(No Model.)

B. B. KEYES.

SOCKET FOR INCANDESCENT ELECTRIC LAMPS.

No. 455,287. Patented June 30, 1891.

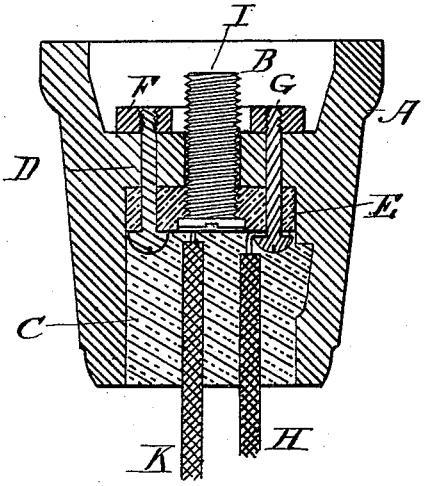

Fig. 1.

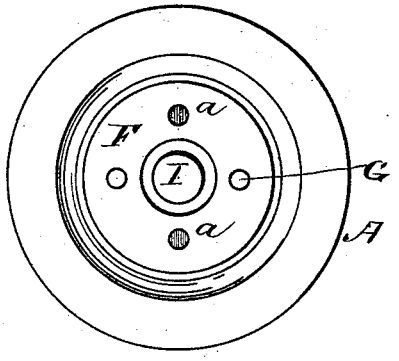

Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

BENJAMIN B. KEYES, OF CHELSEA, MASSACHUSETTS.

SOCKET FOR INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 455,287, dated June 30, 1891.

Application filed October 6, 1890. Serial No. 367,219. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN B. KEYES, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Sockets for Incandescent Electric Lamps, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of this invention is the production of a socket for incandescent electric lamps, which socket can be used in damp situations without injury to the insulation, and on which socket the contact terminals of the conducting-wires are firmly secured to the socket without the use of cement in the recess in the socket which receives the electric lamp.

To this end the invention consists in the combination, substantially as and for the purpose set forth, of a block of porcelain or other similar insulating material impervious to moisture, having recesses in its opposite ends separated by a partition, metallic contacts in one of the recesses mechanically secured to the partition, a disk of hard rubber or other similar insulating material capable of holding a screw mechanically secured to the other side of the partition, a metallic screw passing through the disk and partition into the recess which contains the contacts, a conducting-wire electrically connected to said screw, a conducting-wire electrically connected to the contacts, and a filling of cement in the deeper recess.

In the accompanying drawings, Figure 1 is a sectional view of a socket embodying my invention and as constructed to be used for the reception of a Thomson-Houston lamp, and Fig. 2 is a plan view of the same.

In both the figures the same letters refer to the same parts.

Referring to the drawings, A is a block of porcelain or other similar insulating material impervious to moisture, and having in opposite ends a recess B and a recess C, so that a partition D is formed between the recesses. This block is generally cast or molded, and thus the partition is of the same material as the block, and forms part of the same. This partition is preferably so placed that one of the recesses is shallower than the other, and also of larger diameter. It is this recess which receives the base of the incandescent lamp.

E is a disk of hard rubber or other similar insulating material capable of holding a screw placed in the other recess and bearing against the partition, and F is a ring of metal in the recess which receives the base of the lamp, secured against the partition by metallic screws G, which pass through the hard-rubber disk and the partition and are tapped in the ring. There are no screw-threads in the partition; but the ring F and disk E are firmly clamped to the partition by means of the screws. To one of these screws is electrically connected one of the conducting-wires H. Secured in the disk E, and passing through the partition D and projecting into the recess B, is a metallic screw I of a diameter equal to the internal screw-socket on the base of the Thomson-Houston lamp, and this screw is separated from the ring F by a space or otherwise insulated therefrom. The other conducting-wire K is secured to the screw I. After the parts have been put together and firmly clamped and the conducting-wires protected by an insulating covering and electrically connected to the socket-terminals, then the recess C is filled with a suitable cement of water-proof insulating material, which fills the recess, embeds the conducting-wires therein, and effectually prevents the entrance of moisture.

The contacts in the recess B are in firm and stable contact with the partition, and the cement is poured into the other recess, and owing to the depth of the recess sufficient cement can be applied to effectually seal the wires and protect all the parts from the effects of moisture.

In the ring F may be formed screw-holes *a*, by means of which, when the socket is used to hold an Edison lamp, a screw-threaded shell for the reception of the base of the lamp may be secured to the ring. The end of the screw I will bear against and establish electrical contact with the metallic piece in the base of the Edison lamp.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, substantially as and for the purpose set forth, of the block of insulated material impervious to moisture, having recesses in opposite ends thereof separated by a partition, one of the recesses being

used for the reception of the base of an incandescent lamp, a disk of hard rubber or other similar insulating material capable of holding a screw placed in the other recess and firmly clamped to the partition, metallic contacts in the recess which receives the lamp, mechanically secured to the partition without cement and electrically connected to one of the conducting-wires, a central metallic screw insulated for these contacts and passing through the insulating-disk and partition and projecting into the recess which receives the lamp, and electrically connected to the other conducting-wire, and a filling of waterproof insulating-cement in the recess which contains the insulating-disk and conducting-wires.

2. The combination, substantially as and for the purpose set forth, of the block of insulating material A, having recesses B and C in the same, separated by a partition D, the recess B being wider and shallower than the recess C, the metallic ring F in the recess B, fixed on the partition and electrically connected to one of the conducting-wires H, disk E, of hard rubber or other similar material, capable of holding a screw placed in the recess C and against the partition D, the metallic screws G, passing through the disk E and partition D and tapped in the ring F, the conducting-wire H, connected to one of these screws, the central screw I, passing through the disk E and partition D and projecting into the recess B and adapted to receive the base of a Thomson-Houston incandescent lamp, the conducting-wire K, electrically connected to the screw I, and the filling of cement in the recess C.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 3d day of October, A. D. 1890.

BENJAMIN B. KEYES.

Witnesses:
FRANK G. PARKER,
ALEX. L. HAYES.