

R. M. DIXON.
 GLOBE HOLDER.
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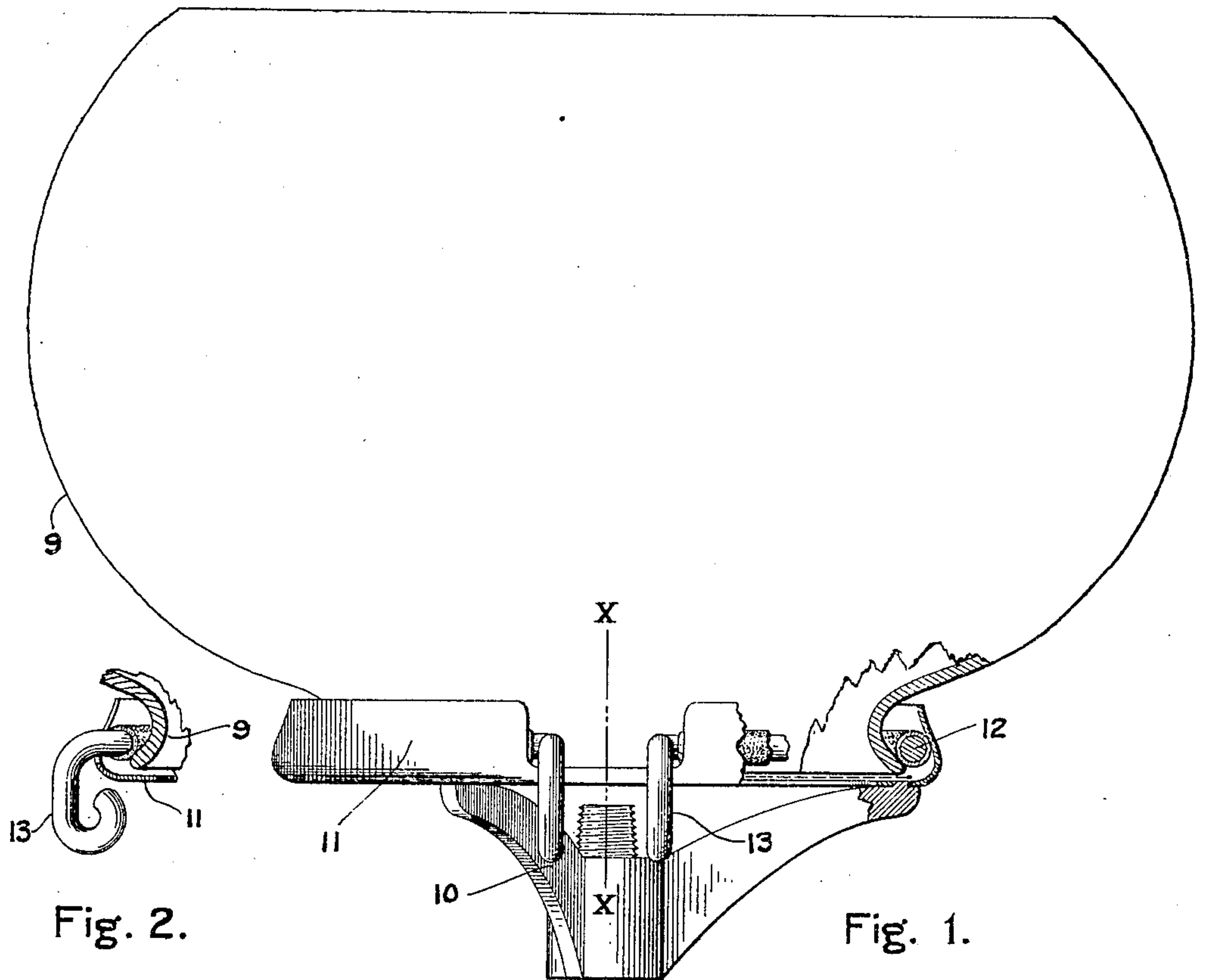


Fig. 2.

Fig. 1.

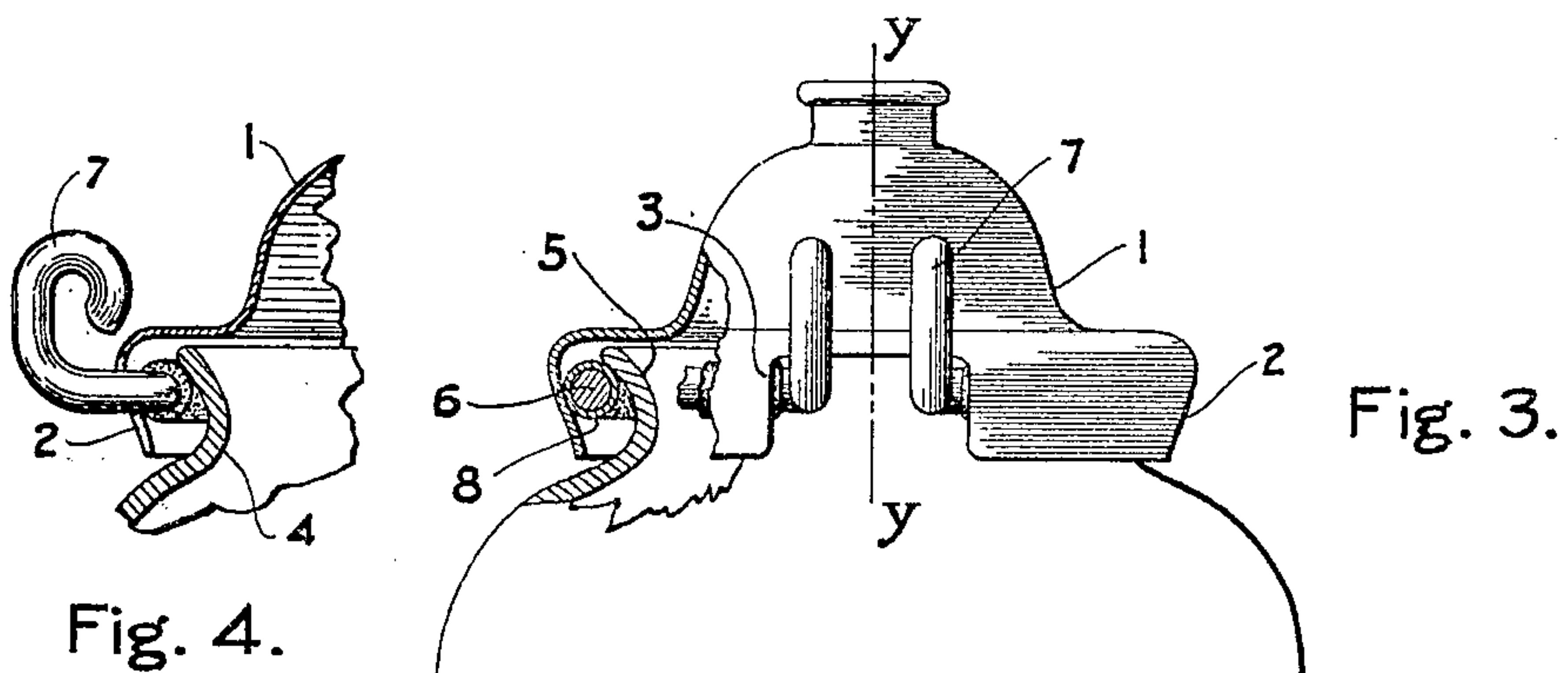


Fig. 4.

Fig. 3.

WITNESSES:
J. Clyde Ripley.
Robert S. Blair

INVENTOR
R. M. Dixon
 BY
Worfield Thell
 ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROBERT M. DIXON, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE SAFETY CAR HEATING & LIGHTING COMPANY, A CORPORATION OF NEW JERSEY.

GLOBE-HOLDER.

No. 927,718.

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To all whom it may concern:

Be it known that I, ROBERT M. DIXON, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Globe-Holders, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to means for holding globes and articles of like nature in operative position and, more particularly, to means of this type peculiarly adapted for use in car lighting systems.

15 One of the objects thereof is to provide means of the above type of simpler construction and susceptible of more ready manipulation than is practicable with former devices of the same general nature.

20 Another object is to provide means of the above type characterized by increased security in holding the globe, both as to cushioning the same against all shocks and vibrations transmitted to the supporting means and as to the prevention of accidental detachment.

Other objects will be in part obvious and in part pointed out hereinafter.

30 The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the device hereinafter described, and the scope of the application of which will be indicated in the following claims.

35 In the accompanying drawings, wherein are shown two of various possible embodiments of certain features of my invention: Figure 1 is an elevation of one of the same partially in section. Fig. 2 is a detailed sectional view taken on the line $x-x$ of Fig. 1. Fig. 3 is an elevation of another embodiment, certain parts being cut away so as to show the construction more clearly. Fig. 4 is a detail sectional elevation taken on the line $y-y$ of Fig. 3.

Similar reference characters refer to similar parts throughout the several views.

40 In order to render clearer certain features of my invention, it may here be noted that I have found that in devices of the general nature of those with which this invention deals, it is of considerable importance that the same be readily manipulated so as to de-

tach the globe, as for purposes of cleansing. 55 This feature attains even greater prominence in constructions in which the removal of the globe is a pre-requisite to lighting the lamp. I have also found that when devices of this type are used in cars, or under similar severe 60 conditions, it is difficult to prevent the breakage or chipping of the globe, due to excessive or unequal pressure upon certain parts thereof, or to the effect of such blows as might result from rattling against a metallic part. Moreover, when devices of this 65 nature are used in the above indicated relations, it is often difficult to prevent the accidental detachment of the globe, and even though it remains intact and in place, nevertheless, the continual rattling of the globe upon a moving train is a constant source of annoyance. The above and other defects are remedied in constructions of the nature 70 of that hereinafter described. 75

Referring now to Fig. 3 of the drawings, there is shown a supporting member 1 adapted to be detachably secured upon a gas conduit or other fixed part and provided with a depending inwardly-directed flange or 80 shield 2, which constitutes an abutment for the flexible ring 6 and through the coöperation of said ring when expanded locks the globe against inadvertent detachment and which is cut away as shown at 3, for a purpose hereinafter described. A globe 4, 85 which may be of any desired shape, is preferably provided with an outwardly-flared lip 5, of such shape and size as readily to pass within the shield 2. The form of globe shown 90 is especially designed for use in connection with an incandescent gas lamp in a car-lighting system, but the same may be of any shape and may be adapted to inclose a source of light of any desired type without 95 sacrifice of the more important features of my invention, and I desire to be understood that by the term "globe," as used throughout this specification and the following claims, I intend any member adapted to be 100 used in conjunction with a source of light to protect the same in any manner, to aid in combustion of fuel, or to vary the amount or affect the distribution of light emitted.

Globe 4 is locked within the shield 2 by 105 means of a spring 6, preferably provided with bent finger grips 7. In the illustrative embodiment shown, these members are formed

of a single piece of spring wire bent into the shape indicated in the drawings, and so formed as to tend to spring outwardly against the shield 2. Fitting about spring 6 is a tube 8, preferably formed of asbestos, which cushions the parts relatively one to another, and performs other advantageous functions when used in this relation, some of which will be hereinafter indicated, and some of which will be obvious from the matter set forth.

The method of use of the above described embodiment of my invention is as follows: Assuming the parts to be in the assembled condition shown in Fig. 3 of the drawings and that it is desired to detach the globe 4, the finger grips 7 are merely pressed toward one another so as to contract the spring and draw the same, together with its surrounding tube 8, into the concave portion of the globe below the lip 5 which constitutes another abutment for the flexible ring 6 and enables the latter to co-act with both the globe and the support in such a manner that a wedging action results from an initial movement tending to effect a separation of the globe from the holder. This follows from the fact that the abutments of the globe and support, respectively, are disposed in an angular relation, as may be seen from an inspection of the drawing. The resiliency of the ring maintains it in the narrower space between the angularly disposed abutments, and, as will be understood, upon manually overcoming such resiliency the ring may be positioned in the wider space provided by the recess at the junction of the globe lips or abutment with the body portion. In this manner, the spring is so contracted as to slip, together with the globe, past the inwardly turned edge of the shield 2. The globe may then be cleansed or replaced or the lamp lighted and it is again locked into position merely by slipping it, together with the locking spring 6, into the shield 2, and releasing the finger grips 7, thus permitting the spring to expand. If any considerable period of time is to elapse between the removal and replacing of the globe, the locking spring 6 may be snapped into position within the shield 2, thus doing away with the chance of losing or misplacing the same, which would otherwise exist.

It will thus be seen that I have provided a device which is well adapted to accomplish the objects of this invention and which possesses many advantages, some of which will be apparent from the above description. Owing to the feature of my invention whereby the globe is locked by the expansion, rather than the contraction, of a resilient member, it is securely held in position, as, due to the flaring lip 5, any tendency of the globe to leave the support forces the resilient member outwardly and locks the globe yet

more securely. That is to say, inasmuch as the ring 6 covered with an asbestos sheath 8 is resilient in that direction, which tends to press it directly against the inclined or conical flange 2 which serves as an abutment, it will be noted that the resiliency of the ring tends to cause the same to expand into the portion of the abutment having the larger periphery. On the other hand, the flaring flange 5 of the globe forms an abutment which is reversely arranged and in angular relationship with respect to the abutment constituting the flange 2. The effect of this angular relationship is to bring the free edge of the globe abutment or flange closer to its complementary holder flange than elsewhere. Now, as the ring tends to expand, and also has a vertical bodily play as well as a lateral play, it will become wedged between these two flanges. Now, in case the globe should tend to fall or move away from its holder, this would have the effect of bringing the free edge of the globe flange closer to the complementary flange on the holder, thereby still further wedging and squeezing the ring 6. Evidently, therefore, this action cannot follow. Moreover, the globe, while securely supported in position, is nevertheless removable at any time, and may be replaced with a minimum of effort. The asbestos tubing 8, moreover, thoroughly cushions the globe against all shocks or vibrations which might otherwise be transmitted thereto, and is itself durable, heat-insulating, and being preferably of asbestos and consequently of refractory material, is substantially unaffected by the action of heat or moisture. As the globe rests upon the asbestos tube, has a uniform bearing thereon about substantially the entire circumference, and does not contact any of the surrounding metal parts, it will be readily seen that the chances of rattling or breakage thereof are reduced to a minimum.

In Fig. 1 of the drawings, there is shown a slightly different embodiment of my invention, wherein a globe 9 rests upon a supporting member 10 provided with a shield 11, identical in function with the shield 2 above described. The locking spring 12 shown in connection with this embodiment is substantially identical with that above described, the main point of difference resting in the fact that, in this form, the finger grips 13 are inclined downwardly this formation being rendered necessary by the shape of the globe. This embodiment of certain features of my invention possesses many of the advantages of that first described.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter contained in the above description or shown

in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I desire it also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein-described and all statement of the scope of the invention, which as a matter of language, might be said to fall therebetween.

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

1. In a device of the class described, in combination, a globe, a supporting member, and resilient means adapted to be expanded and wedged between the same and lock said globe to said supporting member in said expanded condition, said parts being normally arranged whereby an initial separating movement of said globe relative to said member will wedge said means between said globe and said member.

2. In a device of the class described, in combination, a globe, a supporting member, resilient means adapted to be expanded and wedged therebetween and lock said globe to said supporting member, and manually actuated means adapted to contract said resilient means and release said globe, said parts being normally arranged whereby an initial separating movement of said globe relative to said member will wedge said means between said globe and member.

3. In a device of the class described, in combination, a supporting member having an inturned portion, a globe having a flared lip adapted to pass within the edge of said inturned portion, and resilient means interposed between said lip and said supporting member adapted to expand beyond the edge of said inturned portion and lock said globe within said supporting member in said expanded condition.

4. In a device of the class described, in combination, a supporting member having an inturned portion, a globe having a flared lip adapted to pass within the edge of said inturned portion, resilient means interposed between said lip and said supporting member adapted to expand beyond the edge of said inturned portion and lock said globe within said supporting member, and a pair of grips adapted to contract said resilient means and release said globe.

5. In a device of the class described, in combination, a supporting member having an inturned portion, a globe having a flared lip adapted to pass within the edge of said inturned portion, and a resilient member about said globe and tending to spring outwardly toward the inturned portion of said supporting member, adapted upon being contracted within the lip of said globe to pass within the edge of said inturned portion and upon being

permitted to expand to lock said globe upon said supporting member in said expanded condition.

6. In a device of the class described, in combination, a supporting member provided with a projecting portion, a globe, and resilient means provided with a non-metallic, refractory covering, adapted to be expanded within the projecting portion of said supporting member and lock the globe thereon in said expanded condition and cushion the movement of said globe.

7. In a device of the class described, in combination, a member provided with an inturned portion, a globe, and a resilient member adapted to be expanded between said inturned portion of said supporting member and said globe and lock said globe thereon in said expanded condition, said resilient member being provided with refractory, non-metallic means adapted to cushion the movement of said globe.

8. In a device of the class described, in combination, a supporting member having an inturned portion, a globe provided with a lip adapted to pass within said inturned portion, a resilient member substantially surrounding said globe and adapted to be expanded between said inturned portion and said lip, and lock said globe upon said supporting member in said expanded condition, and a non-metallic cover upon said resilient member adapted to protect said globe.

9. In a device of the class described, in combination, a supporting member, a globe, resilient means adapted to be expanded between the same against the supporting member and lock said globe upon said supporting member in said expanded condition, and means connected with said resilient means adapted to place the same in inoperative condition.

10. In a device of the class described, in combination, a supporting member provided with a projecting portion, a globe, a resilient member adapted to be expanded against said projecting portion of said supporting member to lock said globe thereon in said expanded condition, said resilient member being provided with non-metallic heat insulating means adapted to protect said globe, and means connected with said resilient member adapted to contract the same and release said globe.

11. In a device of the class described, in combination, a supporting member provided with an inturned portion, a globe having a lip adapted to pass within the edge of said inturned portion, a resilient member adapted to be expanded between said lip and said inturned portion and lock said globe upon said supporting member in said expanded condition, an asbestos part upon said resilient member adapted to protect said globe, and means connected with said resilient member

adapted to contract the same within said lip and release said globe from said supporting member.

12. In a device of the class described, in combination, a supporting member provided with an inturned portion, a globe provided with a lip adapted to pass within the edge of said inturned portion, a resilient member about said lip adapted to be expanded between said lip and said inturned portion and lock said globe upon said supporting member in said expanded condition, an asbestos tube upon said resilient member adapted to have a substantially uniform bearing upon and protect said globe in locked position, and means formed upon said resilient member adapted to contract the same within said lip and release said globe.

13. A globe having a recess and an abutment, a supporting member having an abutment, and means normally wedged between said abutments adapted to be manually seated in said recess to enable a separation of said globe from said supporting member to be effected.

14. A globe having an annular recess and an abutment inclined therefrom, a support-

ing member having an opposing abutment in angular relation to the aforesaid abutment, and an annular shaped resilient ring normally wedged between said abutments adapted to be manually seated in said recess to allow a separation of said globe from said supporting member.

15. In an illuminating apparatus in combination; a globe provided with an abutment; a support provided with a corresponding abutment, said abutments being reversely arranged and in angular relationship; and a resilient member normally elastically urged against said support abutment and maintained against said globe abutment, whereby the latter is locked against inadvertent detachment, said member being adapted and arranged to be manually withdrawn from said normal position to effect a release of said globe.

In testimony whereof I affix my signature, in the presence of two witnesses.

ROBERT M. DIXON.

Witnesses:

A. C. MOORE,
ELMER E. ALLBEE.