H. D. CURRIER.

SWITCHBOARD LAMP.

APPLICATION FILED SEPT. 11, 1913.

1,244,475. Patented Oct. 30, 1917.

Fig. 1.

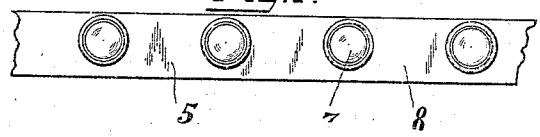


Fig. 2.

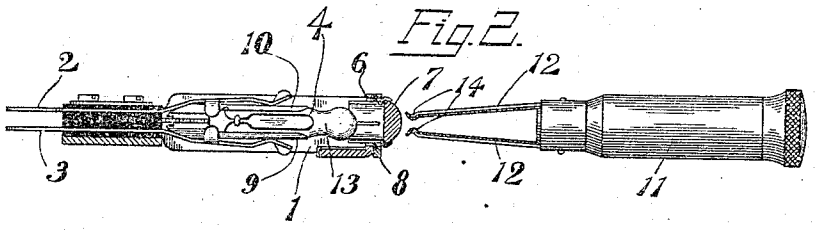


Fig. 3.

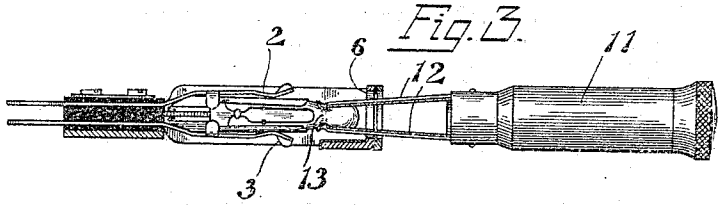
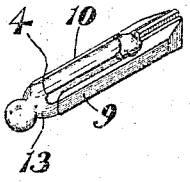


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

HIRAM D. CURRIER, OF CHICAGO, ILLINOIS, ASSIGNOR TO KELLOGG SWITCHBOARD & SUPPLY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

SWITCHBOARD-LAMP.

1,244,475. Specification of Letters Patent. Patented Oct. 30, 1917.

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To all whom it may concern:

Be it known that I, HIRAM D. CURRIER, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Switchboard-Lamps, of which the following is a specification.

My invention relates to switchboard lamps, by which I mean lamps in general which are small in size and are adapted to be mounted within small confined spaces. Lamps of this character are used to a large extent for telephone switchboards where these lamps are mounted in banks, the banks being constructed to form suitable lamp jacks consisting of springs between which the lamp is held. A suitable opening in front of the lamp is provided with the opal or crystal through which the light emanates, which crystal or opal may be removed to expose the lamp. The lamps, of course, must be frequently withdrawn as they burn out and it has hitherto been extremely difficult to remove these lamps satisfactorily, and it has always been a serious difficulty to prevent short circuiting the springs of the lamp jack during the removal operation of the lamp. My invention contemplates means whereby the lamp is so constructed that short circuiting of the circuit is prevented and also provides means whereby the insertion or removal of the lamp is greatly facilitated.

I will explain one form of lamp constructed in accordance with my invention more in detail by referring to the accompanying drawing in which:—

Figure 1 is a front view of a bank of lamps constructed in accordance with my invention;

Fig. 2 is a transverse sectional view of the bank, the tool for withdrawing the lamp being also shown;

Fig. 3 is a similar view with the tool shown in position to extract the lamp; and

Fig. 4 is a detail view of the lamp.

The lamp bank consists preferably of a framework 1, upon whose left hand extremity suitable lamp supporting springs 2 and 3 are insulatingly mounted, being adapted to hold lamps 4. A plurality of these lamp jacks are arranged preferably side by side to form the bank 5, as shown in Fig. 1. The lamp bank structure has openings 6 in front of each lamp, through which the lamp may be inserted or withdrawn whenever an opal 7 is removed. A plate 8 carries the opals or crystals 7, which are held in position in front of each lamp. My improved lamp 4 has on its opposite sides contact strips 9 and 10, through the agency of which contact is made with the springs 2 and 3. The tool 11 which is ordinarily used to extract lamps, has spring prongs 12—12 projecting therefrom adapted to grasp the lamp between them. These prongs if inserted too far will, as is readily apparent, touch the conducting plates 9 and 10, thus tending to short circuit the springs 2 and 3 which is objectionable. In order to obviate this, and in order to provide a lamp structure which can be easily grasped by the prongs 12, so that it can be readily removed I arrange the lamp with an annular groove 13 near its outer extremity, which groove serves to form a stop for the bent extremities 14 of the prongs 12. As will be seen more clearly from Fig. 3, when the tool 11 is inserted the groove 13 will catch the prongs 14 and prevent them from being moved farther inwardly, thus to prevent these prongs from short circuiting the conducting plates 9 and 10. This groove 13 at the same time forms a very strong and efficient grasping structure whereby the lamp can be removed after the bent extremities 14 of the prongs 12 are in place, as shown in Fig. 3. It will be readily seen that this particular structure of the lamp shell permits the ready removal of the lamp, even though the lamp is tightly grasped between the springs 2 and 3.

While I have illustrated and described my invention in connection with one specific embodiment of the same, yet I do not wish to be limited to this specific structure as it is apparent many changes may readily suggest themselves. Therefore I desire to cover all such changes as come within the spirit and scope of the appended claims.

Having, however, thus described one form which my invention may take what I claim is new and desire to secure by Letters Patent is:

A lamp of the character described including a cylindrical elongated bulb, a pair of contact strips mounted diametrically opposite each other partially inclosing said bulb and forming the terminals of the lamp, an annular groove near one extremity of said

elongated bulb, said groove being positioned to receive the extended rounded fingers of a removing implement whereby the lamp may be readily inserted into or removed from its switch socket, said groove also preventing the fingers of the removing implement from engaging with and short-circuiting the said contact strips.

Signed by me at Chicago, county of Cook and State of Illinois, in the presence of two witnesses.

HIRAM D. CURRIER.

Witnesses:
GEORGE E. MUELLER,
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