

No. 733,342.

PATENTED JULY 7, 1903.

G. E. STEVENS.
GLOBE HOLDER FOR ARC LAMPS.
APPLICATION FILED OCT. 7, 1899.

NO MODEL.

Fig. 1.

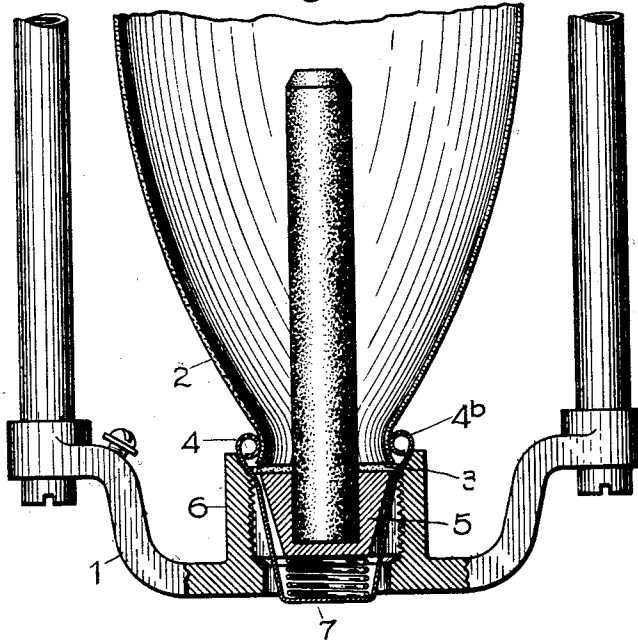


Fig. 2.

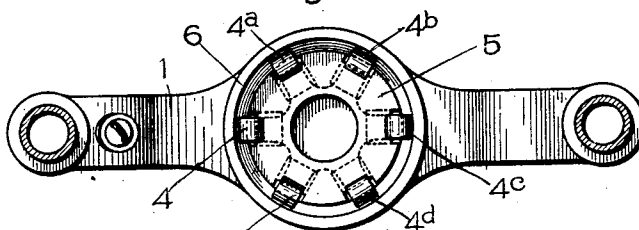
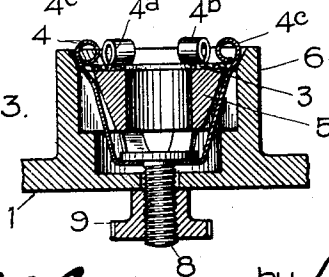


Fig. 3.



Witnesses.

Lewis D. Bell

Benjamin B. Hall

Inventor.

George E. Stevens

by *Albert G. Davis*

Atty.

UNITED STATES PATENT OFFICE.

GEORGE E. STEVENS, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

GLOBE-HOLDER FOR ARC-LAMPS.

SPECIFICATION forming part of Letters Patent No. 733,342, dated July 7, 1903.

Application filed October 7, 1899. Serial No. 732,866. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. STEVENS, a citizen of the United States, residing at Lynn, county of Essex, State of Massachusetts, have
5 invented certain new and useful Improvements in Globe-Holders for Arc-Lamps, of which the following is a specification.

My invention relates to globe-holders for arc-lamps, the object being to provide a device by which the globe may be clamped to
10 its support or released therefrom of simple and cheap construction.

The invention is particularly adapted for use in connection with the inner globe of in-
15 closed arc-lamps.

In carrying out my invention I mount upon a yoke or other support attached to the lamp-frame a globe-supporting device provided with an air-tight seat for the bottom of the
20 globe, adapted to be engaged or released by a plurality of laterally-movable clamping-toes capable of being shifted into or out of clutching engagement with the neck of the globe by vertical adjustment. In the best forms in
25 which I have embodied my invention I form the several clamping-toes from a single piece of sheet metal punched with a number of radial prongs and bent upwardly from a central portion of the blank, so as to lie in an in-
30 clined direction with reference to the axis of the globe when in position in the support. The terminals of the prongs are curved inwardly, so as to form clamping-toes, and means are provided for adjusting all of them
35 bodily in a vertical direction, by which the prongs are forced inwardly or outwardly with reference to the axis of the globe by a suitable guide in the support. The prongs may have an elasticity of their own, or a spring
40 may be provided to assist their adjustment.

The several features of novelty will be more fully pointed out hereinafter and will be definitely indicated in the claims.

In the accompanying drawings, which illustrate the invention, Figure 1 is a side elevation of a device embodying my improvements, the globe-holder being shown in section. Fig.
45 2 is a top plan view of the globe-holder and the frame-yoke on which it is mounted. Fig.

3 is a median cross-sectional view of a modification.

Referring first to the type of construction shown in Figs. 1 and 2, 1 represents a frame attachment, shown as a yoke connecting two vertical pillars or tubes of an inclosed arc-
55 lamp frame. As will be understood by those familiar with the construction of a common type of these lamps, the yoke is insulated from the tubular extensions, and rods movable within said extensions carry auxiliary
60 devices for supporting the outer inclosing globe. I provide a seat for the bottom of the inner globe 2, which may be rendered airtight by a packing-washer of asbestos 3. Arranged at a plurality of points around the
65 globe-seat are a series of yielding clamps 4^a, &c., movable in a direction to or from the axis of the globe. I prefer to form these several clamping-toes by striking from a single sheet of metal a star-shaped blank or spider
70 and bending the arms at a slightly obtuse angle to the base, as shown in Fig. 1. The upper ends of these arms bear against a fixed guide mounted on the frame, and means are provided for moving the clamping device ver-
75 tically, so as to permit the fingers to spread and release the globe or to draw them inwardly by a downward adjustment to clamp the globe. Various ways of effecting this result may be adopted. Two simple, neat,
80 and effective forms are shown in the drawings. That of Fig. 1 comprises a threaded nut 5, containing a socket for the negative electrode and capable of vertical adjustment in a fixed tubular support 6, carried by the yoke. The
85 nut is slotted to permit the arms 4^a, &c., to nest within the slots, and a spring 7 between the bottom of the clamp and the nut may be provided to retract the clamp to a position where the toes lie within the periphery of the
90 globe-seat. The globe may be released by pushing upwardly on the bottom of the clamp 7, the walls of the grooves in the nut spreading the clamping-toes upwardly and releasing the globe. The nut permits the tension of
95 the spring 7 to be varied and the parts to be assembled or dismantled with ease. In inserting a globe the bottom of the clamp is

pushed up and the globe put in place and the bottom then released, permitting the spring 7 to force the clamp down, and the upper ends by bearing against the upper edge of the support 6 are forced into engagement with the globe.

In the modification shown in Fig. 3 the spring 7 is dispensed with, a screw-stem fastened to the globe-support being carried through an opening in the tubular support, as indicated at 8, an adjusting-nut 9 being provided to shift the globe-support up or down. The bottom of the clamp is perforated to admit the screw, to which it may be fastened in any suitable manner. By loosening the nut and pushing up on the screw 8 the clamping-toes are spread outwardly and the globe released. The reverse operation clamps the globe.

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

1. A globe-holder for an arc-lamp, comprising a vertically-adjustable globe-seat having a screw-plug containing outwardly-inclined 25 guide-slots, spring clamp-fingers extending through the slots, and a spring beneath the plug to hold the fingers normally depressed into clamping relation to the globe.

2. A globe-holder for an arc-lamp, comprising a plurality of inclined elastically-yielding 30 clamping-toes, a nut for adjusting them vertically, a spring pressing axially on the globe,

and a deflecting device for shifting the toes relatively to the globe-axis to engage or release the globe.

3. A globe-holder for an arc-lamp, comprising a hollow support fixed to the lamp-frame, a globe-seat vertically adjustable therein, a clamping device for the globe, comprising a plurality of inclined arms movable with the globe-seat and nesting in slots formed in the same, the free ends of said arms constituting a clamping device for the globe, and a guide for deflecting them within or without the limits of the globe-seat.

4. A globe-holder for an arc-lamp, comprising an air-tight seat for the globe, a plurality of spring-fingers guided in the sides of the holder toward and from the globe-axis, and an attachment of the fingers below the holder 50 for pushing them upwardly to spread the fingers and release the globe.

5. The combination of a tubular globe-holder, an air-tight globe-seat mounted thereon, and inclined springs guided therein to 55 grip or release the globe, said springs being movable vertically and accessible from the bottom of the holder.

In witness whereof I have hereunto set my hand this 5th day of October, 1899.

GEORGE E. STEVENS.

Witnesses:

DUGALD MCKILLOP,
HENRY O. WESTENDARP.