

(No Model.)

A. C. CAREY.
INCANDESCENT ELECTRIC LAMP.

No. 485,682.

Patented No

FIG. 1

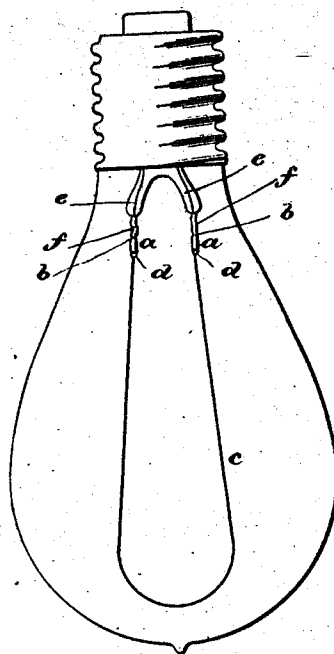


FIG. 2

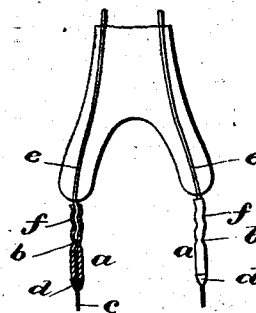


FIG. 3

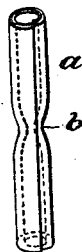


FIG. 4



Witnesses

J. F. Coleman
E. A. Finckel.

At

by N

UNITED STATES PATENT OFFICE

AUGUSTUS C. CAREY, OF LAKE PLEASANT, MASSACHUSETTS.

INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 485,682, dated November 8, 1892.
Application filed January 15, 1892. Serial No. 418,133. (No model.) Patented in England March 8, 1892, No. 4.

To all whom it may concern:

Be it known that I, AUGUSTUS C. CAREY, a citizen of the United States, residing at Lake Pleasant, in the county of Franklin and State of Massachusetts, have invented a certain new and useful Improvement in Couplings for Securing Carbons in Incandescent Electric Lamps, (for which I have obtained a patent in Great Britain, dated March 8, 1892, No. 4,578,) of which the following is a full, clear, and exact description.

This invention relates to a coupling for uniting the carbon or filament of incandescent electric lamps with the leading-in wires, either for purposes of renewing the carbon or filament or for inserting it in the first instance; and the principal objects of the invention are to facilitate the application of the couplings to the filament, to secure good contact between the parts united, and to insure the firm union of the coupling and leading-in wires.

The invention consists of a coupling made as a metal tube preferably constricted about midway between its ends, so as to prevent the adhesion of the cement to the holders for supporting the couplings while the filament is being applied thereto and to determine the extent to which the carbon and leading-in wires shall enter such couplings, and thereby afford good contact between them, the said couplings and leading-in wires being firmly united by crimping or bending them when in position.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is an elevation of a common form of glow-lamp supplied with my couplings. Fig. 2 is a partly-sectional elevation, on a larger scale, of the glass standard and the adjacent parts. Figs. 3 and 4 are perspective views, on a very large scale, of two forms of my constricted coupling.

The coupling *a* of this invention is a tube of suitable length crimped, bent, broken down, or otherwise constricted about midway of its ends, as at *b*, so as to close or nearly close its passage-way or opening. This coupling may be variously constructed—as, for example, by rolling a sheet of metal upon itself one or

more times, as in Fig. 3; or, as in may be made by boring a straight, or other hole in a rod, bar, or cylinder or it may be of tubular wire. The tion *b* may be formed by any suitable means. Of course I do not limit my invention to the exact form of the couplings, but they may be arranged at any point between the ends thereof.

In using couplings having no cement when they are mounted on wire-supports, hold them up while the filament is being applied and cemented in the cement. The ends of the filament runs down the couplings and cements the carbon to the wire-supports, making it very easy to remove the couplings without breaking the filament; but by constricting the filament, as in this invention, the openings of the couplings are closed, so that the ends of the filament are sure to come into contact with the metal of the couplings, and the cement filling the holes, fastens the ends of the filament there, and none of the cement can be removed from the wire-supports without breaking the filament. The difference between pinching and crimping is shown from the fact that the coupling may get loose from the wires by heating and cooling—the wires expanding and contracting, inside the lamp—and drop off or result in contact. On the other hand, if the wires are crimped on the leading-in wires, they are crimped or zigzagged, and even if the couplings should become a little loose, the sides are in good contact with the leading-in wires whether the lamp is put on or otherwise.

As the coupling is of electrically non-conducting material and the leading-in wires of the carbon or filament are separated by the constrictions in the coupling, there is no contact between the various parts of the coupling.

What I claim is—

1. The combination, with the

wires and carbon or filament of an incandescent electric lamp, of couplings constructed as tubes constricted between their ends and applied to the ends of such wires by crimping
5 or bending them together transversely and cemented to the carbon or filament, substantially as described.

2. In an incandescent electric lamp, the combination, with the leading-in wires, and
10 the filament or carbon, of couplings therefor

constricted between their ends and connected with the leading-in wires by crimping said wires and couplings together transversely, substantially as described.

In testimony whereof I have hereunto set
my hand this 13th day of January, A. D. 1892. 15

AUGUSTUS C. CAREY.

Witnesses:

HENRY E. WILKINS,
G. A. FREI.