

(No Model.)

A. SWAN.

HOLDER FOR INCANDESCENT ELECTRIC LAMPS.

No. 292,447.

Patented Jan. 22, 1884.

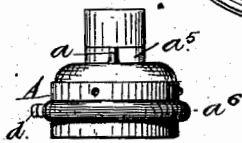
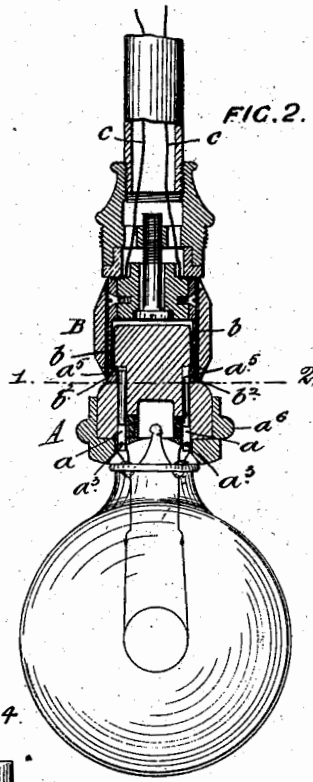
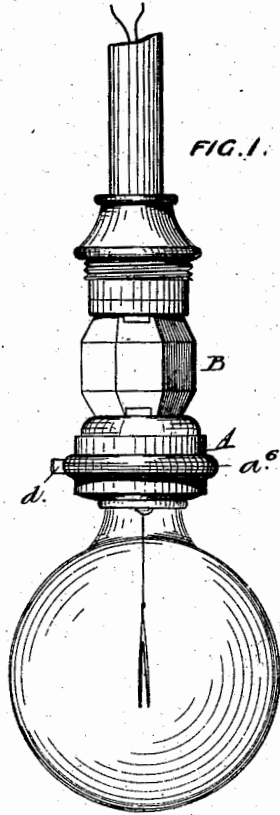


FIG. 7.

FIG. 6.

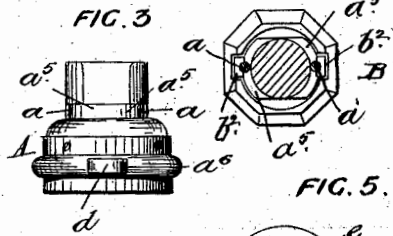
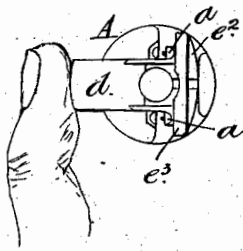
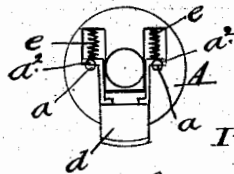


FIG. 3.

FIG. 5.



Inventor:

Alfred Swan  
by A. Pollock  
his attorney

Attest:

J. Henry Kaiser.  
Wm T Gill

# UNITED STATES PATENT OFFICE.

ALFRED SWAN, OF GATESHEAD, COUNTY OF DURHAM, ENGLAND.

## HOLDER FOR INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 292,447, dated January 22, 1884.

Application filed July 23, 1883. (No model.) Patented in England May 21, 1883, No. 2,528; in France June 19, 1883, No. 156,137; in Belgium June 21, 1883, No. 61,778; in Canada August 10, 1883, No. 17,468, and in Austria-Hungary October 8, 1883, No. 27,350 and No. 43,886.

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 in the borough of Gateshead, county of Durham, England, have invented certain Improvements in Holders for Incandescent Electric Lamps, (for which I have obtained a patent in Great Britain, No. 2,528, dated May 21, 1883,) of which the following is a specification.

My invention has for its object to provide a holder for incandescent electric lamps which will give a firm support for the same and allow of the ready detachment of either the bulb from the part which directly holds it or of both the bulb and the said part together from the bracket-support or electrolier. At the same time also, if desired, the said holder will answer the purpose of a tap for the lamp.

I will describe my invention with reference to the accompanying drawings.

Figure 1 represents a holder constructed according to my invention and affixed to a bracket. Fig. 2 is a vertical section of the same. The part A, which directly holds the bulb, is carried by a part, B, affixed to the end of the bracket or the like. The bulb is separable from the part A, or the said bulb and the part A can be removed from the part B together without removing the bulb from the part A, as hereinafter described. Figs. 3 and 4 are views of the part A, taken at right angles to each other. Fig. 5 is a plan of under side of the part A with the cap-piece  $a^6$  removed; and Fig. 6 is a section on the line 1 2, Fig. 2, showing the part B in plan of under side and the part A in section. Fig. 7 is a modification of the part A, as hereinafter described.

The part A is made of non-conducting material, and contains two pairs of jaws,  $a a^2$ . The parts  $a$  of the said jaws are led through the part A, and are in metallic connection (through the springs  $b$  in the part B) with the current-wires  $c$ , as shown clearly in Fig. 2. The other parts,  $a^2$ , are capable of being pressed away from the parts  $a$  by means of a pusher,  $d$ , the springs  $e$  causing the jaws  $a a^2$ , when pressure is released from the pusher  $d$ , to close firmly

upon each other. One of the parts of each pair of jaws is preferably furnished with a pin,  $a^3$ , which enters a recess in the other part of the jaw. The cap-piece  $a^6$  of the part A is formed—as shown, for example, in Fig. 2—to correspond with and fit the end of the bulb. The attachment of the bulb to the part A is effected by pressing the pusher  $d$  so as to cause the jaws  $a a^2$  to open when the loops of the terminal wires are passed over the pins  $a^3$ , and on releasing the pusher  $d$  the jaws are acted upon by the springs  $e$ , so that they close together and grasp the terminal loops between them and firmly retain the bulb in place in the said holder. By pressing upon the pusher  $d$  the jaws are opened, and the bulb can readily be removed from the part A.

Fig. 7 shows a modification (with the jaws open) wherein the thumb-piece  $d$ , to which are attached the back parts,  $a$ , of the jaws, bears against the piece  $e^2$ , which, in its turn, bears upon a spring,  $e^2$ , in the form of a blade, which may be held in its position by a projection at the middle fitting into a corresponding depression in the bed-piece. The attachment of the part A to the part B is effected by means of the springs  $b$ , which are undercut or formed with projecting parts  $b^2$  at their ends, as shown in Figs. 2 and 6, and the said springs are also formed with recesses for containing the metallic conducting parts of the part A, which conducting parts may be formed by continuations of the parts  $a$  of the jaws, as shown in Figs. 2 and 6. The upper portion of the part A is formed, as shown in Fig. 6, with shoulders or ledges  $a^5$  at opposite sides, and the part B is formed with a recess to receive this upper portion of the part A, the projections  $b^2$  of the springs  $b$  projecting into the said recess. The part A, when in a position at right angles to that shown in Figs. 2 and 6, is passed into the recess in the part B, and then, by turning the said part A through a portion of a rotation, the shoulders  $a^5$  engage with the projections  $b^2$  of the springs  $b$ , the upper parts of the pins  $a$  engaging with the recesses in the said projections of the springs  $b$ , thus making a metallic circuit between the conducting-wires to and

from the lamp. By giving the part A a motion of partial rotation, the pins *a* will pass from contact with the projections of the springs *b*, and when brought to a position at right angles to that shown in Figs. 2 and 6 the said part A, together with the bulb, can be readily removed from the part B. If an intermediate position be given to the part A in the part B, the pins *a* may be brought out of contact with the projections *b*<sup>2</sup> of the springs *b*, and thus the lamp be extinguished while the ledges *c*<sup>3</sup> are still engaged with the said projections, and the part A and the bulb are still held to the bracket.

The non-conducting parts of the parts A and B may be made by molding in glass or other material, and the conducting or metal parts may be produced by stamping, whereby the entire apparatus may be produced at small cost; but I do not limit myself to any particular material or process of manufacture, provided that the conducting parts are properly insulated.

It will be evident that the lamp-holder can also be used to support the lamp in the reverse or any other position from that shown in the drawings.

I claim—

1. The holder for incandescent electric lamps, consisting of the part A, which directly holds the bulb, and a part, B, united to part A by spring fastening devices, so that the bulb can be readily removed from the part A, or the part A and bulb removed together from part B, substantially as described.

2. In a holder for incandescent lamps, the combination of the recessed part B, the part A, detachably connected with the bulb and having shoulders or ledges on opposite sides, and springs on said part B, for engaging with said shoulders or ledges when the part A is turned in the proper position, substantially as described.

3. The combination, with the part B and springs *b*, connected with the line-wires, of the part A, shoulders or ledges extending partly around said part A, for engagement with said springs, and conducting-pins carried by said part A, and arranged so that the said part can be returned to break contact between said clamping-springs and conducting-pins without releasing said shoulders or ledges from engagement with said springs, substantially as described.

4. The combination, with the bulb and looped terminal wires thereof, of the holder and the spring-jaws, carrying pins upon which the loops of said terminal wires are hung, being held thereon by the closing of said jaws, substantially as described.

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

ALFRED SWAN.

Witnesses:

ROBERT SPENCE WATSON,  
*Solicitor, Newcastle-on-Tyne.*

JAMES MASON LATHAEN,  
*Clerk to Messrs. Watson & Dendy,  
Solicitors, Newcastle-upon-Tyne.*