

March 13, 1934.

H. J. SAUER

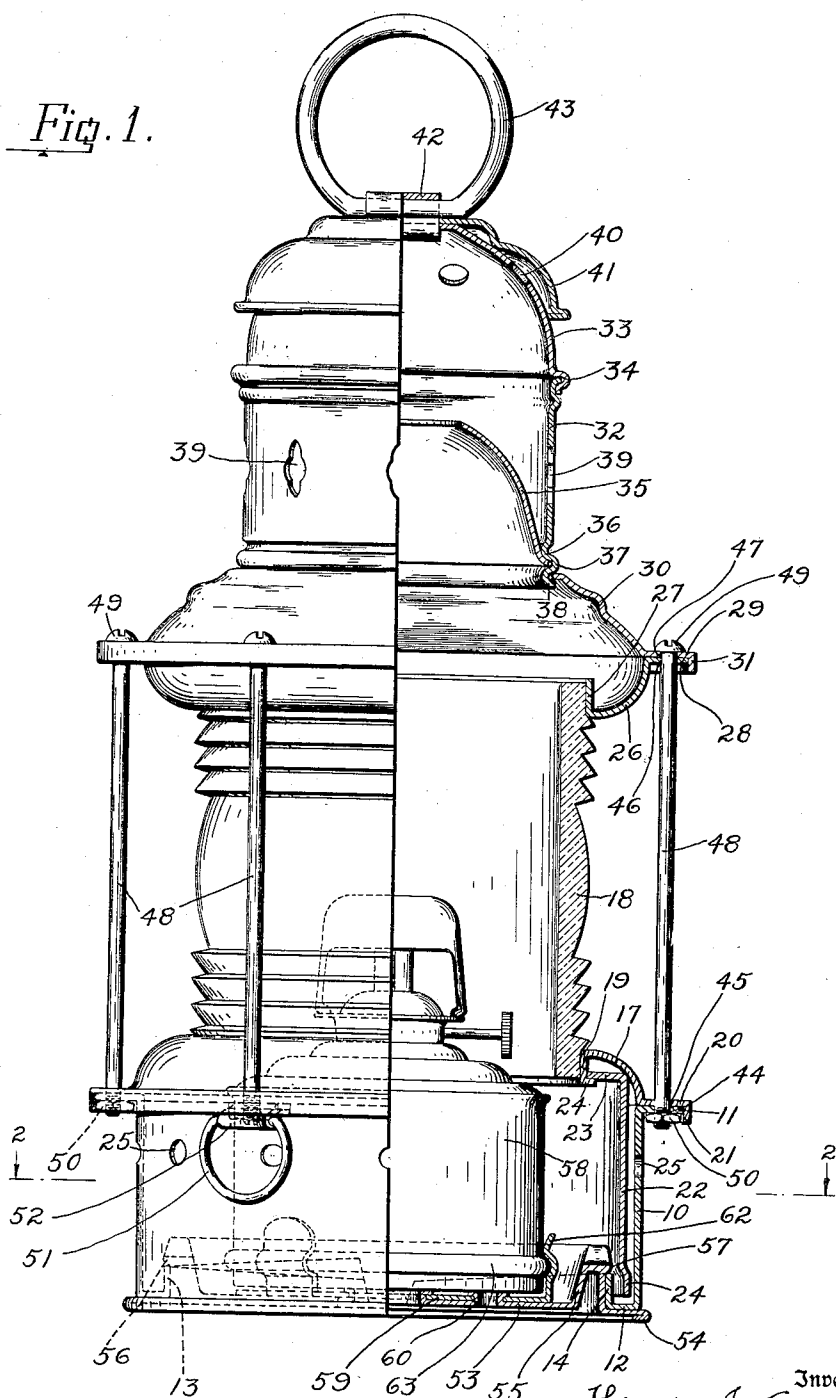
1,950,696

MARINE LAMP

Filed July 15, 1932

2 Sheets-Sheet 1

Fig. 1.



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March 13, 1934.

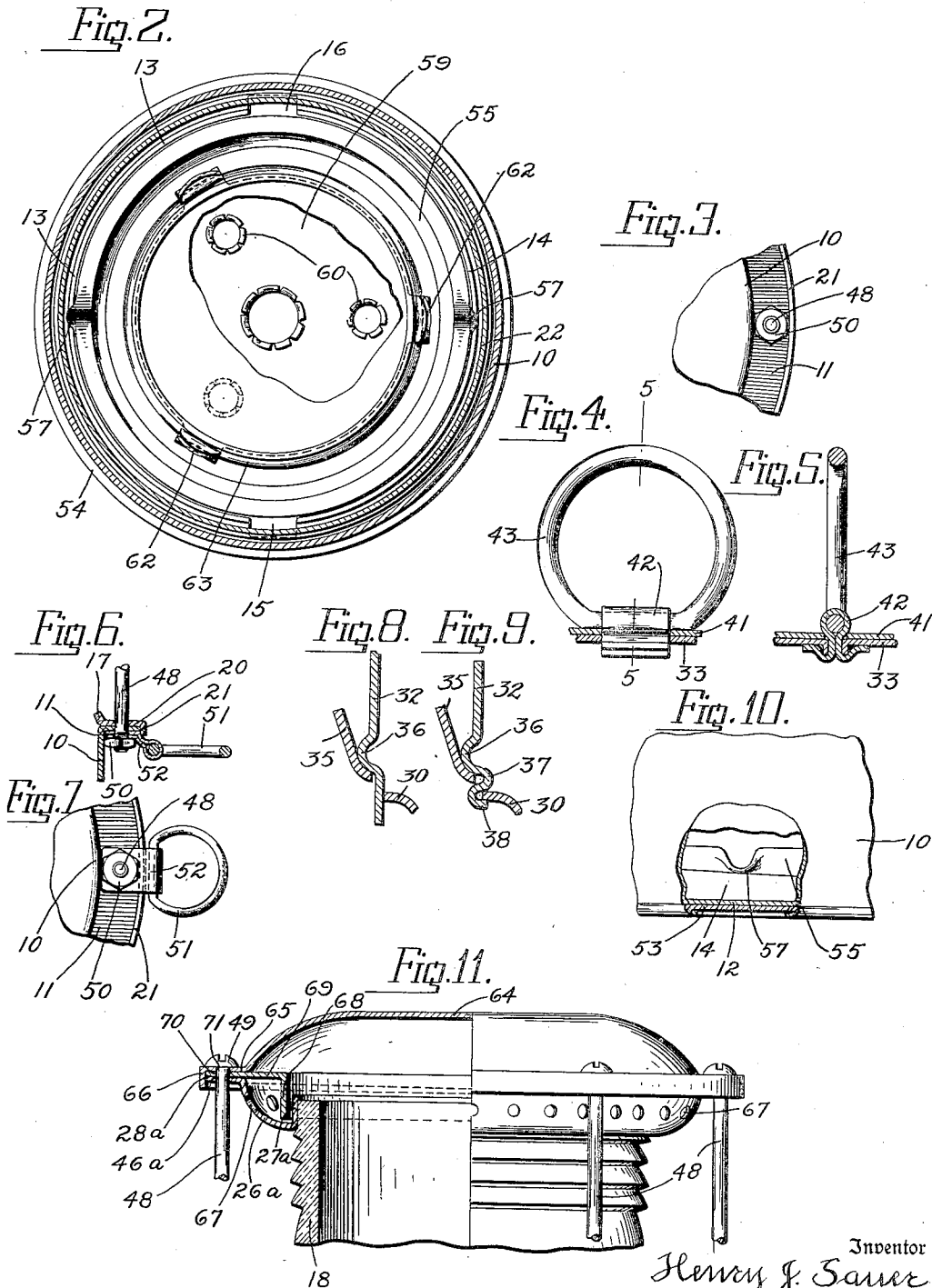
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

1,950,696

MARINE LAMP

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Application July 15, 1932, Serial No. 622,582

16 Claims. (Cl. 240—11)

The present invention relates to marine lamps, and has for an object to provide a lamp of this character in which the principal parts are in the form of metal stampings, and which are adapted to be assembled and disassembled without solder joints, so that in the event of damage to any of the parts they may be replaced, and the lamp will not be subject to separation of its parts from the action of heat and fire. I further propose to provide a lamp structure of strong, rigid and reliable construction, and which will function properly under the severe weather conditions to which such lamps are subjected in use.

With the above and other objects in view embodiments of the invention are shown in the accompanying drawings, and these embodiments will be hereinafter more fully described with reference thereto, and the invention will be finally pointed out in the claims.

In the drawings:

Fig. 1 is a view, half in elevation and half in vertical section, of a marine lamp according to the illustrated exemplary embodiment of the invention.

Fig. 2 is a horizontal sectional view, taken along the line 2—2 of Fig. 1, the oil fount being partially broken away.

Fig. 3 is a detail fragmentary view of a portion of the base.

Fig. 4 is a detail sectional view of the upper end of the lamp, showing the ring handle.

Fig. 5 is a vertical sectional view taken along the line 5—5 of Fig. 4.

Fig. 6 is a detail sectional view of a portion of the base showing a tie ring employed.

Fig. 7 is a bottom view thereof.

Figs. 8 and 9 are detail sectional views showing a joint employed in assembling the hood portion.

Fig. 10 is a fragmentary detail view of the base, partly broken away, showing the closure securing means employed.

Fig. 11 is a view, half in vertical section and half in elevation of the upper end of a modified form of the invention.

Similar reference characters indicate corresponding parts throughout the several figures of the drawings.

Referring to the drawings, the marine lamp, according to one exemplary embodiment of the invention, comprises a cylindrical base 10 having an outwardly bent lateral flange 11 at its upper end and having at its lower end an inwardly bent lateral flange 12, provided with upwardly bent

substantially semi-circular cam flanges 13 and 14, the ends of which are spaced apart by cut-outs 15 and 16 in the lateral flange 12. The cam flanges 13 and 14 are of gradually increasing height from one end to the other, the low end of one flange being adjacent the high end of the other, and are adapted to have a closure and fount supporting member removably secured thereto, as will hereinafter more fully appear.

A rim member 17 of arcuate cross section, adapted to support the lower end of the "Fresnal" type lens globe 18, is provided at its inner edge with a downwardly extending flange 19 into which the lower end of the globe is snugly fitted. The outer section of the rim member is in the form of a flat marginal flange 20 adapted to seat upon the upper flange 11 of the base 10 and is bent downwardly at its outer edge, as at 21, forming a recess into which said flange 11 fits, the portion 21 extending below the flange 11 to conceal the tie rod ends, hereinafter to be more fully described.

A cylindrical baffle member, carried by the rim member and extending into the base 10, comprises a cylindrical baffle wall 22 provided at its upper end with an inwardly bent lateral flange 23 extending and supported between the arcuate inner surface of the rim member 17 and the flange 19, the latter being outwardly bent, as at 24, beneath the flange 23 to thereby rigidly secure the baffle to the rim member. The point of engagement of the baffle with the curved inner surface of the rim member determines the inward spacing of the baffle from the cylindrical base 10, it being understood that this may be readily changed by varying either the angularity or width of the flange 23, or by changing the curve or inclination of the rim member. The lower end of the baffle is preferably given an outwardly offset bend, as at 24, to stiffen it and is disposed in the space between the wall 10 and the flanges 13 and 14 in spaced relation to said wall 10 and the lateral flange 12. A series of air inlet openings 25 is provided in the wall 10 near its upper end, and air entering these openings is baffled by the wall 22, passing about its lower edge into the interior of the base where it is directed upwardly by the flanges 13 and 14, being thus subjected to a double baffling action.

The top of the lamp comprises a rim member 26 of arcuate cross-section, disposed in reverse relation to the rim member 17, and having an upwardly bent flange 27 at its inner edge in which the upper end of the lens globe 18 is snugly fitted, the outer section of the rim being in the

form of a flat marginal flange 28, and which seats against the under side of the lateral marginal flange 29 of an inwardly and upwardly extending annular dome member 30, the flange 29 being provided with a downwardly bent rim flange 31 at its outer edge extending slightly below the portion 28.

A hood portion surmounts the dome member 30, and comprises a cylindrical lower portion 32 and a dome shaped upper portion 33 secured to said lower portion by an interlocking curled joint 34. A centrally apertured dome-shaped baffle 35 is secured to the lower end of the hood, and in order to facilitate assembly the hood member 32 and baffle 35 are secured to the annular member 30 as shown in Figs. 8 and 9. Before assembling an inwardly bent bead 36 is formed near the lower edge of the member 32 against which the outwardly flared lower end of the baffle member 35 is engaged, the opening in the member 30 being of such diameter as to permit insertion of the downwardly extending end of the member 32 as shown in Fig. 8. A double crimp is thereupon imparted to this lower end portion, as shown in Fig. 9, the upper portion of the crimp being forced outwardly to engage the upper side of the member 30 as at 37, and at the same time extending inwardly to clamp the lower edge of the baffle member against the bead 36, and the lower portion of the crimp being forced outwardly as at 38, to clamp against the under surface of said member 30.

A series of air outlet openings 39 is provided in the cylindrical portion 32 of the hood, passage of air to these openings being baffled by the baffle 35. The upper portion 33 is also provided with a series of air openings 40 which are exteriorly baffled by an overhanging cap member 41 surmounting the hood and secured thereto by clip 42, which also secures a ring handle 43 to the top of the structure.

The flange portions 11, 20, 28 and 29 are respectively provided with series of spaced holes 44, 45, 46 and 47, the holes 44 and 45 registering with each other and being vertically aligned with the holes 46 and 47, which also register with each other. A series of vertical tie and guard rods 48 are inserted through these holes and are adapted to secure the upper and lower portions of the lamp together and at the same time tightly clamp the lens globe 18 between them. The upper ends of the rods are provided with slotted heads 49 and the lower ends are threaded and engaged by nuts 50, these nuts being seated and concealed in the annular recess formed by the rim flange 21, and being held against rotation by engagement of two opposed sides of their hexagonal peripheries with the wall 10 and the flange 21.

Tie rings 51, preferably two in number, are secured to the lower ends of two of the rods 48, and for this purpose a metal clip 52, bent about the ring to form a bearing and having its end portions perforated, is engaged upon the lower threaded end of the rods 48 and secured by the nuts 50. These particular rods may be slightly longer than the others to facilitate mounting of the clip, and may be readily interchanged with the other rods to position the tie rings at the most desirable points for securing the lamp to its support by a rope.

The base is provided with a removable closure bottom 53 having its peripheral edge curled under, as at 54, and projecting slightly beyond the wall 10 to provide a gripping surface for turning it, and provided with an upwardly pressed annular

rib 55 in inwardly spaced relation to its edge, this rib being of greater height than the cam flanges 13 and 14 and having its outer wall of cylindrical form and adapted to fit snugly within the circular opening provided by said cam flanges. At diametrically opposed points the rib is indented and the metal is pressed outwardly to provide a pair of lugs 56 and 57 adapted to overhang the upper edges of the cam flanges 13 and 14, the height of these lugs being substantially the same as the intermediate portions of the flanges. In placing the closure in the base the lugs are inserted through the cut-outs 15 and 16, and thereupon the closure is turned, causing the lugs to ride upon the upper surfaces of the cam flanges to points where their increasing height causes the closure to be held tightly with a wedging action. An air-tight closure is thus secured, and at the same time the closure may be conveniently removed and replaced.

The oil fount 58 is removably secured to the closure bottom 53, and for this purpose a plate 59 is secured to the bottom, as by flanged over eyelets 60, and is provided with a plurality of spring clips 62, suitably curved to embrace a rib 63 formed on the fount.

In Fig. 11, I have shown a modified form of the invention in which a dome shaped top 64 is provided with a marginal flange 65 having its edge bent downwardly as at 66 to receive the flange 28^a of the upper globe lens supporting rim member 26^a. In this embodiment the rim member 26^a is provided with a globe engaging flange 27^a, similar to the flange 27 of the first embodiment, and is further provided with a series of air outlet openings 67. An annular cylindrical baffle member 68 is disposed within the rim member and is provided with a lateral flange 69 extending between the flanges 65 and 28^a and having holes 70 through which the tie rods 48 are engaged, registering holes 71 and 46^a being also provided in the flanges 65 and 28^a. It will be seen that the baffle is disposed in spaced relation about the flange 27^a so that the air is doubly baffled in passing from the interior of the lamp to the outlet openings.

I have illustrated and described preferred and satisfactory embodiments of my invention but it will be obvious that changes may be made therein within the spirit and scope thereof, as defined in the appended claims.

Having thus described my invention what I claim and desire to secure by Letters Patent is:—

1. In a lamp structure, a globe, a top surmounting said globe, a globe supporting rim member engaged with the lower end of said globe and having a downwardly disposed annular recess, a cylindrical base member having an outwardly extending lateral flange at its upper end adapted to be seated in said recess, and detachable securing means extending between said top and said rim member and flange adapted to secure said flange in said recess, the under surface of said flange being vertically clear of said rim member whereby said cylindrical base member is freely removable from said recess upon removal of said detachable securing means.

2. In a lamp structure, a globe, a top surmounting said globe, a globe supporting rim member engaged with the lower end of said globe and having a laterally extending flange portion bent downwardly at its periphery to form a downwardly disposed annular recess at the under side of said rim member, a cylindrical base member having an outwardly extending lateral flange at its

upper end adapted to be seated in said recess and the outer diameter of which is less than the diameter of the edge of said downwardly bent flange portion whereby said cylindrical base member may be freely engaged with and disengaged from said recess, and detachable securing means extending between said top and said flanges adapted to secure said flange in said recess, the under surface of said flange of said cylindrical base member being vertically clear of said rim member whereby said cylindrical base member being freely removable from said recess upon removal of said detachable securing means.

3. In a lamp structure, a globe, a top surmounting said globe, a globe supporting rim member engaged with the lower end of said globe and having a laterally extending flange portion bent downwardly at its periphery to form a downwardly disposed annular recess at the under side of said rim member, a cylindrical base member having an outwardly extending lateral flange at its upper end adapted to be seated in said recess and the outer diameter of which is less than the diameter of the edge of said downwardly bent flange portion whereby said cylindrical base member may be freely engaged with and disengaged from said recess, said downwardly bent flange extending below said flange of the cylindrical base member, and detachable securing means extending between said top and said flanges, and including nuts disposed beneath said flange of the cylindrical base member and adapted to secure said flange in said recess, the under surface of said flange of said cylindrical base member being vertically clear of said rim member whereby said cylindrical base member being freely removable from said recess upon removal of said detachable securing means, said nuts being held against rotation by abutment with said downwardly bent flange and said cylindrical base member.

4. In a lamp structure, a globe, a base structure at the lower end of said globe, a globe supporting rim member engaged with the upper end of said globe and having an outwardly extending lateral flange, a hood having a downwardly disposed recess in which said flange of the rim member is seated, and detachable securing means extending between said flange and hood and said base structure adapted to secure said flange in said recess, the under surface of said flange being vertically clear of said hood member whereby said rim member is freely removable from said recess upon removal of said detachable securing means.

5. In a lamp structure, a globe, a base structure at the lower end of said globe, a globe supporting rim member engaged with the upper end of said globe and having an outwardly extending lateral flange, a hood having a laterally extending flange portion bent downwardly at its periphery to form a downwardly disposed annular recess at the under side of said hood in which said flange of the rim member is seated, the outer diameter of said flange of the rim member being less than the diameter of the edge of said downwardly bent flange portion of the hood whereby said rim member may be freely engaged with and disengaged from said recess, and detachable securing means extending between said flanges and said base structure adapted to secure said flange in said recess, the under surface of said flange of the rim member being vertically clear of said hood member whereby said rim member is freely

removable from said recess upon removal of said detachable securing means.

6. In a lamp structure, a base structure, a top structure, and a globe between said base and top structures having upper and lower cylindrical end portions and annular shoulders adjacent said end portions, said top structure comprising a globe supporting rim member having an upwardly extending annular flange at its inner edge adapted to be exteriorly engaged upon the upper cylindrical end portion of said globe against said annular shoulder, and a hood surmounting said rim portion member, said base structure comprising a member adapted to support a source of illumination, and a globe supporting rim member surmounting said last mentioned member and having a downwardly extending annular flange at its inner edge adapted to be exteriorly engaged upon the lower cylindrical end portion of said globe against said annular shoulder, and means extending between said top and base structures adapted to secure said rim members in engagement with said globe.

7. In a lamp structure, a globe, a globe supporting rim member engaged with the upper end of said globe and having an outwardly extending lateral flange, a hood having a downwardly disposed recess in which said flange of the rim member is removably seated, a second globe supporting rim member engaged with the lower end of said globe and having a downwardly disposed annular recess, a cylindrical base member having an outwardly bent laterally extending flange at its upper end adapted to be removably seated in said last mentioned recess, and detachable securing means extending between said hood and said base member adapted to secure said flanges in said recesses, the under surfaces of said flanges of said first rim member and said cylindrical base being respectively vertically clear of said hood and said second rim member whereby said rim members are freely removable from said hood and said cylindrical base member upon removal of said detachable securing means.

8. In a lamp structure, a globe, a top surmounting said globe, a globe supporting rim member engaged with the lower end of said globe and having a downwardly disposed annular recess, a cylindrical base member having an outwardly extending lateral flange at its upper end adapted to be seated in said recess and having air inlet openings below said flange, a baffle member inwardly spaced from said cylindrical base member and having an inwardly bent flange at its upper end, and means on said rim member engaging said flange of said baffle member and securing said baffle member to said rim member.

9. In a lamp structure, a globe, a top surmounting said globe, a globe supporting rim member engaged with the lower end of said globe and having a downwardly disposed annular recess, a cylindrical base member having an outwardly extending lateral flange at its upper end adapted to be seated in said recess and having air inlet openings below said flange, a baffle member supported by said rim member and depending in spaced relation within said cylindrical base member, and detachable securing means extending between said top and said rim member and flange adapted to secure said flange in said recess, the under surface of said flange being vertically clear of said rim member whereby said cylindrical base member is freely removable from said recess upon removal of said detachable securing means.

10. In a lamp structure, a base, a top, and a

- globe between said base and top, said base comprising a receptacle having a side wall having air inlet openings and an opening in its bottom, a baffle inwardly spaced from said wall and extending to a point in spaced relation to the base of said side wall, and a closure removably secured in said open bottom having an annular upstanding flange inwardly spaced from said baffle and adapted to baffle the air passing about the lower end of said baffle.
11. In a lamp structure, a base, a top, and a globe between said base and top, said base comprising a receptacle having a side wall and an opening in its bottom, a closure bottom adapted to close said opening, and wedging cam means for increasingly retaining said closure upon relative turning movement between said closure and receptacle.
12. In a lamp structure, a base, a top, and a globe between said base and top, said base comprising a receptacle having a side wall, an inwardly bent flange at the base of said side wall, circumferential flanges bent upwardly from said last mentioned flange and defining an opening, the upper edges of said flanges being inclined to constitute wedging cam surfaces, a closure bottom adapted to close said opening, and means carried by said bottom adapted upon turning of said bottom to engage said cam surfaces to increasingly tighten and retain said bottom in closed relation.
13. In a lamp structure, a base, a top, and a globe between said base and top, said base comprising a receptacle having a side wall, an inwardly bent flange at the base of said side wall, circumferential flanges bent upwardly from said last mentioned flange and defining an opening, the upper edges of said flanges being inclined to constitute wedging cam surfaces, a closure bottom adapted to close said opening, an annular upstanding flange carried by said bottom, having outwardly extending lugs adapted upon turning of said bottom to engage said cam surfaces to increasingly tighten and retain said bottom in closed relation.
14. In a lamp structure, a base, a top, and a globe between said base and top, said base comprising a globe supporting rim portion having a downwardly disposed annular recess, a receptacle member having an outwardly extending lateral flange seated in said recess, detachable securing means extending between said top and said base and extending through said recess and said flange seated therein, a tie ring clip member having an aperture and removably secured to said base by said detachable securing means engaged through said aperture, and a tie ring carried by said clip member.
15. In a lamp structure, a base, a top, and a globe between said base and top, said top comprising a hood including a lower portion having an opening, an upper sheet metal portion having a crimp at its lower edge secured in said opening, and a baffle member having its lower edge secured by said crimp, the diameter of said opening being greater than the outer diameter of said lower edge of said baffle member to an extent at least equal to the metal thickness of said upper hood portion.
16. In a lamp structure, a base, a top, and a globe between said base and top, said top comprising a globe supporting rim member having an outwardly extending lateral flange and having air openings below said flange, a hood having a laterally extending flange portion bent downwardly at its periphery to form a downwardly disposed annular recess at the under side of said hood in which said flange of the rim member is seated, and a baffle member disposed inwardly of the air openings of said rim member and having an outwardly extending flange disposed between said flanges of the rim and hood members.

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