R. P. BERNARDINI.

FUSE.

APPLICATION FILED MAR. 25, 1911.

994,566.

Patented June 6, 1911

Fig. 1.

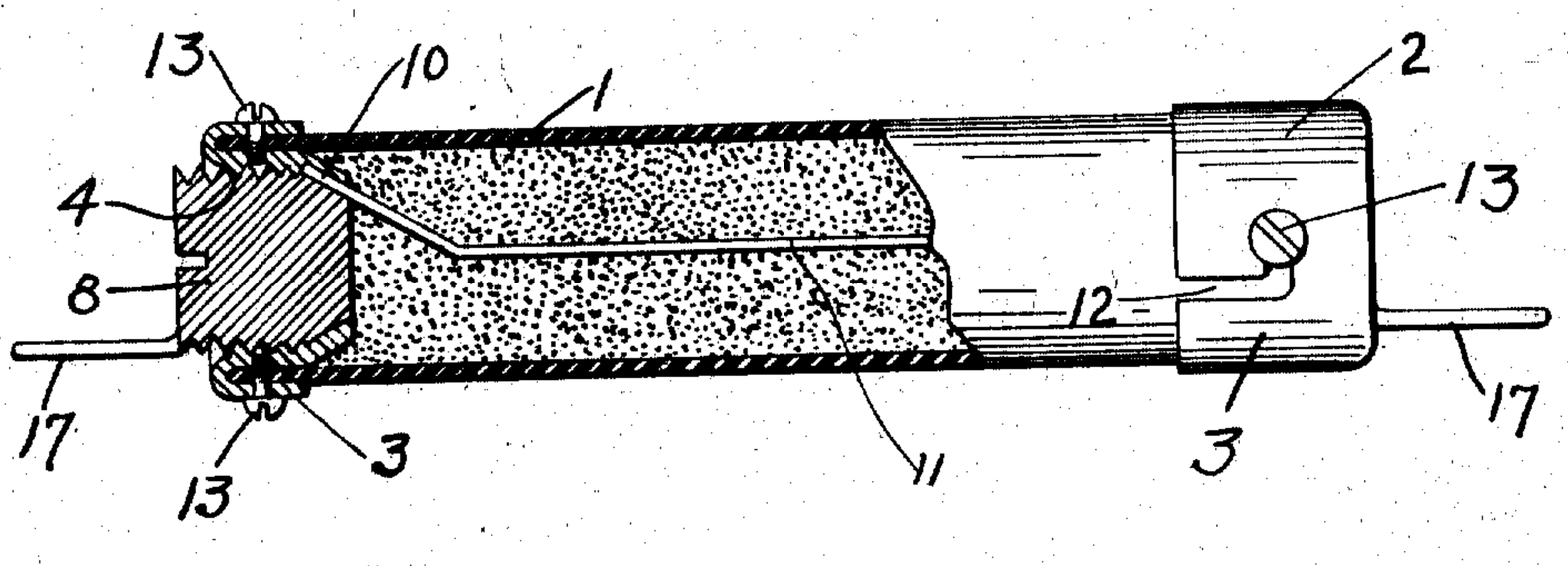


Fig. 4.

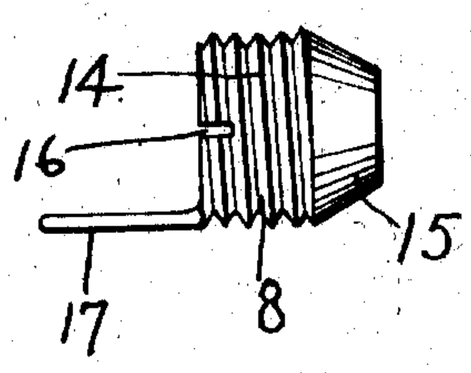


Fig. 2.

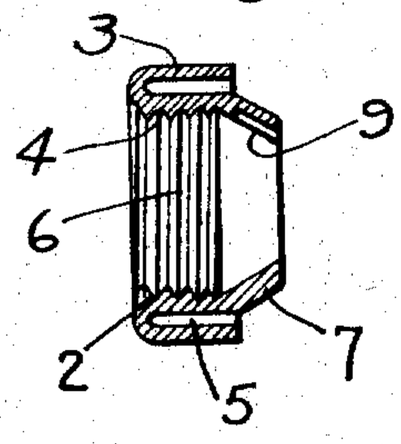
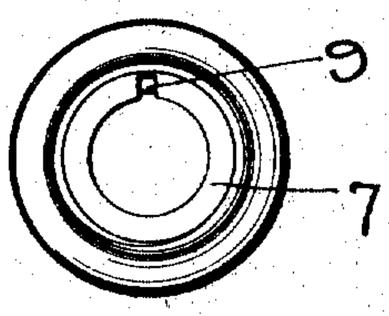


Fig. 3.



Witnesses

Chas. W. Eddy.

E. D. Ogden

Inventor

Roland P. Bernardini

By Howard C. Barlow

Attorney

UNITED STATES PATENT OFFICE.

ROLAND P. BERNARDINI, OF PROVIDENCE, RHODE ISLAND.

FUSE.

994,566. Specification of Letters Patent. Patented June 6, 1911.

Application filed March 25, 1911. Serial No. 616,92..

To all whom it may concern:

Be it known that I, ROLAND P. BERNARDINI, a citizen of the United States, and resident of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Fuses, of which the following is a specification.

This invention relates to a safety fuse of the cartridge type for electric circuits, and has for its object to provide a simple and practical means for retaining the ends of the destructible fuse wire within the cartridge shell by means of a ready removable binding plug and without the use of solder.

A further object of the invention is to also provide a readily removable socket cap for receiving said binding plug whereby the whole end of the cartridge casing may be opened to quickly empty the same of its finely divided gas absorbing material and to quickly replace the destroyed fuse by a fresh one.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

Of the accompanying drawings: Figure 1— is a side elevation of a cartridge fuse, partly in section, illustrating my improved cartridge ends in position on the casing. Fig. 2— is a sectional view of the socket cap which fits both over the outside and also on the inside of the casing and is adapted to receive the binding plug therein. Fig. 3— is an end view of said socket cap showing the recess for receiving the end of the fusible strip. Fig. 4— is a side elevation of the binding plug.

Referring to the drawings, 1 is the outer casing of the cartridge which may be constructed of any suitable insulating material. On either end of this casing is secured a socket cap 2, the same being constructed with an outer annular band 3 to inclose the end of the casing, and an inwardly extending annular wall 4 projecting into the inside of the casing. Between this inner and outer wall is formed an annular chamber 5 for the reception of the end of the casing 1. The internal surface of the inner wall of this socket cap is threaded as at 6 and the end of this wall is contracted on an incline or tapered as at 7 to receive the frusto-conical end of the plug 8, presently described. The tapered portion of this wall 7 is provided on its inner side with a slot or recess 9 into which the end 10, see Fig. 1, of the fusible strip 11 is designed to fit, the size of the slot indicating the capacity of the fuse strip, and the slot being of such a depth that a part of the fuse strip will project to be engaged and bound by the plug 8 when the same is positioned. The outer band 3 of this socket cap is provided with one or more angular slots 12 forming a bayonet joint through which the retaining screws 13 may pass, said screws being adapted to also pass through the casing 1 and threaded into the inner wall 4 of the socket cap so that when it is desired to remove this cap it is only necessary to withdraw the ends of the screws from the inner wall 4, then by rotating the cap slightly it can be readily withdrawn from its position on the casing.

The plug 8 has a straight body portion threaded as at 14 and a tapering frusto-conical end 15 corresponding with and adapted to fit into the tapering portion of the socket cap. This plug is provided with a slot 16 in its end to receive a screw driver whereby it may be readily removed when desired and the same may be also provided with an ear 17 which may be of any convenient shape to engage any form of binding post or fuse block to which the cartridge may be connected.

When a cartridge fuse of the type described blows, it is intended that the same shall be replaced by a fresh cartridge, but oftentimes the attendant has no fresh supply on hand and it is necessary to make a quick repair. I have found by practical experience that by providing the cartridges with my improved socket cap and plug a quick, permanent and safe repair may be made even by an unskilled person, it being only necessary to take a screw driver or a pair of pliers, remove the plugs 8, empty out the filling, insert a new fusible strip, place one end of the same in the slot 9 and screw in one plug firmly binding this end in position. Then return the filling to the casing, place the opposite end of the strip in its slot 9, screw in the binding plug and the whole is complete and as good as new, and this with but a few minutes work and without the use of solder.

If in replacing a fuse strip it is found that the end of the strip on hand is not thick enough to a little more than fill the slot 9, then the end may be bent over upon itself

so that the plug will engage and bind it when positioned in its socket.

I claim:

1. A safety fuse of the cartridge type, comprising a casing, a cap provided with a socket and removably secured to the ends of said casing, the inner wall of the socket portion of said cap being provided with a recess for the reception of the fuse strip end, and a screw threaded plug adapted to be screwed into said socket to engage and bind said fuse strip in said recess.

2. A safety fuse of the cartridge type, comprising a casing, a cap provided with an inwardly turned socket and removably secured to the ends of said casing, a portion of the inner wall of the socket portion being set on an incline and provided with a recess for the reception of the fuse strip end, and a screw threaded plug having a correspondingly tapering portion adapted to be screwed into said socket to engage and bind said fuse strip against the recess wall.

In testimony whereof I affix my signature in presence of two witnesses.

ROLAND P. BERNARDINI.

Witnesses:
HOWARD E. BARLOW,
E. I. OGDEN.