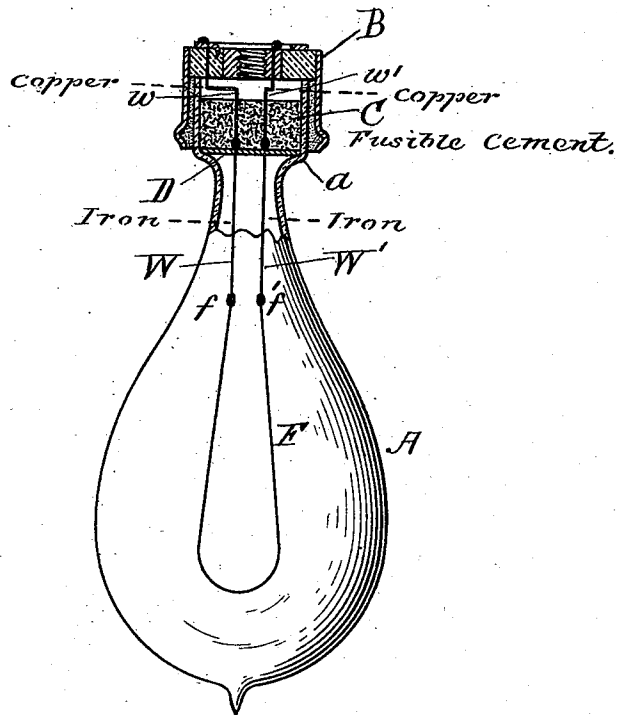


(No Model.)

W. E. NICKERSON.
INCANDESCENT ELECTRIC LAMP.

No. 507,554.

Patented Oct. 31, 1893.



WITNESSES

Frank G. Parker
Frank C. Hattie

INVENTOR

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WILLIAM EMERY NICKERSON, OF CAMBRIDGE, MASSACHUSETTS.

INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 507,554, dated October 31, 1893.

Application filed July 31, 1893. Serial No. 482,001. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EMERY NICKERSON, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Incandescent Electric Lamps, of which the following, taken in connection with the accompanying drawing, is a specification.

My invention relates to that class of incandescent electric lamps in which the neck of the lamp bulb is closed air-tight by a plug of fusible cement, its object being to prevent the over heating of the cement plug.

My invention is illustrated in the accompanying drawing, in which—

A represents the glass bulb of an incandescent electric lamp, having a neck provided with the shoulder *a*. Upon this shoulder rests the disk D, which serves as a support for the plug of fusible cement C, by which the neck is closed air-tight.

F is the filament, attached at *f* and *f'* to the leading-in wires *W w* and *W' w'*. Each leading-in wire is composed of two sections *W* and *W'*, and *w* and *w'* respectively. The two sections are composed, either of two sizes of wire, or of different metals of the same size but of different conductivity as regards heat, or they may differ in both respects.

The section of wire next the filament is of less heat-conducting capacity than the other, which passes through the cement plug, and its outer end is attached by soldering to the proper part of the base or cap B. The object of this arrangement is, that the wire located in the cement, shall be able to more freely conduct the heat from the cement plug to the cap or base of the lamp and thereby disperse it, than the section next the filament shall be able to conduct it into the plug of cement, whereby the temperature of the cement plug is maintained at a lower point than would otherwise be the case. The section of wire next the filament may be of iron, and that within the cement plug of brass or copper. The copper section is also by preference of larger diameter than the iron one. The two sections of wire may be united by touching together in a gas flame, made non-luminous by a blast of air.

The gist of my invention consists in arranging in an incandescent electric lamp of the class described, leading-in wires in two sections of different heat-conducting capacity, that of lesser capacity being within the lamp next the filament, and that of the greater being located in the cement plug, whereby the temperature of the cement plug is reduced during operation.

I claim—

1. In an incandescent electric lamp in which the neck of the lamp bulb is closed air-tight by a plug of fusible cement, leading-in wires composed of two sections, of different conducting capacity, that of the lesser capacity being next the filament within the lamp, and that of the greater capacity within the cement plug by which the lamp is closed air-tight, substantially as and for the purpose set forth.

2. In an incandescent electric lamp, the combination of the glass bulb A having a neck adapted to be closed air-tight by a plug of fusible cement, the cement plug C, and the filament F; with the leading-in wires *W w* and *W' w'* composed of a section of lesser heat-conducting capacity located within the lamp and next the filament, and a section of greater heat-conducting capacity located in the said cement plug, substantially as and for the purpose set forth.

3. In an incandescent electric lamp, the combination of the glass globe A having a neck adapted to be closed air-tight by a plug of fusible cement, the cement plug C and the filament F; with the leading-in wires *W w* and *W' w'* as described and the base B, said base being adapted in connection with said wires to disperse the heat and keep the said cement plug cool, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 24th day of July, A. D. 1893.

WILLIAM EMERY NICKERSON.

Witnesses:

FRANK G. PARKER,
FRANK G. HATTIE.