May 5, 1925. 1,536,522

L. P. PELLEGREN

EXTENSION PLUG FOR ELECTRIC SOCKETS

Filed Oct. 17, 1922

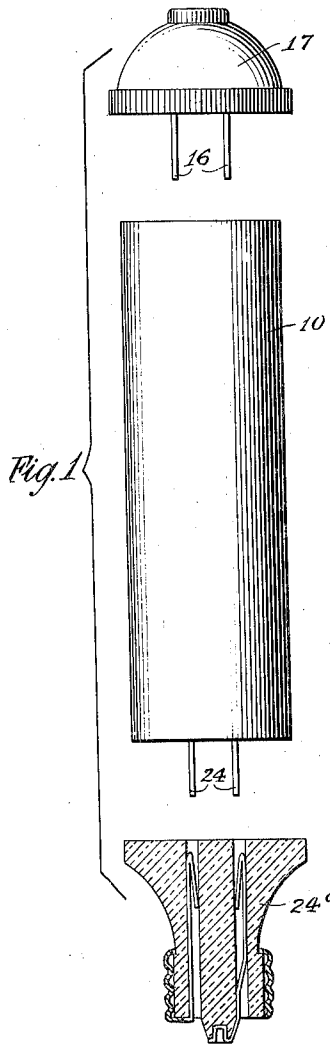
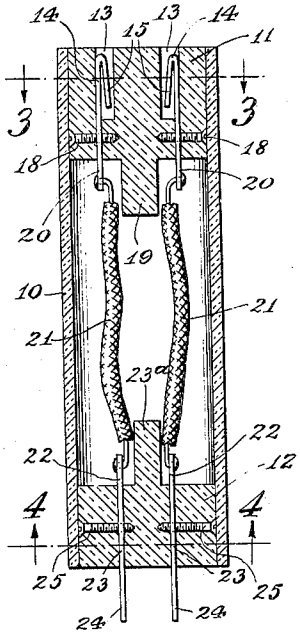


Fig. 1

Fig. 2



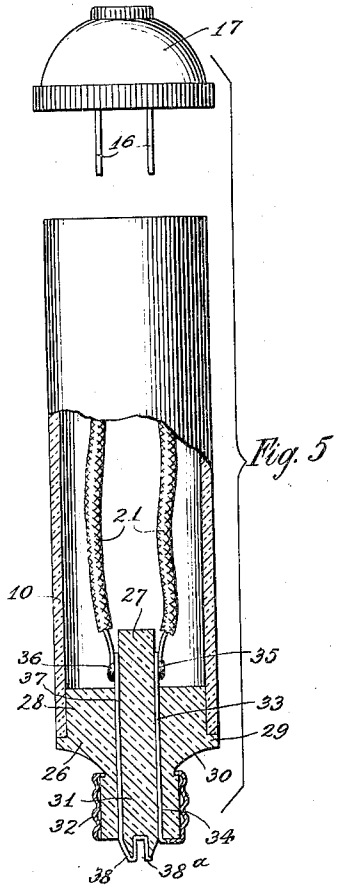


Fig. 5

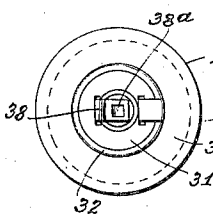


Fig. 6

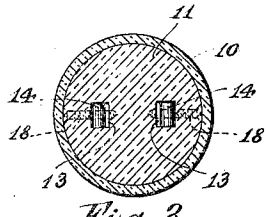


Fig. 3

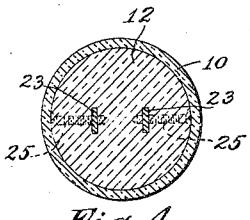


Fig. 4

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UNITED STATES PATENT OFFICE.

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EXTENSION PLUG FOR ELECTRIC SOCKETS.

Application filed October 17, 1922. Serial No. 595,071.

To all whom it may concern:

Be it known that I, LOUIS P. PELLEGREN, a citizen of the United States, and a resident of Torrington, county of Litchfield, and State of Connecticut, have invented certain new and useful Improvements in Extension Plugs for Electric Sockets, of which the following is a specification.

This invention relates to electric socket plugs, and more particularly to an extension member adapted to connect the male and female parts of the ordinary separable electric attachment plug.

One object of the present invention is to provide a device of the above nature which will be simple, cheap to manufacture, easy to manipulate, and very efficient and durable in use.

With this and other objects in view, there have been illustrated on the accompanying drawings, two forms in which the invention may be conveniently embodied in practice.

Fig. 1 represents a side view of a tubular extension member embodying the invention, shown arranged between the male and female parts of an ordinary standard form of separable plug.

Fig. 2 is a longitudinal sectional view of the extension member shown in Fig. 1.

Fig. 3 is a transverse sectional view of the extension member shown in Figs. 1 and 2, taken along the line 3—3 of Fig. 2, looking in the direction of the arrows.

Fig. 4 is a transverse sectional view of the extension member shown in Figs. 1 and 2, taken along the line 4—4 of Fig. 2, looking in the direction of the arrows.

Fig. 5 is a side view, partly in section, of a modified form of the invention.

Fig. 6 is a bottom view of the modified form of invention shown in Fig. 5.

In the use of the former type of electric separable attachment plug, it is often difficult for the operator to insert the plug in the socket. For example, when it was desired to insert such a plug in the ordinary lamp socket having a narrow shade it was usually necessary to first remove the shade.

The present invention avoids the above and other disadvantages by the use of a narrow extension tube adapted to fit between the male and female sections of the ordinary electric attachment plug, whereby the plug will be lengthened to such an extent that it can be easily inserted through the lamp shade or other obstructing objects without difficulty.

Reference will now be had to the drawings in which like reference numerals denote corresponding parts throughout the several views.

Referring now to the first embodiment of the invention illustrated in Figs. 1–4, the numeral 10 designates a tubular casing constructed of insulating material such as hard rubber or the like. The casing 10 has fitted into the ends thereof, a pair of upper and lower cylindrical plugs 11 and 12 respectively. The plugs 11 and 12 are preferably held in place within the ends of the tube 10, by friction, although other securing means may be employed if desired. The plugs 11 and 12 may be constructed of any suitable insulating material, but are preferably made of hard rubber, bakelite, or porcelain.

The upper plug 11 is provided in its outer face with a pair of longitudinal recesses 13 adapted to receive a pair of contact strips 14. The outer portions of the contact strips 14 are bent downwardly upon themselves to form spring members 15 which, together with the sides of the slots 13 are adapted to engage the contacts 16 projecting outwardly from a male member 17. The resilient contact strips 14 are secured in place by means of set-screws 18.

The upper plug 11 is provided on its lower face with a downwardly projecting separating portion 19 adapted to insulate a binding terminal 20 and wire 21 on one side of the plug 11 from a corresponding terminal 20 and wire 21 on the other side of said plug. The wires 21 are secured to the terminals 20 in any suitable manner, preferably by soldering, and may also be covered, if desired, with insulation. The wires 21 extend downwardly through the tubular casing 10 and are secured at their lower ends, as by soldering, to the upper terminals 22 of a pair of metal strips 23 passing through the lower plug 12. The lower plug 12 is provided on its inner face with an upwardly projecting portion 23^a adapted to insulate the terminal 22 and wire 21 on one side of the plug 12 from the corresponding terminal 22 and wire 21 on the other side of said plug.

The strips 23 pass entirely through the plug 12 and extend out at the bottom thereof at 24. The strips 23 are secured to the plug 12 by suitable set screws 25 similar to the

set screws 18 previously mentioned. The projecting portions 24 of the lower strips 23 are adapted to fit within slots of the lower or female member 24ª of the plug, said slots being similar to the slots 13 of the upper plug 11.

In the operation of this form of the invention, when it is desired to connect an electric cord to a live socket which is located in an awkward or inaccessible position, it will only be necessary to select an extension tube of the desired length and insert it in position between the male and female members 17 and 24ª. The lengthened may then be readily pushed into the socket and screwed into position.

Reference will now be had to the modified form of the invention illustrated in Figs. 5 and 6. In this form, the tubular casing 10, the upper plug 11, and the male member 17 are identical with the corresponding parts of the first form, shown in Figs. 1 to 4. The female member 24ª, and the lower plug 12, however, are omitted, and their places are taken by a plug 26. The plug 26 is provided with an upper projection 27 similar to the projection 23ª of the first illustrated embodiment. The plug 26 is provided with a cylindrical portion 28 fitting within the casing 10, and below which is an annular flange 29 adapted to lie flush with the bottom of the casing 10. Below the flange 29, the plug 26 has an inwardly tapered section 30 which adjoins a cylindrical socket-engaging section 31 having the usual threaded shell 32 adapted to be screwed within the electric lamp socket.

The shell 32 is secured to the plug 26 by having its inner end bent inwardly and disposed in a groove 34. The strip 33 extends upwardly through the plug 26, and is soldered at 35 to one of the conducting wires 21. The other conducting wire 21 is soldered at 36 to a second terminal strip 37 extending entirely through the plug 26. The strip 37 is connected at its bottom end with a central contact member 38 secured in the base of the plug, in any suitable manner, as by an anchor bolt 38ª. The strip 33 is secured to the base of the shell 32 by soldering or in any other suitable manner.

It will thus be seen that an ornamental device of simple construction has been produced which will greatly facilitate the use of electrical equipment. While the invention is adapted for general use, it will be probably found especially useful in the household, for facilitating the electrical connection of electric lamps, toasters, vacuum cleaners, dish washers, clothes washers, grills, etc.

While there have been disclosed in this specification two forms in which the invention may be embodied, it is to be understood that these forms are shown for the purpose of illustration only, and that the invention is not to be limited to the specific disclosures, but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claim.

Having thus fully described the invention, what is claimed as new, and for which it is desired to secure Letters Patent, is:

In a lengthened separable attachment plug adapted to be connected to an electric lamp socket located in a position where it would be awkward or impossible to connect the ordinary "short" plug, a tubular casing, a pair of blocks fitting within the ends of said casing, each of said blocks having a pair of longitudinal conducting strips for connection with the male and female sections of an ordinary separable electric attachment plug, a pair of longitudinal conductors located in the central part of said casing and lying in substantial alinement with said strips, each of said blocks having an insulating barrier projecting inwardly for a substantial distance to separate said centrally located conductors from each other.

In testimony whereof, I have affixed my signature to this specification.

LOUIS P. PELLEGREN.