(No Model.)

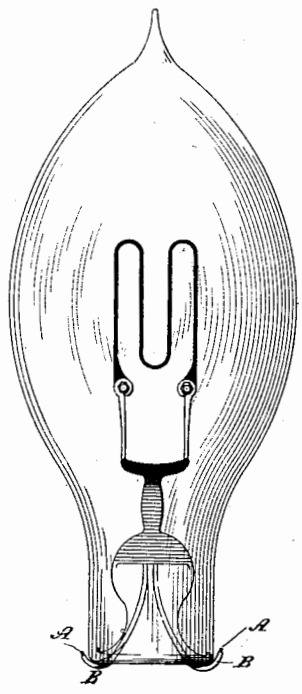
J. V. NICHOLS.

ELECTRIC INCANDESCENT LAMP.

No. 268,270. Patented Nov. 28, 1882.

Fig. 1.

Fig. 2.



Attest:

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UNITED STATES PATENT OFFICE.

JOSEPH V. NICHOLS, OF BROOKLYN, ASSIGNOR TO THE UNITED STATES ELECTRIC LIGHTING COMPANY, OF NEW YORK, N. Y.

ELECTRIC INCANDESCENT LAMP.

SPECIFICATION forming part of Letters Patent No. 268,270, dated November 28, 1882.

Application filed February 28, 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 Electric Incandescent Lamps, of which the following is a specification.

The conducting or supporting wires of incandescent lamps as now commonly manufactured are made of platinum, this metal having been found to give the best results, for several reasons, the principal of which, generally stated, are the readiness with which it adheres to glass, and the fact that it retains a smaller proportion of air or gas than copper, and consequently permits the attainment of a more perfect vacuum in the lamp. The use of platinum wires is, however, a serious obstacle to the production of incandescent lamps, owing to the high cost of this metal.

My object is to produce conductors which present practically all the advantages of pure platinum, and of which the expense is much less. To this end I employ as the supporting-conductors compound wires of copper or similar cheap metal and platinum, the latter forming the exterior surface of the wires. Such wires are produced by the well-known process of drawing down a tube of platinum and core of copper, or by other equivalent methods. It is not essential that the platinum should be more than a mere film in the finished wire. It must, however, be intimately and perfectly united to the copper core. These wires are to be used in the same manner precisely as the ordinary platinum or copper wires commonly employed.

For purpose of illustration, I have represented in the accompanying drawings a compound wire of copper and platinum and a lamp in which the same is or may be used. The wire in Figure 1 is composed of a copper core, A, and a platinum sheathing, B. Fig. 2 illustrates the application of such wires to the construction of an ordinary electric lamp.

I am aware that various metals have been drawn together in this manner for the purpose of increasing the conductivity or strength, or both, of a given length of wire. I am not however aware that the two metals specified—viz., copper and platinum—have ever been so drawn or combined in the manner and for the purpose indicated.

What I claim, therefore, is,—

1. In an incandescent lamp, in combination with the glass receiver, supporting-wires for the carbon composed of copper and platinum, in substantially the manner described.

2. The combination of an air-exhausted globe, a carbon-conductor contained therein, and compound wires consisting of copper cores incased in platinum, sealed into said globe, and connected with the carbon, as and for the purpose specified.

In testimony whereof I have hereunto set my hand this 16th day of February, 1882.

JOSEPH V. NICHOLS.

Witnesses:
W. FRISBY,
R. F. BARNES.