(No Model.)

E. J. BROOKS.

ELECTRIC LIGHT CARBON.

No. 261,904. Patented Aug. 1, 1882.

Fig. 1.

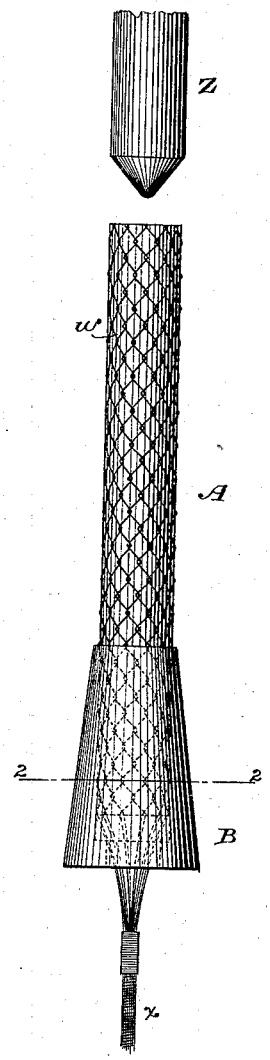


Fig. 4.

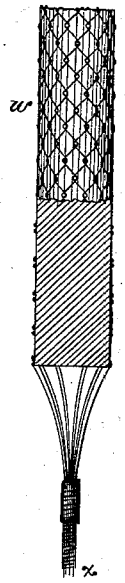


Fig 3

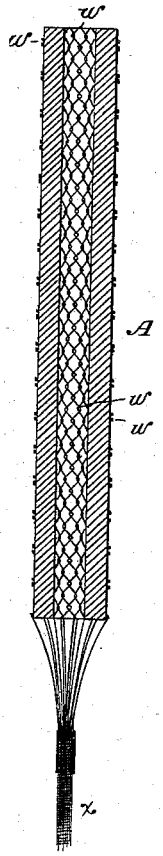
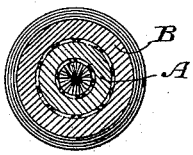


Fig. 2.



WITNESSES.

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EDWARD J. BROOKS, OF EAST ORANGE, NEW JERSEY.

ELECTRIC-LIGHT CARBON.

SPECIFICATION forming part of Letters Patent No. 261,904, dated August 1, 1882.

Application filed May 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. BROOKS, a citizen of the United States, residing at East Orange, in the State of New Jersey, have invented a new and useful Improvement in Electric-Light Carbons, of which the following is a specification.

This invention relates to the construction of "carbons" or electrodes for arc electric lights; and it consists in certain combinations, herein described and claimed, based primarily on the provision of superficial metallic paths for the electric fluid by means of wire-netting, and their distribution both inside and outside of a tubular or hollow carbon for securing brilliancy and steadiness of light, with resistance to the disintegration of the carbon-body, the effective connection with the electrical conductor of each wire of tubular wire-nettings, applied both externally and internally to a tubular or hollow carbon, and the insulation of the external wire-netting from the frame of the lamp.

In the accompanying drawings, forming part of this specification, Figure 1 is an elevation of a pair or set of electric-light carbons, the lower of which illustrates this invention. Fig. 2 represents a horizontal section on the line 2 2, Fig. 1; and Fig. 3 represents a longitudinal section of said lower carbon. Fig. 4 is an elevation partly in section of another electric-light carbon, illustrating a modification.

A, Figs. 1 to 3, represents the improved carbon constructed and arranged as a tubular positive electrode for an ordinary arc electric lamp receiving straight cylindrical carbons. The body of this carbon may be of any preferred composition, and may be produced in the same manner as other tubular carbons. With the said body there are combined internal and external tubular metallic nettings, *w w*, of fine wire. The material of the body may be molded between these nettings, so as to embed the wire in its respective surfaces; or the nettings, tightly fitted to the respective surfaces of the previously-carbonized body, may be drawn into and over said body, as may be preferred. The lower ends of the several wires are finally united with the positive conductor *x*, by means of which both nettings receive the electric fluid directly. The nettings afford this fluid numerous superficial metallic paths, which facilitate producing a light of great brilliancy, while they serve also to resist disintegration of the carbon-body. At the same time, by their distribution both inside and outside the tubular carbon, they tend to steady the light by leading the electricity to play from the center outward, and vice versa, instead of from side to side.

B, Figs. 1 and 2, represents an insulating cup or holder for the carbon A, to keep its exterior wire-netting from contact with the metallic frame of the lamp. This holder may be of soft vulcanized rubber or glass. The wires are drawn through a hole in the bottom of the holder, (represented by a dotted circle in Fig. 2,) and through this hole the customary supply of air may enter the tubular carbon. The respective nettings may be connected with the electrical conductor in any other effective way.

Z, Fig. 1, represents an upper carbon of any approved description.

The modification represented by Fig. 4 consists in providing a solid carbon with an external wire-netting, *w*, connected with the electrical conductor *x*.

Metallic coatings such as have heretofore been proposed and used may be applied both internally and externally to a tubular carbon to steady the arc on the principle aforesaid.

Upper as well as lower carbons may be constructed according to the said principles of my invention, and, if desired, they may be of one and the same pattern. The shape and proportions of the carbons may be varied. Suitably-perforated sheet metal may be substituted for wire-netting, and various sub-modifications by omissions may be made, as those skilled in the art will understand, without materially departing from the respective features of my invention as herein defined.

I claim as new and of my invention, and desire to protect under this specification—

1. The combination, with the body of an electric-light carbon, of metallic wires in the form of a netting connected with the conducting-wire, substantially as herein specified, for the purpose set forth.

2. The combination, in a tubular carbon for electric lights, of internal and external tubular

metallic nettings or coatings connected with the conducting-wire, substantially as herein described, for the purpose set forth.

3. The tubular carbon A, having internal and external wire-nettings, *w w*, in combination with a conducting-wire, *x*, connected with each of said nettings, substantially as shown, for the purpose set forth.

4. In combination with a tubular carbon having an external wire-netting connected with a conducting-wire, an insulating-holder, B, having a hole in its bottom through which the netting-wires extend, substantially as herein specified.

EDWARD J. BROOKS.

Witnesses:
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