

(No Model.)

C. G. PERKINS.

ELECTRIC INCANDESCENT LAMP AND HOLDER.

No. 287,314.

Patented Oct. 23, 1883.

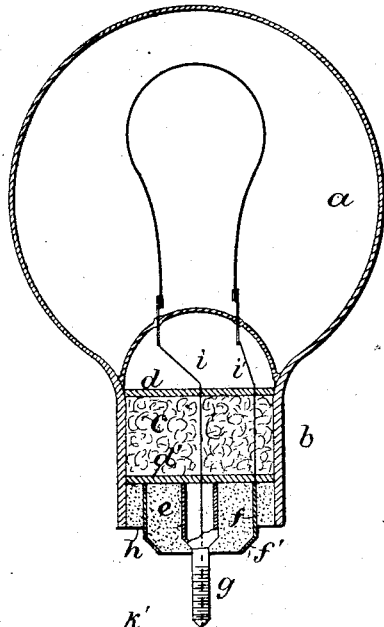


Fig. 1.

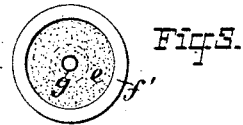


Fig. 3.

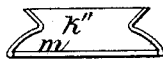


Fig. 4.

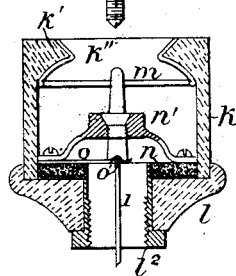


Fig. 2.

Fig. 5.

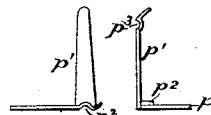
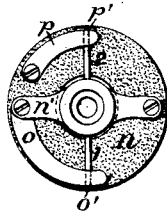


Fig. 6.

ATTEST:

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UNITED STATES PATENT OFFICE.

CHARLES G. PERKINS, OF NEW YORK, N. Y., ASSIGNOR TO THE IMPERIAL
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ELECTRIC INCANDESCENT LAMP AND HOLDER.

SPECIFICATION forming part of Letters Patent No. 287,514, dated October 23, 1883.

Application filed May 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. PERKINS, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Electric Incandescent Lamps and Holders, of which the following is a specification:

My invention relates to an electric incandescent lamp and holder adapted for an electro-

lier.
In my former applications for Letters Patent for electric incandescent lamps, with plaster-of-paris within the neck of the globe, no means were provided for arresting the downward radiation of heat, which would evidently arise from several carbons illuminating at the same time, and in time the plaster-of-paris would convey the heat to the delicate mechanism forming the switch, and cause the several parts to warp and ultimately destroy the same. This objection is obviated by first placing within the wall of the neck of an electric incandescent lamp a suitable quantity of mineral wool or other non-conducting material, the result of which prevents the downward radiation of the heat as generated by the illuminated carbons within the globe, of which a full description will be given hereinafter.

The first part of my invention consists in arranging within the neck of an incandescent lamp a suitable quantity of mineral wool supported at the top and bottom by disks of paper or other suitable material, the whole supported by plaster-of-paris, having a central projecting metallic screw, and a cylindrical metallic projection provided with an annular bevel projecting below the base of the lamp.

The second part of my invention consists of a hollow glass case of a cylindrical shape, open at both ends. The upper end is provided with a bevel projection integral therewith, and corresponding with a metallic sleeve made in halves and mounted on said bevel projection.

The third part of my invention consists of a disk made of insulating material, mounted with a straddle-screw nut and two flat springs, one of which is electrically connected with the metallic straddle-screw nut, while the other is electrically connected with the metallic rings made in halves by an upright spring provided

with a depression corresponding with a bead integral with the lower portion of the aforesaid metallic ring in halves, the whole mounted on a glass base provided with a central metallic sleeve provided with screw-threads on the inner circumference, at the lower portion thereof, while the upper end thereof is provided with screw-threads on its outer circumference corresponding with the threads in the disk of insulating material.

In the drawings, Figure 1 represents a vertical section of an electric incandescent lamp, showing the principle features of my invention. Fig. 2 represents a vertical section of the lamp-holder. Fig. 3 represents the plug of plaster-of-paris, with metallic bevel-edged ring and central metallic screw attached thereto. Fig. 4 represents one-half of the metallic sleeve. Fig. 5 represents a plan view of the disk of insulating material, with flat springs and straddle-screw nut connected therewith. Fig. 6 represents a detail view of the flat metallic spring provided with an upright integral therewith, and which forms one connection for the circuit of the lamp.

Similar letters refer to similar parts throughout the several views, in which—

a represents the globe of an electric incandescent lamp.

b is the neck, and *c* is the mineral wool, supported therein by the disks *d d'*.

e is the plug of plaster-of-paris, having the cylindrical metallic projection *f*, provided with the bevel-edge *f'*, and also containing a central metallic screw, *g*, the whole held within the neck *b* by the plaster-of-paris *h*.

i i' are the electrical conductors, one of which is electrically connected with the central screw, *g*. The other is connected with the metallic projection *f*.

k represents the glass case, mounted on the glass base *l*.

k' is the beveled projection of the glass case *k*, and *k''* is one-half of the metallic sleeve, provided with an annular bead, *m*, on the lower portion thereof.

n is the disk of insulating material, having a metallic straddle-screw nut, *n'*, connected therewith. One arm of the straddle-screw nut *n'* is electrically connected with the flat spring *o*, provided with a depression, *o'*, on

the under side thereof, near the end, in which one of the electrical conductors, 1, leading to the main-line wire, is held.

p is the second flat spring, fastened to disk *n*. This spring is also provided with a depression, *p*², on the under side thereof, near its end, for holding the other electrical conductor, 2, in position, and at the same time making a perfect electrical contact therewith. The spring *p* is also provided with a perpendicular spring, *p*¹, integral therewith, and is also provided with a depression, *p*³, corresponding with the bead, *m*, of the metallic sleeve *k*¹, with which the said spring *p*¹ makes an electrical contact. *k*² is the metallic sleeve holding the disk *n* and base *l* together.

Whenever the lamp and holder shall have been completed, the two are joined together by inserting the central screw in the straddle-screw nut, and then turning the lamp until the beveled edge of the metallic projection of the lamp shall have made a perfect electrical contact with the corresponding bevel on the metallic sleeve arranged on the beveled projection of the glass case forming part of the lamp-holder. When the lamp and holder shall have been mounted on the extending arms of an electrolier, the current will then travel through the wire 1 to the metallic flat spring *o*, thence through the straddle-screw nut *n*¹, to the central screw, *g*, from which it travels to the conductor *i*, leading to the carbon filament, through which it passes to the conductor *i*¹, thence to the metallic cylindrical projection *f*, to the metallic sleeve *k*¹, from which it passes to the perpendicular spring *p*¹, and thence to the flat spring *p*, to the wire 2, leading to the main-line wire, thus completing the circuit through the lamp and holder.

40 Having thus described my invention, what I

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

1. In combination with an electric incandescent lamp, the mineral wool within the neck of the globe. 45

2. In combination with an electric incandescent lamp, the mineral wool *c*, and disks *d* *d*¹, arranged within the neck *b*, substantially as shown and described.

3. In combination with an electric incandescent lamp, the mineral wool *c*, disks *d* *d*¹, plaster-of-paris plug *e*, cylindrical metallic projection *f*, beveled edge *f*¹, metallic screw *g*, and the electrical conductors *i* *i*¹, the whole arranged within the neck *b*, substantially as shown and described. 55

4. In combination with an electric incandescent lamp holder, the case *k*, beveled projection *k*¹, metallic sleeve *k*², and bead *m*, forming a part of the circuit-connections of the lamp, substantially as shown and described. 60

5. In combination with an electric incandescent lamp, the disk *n*, fastened to the glass base *l* by the metallic sleeve *l*¹, straddle-screw nut *n*¹, fastened to said disk *n*, the flat metallic springs *o* *p*, provided with depressions *o*¹ *p*², for holding the leading-in wires into position and making a perfect electrical contact therewith, and the upright *p*¹, integral with the flat spring *p*, and having a depression near its upper end corresponding and engaging with the bead *m* of the metallic sleeve *k*², mounted on the case *k*, substantially as shown and described. 70

Signed at New York, in the county of New York and State of New York. 75

CHARLES G. PERKINS.

Witnesses:

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GEORGE BECKER.