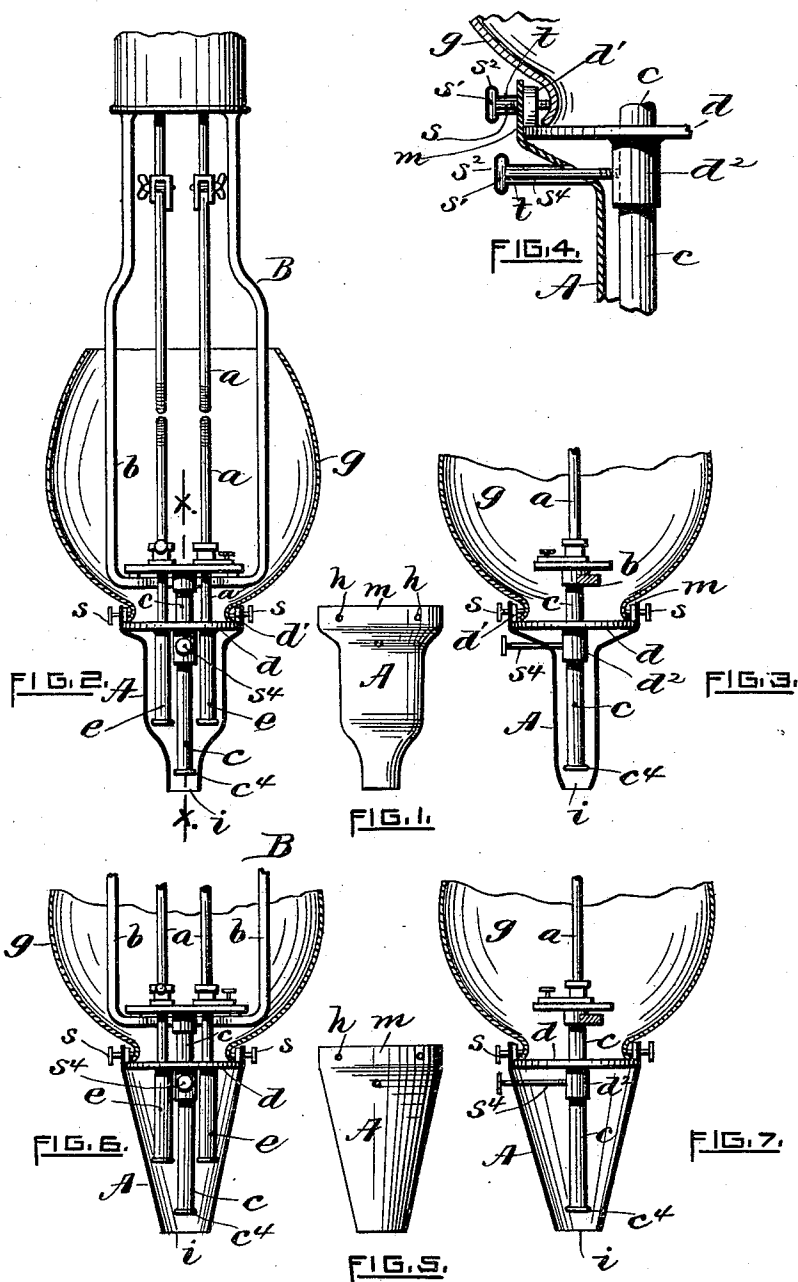


(No Model.)

V. A. THOMAS.
ATTACHMENT FOR ELECTRIC ARC LAMPS.

No. 459,846.

Patented Sept. 22, 1891.



WITNESSES.

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ATTACHMENT FOR ELECTRIC-ARC LAMPS.

SPECIFICATION forming part of Letters Patent No. 459,846, dated September 22, 1891.

Application filed January 8, 1891. Serial No. 377,129. (No model.)

To all whom it may concern:

Be it known that I, VAN A. THOMAS, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Non-Conducting Hoods or Shields for Arc Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My present invention has relation to electric lights, but more especially to the class of arc lights, or rather to the lower portion of the lamps, adapted to arc lighting; and it consists, essentially, of an insulating hood or shield arranged to be readily attached to and inclose the lower or exposed metallic portion of the lamp.

Heretofore, so far as I am aware, the lower exposed portions extending below the glass globes of arc lamps—as, for example, the detachable plate or holder carrying one or more lower-carbon electrodes—have been unprovided with suitable non-conducting guards or protectors. It is true that the interior of the carbon-holding tubes is sometimes lined with non-conducting material; but it practically soon becomes worn through by the frequent renewal of the carbons. It occasionally happens that a person carrying an open umbrella receives an electric current from a burning arc lamp by reason of its contact with some metallic portion of the lower part of the lamp. The danger from this source is obviously greatly increased during rainy weather. I would state, however, that the danger or risk just referred to applies mainly to what are termed “commercial” lights, as distinguished from street or “municipal” lights, because as a rule the former are suspended in front of store-windows and but a comparatively few feet from the sidewalks.

In the accompanying sheet of drawings, Figure 1 represents a side elevation of my improved non-conducting shield adapted to be attached to the lower portion of an arc lamp. Fig. 2 is a sectional view taken through the

center of the glass globe and shield, showing the latter in position as in use, and also showing a portion of the lamp itself. Fig. 3 is a similar view taken on line *xx* of Fig. 2. Fig. 4 is an enlarged sectional view showing the manner of holding the shield in place, the heads of the retaining-screws being insulated. Fig. 5 is a side view of the shield having a modified form; and Figs. 6 and 7 are sectional views similar to Figs. 2 and 3, showing the modified shield attached to the lamp as in use.

Again referring to the drawings, B indicates an arc lamp of usual construction provided with a supporting-frame *b*.

aa designate the carbon electrodes mounted substantially as common.

d indicates a bottom plate or holder, having a central downwardly-extending centrally-bored hub *d*², through which the guide-rod *c* freely passes, the latter being held in position therein by a screw *s*⁴. The holder is further provided with tapped ears *d*¹, carrying screws *s*, arranged to hold the glass globe *g* in place. (See Fig. 4, &c.) The plate *d* is also furnished with two tubes *e*, Figs. 2 and 6, arranged to receive and hold the two lower carbons. These tubes are sometimes provided with swinging caps to cover the bottom ends, thereby permitting the carbons to be inserted at that end; but practically the lamp-trimmers prefer to loosen the screw *s*⁴ and drop the plate to its limit or stop *c*⁴ and introduce the carbons at the top of the tubes *e*.

The foregoing forms no part of my present invention. Therefore I make no claim to the lamp itself, except as combined with the non-conducting hood about to be described.

A indicates the hood or shield, made, preferably, of non-conducting material, as rubber, and having a degree of flexibility, although other substances or compositions may be employed—as, for example, paper or fabric rendered water-proof and non-conducting by suitable resins, shellac, paraffin, &c. In the drawings I have represented two forms of the hood, one, Fig. 5, being cone-shaped and the other, Fig. 1, made to conform somewhat to the outline of the holder *d* and its attached parts *c* & *e*. The lower end of the hood extends beyond the rod *c*, thereby completely inclosing all the metallic portions liable at times to

be charged with electricity. The upper portion of the hood forms a circular flange *m*, arranged to receive the plate *d* and its ears *d'*. The flange *m* is provided with a series of
5 holes *h*, through which the screws *s* freely pass to engage the said ears. In order to protect the said screws *s* ¹, I provide the heads *s'* thereof with non-conducting caps *s* ² of hard rubber, vulcanite, or other suitable material.
10 The shank portions of each of these screws exterior of the shield *A*, I surround with a short piece of rubber tubing *t* or other non-conducting materials, thereby completely insulating the screws, all as clearly shown in
15 Fig. 4. I would state that the hoods *A* may be permanently attached to the lamp without departing from the spirit of the invention. In fact, practically, the lamp-trimmer does not usually remove the hoods in making his daily
20 round of duties.

I claim as my invention and desire to secure by United States Letters Patent—

1. An insulating or non-conducting hood having open ends and fastening devices at

one end, by which it is adapted to be removably secured to the base or lower portion of an arc lamp, substantially as hereinbefore described.

2. The combination, with an arc lamp, of a non-conducting or insulating hood removably secured thereto and surrounding the lower or exposed metallic portions extending below the glass globe, substantially as described.

3. The combination of an arc lamp provided with non-conducting holding-screws, as ³⁵ *s*, and a detachably-secured non-conducting open-ended shield or hood *A*, surrounding the metallic or conducting portions extending below the glass globe or shade of the lamp, substantially as hereinbefore described, and for ⁴⁰ the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

VAN A. THOMAS.

Witnesses:

CHARLES HANNIGAN,
GEO. H. REMINGTON.