

No. 627,486.

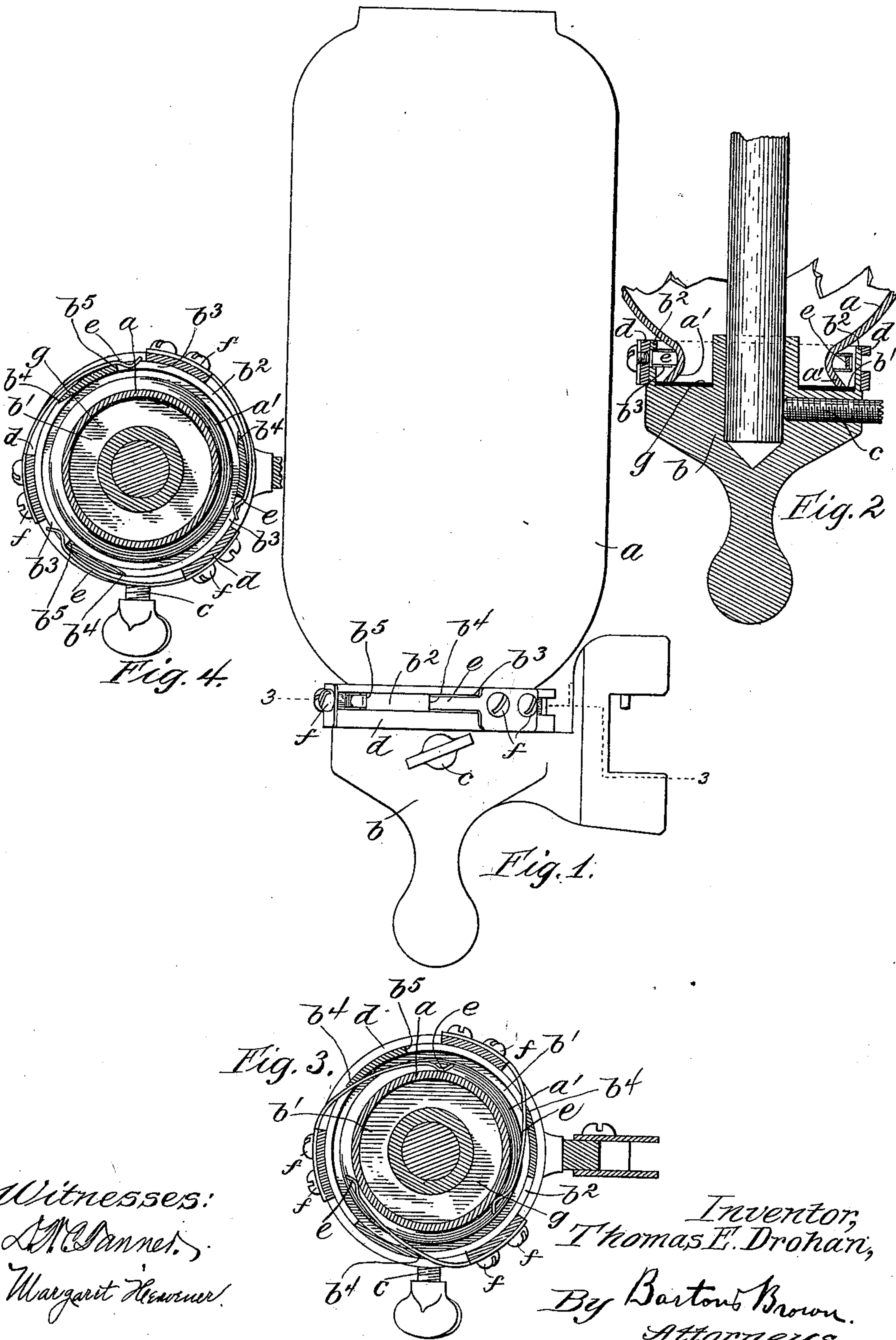
Patented June 27, 1899.

T. E. DROHAN.

GLOBE HOLDING DEVICE FOR ELECTRIC ARC LAMPS.

(Application filed May 21, 1898.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## GLOBE-HOLDING DEVICE FOR ELECTRIC-ARC LAMPS.

SPECIFICATION forming part of Letters Patent No. 627,486, dated June 27, 1899.

Application filed May 21, 1898. Serial No. 681,297. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS E. DROHAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Globe-Holding Devices for Electric-Arc Lamps, of which the following is a full, clear, concise, and exact description.

My invention relates to a globe-holding device for electric-arc lamps, and is especially designed and adapted for supporting and clamping the inner globe of an inclosed arc-lamp.

One difficulty that has stood in the way of successful operation of inclosed arc-lamps, causing considerable annoyance, has been the liability of the lamp-trimmer to break the thin inner glass globe which immediately encircles the electric arc during the act of inserting fresh carbons to take the place of those which have been consumed.

The present invention has for its object to provide an improved device for clamping the inner globe and maintaining the same in position without danger of breaking the thin glass of which it is made, my object also being to construct such a device in a simple and practical manner, so that it may be easily and quickly operated to release the globe.

My invention contemplates, therefore, a support, preferably a cup formed integrally with the lower-carbon holder, upon which support the base of the globe is adapted to rest. A ring is associated with said support, being rotatable relatively thereto, and clamping-fingers are provided which are controlled by manipulation of said ring, said fingers normally engaging the globe, so that upon rotation of the ring in one direction the fingers will be caused to release the globe, and upon opposite rotation they will again be caused to engage and clamp the globe.

In the accompanying drawings I have indicated a convenient embodiment of my invention, which will be specifically described and the operation thereof explained by reference to said drawings, in which—

Figure 1 represents the device in elevation. Fig. 2 is a vertical sectional view thereof. Fig. 3 is a sectional plan view on line 3 3 of Fig. 1, the spring-actuated fingers being

shown engaging the base of the globe; and Fig. 4 is a similar view, except that the ring is shown as having been rotated so as to cause the fingers to release their hold upon the globe.

The same letters of reference are used to designate the same parts wherever they are shown.

The base of the globe *a* is provided with a projecting rim *a'*, which rests within the cup *b'*, formed by the annular wall *b<sup>2</sup>* of the lower-carbon holder *b*. I preferably provide a mat of asbestos paper *g* in the bottom of said cup, upon which the globe may rest. The carbon-holder is provided with a central bore to receive the lower carbon, which is maintained in position by means of a set-screw *c* in the usual manner. A ring *d* encircles the annular wall *b<sup>2</sup>*, engaging with its outer surface and being movable thereon. The fingers *e*, in this instance three in number, are mounted upon the encircling ring, being secured thereto by screws *f*. Slots *b<sup>3</sup> b<sup>3</sup>* are provided in the walls *b<sup>2</sup>* of the cup, through which slots fingers *e e* are adapted to project, the ends of said fingers thus being within the cup and bearing against the rim *a'* of the globe and clamping the same firmly, although being sufficiently yielding to prevent breakage of the glass globe. This arrangement is illustrated most clearly in Fig. 3, which will be understood at a glance. It will be seen that if a tighter engagement is desired between the fingers and the globe the ring *d* may be rotated in a clockwise direction, whereby the fingers will be caused to engage with the vertical edges *b<sup>4</sup> b<sup>4</sup>* of the slots *b<sup>3</sup> b<sup>3</sup>*, which are provided in said annular wall. The tendency thus is to force the springs inward and thereby to increase the clamping pressure against the globe. When now it is desired to release the globe, ring *d* may be rotated in a contraclockwise direction, whereupon the parts will be brought into the relative positions illustrated in Fig. 4, the springs being engaged by the edges *b<sup>5</sup>* and bent outward and the ends of said springs taking a position within the slots *b<sup>3</sup>*, so that the globe may be freely removed.

Obviously various modifications may be made in the device illustrated without de-



parting from the spirit of my invention, and I do not desire, therefore, to be understood as limiting myself to the precise form or arrangement shown in the drawings; but,

5 Having thus described one embodiment of my invention, I claim as new, and desire to secure by Letters Patent, together with such modifications as may be made by mere skill, the following:

10 1. In a device of the class described, the combination with a slotted cup or receptacle wherein the globe is adapted to be placed, of a ring mounted upon the exterior of and rotatable with respect to said cup, and clamp-  
15 ing-fingers provided upon said ring and extending through the slots, the walls thereof being adapted to cause said fingers to engage or release the globe as the ring is rotated in one direction or the other, substantially as  
20 described.

2. In a globe-holding device for electric-arc lamps, the combination with a slotted cup wherein the base of the globe is adapted to be placed, of an exteriorly-mounted ring rotatable with respect to said cup, and spring  
25 clamping-fingers provided upon the said ring

and extending through the slots of the cup, whereby upon the relative rotation of the parts the fingers are moved in engagement with the walls of the slots to secure the clamp- 30  
ing and unclamping of the globe, substantially as described.

3. In a globe-holding device, the combination with a cup in which the base of the globe is adapted to rest, of a ring concentrically associated with said cup, an opening in the wall of said cup, a spring-finger mounted upon said ring and adapted to project through said opening and engage the globe; said ring being rotatable with relation to said cup; where- 40  
by the said spring-finger may be thrust through said opening to engage the globe upon rotation in one direction, and withdrawn therefrom upon opposite rotation, substantially as described. 45

In witness whereof I hereunto subscribe my name this 25th day of April, A. D. 1898.

THOMAS E. DROHAN.

Witnesses:

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