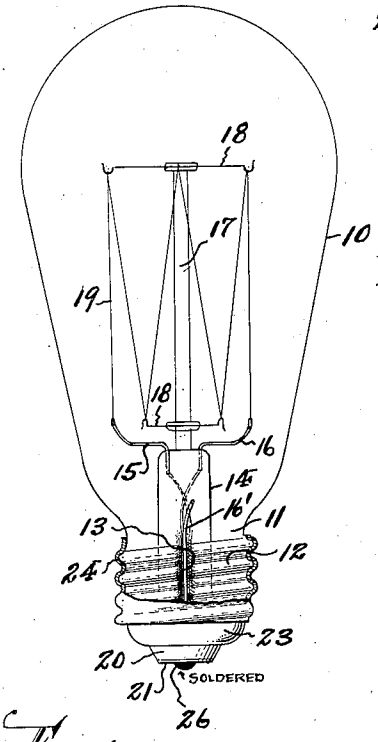
Nov. 22, 1927. 1,650,289

J. B. McGINLEY

INCANDESCENT ELECTRIC LAMP

Filed Dec. 10, 1926

Fig. 1



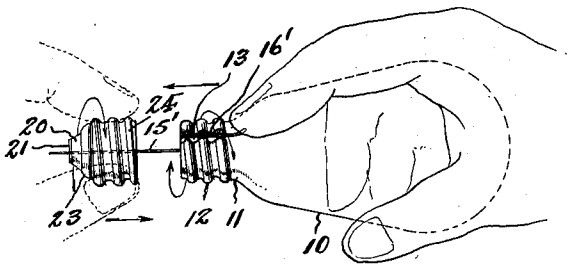


Fig. 2

Fig. 3

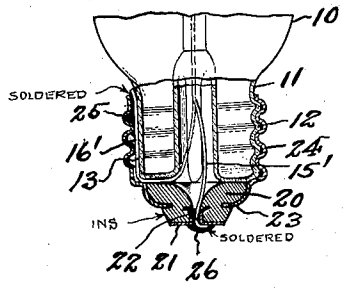


Fig. 4

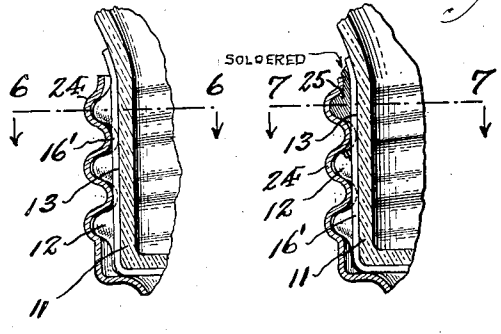


Fig. 5

Fig. 6

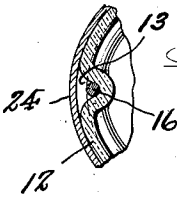
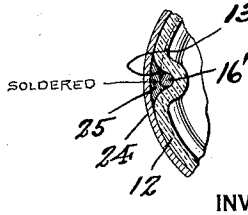


Fig. 7



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Patented Nov. 22, 1927. 1,650,289

UNITED STATES PATENT OFFICE.

JAMES B. McGINLEY, OF NEWARK, NEW JERSEY.

INCANDESCENT ELECTRIC LAMP.

Application filed December 10, 1926. Serial No. 153,768.

This invention relates to improvements in incandescent electric lamps; and the invention has reference, more particularly, to an improved means for attaching to the butt of lamps the external contact carrying connecting plug thereof.

The invention has for its principal object to provide a novel and simple means whereby the connecting plug, comprising an external threaded metallic contact sleeve and central metallic contact button, may be quickly and easily assembled with and secured to the butt of the lamp without necessity of using cement (as has heretofore been common practice), while at the same time securing the lead wires of the lamp filament respectively to said contact sleeve and contact button; all with a minimum expenditure of time and labor, and with less likelihood of breakage or other waste in the production operations.

The invention has for a further object to provide a novel form of coupling connection between the lamp butt and external contact plug which is positive and secure, and which avoids tendency of such parts to become loose or separated during the active life of the lamp in use.

Other objects of this invention, not at this time more particularly enumerated, will be clearly understood from the following detailed description of the same.

The invention is clearly illustrated in the accompanying drawing, in which:—

Figure 1 is a side elevation of the lamp made according to this invention, with a portion of the connecting plug broken away to show underlying structure; Figure 2 is a diagrammatic perspective view illustrating the operation of assembling the connecting plug with the butt of the lamp; Figure 3 is a longitudinal vertical section through the assembled connecting plug and butt of the lamp; Figure 4 is an enlarged fragmentary vertical section showing the arrangement of the threaded contact sleeve and engaging filament lead-out wire on the butt of the lamp prior to the application of the solder connection thereto, and Figure 5 is a similar view after the application of the solder connection thereto; Figure 6 is a horizontal section, taken on line 6—6 in Figure 4, and Figure 7 is a similar horizontal section, taken on line 7—7 in Figure 5.

Similar characters of reference are employed in all of the above described views, to indicate corresponding parts.

Referring now to said drawings, the reference character 10 indicates a glass bulb of any usual style or shape employed in the production of incandescent electric lamps. The lower end or butt 11 of said bulb is formed, when the same is blown, with an external screw thread 12 in combination with a vertical channel 13 which traverses said screw threads, and which extends from end to end of said butt 11. Connected in the usual fused integral sealing relation to the lower free end of the bulb butt 11 is the customary central outlet tube 14 which projects upwardly into the interior of the bulb, and through the closed inner end of which the lead wires 15 and 16 extend outwardly from said interior of the bulb. The upper inner end of said outlet tube 14 is provided with the supporting post 17 carrying the filament supports 18 upon which the lamp filament 19 is carried. The ends of said filament 19 are respectively joined to the inner ends of said lead wires 15 and 16.

The connecting plug, carrying the external contacts of the lamp, comprises the usual insulator base member 20, preferably made of a suitable moulded plastic insulation material, in the bottom end of which is anchored a central metallic contact button 21, having a central perforation 22, and imbedded in the sides of which is the bottom inturned anchor flange 23 of an externally and internally screw threaded metallic contact sleeve 24, the internal thread of which is adapted to fit and cooperate with the external screw thread 12 of the bulb butt 11.

Prior to assembling the connecting plug with the bulb butt, the exterior end portion 15′ of the lead wire 15 is projected in substantially straight axial alignment from the bulb butt, while the exterior end 16′ of the other lead wire 16 is bent around the lower end of the butt, and then turned upwardly to lie in the channel 13 which traverses the external screw thread 12 of said butt, being held in such position by the finger of the assembling operator, as shown in Figure 2. As thus positioned said lead wire end 16′ lies in a plane substantially coincident with the bottom of the external screw thread 12, and consequently does not impede the operation or functioning of the thread when the external contact plug is screwed thereon. To as-

semble the external contact plug, the operator first threads the axially projecting end 15′ of the lead wire 15 through the perforation 22 of the contact button 21 of the plug (as is also shown in Figure 2 of the drawings), whereupon the operator screws the threaded metallic contact sleeve 24 of the plug upon the thread 12 of the bulb butt 11, the tops of the thread of said sleeve 24 making contact with the end 16′ of the lead wire 16 which lies in the channel 13. When the plug is thus assembled with the bulb butt, the operator drops molten solder around the extremity of lead wire end 16′, so that the solder enters the channel 13 and by adhesion to the interior side of sleeve 24 and to the lead wire end 16′ not only assures the maintenance of good electrical engagement of such parts as well as a strong mechanical coupling thereof against accidental separation, but such solder also provides an interlocking key 25 which, being secured to said sleeve 24 by adhesion and being entered in said channel 13 of the bulb butt 11, firmly anchors the sleeve 24 against movement relative to the butt, and thus holds the former against unscrewing from the latter, whereby a permanent and durable coupled connection of the plug with the bulb butt is obtained, without necessity for using a cement bond between such parts. To complete the connection of the plug the end 15′ of the lead wire 15 is secured to the central contact button 21 by solder 26 in the usual manner.

Not only does the above described means for uniting the external contact bearing plug with the bulb butt of an incandescent electric lamp, afford a strong, simple and non-loosening coupling connection between said parts, but it also greatly simplifies the labor of assembling the parts, and avoids tendency to breakage attendant upon the old cementing method of forming such connection, as well as loss and waste arising from imperfectly prepared and applied cemented connections.

While I have herein shown and described the preferred form of my invention by way of illustration, I wish it to be understood that I do not limit or confine myself to the precise details of construction herein described and shown, since obviously some alterations and variations may be made therein which will still be comprised within its spirit. Generally speaking, I desire it to be understood that I do not limit myself to any specific form or embodiment, except in so far as is specified in the here following claims.

I claim:—

1. In an incandescent electric lamp, a bulb having an externally threaded butt provided with a channel traversing the threads thereof, one of the filament lead wires of said lamp being up-turned to lie in said channel, an external contact plug having an internally threaded contact sleeve to screw on said bulb butt over said lead wire, and an interlocking key formed of solder engaged in said channel and in adhering relation to said sleeve and lead wire.

2. In an incandescent electric lamp, a glass bulb having a butt provided with an external screw thread and formed with a channel traversing said screw thread, one of the filament lead wires of said lamp being up-turned to lie in said channel, an external contact plug provided with a bottom contact button and an internally threaded contact sleeve engaged with the external screw thread of said bulb butt over said lead wire, an interlocking key formed of solder engaged in said channel and in adhering relation to said sleeve and lead wire, and the other filament lead wire of said lamp being secured to said bottom contact button of said plug.

3. In an incandescent electric lamp, a glass bulb having a butt provided with an external screw thread and formed with a channel intersecting the bases of said screw thread, a filament lead wire of one polarity being up-turned to extend through said channel, an external contact plug provided with a central perforate metallic contact button and an internally threaded metallic contact sleeve engaged with the external screw thread of said bulb butt over said lead wire, an interlocking key formed of solder engaged in said channel and in adhering relation to said sleeve and lead wire, and a filament lead wire of opposite polarity being engaged through the perforation of said contact button and soldered thereto.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 9th day of December, 1926.

JAMES B. McGINLEY.