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LAMP SOCKET

Filed Jan. 9, 1924

Fig. 1.

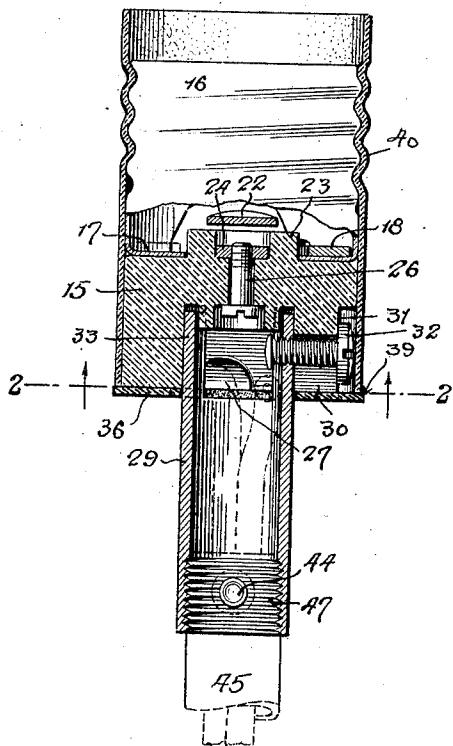


Fig. 2.

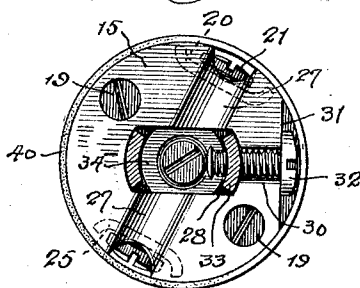


Fig. 3.

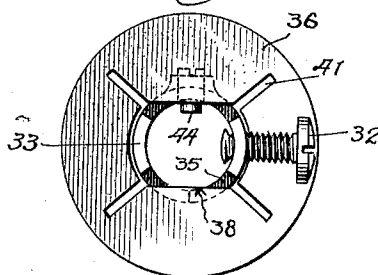


Fig. 4.

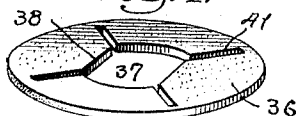


Fig. 5.

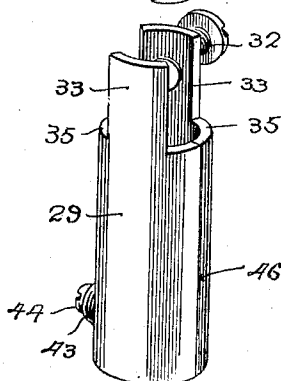
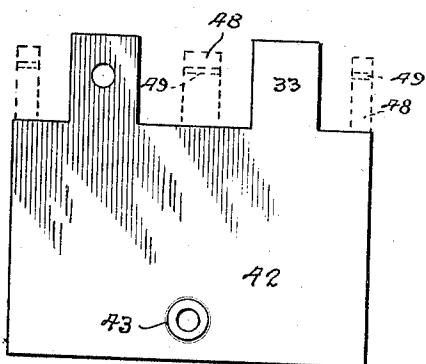


Fig. 6.



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LAMP SOCKET

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Our invention relates to lamp sockets, and particularly to devices of the candle socket type. Among the objects of our invention are (1) to provide a socket of simple and inexpensive construction, having an associated readily detachable support which facilitates the wiring and mounting of the socket; (2) to provide for the screw shell of the socket a removable insulating jacket and a readily detachable abutment therefor which may be discarded when the jacket is not used; (3) to improve the socket construction in various details which will be clear from the accompanying drawings, in which

Fig. 1 is a vertical section through a socket structure in which our invention is embodied in one form;

Fig. 2 is an inverted section on the line 2—2, Fig. 1;

Fig. 3 is a section on the line 2—2, Fig. 1, but looking in the opposite direction;

Fig. 4 is a perspective of the removable abutment washer detached;

Fig. 5 is a perspective of the supporting nipple detached; and

Fig. 6 is a plan view of the sheet metal blank from which the nipple is formed.

The invention, in the embodiment thereof illustrated, comprises an insulating base 15, preferably in the form of a one-piece porcelain button. Mounted at one end of the button is the usual screw shell receptacle contact 16, the base flange 17 of which rests upon the button and is secured thereto by the overlying yoke 18 engaged by securing screws 19 which pass through the button. An integral wire terminal lug 20 offset from the yoke enters a lateral recess in the button to accommodate the wire and binding screw 21. The center contact 22, located between barrier ribs 23, is arranged centrally within the screw shell, while its base 24 is integral with an offset terminal lug 25 which lies in a lateral channel in the button 15 diametrically opposite the channel provided for the reception of the screw shell terminal lug 20. The center contact is clamped to the insulating body by the screw 26 piercing the button 15.

The two lateral wire terminal channels communicate with transverse wire receiving

channels 27 which are formed in the lower face of the body 15 and lead to a central well 28 let into this face of the body for the accommodation of the lead wires and the attaching end of a support 29.

Another and deeper channel 30 leads from the well 28 to a lateral flat 31 against which bears the head of a clamping screw 32, the stem of which passes through the channel 30 and engages one of the lugs 33 of the support 29 to clamp the latter to the base.

It is to be noted that the well 28 and the flat 31 afford surfaces which extend parallel with the socket axis and through which the transverse channel 30 opens. The channel is also open at its lower end. These surfaces are for engagement with the attaching ends of the support 29, the head of screw 32 engaging the flat surface 31, and the lug 33, through which the screw is threaded, engaging the surface of well 28. Threading of the screw into lug 32 draws the head of the screw and the lug firmly against these engaging surfaces.

In the form here shown the support 29 is an elongated tubular nipple, one end being cut away to form a pair of lugs 33, one of which is tapped to receive the clamping screw 32. In assembled position the lugs 33 enter the well 28. It is obvious that upon setting up the screw 32, the rugged side wall of the base through which the channel 30 is formed, is firmly clamped between the head of the screw and the lug 33 engaged thereby. The socket body and support are thus firmly united.

The wire channels 27 are so located that they open to the well 28 at points between the adjacent side margins of the lugs 33, the gaps between the lugs being of sufficient extent to afford ample clearance for the passage of the wires from the well 28 to the channels 27 leading to the wire terminals. In order to insulate the center contact securing screw 26 from the wires and lugs 33, a collar 34 is formed in the base surrounding the seat for the head of the screw 26. Preferably, the latter is further insulated by waxing (not shown).

Resting on the shoulders 35 of the sup-

port 29 formed by the cutting away of the latter to provide the lugs 33, is a washer 36, which may be of insulation, such as paper or fiber. The washer is centrally apertured at 37 to permit the free passage of the wire cable and lugs 33 therethrough into the well 28, but the aperture is non-circular and its opposite inner margins 38 overlie and rest upon the shoulders 35. The over-all diameter of the washer is slightly greater than that of the base 15, so that its outer margin provides an annular shoulder 39 for the support of the usual insulating jacket 40 for the screw shell 16. Slots 41 are preferably cut in the washer, so that the latter may be readily sprung over the clamping screw 32 and discarded when the jacket 40 is not used—for example, when the encasing candle (not shown) has an internal diameter too small to accommodate the jacket and washer.

While the support 29 in the form here shown may be formed from tubular stock, we prefer to shape it from a sheet metal blank such as 42 (Fig. 6) which may be readily pressed to shape. A boss 43 is preferably formed up from the metal of the blank and tapped to receive the set screw 44 by which the support is fixed in position on the wire conduit 45. By locating the set screw 44 diametrically opposite the meeting edges 46 of the formed blank, the setting up of the screw 44 against the wire conduit has a tendency to spread the tube and thus causes the threads 47 thereof to bind those of the conduit with exceptional effectiveness.

To wire the socket, the jacket 40 (if it is to be used) is lifted to expose the clamping screw 32, and the latter turned out to free the support from the socket body. The nipple, with washer 36 attached (if the washer is to be retained) is then passed over the lead wires and screwed upon the wire conduit, the set screw 44 being turned down to fix the support in position. No objectionable twisting of the wires is possible during this adjustment of the support on the wire conduit.

After the support has been thus secured in position the wires are separated and bent in opposite directions through the passageways afforded between the lugs 33. The ends of the wires are preferably now stripped and trimmed to proper length, this operation being conveniently accomplished since the socket body is not in the way.

The support and wires having been thus secured and prepared for the reception of the socket body, the latter is again placed upon the support and the clamping screw 32 turned down to hold the parts firmly together. The bared ends of the wires are attached to the binding screws, and the jacket 40 (if used) screwed down upon the washer 36, thus housing-in the wires and terminals.

If the candle tube which surrounds the socket in the completed installation, is of

such slight internal diameter that the jacket 40 and washer 36 must be discarded, the wiring operation is the same, except that the jacket 40 instead of being merely lifted to expose the clamping screw 32, is drawn off the shell 16 and thrown away; while the washer 36, after the support has been detached from the socket, is sprung over the screw 32 and similarly thrown away. It is customary to supply both the jacket and the flexible washer with the socket, but it will be readily understood that they are not necessary to the proper mounting and wiring of the socket. When they are discarded, and a close fitting candle tube is used for the installation, the tube should be of insulation, or at least lined with insulation.

Since the main function of the washer 36 is to form an abutment for the jacket 40, although it has a further value, when used, of housing-in the conductors at the supported end of the socket, it is readily possible to provide a jacket abutment in other ways. Thus, lugs 48 (Fig. 6) may be formed on the blank between the lugs 33, and bent outward to extend slightly beyond the periphery of the socket body to form such an abutment. To remove the projecting ends of the lugs when desired, it is possible either to bend them down out of obstructing position, or to break off their ends, the lugs being notched or cross channelled at 49 for this purpose.

Various modifications in details will readily occur to those skilled in the art, which do not depart from what we claim as our invention.

We claim—

1. An electric lamp socket, having a base recessed at one end to form a well and a transverse channel leading therefrom, in combination with a support adapted to enter said well, and a clamping screw carried by the support and adapted to laterally enter said channel.

2. An electric lamp socket comprising an insulating base, a screw shell socket contact at one end thereof, an insulating jacket surrounding said shell and base, a support having projecting lugs secured to the opposite end of the base, together with a washer resting on the support adjacent said lugs and projecting beyond the periphery of the socket to afford an end abutment for the insulating jacket.

3. An electric lamp socket having an insulating base recessed at one end within its margins to receive a support, wire channels extending from said recess to the side margin of the base, a lateral seat on the base, a channel extending from said recess to said seat for the reception of a lateral clamping screw, the head of which rests against said seat and the shank of which passes through said channel into engagement with the support to detachably clamp the latter to the socket base.

4. An electric lamp socket having an in-

5 sulating base recessed within its margins to receive a support, a barrier within said recess to space said support from a current-carrying element, a wire channel extending from said recess to the margin of the base, a seat on the side of the base, and a channel extending from said recess to said seat for the accommodation of a lateral clamping screw.

10 5. An electric lamp socket comprising an insulating base recessed at one end to form a central well, and a channel leading therefrom to the side of the base, a socket support comprising a lug adapted to enter said well, and means accommodated in said channel
15 and extending from said lug to the side of the base to detachably clamp the base to the support.

20 6. An electric lamp socket comprising an insulating button recessed on one face to form a central well, and a channel leading therefrom toward the periphery of the button, in combination with a readily detachable support having a lug adapted to enter said well, and a clamping screw engaging said lug and
25 lying in said channel, the head of said screw engaging the button at the peripheral end of said channel and serving, on the setting up of the screw, to clamp the lug of the support to the button.

30 In testimony whereof we have signed our names to this specification.

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