T. J. LITLE, JR.

GLOBE HOLDING DEVICE FOR LAMPS.

APPLICATION FILED JULY 15, 1910.

1,002,592.

Patented Sept. 5, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

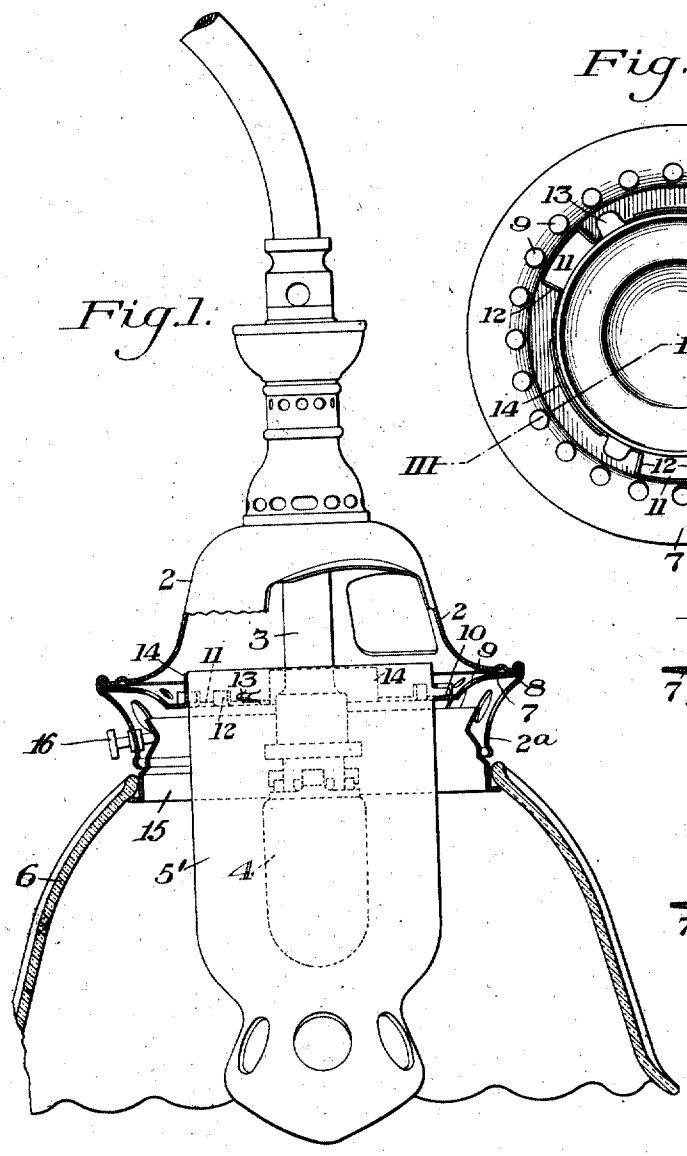


Fig. 2.

Fig. 3.

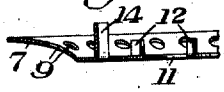
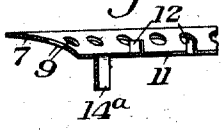


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 5.

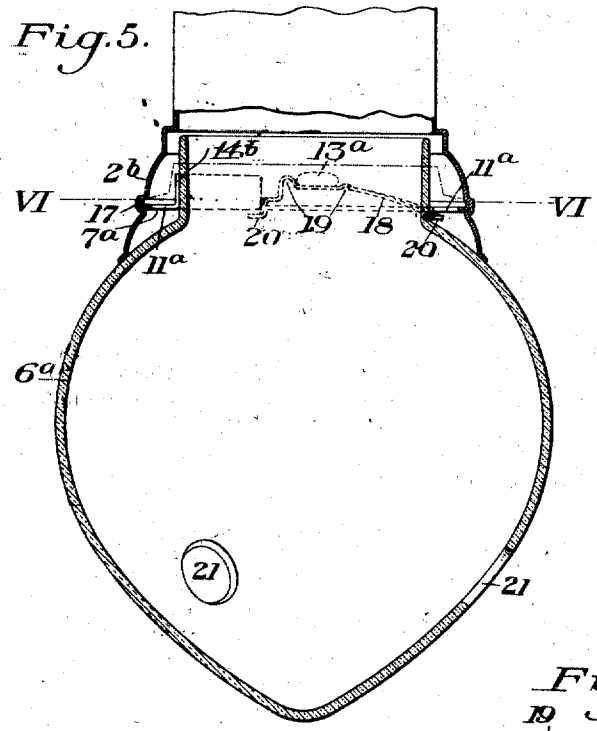


Fig. 7.

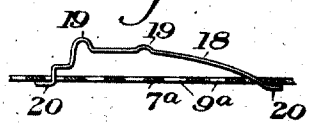
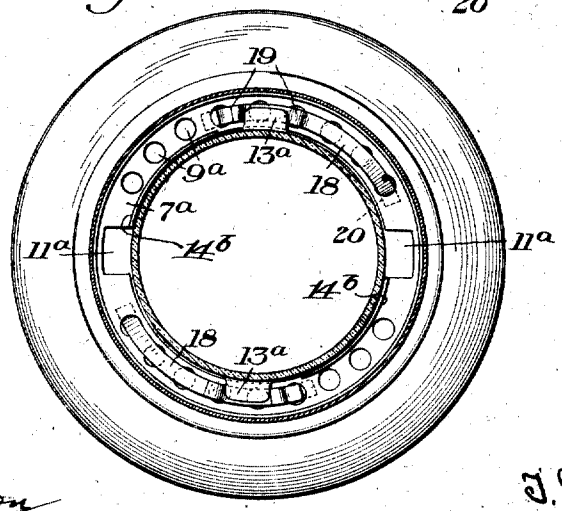


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

THOMAS JAMES LITLE, JR., OF WOODBURY, NEW JERSEY, ASSIGNOR TO WELSBACH LIGHT COMPANY, OF GLOUCESTER CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

GLOBE-HOLDING DEVICE FOR LAMPS.

1,002,592. Specification of Letters Patent. Patented Sept. 5, 1911.

Application filed July 15, 1910. Serial No. 572,192.

To all whom it may concern:

Be it known that I, THOMAS J. LITLE, Jr., of Woodbury, Gloucester county, New Jersey, have invented a new and useful Globe-Holding Device for Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section partly in side elevation showing a lamp embodying one form of my invention; Fig. 2 is a top plan view of the globe-holding ring removed, with the globe in place; Fig. 3 is a detail view of the ring of Fig. 2; Fig. 4 is a view similar to Fig. 3 showing a modified form; Fig. 5 is a view similar to Fig. 1 showing another form of the invention; Fig. 6 is a cross-section on the line VI—VI of Fig. 5; and Fig. 7 is a detail view of the spring cam device of Figs. 5 and 6.

My invention relates to globe-holding devices for gas lamps, particularly lamps of the inverted type. It is designed to provide simple and effective mechanism for holding the globe in position and for improving the structure of the lamp.

In the form of Figs. 1 to 4, inclusive, 2 represents the lamp casing; 3 the mixer tube; 4 the mantle (shown in dotted lines); 5 an inner globe; and 6 an outer globe or shade. In this form the inner globe 5 is supported upon a metal ring 7, the edge portion of which is preferably locked or clamped in the seam between the upper portion 2 and the lower portion 2^a of the lamp casing, as shown at 8 in Fig. 1. The ring is preferably curved downwardly and inwardly from this seam, and is provided with a series of holes 9 to allow entrance of air for cooling of the ring. These holes also provide for a better upward draft of air through the lamp, particularly in the case of a closed globe. The inner portion of the ring is provided with a flange 10, which is cut away at a plurality of points to provide slots 11, shown as three in number (Fig. 2). In cutting these slots, the metal is preferably turned up at their opposite ends, as shown at 12, thus providing guard lugs to prevent accidental side movement of the nibs or projections 13 of the inner globe into line with the slots. In forming the ring, I also preferably provide guiding strips or projections 14 which contact with the sides of the globe and serve to prevent its tilting or rocking. Side movements of the inner globe are liable to cause it to contact with the mantle and injure or destroy it, and such movements are hindered or prevented by these guiding extensions. In Fig. 3 the guide is shown as extending upwardly, while in the form of Fig. 4 the extension 14^a projects downwardly. This projection or guide is at the inner edge of the ring flange, so that it fits against the globe as shown at the left-hand portion of Fig. 1. In placing the inner globe in position, its nibs are brought into line with the ring slots, the globe is then pushed upwardly until the nibs rise over the guard projections 12, and the globe is then dropped with its nibs in the position shown in Fig. 2. The globe is then supported by its nibs, resting on the ring between the guard projections, which prevent its accidental rotation into line where the nibs would drop through the slots. In this form, I show the outer globe 6 as supported upon a suitable metal member or neck 15 held by set screws 16 within the lower casing section.

In the form of Figs. 5, 6 and 7 I show the invention as applied to a lamp having a single globe 6^a with a closed lower end. In this form the ring 7^a is shown as provided with a shallow outer flange secured within a beaded portion 17 of the casing 2^b; while the convex portion of the globe rests against the lower edge portion of the casing. In this form I show the ring as again provided with the air holes 9^a, and having two slots 11^a through which the nibs 13^a of the globe may be pushed up and then swung sidewise. In this case the guiding projection which prevents side swinging of the globe is marked 14^b. In this form I also show a spring cam device 18 having projections or corrugations 19. These cams are engaged by the nibs of the globe, so that as the globe is turned it rides along the cam and is firmly drawn up against the lower edge of the casing. In the form shown, I have formed these spring cams of separate spring metal with their legs projecting through some of the holes in the ring and held by small lugs 20. The form and method of making and securing this spring cam may, however, be widely varied without departing from my invention. In this form the globe has lower air holes 21. In

this case, the ring cams, therefore, serve to not only hold the globe against rotation, but also draw it up firmly against the lower portion of the casing, thus preventing objectionable looseness and rattling. The globe guide 14 of Fig. 1 may or may not be used in this second form, as desired.

The advantages of my invention will be obvious to those skilled in the art. A simple and efficient securing means is provided for the globe of a lamp, allowing for easy insertion and removal, while it is securely held in place when properly positioned. The guide projections serve to prevent side swinging of the globe, and where the cams are used they serve to draw the globe upwardly against the casing shoulder and prevent rattling and entrance of air at the joint.

Variations may be made in the form and arrangement of the parts, their method of manufacture, &c., without departing from my invention.

I claim:—

1. In an inverted incandescent gas lamp, a globe holder comprising a surrounding ring having slots in its inner edge to receive projections on the suspended globe within the ring, said ring being provided with air holes around the globe to cool the exterior of the globe adjacent to the ring; substantially as described.

2. In a lamp, a globe holder comprising a ring having slots to receive exterior projections on the globe, said ring having a vertically extending portion to engage the globe and prevent side swinging thereof; substantially as described.

3. In a lamp, a globe holder comprising a ring having inwardly opening slots to receive exterior projections on the globe, said ring having air holes therethrough and provided with a vertically extending portion to engage the globe and prevent sidewise swinging; substantially as described.

4. An inverted incandescent gas lamp having a lamp casing arranged to support a globe and provided with an intermediate surrounding recess, and an inner globe holding ring having its edge portion secured within the said recess in the casing and arranged to surround an inner globe, said ring having slots in its inner edge portion to receive exterior projections or nibs on the inner globe; substantially as described.

5. In an inverted incandescent gas lamp having a lamp casing, a globe holding ring within the casing having a slot to receive a projection on the globe, and spring cam mechanism connected to the ring arranged to receive said projection; substantially as described.

6. In a lamp, a globe-holding ring having slots to receive projections on the globe, and leaf spring cams connected to the ring along which the globe projections ride when turned to position; substantially as described.

7. In a lamp, a globe-holding ring having slots to receive projections on the globe, and spring cams along which the globe projections ride when turned to position, said cams having projections arranged to retain the globe nibs or projections in place from movement in both directions; substantially as described.

8. In an inverted incandescent gas lamp having a lamp casing, a globe holder of ring form within the casing arranged to surround a suspended globe, said globe holder having spring cam mechanism connected thereto and arranged to engage projections on the globe and raise the globe as the same is turned to normal suspended position; substantially as described.

9. In a lamp, a globe-holding device comprising a ring having slots to receive projections on a globe, said ring having leaf spring cam mechanism to engage said projections, said cams having recesses for the reception of said projections to prevent the globe from turning; substantially as described.

10. In a lamp, a casing, a globe holder within said casing comprising a ring having spring cam mechanism connected thereto, and a globe having projections coacting with said cam mechanism to draw the globe upwardly against the casing; substantially as described.

11. An inverted incandescent gas lamp having a lamp casing arranged to support a globe, a ring within said casing and a second globe suspended thereby, one of said parts having projections and the other part having recesses arranged to receive the projections when registered therewith; substantially as described.

12. In an inverted incandescent gas lamp having a casing arranged to support an outer globe, a ring within said casing having slots in its inner edge, and a second globe having projections arranged to register with said recesses, the surrounding ring also having a projection arranged to prevent back turning of the globe when in normal position; substantially as described.

In testimony whereof, I have hereunto set my hand.

THOMAS JAMES LITTLE, JR.

Witnesses:
JOSEPH H. JOHNSON,
R. B. WASHINGTON.