(No Model.)

E. WESTON.

CARBON FOR INCANDESCENT LAMPS.

No. 264,985. Patented Sept. 26, 1882.

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UNITED STATES PATENT OFFICE.

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CARBON FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 264,985, dated September 26, 1882.

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

To all whom it may concern:

Be it known that I, EDWARD WESTON, a subject of the Queen of Great Britain, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Carbons for Incandescent Lamps, of which the following is a specification.

Incandescent electric lamps as now commonly made contain a strip or pencil of carbon that is mounted in a vacuum-globe by being attached to metallic conductors which introduce the current into the lamp. These strips or pencils, being of considerably higher resistance than the remainder of the circuit, become incandescent on the passage of an electric current. In order, then, to protect the metal conductors from oxidation or fusion, it has been customary to enlarge the ends of the carbons to which the said conductors were connected, or to employ, in connection with the metal clamping devices, washers or blocks of carbon. The latter method is attended with many objectionable features, and is rarely practiced; but in either case the result is practically to increase the cross-section, and consequently the conductivity, of the carbon conductors at their ends, so that these ends do not become heated to the same degree as the remaining portions of the carbon.

It may often be desirable to produce carbons of the same size and shape throughout their entire length, and it further happens in many cases that the carbons of a superior quality are obtainable from fibers or by the proper manipulation of plastic substances, in which it is very difficult to properly enlarge the ends; and it is particularly to rendering these available that my present invention is designed, though it is generally applicable to other forms of carbon.

The invention therefore consists, in general terms, in lowering the resistance of the clamping ends by increasing their density or conductivity without increasing their cross-section. The most available methods of which I am at present aware for the accomplishment of this result are substantially as follows:

The carbons may be formed by cutting or punching and then carbonizing blanks from a sheet of paper or wood re-enforced by one or more narrower sheets, and which have been compressed to an even thickness. In this case those portions of the blanks that are cut from the re-enforced portion of the sheet have a greater density, and consequently lower resistance, than the remaining portions. When these blanks are so cut that the denser portions are at the ends only the desired object is attained.

Another way of producing carbons of this description, and one which is applicable to the manufacture of carbons from plastic materials, would be to place the plastic material in a mold, putting more of the substance in those portions of the mold which form the clamping ends of the complete strip than elsewhere, and subjecting the whole to a pressure sufficient to bring the whole to an even thickness.

Other methods of accomplishing this result may be pursued, but the above are the most practicable of which I am at present aware.

A drawing is annexed, in which a carbon having the general shape and size of those that I design making under this invention is illustrated.

Having now described my invention, what I claim is—

1. A carbon conductor for incandescent lamps, having ends or clamping portions of lower resistance than the remainder of the strip, but of the same cross-section, substantially as set forth.

2. A carbon conductor for incandescent lamps, having ends or clamping portions of greater density than the remainder of the strip, but of the same cross-section, as set forth.

In testimony whereof I have hereunto set my hand this 28th day of February, 1882.

EDWARD WESTON.

Witnesses:
HENRY A. BECKMEYER,
JOHN P. DENGLER.