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MOUNTING AND RETAINING MEANS FOR ELECTRICAL UNITS

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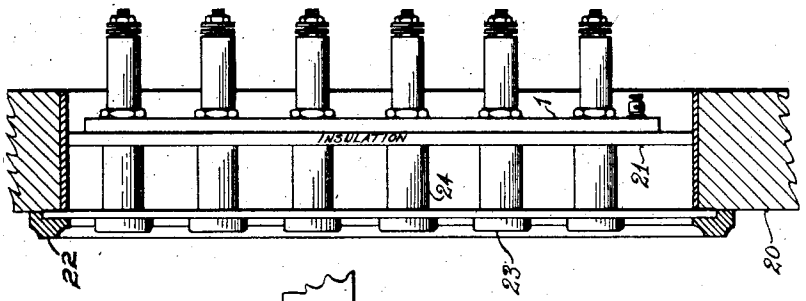


Fig. 3.

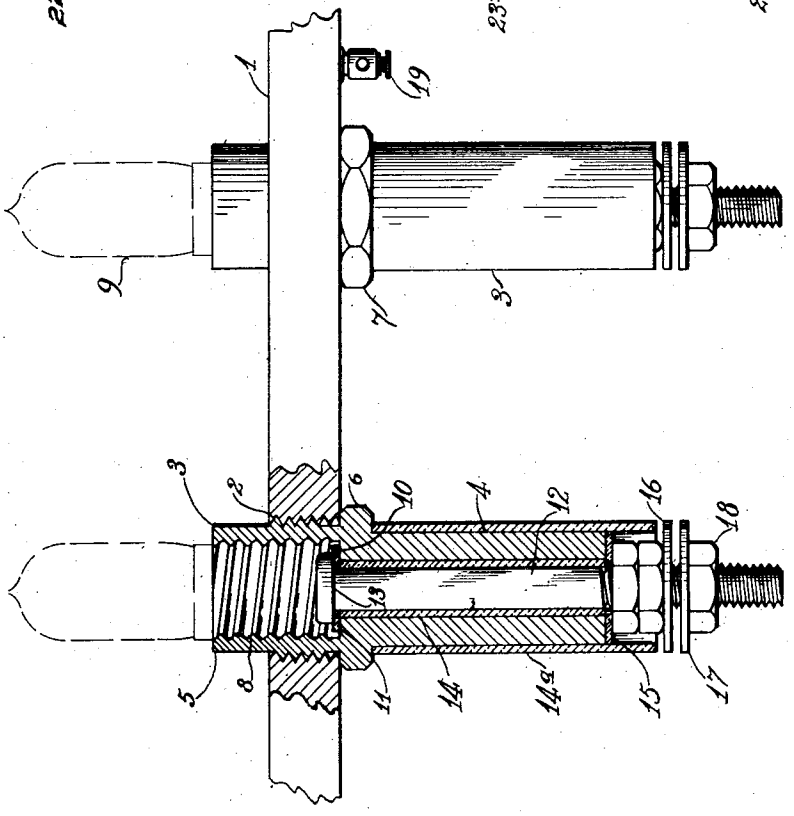


Fig. 1.

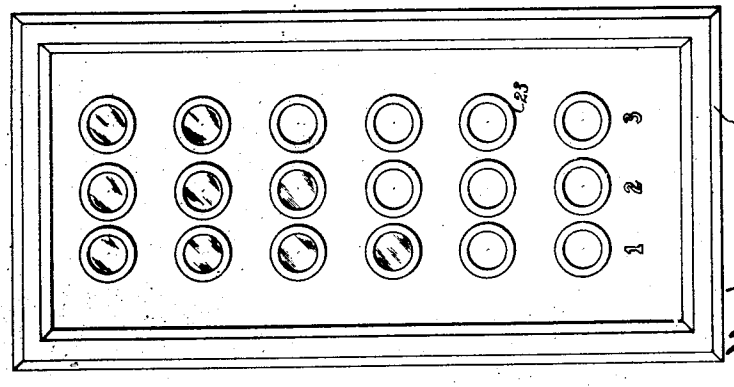


Fig. 2.

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UNITED STATES PATENT OFFICE.

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MOUNTING AND RETAINING MEANS FOR ELECTRICAL UNITS.

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This invention has for its primary object the provision of improved means for mounting electrical resistance or conducting units, such as electric flashlight bulbs; and more particularly the provision of retaining means for such units to make it possible to install same in group formation in a suitable panel, such as a signal board; and to remove each unit separately, including the retaining means therefor, from the rear side of such panel.

A further object of the invention is to provide in this connection a retaining means or socket for such a unit, which is of such a construction that it can be removed only from the rear of the mounting panel.

Such a construction has many obvious advantages, one of which lies in the fact that it thereby becomes impossible for any person other than the proper attendant to tamper with the socket or the electrical connections thereto, inasmuch as such socket and the leads thereto will be accessible only from the rear side of the mounting panel, access to which is ordinarily barred to all but the proper supervisor.

Another obvious advantage lies in the opportunity thus afforded the attendant to inspect and repair such sockets and connections without disturbing or interrupting the normal function or operation of the signal board.

Signal boards of the type to which my invention is particularly adapted are commonly employed in office buildings for signaling the various elevators and the positions thereof. My invention, however, is not to be considered as confined to such adaptation; for obviously other uses and applications of the novel construction disclosed herein will occur to persons skilled in the art, and are intended to come within the scope of this invention.

Referring to the drawings, wherein is illustrated my preferred construction,

Figure 1 shows a pair of my novel retainers or sockets mounted in a signal panel.

Fig. 2 shows a front elevation of a typical signal panel to which my novel apparatus is applicable.

Fig. 3 is a section thru a wall in which the panel of Fig. 2 is mounted.

Referring to Fig. 1, the reference character 1 designates a feed bar or plate constructed of a suitable conducting material, such as brass, this plate having openings preferably drilled and threaded therein at the desired points, as shown for example at 2.

Into the openings thus provided are threaded the retainers or sockets of my novel construction, one of which sockets is shown in section in Fig. 1 and designated generally by numeral 3. This socket is substantially cylindrical in formation, and comprises a long cylindrical shank 4 extending over half the entire length of the socket, on the lower end, and another cylindrical shank 5 on the upper end, the upper shank being of a slightly larger diameter, both internally and externally; the two shank portions 4 and 5 being integrally united to a flanged portion 6 at the point where the internal diameter changes, as shown clearly in Fig. 1.

The flanged portion 6 is preferably flattened at its outer surface, as shown best at 7, to provide a gripping means for permitting removal an insertion in the plate 1.

The upper shank 5 of the socket is preferably threaded to conform to the threaded opening 2, in the manner shown. The upper shank 5 is also preferably threaded internally the entire distance, as shown at 8, to allow insertion of the threaded portion of the flashlight bulb or other unit to be placed therein, as suggested in phantom lines at 9.

Before inserting the socket 3 in plate 1, a fibrous washer 10, or other non-conducting annular disk, is placed in the upper portion 5 of the socket so as to rest on the lower circular ledge formed at 11, the point where the internal bore of the socket changes. A conducting member 12 of brass or other conducting material is then inserted in the socket. This central member 12 has a head 13 for contact with the conducting knob of the bulb shank 9 or other unit to be inserted; head 13 being insulated from the socket by means of washer 10, and the shank of the central member being insulated from the socket by the insertion of fibrous sleeve 14. Another fibrous sleeve 14^a is preferably placed around the lower shank 4, as shown.

The lower-end of central member 12 is preferably threaded to allow placement thereon of two nuts as shown, one serving to lock the other, and both serving to hold the parts in place. These nuts are insulated from socket 3 by the provision of suitable

non-conducting material, such as fibrous washer 15.

Any suitable means may be provided for attaching a conducting wire to convey current to the bulb or other unit placed in socket 3, but I prefer to provide for this purpose a pair of metallic washers 16 and 17 between which the conductor may be inserted, and the whole firmly secured by a nut 18.

The return circuit is preferably through the socket 3 and plate 1, so that it will be necessary to provide for only one conductor to each unit, with a return terminal secured to feed plate 1, as indicated at 19.

Thus it will be apparent that the path of the current to the bulb 9 or other electrical unit will be as follows: From the conductor fixed between washers 16 and 17 through central member 12 and head 13 to the usual insulated terminal at the lower end of the bulb shank (not shown), thence after passing thru the filament or other conductors in the bulb, back thru socket 3 and feed plate 1 to terminal post 19, to which will be secured the conductor leading to the other side of the source of current.

Feed plate 1 is insulated from wall 20 by means of suitable supporting panel of non-conducting material, as shown at 21 in Fig. 3.

In cases where flashlight signals are employed, the light from the individual signals may be confined to illuminate corresponding jewels, so-called, in an enclosing panel, as indicated in Figs. 2 and 3, where the enclosing panel is shown at 22, the jewels at 23, and the sleeves placed around the flashlights at 24. The effect of this arrangement is to cause the light from each signal to be concentrated at the corresponding spot 23 on the outer panel.

When it is desired for any reason to remove any light or its retainer, all that is necessary is to unscrew the same from the feed plate, thereby removing the entire unit bodily.

Modifications may be made in the construction and arrangement of the parts within the scope of this invention as disclosed herein and as defined in the appended claim.

I claim:

In combination with a current conducting socket, a mounting plate having a threaded opening therein for the insertion of said socket, said socket comprising an outer cylindrical member threaded internally and externally and having a flanged portion abutting one side of said mounting plate, the externally threaded portion of said outer member engaging the threaded opening in said plate and extending thru said plate, the internal thread serving as a retaining means for an electrical resistance unit, a central member insulated from said outer member, and means to convey current thru said central member to said resistance unit, said outer member and said plate forming the return circuit from said unit.

Signed at Hoboken, New Jersey, this 18th day of March, 1926.

CYRUS W. BASSETT.