(No Model.)

# A. SWAN.

## HOLDER FOR INCANDESCENT ELECTRIC LAMPS.

No. 313,965. Patented Mar. 17, 1885.

Fig. 5.

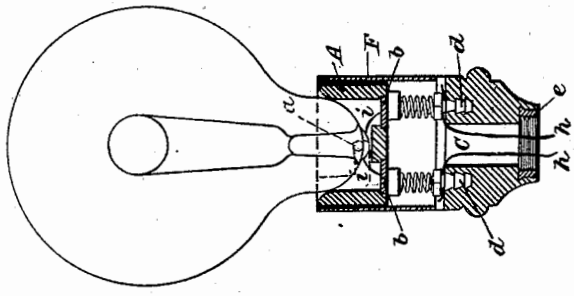



Fig. 3.


Fig. 4.

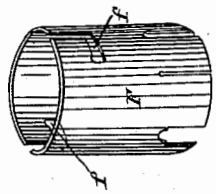



Fig. 1.

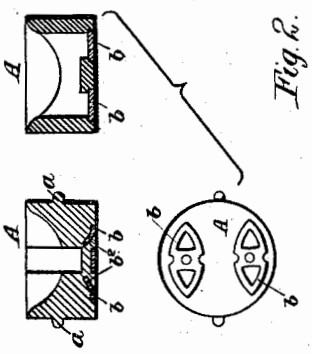
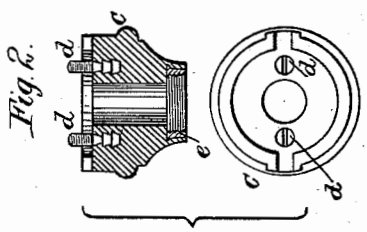



Fig. 2.

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Alfred Swan
by A. Pollok
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# UNITED STATES PATENT OFFICE.

ALFRED SWAN, OF LOW FELL WORKS, GATESHEAD-ON-TYNE, ENGLAND.

## HOLDER FOR INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 313,965, dated March 17, 1885.

Application filed December 20, 1884. (No model.) Patented in England June 19, 1884, No. 9,185.

*To all whom it may concern:*

Be it known that I, ALFRED SWAN, a subject of the Queen of Great Britain and Ireland, and residing at Low Fell Works, Gateshead-on-Tyne, England, have invented certain Improvements in Holders for Incandescent Electric Lamps, in part applicable also to other analogous purposes, (for which I have made application for patents in Great Britain, No. 9,185, dated June 19, 1884; France, dated November 14, 1884; Belgium, dated November 17, 1884; Italy, dated November 14, 1884, and Austria, dated November 14, 1884,) of which the following is a specification.

My invention has for its object to enable incandescent electric-lamp holders to be made of an insulating material capable of being molded or cast—such as glass—the metal fittings being so formed at the parts which are to be inclosed in the glass or the like that they will be secured in the glass or other insulating material by the process of molding or casting.

I will describe, with reference to the accompanying drawings, a manner in which the invention may be carried into effect.

Figure 1 shows the upper part of the holder in vertical sections and in plan. Fig. 2 shows the lower part of the holder in vertical section and plan. Fig. 3 is a detail view of the spring-contact; Fig. 4, a perspective view of the inclosing-sleeve, and Fig. 5 a vertical section of the entire device.

The part to be secured to the bulb is shown at Fig. 1, in plan and transverse sections, at right angles to each other, and consists of a body part, A, of glass or other insulating material, capable of being molded or cast. The metal fittings *b b* are formed with ear-pieces $b^2$ $b^2$, and are placed in the mold for the part A, and on the glass or like material being pressed or cast in the mold the said metal parts *b b* are secured firmly in position in the part A.

The part C, to which the main wires are connected, and which is secured to the bracket or the like, is similarly formed by casting or molding the glass or like material around the metal fittings, consisting of a screw-collar, *e*, for securing to the bracket or the like, and split screws *d d*, between which the main wires *h h* are secured by screw-nuts $g^2$, provided with springs *g*, the other ends of which form or are provided with contact-pieces to press against the wires *i r* from the lamp, or the contact pieces *b*, to which they are joined.

Fig. 3 shows one of these nuts and springs separately.

The fittings *d d* and *e* are provided at the parts where they are surrounded by the glass or the like with projections or grooves, by which they are held firmly in position.

The parts A and C may be secured together, and the bulb consequently be secured in place, by a collar-piece, F, slid or sprung upon the part C, and prevented from turning by a recess or recesses in the collar F taking over a projection or over projections at the side of the piece C, to keep the parts in the proper relative position, the part A being secured by the knobs *a* thereon engaging in bayonet-joint grooves *f* in the collar F. Fig. 4 shows the collar F separately, and Fig. 5 shows the parts fitted to a lamp, the part A being connected or otherwise fixed to the bulb of the lamp.

The projections or grooves on the parts of the fittings surrounded by the glass or the like may be of any kind which will serve to secure the fittings in position in the glass or the like.

I do not limit myself to any particular shape of the body part of the holder, or shape or number of the parts constituting the body-part of the holder; nor do I limit myself to any particular shape or number of the fittings, nor to the details of the fittings, as shown in the drawings; but

What I claim as my invention is—

1. In a holder for incandescent electric lamps having a socket of glass or similar insulating moldable or castable material with metal fittings or contact-plates embedded directly therein, and having projections extending into the mass of the glass or other insulating material, substantially as described.

2. A holder for incandescent electric lamps, comprising a part of glass or like moldable or castable insulating material, having split screws partly embedded therein, the main wires being held in said screws by screw-nuts, substantially as described.

3. In a holder for incandescent electric

lamps, the combination of the part to which the main wires are led, formed of glass or like material, with split screws partly embedded therein, the screw-nuts for holding the main wires in said screws, and the springs connected with screw-nuts and forming or provided with contacts for connecting with the leading-in wires, substantially as described.

4. A holder for incandescent electric lamps, comprising a part or socket, *a*, of glass or like material, having contact-plates embedded directly therein, a part, C, of like material having split screws partly embedded therein, screw-nuts for engagement with said screws, and spring-contacts for making connection between said screws and contact-plates, both parts *a* and C being supported in a tube or collar, substantially as described.

5. A holder for incandescent electric lamps, comprising a socket, *a*, of glass or like material, provided with contact-plates embedded therein, a part, C, also of glass or like material, provided with screws for the main wires, spring-contacts for connecting said screws with said plates, and a tube or collar in which both said parts *a* and C are supported by a bayonet-joint, so as to be readily removable, or to be turned to make and break the circuit, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses: ALFRED SWAN.

ROBINSON LOCKE,

GEO. S. H. SWAN,

*Both of No. 6 Grey St., Newcastle.*

Correction in Letters Patent No. 313,965.

It is hereby certified that in Letters Patent No. 313,965, granted March 17, 1885, upon the application of Alfred Swan, of Low Fell Works, Gateshead-on-Tyne, England, for an improvement in "Holders for Incandescent Electric Lamps," an error appears in the printed specification requiring the following correction: In line 90, page 1, the word "having" should be stricken out; and that the said Letters Patent should be read with this correction therein that the same may conform to the corrected files pertaining to the case in the Patent Office.

Signed, countersigned, and sealed this 22d day of September, A. D. 1885.

[SEAL.]

H. L. MULDROW,
*Acting Secretary of the Interior.*

Countersigned:

M. V. MONTGOMERY,
*Commissioner of Patents.*