

April 3, 1928.

F. F. FRAKES

1,664,408

ATTACHMENT PLUG

Filed May 31, 1927

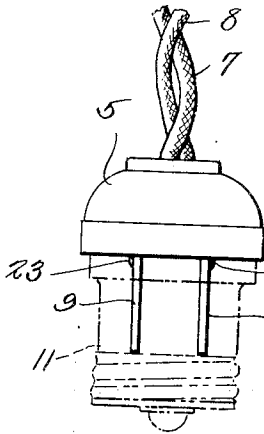


Fig. 1.

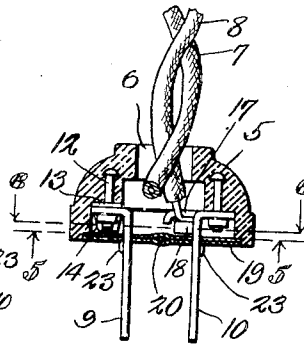


Fig. 3.

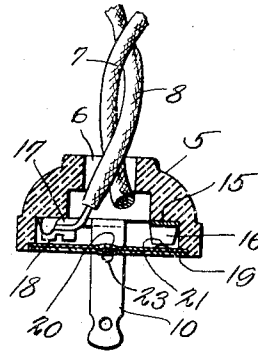


Fig. 4.

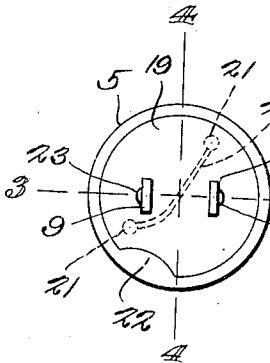


Fig. 2.

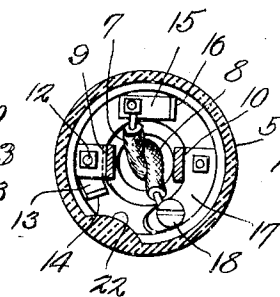


Fig. 5.

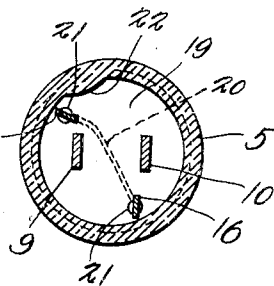


Fig. 6.

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UNITED STATES PATENT OFFICE.

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ATTACHMENT PLUG.

Application filed May 31, 1927. Serial No. 195,311.

This invention has reference to an attachment plug, the primary object of the invention being to provide means to protect the fuses of a circuit in which the plug is positioned from blowing out should a short circuit occur between the plug and electrical appliance, associated therewith.

Another object of the invention is to provide an attachment plug having a fuse of the removable type in circuit with the plug and secured therein so that when a short circuit occurs, the fuse will be destroyed, thereby automatically cutting off the electric energy to the electrical appliance.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawing:

Figure 1 is an elevational view illustrating a separable fuse plug constructed in accordance with the invention.

Figure 2 is a bottom plan view of the head of the plug.

Figure 3 is a vertical sectional view through the head of the plug.

Figure 4 is a sectional view taken at right angles to Figure 3.

Figure 5 is a sectional view taken on line 5-5 of Figure 3.

Figure 6 is a sectional view taken on line 6-6 of Figure 3.

Referring to the drawing in detail, the reference character 5 designates the head of a separable plug employed in connecting an electrical appliance to an electric socket.

The head 5 is formed of suitable insulating material and is provided with a central opening 6 through which the wires 7 and 8 which complete the circuit to the appliance, pass.

Contact arms 9 and 10 respectively extend from the head in the usual and well known manner and fit in sockets of the plug portion of the attachment plug, the plug portion being shown in dotted lines in Figure 1 of the drawing and indicated by the reference character 11.

The arm 9 has a right angled apertured

portion to receive the bolt 12 which also passes through the contact member 13 that has an upstanding end portion 14. The wire 7 extends through the opening in the head and connects with the contact member 15 that has an upstanding end portion 16. The wire 8 is connected with the contact plate 17, by means of the screw 18.

Forming an important feature of the invention, is a disk 19 constructed of mica or other suitable insulating material, the disk 19 supporting the fusible wire 20 that has its ends connected with the contact points 21 so that when the contact points 21 are placed in circuit with the contact members 13 and 15, electrical current will flow through the wire 20 to the contact member 14 and into the arm 9.

An enlargement 22 is formed interiorly of the head, the enlargement being curved to fit within the curved cut out portion of the disk 19.

Openings are formed in the disk 19 to permit the disk to be passed over the arms 9 and 10, and as shown by Figure 2, the arms 9 and 10 are provided with lateral bosses 23 that are designed to contact with the disk 19 to lock the disk in position within the head in a manner to insure against displacement thereof.

From the foregoing it will be seen that due to this construction, electric energy will pass through the fuse wire 20 completing the circuit between the contact points 14 and 16 to supply the arm 9 with electric energy.

It will be obvious that should a short circuit occur in the wire between the plug and the appliance, which often happens, the wire 20 will be burned out breaking the circuit between the contact points 14 and 16 and eliminating any possibility of blowing the fuses in the circuit, and at the same time, protecting the appliance against damage by such short circuiting.

I claim:

1. In an attachment plug, a head, contact arms extending from the head, contact members in circuit with the contact arms and spaced apart, a contact member spaced from the first mentioned contact member, wires leading to one of the first mentioned contact members and to the last mentioned contact member, a disk-like supporting member having openings to accommodate the contact arms, a fusible wire supported by the disk

and adapted to complete a circuit between the last mentioned contact members and one of the first mentioned contact members, and said fusible wire adapted to break the circuit between the contact members in circuit therewith when a short circuit occurs.

2. In an attachment plug, a head, contact arms having bosses extending from the head and having lateral enlargements, contact members in circuit with the contact arms, a contact member spaced from the first mentioned contact members, a disk-like insulating member having openings and adapted to

be positioned over the head, the arms extending through the openings, said bosses contacting with the disk to normally hold the disk against movement, and a fusible wire on the disk and adapted to complete a circuit between the last mentioned contact member and one of the first mentioned contact members.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

FRANK FOSTER FRAKES.