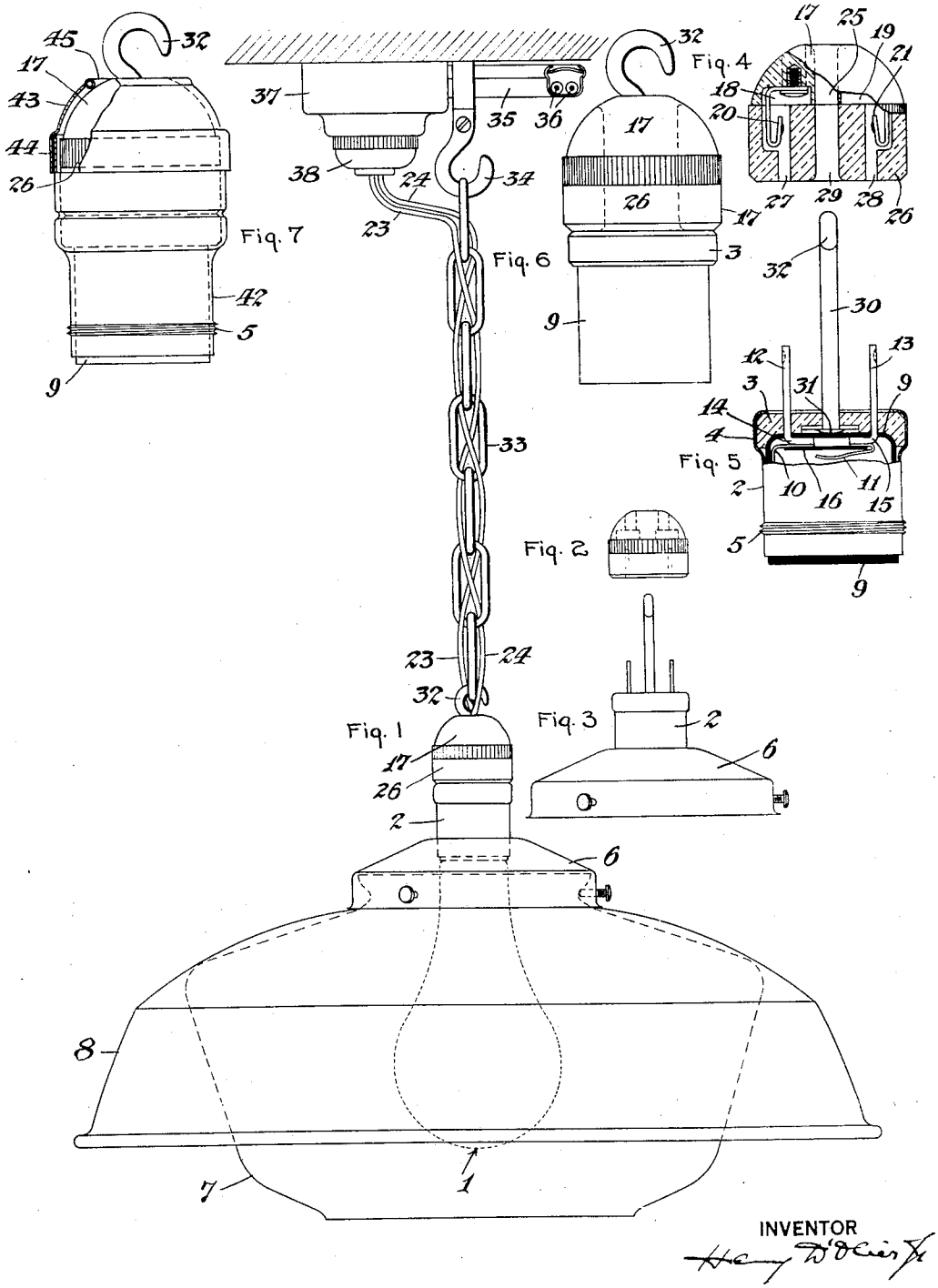
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ELECTRIC CONNECTER SOCKET

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ELECTRIC CONNECTER SOCKET.

Application filed December 14, 1925. Serial No. 75,165.

This invention relates to electrical sockets, and more particularly to connecter sockets, this expression being used generically as a designation for sockets adapted to receive lamps and many other articles of the various types for which such sockets are used in electrical circuits.

There is a present tendency to increase the size of individual incandescent electrical lamps, with an attendant increase in weight of the lighting unit, comprising the lamp, its shade and fittings, so that a heavy suspended unit of this character can no longer depend with safety for its support on the insulated conductors which have sufficed for the lighter units.

These larger units also require greater care, and could be more readily cleaned and otherwise handled were they readily detachable, with their sockets, from their supports, and also from the electrical conductors associated therewith.

Existing lamp sockets of the conventional type are not constructed, however, to permit ready detachment from their mechanical and electrical connections, and a wide variety of auxiliary sockets or adapters have been devised to screw into lamp sockets, and serve to permit almost every kind of household appliance to be used with the existing lamp sockets.

These adapters are useful in their proper field, but do not meet the need for a socket by which a lighting unit may be suspended from a primary support with sufficient mechanical strength, yet readily detachable from its mechanical and electrical connections; and an important object of the present invention is to provide a lamp socket corresponding closely in general appearance and structure with the conventional socket, but adapted for ready disconnection, with the lamp and its shade and other fittings constituting a lighting unit, from the electrical conductors and from the suspending means, whatever the character of the latter may be, as for example, a chain with which the conductors may be associated.

In pursuance of this object, and other important objects of the invention, which are duly illustrated and described herein, I have devised a novel socket having preferably a threaded receptacle of substantially the usual form to receive a lamp or similar article to be screwed therein, and having the usual, or suitable, electrical contact terminals to co-operate with those on the base of a lamp, or corresponding article, my improved socket being provided also with auxiliary electrical contact terminals adapted to co-operate with appropriate contact terminals on a connecter-member connected with the electrical conductors from which the socket derives its supply of current.

In accordance with the invention, the socket is provided also with a mechanical connection, such as a hook, by means of which it may be hung upon a supporting chain, or with some other readily connectible and disconnectible mechanical device, to permit its support in desired position, the mechanical and electrical connections being preferably so positioned relatively to each other that when the lighting unit is removed by unhooking the socket from its supporting chain, or is otherwise disconnected from its support, the user can effect the electrical disconnection by simply pulling the socket away from the terminal of the connecter member.

Conversely, the connections may be effected by "plugging in" the electrical connections and hooking the unit on its chain, in a manner easily understood by the average user, and not requiring the services of an electrician.

A further object of the invention is to provide the improved socket with such a removable connecter member, these two parts constituting a unitary structure which can be sold to the user as a complete article of manufacture, and can be installed without special tools, involving no risk in the installation, as the connecter-member can be removed from the socket and connected to the supply conductors first, and is then ready to have the socket terminals plugged in, in the usual manner.

Among other objects of the invention are the provision of such co-operating socket members with a metal jacket of substantially the standard type, or any suitable form, so that the completed structure presents the well-known appearance of existing sockets, and may be used as such, with the additional advantages of operation characteristic of my improved structure.

When the term "socket" or "electric connecter socket" is used herein, an electric lamp or light bulb holder is referred to.

Structure shown herein is also shown in my co-pending application Serial Number 117,898, filed June 23, 1926.

The various features of the invention are illustrated and described in the accompanying drawings and specification and are pointed out in the claims.

In the drawings,

Figure 1 is a view in elevation of a suspended lighting unit with a connecter socket in the construction of which the invention has been embodied.

Figs. 2 and 3 show respectively the members of the connecter ready for installation, the socket being illustrated with a shade-holder fitted thereto.

Fig. 4 is a sectional view on larger scale of the connecter member shown in Fig. 2.

Fig. 5 is a similar view of the socket member shown in Figure 3.

Fig. 6 is a view in elevation of the connecter as a whole, with the parts assembled, without a shade-holder, and without the metal socket casing.

Fig. 7 is a similar view of a standard metal keyless socket casing with the parts shown in Fig. 6 enclosed therein.

In the illustrated embodiment, the part designated by the reference numeral 1 is an incandescent electric lamp screwed into a socket 2 which comprises a base 3 (see Fig. 5) preferably of bakelite or other insulating material of great tensile strength, surrounded by a metal jacket 4, preferably integral with the body 2, which is shown as provided with a thread 5 for attachment of a metal shade-holder 6 to support a glass or other suitable globe 7 and reflector or shade 8.

At 9 is shown a petticoat of insulating material, enclosing contact terminals 10 and 11 which are adapted to be engaged disconnectibly with the appropriately placed terminals on the base of the lamp 1, the latter terminals being preferably of the conventional form (not shown), so that the socket is adapted to have the lamp 1 or any suitable article screwed therein, forming the usual electrical circuit connections.

In pursuance of the invention, the socket is provided with auxiliary metal contact terminals 12 and 13 having bent-over portions 14 and 15 soldered to, or otherwise suitably connected electrically with, the inner contact terminals 10 and 11, these auxiliary contact terminals 12 and 13 being supported by the insulating base 3 through which they extend in substantial parallelism with the longitudinal axis of the socket, being insulated from each other by the base 3 and also by the insulating petticoat or lining 9 and preferably by a disc 16 of insulating material, the insulating means being suitably held in place by rivets or devices, not shown.

The auxiliary contact terminals 12 and 13 are adapted to receive an auxiliary contact member 17 of insulating material, of any suitable form, and shown in the instance illustrated as a receptacle member having recesses 18 and 19 in which are provided contact terminals 20 and 21 held in place by screws 22 which serve also for effecting electrical connection of the conductors 23 and 24 shown in Fig. 1.

To facilitate the introduction and connection of these conductors, the auxiliary member 17 is shown as having an axial aperture 25 and this member may conveniently have an extension 26, also of insulating material with central opening 29 in continuation of the opening 25, and recesses 27 and 28 into which the contact terminals 20 and 21 extend and into which the contact terminals 12 and 13 project through the lower openings of the recesses 27 and 28 when the parts are assembled. The parts 17 and 26 are suitably fastened together by screws or other means not shown.

In further pursuance of the invention, means are provided for mechanical connection of the connecter members and for support of the socket as a whole, with the shade-holder 6, globe 7 and reflector 8, by means which can be readily connected and disconnected from the primary support of the lighting unit, and in such manner that the unit does not depend for its support on the electrical conductors 23 and 24.

As one convenient form of construction for this purpose I have shown in Figs. 1 to 7 a post 30 passing through the central portion of the insulating base 3 and having a retaining head 31, the free end of the post having a hook 32 adapted to be hooked easily and removably upon a chain 33 such as that shown in Fig. 1.

This post is of sufficient length to extend up through the axial opening 25, with the hook presented above the part 17 as shown clearly in Figs. 1, 6 and 7.

The lighting unit may be suspended from any suitable primary support, and in the instance illustrated in Fig. 1 the chain 33 is carried by a hook or hanger 34 mounted on a conduit 35 which encloses supply conductors 36 running to an outlet box 37 having a conventional plug 38 connected with the conductors 23 and 24.

When thus assembled, the lighting unit is supported, without any strain on the conductors 23 and 24, by the chain 33 and hook 32, and when it is desired to remove the unit for cleaning, inspection or replacement of any of its parts, it is only necessary for the user to unhook the hook 32 and pull downward on the socket member 2, when the post 30 and its hook 32 will pass out through the axial openings 25 and 29, leaving the mem-

ber 17 in place upon the conductors 23 and 24, ready for reassembly by a reversal of the operation.

In Fig. 7 I have shown the connecter parts of Fig. 6 enclosed by a standard lamp socket casing 42, as for example a brass shell, and I have provided a cap member 43, fitted removably at 44 upon the shell, and having an opening 45 to permit the hook 32 to extend into position for use as already described.

The cap 43 may be readily removed to give access to the connecter member 17, and the latter may then be removed to permit connection or disconnection of the electrical conductors 23 and 24, the operation of the device being as already set forth. The device, when assembled, is closely similar to the conventional lamp socket, but has the desirable mechanical strength combined with ready detachability already noted.

Having described my invention, I claim:

1. An electrical socket device for use with suspension means, and an electrical connecter provided with contacts and with a passage, associated therewith, said socket device including a body having plugging electrical contacts at one end for engagement with the contacts of the connecter, a hanger secured to and projecting from said body at said end thereof and adapted to project through the said passage and formed to be readily connectible to and disconnectible from the suspension means, and means at the opposite end of the body to support an electric light bulb.

2. An electrical socket device for use with suspension means, and an electrical connecter provided with contacts and with a passage, associated therewith, said socket device including a body having plugging electrical contacts at one end for engagement with the contacts of the connecter, a hanger secured to and projecting from said body at said end thereof and having a hook adapted to freely project through the said passage in said connecter so as to have hooking engagement with the suspension means, and means at the opposite end of the body to support an electric light bulb.

3. An electrical socket device for use with suspension means, and an electrical connecter provided with contacts and with a passage, associated therewith, said socket device including a body having plugging electrical contacts at one end for engagement with the contacts of the connecter, means secured to said body at said end thereof and adapted to project through the said passage and beyond the connecter and including a hook-like member projecting from said body and formed to be readily connectible to and disconnectible from the suspension means, and means at the opposite end of the body to support an electric light bulb.

4. In an electrical socket device for use with suspension means, an electrical connecter composed of a body provided with contacts and with an axial passage and a second body having plugging electrical contacts at one end for engagement with the contacts of the connecter, means secured to said body at said end thereof and adapted to project through the said passage and beyond the connecter and including a hook-like member projecting from said body and formed to be readily connectible to and disconnectible from the suspension means, and means at the opposite end of the body to support an electric light bulb.

In testimony whereof, I have signed this specification.

HENRY D'OLIER, JR.