(No Model.)

H. D. BURNETT & S. E. DOANE.

INCANDESCENT ELECTRIC LIGHT.

No. 505,913. Patented Oct. 3, 1893.

Fig. 1.

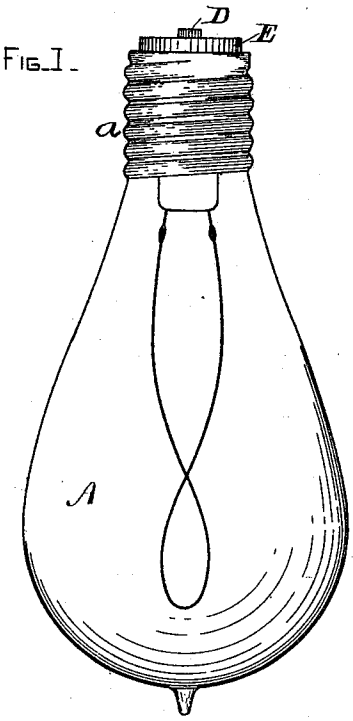


Fig. 2.

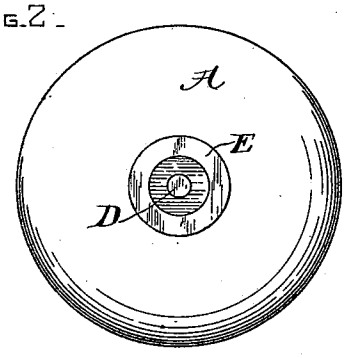


Fig. 3.

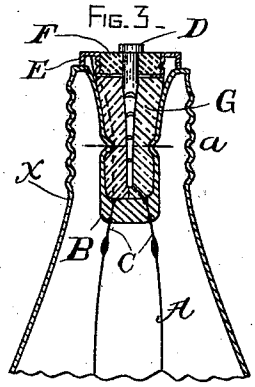


Fig. 8.

Fig. 4.

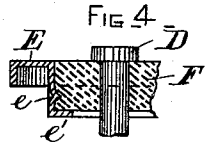


Fig. 5.

Fig. 6.

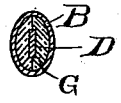


Fig. 7.

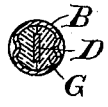


Fig. 9.

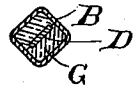
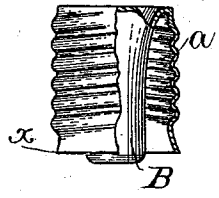


Fig. 10.



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UNITED STATES PATENT OFFICE.

HENRY D. BURNETT, OF LYNN, AND SAMUEL E. DOANE, OF SWAMPSCOTT, MASSACHUSETTS, ASSIGNORS TO THE THOMSON-HOUSTON ELECTRIC COMPANY, OF CONNECTICUT.

INCANDESCENT ELECTRIC LIGHT.

SPECIFICATION forming part of Letters Patent No. 505,913, dated October 3, 1893.

Application filed June 27, 1892. Serial No. 438,097. (No model.)

To all whom it may concern:

Be it known that we, HENRY D. BURNETT, residing at Lynn, and SAMUEL E. DOANE, residing at Swampscott, county of Essex, State of Massachusetts, citizens of the United States, have invented a certain new and useful Improvement in Incandescent Electric Lamps, of which the following is a specification.

Our invention relates to incandescent electric lamps, and its object is to improve the mode of securing the contacts for the leading-in wires.

In the drawings, Figure 1 is a side elevation of the neck or base of a bulb. Fig. 2 is a top plan view. Fig. 3 is a vertical section. Fig. 4 is an enlarged detail. Fig. 5 is a side view of the central contact pin. Figs. 6, 7, 8 and 9 are cross sections of tubes for the leading-in wires, and Fig. 10 shows this tube and its threaded flange before it is sealed to the bulb.

The glass bulb A is provided with a screw-threaded neck *a*, the threads being formed in a portion of the wall of the exhausted chamber of the lamp. This may be done in any suitable manner, but it is preferred to form them by blowing or casting in a mold. They may be conveniently formed in the flange of a supporting tube B, said flange being afterward sealed to the bulb at the point *x*.

The tube B is closed at its inner end, and the leading-in wires C pass in through it. Their outer ends are electrically connected with the contacts D, E, the former being a headed pin centrally arranged in the tube B, and the other a flanged ring concentric with the headed pin. The ring has an internal flange *e* which has an inturned annular shoulder *e'* upon which rests a button F of insulating material, through the center of which passes the pin D. Indentations in the flange *e* keep the button in place. The ring is of less diameter than the neck of the bulb at the bottom of the thread, so as to insure a clear space between said ring and the shell of the socket. The shank of the pin is polygonal and is preferably of a flattened shape, as shown. Before inserting it into the tube, two slabs of resilient material G are forced into the tube, their meeting faces being in a plane of the axis of the tube. The pin is then forced down between the filling pieces, and the leading-in wires are soldered to the pin and to the ring respectively.

The resilient material we use is preferably cork, though any other suitable substance may be employed such as paper pulp, soft wood, and the like. The slabs may be cemented into the tube B; or they may be anchored by projections, indentations or the like, on the inside of the tube. To prevent them from turning in the tube, it may be made polygonal or elliptical, or cylindrical with flattened portions, as shown. The plane of the meeting faces of the slab lies preferably in the longest diameter of the tube; though this is not essential. This bulb is used in a screw-threaded socket, which is insulated from the electric circuit by the space between said socket and the ring E. In some cases, the filling may be in one piece, the pin being forced down into it.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination with an incandescent lamp bulb, having a supporting tube, of a filling for said tube composed of two pieces of resilient material, and a contact pin held between said pieces, substantially as set forth.

2. The combination with an incandescent lamp bulb, of two contacts consisting of a flat ring E having an internal flange *e*, provided with a shoulder *e'*, and a central pin D, and a button of insulation F filling the space between the pin and the flange and resting on the shoulder *e'*.

3. The combination with an incandescent lamp bulb, having a supporting tube, of two filling pieces in said tube, and a flat contact pin held between them, substantially as described.

4. The combination with an incandescent lamp bulb, of a supporting tube having internal projections a filling of cork, and a contact pin embedded in said cork, substantially as set forth.

5. The combination with an incandescent lamp bulb, of a supporting tube, having a re-

silient filling, a contact pin embedded in said filling, an insulating button surrounding the outer end of said pin, and a flanged ring inclosing the button, said pin and ring constituting the lamp contacts, substantially as described.

6. The combination with an incandescent lamp bulb, of a supporting tube having a non-circular cross section at one or more points, a resilient filling in said tube, and a contact pin embedded in said filling.

In testimony whereof we have hereto set our hands this 23d day of June, 1892.

HENRY D. BURNETT.
SAMUEL E. DOANE.

Witnesses:
JOHN W. GIBBONEY,
BENJAMIN B. HULL.