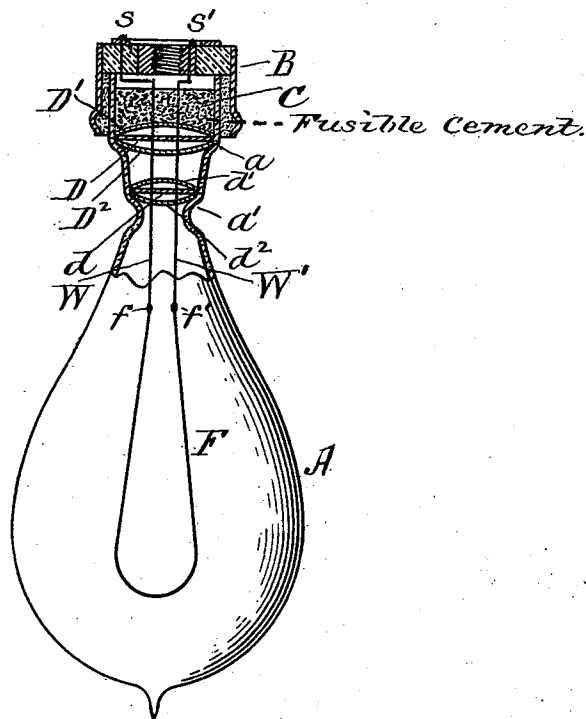


(No Model.)

W. E. NICKERSON.
INCANDESCENT ELECTRIC LAMP.

No. 507,555.

Patented Oct. 31, 1893.



WITNESSES

Frank A. Parker
Frank G. Hattie

INVENTOR

William Emory Nickerson

UNITED STATES PATENT OFFICE.

WILLIAM EMERY NICKERSON, OF CAMBRIDGE, MASSACHUSETTS.

INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 507,555, dated October 31, 1893.

Application filed July 31, 1893. Serial No. 482,002. (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
5 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 incandescent electric lamps of that class in which disks located within the neck of the lamp bulb are used either as heat reflectors, or for the purpose of supporting a plug of fusible cement by which the neck is closed air-tight.

15 It consists in an arrangement of disks, whereby the fusible cement plug is prevented from becoming over-heated by the radiant heat of the incandescent filament.

My invention is illustrated in the accompanying drawing, in which A is the bulb of an incandescent electric lamp, in which the neck is provided with the shoulders a and a' . Upon these shoulders a and a' rest the disks D D' D'', and $d d' d''$, respectively, the former supporting the plug of fusible cement C, and the latter serving as heat reflectors, for preventing radiation from the filament from overheating the cement plug.

30 W and W' are the leading-in wires, which are attached to the filament F at f and f' .

B is a base or cap secured to the lamp neck in the ordinary way. The leading-in wires W and W' are joined to the proper parts of the base by soldering, at S and S' respectively.

35 My invention consists in a certain compounding or arrangement of the disks, (which I prefer to make of plates of mica,) whereby their effectiveness in preventing the overheating of the cement plug is largely increased.

40 This result I accomplish, by giving a spherical or dished form to a portion, or all, of the disks used. When mica is used this form is given, by pressing the plain disks between two surfaces, one of which is concave and the other

45 convex. These dished disks may be combined with each other, or with plain disks, in various ways. For example, the disks D' and D'' may be used together without the disk D, and d' with d'' without d . Or D with D' and d with d' , or D with D'' and d with d'' . In the first case, where three disks are used, two spaces are left between, and in the other cases, one

space, the backward reflection of the presented surfaces, tending to reduce the amount of heat passing into the cement plug C. When mica is used the stamping into a dished form, tends to loosen up its laminated structure, thereby presenting a great number of narrowly separated surfaces, which are very effective in preventing the passage of radiant heat by their backward reflection. 60

The gist of my invention consists, in the combination in an incandescent electric lamp of the class described, of dished disks with each other, or of plain disks with one or more of dished form, for the purpose of preventing the passage of the heat of the filament into the cement plug by which the neck of the lamp is closed air-tight. 65

I claim— 70

1. In an incandescent electric lamp in which the neck of the lamp bulb is closed air-tight by a plug of fusible cement the combination of two or more disks having a dished form located in the neck of the lamp bulb and adapted to support the said cement plug, substantially as and for the purpose set forth. 75

2. In an incandescent electric lamp in which the neck of the lamp bulb is closed air-tight by a plug of fusible cement the combination of two or more disks of dished form located within the neck of the lamp and having a space between them and the cement-supporting disks and adapted to prevent the heat of the filament from reaching the cement-supporting disks, substantially as and for the purpose set forth. 80

3. In an incandescent electric lamp in which the neck of the lamp bulb is closed air-tight by a plug of fusible cement the combination of one or more disks of dished form with plain disks located within the neck of the lamp and adapted to prevent the heat of the filament from passing into said cement plug, substantially as and for the purpose set forth. 85

4. 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 filament F, the leading-in wires W W', the cement plug C; with the dished disk D' and the similar disk D'', substantially as and for the purpose set forth. 90

5. In an incandescent electric lamp the combination of the glass bulb A having a neck 95

adapted to be closed air-tight by a plug of fusible cement, the filament F, the leading-in wires W W', the cement plug C; with the plain disk D and the dish shaped disk D', substantially as and for the purpose set forth.

6. 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 filament F, the leading-in wires W W', the cement plug C; with the plain disk D and the dish shaped disk D'', substantially as and for the purpose set forth.

7. 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 filament F, the leading-in wires W W', the cement plug C; with the dish shaped disk d' and similar disk d'', substantially as and for the purpose set forth.

8. 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 filament F, the leading-in wires W W', the cement plug C; with the plain disk d and dish shaped disk d', substantially as and for the purpose set forth.

9. 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 filament F, the leading-in wires W W', the cement plug C; with the plain disk d and dish shaped disk d'', 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.