March 27, 1934. H. A. PETERSON 1,952,279

FUSE PLUG FOR ELECTRIC LIGHT SWITCH BOXES

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Fig. 3

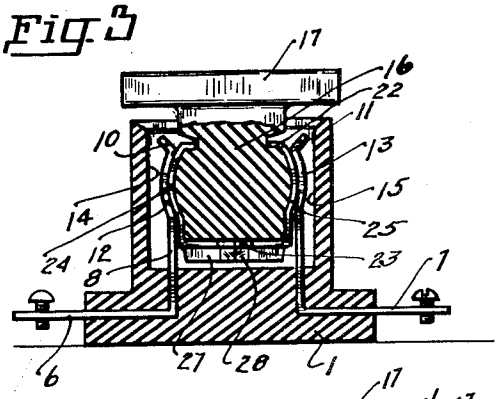


Fig. 4

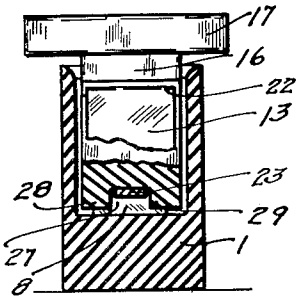


Fig. 6

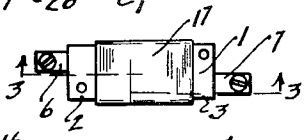


Fig. 1

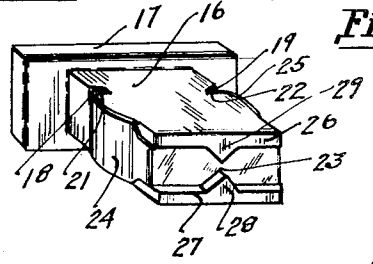


Fig. 8

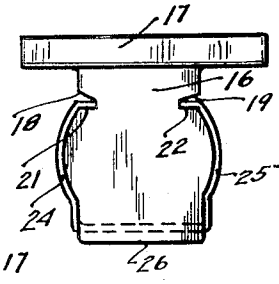
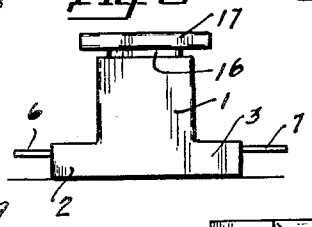


Fig. 2



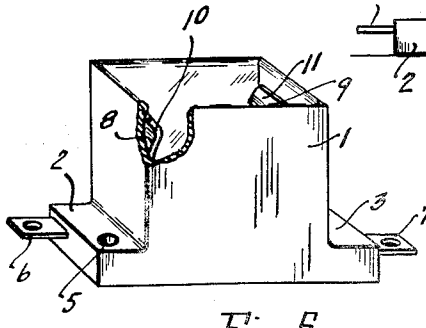
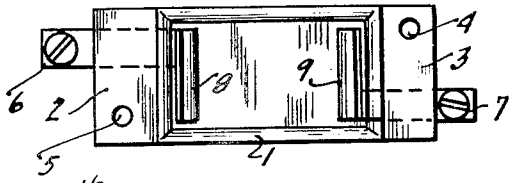


Fig. 5

Fig. 7



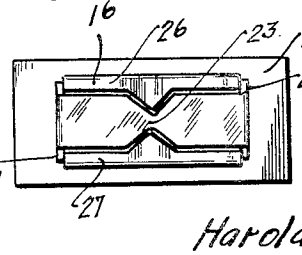


Fig. 9

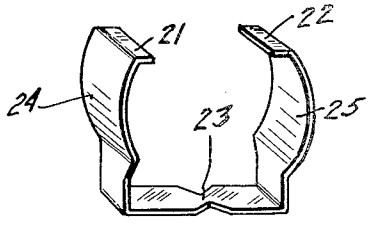


Fig. 10

Inventor
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Fig. 11

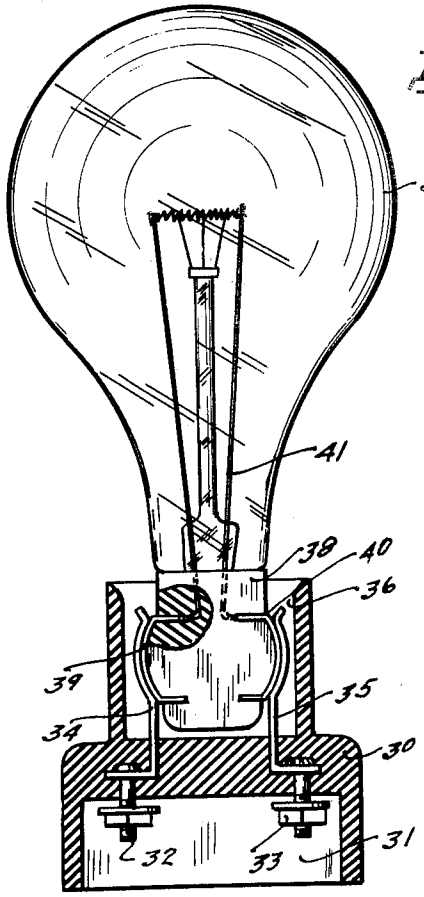
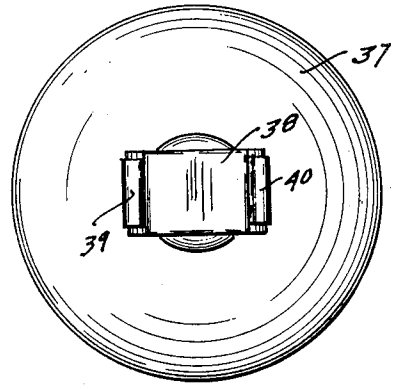


Fig. 13



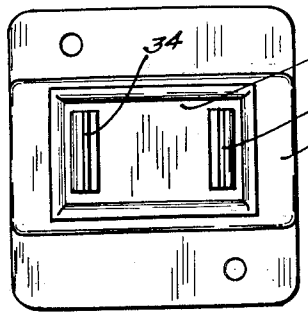


Fig. 12

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Patented Mar. 27, 1934

1,952,279

UNITED STATES PATENT OFFICE

1,952,279

FUSE PLUG FOR ELECTRIC LIGHT SWITCH BOXES

Harold A. Peterson, Portland, Oreg., assignor of fifteen per cent to Peter W. Peterson, Portland, Oreg.

Application December 28, 1931, Serial No. 583,441

1 Claim. (Cl. 200—129)

My invention relates to fuse plugs for use in electric switch boxes, and lamp and lamp terminals.

The invention is comprised primarily of a base member having electric terminals associated therewith and having a removable plug member, to which is attached the electric circuit conductor removable plug member, that is adapted for being placed and secured within the base member and for completing the electric circuit therethrough.

The fusable electric circuit conductor, or fusing member is adapted for completing the electric circuit therethrough and having a predetermined fusing point disposed central of its ends, that fuses when predetermined resistances are developed within the fusing member and within the electric circuit passing therethrough.

In the event that the fusing member becomes burned out, or destroyed by an electric overload, the same may be removed and replaced with a fuse member of like carrying capacity.

The primary purpose and object of my invention is to provide a permanent fuse plug, to which a fusing member of predetermined carrying capacity is fitted thereto.

A further object of my invention consists in providing a fuse plug, to which a fusing member of predetermined capacity only may be fitted.

A still further object of my invention consists in providing a fuse plug of given rated capacity that may have fusing members secured thereto and replaced therewithin, to lessen the operating costs of the fuse plugs.

Heretofore, it has been the general custom in fuse plugs to throw the same away when the fuse member has been destroyed.

In the use of my new and improved device, the fusing member is replaced within the fuse plug to thereby greatly lessen the replacement cost of fuse plugs.

A still further object of my invention consists in the placing of a fuse plug within the electric circuit that will prohibit the placing of other fuse plugs of different rated fusing capacity within the circuit.

A still further object of my invention consists in so constructing the fuse plug that the fusing member disposed therein, may be inspected periodically, or in the event of a break in the line, the fuse plug may be inspected and readily determined when the fuse plug has been burned out.

A still further object of my invention consists in providing a fuse plug, through the use of which an overload may not be developed within the electric circuit because of the placing of fuse plugs therein, of higher rated capacity than that of the electric circuit with which the same is being used.

And a still further object of my invention is to provide a fuse plug of rugged construction and one that may have a long and useful life and one that may not be destroyed when the fusing member has been destroyed.

And a still further object of my invention consists in placing a terminal upon a lamp and a lamp socket therefor that may be secured together through the action of a pressing connection. This construction is especially desirable in electric signs when electric lamps are to be used as the illuminating agency.

And a still further object of my invention consists in providing an electric lamp and a socket therefor that will remain securely fastened together, even under adverse operating conditions as in electric signs, upon trains, water and land craft and upon airships and the like.

With these and incidental objects in view, the invention consists in certain novel features of construction and combination of parts, the essential elements of which are set forth in the appended claim, and a preferred form of embodiment of which is hereinafter shown with reference to the drawings which accompany and form a part of this specification.

In the drawings:

Fig. 1 is a top, plan view, of the preferred embodiment of the assembled device.

Fig. 2 is a side view, of the embodiment of my device as disclosed in Fig. 1.

Fig. 3 is a sectional, front view, of the assembled device. The same being taken on line 3—3 of Fig. 1, looking in the direction indicated.

Fig. 4 is a sectional, side view, of the assembled device.

Fig. 5 is a fragmentary, perspective, front view, of the base member of the device.

Fig. 6 is a perspective, end view, of the plug member, that is adapted for being placed into the base member.

Fig. 7 is a top, plan view of the base member.

Fig. 8 is a side view of the plug member.

Fig. 9 is an inverted, plan view of the plug member.

Fig. 10 is a perspective, side view, of the fusing member of the plug.

Fig. 11 is a cross section view of one of my new and improved lamp sockets with one of my new and improved lamps disposed therein.

Fig. 12 is a plan view of one of my new and

improved lamp sockets with the lamp removed therefrom.

Fig. 13 is an end view, of the terminal end of the lamp, made to illustrate the terminals disposed thereupon that are adapted to be pressed into the lamp socket and for forming a working relationship between the lamp socket and the lamp.

Like reference characters refer to like parts throughout the several views.

I preferably form the base member 1 of my device, as having parallelly disposed front and side walls, and having outwardly extending ledges 2 and 3 disposed at the base of the plug. Fastening holes 4 and 5 are disposed through the base member, through which any suitable fastening means may be passed to secure the same in place and position upon any suitable support.

Electric terminals 6 and 7 outwardly extend from the base member, and contact points 8 and 9 upwardly extend within the base. The contact members are so positioned and placed that a spring connection may be disposed between the contact points and the plug member. The outer ends of the contacts are bent outwardly, as illustrated at 10 and 11, to facilitate the attachment of the plug to the contact points, and the contact points are shaped as illustrated at 12 and 13, to form a receiving socket for the plug. The contact points are preferably spaced apart from the inner walls 14 and 15 of the base member, to permit an expansion of the contact points when the plug is placed therein.

I form the plug member 16 of a single piece of suitable insulating material and provide a hand engaging head 17 upon the outer end of the same.

Receiving notches 18 and 19 are placed within the side walls of the plug. A fusing member 20, made of a single piece is adapted to the outer surface of the plug and the fuse member has engaging offsets 21 and 22 to adapt the same to the locking and receiving notches 18 and 19.

The rated carrying capacity of the fusing member is determined by the fusing amount and rated capacity of the metal 23, from which the fusing member is made, and the amount of metal disposed within the space predetermines its rated capacity.

The side walls 24 and 25 of the fusing member are shaped to fit into the contour of the contact points of the base member and to precisely lock the same, one to the other. The lower end 26 of the plug is recessed, as shown at 27, to permit the fusing member being precisely positioned within the recess, and lugs 28 and 29 inwardly extend from the side walls 24 and 25 that form the recess. The purpose and object of the lugs is to prohibit the placing of a fusing member within the plugs of a different rated capacity than that of the plug itself.

It will thus be seen that I have provided a fuse plug and base member that are adapted for coacting with each other, and through which a fuse member may not be placed that is of different rated capacity than that for which the same is intended.

It will also be noted that I have provided a fuse plug, the utility of which, may be determined by the withdrawal of the plug from the base and the inspecting of the same.

Where my device is to be used as a lamp socket, I form the base 30 of the lamp socket as having a relatively large recess 31 disposed therein. Electric terminals 32 and 33 are disposed within the recess and terminal bars 34 and 35 upwardly extend within the lamp receiving socket portion 36.

I form the electric lamp 37 having the terminal 38 disposed upon the socket end of the lamp and provide terminals 39 and 40 upon the outer surface of the terminal to which the filament 41 is connected in the usual manner. The outer surface contour of the terminals of the lamp are adapted to fit the inner surfaces of the terminals 34 and 35 to form a relatively close snap fit connection between the lamp and the lamp socket.

A lamp made as herein outlined is particularly adapted for use upon vehicles such as automotive vehicles, railway equipment, ships, signs and in any and all places where the lamps are subjected to vibration.

While the form of mechanism herein shown and described is admirably adapted to fulfill the objects primarily stated, it is to be understood that it is not intended to confine the invention to the one form of embodiment herein shown and described, as it is susceptible of embodiment in various forms, all coming within the scope of the claim which follows.

What I claim is:

In a fuse plug socket of the class described, having a plurality of upwardly extending and yieldingly mounted electric terminals, the combination of a fuse plug having a main body member formed with a flat groove extending across its bottom and along two of its sides, the bottom groove being restricted to a predetermined degree transversely at its center, a band of fusible material correspondingly shaped to the shape of the groove and relieved at its center to fit within the restricted portion of the groove, whereby only fusible material of a predetermined capacity may be used with said fuse plug.

HAROLD A. PETERSON.