and which body portion has a conical socket portion 20. The stud extension has an external configuration which conforms to the internal configuration of the socket 20 whereby a series of fixtures may be nested each with its socket on a supporting and mating stud of a lower fixture. The nesting tapered surfaces are complementary. Preferably they are conical. They may be formed with mating corrugations or otherwise. The stud extensions 24 are of a length and diameter complementary to the length and diameter of the socket portion 20. The stud 24 terminates at its larger end in an annular shoulder 22. This shoulder is adapted to be engaged by the corresponding lower end of the socket of a nested unit as shown in FIG. 4.

Each of the stud extensions 24 of the various figures of the drawings has a central wire passageway 26 the uppermost of which passageways is closed off by a closure member 28.

The lamp fixture supporting arm 14 is preferably cast integral with the body portion 12. Communication between the interior of the arm 14 and the interior of the body portion 12 as provided by an opening through the cylindrical sidewall of the body portion 12 which opening communicates with interior of the arm 14. The wires 15 which extend from the lamp terminal block 16, extend through the arm 14, the top part of the opening between the interior of the arm 14 and the hollow body portion, then down through one or more openings 26 in the fixture units to the base of the supporting pole. The post 29 has a passageway 31 which is a passageway for wires leading to the various lamp supporting means 16.

FIG. 4 also illustrates the manner of mounting the fixtures of our invention on the upper cylindrical end 35 of a cylindrical pole by means of the shoulder 22 and the set screws 33. Preferably three set screws are used. The weight of the fixture is taken by the engagement of shoulder 22 of the unit with the top of the pole.

It is to be noted that with the conical socket portions tapering outwardly and downwardly they act to shed rain outwardly, this is desirable to avoid moisture in the poles and fittings.

In FIGS. 5 through 7 the arm portion 14 which is integrally formed with the central body portion 12 is slightly different, that is, it is formed as a pair of diametrically opposite arms. The stud extensions 24 of FIGS. 5 and 6 are tapered so that their external configuration conforms to the internal tapered configuration of the socket 20 so that similar fixtures may be nested one on top of the other and each be wired through the pole 29.

In FIG. 7 the diffuser 18*c* in the form of a lantern is additionally supported, not only by the hollow tubular body 12 but also by a decorative curved strap 32 which may be associated with the body portion 12.

Each socket portion 20 of a body portion 12 may contain a stop 22, in the form of a shoulder if desired. Such stop 22 will limit the nesting of the socket portion with respect to the stud extension 24.

It is desirable that the lower rim or edge 39 of the socket be squared off with the vertical axis of the socket and likewise the upper face of the shoulder 24 be similarly squared off with the longitudinal vertical axis of the fittings so that when nested the fittings will be in vertical alignment.

Each arm may be set in position with respect either to the pole top or to the stud extension by a set screw 33. Such set screw will prevent or limit both the axial and rotational movement of a lighting fixture. Instead of a set screw 33, mating ribs (not shown) may be used on each stud extension 24 and in the socket 20 to control the circumferential position of one arm relative to another arm.

What is claimed is:

1. A lighting fixture adapted to be supported on a pole top or the like comprising a hollow generally cylindrical body portion with one or more hollow arms extending laterally from said body portion, lamp supporting means including electrical wires and terminals carried in said arm, said hollow body portion providing a downwardly opening conical socket by which said fixture may be nested with and supported on a mating conical stud, said socket having a stop to limit the nesting of the body portion with a supporting and mating stud, said hollow body portion having a conical stud extension at its upper end, the external configuration of which stud conforms to the internal configuration of the socket whereby the fixture may be nested with a supporting and mating stud of another fixture.

2. The lighting fixture of claim 1 wherein the socket is tapered and the supporting and mating stud is correspondingly tapered.

3. The lighting fixture of claim 1 wherein the hollow arm is integral with the body portion.

4. The lighting fixture of claim 3 wherein the arm is radial and extends from one side of the body portion.

5. The lighting fixture of claim 3 wherein the arms are diametrically opposed to each other and formed integral with the body portion.

6. The lighting fixture of claim 1 wherein a diffuser is operatively associated with each arm.

7. The lighting fixture of claim 1 wherein the stud is hollow and is an axial extension of the socket of the body portion.

8. The lighting fixture of claim 7 wherein the stud includes a wire passageway.

9. The lighting fixture of claim 8 wherein there is a closure for a wire passageway of the uppermost stud.

10. In a lighting fixture combination a first unit comprising a hollow cylindrical member having a body portion and an upwardly and inwardly tapered hollow stud portion, said first unit being adapted to be supported on a pole top, said stud portion having a horizontal top wall with an opening therethrough for an electric conductor and an annular shoulder at the junction of said body portion and said stud portion, a cooperating unit comprising a socket portion adapted to nest over said hollow stud portion of the first unit and seat on said annular shoulder, and having a hollow laterally extending arm adapted to support an electric light, said latter unit having a hollow laterally extending arm terminating in a lamp supporting portion said arm providing a duct for a conductor extending from the lamp supporting means through the opening in the top wall of the first unit.

11. The combination of claim 10 wherein the upper end of said cooperating unit provides a hollow stud portion of substantially the same mating configuration as said first stud portion.

12. In a fixture of the class described, a hollow body portion, a vertically disposed conical stud portion joined thereto with an external circumferential shoulder at the junction of said body portion and said stud portion and a laterally extending lamp fixture supporting arm supported on said body portion, said body portion having a downwardly facing conical socket terminating in a downwardly facing shoulder and one or more clamping screws carried on the body and being extensible into the socket.

13. A lamp and a shade support unit for pole top lighting comprising a hollow cylindrical body portion having a conical socket extending endwise into the lower end of the body for mounting said unit upon a pole top or on a cooperating conical support, said cylindrical body portion having at its upper end a hollow conical stud of an external contour substantially the same as the internal contour of said conical socket, the junction of the stud with the hollow body portion providing an external shoulder facing endwise of the hollow body portion, the conical socket terminating in a radially inwardly extending shoulder lying a short distance below the level of the external shoulder, a hollow lamp supporting arm joined to and extending from the side of the cylindrical body, the interior of the arm communicating with the interior of the hollow body portion by an opening which extends through the side wall of the cylindrical body above the internal shoulder at the upper end of the conical socket for the entry of conductors into the hollow lamp supporting arm.

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