

R. & G. H. GEROW.
INCANDESCENT ELECTRIC LAMP.

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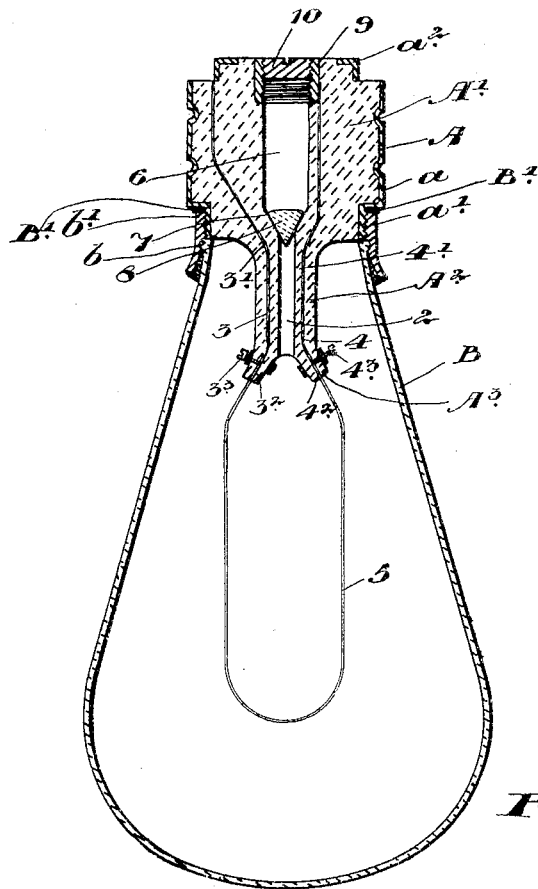


Fig. 1.

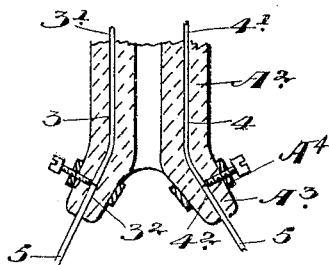


Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE

ROYAL GEROW AND GEORGE HILLIARD GEROW, OF NORTHPORT,
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INCANDESCENT ELECTRIC LAMP.

No. 805,131.

Specification of Letters Patent.

Patented Nov. 21, 1905.

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To all whom it may concern:

Be it known that we, ROYAL GEROW and GEORGE HILLIARD GEROW, of the village of Northport, in the county of Prince Edward, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Incandescent Electric Lamps, of which the following is the specification.

Our invention relates to improvements in incandescent electric lamps; and the object of the invention is to devise a lamp of this class in which the filament when worn or burned out may be restored by new filament, and thereby save the main body and base of the lamp, and consequently avoid throwing away the lamps after the filaments have been rendered useless through long use; and it consists, essentially, of a base provided with a reduced inner portion exteriorly threaded and a globe provided with the reduced portion having a sleeve attached thereto, which is interiorly threaded to fit the aforesaid reduced portion of the base, the said base being also provided with an orifice extending there-through having a suitable valve and closing-plugs and also an inwardly-extending stem provided with means at the inner end thereof for holding the filament, the parts being arranged and constructed in detail, as herein-after more particularly explained.

Figure 1 is a sectional view of a lamp constructed in accordance with our invention. Fig. 2 is an enlarged sectional detail showing the means for holding the filament in the stem.

In the drawings like letters and figures of reference indicate corresponding parts in each figure.

A is the base of the lamp, and B the globe, which is made of glass. The base A is made mostly of a porcelain body A', provided with a metallic covering *a*, surrounding the major portion of the lamp and provided with any suitable means for connecting it to the socket, such as thread or groove.

The covering or casing *a* is metallic and is provided with a reduced inner portion *a'*, which is exteriorly threaded, as indicated. The reduced outer portion of the body A' is provided with a metal ring *a²*, as indicated.

The body A' has an inwardly-extending stem A², through the center of which extends the passage-way 2. The stem A² flares outwardly at the bottom at A³, and on

each side of the passage-way 2, through the passage-ways 3 and 4 in the body, extend the circuit-wires 3' and 4'.

5 is the filament, which extends into the orifices 3² and 4², forming a continuation of the passage-ways 3 and 4. The ends of the filament extend into the orifices 3² and 4² and are secured therein so as to abut the wires 3' and 4' by the set-screws 3³ and 4³, respectively. The flaring portion A³ is provided with reinforcing metal collars A', through which the screws 3³ and 4³ pass, thereby giving them a firm hold.

6 is an orifice which extends through the base A', forming a continuation of the orifice 2, to which it is connected by the tapered portion 7, within which is located the conical valve 8.

9 is a sleeve fitting in the orifice 6, suitably held therein and to which the outer end of the wire 4' is secured.

10 is a screw-plug which is fitted into the sleeve 9, as indicated.

The globe *b* is provided with a bead *b* at the inner and has suitably cemented or otherwise fastened around the open end the collar *b'*, which is internally threaded outside of the bead, as indicated, in order that the globe may be screwed in place on the reduced threaded end *a'* of the metallic casing *a*.

We preferably provide a rubber gasket B' between the end of the collar *b'* and the shoulder formed in the casing, so as to effectually prevent any escape of air when the globe is securely held in place.

In manufacturing our lamp the filament is first secured in the stem of the base, as hereinbefore described, and then the globe screwed in place. The plug 10 is removed and a vacuum-pump applied to the threaded sleeve and the interior of the globe rendered *in vacuo*, the valve 8 permitting of this and being drawn by suction down on its seat as soon as the vacuum-pump is removed. The plug 10 is then inserted in position for safety.

Should a lamp burn out, the globe B is unscrewed and the air let in and a new filament put in place, when the plug 10 may be removed and the interior of the globe rendered *in vacuo* again. It will be seen by this means we are enabled to repair a lamp or render it as good as new again at a trifling expense—viz., the cost of the filament—which is an important desideratum.

What we claim as our invention is--

1. In an incandescent electric lamp, the combination with the base having a contracted stem provided with a central orifice
5 the end of said stem being adapted to receive the ends of the filament and an extension-orifice in the base connected to the aforesaid orifice by a tapered portion, a conical valve
10 located in said tapered portion and a removable plug closing the end of the extension-orifice.

2. In an incandescent electric lamp, the combination with the base having a stem provided with a central orifice and an extension-orifice in said base connected to the
15 aforesaid orifice by a tapered portion, the conical valve located in such tapered portion, a screw-threaded sleeve fitting in the upper end of the extension-orifice, a screw-plug fitting
20 in said sleeve, a metal ring fitting the outer end of the base and the wires leading

from said ring and sleeve through the base and stem thereof, the filament held in the stem and being connected to the said wires and the globe removably attached to the
25 base, substantially as described.

3. In an incandescent electric lamp, the combination with a base having a central orifice and a filament detachably connected to
30 wires in the base, of a globe having a beaded neck, and a metallic collar extending over the said beaded neck and along the exterior of the globe, said collar being cemented below the bead to the globe and having an extension above the bead screw-threaded and
35 engaging a screw-thread on the base, substantially as described.

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Witnesses:

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