

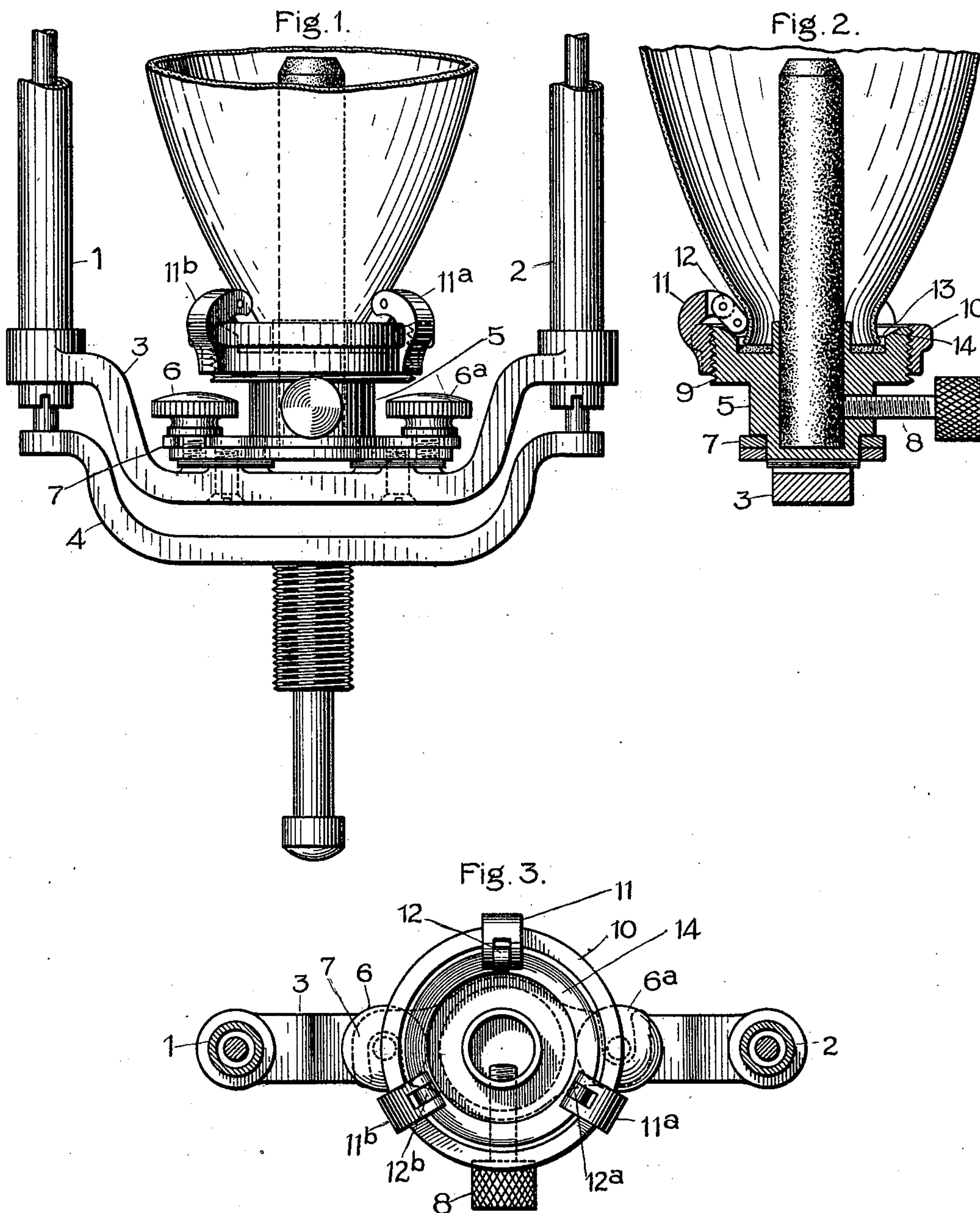
No. 665,422.

Patented Jan. 8, 1901.

R. FLEMING.
GLOBE HOLDER FOR ARC LAMPS.

(Application filed Sept. 25, 1899.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

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GLOBE-HOLDER FOR ARC-LAMPS.

SPECIFICATION forming part of Letters Patent No. 665,422, dated January 8, 1901.

Application filed September 25, 1899. Serial No. 731,535. (No model.)

To all whom it may concern:

Be it known that I, RICHARD FLEMING, a subject of the Queen of Great Britain, residing at Lynn, county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Globe-Holders for Arc-Lamps, (Case No. 1,362,) of which the following is a specification.

This invention relates to globe-holders for arc-lamps, and especially to that type of arc-lamp in which a small inner globe or inclosure for the arc is employed. The object of this invention is to provide a device of this character with a globe-holder or a combined globe holder and socket for the negative carbon or electrode which will permit ready assembly or dismounting of the globe and carbon and constitute an efficient clamp and will not fracture the globe.

In carrying out my invention I provide an annular adjustable nut interiorly threaded and adapted to screw upon a cooperating thread on the periphery of a supporting post or pillar for the globe. This pillar is centrally bored and provided with a tubular socket for the negative carbon. It is flanged at the top to form a cup to receive the contracted bottom of the globe and provided with a beveled rim which when the globe is in position stands above its bottom. A plurality of yielding and preferably pivoted clamping-toes are supported on the screw-ring above referred to, which when the ring is raised by screwing upwardly drop to a vertical position and clear the neck of the globe, permitting the latter to be removed from the globe-socket; but when the ring is adjusted in a downward direction the toes ride upon the beveled rim of the socket and are deflected inwardly into clamping relation to the globe.

These several features of novelty will be hereinafter more fully described and will be specifically set forth in the claims accompanying this specification.

In the accompanying drawings, illustrating the invention, Figure 1 is a side elevation, the upper part of the lamp being broken away, showing an organization embodying my improvements. Fig. 2 is a median vertical section through my improved globe-holder. Fig. 3 is a top plan view of the globe-holder.

1 2 represent the lower posts of the arc-lamp frame, and 3 4 the cross-yokes on which the globes are mounted. Yoke 4 is screwed at its ends to sliding rods to permit lowering of the outer globe. As this feature, however, forms no part of my invention and is a familiar form of construction in arc-lamps, it will not further be referred to. Upon the yoke 3 is mounted a globe-support 5. This may be detached from the yoke by loosening thumb-screws 6 6^a, which clamp the slotted arms of a base 7, screwed to the support. The support is bored vertically, as indicated in Fig. 2, to form a socket for the negative electrode, and through the wall of the support extends a clamping-screw 8 for holding the carbon securely in place. The globe-support is flanged at the top and threaded on its periphery, as indicated at 9, on which thread screws an adjustment-sleeve 10. A plurality of short standards 11, 11^a, and 11^b are secured to or formed integral with the adjusting-ring. These are symmetrically placed with respect to the axis of the ring and are provided with slots at the top overhanging the flanged top of the globe-holder. In each slot is pivotally mounted a clamping-toe 12 12^a 12^b. The top of the globe-holder is recessed, as shown at 13, to form a socket for the bottom of the globe, and a washer of soft material, such as asbestos, is placed in the socket to form an air-tight joint with the bottom of the globe. The outer wall of this socket, formed by the rim of the globe, is beveled, as indicated at 14, to form a deflector for the clamping-toes when the nut is adjusted downwardly. The globe is shown in Fig. 2 clamped in position, the pivoted toes being forced by the beveled rim against the concentrated neck of the globe.

It will be evident that other specific forms of the clamping-toes than the pivoted type shown might be employed, the only essential function to subserve being a capacity to retract from the axis of the globe, so as to free it when the nut is unscrewed. Other types than the simple gravity type shown will occur to those skilled in mechanics. By screwing the nut 10 upwardly the clamping-toes are raised from the beveled wall and drop by gravity to a vertical position, permitting the

flanged neck of the tube to be cleared, so that the globe can be easily removed.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

5 1. A globe-holder for an arc-lamp comprising a globe-support having a recess to receive the bottom of the globe, a vertically-adjustable clamp-nut threaded on the periphery of the support, a pillar forming part of the sup-
10 port, and connecting it with the lamp-frame, a clamping device mounted on the nut, and a wall or support to deflect said device toward the axis of the globe when the nut is adjusted.

2. A globe-holder for an arc-lamp, compris-
15 ing a globe-support having a substantially air-tight recess to receive the bottom of the globe, an adjusting-nut threaded on the periphery of the support, a pillar forming part of said support and connecting it with the
20 lamp-frame, a plurality of clamping-toes mounted upon and controlled by said nut, and means for deflecting them into engagement with the globe when the nut is adjusted.

3. A globe-holder for an arc-lamp, compris-
25 ing a globe-support having a recess to receive the bottom of the globe, an adjusting-nut mounted thereon, a plurality of symmetrically-arranged clamping devices pivotally secured to said nut hanging in lines to clear the
30 globe when the nut is raised, and an inclined wall on the globe-support adapted to engage

said clamping devices to deflect them into engagement with the globe when the nut is lowered.

4. A globe-holder for an arc-lamp, compris- 35
ing a globe-support having a socket for the negative electrode provided with an air-tight joint for the bottom of the globe, an adjusting-nut on the periphery of said support, a plurality of symmetrically-arranged clamp- 40
ing-toes carried by said nut hanging in lines to clear the globe when the nut is raised, and an inclined wall on the globe-holder to deflect said clamping-toes into engagement with the globe when the nut is lowered. 45

5. A globe-holder for an arc-lamp, compris-
ing a globe-support having an air-tight socket for the bottom of the globe, a holder for the negative electrode, a nut on the periphery of the support, a plurality of freely-pivoted 50
clamping-toes carried thereby and suspended to clear the bottom of the globe when free, and an annular deflecting-surface having a fixed position with relation to the nut to force the toes inwardly to engage the globe when 55
the nut is adjusted.

In witness whereof I have hereunto set my hand this 21st day of September, 1899.

RICHARD FLEMING.

Witnesses:

DUGALD MCKILLOP,
HENRY O. WESTENDARP.