

(No Model.)

J. D. SMITH.
CARBON FOR ARC LAMPS.

No. 582,378.

Patented May 11, 1897.

Fig. 1.

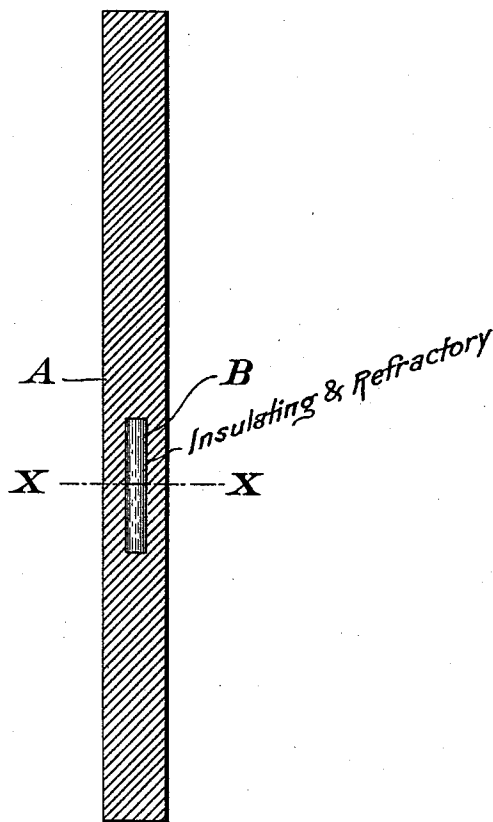
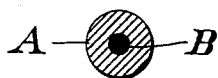


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES D. SMITH, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF
ONE-HALF TO GEORGE READE BALDWIN, OF SAME PLACE.

CARBON FOR ARC-LAMPS.

SPECIFICATION forming part of Letters Patent No. 582,378, dated May 11, 1897.

Application filed March 1, 1897. Serial No. 625,649. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. SMITH, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Carbons for Arc-Lamps; and I do 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 the letters of reference marked thereon, which form a part of this specification.

My invention relates to carbons for arc-lamps; and the object of my invention is to cut out or extinguish the arc before it reaches the carbon-holders. This is accomplished by incorporating in the carbon or attaching to the carbon or any part or parts of the lamp a piece of insulating and preferably refractory material, such as burned fire-clay, to interpose itself in the path of the arc and extinguish the arc. This piece of insulating material I will hereinafter in this specification specifically designate as the "cut-out." The position of this cut-out is between the place where the carbon is grasped by the carbon-holder and the arc end of the carbon. When the lamp is in operation, the arc may consume the carbon as far as the cut-out, which then interposes itself in the path of the arc and extinguishes it.

I have illustrated a type of my invention in the accompanying drawings, in which—
Figure 1 shows a vertical cross-section of the carbon and cut-out, and Fig. 2 a horizontal cross-section of the same on the line X X.

A represents the carbon, and B the cut-out, molded in said carbon.

The carbon-holder grasps the carbon near or below the line X X for the negative or lower carbon, and the arc consumes the carbon at the top or opposite end.

For the upper or positive carbon the positions of holder and arc are reversed.

The material I use may be of a more or less refractory nature. It is not necessary that the material should be highly refractory for the successful operation of the cut-out, but may be fusible, like glass; but refractory substances are preferable for this purpose.

I am fully aware that many variations (not shown specifically in this specification and drawings) may be made without departing from the spirit of my invention.

The cut-out B may be made of many different forms of prisms or irregular in shape. It may be in the form of a ring or collar encircling the carbon. It may be also attached to the carbon-holder or other parts of the lamp, but all of these and others unnecessary to mention perform the same functions as this shown and come within the scope of my invention.

Having therefore described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. In a carbon for arc-lamps, the combination of a carbon and a piece of insulating material attached to the carbon and interposed in the path of the arc to extinguish the arc, substantially as described.

2. In a carbon for arc-lamps, the combination of a carbon and a piece of insulating and refractory material attached to the carbon and interposed in the path of the arc to extinguish the arc, substantially as described.

3. A carbon for arc-lamps consisting of the carbon and a piece of insulating material molded in the carbon and interposed in the path of the arc to extinguish the arc, substantially as described.

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

JAS. D. SMITH.

Witnesses:

GEO. R. BALDWIN,
CHRIS COX DAWSON.