(No Model.)

J. W. COLLIER.

INCANDESCENT ELECTRIC LAMP SOCKET.

No. 441,059. Patented Nov. 18, 1890.

Fig. 1.

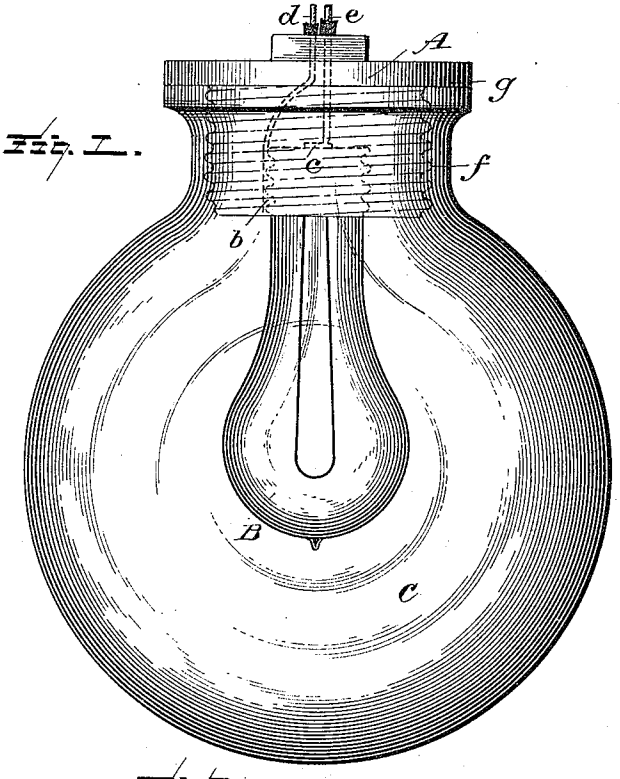


Fig. 2.

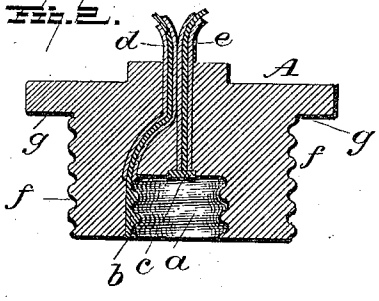


Fig. 3.

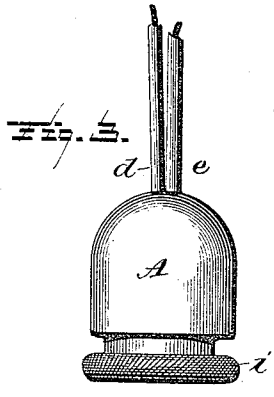
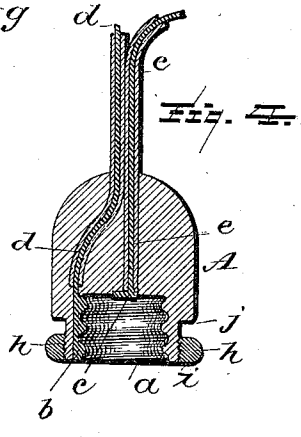


Fig. 4.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES WALTER COLLIER, OF NEW YORK, N. Y.

INCANDESCENT-ELECTRIC-LAMP SOCKET.

SPECIFICATION forming part of Letters Patent No. 441,059, dated November 18, 1890.

Application filed November 16, 1889. Renewed August 28, 1890. Serial No. 363,237. (No model.)

To all whom it may concern:

Be it known that I, JAMES WALTER COLLIER, of the city, county, and State of New York, have invented new and useful Improvements in Sockets or Holders for Incandescent Lamps, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of an incandescent lamp embodying my invention. Fig. 2 is a longitudinal axial section of the holder dissociated from the lamp and its inclosing-globe. Figs. 3 and 4 are a side elevation and longitudinal axial section, respectively, of a slightly-modified form of holder.

The body A of the holder is made from a plastic non-conducting material—such as hard rubber—which is capable of being molded into form. It is formed with a socket *a*, which in the present instance is internally screw-threaded to receive the correspondingly screw-threaded neck of the lamp B, and in the wall and base of this socket are the metallic contacts *b c*, which are to meet and make connection with the lamp-contacts in the customary way when the lamp is screwed home in the socket. The internal form and dimensions of the socket proper *a*, as well as the location of the contacts *b c* therein, will of course vary according to the particular kind of incandescent lamp to be used therewith. Fixed to the contacts *b c*, so as to be in electrical connection therewith, are the circuit-wires *d e*, which, as shown in the drawings, are covered and protected by the usual insulation or insulated covering. All of these parts *b c d e* are molded and embedded in the holder during the operation of forming the latter, and by the subsequent vulcanizing are most firmly and permanently held therein. The body of the holder is molded in a solid mass around these contact-pieces and wires, there being no opening in the base of the holder, but the rubber being molded and vulcanized solidly around the wires, which with their insulated covering extend out from the base of the holder to any length desired, so that they may be connected up in the circuit in which the lamp is to be placed. This feature is material and of importance, because thereby I obtain an incandescent-lamp holder which can be used in damp and wet localities and under water with the least possible danger of being injured by oxidation and other injurious influences. The base, and indeed the whole body of the holder, is absolutely closed against atmospheric influences or water. The usual opening in the base for its attachment to a bracket or support is absent. The only things which project through that base are the circuit-wires, which themselves have the customary insulated covering, and these wires are molded into the body of the holder so as to constitute in effect an integral part thereof, the joint between the wires and the holder being hermetically sealed against any outside influences by reason of the fact that the material of which the body of the holder is composed is molded and baked around these wires. The wires serve not only as electrical connections, but also as the means whereby the holder is mechanically attached and upheld in place.

The holder shown in Figs. 1 and 2 is more particularly designed for submarine or subaqueous purposes. The exterior of the holder is screw-threaded, as at *f*, to receive a globe C, the internally-screw-threaded neck of which screws upon the holder until it brings up against the shoulder or flange *g*. By seating the joint between the neck and the flange entrance of water can be wholly prevented.

In the holder shown in Figs. 3 and 4, (designed more particularly for street use,) there is upon the exterior of the holder a screw-threaded portion *h*, upon which screws a clamping-collar *i*. The neck of the shade used in connection with this holder is clamped between a shoulder *j* on the holder and the clamping-collar *i*.

Having described my improvement and the best way known to me of carrying the same into effect, what I claim, and desire to secure by Letters Patent, is—

1. An incandescent-lamp socket or holder made from a plastic non-conducting material, such as hard rubber, having solidly molded and embeded in it the holder-contacts and the circuit-wires for connecting said contacts with the outside circuit, said holder having a solid hermetically-closed base, through and beyond which project the said circuit-wires

around which the body of the holder is molded, as and for the purposes hereinbefore set forth.

2. An incandescent-lamp socket or holder made from a plastic non-conducting material, such as hard rubber, having molded and embedded in the body of the material of which it is composed the insulated wires by which it is connected to the outside circuit, substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 15th day of November, 1889.

JAMES WALTER COLLIER.

Witnesses:

JAMES TYSON BOSDEVEX,

WILLIAM MCCORMICK.