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TERMINAL MOUNTING FOR LIGHTING FIXTURES

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Fig. 1

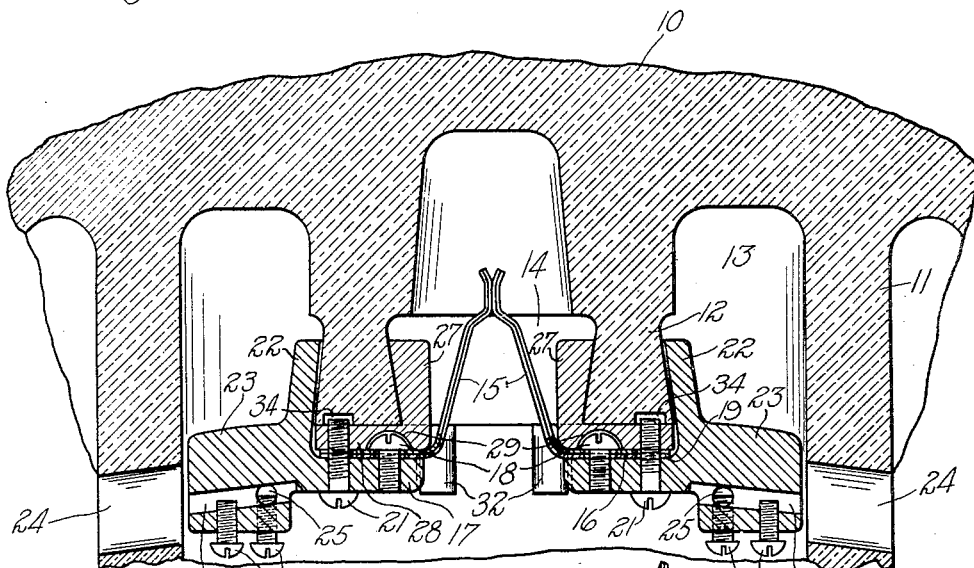


Fig. 2

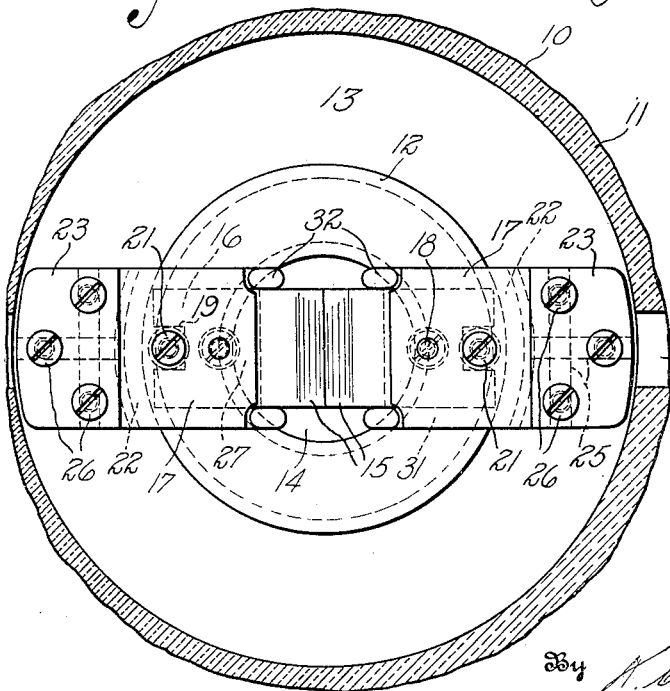


Fig. 3

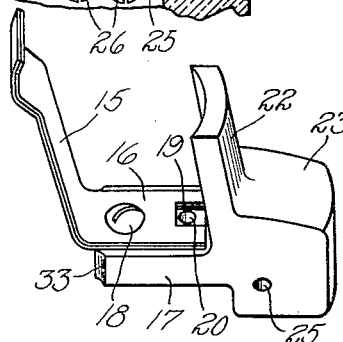
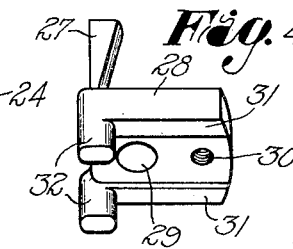


Fig. 4



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TERMINAL MOUNTING FOR LIGHTING FIXTURES

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6 Claims. (Cl. 173-328)

The present invention relates to electric fixtures, and more particularly to lighting fixtures adapted for use in street and road lighting and wherein contacts are made in high voltage circuits.

5 An object of the present invention is to provide a simplified mounting for the terminals in the insulator of the lighting fixture, and wherein the insulator body may be constructed to carry out the essential features of uniform density, the requisite dielectric resistance and mechanical strength, and wherein the parts may be readily molded in the usual way by rotation of the die forming the annular and other spaces required.

10 Another object of the present invention is to provide a terminal support which is mounted directly on a portion of the insulator body, and which may have a loose fit therewith to admit a little play between the support and the insulator body and accommodate any irregularities which may occur from various causes in the manufacture of the parts, temperature changes and the like.

15 A further object of this invention is to provide a relatively strong and secure mounting for the terminals which admits of the quick and easy assemblage of the insulator as a whole, and which overcomes the necessity of employing the usual sub-base which has heretofore been required in prior constructions of this general character.

20 Other objects will be in part obvious, and in part pointed out more in detail hereinafter.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the appended claims.

25 In the accompanying drawing, wherein is shown one embodiment which the present invention may take:

Fig. 1 is a fragmentary sectional view taken through a portion of the insulator of a lighting fixture constructed in accordance with the present invention;

Fig. 2 is a fragmentary bottom plan view of the same, certain parts being broken away;

Fig. 3 is a detail perspective view of one of the terminals with its combined clamping jaw and connector; and

Fig. 4 is a bottom perspective view of the opposite clamping jaw for the terminal.

Referring to the drawing in detail, 10 designates an insulator body which may be of any suitable configuration or general form and which is pro-

vided in its lower side with a plurality of concentric walls or skirts 11 and 12 providing therebetween an annular space or channel 13 and a centrally disposed chamber or opening 14. The opening 14 may be carried back into the body 10 of the insulator to accommodate inserted contact fingers or tongues which may be carried upon a plug member for cooperation with the terminals of this invention.

The skirt 12 is spaced inwardly from the skirt 11 and is given an irregular cross sectional construction or form. In the present instance, the skirt 12 is of dovetail cross section with the base or larger portion outermost at the free edge of the skirt.

Supported in the chamber or cavity 14 is a pair of terminals 15 of the spring type and which are constructed of suitable non-corrosive electric conducting material and may be laminated or otherwise constructed to impart the desired strength and resiliency for yieldingly urging the terminals 15 toward each other at their free ends, as shown in Fig. 1.

As shown in Fig. 3, each terminal 15 is provided with a base flange or portion 16 bent substantially at right angles to the terminal 15 and which is seated upon the base 17 of an outer combined jaw and terminal member which is also of electricity conducting material. The base 16 of the terminal is mounted upon the base 17 of the jaw member by means of a screw 18 or the like which passes downwardly through the terminal base 16 and is threaded into the jaw base 17. The free end of the terminal base 16 is recessed or notched, as at 19, to register with an opening 20 in the jaw base 17 to admit the free passage of a screw 21 upwardly through the jaw base 17 and the terminal base 16.

Extending upwardly and inclined inwardly from the outer end of the jaw base 17 is a jaw portion 22 adapted to conform to the inclined outer side of the skirt 12. The portion 22 is also transversely curved to conform to the curved exterior surface of the skirt 12. This jaw portion is given any other suitable configuration to adapt it to the outer side of the skirt 12. The jaw base 17 also carries a connecting socket 23 which is disposed outwardly of the base 17 and the jaw portion 22 and is preferably offset downwardly to register with an opening 24 formed in the lower portion of the skirt 11. The socket portion 23, as shown in Fig. 1, is provided with a wire terminal receiving aperture 25 in line with the opening 24, and the socket carries clamping screws 26 which are threaded through the lower

portion of the socket 23 for binding engagement against the wire terminal to not only hold the same in the socket but to establish the desired electrical connection therewith.

5 Cooperating with the outer jaw thus described and shown in Fig. 3, is an inner jaw 27, shown in Fig. 4. The jaw 27 has an inner face which is not only inclined with respect to the longitudinal axis of the insulator body 10, but is also transversely curved to conform to the curvature of the inner side of the skirt 12. This jaw 27 may also be given any other suitable configuration to adapt it to the inner side of the skirt 12. The jaw 27 is provided with a base portion 28 adapted to overlie the base 16 of the terminal and which is provided in its underside with a cavity 29 to receive the head of the screw 18 and with a threaded opening 30 receiving therein the upper threaded end of the screw 21. The opening 30 registers with the notch or recess 19 in the terminal base 16 and with the opening 20 in the outer jaw base 17.

The inner jaw base 28 is provided with depending ribs or flanges 31 at its opposite longitudinal sides adapted to seat upon the upper face of the outer jaw base 17 at the opposite longitudinal edges of the terminal base 16 to maintain the latter against turning on the screw 18 as an axis. The inner jaw base 28 is rounded or otherwise formed to seat against the inner face of the outer jaw portion 22 at the base thereof to hold the jaw bases 28 and 17 in relative alinement, and is provided at its free corners with interlocking pins or posts 32 which may be round, as shown, for seating engagement against rounded depressions 33 provided in the outer free corners of the base jaw 17. These posts or pins 32 extend upwardly at opposite sides of the terminal 15 and outwardly beyond the adjacent corners of the base 28 so as to lie at opposite sides of the curved portions of the terminal 15 for protecting the latter. The socket member (not shown) is adapted to abut against the lower ends of the posts 32.

45 The parts may be assembled in various ways, but preferably the inner jaws 27 are first placed against the inner side of the annular skirt 12 at diametrically opposed points and in registry with the outer skirt openings 24, and with the base portions 28 opposite the enlarged or free edge of the skirt. The outer jaw member 22 is now positioned with its base 17 against the base 28 of the inner jaw member, the upwardly convergent angles of the terminals 15 admitting of the tilting of the outer jaw member to the desired extent to escape the enlarged free end of the skirt 12 during assembling operation. The socket end 23 of the outer jaw member is then swung upwardly and the upper threaded end of the screw 21 is engaged in the base 28 of the inner jaw member. The tightening of the screw 21 draws the bases 17 and 28 together and swings the outer jaw member 22 upwardly into contact with the outer surface of the skirt 12. A dovetail socket is thus provided between the jaws 22 and 27 and the dovetail skirt or tongue 12 is thus interlocked with the jaws so that the jaws cannot slip from the skirt, and the terminals 15 are thus positively held at their bases to the insulator body. There is preferably a slight play or looseness between the jaws 22 and 27 and the interposed portion of the skirt 12 to accommodate the parts to irregularities in manufacture and incident to temperature changes. The wire connections may now be readily made through the

openings 24 in the outer skirt 11, or otherwise according to the type of insulator body 10 employed, by clamping the ends or terminals of the wires in the socket openings 25 by the binding screws 26. If desired, the free or lower end of the skirt 12 may be provided with notches or recesses 34 to accommodate the upper projecting ends of the screws 21 when the latter are turned up through the bases 17 and 28, and thus the fingers are properly alined.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

I claim as my invention:

1. An insulator body having a depending wall, an electric terminal, a pair of jaw members having portions adapted to interlock with the wall, said jaw members having interlocking portions adapted to house one end portion of the terminal, and means for retaining said end portion of the terminal between the interlocking portions of the jaw members.

2. An insulator body having a portion irregular in cross section, an electric terminal having a base portion, a jaw adapted to engage one side of said irregular portion, a second jaw for interfitting engagement against the opposite side of said irregular portion, said jaws having portions adapted to overlap and to house therebetween the base portion of said terminal, and means for securing said jaws together for holding the same to said irregular portion of the insulator body and supporting the terminal thereon.

3. An insulator body having a depending skirt dovetail in cross section with its base portion lowermost, a pair of electric terminals, a dovetail jaw member carried upon the base of each terminal and adapted for engagement against the outer side of the dovetail skirt, and cooperating jaws adapted for engagement against the inner side of said dovetail skirt and connected to said first jaws for cooperation therewith to support the terminals on the skirt, said first mentioned jaws having means for receiving electric current conductors.

4. An insulator body having an annular depending skirt dovetail in cross section with its base portion outermost, a pair of electric terminals, a pair of jaws one for each terminal engaging against the outer side of the skirt and each having a base portion extending across the base portion of the skirt, and a pair of complementary jaws one for each of said first jaws engaging the inner side of the skirt and each having a base portion adapted to lie between the base portions of the skirt and one of the first jaws, and means for releasably clamping said jaws together for interlocking the same in opposed relation on said skirt to support the terminals, said first mentioned jaws having means for receiving electric current conductors.

5. An insulator body having a depending skirt irregular in cross section, a pair of outer jaws having irregular surfaces adapted to interfit with

the outer face of said skirt, a pair of inner jaws for cooperation with the respective outer jaws and having irregular surfaces adapted to interfit with the inner surface of the skirt, said jaws
 5 having base portions adapted to overlap beneath the skirt, means for detachably binding said base portions of the cooperating jaws together for interlocking position with the skirt, and a pair of electric terminals disposed within the skirt, each
 10 terminal having a base portion secured between the base portions of the respective cooperating jaws, said first mentioned jaws having means for receiving electric current conductors.

6. An insulator body having opposed dovetail
 15 projections, a pair of clamping jaws for each projection having opposed faces interfitting therewith, the jaws of each pair having overlapping base portions disposed beneath the adjacent projection, a clamping screw for binding
 80 said base portions together for holding the respective pair of jaws upon the projection, an electric terminal for each pair of jaws, each terminal having a base portion extending between the base portions of the jaws, and means
 85 for securing the base portion of the terminal to the base portion of one of said jaws to admit the withdrawal of the terminal with one of said base portions, each pair of jaws having means for receiving electric current conductors.

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