

(No Model.)

B. B. WARD.
CARBON FOR ARC LIGHTS.

No. 444,471.

Patented Jan. 13, 1891.

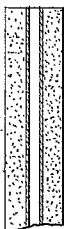


Fig. 1.



Silicate of Soda.



Fig. 2.



ATTEST:

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CARBON FOR ARC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 444,471, dated January 13, 1891.

Application filed April 4, 1890. Serial No. 346,604. (No model.)

To all whom it may concern:

Be it known that I, BARTON B. WARD, a citizen of the Dominion of Canada, and a resident of New York, in the county of New York and State of New York, have invented a certain new and useful Carbon for Arc Lights, of which the following is a specification.

My invention relates to carbon sticks or pencils for use in that class of arc lights in which two sticks or pencils are presented end-to-end and the arc plays in the space between the same.

The object of my invention is to produce a carbon which will be free from hissing and sputtering, even though the arc is short, and which may be operated with a low voltage of current and yet maintain an arc which shall not go out readily.

My invention consists of a carbon stick or pencil having a longitudinal bore or passage at or near the center, the wall of which is covered with a thin film or layer of a silicate, preferably a silicate of soda or a silicate of potash. With silicate of soda I have obtained excellent results, and I generally use this substance on account of its cheapness.

In the accompanying drawings, Figure 1 is a longitudinal section through a carbon stick or pencil embodying my invention, and shows the manner in which the same is presented to the opposite or negative carbon while being consumed. Fig. 2 is a cross-section through the carbon stick or pencil.

As shown in Fig. 1, the carbon stick or pencil has a longitudinal bore or passage at or about its center, to the walls of which are applied a thin layer or film B of the material, which shall vaporize in the arc and shall produce a vapor of considerable conducting ca-

capacity, so as to prevent the breakage of the arc running on low voltage. In the drawings the thickness of the layer is shown greatly exaggerated. As before stated, I prefer to employ silicate of soda as the material of this film or layer. In order to apply it, I use the ordinary solution of a silicate, and after placing a few drops at one end of the bore or passage distribute the same over the interior surface by means of a blast of air applied by means of a nozzle or other device and forced through the bore or passage. By this means the silicate is distributed evenly over the interior surfaces, and, after being allowed to dry, the carbon is ready for use.

The carbon stick or pencil constructed with a bore or passage and provided with a film or layer of the material described not only possesses the advantages hereinbefore described over previous constructions, but may be also cheaply and readily manufactured.

What I claim as my invention is—

1. As a new article of manufacture, a carbon stick or pencil having a longitudinal bore or passage the walls of which are coated with a thin film or layer of a silicate.

2. As a new article of manufacture, a carbon stick or pencil having a longitudinal bore or passage at or near its center, the walls of which are coated with a thin layer or film of silicate of soda, as and for the purpose described.

Signed at New York, in the county of New York and State of New York, this 3d day of April, A. D. 1890.

BARTON B. WARD.

Witnesses:

WM. H. CAPEL,
HUGO KOELKER.