Oct. 30, 1923. 1,472,082

E. NOMBURG

FUSE PLUG

Filed April 12, 1920

Fig. 1.

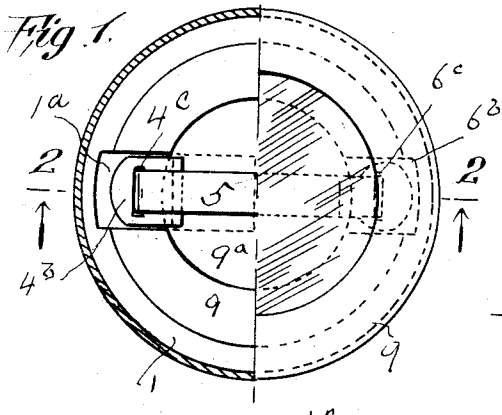


Fig. 2.

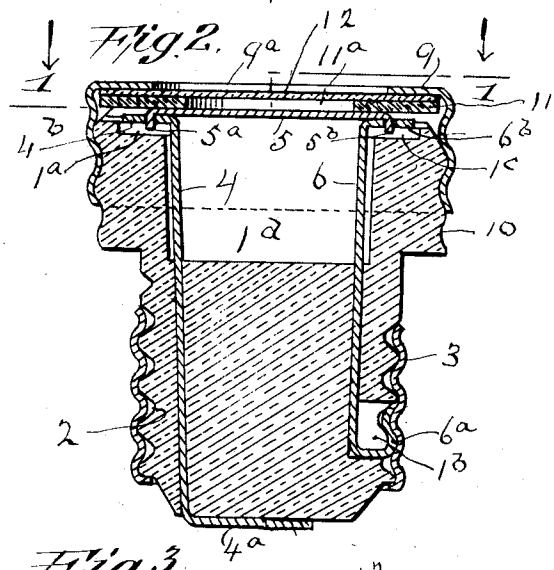


Fig. 3.

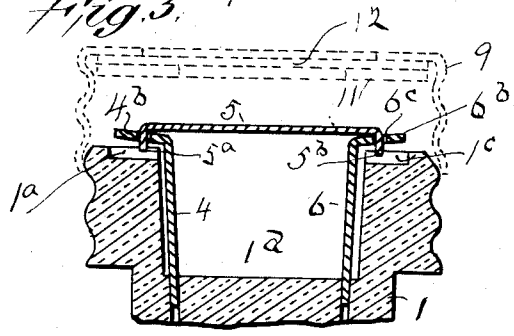


Fig. 4.

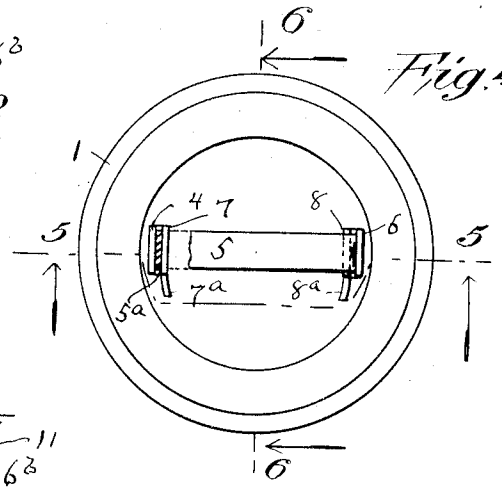


Fig. 5.

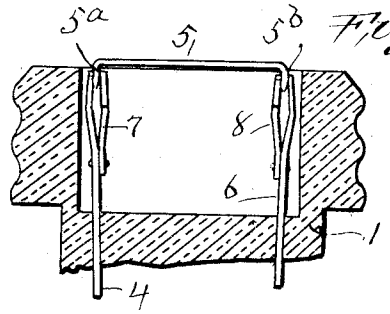
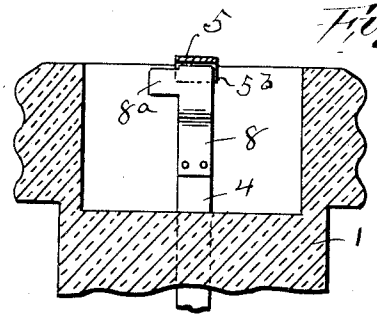


Fig. 6.



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UNITED STATES PATENT OFFICE.

EMIL NOMBURG, OF NEWARK, NEW JERSEY, ASSIGNOR TO JOSEPH NOMBURG, OF NEW YORK, N. Y.

FUSE PLUG.

Application filed April 12, 1920. Serial No. 373,157.

To all whom it may concern:

Be it known that I, EMIL NOMBURG, a citizen of the United States, and resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Fuse Plugs, of which the following is a specification.

The object of my invention is to provide a fuse plug in which the fuse strip will be readily detachable and replaceable and whereby good electrical contact of the fuse strip with the terminal conductors of the plug may be maintained.

My invention comprises novel details of improvement that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is had to the accompanying drawings forming a part hereof wherein

Figure 1 is an end view of my improved fuse plug partly in section on the line 1, 1 in Fig. 2;

Fig. 2 is a section on the line 2, 2 in Fig. 1;

Fig. 3 is a detail section;

Fig. 4 is an end view of a modification, the cap being removed, and

Figs. 5 and 6 are detail sections respectively on the lines 5, 5 and 6, 6 in Fig. 4.

Similar numerals of reference indicate corresponding parts in the several views.

The body or base of the fuse plug is indicated at 1 which may be of any suitable insulating material commonly used for fuse plugs. Body 1 is shown externally threaded at 2 to receive the threaded metal shell or sleeve 3 to screw into a socket in an ordinary manner. A terminal conductor is indicated at 4, a portion of which is buried in body 1. One end 4^a of terminal 4 extends across the adjacent outer end of body 1 in a central position to engage a central contact in a socket. The opposite end 4^b of terminal 4 extends laterally at the adjacent end of body 1 to make contact with a fuse strip 5 an end of which is adapted to rest on lateral terminal extension 4^b as in Figs. 1, 2 and 3. To retain said fuse strip on extension 4^b the latter is provided with slot 4^c to receive the laterally extending bent end 5^a of fuse 5 to retain the latter in position. The extension 4^b is shown over a recess 1^a at the end of body 1 to receive the extension 4^b and fuse end 5^a.

On the side of body 1 opposite terminal 4 is a terminal conductor 6, part of which is shown buried in body 1. One end of terminal 6 is in electrical connection with shell 3. I have shown the bent end 6^a of terminal 6 in a recess 1^b in body 1, the end 6^a being preferably bent to correspond to the threads 2 of body 1 and the corresponding threads of shell 3 so that the latter will screw on end 6^a to make electrical contact therewith. Other well known means, such as solder, may connect terminal end 6^a and shell 3. The opposite end of terminal 6 is shown bent laterally over a recess 1^c in the adjacent end of body 1. The adjacent end of fuse strip 5 is adapted to rest on end 6^b of strip 6 to make electrical contact therewith. Said end 6^b is shown slotted at 6^c to receive the adjacent laterally extending bent end 5^b of fuse strip 5 to retain the latter in position.

In Figs. 4, 5 and 6 the terminal 4 is provided with a clamp piece 7, which may be riveted to the terminal and the terminal 6 is shown provided with a clamp piece 8 which may be riveted to said terminal. The clamp pieces 7, 8 may respectively be provided with ears or lugs 7^a, 8^a, serving as finger grips to permit spreading of the pieces 7, 8 to admit the ends 5^a, 5^b of fuse 5, between the parts 4, 7 and 6, 8 respectively, the spaces between the last named parts serving like the slots 4^c to receive the lateral ends of the fuse piece. Said parts serve as spring jacks or clamps to secure the ends 5^a, 5^b to the terminals 4, 6 with good electrical contact.

At 9 is a threaded cover or cap adapted to screw on threads 10 on body 1 in an ordinary manner, to retain removable fuse strip 5 against terminals 4, 6. An insulating disk 11 is located between cover 9 and fuse strip 5 serving to press the latter into firm contact with terminals 4 and 6 when the cover is screwed snugly on body 1. By preference cover 9 is apertured at 9^a and disk 11 is apertured at 11^a to permit observation of fuse 5. To exclude air and moisture from the terminals and fuse of the plug a translucid disk 12, which may be of mica, is located between cover 9 and disk 11, being clamped by the cover against said disk, permitting observation of fuse 5.

When the parts are assembled as disclosed the fuse will carry the current between terminals 4 and 6, the central cavity 1^d being

bridged by the fuse. When it is desired to replace a fuse it is merely necessary to remove cover 9 and disks 11, 12, lift off the fuse or any remaining pieces if the same has been fused, and place a new fuse upon terminals 4, 6, and replace the cover and disks. The construction described provides a simple and cheap fuse plug, enabling expeditious and accurate replacement of fuse pieces by merely laying the same upon the terminals 4, 6 without requiring the fuse to be bent and fitted through one or more apertures in the body of the plug. If the cover be made of insulating material the insulation 11 may be dispensed with, or the mica disk 12 may bear direct on fuse piece 5 to retain it on terminals 4 and 6.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. A fuse plug having conductor terminals provided with slots, a fuse piece having laterally extending ends to enter said terminal slots, and a cover over the fuse piece retaining the latter on the terminals.

2. A fuse plug comprising an insulating block having a central cavity and recesses at the sides thereof, conductor terminals provided with lateral end portions having slots located over said recesses, a fuse piece having lateral ends to enter said slots, said fuse piece bridging said cavity, and a cover over said fuse piece.

3. A fuse plug comprising a body having a central cavity and a terminal exposed at opposite ends thereof and a terminal exposed at one end and at one side thereof, a metal shell on the body electrically connected to the last named terminal at the side of the body, a fuse strip to contact with said terminals and bridging said cavity, said strip having laterally extending portions, said terminals at adjacent ends having laterally extended portions provided with slots to receive the laterally extending portions of the terminals, and a cap over the fuse and terminals.

4. A fuse plug comprising a body having a terminal exposed at opposite ends thereof and a terminal exposed at one end and at one side thereof, a metal shell on the body electrically connected to the last named terminal at the side of the body, a fuse strip to contact with said terminals, said strip having laterally extending portions, said terminals at adjacent ends having laterally extended integral portions normally disposed at an angle to the terminals provided with slots to receive the laterally extending portions of the terminals to retain said strip in position, a cap over the fuse and terminals, and an apertured insulating disk between the fuse and cap to retain the fuse on the terminals.

Signed at New York in the county of New York and State of New York this 10th day of April A. D. 1920.

EMIL NOMBURG.