

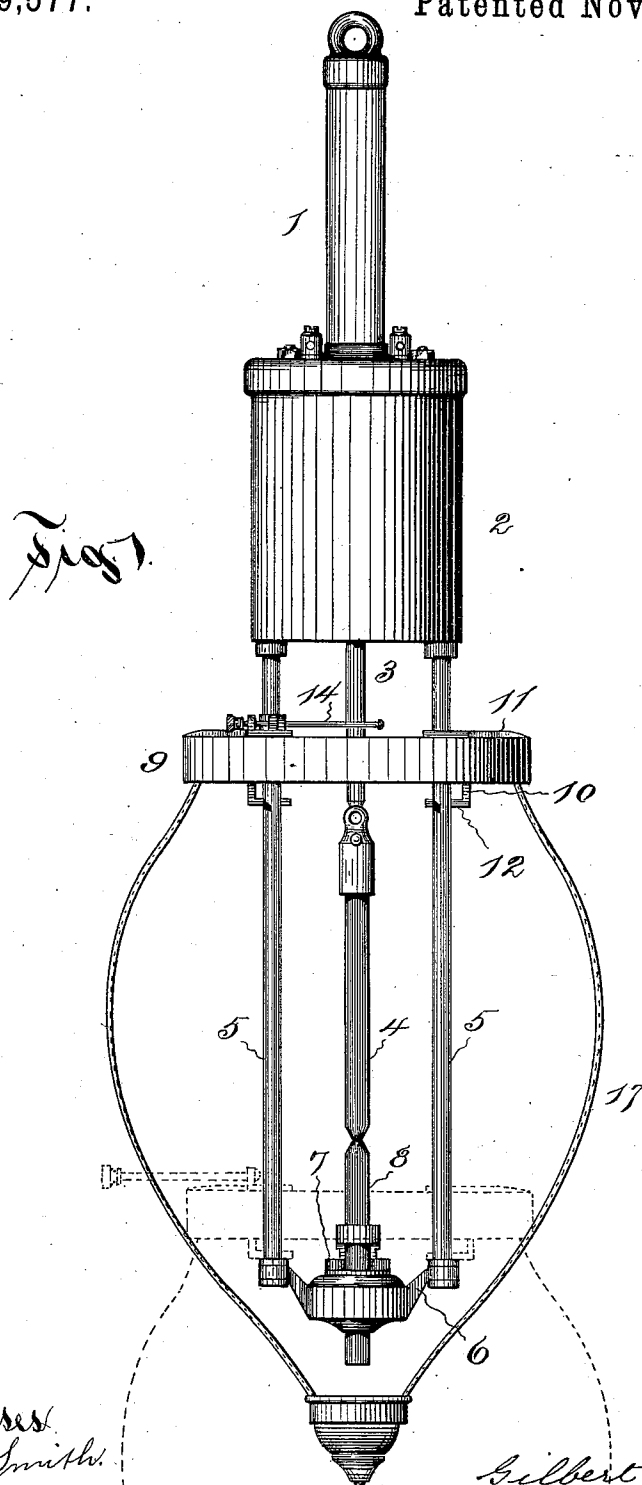
(No Model.)

3 Sheets—Sheet 1.

G. L. MOYER.
ARC LAMP GLOBE HOLDER.

No. 549,577.

Patented Nov. 12, 1895.



Witnesses
Scott H. Smith.
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Inventor.
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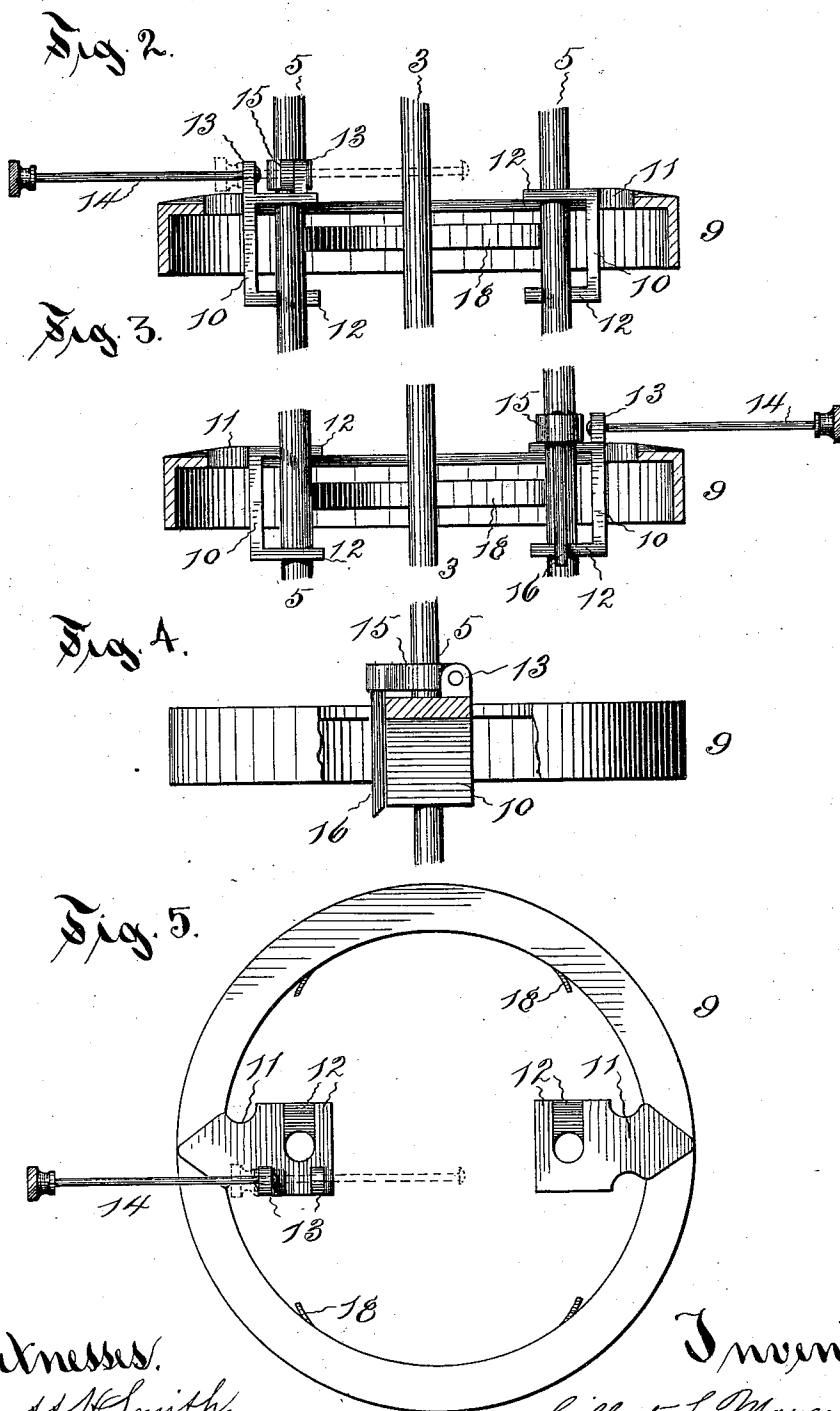
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Fig. 6.

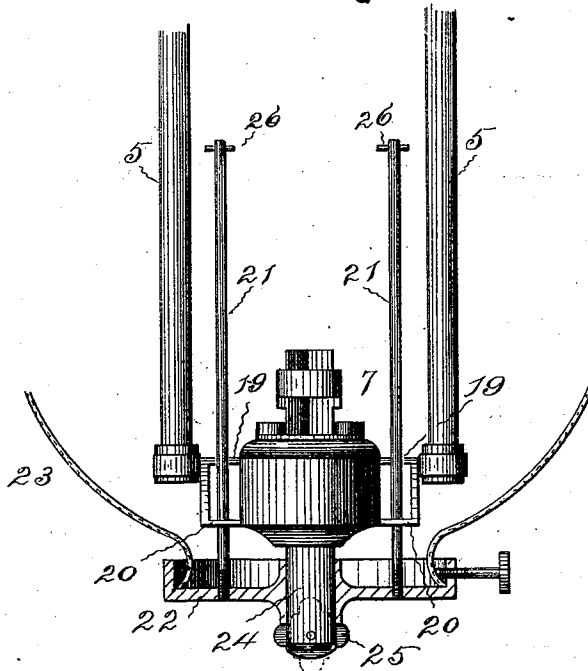
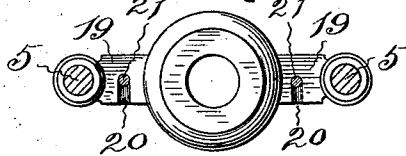


Fig. 7.



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UNITED STATES PATENT OFFICE.

GILBERT L. MOYER, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE PERKINS ELECTRIC SWITCH MANUFACTURING COMPANY, OF SAME PLACE.

ARC-LAMP GLOBE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 549,577, dated November 12, 1895.

Application filed March 19, 1895. Serial No. 542,415. (No model.)

To all whom it may concern:

Be it known that I, GILBERT L. MOYER, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Arc-Lamp Globe-Holders, of which the following is a specification.

The invention relates to the class of devices that are more particularly adapted and intended for holding the globes or other shades of electric-arc lamps; and the object of the invention is to provide a simple and cheap arrangement for holding the globe of such a lamp securely and firmly in place which can be quickly operated, so that the globe can be lowered for trimming or otherwise attending to or inspecting the carbons of the lamp without necessitating the complete removal of the globe and without danger of its accidentally dropping off, and yet which can be easily manipulated, so that the globe and its holder can be instantly removed, if desired.

Referring to the accompanying drawings, Figure 1 is an elevation of an arc lamp with a globe-holder embodying the invention. Fig. 2 is an enlarged detail elevation looking from the front of the holder and the connecting parts with the globe-ring cut in section. Fig. 3 is a similar view looking from the back. Fig. 4 is a similar view looking from one side. Fig. 5 is a plan of the globe-holding ring. Fig. 6 is a detail side elevation, with parts in section, of a modified arrangement of the invention; and Fig. 7 is a plan of the bottom part of the frame of the lamp made so as to embody the latter form of the invention.

In the form of lamp shown in the drawings the support or hanging-post 1 holds the cylindrical shell 2, which contains the feeding and regulating mechanism that operates the feed of the upper carbon-rod 3 and its carbon 4. This cylinder supports the frame-rods 5, that are connected at their lower ends by the cross-piece 6, which bears the lower-carbon holder 7 and the lower carbon 8.

The globe-holding ring 9, which is usually cast to shape of metal, is provided with inwardly-projecting brackets that are adapted to slide freely on the rods 5 of the frame.

These brackets preferably are formed with back plates 10, that are connected by arms 11 with the ring, and the back plates have near their upper and lower ends inwardly-projecting plates 12, which have perforations or mortises that fit and slide easily on the rods of the frame. The perforations or mortises through the plates of each bracket are made in line, and the contact of the rods with the walls of these openings through these upper and lower plates of the brackets guide the movement of the ring up and down. Openings are made in the bracket-plates from the edges to the perforations or mortises, usually those in the top plates being made from the back edge, while those in the bottom plates being made from the front edge. On one of the brackets are perforated lugs 13, and sliding freely in the perforations through these lugs is a pin 14, that can be passed through or removed from a perforation made through an arm 15, that is clamped upon one of the rods of the lamp-frame at the desired height. With this pin thrust through the two lugs on the bracket and the perforation through the arm that is clamped to the rod, as shown in full lines in Fig. 1, the ring is held securely and firmly in its upper position. When the pin is pulled from one of the lugs and the perforation through the arm, the ring is free to drop down in its lower position, which is shown in dotted lines in Fig. 1.

Projecting downward from the back of the arm 15, that is clamped to one of the rods of the lamp-frame, is a wire or finger 16, that is located in such position as to make contact with the edge of one of the brackets and prevent the ring from being tipped or tilted sideways when it is held in its upper position by the holding-pin.

The globe or other shade 17 can be held to the ring by means of spring-arms 18, as shown in the views illustrating the first form of the invention; but it may be held by set-screws, as shown in connection with the modified form, or by any other common means.

To trim the lamp or expose the carbons for inspection, adjustment, or any other purpose, if the globe is in place the pin is pulled from the perforation through the arm that is

clamped to one of the rods of the frame, and the ring, with the globe, is dropped from its upper position to its lower position, as shown in Fig. 1, the brackets freely sliding down the rods of the frame and guiding the ring in its vertical movement, and also preventing it from dropping completely off or from accidental removal. To return the globe from its lower position, it is simply pushed up until the holding-pin is in line with the perforation through the arm that projects from the frame-rod, and then the pin is thrust in through the perforations in the parts. The pin preferably has an enlarged head, so that it will not drop from the outer lug when it is pulled, and it is usually provided with a common form of handle, in order that it may be readily grasped for pushing it in or pulling it out.

To remove the ring, with the globe, from the lamp-frame, when desired, the ring is first dropped to its lower position and then it is tipped a little in one direction, preferably by swinging the globe toward the rear, so that the lower plates of the brackets that project inwardly are freed from the rods and the bottom cross-piece of the frame that joins the ends of the rods, and then after lowering the ring just a little it is tipped in the opposite direction by swinging the globe toward the front, so that the top plates of the brackets are freed from the rods and the bottom cross-piece of the frame. Tipping the ring first in one direction and then in the other direction, so that first the lower plates are freed from the bottom cross-piece of the frame and then the upper plates are freed, is easily done by any one who understands the operation and desires to remove the globe, and it can be instantly accomplished; but the globe of itself cannot swing so as to do this and drop off or be accidentally dropped when it is lowered for trimming.

By means of the construction described a globe held at the top may be securely fastened in its proper position on the frame in such manner that it can be dropped quickly by an attendant for trimming the lamp, or the globe can be instantly completely removed from the frame, when desired, for cleaning.

In the embodiment shown in Figs. 6 and 7 the invention is adapted to a holder that supports the globe at the bottom. In this arrangement the cross-piece that joins the lower ends of the rod 5 and supports the lower-carbon holder is formed so as to perform the function of the brackets that guide the holder in its vertical movement and necessitate the tipping motion when complete removal is desired. These guiding-brackets are made with the upper and lower inwardly-projecting plates 19 and 20, that have perforations or mortises, for the passage of the rods 21, which perforations or mortises through the top plates open through the edges of the plates in one direction and through the bottom plates in the opposite direction—that is, the perforations or mortises through the top plates are made open

to the front edge and the perforations or mortises through the bottom plates are made through the back edge. In these perforations freely move guiding-rods 21, that are attached at their lower ends to the globe-ring 22. This globe-ring holds the globe 23 in any common manner and has a central perforation which is fitted upon a stem 24, that projects from the bottom of the lamp-frame. In the end of this stem is a pivoted latch or catch 25, that when turned in one direction, as shown in full lines, holds the ring and prevents its removal from the stem, but when turned in the position shown in dotted lines allows the free removal of the ring from the end of the stem. When this latch is turned and the ring is free, it drops down until the ends of the rods that are enlarged or provided with stop-pins 26 come in contact with the top plates, in which position they will hold the globe indefinitely while the lamp is being trimmed or otherwise regulated. For returning the globe the ring is pushed up and the latch turned, so as to prevent the ring from dropping off the stem. To remove the globe entirely when this latter form of the invention is used, the ring is first dropped until the ends of the rods are at the top plates, and then a swing toward the rear will free the ends of the rods from the upper plates, and after a little downward movement a swing toward the front will remove the enlarged ends of the rods from the lower plates. To replace the globe, the ends of the rods are passed diagonally between the two plates, and then by bringing the rods to a vertical position they come into the proper guiding perforations in the bracket-plates. With this form the globe can be quickly lowered at any time for trimming the lamp without danger of its being accidentally dropped, and, if necessary, the globe can be removed for any purpose without operating any screws or releasing any mechanism.

I claim as my invention—

1. In combination with the frame of an arc lamp, brackets with guiding openings through one edge of the upper plates and guiding openings through the opposite edge of the lower plates of the brackets, a movable globe holder, and connections between the brackets and the globe holder, substantially as specified.

2. In combination with the frame of an arc lamp, brackets sliding on said frame and having guiding slots that open through parts of the brackets in one direction, and through other parts of the brackets in an opposite direction, a movable globe holder, connected with the brackets, and a removable fastening for retaining the globe holder in its upper position, substantially as specified.

3. In combination with the frame of an arc lamp, a movable globe holder, rods for guiding the globe holder in its vertical movement, and brackets with openings in their edges through which the rods may pass arranged so that movement in one direction will free a

part of the brackets from the rods, and a movement in the opposite direction will free another portion of the brackets from the rods, substantially as specified.

5 4. In combination with the frame of an arc lamp, brackets sliding on said frame and having guiding slots that open through parts of brackets in one direction, and through other parts of the brackets in an opposite direction,
10 a movable globe holder connected with the brackets, a pin engaging a part of a bracket and adapted to engage a part of the lamp frame, substantially as specified.

15 5. In combination with the frame of an arc lamp, brackets sliding on said frame and having guiding openings made through their walls in opposite directions, a movable globe holder connected with the brackets, a pin passing through a perforation in a part of the

20 bracket and adapted to pass through a perforation in a part attached to the lamp frame, and a part attached to the lamp frame adapted to engage a part of the globe holder to prevent the latter from swinging, substantially as specified.

25 6. In combination with the frame of an arc lamp, a bracket with a guiding slot opening through the edge of the upper part in one direction, and a guiding slot opening through the edge of the lower part in an opposite direction, and a movable globe holder with connection between the globe holder and the bracket, substantially as specified.
30

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