

C. W. DAKE.
ARC LAMP ELECTRODE.
APPLICATION FILED APR. 13, 1912.

1,105,887.

Patented Aug. 4, 1914.

Fig-1.

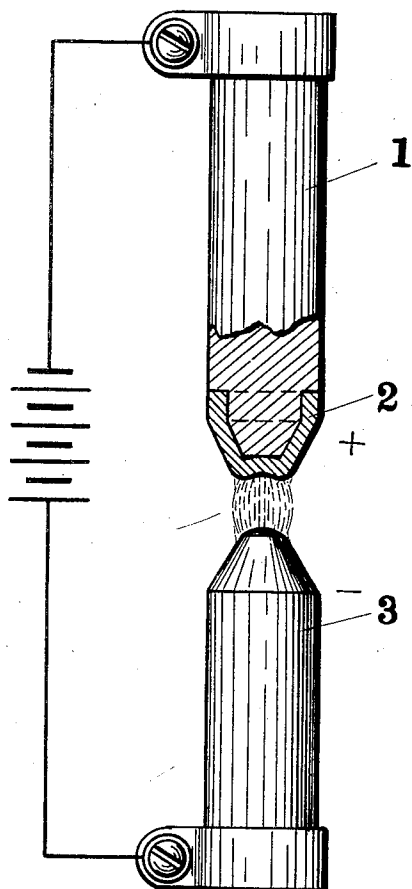


Fig-3.

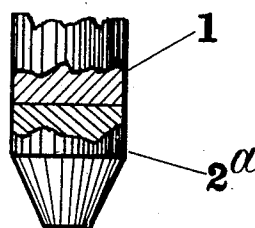
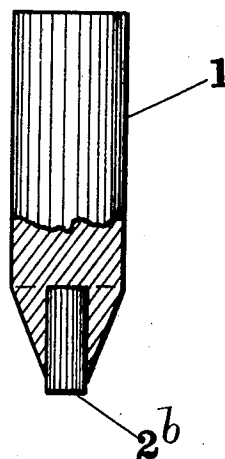


Fig-2.



WITNESSES:

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CHARLES W. DAKE, OF CHICAGO, ILLINOIS, ASSIGNOR TO PYLE-NATIONAL ELECTRIC HEADLIGHT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF NEW JERSEY.

ARC-LAMP ELECTRODE.

1,105,887.

Specification of Letters Patent.

Patented Aug. 4, 1914.

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To all whom it may concern:

Be it known that I, CHARLES W. DAKE, 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 Arc-Lamp Electrodes, of which the following is a specification.

My invention relates to electrodes for arc lamps and has for its object to provide electrodes having high fusing points or electrodes slow to disintegrate.

The invention is illustrated in the accompanying drawing, wherein—

Figure 1 is an elevation with parts in vertical section of a pair of electrodes; Fig. 2, a detailed modification of the upper electrode; Fig. 3, a detail of a further modification of the upper electrode.

Like parts are indicated by like figures in the drawings.

1 is the body of the upper electrode having a sheath 2 or a cap 2^a or a plug 2^b; 3 is the lower electrode.

In Fig. 1 I have shown the parts in position as if in use in an arc lamp, but I have not shown the mechanism for starting the arc or feeding or supporting either of the electrodes. The arrangements for supporting such carbons or manipulating them as may be required in an arc lamp form no part of this invention and, hence, I show nothing in that respect.

In Fig. 1 I have shown the two electrodes as immovable and connected through a battery. The upper electrode, being in this case the positive electrode, is made of any desired material but provided with a sheath, cap or plug which disintegrates slowly, if at all, or which has a high fusing point or which may have both of these characteristics. The lower electrode, in this case the negative, may be of any desired material, but

preferably, of course, a material which slowly disintegrates, if at all, and which has a high fusing point, though in this case, of course, the requirements are much less severe.

In a preferred or convenient form of my device the lower electrode is made of copper and the upper of any desired material with a tungsten sheath, cap or plug. With such a combination of electrodes the arc is fixed and uniform.

The two parts of the upper electrode may be assembled or united in any desired manner, and materials other than tungsten may, of course, be used. I mention that as perhaps the desirable or the preferred substance to be employed.

By the term "fusing" of course I mean melting or any other similar change or transformation which would unfit the carbon for any reason to perform its accepted function. The arrangement which I have shown and described applies, of course, to direct current lamps. In the case of an alternating current it would be necessary to substitute for the lower or copper carbon another carbon with a high fusing point.

I claim:—

An arc lamp comprising a pair of metallic electrodes, one of them negative, the other positive, the positive electrode being provided with a metallic sheath on the end thereof in opposition to the end of the negative electrode, said sheath being made up of a material of high fusing point and adapted to resist disintegration caused by the passage of the current.

Signed at Chicago, Illinois, this 11th day of April, A. D. 1912.

CHARLES W. DAKE.

Witnesses:

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