March 18, 1930. E. F. PELLETIER ET AL 1,751,055

FUSE PLUG

Filed Oct. 22, 1928

Fig. 1

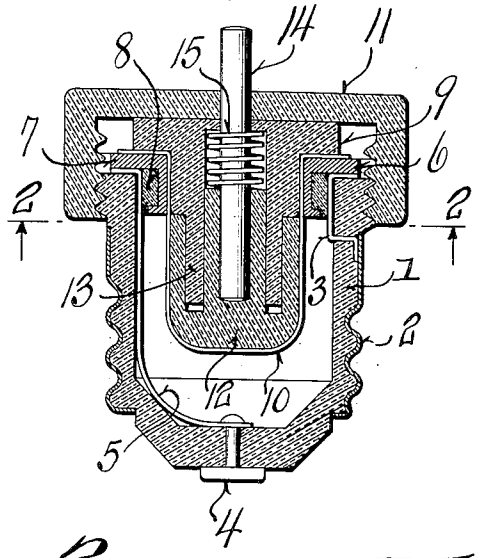


Fig. 2

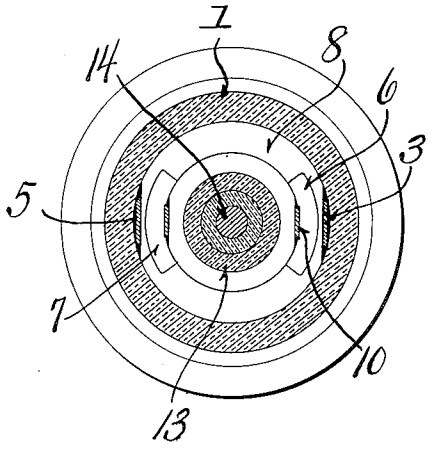


Fig. 3

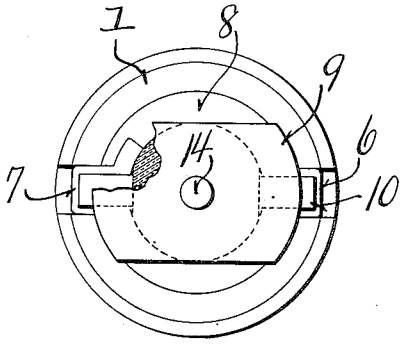
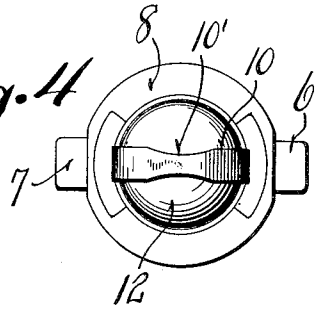


Fig. 4



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UNITED STATES PATENT OFFICE

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FUSE PLUG

Application filed October 22, 1928. Serial No. 314,266.

This invention relates to fuse plugs.

Objects of this invention are to provide a novel form of fuse plug, which is renewable, and which is so constructed that an insulating member is projected into the path of the arc, resulting from the fusing of the strip of fusible material, and immediately separates the ends of the fusible material so that arcing is wholly prevented.

Further objects are to provide a fuse plug having the characteristics noted above, which is so constructed that a visible indication is given on the outer side of the plug whenever fusing occurs, and to provide a construction which is very simple and easily produced.

An embodiment of the invention is shown in the accompanying drawings, in which:

Figure 1 is a sectional view through the fuse plug.

Figure 2 is a transverse, sectional view on the line 2—2 of Figure 1.

Figure 3 is a view from the upper side of the plug with the cap removed, and with parts broken away.

Figure 4 is a view from the under side of the plug with the shell removed.

Referring to the drawings, it will be seen that the fuse plug comprises an outer shell 1 which may be screw-threaded, if desired, and which is provided with a metal ferrule or covering 2. This covering is connected internally to the contact strip 3. A central contact member 4 is provided in the form of a rivet and is connected internally of the shell with the contact strip 5. The contact strips 3 and 5 have their upper ends turned over the upper end of the shell and are adapted to engage contact members 6 and 7 carried by the removable ring 8 when the plug is assembled. Within the ring 8 the removable sleeve is adapted to clamp the ends of the fusible strip 10 in contact with the metal members 6 and 7, such members contacting with the terminal members or contact strips 3 and 5.

The shell is screw-threaded adjacent its upper end and is adapted to receive the removable screw-threaded cap 11 by means of which the parts are clamped together.

Further, it is to be noted that a spring-pressed plunger 12 is slidably carried by the sleeve 9. Preferably the sleeve 9 is provided with a flange 13 which fits slidably within an annular recess formed in the plunger 12. The plunger 12 is also provided with a pin 14 which projects through the outer cap 11 so that when the fusible member 10 melts, the pin is moved inwardly and thus the condition of the fuse is readily indicated. The spring for urging the plunger 12 downwardly is indicated at 15 and is within a recess formed in the sleeve 9, as shown in Figure 1.

It is preferable to provide a constricted portion 10′ for the fuse strip 10, as shown in Figure 4, such constricted portion being located centrally of the outer end of the plunger.

In using the device, it is apparent that when the fuse blows, the spring will project the plunger downwardly between the ends of the fusible strip and that the pin 14 will move inwardly, thus indicating the condition of the fuse.

The fuse is readily renewable as the cap may be unscrewed and the sleeve 9 separated from the ring 8. Thereafter a new fuse strip is positioned, as indicated in Figure 1, and the sleeve 9 is again inserted in the ring, thus binding the fuse strip in contact with the contact members 6 and 7. When the cap is again screwed down, the contact members 6 and 7 are forced into engagement with the terminal members or strips 3 and 5, and the plug is again ready for use.

It will be seen that a very simple type of device has been provided by this invention, which may be readily and cheaply manufactured, which has a comparatively small number of parts, which permits ready renewal of the fuse strip, and which is easy to operate.

Although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

We claim:—

1. A fuse plug comprising a casing, a ring carried by said casing, a sleeve fitting within said ring and adapted to clamp a fuse strip

between itself and ring, a plunger spring-pressed downwardly and carried by said sleeve, and a fuse strip surrounding said plunger and holding it inwardly.

2. A renewable indicating fuse plug comprising a shell provided with terminals, a ring and a sleeve adapted to hold between them a renewable fuse strip, a plunger carried by said sleeve and spring-pressed inwardly and restrained by said fuse strip, a cap holding said sleeve and ring in place and screwed upon said shell.

3. A renewable indicating fuse plug comprising a shell provided with terminals, a ring and a sleeve adapted to hold between them a renewable fuse strip, a plunger carried by said sleeve and spring-pressed inwardly and restrained by said fuse strip, a cap holding said sleeve and ring in place and screwed upon said shell, said cap having a central aperture and a pin carried by said plunger and projecting through the central apertures of said cap.

In testimony that we claim the foregoing we have hereunto set our hands at St. Joseph, in the county of Berrien and State of Michigan.

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