July 31, 1928.

1,679,333

H. A. DOUGLAS

CIRCUIT CONNECTER

Filed Sept. 5, 1922

Fig. 1.

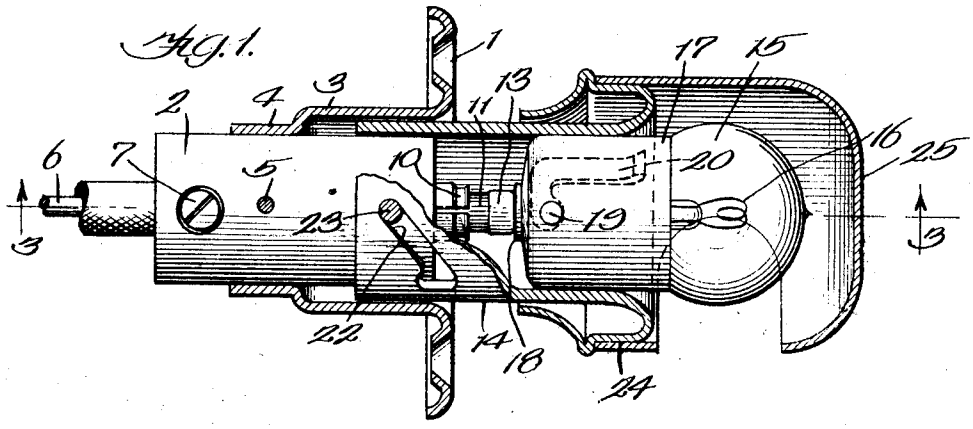


Fig. 2.

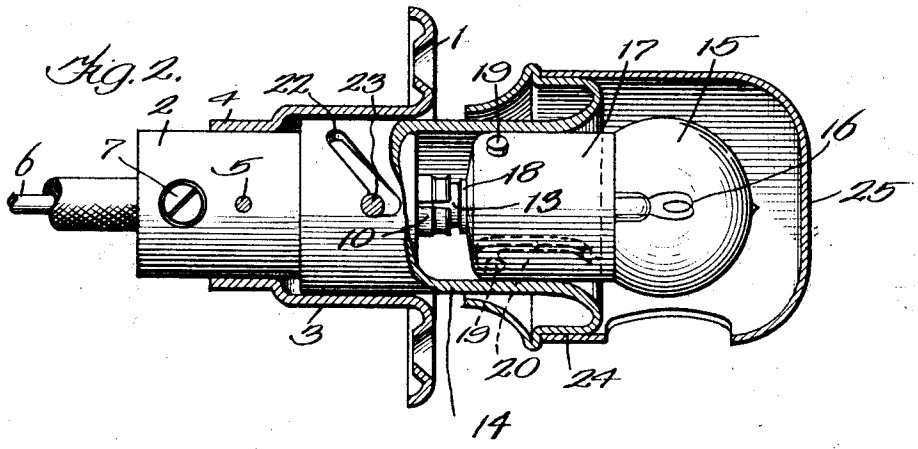


Fig. 3.

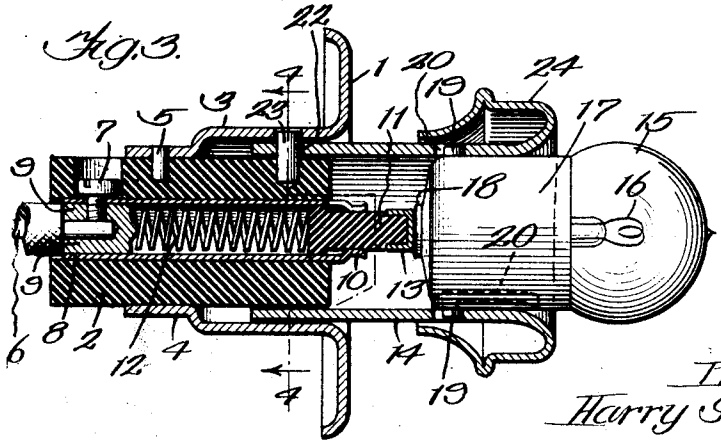
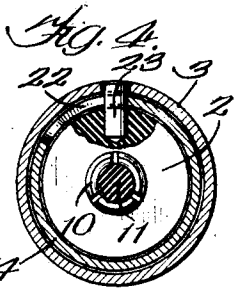


Fig. 4.



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UNITED STATES PATENT OFFICE.

HARRY A. DOUGLAS, OF BRONSON, MICHIGAN.

CIRCUIT CONNECTER.

Application filed September 5, 1922. Serial No. 586,269.

My invention relates to circuit connecters and is of particular service when employed in conjunction with small incandescent lamp bulbs.

My invention resides in the provision of a holder for the lamp bulb base or other contact carrier and switching means operable by this holder whereby the lamp, or other translating device pertaining to the contact carrier, may have its circuit closed or opened.

In the preferred embodiment of the invention a mounting is employed and there is a contact carrier supported by this mounting. Contacts are provided upon this contact carrier and aligned longitudinally thereof, the outer one of these contacts being movable longitudinally of the carrier supporting the same into and out of engagement with the inner contact. A holder for the lamp bulb has bayonet projection and channel engagement with the lamp base that is maintained by the pressure of the aforesaid movable contact upon the lamp base contact. Means are employed for assembling the lamp holder and contact carrier that includes a bayonet projection and an inclined bayonet channel to enable the adjustment of the lamp holder to an inner position to engage the two first aforesaid contacts and to an outer position to permit the spring to separate these contacts. The holder for the lamp may be so shaped as to constitute a support for a cowl that hoods the lamp bulb whereby this structure is especially well adapted for service when mounted upon a dash or mounting boards of automobiles.

The invention will be more fully explained by reference to the accompanying drawing in which Fig. 1 is a view partially in longitudinal section and partially in longitudinal elevation showing the preferred embodiment of the invention, the switching mechanism being so adjusted that the lamp is out of circuit; Fig. 2 is a view similar to Fig. 1 showing the lamp in circuit; Fig. 3 is a longitudinal view showing more of the parts in section than do Figs. 1 and 2; and Fig. 4 is a sectional view on line 4—4 of Fig. 3.

Like parts are indicated by similar characters of reference throughout the different figures.

I have illustrated a mounting 1 which may be fastened upon the dash board of an automobile, although the invention is not to be limited to a construction employing such a mounting. The contact carrier 2, formed of insulating material, is supported upon the mounting in any suitable way. As illustrated, the mounting is formed with a rearwardly extending outwardly projecting support 3 having a reduced portion 4 that is held in assembly with the contact carrier 2 by means of a dowel pin 5. The lamp structure illustrated is a so-called single pole lamp and in such case but one circuit conductor 6 is assembled with the carrier 2 as by means of an assembling screw 7 that passes through a tubular inner contact member 8 and partially through a solid metallic plug 9 that fills the rear end of the tubular contact member, the inner end of the screw engaging and clamping the conductor. The tubular contact member 8 extends forwardly through the contact carrier 2 and projects forwardly beyond said contact carrier. The forward end of the contact member 8 is longitudinally slit and formed to constitute spring contact fingers 10. An insulating member 11 is located partially within the bore of the hollow contact member 8 and projects forwardly beyond the same, the inner end of the insulating member being enlarged to prevent it from being altogether removed from assembly with the contact 8.

A spring 12 is located within the bore of the hollow contact member 8 and bears at its rear end upon the plug 9 and at its forward end upon the insulating member 11 and when this spring is free to act it thrusts the insulating member 11 outwardly to an extent that is limited by the inner and enlarged end of said member. An outer contact 13 is mounted upon the forward end of the member 11 and when this member is thrust inwardly by the inwardly moved lamp holder 14 when the lamp is to be included in circuit, as will later appear, the member 13 is thrust into the space between the spring fingers 10 to be engaged by said spring fingers, circuit through the lamp being thus completed. When the lamp is to be excluded from circuit this lamp holder is moved outwardly, permitting the spring 12 to thrust the contact 13 out of the zone of the spring fingers 10, all as will more fully appear.

The incandescent lamp 15 has the usual filament 16 having one terminal in the metallic sheath 17 that surrounds the lamp face concealed thereby. The inner and trans-

verse face of this lamp base carries a contact 18 which is constantly engaged by the contact 13 due to the action of the spring 12.

The lamp base carries bayonet pins or projections 19 that are receivable within bayonet seats formed at the inner ends of the bayonet passages 20 in the lamp holder 14. This lamp holder, in turn, is formed with an inclined bayonet channel 22 that receives a bayonet projection 23 carried by the contact carrier 2. When the lamp is to be placed in circuit the holder 14 is turned and pressed inwardly against the force of the spring 12 to bring the bayonet projection 23 into the outer seat in the bayonet passage 22. In this adjustment of the parts the lamp contact 18 presses the contact 13 into the zone of the spring contact fingers 10 whereby the lamp circuit is closed, this lamp circuit including the now three electrically connected contacts 8, 13 and 18, the metallic sheath 17 of the lamp base and the grounded metallic lamp holder 14. When the lamp is to be excluded from circuit the holder 14 is first slightly pressed inwardly to free the bayonet projection 23 whereafter the lamp holder is turned and manipulated to bring the bayonet projection 23 into the seat at the rear end of the channel 22. When the parts are thus adjusted the spring 12 functions to thrust the insulating member 11 outwardly to separate the contact 13 from the spring fingers 10 of the contact 8. If desired the lamp holder may be returned upon itself at its forward end to form a seat 24 for the cowl 25, this seat being preferably circular as is the engaging end of the cowl whereby the cowl may be turned upon its side to control the direction in which the light may emanate from the lamp bulb.

While I have herein shown and particularly described the preferred embodiment of my invention I do not wish to be limited to the precise details of construction shown as changes may readily be made without departing from the spirit of my invention, but having thus described my invention I claim as new and desire to secure by Letters Patent the following:—

A circuit connecter comprising a mounting member provided with a tubular portion, a plug having a portion thereof fitted within the tubular portion in snug engagement therewith throughout its circumferential extent whereby it is held rigidly by said mounting member against tilting movement with respect thereto, means holding said plug against longitudinal movement with respect to said mounting member, a portion of said plug extending outwardly of the tubular portion of said mounting member, a rotatable and longitudinally movable sleeve engaged over the outwardly extending portion of said plug, a pin fixed with respect to said plug and mounting member passing through a diagonal slot in said sleeve whereby rotation of said sleeve results in its longitudinal movement with respect to said plug, and a contact carried by said plug for cooperation with a circuit continuing member mounted in the sleeve.

In witness whereof, I hereunto subscribe my name this 24th day of August, A. D., 1922.

HARRY A. DOUGLAS.