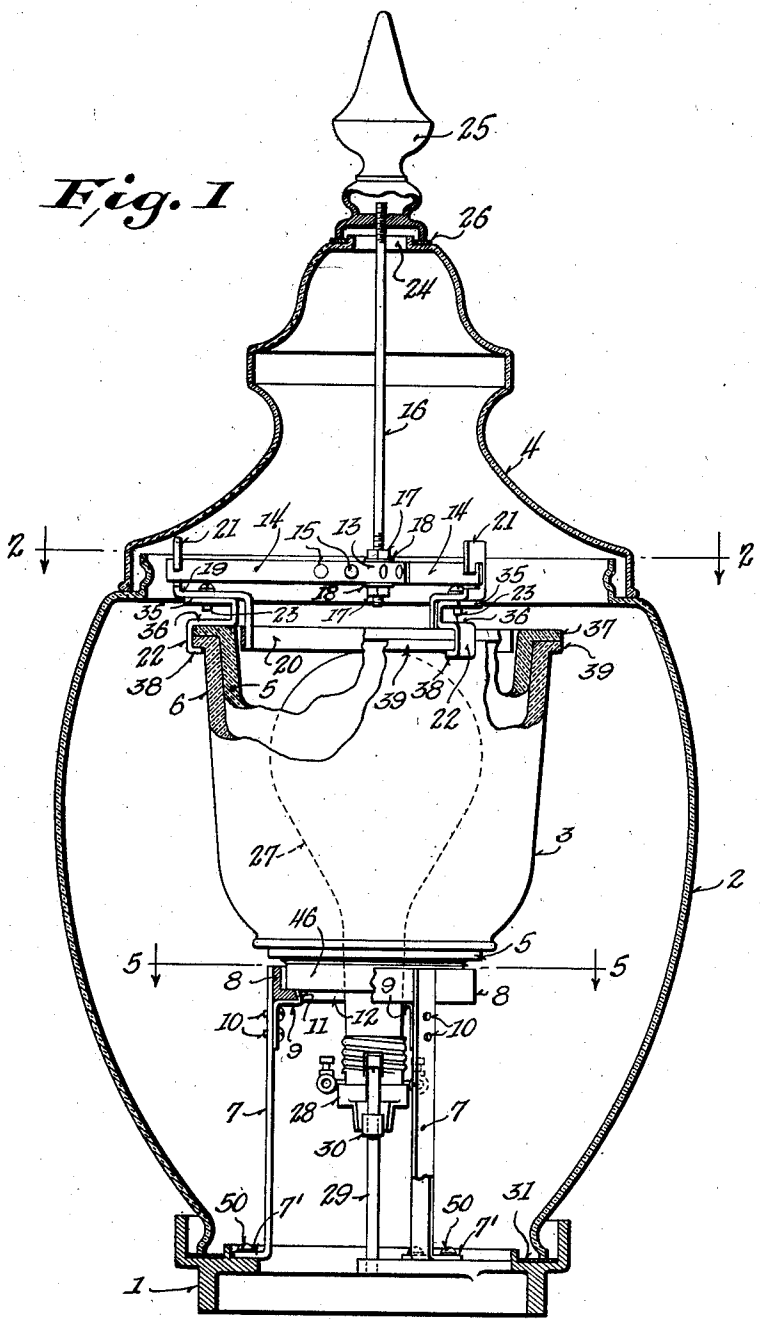
May 17, 1938. A. G. STEINMAYER ET AL 2,117,862

STREET LIGHTING FIXTURE

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Fig. 1



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Fig. 2

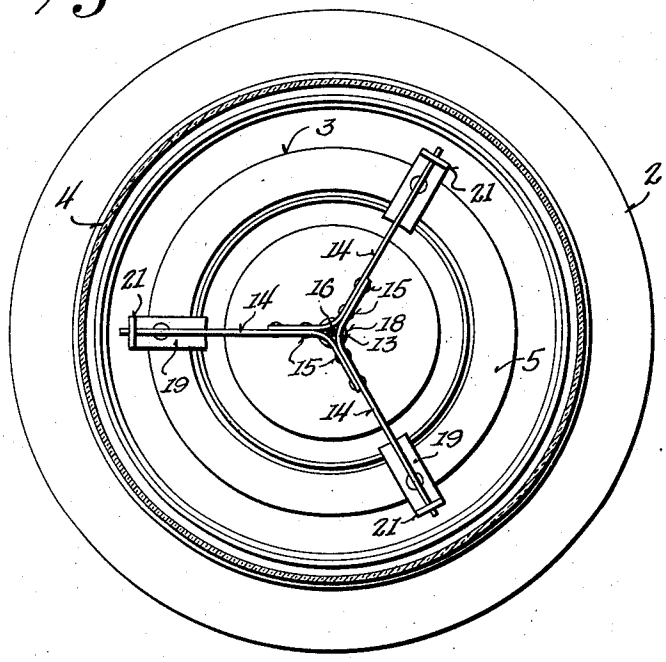


Fig. 5.

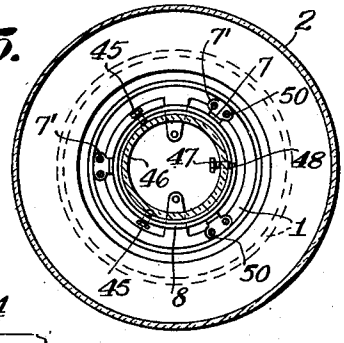


Fig. 3.

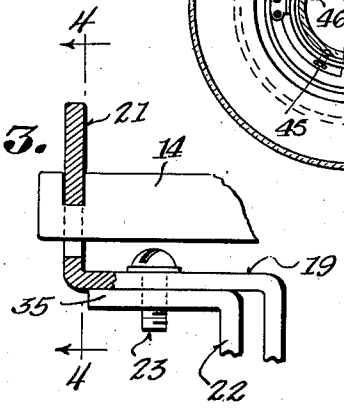
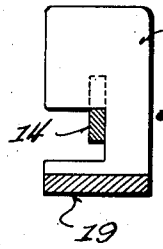


Fig. 4.



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STREET LIGHTING FIXTURE

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Application May 2, 1935, Serial No. 19,400

8 Claims. (Cl. 240—25)

This invention relates to improvements in street lighting fixtures.

It is an object of this invention to provide improved means for supporting a refractor bowl and a canopy from a supporting base upon which a lighting bowl surrounding the refractor bowl is mounted.

Street lighting fixtures frequently comprise a glass globe or bowl, a glass canopy for the globe, a refractor bowl in the globe, and supporting means for all of these elements. One of the difficulties involved in supporting these elements is in providing supporting means which will not interfere with the proper distribution of light coming from the refractor, and which will not cast visible objectionable shadows.

We are aware that supporting means have heretofore been provided which do not cast objectionable shadows, but it has been found that when the globe or bowl has been broken, the canopy would then be unsupported and would fall and break the refractor bowl.

Therefore, we have provided an arrangement in which the canopy is supported from and held in place by the refractor bowl, the refractor bowl being supported from the lighting fixture base independently of the globe surrounding the refractor. As a result, when the globe is broken, the remaining structure will not collapse or be destroyed in consequence thereof. At the same time we have provided an arrangement which will not interfere with the proper distribution of light coming from the refractor bowl or cast any objectionable shadows.

In the drawings:

Fig. 1 is a vertical sectional view of a lighting fixture embodying this invention.

Fig. 2 is a plan view taken on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged fragmentary view partly in section of the canopy supporting spider.

Fig. 4 is a view taken on the line 4—4 of Fig. 3.

Fig. 5 is a view taken on the line 5—5 of Fig. 1, the light bulb being removed.

Like parts are identified by the same reference characters throughout the several views.

The fixture disclosed in the drawings comprises four main parts, namely, a base 1, transparent globe 2, refractor bowl 3, and a transparent canopy 4. The globe 2 rests on a felt washer 31 on the base 1 and the base may be secured to any suitable object such as a pole (not shown). The refractor 3 comprises an inner bowl 5 and an outer bowl 6. These bowls are shown as contacting interiorly of the bowl 6, but it will be understood that they preferably do not contact in order to allow for differences in expansion between the bowls. This preferred arrangement of the refractor bowls is old and is well known to the art.

The refractor 3 is supported from the base 1 by means of uprights 7 upon which a flanged ring 8 is supported by means of the clamping brackets 9. The uprights are each provided with feet 7' secured to the base 1 by means of bolts 50. It will be noted that the clamping brackets are secured to the uprights 7 by means of bolts 10 and are provided with angular upright finger portions 11 engaging the inner angular face 12 on the flange ring 8.

Mounted on the refractor bowls 5 and 6 is a canopy supporting spider 13 having three arms 14 extending radially relative to and above the refractor bowls. As clearly shown in Fig. 2, these arms are secured together by means of rivets 15, and provide an opening through which the rod 16 extends. This rod 16 is secured to the legs by means of nuts 17 engaging the washers 18. The arms 14 each engage clamping brackets 19 mounted on and secured to the spacing ring 20 within the refractor bowl 5. The brackets 19 are provided with the upright portions 21 slotted laterally to receive the arms 14. As shown, each of the arms is also slotted vertically to receive the portion of the upright 21 disposed above the lateral slot therein. Thus the uprights and arms are interlocked against unwarranted movements.

Each of the clamping brackets 19 is mounted on clamping jaw members 22 which are bent to clampingly engage the flanges of the refractor bowls 5 and 6. As illustrated, the members 22 are each reversely curved to provide a bracket engaging arm 35, a supporting arm 36 resting on the flange 37 of the bowl 5, and a clamping finger 38 engaging the underside of the flange 39 on the bowl 6. The rod 16 extends upwardly through an opening 24 in the top of the canopy and is threadedly engaged by a finial 25. The finial 25 rests on a fibre washer 26 on the canopy and serves to draw the canopy downwardly into clamping engagement with the bowl 2.

Mounted within the refractor bowls is an electric light bulb 27 extending through the bottom of the refractor bowls and mounted on the electric light socket 28. The electric light socket is supported by posts 29 and is adjustable vertically thereon by means of the clamping member 30. The posts 29 are threadedly mounted on the base 1. The detail of the clamping member 30 is not given, because this is standard structure known to the trade and forms no part of this invention.

It will be noted that the upright portions 21 of the clamping brackets 19 extend to a point in close proximity to the canopy 4. When, for any reason, the globe 2 is broken and no longer supports the canopy 4, the canopy will rest upon the uprights 21 and be prevented from falling into contact with the refractor bowl, thus saving both the canopy and refractor bowl from destruction when the bowl 2 fails to support the canopy.

If it is desirable to remove or repair any of the fixture elements, it is only necessary to remove the finial 25 from the rod 16. The canopy 4 may then be raised from the globe 2 and the remaining parts replaced or repaired in an obvious manner.

We have provided supporting means for the refractor bowls 5 and 6 which permit rotative adjustment of the bowls on the supporting flanged ring 8 when the lighting fixture is originally assembled and which will, after these adjustments are made, serve to always insure that the refractor bowls will be replaced in the same position; thus light distribution effects of the bowls secured by the original adjustment will be duplicated when the bowls are removed and replaced. Fig. 5 clearly illustrates an embodiment which produces the desired results. The flanged ring 8 is provided with a pair of clamping screws 45 which engage the neck 46 on the bowl 5. Threaded through the neck 46 is an aligning screw 47 which extends into a recess in the flanged ring 8 at 48. When it is desired to remove the bowls 5 and 6, it is only necessary to release the screws 45 and when the bowl is replaced to tighten these screws. Obviously the screw 47 serves to determine the position of the bowls relative to the ring 8.

The original rotative adjustment of the bowls 5 and 6 is secured by releasing the clamping brackets 9 and rotating the flanged ring 8 on these brackets until the desired light effects of the bowls are secured. The brackets 9 will then be clamped to the ring 8 by the bolts 10 and hold the ring in position to serve as means for securing the same alignment of the bowls when replaced on the ring.

From the foregoing disclosure it becomes apparent the objects of this invention have all been attained, the principal objects being to provide a canopy support for preventing a frangible canopy from falling upon a frangible refractor after the globe which supported the canopy has been destroyed. Furthermore, the means for supporting the canopy after the globe is destroyed is of such nature that it will not cast any objectionable shadows when light is being transmitted from the interior of the refractor bowl.

Although we have illustrated but a single embodiment of our invention, nevertheless we recognize that there are various modifications that may be made without departing from the spirit of the invention. Therefore, it will be understood that the claims are not to be limited to the specific disclosure in the drawings and description thereof.

We claim:

1. In a lighting fixture comprising a base, a light transmitting globe on the base, and a frangible canopy normally supported by the globe; a light transmitting refractor bowl in the globe and removably supported from said base independently of said globe, in combination with support means removably mounted on said bowl, and means on said supporting means and beneath said canopy for receiving and supporting the canopy when the globe is destroyed or removed from the base, said means on said support being disposed adjacent the inner wall of said canopy, whereby breakage of said canopy will be prevented when said globe is destroyed.

2. In a lighting fixture comprising a base, a light transmitting globe on the base, and a canopy supported by the globe; a light transmitting refractor bowl in the globe and supported from the base independently of the globe, in combination with a canopy supporting spider mounted on and secured to said refractor bowl, a rod secured to the spider and extending through the top of the canopy, and a finial engaging the rod and clamping the canopy on said globe, said spider having canopy receiving means for supporting the canopy from the refractor, when the globe has been removed.

3. In a lighting fixture, a base, a globe supported on the base, a flanged refractor bowl in the globe supported on the base independently of the globe, a canopy supported by the globe, and means supported by the refractor bowl and securing the canopy in place; said means comprising a spacing ring, bracket arms secured to the ring, a clamping member removably secured to each of said arms and supported by and secured to the flange on said refractor bowl, a spider supported by the bracket arms, a rod secured to the spider and extending vertically to the top of the canopy, and a finial engaging the rod and the canopy, thereby holding the canopy on said globe.

4. In a lighting fixture, a base, a globe supported on the base, a flanged refractor bowl in the globe supported on the base independently of the globe, a canopy supported by the globe, and means supported by the refractor bowl and securing the canopy in place; said means comprising a spacing ring, bracket arms secured to the ring, a clamping member removably secured to each of said arms and supported by and secured to the flange on said refractor bowl, a spider supported by the bracket arms, a rod secured to the spider and extending vertically to the top of the canopy, and a finial engaging the rod and the canopy, thereby holding the canopy on said globe, said bracket arms each extending to a point adjacent the canopy to serve as a support therefor when the globe is removed.

5. In a lighting fixture having a base, a globe supported by the base and a canopy supported by the globe; a refractor bowl in said globe, in combination with a supporting structure carried by the base and supporting the refractor bowl, said structure including means for rotatively and adjustably securing the bowl on said structure and means for releasing the bowl without disturbing the rotative adjustment of the bowl, and clamping means carried by the refractor bowl and engaged with the canopy to hold it on said globe.

6. In a lighting fixture having a base, a globe supported by the base, and a canopy supported by the globe; a refractor bowl in said globe, in combination with a supporting structure carried by the base and supporting the refractor bowl, said structure including means for rotatively and adjustably securing the bowl on said structure and means for releasing the bowl without disturbing the rotative adjustment of the bowl, and clamping means carried by the refractor bowl and engaged with the canopy to hold it on said globe, said clamping means being provided with supports for supporting the canopy when the globe is removed.

7. In a lighting fixture having a base, a globe supported by the base, and a canopy supported by

the globe; a refractor bowl in said globe, a supporting structure carried by the base and supporting the refractor, said structure including a flanged ring rotatively adjustably secured to the base, inter-acting means between the refractor bowl and ring for securing them in rotative alignment, clamping means on the ring securing the bowl in said rotative alignment, a supporting spider secured to the refractor bowl, and clamping means on the spider holding the canopy on the globe.

8. In a lighting fixture having a base, a globe supported by the base, and a canopy supported by the globe; a refractor bowl in said globe, a supporting structure carried by the base and supporting the refractor, said structure including a flanged ring rotatively adjustably secured to the base, inter-acting means between the refractor bowl and ring for predetermining their rotative alignment, clamping means on the ring securing the bowl in said rotative alignment, a supporting spider secured to the refractor bowl, clamping means on the spider holding the canopy on the globe, said supporting spider being provided with means for supporting the canopy when the globe is removed.

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