(No Model.)

### J. V. NICHOLS & L. H. LATIMER.

ELECTRIC LAMP.

No. 247,097.

Patented Sept. 13, 1881.



# UNITED STATES PATENT OFFICE.

## JOSEPH V. NICHOLS, OF BROOKLYN, AND LEWIS H. LATIMER, OF NEW YORK, N. Y.

#### ELECTRIC LAMP.

### SPECIFICATION forming part of Letters Patent No. 247,097, dated September 13, 1881. Application filed April 18, 1881. (No model.)

#### To all whom it may concern:

Be it known that we, JOSEPH V. NICHOLS, a resident of Brooklyn, in the county of Kiugs and State of New York, and LEWIS H. LAT-IMER, of the city, county, and State of New York, have invented certain new and useful Improvements in Incandescent Electric Lamps, of which the following is a specification.

Our invention relates to electric lamps in 10 which the light is produced by the incandescence of a continuous strip of carbon secured to metallic wires and inclosed in a hermetically-sealed and thoroughly-exhausted transparent receiver; and it relates more especially 15 to the method of mounting the carbons or con-

necting them with the wires.

In the drawings annexed our invention is illustrated, Figure 1 representing a carbon united to the metallic conducting-wires of an in-

20 candescent lamp by our improved method; Fig. 2, a view of the same turned edgewise; and Fig. 3, a perspective of the same, illustrating more in detail the connections.

Arepresents a carbon conducting strip, made, 25 in the usual manner, with widened ends B B.

- The strip is, by preference, prepared by carbonizing a blank cut from sheets of paper, the form of the blanks being approximately that of the finished carbon. This method is not es-
- 30 sential, however, as others may be employed in the preparation of the carbons, as by bending and twisting straight strips of wood or paper either before or after carbonization.
- Through the ends B B square or rectangular 35 perforations C are cut before carbonization, and through these perforations the flattened ends of the wires or conductors D D are passed and bent over by pinchers to firmly clamp the carbon. In order to secure a more perfect 40 electrical contact between the carbons and the

wires, the ends of the former may be previously coated with copper or platinum. With this form of clamp all nuts, screws, or pins and similar accessories are dispensed with. The conductors make contact with the carbons at 45 considerable distance from the incandescent portion, so that the permanency of the connections is insured, and as the wires are by this means protected in great measure from the heat developed, they may be of copper, where-50 by the cost of the lamps is greatly reduced. The wires are flattened for a short distance from their ends for securing greater contactsurface and flexibility, and are brought together and sealed into a support of vitreous 55 material surmounting the base E of the ordinary incandescent lamp.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in an incandescent lamp, with the perforated ends of a carbon conducting-strip, of metallic wires passing through the same and bent over into close contact with the carbon, as described.

carbon, as described. 65 2. The combination, with the carbon conducting-strip A, having widened portions B B and rectangular perforations C C, of conducting-wires D D, with flattened ends passing through the perforations and bent over into 70 close union with the carbon, as and for the purpose set forth.

In testimony whereof we have hereunto affixed our signatures in the presence of two subscribing witnesses.

> JOSEPH V. NICHOLS. L. H. LATIMER.

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Witnesses:

WM. H. TUCKER, DAVID LAW.