

(No Model.)

J. V. NICHOLS.
CARBON FOR INCANDESCENT LAMPS.

No. 258,942.

Patented June 6, 1882.

Fig. 1.

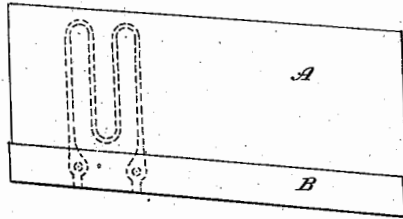


Fig. 2.

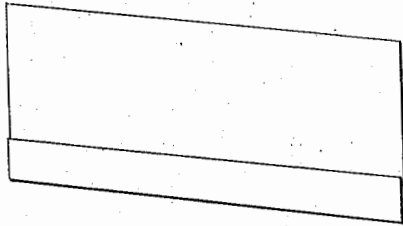
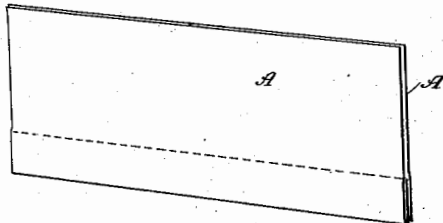


Fig. 3.



Attest

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Inventor:

Joseph V. Nichols.

by Parker W. Page.

his Atty.

UNITED STATES PATENT OFFICE.

JOSEPH V. NICHOLS, OF BROOKLYN, ASSIGNOR TO THE UNITED STATES
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CARBON FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 258,942, dated June 6, 1882.

Application filed February 1, 1882. (No model.)

To all whom it may concern :

Be it known that I, JOSEPH V. NICHOLS, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Carbons for Incandescent Lamps, of which the following is a specification.

In another application filed by me I have illustrated a method of manufacturing carbon conductors for incandescent lamps, which consisted in re-enforcing a strip of paper or similar material by the application of a narrower strip of the same material, the two being united by heat and pressure. From these compound strips the loops were cut or stamped in such manner that the ends of the said loops only should be cut from the re-enforced portion of the blank. Conductors were thus formed having clamping ends of greater density and lower resistance than the remainder of the strip.

My present invention relates to this method of forming conductors; and it consists broadly in combining metal with the clamping ends of the conductors; and this I effect by re-enforcing the blanks by narrow strips of metal instead of carbonizable material, the object being to thereby further improve the conducting capacity of the clamping ends of the conductors, which are cut from the compound blanks.

In carrying out my invention I select strips of paper or other material to be used, and lay along one or both edges, as the case may be, a narrow strip of metallic foil, using such metals as do not easily oxidize under high temperatures, as platinum, nickel, or even copper. Paste may be used to make the foil adhere. The two are then subjected to high pressure and a temperature about that of melted lead. By this means they are forced into intimate contact and caused to strongly adhere. From the strips thus prepared, as from the ordinary blanks, the loops which form the conductors are cut by a die, so much of the re-enforced portion being cut as will leave a film of metal on the clamping ends of the loops. The loops are then to be carbonized, and in other respects treated in the same manner as the ordinary or simple carbons. During the process of carbonization the metal and the carbonizable material are thoroughly united. The strips of metallic foil may be applied to

one or both sides of the wider strips of carbonizable material, or two strips of carbonizable material may be laid together to form a compound blank and the strip of metal laid between them.

The accompanying drawings illustrate the different ways of applying the metal to the paper.

Figure 1 represents a single sheet of paper, A, and a single strip of metal foil, B, laid on one side of the paper only. Fig. 2 shows the paper with the strip of metal folded or doubled so as to cover the edge of the paper on both sides, and Fig. 3 shows the two sheets of paper A A' with the metal foil laid between them.

The loops for the conductors are cut from the blanks, as is indicated in the dotted lines in Fig. 1. It is evident that the same object may be attained by still further modifications, which it is not necessary here to describe. Conductors thus formed, particularly those of very high resistance, are connected to the supporting-conductors of the lamp with little difficulty, owing to the good conducting properties of the clamping ends, and consequent security from heating and oxidation at those points.

I am aware that the ends of carbon conductors for electric lamps have heretofore been coated with metal by the process of electro-deposition. Such I do not claim.

What I claim is—

1. A carbon conductor for incandescent lamps, having its clamping ends composed in part of metal mechanically incorporated therewith, as described.

2. A carbon conductor for incandescent lamps, re-enforced at its ends by a film or strip of metal mechanically incorporated therewith, substantially as described.

3. As a new article of manufacture, a conductor for incandescent lamps, composed of a single or compound strip of carbonized material, having enlarged clamping ends, re-enforced by a film or strip of metal mechanically incorporated therewith, substantially as described.

In testimony whereof I have hereunto set my hand this 30th day of January, 1882.

JOSEPH V. NICHOLS.

Witnesses:

PARKER W. PAGE,
W. FRISBY.