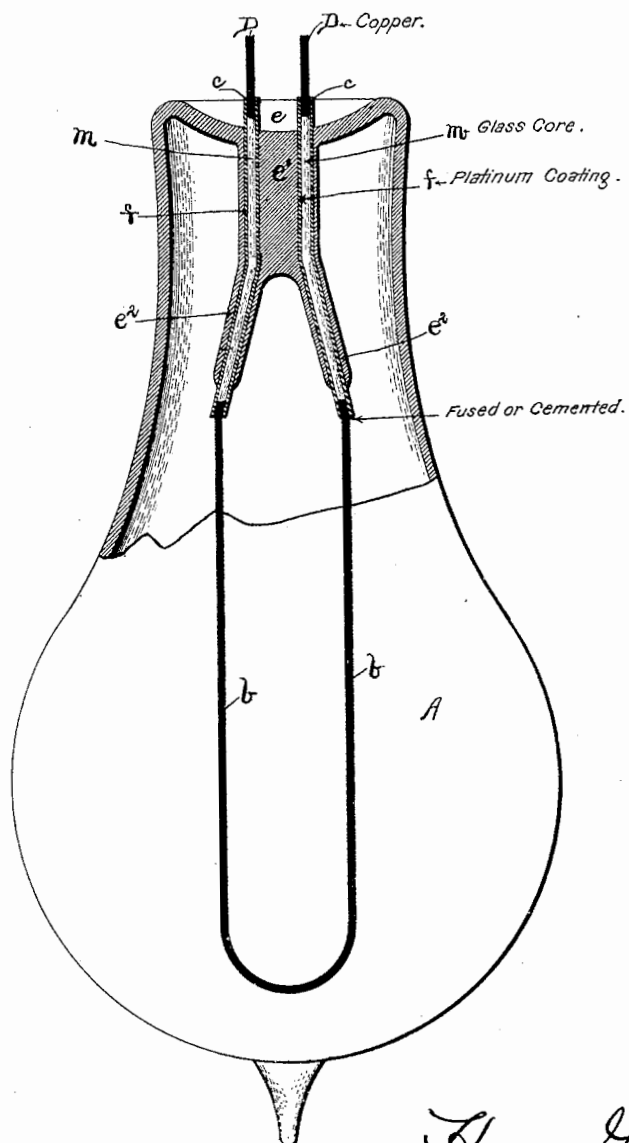


(No Model.)

H. GREEN.  
INCANDESCENT ELECTRIC LAMP.

No. 479,360.

Patented July 19, 1892.



WITNESSES  
C. S. Frye  
Thomas E. Turpin

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# UNITED STATES PATENT OFFICE.

HENRY GREEN, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF TO  
F. C. ROCKWELL, OF SAME PLACE.

## INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 479,360, dated July 19, 1892.

Application filed September 2, 1891. Serial No. 404,525. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY GREEN, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Conductors for Incandescent Lamps, of which the following is a specification.

My invention has relation to improvements in incandescent electric lamps; and it has for its general objects to provide leading-in tubes, of platinum or other suitable metal, adapted to receive the ends of the external wires and the filament and admit of a fused or cement connection of the same; to provide a core of glass in the tubes to lend rigidity and strength to the same, and to provide a seal of such form to incase the tubes that the rigidity and strength of the latter will be further increased.

With the foregoing ends in view the invention will be fully understood from the following description and claim, when taken in conjunction with the annexed drawing, in which the figure is an elevation of an incandescent-lamp bulb, the neck being shown in vertical section to illustrate the seal, tubes, filament, and wires in position.

Referring by letter to the said drawing, A indicates an incandescent electric lamp-bulb, which in general may be of the ordinary or any approved form.

*f* indicates the leading-in tubes, which are formed from platinum and are preferably bent, as illustrated. I prefer in practice to form these tubes *f* by electro-deposit of platinum upon a suitable core, as when so formed they are more compact and are better conductors; but I do not desire to be confined to this method of forming the tubes, as any suitable method may be employed.

Placed within the tubes *f* and extending to points adjacent to the ends thereof are glass fillings or cores *m*, which serve to lend rigid-

ity and strength to the tubes without impairing their conductive function.

*e* indicates the glass seal, which is suitably fused to the neck of the bulb and the tubes and comprises the body *e'*, in which the upper portion of the tubes is seated, and the depending legs *e''*, surrounding the lower portion of the tubes, whereby it will be seen that the tubes are incased for the greater portion of their length and are firmly held in position. The carbon filament *b* within the bulb A has its ends secured in the lower ends of the tubes *f* by fusion, cement, or other suitable means, and the wires D have their ends secured in the upper external ends of the tubes in a similar manner.

From the foregoing description, taken in conjunction with the drawing, it will be readily perceived that I have provided conductor or leading-in tubes and have so arranged and reinforced the same that the lamp is rendered very strong and durable.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In an incandescent electric lamp, substantially as described, the combination of the bulb, the seal connected to the neck of the bulb and comprising the body and the depending legs, the leading-in tubes incased in the body and depending legs of the seal, the glass cores or fillings in the leading-in tubes, the filament within the lamp having its ends secured in the lower ends of the tubes, and the wires secured in the upper ends of the tubes, all substantially as and for the purpose set forth.

Signed at New York, in the county of New York and State of New York, this 26th day of August, A. D. 1891.

HENRY GREEN.

Witnesses:

SAMUEL MCCAMMAN,  
J. B. MANNING, Jr.