

Dec. 3, 1929.

H. F. DELMANHORST

1,738,174

FUSE PLUG

Filed July 16, 1925

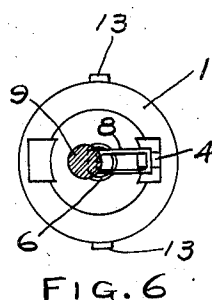
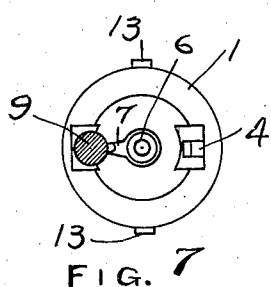
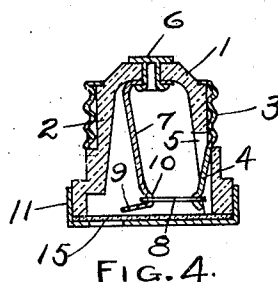
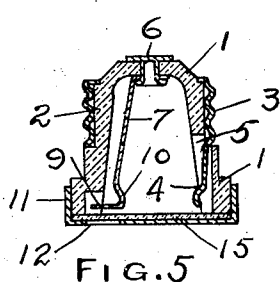
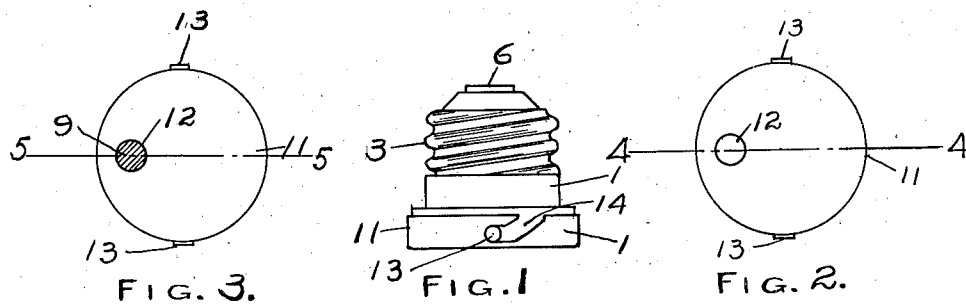


FIG. 8

INVENTOR

Herman F. Delmanhorst  
By John F. Strehli  
ATTORNEY

# UNITED STATES PATENT OFFICE

HERMAN F. DELMANHORST, OF LOUISVILLE, KENTUCKY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO NILES MACHINE COMPANY, OF LEBANON, NEW HAMPSHIRE

## FUSE PLUG

Application filed July 16, 1925. Serial No. 43,913.

My invention relates to fuse plugs, more particularly to that class of fuse plugs generally used on comparatively low voltage and small amperage, such as are generally used for lighting circuits and for small power units.

In fuse plugs of this type in general use, it is difficult to see the fuse wire, and consequently when a fuse has "blown", it is usually necessary to remove several and to examine them in order to find out which one must be renewed and a new fuse must necessarily be used to renew the "blown" one.

The object and purpose of my invention is to provide a fuse plug which when "blown" will be readily distinguishable from the live or good ones.

Another object and purpose of my invention is to provide a fuse plug which will be readily renewable by replacing the burned fuse element, and that fuse element shall be of such form as to make it readily and easily installed at a minimum price, making a cheap, highly efficient, simple and safe fuse plug, possessing marked utility.

In the accompanying drawing, forming part of this specification:

Fig. 1, is a side view of a fuse plug embodying my invention,

Fig. 2, is a bottom view of the fuse plug shown in Fig. 1,

Fig. 3, is a bottom view of the fuse plug shown in Fig. 1, as it would appear if the fuse has "blown",

Fig. 4, is a section on line 4—4 of Fig. 2,

Fig. 5, is a section on line 5—5 of Fig. 3,

Fig. 6, is a bottom view of fuse plug as shown in Fig. 4, with the cap removed,

Fig. 7, is a bottom view of fuse plug shown in Fig. 5, with cap removed, and

Fig. 8, is an isometric view of the fuse element to be used with my fuse plug.

This fuse plug consists of a body 1, made of an insulating material, composed of a cylindrical porcelain body part 2, on which I mount a metal ferrule 3, in any suitable manner, the said metal ferrule 3 adapted to engage the threaded part of a socket; the said ferrule also carries a tongue or hook 4 adapted to hold one end of the fuse 8; the said

tongue or hook extending through a slot 5 in the body 1.

I also provide a rivet 6, or its equivalent, to form one of the contacts with the socket.

A spring hook 7 is held in place by the rivet 6, and carries at its outer end the indicator or target 9, and a notch 10, adapted to hold the fuse link 8.

A cap 11, made of any suitable material, is provided with a hole 12, and is secured to the body portion 1, the lugs 13 on the said body portion being engaged by the oblique slots 14 of the cap 11.

A layer of mica 15 covers the opening in the body 1 and is held in place by the cap 11, thus preventing flashing when the fuse burns out.

The operation of this fuse plug is very simple, the fuse link 8 being placed over the hook 7, the target 9 being drawn toward the hook 4 until the fuse link engages said hook 4, thus forming a fusible connection between the rivet 6 and the sleeve or ferrule 3 and at the same time holding the target in a position where it cannot be seen through the hole 12 in the cap 11, but when this fuse burns out or "blows", the spring 7 is released allowing the target to take the position shown in Fig. 7, making it visible through the hole 12 in the cap 11 as shown in Fig. 3.

The tongue 4 and the spring hook 7 may be termed leads, which, in connection with the rivet or contact point 6 are capable of connection with an electrical circuit. It will readily become apparent that I provide a renewable fuse automatic self-indicating fuse plug.

The target 9 is an indicating device, and may be colored to make it quickly and plainly visible, and it may be connected up in any manner other than herein set forth.

My invention may be applied to any fuse plug of a varying construction than herein set forth which is capable of receiving the same. The fuse link may be made of any material found practicable for the purpose.

What I claim as new and my invention and desire to secure by Letters Patent is:—

1. A fuse plug comprising a cup-shaped body of insulating material, a removable

cover closing the mouth of the cup-shaped body and provided with a sight opening, first and second electric conducting elements extending into said body, the first conducting element being adapted to spring away from the second one of said elements, and a removable fusible link loosely connected to said elements, and adapted to hold the first element under tension, one of said electric elements having an indicator normally held out of alignment with the sight opening by said fusible link, the indicator being adapted when the link is severed, to move into alignment with the sight opening.

2. An electric fuse plug comprising a cup-shaped body of insulating material, a removable cover closing the mouth of said body, a threaded ferrule of conducting material arranged on the periphery of said body and secured to the latter, said body having an opening in its side wall, a tongue connected to the ferrule and extending through said opening into the interior of the body, a conducting element connected to the bottom of the body, a resilient tongue arranged in the body and electrically connected to the last mentioned element, a detachable fusible link connecting said tongues, said cover having a sight opening, and said resilient tongue having a target normally arranged out of alignment with the sight opening, and adapted when the fusible link breaks to move into alignment with the sight opening, and indicate that the fuse has been "blown"; said link being adapted to be threaded about the ends of said tongues.

In testimony whereof, I affix my signature at Louisville, Kentucky, this 3rd day of July, 1925.

HERMAN F. DELMANHORST.