Sept. 8, 1931. J. J. DESMOND 1,822,019

LIGHTING FIXTURE

Filed Oct. 12, 1928

Fig. 1.

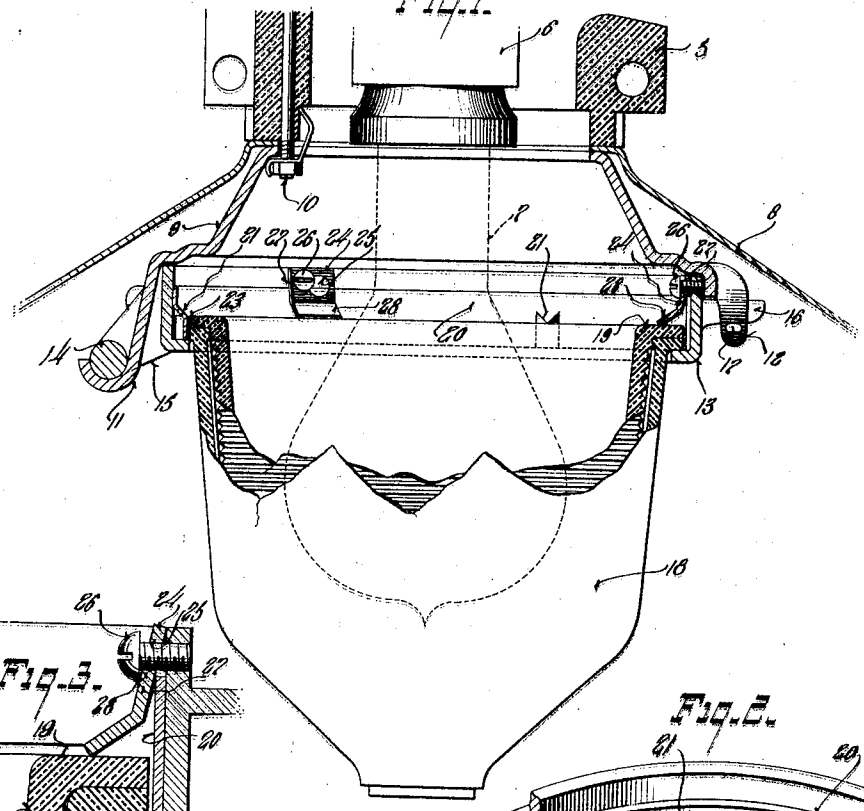


Fig. 3.

Fig. 2.

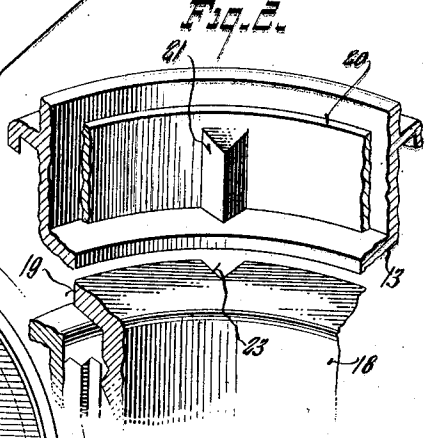
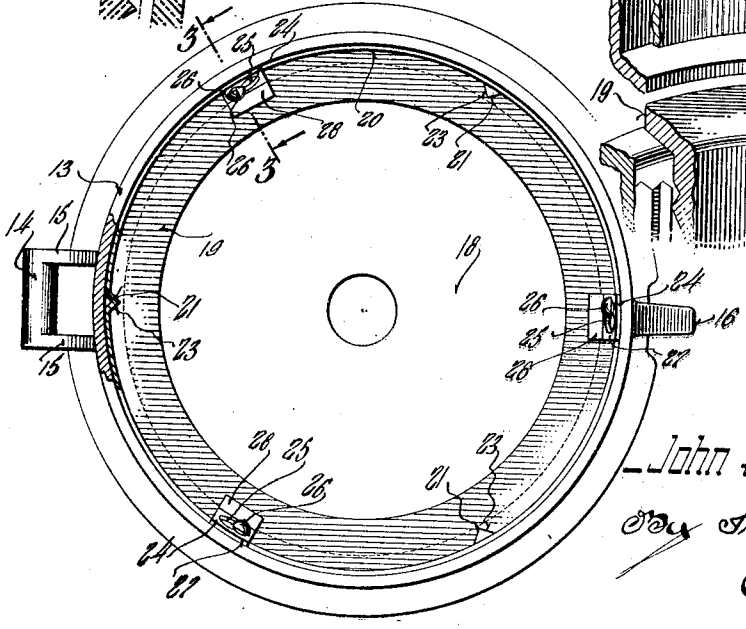


Fig. 4.



Inventor
John J. Desmond
By Ira Milton Jones.
Attorneys

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UNITED STATES PATENT OFFICE

JOHN J. DESMOND, OF HUBBARD WOODS, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO LINE MATERIAL COMPANY, OF SOUTH MILWAUKEE, WISCONSIN, A CORPORATION OF DELAWARE

LIGHTING FIXTURE

Application filed October 12, 1928. Serial No. 312,094.

This invention relates particularly to means for connecting glass refractors of the two, three and/or four way type with a lighting fixture.

It is necessary that refractors of this type be held against rotation to insure their concentrated rays being cast in the proper direction and heretofore this has been accomplished by notches formed in the glass refractor with which projections carried by a metal refractor holder engaged. While this manner of preventing rotation of the refractor with respect to its holder is effective, it is objectionable in that frequently rotational adjustment is required, which can be obtained only through turning the entire fixture on its support and very often the construction of the fixture or the fact that its attaching portion has corroded into its mounting makes this course practically impossible. Therefore, the present invention has as its primary object to provide means for connecting a refractor with a fixture whereby rotational adjustment independently of the fixture is readily obtainable.

Another object of this invention resides in the provision of means for connecting a refractor with its mounting member, which remains undisturbed during removal or opening of the refractor for cleaning.

And a more specific object of this invention resides in the provision of a ring member having inwardly extended projections with which notches formed in the refractor engage and means for securing the ring member in the refractor holder of a lighting fixture against rotation, whereby adjustment of the refractor may be effected by turning the ring member independently of the fixture.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated one complete example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a side elevational view of a portion of a street lighting fixture illustrating my improved refractor mounting means secured thereto with parts broken away and in section;

Figure 2 is a fragmentary perspective view of the refractor holder with the separable ring in position and illustrating a portion of the upper periphery of the glass refractor in which the notches are formed;

Figure 3 is a fragmentary sectional view taken through Figure 4 on the plane of the line 3—3, and

Figure 4 is a top view of the refractor holder with a refractor assembled therewith and with a portion broken away and in section.

Referring now more particularly to the accompanying drawings in which like numerals designate like parts throughout the several views, 5 represents the housing of a lighting fixture which may be of any desired construction having a light socket 6 positioned therein to receive a lamp 7. A reflector 8 and a refractor mounting member 9 are secured to the housing by bolts 10 or the like and the refractor mounting member 9 is provided with a downwardly projecting hook or retaining member 11 and a pair of spaced downwardly projecting lugs 12 apertured at their lower outer ends by which a refractor holder 13 is connected with the fixture.

The refractor holder 13 is substantially a channel shaped ring member and is hingedly connected with the mounting member 9 by a pivot pin 14 bridging the outer ends of a pair of outwardly and downwardly extended arms 15 formed integral with the holder, the pivot pin being engaged in the hook portion of the member 11. The holder 13 may thus be swung on its pivot 14 from a closed position, adjacent the lower edge of the mounting member 9, to a position disposed at an angle thereto to permit access

to the interior of the fixture and is maintained in its closed position by a finger 16 which projects between the arms 12, in which position it is secured by a pin or key 17 extending through the apertures at the lower outer portions of the arms.

A refractor 18 which may be of the two, three or four way type and which may be formed of a double thickness of glass as illustrated, is provided with a laterally extended flange 19 at its upper periphery which rests on the lower portion of the channel shaped refractor holder 13 to support the refractor. A ring member 20 formed of a relatively thin band of metal having inwardly pressed projections 21 encircles the flange 19 of the refractor and is positioned between the outer wall of the flange and the inner wall of the holder 13 with its projections 21 engaging notches 23 in the flange 19 of the refractor. A plurality of clips 24 bent to an obtuse angle and provided with a key slot 25 are secured to the inner wall of the holder 13 at spaced intervals by screws 26 or the like that pass through the substantially vertical leg 27 of the clips engaging their upper edges with the wall of the refractor holder and clamping the ring 20 against rotation, the lower or substantially laterally directed legs 28 of the clips 24 engaging the upper periphery of the flange 19 of the refractor and maintaining the same against vertical displacement.

Thus it will be seen that to adjust the refractor so that its concentrated rays are cast in the desired direction it is but necessary to loosen the screws 26 which clamp the clips 24 against the ring member 20. This permits the refractor together with the ring 20 to be turned in the channel shaped holder 13 to any desired position. It will be noted that the keyhole slots 24 are directed at an upward angle so that the clips 24 may be properly adjusted to exert proper pressure on the upper periphery of the flange 19 of the refractor and restrain all longitudinal movement thereof with respect to the holder.

From the foregoing description taken in connection with the accompanying drawings it will be readily apparent to those skilled in the art to which an invention of this character appertains that I provide novel means for securing a refractor in its holder which means readily permits adjustment of the concentrated rays of the refractor independently of the fixture proper and in which opening of the refractor to permit access to the interior of the fixture does not disturb the setting thereof.

I claim:

1. In combination with a lighting fixture of the character described, and including a refractor holder and an asymmetrical refractor adapted to direct concentrated rays of light in predetermined directions carried thereby, the holder being hingedly mounted for swinging movement to and from closed position to permit access to the fixture interior, a ring member non-rotatably connected with the refractor, and means adjustably securing the ring member in the refractor holder to rigidly connect the refractor with the holder, said means enabling the refractor to be adjusted with respect to the fixture.

2. In combination with a lighting fixture of the character described, including a refractor holder and an asymmetrical refractor adapted to direct concentrated rays of light in predetermined directions carried thereby, the refractor holder being hingedly connected with the fixture to enable it and the refractor to be swung to open position to permit access to the fixture interior, and means for securing the refractor in the holder, said means comprising a protecting ring for the refractor non-rotatably connected therewith, and means releasably clamping the ring in the holder whereby the refractor may be adjusted independently of the fixture per se to direct concentrated rays of light from the fixture in any desired direction.

3. In combination with a lighting fixture of the character described including a refractor holder and a refractor carried thereby, the holder being hingedly mounted for swinging movement to and from closed position to permit access to the fixture interior, a band like ring member surrounding part of the refractor, projections formed on said ring member and received in depressions in the said part of the refractor to non-rotatably connect the ring member with the refractor, and means for adjustably securing the ring member in the refractor holder to rigidly connect the refractor with the holder, said means enabling the refractor to be adjusted with respect to the fixture.

4. In combination with a lighting fixture including a ring like refractor holder and a refractor carried thereby, the holder being movably but non-rotatably connected with the fixture to enable the same to be moved to permit access to the fixture interior and having an annular abutment to support the refractor, a band like ring member surrounding the portion of the refractor within the holder and disposed between the annular wall of the holder and the refractor with a portion projecting above the refractor, projections extended from the band like ring member and received in notches in the adjacent part of the refractor to non-rotatably connect the band like ring member with the refractor, and means for releasably clamping the band like ring member in the holder, said means also engaging the refractor to hold the same against longitudinal movement.

5. In combination with a lighting fixture of the character described, including a refractor holder movably but non-rotatably connected with the fixture and an asymmet-

rical refractor adapted to direct concentrated rays of light in predetermined directions carried thereby, and means for adjustably securing the refractor in the holder, comprising a ring member non-rotatably connected with the refractor, and means for securing the ring member against movement in the holder.

In testimony whereof I have hereunto affixed my hand.

JOHN J. DESMOND.