No. 751,969. PATENTED FEB. 9, 1904.

J. J. WOOD.

GLOBE HOLDER FOR ARC LAMPS.

APPLICATION FILED MAR. 9, 1903.

NO MODEL.

FIG. 1.

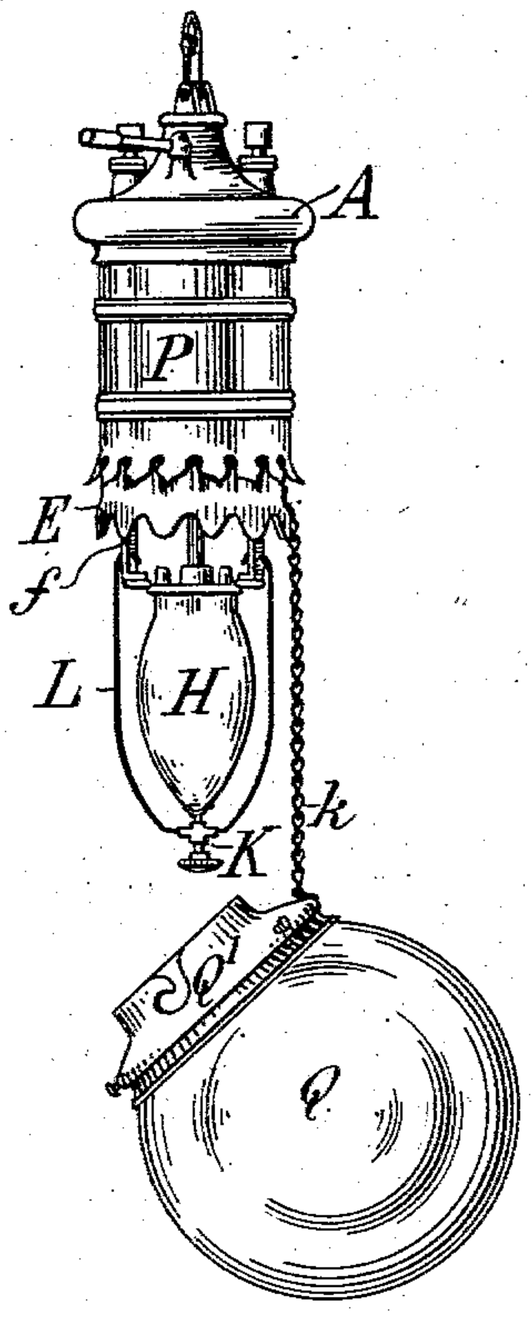

FIG. 2.

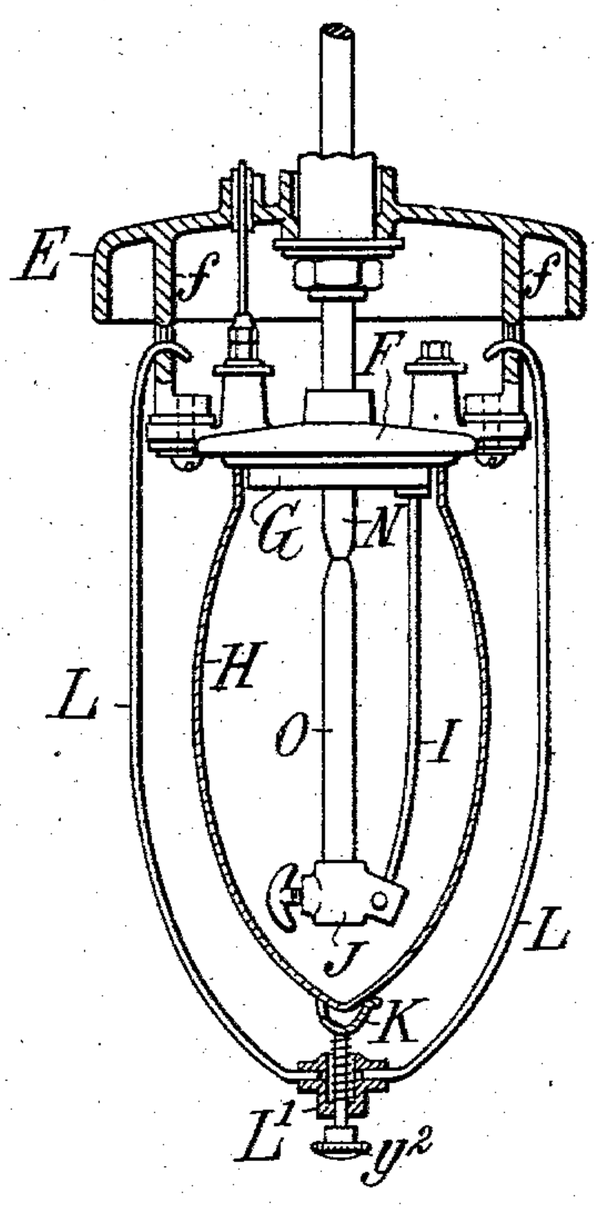

FIG. 3.

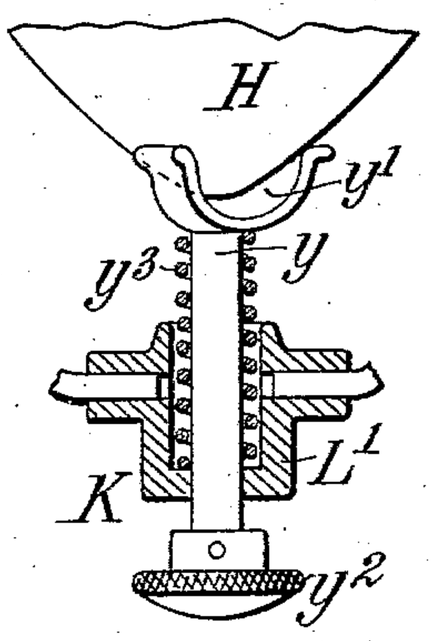

FIG. 4.

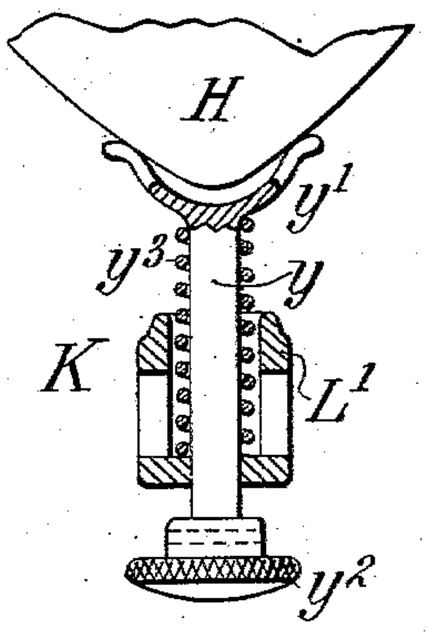

FIG. 5.

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UNITED STATES PATENT OFFICE.

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GLOBE-HOLDER FOR ARC-LAMPS.

SPECIFICATION forming part of Letters Patent No. 751,969, dated February 9, 1904.

Application filed March 9, 1903. Serial No. 146,944. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. WOOD, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Globe-Holders for Arc-Lamps, of which the following is a specification.

This invention provides an improved holder especially applicable to the inner or arc-inclosing globe of an inclosed-arc lamp.

The accompanying drawings show my invention in its preferred form.

Figure 1 is an elevation of the entire arc-lamp on a reduced scale. Fig. 2 is an elevation, partly in section, of a portion of the lamp on a larger scale. Fig. 3 is a fragmentary vertical section, being an enlargement of the lower part of Fig. 2. Fig. 4 is a similar section in a plane at right angles to Fig. 2. Fig. 5 is a plan view of the globe-holding fingers.

The arc-lamp as a whole (shown in Fig. 1) is in general of a well-known type comprising a suspension-hood A, a mechanism-case P, an inner globe H, and an outer globe Q, which, with its globe-holder Q′, is shown disconnected and hanging from a chain *k*. In this particular construction of lamp the bottom of the mechanism-case is made as a casting E, from which, as shown in Fig. 2, project downwardly two arms *f f*, preferably integral. The bottom ends of these arms are fastened to an insulated plate F, which supports the top plate or gas-cap G of the inner globe. The positive carbon N passes through the plates F G, and the negative carbon O is carried by a holder J, supported on a pendent arm I. These parts have no necessary relation to my present invention.

The globe H is held up against the gas-cap G by means of a spring-clamp K beneath it, which clamp is hung on a swinging bail L, formed of wire rods the upper ends of which are suitably supported, preferably by being formed to hook into holes in the pendent arms *f f*. (See Fig. 2.)

The construction of the clamp K is best shown in Figs. 3, 4, and 5. It preferably has an upright plunger or rod *y*, having free vertical play in a socket-piece L′, which is carried by the bottom of the bail L. The upper end of the clamp is formed to engage the globe at separated points in such manner as to be self-centering and to afford ample circulation of air for conducting away the heat. I prefer to form it with three (more or less) arms or fingers *y′* for engaging the globe, as shown. At its lower end it is formed with a head y^2. It is pressed upwardly by a spiral spring y^3, which reacts against the socket-piece L′. To release the globe, it is only necessary to grasp the head y^2 and pull down the rod and then to swing the bail L to one side. The socket-piece L′ is constructed with a deep socket to receive the spring and is formed with holes at its sides (see Fig. 4) opening into this socket, so that if dirt gets into this socket the movements of the spring will force it out, so that it is automatically cleaned.

My improved globe-holder has several important advantages. The spring is remote from the globe, so that it is not heated by the latter, and consequently does not lose its temper. The only contact made with the globe is by means of separate fingers, which touch it near its lower end and at small points, so that the minimum of heat is abstracted from the globe. The disadvantage of making an extended contact with the globe or covering any considerable portion of its surface, so as to obstruct the escape of heat therefrom, is well known. This my improved holder entirely avoids. By providing the handle y^2 at a point remote from the globe the operator is not likely to burn his fingers in the act of releasing the globe in case the latter is still hot. By applying three spring-pressed fingers for touching the globe near its lower end, where the globe is substantially conical in form, the holder is made self-centering and the pressure against the respective fingers is equalized.

What I claim is—

1. In an inclosed-arc lamp, the combination with a gas-cap of a globe-holder adapted to press the globe up against said cap, having separated fingers adapted to touch the closed lower part of the globe, and a spring remote

from the globe for pressing said fingers up, whereby the minimum of heat is conducted from the globe to the spring.

2. In an inclosed-arc lamp, a globe-holder having fingers touching the globe near its lower end at small points, and a spring remote from the globe for pressing said fingers up, whereby the minimum of heat is abstracted from the globe and the heating of the spring is avoided.

3. In an inclosed-arc lamp, the combination with a gas-cap of a globe-holder adapted to press the globe up against said cap, having three separated spring-pressed fingers touching the conical or tapering closed lower part of the globe near its lower end, whereby they center the lower part of the globe and equalize the pressure against it.

4. In an inclosed-arc lamp, the combination with a gas-cap of a globe-holder adapted to press the globe up against said cap, having three rigidly-connected fingers touching the tapering closed lower portion of the globe, and a spring remote from the globe for pressing said fingers up, whereby they center the lower part of the globe and equalize the pressure against it.

5. In an inclosed-arc lamp, a globe-holder having spring-pressed fingers touching the globe near its lower end at small points, and a handle remote from the globe for drawing the fingers down.

6. A globe-holder for an inclosed-arc lamp, comprising a spring-pressed plunger, its upper end adapted to engage the lower part of the globe, a socket-piece through which said plunger passes, and a handle at its lower end beneath said socket-piece by which to grasp it.

7. In an arc-lamp, a holder for the inner globe, comprising a plunger *y* having fingers at its upper end for engaging the globe, and having a head at its lower end, combined with a socket-piece L′ in which it is guided, and a spring seated in said socket-piece and pressing upwardly upon said plunger.

8. In an arc-lamp, a holder for the inner globe comprising a spring-pressed plunger, its upper end adapted to engage the globe, and a socket-piece in which it is guided, having a socket receiving the spring for the plunger, and openings into said socket for escape of dirt from around the spring.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JAMES J. WOOD.

Witnesses:
A. L. HADLEY,
W. F. MELCHING.