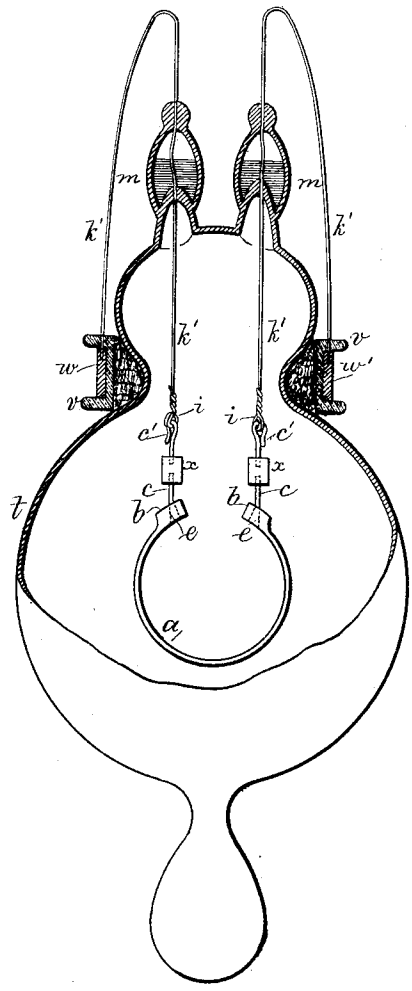
(No Model.) 2 Sheets—Sheet 1.

J. H. GUEST.

ELECTRIC LAMP.

No. 265,315. Patented Oct. 3, 1882.

Fig. 1.



Witnesses

Chas. H. Smith

Harold Serrell

Inventor

John H. Guest

per Lemuel W. Serrell

Attys.

N. PETERS Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

J. H. GUEST.

ELECTRIC LAMP.

No. 265,315. Patented Oct. 3, 1882.

Fig. 5.

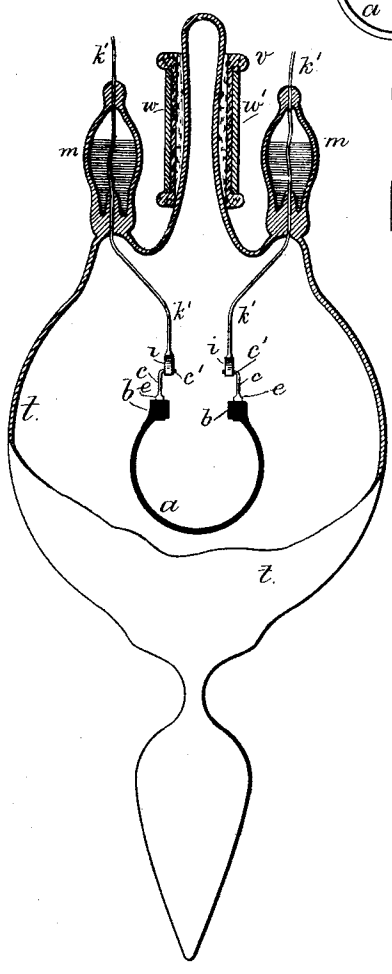


Fig. 2.

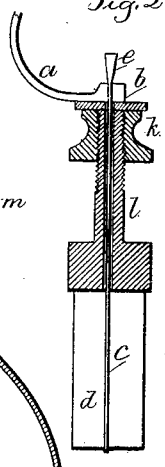


Fig. 3.

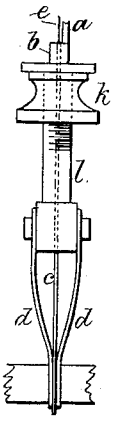


Fig. 6.

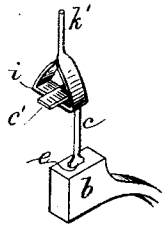
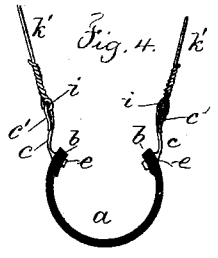


Fig. 4.



Witnesses

Chas. H. Smith

Harold Serrell

Inventor

John H. Guest

per Lemuel W. Serrell

Atty

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JOHN H. GUEST, OF BROOKLYN, NEW YORK.

ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 265,315, dated October 3, 1882.

Application filed November 22, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. GUEST, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Electric Lamps, of which the following is a specification.

Electric lamps have been made of various kinds of carbon in the form of a horseshoe; but difficulty has arisen in connecting the wires permanently to the carbon.

My present invention is made for the purpose of connecting the metallic conductors to the ends of the substance to be carbonized before the carbonization takes place, so that the contact of the metal and the carbon may be of the most intimate character, and the metal connections are adapted to be united with the wires that conduct the electricity after such wires have been passed through the glass bulb and hermetically sealed therein.

In the drawings, Figure 1 represents the lamp complete. Fig. 2 shows a section of the mechanism for inserting the conductors into the material to be carbonized. Fig. 3 is an elevation of the same. Fig. 4 is the carbon arc detached. Fig. 5 is a section of the lamp with the suspending device entirely above the bulb. Fig. 6 is a section of the hooks in a slightly different form.

My present invention is especially adapted to carbons made from vegetable ivory or equivalent substance. The material is cut out in the desired form, but the ends are left comparatively thick and heavy. In Fig. 2 part of such a blank is shown at *a* with the heavy ends *b*. These ends *b* are perforated transversely and a wedge of platina or equivalent metal inserted through the hole and pressed firmly to its place, in order that the wedge may fill the hole tightly and slightly compress the vegetable ivory against which it is in contact; but the wedge must not be driven in so far as to split the material.

A convenient means for inserting these wedges is to clamp the wire portion *c*, that projects from the small end of the wedge *e*, (and for this purpose the clip-plates *d d* may be used.) The vegetable ivory rests upon the nut *k* at the end of the tubular stock *l*, and by screwing the nut along upon said tubular stock *l* the thick portion of the vegetable ivory is pressed along upon the wedge and the parts firmly brought into contact. After the wedges *e* have been introduced into the vegetable ivory or similar material the wires *c* are to be bent up into the form of loops or hooks at *c'*. Sometimes the platina wire will be more or less flattened, as in Fig. 6, and the loops *i* of the conducting-wires *k'* are adapted to receive the hooks or loops *c'*. The surplus materials at the ends of the arch of vegetable ivory are removed and the arch dried and carbonized, and it is then ready to be inserted into the glass bulb *t* and connected to the wires *k'* by the portions *c'* being hooked into the eyes or loops at the ends of the wires *k'*.

In the manufacture of the glass bulb *t* the cups *m*, for mercury or other suitable sealing materials, are applied at the top of the bulb, and the wires *k'* pass through the glass at this place, and the glass is melted around the same. The mercury or other sealing substance is introduced into the cups and acts in the manner set forth in my Patent No. 225,594. The bulb is left open at the bottom end until the carbon has been inserted and connected to the wires *k'*, after which the glass is softened by heat, contracted, and connected to a tube leading to the apparatus that exhausts the air. After the vacuum is produced the lamp is sealed by application of heat to the connecting-tube.

The lamp is suspended, and the device for suspending the same consists of a spool or band, *v*, of non-conducting material—such as hard rubber—around the upper part of the bulb and secured by plaster-of-paris or otherwise, so as to be a permanent fixture, and upon this band *v* there are two plates, *w w'*, to which the wires *k'* are soldered, and at this band *v* the lamp is affixed into a suspending-bracket, and the conducting-wires are brought into contact and clamped against the plates *w w'*, so that the current passes freely and the lamp is complete in itself, and may be removed from or replaced in the supporting-bracket.

In Fig. 1 I have shown the hooks *c'* and wires *k'* sufficiently heavy to receive and support the small weights *x x*, that serve to keep the carbon in a vertical hanging position, and to insure contact between the metallic conductors at the loop or hooks. By this means the carbon is free to swing; but the conductors cannot be-

come detached, and the carbon will not be liable to become injured either in handling the lamp or in consequence of the action of the electric current.

I claim as my invention—

1. The combination, with a blank of vegetable ivory or similar material, of a metallic wedge—such as platina—passing through a hole near each end of said blank and adapted to be connected with the wires of the electric circuit, substantially as set forth.

2. In an electric lamp, the combination, with the carbon and the metallic conductors thereof, of suspending loops or hooks and weights upon the metallic conductors, substantially as and for the purposes set forth.

Signed by me this 18th day of November, A. D. 1880.

J. H. GUEST.

Witnesses:

GEO. T. PINCKNEY,

WILLIAM G. MOTT.