

(No Model.)

C. J. VAN DEPOELE.

ELECTRODE FOR ELECTRIC ARC LAMPS.

No. 287,344.

Patented Oct. 23, 1883.



WITNESSES:

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CHARLES J. VAN DEPOELE, OF CHICAGO, ILLINOIS.

ELECTRODE FOR ELECTRIC-ARC LAMPS.

SPECIFICATION forming part of Letters Patent No. 287,344, dated October 23, 1883.

Application filed December 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. VAN DEPOELE, of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Electrodes for Electric-Arc Lights; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification.

The nature of this invention relates to certain new and useful improvements in electrodes or carbons such as are used in electric-arc lighting.

The invention consists in an electrode or carbon, substantially as hereinafter described.

When electric-arc lights are in operation, it is a source of annoyance to invariably find a hissing or singing noise, which some electricians attribute to the rapid passage of the currents through a resisting atmosphere between the two points of the electrodes. Others insist that this annoying noise or hissing is made by the force of the currents disintegrating the one carbon and throwing the disintegrating parts violently against the end of the opposite electrode, while others have adopted or advanced different theories.

The object of this invention is to overcome this hissing or singing noise and render the electric-arc light noiseless. This I have, after a long series of experiments, succeeded in accomplishing by making a carbon or electrode upon a small core, leaving the walls of the electrode quite thick, as shown in the drawing, which represents an elevation partly broken away. The hole thus formed after the withdrawal of the core is filled with a substance or substances not of a vitreous character, which will partly or wholly volatilize at a relatively high temperature, and which will, when the light is in operation, entirely prevent any noise. My experiments have demonstrated the fact that wood or plant ash is the best material, and keeps the light perfectly noiseless, no matter how large the same may be or how strong the currents. Irrespective of the absence of noise, my carbon has the advantage of keeping the light more central than the ordinary solid carbon, as the

ashes are consumed rather faster than the carbon, leaving a slight depression or cup in the center, which keeps the light central, and thus my carbons are burned more evenly, and as the ashes and carbon together form a solid stick, my filled carbons last longer than the hollow carbons, which, as is well known, are consumed very rapidly. Any alkaline matter can be used, providing it does not produce too great an amount of silicate, which would be deposited upon the negative pole and prevent the current from starting or passing through the same in relighting the lamps. The reason that alkaline substance of this character will silence an arc-light is that on the passage of the current a gas is produced, over which the current passes easier and seems to diffuse the arc over a larger space. The gas present will depend upon the nature of the alkaline matter employed, any of which of the character above specified will be found very effective and produce about the same results as wood-ashes do.

Any novel feature referred to herein and not claimed I reserve the right to claim in a separate application.

I am aware that it has been proposed to use hollow carbons having a core of vitreous material. This I disclaim, for the employment of such vitreous material would defeat the object which I attain, for when the lamp is extinguished the fusion of this vitreous material ceases, and a button is formed on the exposed ends of the electrodes, which would prevent the renewed action of the lamp.

I am also aware that it has been proposed to soak carbons in alkaline solutions, and make no claim thereto.

What I claim as my invention is—

An electrode for electric-arc lamps, formed in the shape of a tube, with thick walls, filled with wood or other ashes, whereby a solid stick is formed that will form a central cup in burning, substantially as and for the purposes specified.

CHARLES J. VAN DEPOELE.

Witnesses:

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