

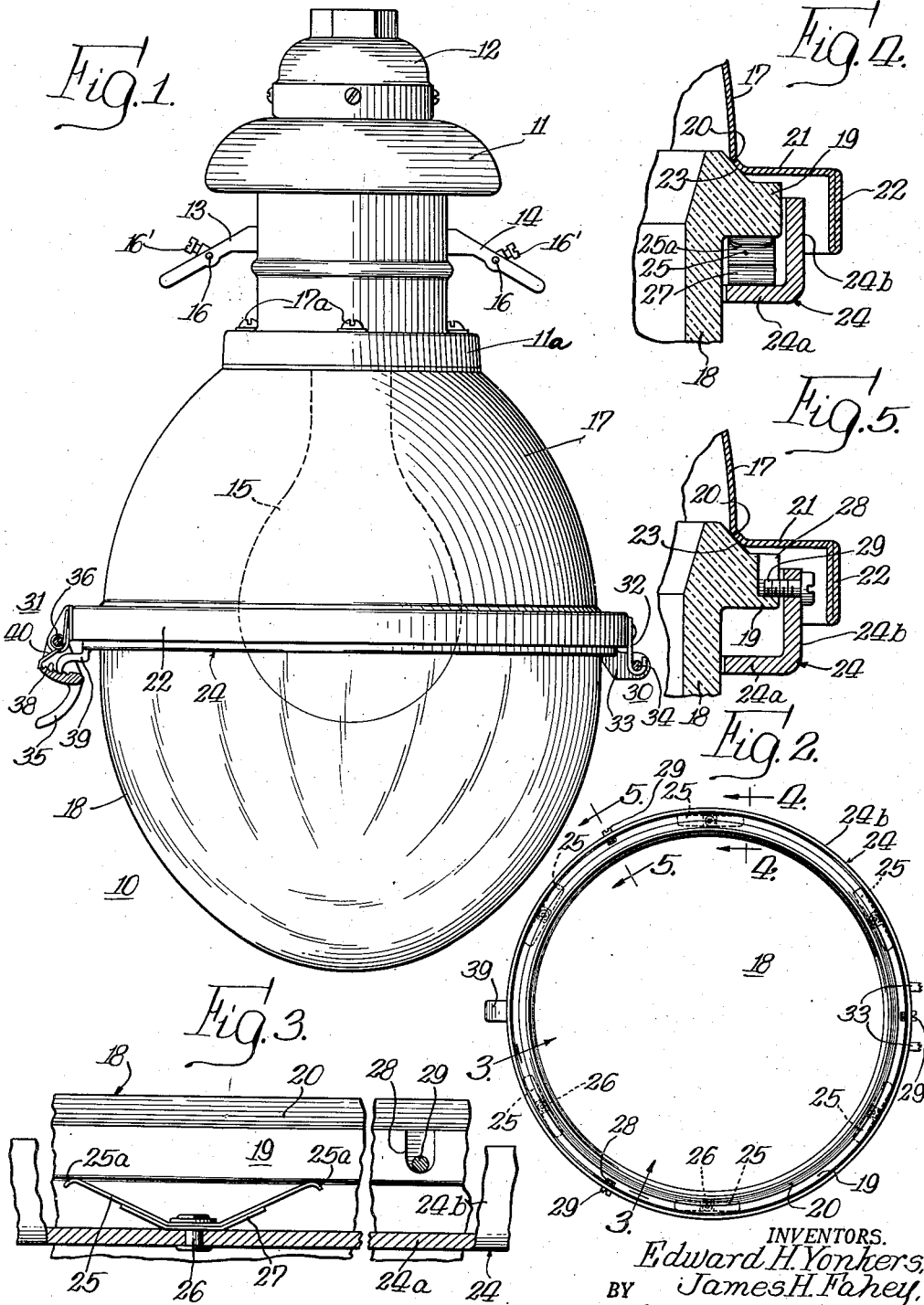
Nov. 13, 1951

E. H. YONKERS ET AL.
SPRING BIASED SEALING DEVICE FOR SUPPORTING
A LUMINAIRE BOWL ON THE REFLECTOR

2,575,310

Filed April 12, 1946

2 SHEETS—SHEET 1



INVENTORS.
Edward H. Yonkers,
BY James H. Fahey,
Mueller & Mason
Attys.

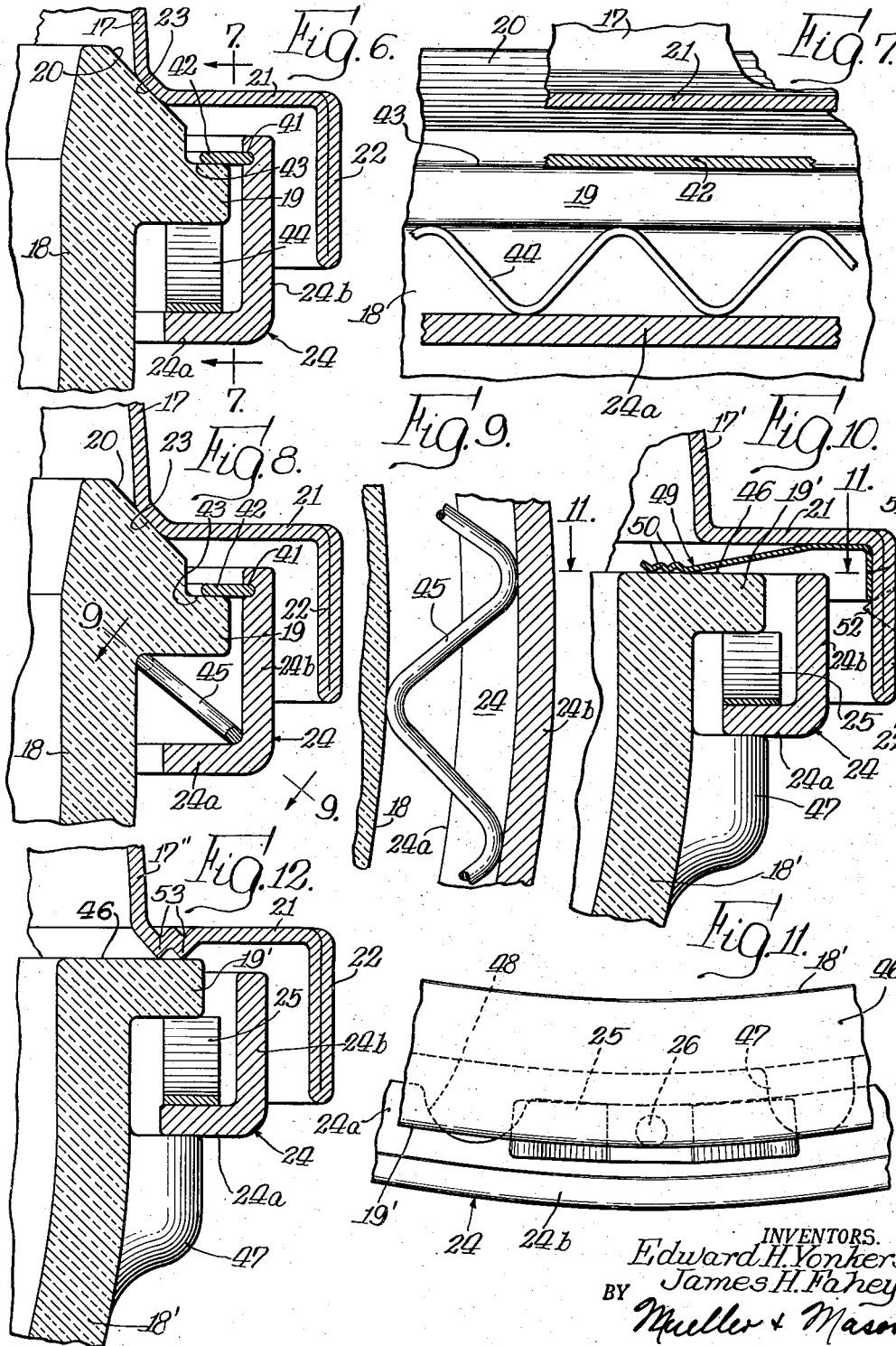
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UNITED STATES PATENT OFFICE

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SPRING BIASED SEALING DEVICE FOR SUPPORTING A LUMINAIRE BOWL ON THE REFLECTOR

Edward H. Yonkers, Glencoe, and James H. Fahey, Chicago, Ill., assignors to Joslyn Manufacturing and Supply Company, Chicago, Ill., a corporation of Illinois

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The present invention relates to luminaires and more particularly to street lighting luminaires of the enclosed type.

In general street lighting luminaires of the type referred to above comprise an enclosure defined by a head assembly which is either of metal or some form of insulating material, a conoid-shaped reflector, and glassware generally in the form of a semi-spheroidal or substantially semi-spherical globe. Within the enclosed unit thus defined there is mounted a light receptacle and an electric light bulb. It is essential that bugs, dust and moisture be excluded from the enclosure and at the same time it is also essential that access may readily be had to the lighting unit such as the bulb for replacement thereof. Moreover it is also necessary to be able to replace the glassware in the event of breakage thereof and it may furthermore be desirable to wash or otherwise clean this glassware periodically. It has been common practice for many years to fasten the glassware comprising the semi-spheroidal or semi-spherical globe to the reflector by means of spring toggle latches whereby access to the light bulb within the unit is obtained and removal of the glassware for replacement or cleaning can also be readily accomplished. In order to prevent bugs, dust and moisture from entering the enclosed structure at the juncture between the glassware and the reflector it was customary to provide a suitable gasket. Due to the fact that satisfactory gaskets are generally formed of organic material which deteriorates with age and heat considerable pressure was brought to bear on manufacturers to furnish a construction which did not employ a gasket at the juncture between the glassware and the reflector and yet which was bug, dust and moisture tight.

Luminaires are now available on the market which have no gasket between the glassware and the reflector. Such luminaires employ a spun-on ring or a clamping ring arrangement of some sort. These arrangements either prevent separation of the parts or removal of the glassware in the field, or if replacement of the glassware can be accomplished in the field it requires much time and effort. In order that ready access can be had for replacement of the lamps within enclosed luminaires of the type which are not adapted to ready separation of the glassware from the reflector it has been common practice to provide an arrangement wherein the reflector could be unlatched or removed from the head of the luminaire. Since it is possible to make these joints ground metal-to-metal joints, for example, a weather-proof

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construction was feasible without the use of gaskets. These prior art arrangements provided a sealed construction which was bug, dust and moisture tight, but they required two points of separation, one between the reflector and the head affording ready access for replacement of the bulb in the field and secondly, a gasketless joint between the glassware and the reflector. This latter joint, which permitted replacement of the glassware, in many cases necessitated a trip to the factory with the luminaire for inserting a new globe. It would be desirable to provide a luminaire construction of the enclosed type in which only a single gasketless point of access is provided, which permits replacement of the lamp in the field and actual servicing of the luminaire from the ground, and furthermore to provide a construction which permits ready removal of the glassware in the field for cleaning or replacement thereof when necessary.

Accordingly, it is an object of the present invention to provide a new and improved street lighting luminaire having the desirable features noted above.

It is another object of the present invention to provide a street lighting luminaire of the enclosed type provided with a ready means of access in the form of a single gasketless releasable joint between the glassware and the reflector which is bug, dust and moisture tight.

It is a further object of the present invention to provide an enclosed luminaire construction having a new and improved sealing arrangement between the glassware and the reflector which is weather-tight and yet permits ready servicing of the luminaire in the field.

Yet another object of the present invention is to provide a new and improved street lighting luminaire with means for floating the glassware into sealing engagement with the reflector in a manner to permit ready removal of the glassware and servicing of the luminaire.

Further objects and advantages of the present invention will become apparent as the following description proceeds and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

For a better understanding of the present invention reference may be had to the accompanying drawings in which:

Fig. 1 is an elevational view of one form of street lighting luminaire embodying the present invention;

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Fig. 2 is a top view of the glassware and supporting ring of the luminaire shown in Fig. 1;

Fig. 3 is a sectional view of a portion of the construction shown in Fig. 2 taken on line 3—3 thereof;

Fig. 4 is a sectional view taken on line 4—4 of Fig. 2;

Fig. 5 is a sectional view taken on line 5—5 of Fig. 2;

Fig. 6 is an enlarged view similar to Fig. 5 illustrating a modification of the present invention insofar as resilient means for floating the glass ware and means for fastening the glassware to its supporting ring is concerned;

Fig. 7 is a sectional view taken on line 7—7 of Fig. 6;

Fig. 8 is a sectional view similar to Fig. 6 showing a further modification of the invention insofar as the resilient means for floating the glassware in its supporting ring is concerned;

Fig. 9 is a sectional view taken on line 9—9 of Fig. 8;

Fig. 10 is a sectional view similar to Fig. 6 showing a modification of the sealing means of the present invention;

Fig. 11 is a view taken on line 11—11 of Fig. 10; and

Fig. 12 is a sectional view similar to Fig. 10 showing still another modification of the sealing means of the present invention.

Street lighting units or luminaires of the enclosed construction are of many specific types particularly with respect to the head assembly thereof which may comprise a metal head particularly when used for multiple circuits. In addition various kinds of porcelain heads are commonly employed with series circuits and such porcelain heads may take many different forms, depending upon whether inner or outer wiring is employed, etc. In order to illustrate the present invention, only a single style of street lighting unit or luminaire is illustrated in Fig. 1 of the drawings. It should be understood, however, that the present invention is equally applicable to all other styles of street lighting luminaires of the enclosed type and the specific illustrated embodiment is merely representative of a construction to which the present invention is applicable.

Referring now to Fig. 1 of the drawings there is illustrated a street lighting luminaire of the enclosed type generally indicated by the reference numeral 10. This luminaire is illustrated as comprising a head 11 preferably formed of an insulating material such as porcelain or the like which has mounted thereon a metal canopy 12. A pair of terminals 13 and 14 are supported from the head 11 having conducting portions which extend into the interior thereof to make connection with a lamp-supporting receptacle, not shown, suitably mounted within the head 11 for accommodating the lamp indicated as an incandescent bulb 15. Terminals 13 and 14 are provided with suitable lead-receiving openings 16 and adjustable clamping screws 16' for insuring good electrical connection between the external leads, not shown, and the terminals 13 and 14. The lower end of the head 11 is provided with a flange 11a to which a suitable conoid-shaped reflector 17 may be fastened as by means of screws 17a. It will be understood that if a metal head is employed in connection with the luminaire a ground seal between the reflector 17 and the head can be provided to furnish a weather-proof joint without the use of gaskets. Since,

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in accordance with the present invention the reflector is permanently attached to the head 11 and access to the interior of the enclosure comprising the luminaire is not expected to be obtained by separation of the flange 11a of head 11 and the reflector 17, a suitable gasket may be employed for sealing purposes if desired. Such gaskets are satisfactory for joints which are relatively permanent but cause difficulty in those cases where the joint is provided for affording relatively frequent access to the interior of a structure. The reflector 17 is preferably formed of sheet metal with an inner reflecting surface of any suitable construction which forms no part of the present invention.

In order to provide an enclosed construction the lower end of the reflector is closed by means of light-transmitting glassware comprising a globe 18 of semi-spherical or semi-spheroidal construction having somewhat the shape of a bowl. In accordance with one modification of the present invention, the open end of the semi-spherical globe 18 is provided with an annular shoulder 19 having a frusto-conical sealing surface 20, the purpose of which will become apparent from the following description. The reflector 17 on the other hand, is provided with an annular flange 21 which is generally horizontal and which has, depending from the outer edge thereof, an annular skirt 22 having a somewhat greater diameter than the maximum diameter of the annular shoulder 19. As is obvious from the drawings the skirt 22 is defined by folding a portion of the reflector back upon itself to provide a relatively rigid annular member for supporting hinge and latching means defined hereinafter releasably to relate the globe 18 with the reflector 17. Between the annular flange 21 of the reflector 17 and the conoid-shaped reflector portion thereof, there is provided a second frusto-conical sealing surface 23 which is adapted to cooperate with the first frusto-conical sealing surface 20 on the globe 18 in a manner to be described hereinafter.

In order that the glassware comprising the semi-spherical globe 18 may be supported from the reflector 17 there is provided an annular member or ring 24 having an L-shaped cross-section as is best shown in Figs. 4 and 5 of the drawings and including a horizontal flange 24a and a vertical flange 24b. The annular shoulder 19 of the globe 18 has a diameter such that it is adapted to be supported on the horizontal flange 24a of the ring 24. In accordance with the present invention the glassware or globe 18 is floated in ring 24 by resilient means generally indicated at 25 which are illustrated in Figs. 2, 3 and 4 of the drawings as V-shaped members formed of spring-like material with the base of the V riveted or otherwise suitably fastened as indicated at 26 to the horizontal flange 24a of ring 24. To increase the resilience of the members 25 a suitable spring backing strip such as 27 may be provided if desired. These resilient means 25 are spaced around the periphery of ring 24 in the manner clearly indicated in Fig. 2 of the drawings and the ends of the legs of the V-shaped members 25 are rounded as indicated at 25a to engage the annular shoulder 19 of the globe 18. To provide a unitary assembly of the ring 24 and the globe 18 which will still permit replacement of the glassware, it is desirable that they be removably fastened together. In accordance with one embodiment of the present invention the globe 18 is provided with a plurality of spaced

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recesses 28 around the periphery of annular shoulder 19 as best shown in Figs. 3 and 5 of the drawings, into which a plurality of screws 29 threaded through the vertical flange 24b of the ring 24 may extend. It will be observed that with this arrangement the ring 24 may be fastened to the globe 18 with the resilient means 25 compressed a predetermined amount. The globe 18 may be pushed downwardly to further compress the resilient means 25 but the screws 29 will prevent removal of the ring 24 therefrom without first withdrawing the screws 29 from the recesses 28.

In order that the globe 18 which is floated in the ring 24 may be held in sealing engagement with the reflector 17, there are provided a pair of latch members 30 and 31, disposed in diametrically opposed relationship with reference to the ring 24. These latch members may be of any suitable construction and as illustrated in the drawings the latch member 30 is also adapted to act as a hinge and comprises a pair of cooperating hinge members 32 and 33 interconnected by a hinge pin 34. The hinge members 33 which have the hinge pin 34 extending therethrough, which pin is held in position by suitable means such as a cotter pin at each end, for example, are fastened to the ring 24, while the hinge members 32 in the form of a pair of hooks are fastened to the annular skirt 22 of the reflector 17. When the latch 31 is released it will be obvious that the ring 24 and globe 18 can pivot about the hinge pin 34 of the latch 30 which effectively provides a hinge. In addition the assembly of the globe 18 and the ring 24 may be completely separated from the reflector 17 merely by lifting the hinge pin 34 out of the hook portions of the hook-shaped members 32. The latch 31 is illustrated as comprising a latching member 35 pivotally mounted as indicated at 36 to suitable means fastened to the annular skirt 22 of reflector 17. The pivotally mounted latching member 35 is provided with a plurality of teeth 38 adapted to engage a hook-shaped latching member 39 fastened to the ring 24. A suitable spring 40 tends to bias the latching member 35 in such a direction that the teeth 38 remain in engagement with the latching member 39. It will be apparent that with the latch 31 as indicated in Fig. 1 of the drawings an upward force is applied to ring 24 so as to bias the interfitting frusto-conical surfaces 20 and 23 into sealing engagement. The resilient means 25 which are further compressed when the latches 30 and 31 are in latching engagement tend to hold these conical sealing surfaces in engagement so as to provide a weather-tight construction which prevents bugs, dust or moisture from entering into the enclosure. It will be apparent that by employing the frusto-conical sealing surfaces, the resilient means will tend to produce a wedging action between the interfitting conical or frusto-conical surfaces to maintain the sealed relationship. Also, with this arrangement a substantial sealing area may be employed and the difficulty encountered with organic gaskets is completely eliminated. At the same time, the bulb 15 may be replaced or the globe 18 may be cleaned or replaced in the field. In fact by using suitable servicing tools such as lamp replacers this may be accomplished from the ground, thereby greatly facilitating the servicing of luminaries embodying the present invention.

In Figs. 6 and 7 there is illustrated a modification of the present invention insofar as the

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means for holding the ring 24 in assembled relationship with the globe 18 is concerned. The corresponding parts are designated by the same reference numerals as in the preceding figures. Instead of providing the recesses 28 in the annular shoulder 19 of the globe 18 and the screws 29 in the ring 24, there is provided an annular groove 41 in the ring 24 into which may be inserted a snap ring 42 which engages with a flat portion 43 formed on the annular shoulder 19. The ring 24 may be assembled in position on the globe 18 with the resilient means held under compression to such an extent that the snap ring 42 may be snapped into position in the groove 41.

Although a particular type of resilient means for floating the globe 18 in ring 24 has been described and illustrated it will be apparent that such resilient means may take various forms. Accordingly in Figs. 6, 7, 8 and 9 there are illustrated modifications of the resilient means of the present invention. The corresponding parts of these figures are designated by the same reference numerals as in the preceding figures. Mounted between the annular shoulder 19 of the globe 18 and the ring 24 is a resilient means 44 in Figs. 6 and 7 of the drawings and resilient means 45 in Figs. 7 and 8, both means being in the form of a convolute spring. In other words the resilient means 45 comprises a wire of spring material having a zig-zag configuration so that it extends from the angle defined between the shoulder 19 and the spherical body portion of globe 18 to the angle defined between the horizontal flange 24a and the vertical flange 24b of the ring 24. It will be understood that the resilient means 45 may comprise one member extending completely around the periphery of the globe 18 or it may be preferable to make this resilient means 45 in two or more parts. The resilient means 44 is similar except that it is made of flat spring material as contrasted with the spring wire 45.

In all of the arrangements thus far described the gasketless seal provided between the reflector 17 and the globe 18 employs interfitting conical or frustoconical sealing surfaces 20 and 23. In accordance with a modification of the present invention shown in Figs. 10 and 11, the conical sealing surfaces may be dispensed with and yet a gasketless seal is provided. The corresponding parts of Figs. 10 and 11 of the drawings are designated by the same reference numerals as in the preceding figures. A modification of the method of fastening the globe and the sealing ring 24 together is also shown in Fig. 10 of the drawings and this arrangement is first described. The globe designated as 18' is provided with an annular shoulder 19' having a flat sealing surface 46. The globe 18' is also provided with a plurality of bosses 47 spaced around the periphery of the globe and positioned a predetermined distance below the annular shoulder 19'. The horizontal flange portion 24a of the ring 24 is provided with a plurality of cooperating notches 48 spaced around the periphery to accommodate the bosses 47. When the ring 24 is being fastened to the globe 18', it is first slipped over the globe 18' from the closed end toward the flange 19' with the notches 48 thereof in registry with the bosses 48 on the globe 18'. When the ring 24 is moved to the position indicated in Fig. 10 of the drawings with reference only to the space between it and shoulder 19' the resilient means 25 are under compression

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and the lowermost portion of the ring 24 clears the bosses 47. If the ring 24 is now rotated relative to the globe 18' so that the bosses 47 and the notches 48 have the relative positions indicated in Fig. 11 of the drawings, the ring 24 is securely fastened to the globe 18'. With this arrangement the ring 24 is fastened to the globe 18' which is resiliently floated therein.

In order to provide a bug, dust and moisture seal between the reflector 17' of Fig. 10 of the drawings and the globe 18', there is provided an annular spring sealing member 49 having a corrugated portion or a plurality of annular ribs 50 adjacent the inner diameter thereof which ribs are adapted to engage with the flat sealing surface 46 on the annular shoulder 19'. The annular spring member 49 has a depending annular skirt portion 51 adjacent the outer diameter thereof which fits against the skirt portion 22' of reflector 17' and is preferably held in position by suitable means such as the peripherally positioned stakes, one of which is indicated at 52. The inherent resilience of the annular spring seal 49 tends to bias the corrugated portion 50 thereof into firm engagement with the flat sealing surface 46 of the globe 18' and the resilient means 25 further insure the sealing engagement of these surfaces. This construction provides an advantage in that any irregularities in the surface of the flange 21 are taken up by deformation of spring member 49 under the influence of resilient means 25.

In Fig. 12 of the drawings there is illustrated a modification of the construction shown in Fig. 10 with the corresponding parts designated by the same reference numerals. Instead of employing the annular spring sealing member 49, the annular flange 21 of reflector 17'' is provided with a plurality of corrugations or annular ribs 53 which sealingly engage with the flat sealing surface 46 of the globe 18'. The resilient means 25 hold these ribs and surface 46 in sealing engagement to provide a bug, dust and moisture-tight seal therebetween.

In view of the detailed description included above, it will be apparent that a gasketless seal has been provided between the glassware of a street lighting luminaire and the reflector, which gasketless seal may be opened from the ground if necessary for servicing the luminaire as by replacing the lamp or washing or replacing the glassware. In addition only a single joint is provided for affording access to the lamp bulb and a very satisfactory and simple construction is provided overcoming many of the disadvantages of the prior art arrangements.

It should be understood that the present invention is not limited to the specific constructions and arrangements described above and that changes and modifications may occur to those skilled in the art without departing from the spirit and scope of the present invention. It is, therefore, aimed in the appended claims to cover all such changes and modifications as fall within the true spirit and scope of the present invention.

We claim:

1. In a street lighting luminaire, a reflector, supporting means for said reflector held in sealed relationship therewith, a semi-spheroidal globe having an annular shoulder at its open end provided with a glass sealing surface, a ring for supporting said globe, resilient means interposed between said ring and said shoulder for floating said globe therein, cooperating locking means on said ring and globe respectively for holding said

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ring and globe together as a unitary assembly with said interposed resilient means under a predetermined compression, a cooperating metal sealing surface on said reflector for engaging said glass sealing surface to provide a dust and moisture tight seal therebetween, and releasable latching means for latching said ring to said reflector so as further to compress said resilient means and bias said sealing surfaces into sealing engagement.

2. In a street lighting luminaire a reflector, supporting means for said reflector held in sealed relationship therewith, a substantially semi-spherical globe having an annular shoulder at its open end provided with a conical sealing surface, a ring for supporting said globe, resilient means interposed between said ring and said shoulder for floating said globe therein, cooperating means on said ring and globe respectively for holding said ring and said globe with the interposed resilient means as a unitary assembly even when disassociated from said reflector, a cooperating conical surface on said reflector for engaging said conical sealing surface to provide a dust and moisture tight seal therebetween, and releasable latching means for latching said ring to said reflector so as to compress said resilient means and hold said conical sealing surfaces in sealing engagement.

3. In a street lighting luminaire a reflector, supporting means for said reflector held in sealed relationship therewith, a substantially semi-spherical globe having an annular shoulder at its open end provided with a frusto-conical sealing surface, a ring for supporting said globe, resilient means interposed between said ring and said shoulder for floating said globe therein, cooperating locking means on said ring and globe respectively for holding said globe and ring as a unitary assembly independently of said reflector, a cooperating frusto-conical surface on said reflector for engaging said frusto-conical sealing surface to provide a dust and moisture tight seal therebetween, and releasable latching means for latching said ring to said reflector so as to compress said resilient means and hold said frusto-conical sealing surfaces in sealing engagement.

4. In a street lighting luminaire a reflector, glassware in the form of a substantially semi-spherical globe having an annular shoulder at its open end provided with a glass sealing surface, a ring having a horizontal flange for supporting said globe, resilient means including a plurality of V-shaped members interposed between said flange and said shoulder for floating said globe in said ring, a cooperating surface on said reflector for engaging said sealing surface on said shoulder to provide a dust and moisture tight seal therebetween, and releasable latching means for latching said ring to said reflector so as to compress said resilient means and bias said sealing surfaces into sealing engagement.

5. In a street lighting luminaire a reflector, glassware in the form of a substantially semi-spherical globe having an annular shoulder at its open end provided with a glass sealing surface, a ring having a horizontal flange for supporting said globe, resilient means including a convolute spring interposed between said flange and said shoulder for floating said globe in said ring, cooperating means on said ring and globe respectively for holding said ring and said globe with the interposed resilient means as a unitary assembly even when disassociated from said re-

reflector, a cooperating surface on said reflector for engaging said sealing surface on said shoulder to provide a dust and moisture tight seal therebetween, and releasable latching means for latching said ring to said reflector so as to compress said resilient means and bias said sealing surfaces into sealing engagement.

6. In a street lighting luminaire a reflector, supporting means for said reflector, a substantially semi-spherical globe of glass or the like having an annular shoulder at its open end provided with a flat portion defining an annular sealing surface, a ring for supporting said globe, resilient means interposed between said ring and said shoulder for floating said globe therein, means comprising a snap ring engageable with a groove in said ring for holding said ring and globe as a unitary assembly, a cooperating annular surface on said reflector for engaging said annular sealing surface on said globe to provide a dust and moisture tight seal therebetween, and releasable latching means for latching said ring to said reflector so as to compress said resilient means and hold said sealing surfaces in sealing engagement.

7. In a street lighting luminaire a reflector, supporting means for said reflector, a substantially semi-spherical globe of glass or the like having an annular shoulder at its open end provided with a flat portion defining an annular sealing surface, a ring for supporting said globe, resilient means interposed between said ring and said shoulder for floating said globe therein, means comprising a plurality of bosses on said globe for holding said ring and globe as a unitary assembly, means defining notches in said ring to permit said notches to register with said bosses for removal of said ring from said globe, a cooperating annular surface on said reflector for engaging said annular sealing surface on said globe to provide a dust and moisture tight seal therebetween, and releasable latching means for latching said ring to said reflector so as to compress said resilient means and hold said sealing surfaces in sealing engagement.

8. In a street lighting luminaire a reflector, supporting means for said reflector, a substantially semi-spherical globe of glass or the like having an annular shoulder at its open end provided with a flat portion defining an annular sealing surface, a ring for supporting said globe, resilient means interposed between said ring and said shoulder for floating said globe therein, means comprising a notch in said shoulder for receiving a screw threaded in said ring to hold said ring and globe as a unitary assembly, a cooperating annular surface on said reflector for engaging said annular sealing surface on said globe in a dust and moisture tight manner, and releasable latching means for latching said ring to said reflector so as to compress said resilient means and hold said sealing surfaces in sealing engagement.

9. In a street lighting luminaire, the combination of a reflector having a relatively rigid annular member associated therewith, a supporting means for said reflector, a semi-spheroidal globe of glass or the like having an integral annular shoulder at its open end, an annular glass sealing surface on said shoulder, a ring for supporting said globe by said annular shoulder, resilient means interposed between said ring and said shoulder for floating said globe in said ring, cooperating means on said ring and globe for holding said ring and globe and said inter-

posed resilient means as a unitary assembly even when said assembly is disassociated from said reflector, means on said reflector for engaging said annular sealing surface in a weather-tight manner, and releasable means associated with said ring and said relatively rigid annular member for compressing said resilient means to hold said means on said reflector and said sealing surface in sealing engagement.

10. In a street lighting luminaire, the combination of a reflector, a supporting means for said reflector, a semi-spheroidal globe of glass or the like having an integral annular shoulder at its open end, an annular sealing surface on said shoulder, a ring for supporting said globe by said annular shoulder, resilient means interposed between said ring and said shoulder for floating said globe in said ring, an annular spring means supported by said reflector having a portion engaging said annular sealing surface in a weather-tight manner, and releasable means for compressing said resilient means to hold said spring means and said annular sealing surface in sealing engagement.

11. In a street lighting luminaire, the combination of a reflector, a supporting means for said reflector, a bowl-shaped globe formed of light-transmitting material having an integral annular shoulder at its open end, a flat annular sealing surface on one side of said shoulder, a ring for supporting said globe by said annular shoulder, resilient means interposed between said ring and the other side of said shoulder for floating said globe in said ring, cooperating means on said ring and said globe for holding said ring and globe and said interposed resilient means as a unitary assembly even when said assembly is disassociated from said reflector, an annular rib on said reflector for engaging said annular sealing surface in a weather-tight manner, and releasable means between said reflector and said ring for compressing said resilient means to bias said rib and said sealing surface into sealing engagement.

12. In a street lighting luminaire, the combination of a reflector, a supporting means for said reflector, a bowl-shaped globe formed of light-transmitting material having an integral annular shoulder at its open end, a flat annular sealing surface on one side of said shoulder, a ring for supporting said globe by said annular shoulder, resilient means interposed between said ring and the other side of said shoulder for floating said globe in said ring, cooperating means on said ring and said globe for holding said ring and globe and said interposed resilient means as a unitary assembly even when said assembly is disassociated from said reflector, means associated with said reflector defining an annular rib for engaging said annular sealing surface in a weather-tight manner, and releasable means between said reflector and said ring for compressing said resilient means to bias said rib and said sealing surface in sealing engagement.

13. In a street lighting luminaire, the combination of a reflector, a supporting means for said reflector, a bowl-shaped globe formed of light-transmitting material having an integral annular shoulder at its open end, a flat annular sealing surface on one side of said shoulder, a ring for supporting said globe by said annular shoulder, resilient means interposed between said ring and the other side of said shoulder for floating said globe in said ring, cooperating means on said ring and said globe for holding said ring and

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globe and said interposed resilient means as a unitary assembly even when said assembly is disassociated from said reflector, means associated with said reflector defining a plurality of annular ribs for engaging said annular sealing surface in a weather-tight manner, and releasable means between said reflector and said ring for compressing said resilient means to bias said ribs and said sealing surface in sealing engagement.

14. In a street lighting luminaire, the combination of a reflector, a supporting means for said reflector, a bowl-shaped globe of light-transmitting material having an integral annular shoulder at its open end, means defining a frusto-conical surface adjacent one side of said shoulder, a ring for supporting said globe by said annular shoulder, resilient means interposed between said ring and the other side of said shoulder for floating said globe in said ring, cooperating means on said ring and said globe for holding said ring and globe and said interposed resilient means as a unitary assembly even when said assembly is disassociated from said reflector, means on said reflector defining a cooperating frusto-conical surface adapted to interfit with said first-mentioned frusto-conical surface, and releasable means between said ring and said reflector for compressing said resilient means to bias the interfitting frusto-conical surfaces into sealing engagement.

15. In a street lighting luminaire, the combination of a reflector, a supporting means for said reflector, a bowl-shaped globe formed of light-transmitting material having an integral annular shoulder at its open end, means defining a flat annular sealing surface on one side of said shoulder, a ring for supporting said globe by said annular shoulder, resilient means interposed between said ring and the other side of said shoulder for floating said globe in said ring, cooperating means on said globe and ring respectively for holding said ring and said globe and said interposed resilient means together as a unitary assembly independently of said reflector with said resilient means under a predetermined compression, means on said reflector for engaging said annular sealing surface in a weather-tight manner, and releasable means between said reflector

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and said ring for compressing said resilient means to bias said means on said reflector and said sealing surface into sealing engagement.

16. In a street lighting luminaire, the combination of a reflector, a supporting means for said reflector, a bowl-shaped globe of light-transmitting material having an integral annular shoulder at its open end, means defining a frusto-conical surface adjacent one side of said shoulder, a ring for supporting said globe by said annular shoulder, resilient means interposed between said ring and the other side of said shoulder for floating said globe in said ring, cooperating means on said globe and ring respectively for holding said ring and said globe and said interposed resilient means together as a unitary assembly independently of said reflector with said resilient means under a predetermined compression, means on said reflector defining a cooperating frusto-conical surface adapted to interfit with said first-mentioned frusto-conical surface, and releasable means between said ring and said reflector for compressing said resilient means to bias the interfitting frusto-conical surfaces into sealing engagement.

EDWARD H. YONKERS.
JAMES H. FAHEY.

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