Jan. 2, 1934. A. MACHENHEIMER 1,942,178

FUSE PLUG ADAPTER

Filed May 15, 1930

Fig. 1

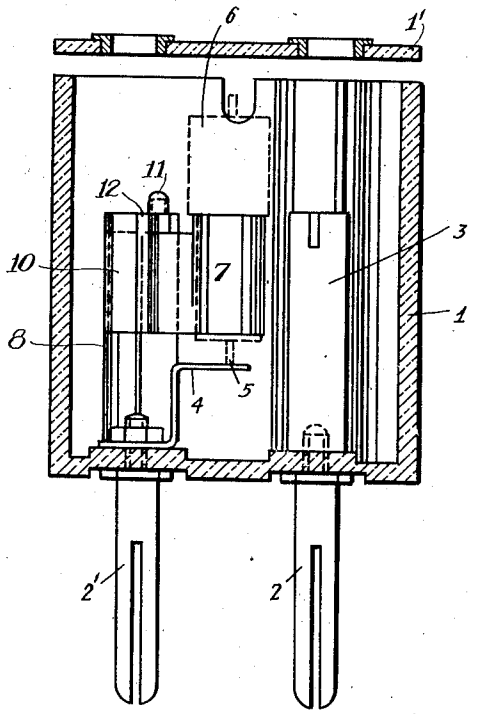
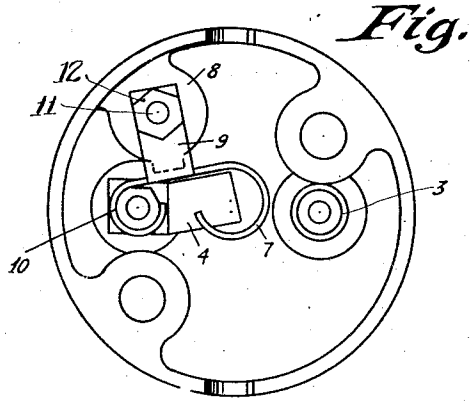


Fig. 2



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FUSE PLUG ADAPTER

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4 Claims. (Cl. 200—115.5)

It has been proposed to provide alternating current line-supplied amplifier arrangements, in particular radio receiving apparatus, with a protective device connected in the primary circuit of a supply transformer. The protection has the purpose to prevent damages to the transformer in case of strong line variations, or of defects in the apparatus which may occur on the secondary side of the transformer connections.

In order to avoid the subsequent and costly reconstruction of apparatus which are built without this protection, it is proposed, according to the new feature, to install a fuse in an intermediate plug or adapter which may be connected, on the one hand, with the apparatus, respectively its connecting plug, and on the other hand with the line. The protective device to be used therefor may be a safety-fuse or the thermo-fuse known in telephone technic.

The drawing shows by way of example an advantageous embodiment of the novel feature.

In the drawing, Figure 1 is a vertical cross section of a plug constructed in accordance with the present invention, the removable fuse being indicated by dotted lines; while,

Figure 2 shows a plan view of Figure 1 with the casing cover and fuse removed.

In a casing 1, suitably consisting of pressed non-conducting material, are disposed the usual connecting plugs 2, 2' spaced the required distance apart. To the plug 2 is directly attached the connecting socket 3 into which may be inserted the one plug of the connection cord of the apparatus. To the other plug 2' is screwed on a contact spring 4 on which bears the lower contact point 5 of the thermo-fuse 6 indicated by the dotted line in Figure 1. This latter is fitted in a yielding sleeve 7 which is attached to a lug 8 in the interior of the plug housing by a clip 9 and retained by an inserted screw 11 and nut 12. The yielding sleeve 7, its attaching clip 9 and a further sleeve-like extension 10 are punched out of one piece of metal. The sleeve-like extension 10 serves as an insertion socket for the second connecting plug between the line and the apparatus to be connected to the line. By means of this arrangement the supply current flows from the outer contact 10 of the fuse and clip 9 through the fuse holder 7 to the lower contact piece 5 through spring 4 to plug 2' and to the apparatus to be energized. The result is that with a strong increase in current above the normal operating circuit requirement of current and voltage, the fuse burns out, thereby disconnecting the apparatus from the line, and preventing injury to the apparatus from such surges of increased voltage or current.

I claim:

1. A protective unit to be interposed between an alternating current source and the apparatus to be energized comprising, a non-conducting cylindrical casing having a removable cover, a pair of prongs extending from the bottom of said casing, a socket member within said casing connected to one of said prongs and coaxial therewith, a second socket member within said casing connected through a fuse and a resilient contact to the other of said prongs and the casing cover having apertures for permitting the prongs of a plug to be inserted in said socket members.

2. A unit to be interposed between a source of alternating current and radio signalling means including means for utilizing said alternating current comprising, a cylindrical casing closed at one end, a pair of prongs extending through the closed end of said casing, a cylindrical socket member extending within said casing and fastened to one of said prongs, a resilient member fastened to the other of said prongs, said resilient member being within said casing, an internal support integral with said casing, a second cylindrical socket member carried by said support, a fuse fastened at one end to said support and at the other end to said resilient member, and a cover for said casing.

3. A fuse adapter to be interposed between a source of alternating current and radio apparatus including means for utilizing the alternating current comprising, a cylindrical casing member closed at one end, said cylindrical casing member being of insulating material, a pair of prongs extending through the end of said member, a metallic cylindrical socket member extending within said casing member and fastened to one of said prongs, a resilient metallic member fastened to the other of said prongs, said resilient member being within said casing member, a support integral with said casing member, a clip mounted on said support, a second cylindrical socket member carried by one end of said clip, a fuse fastened at one end to said clip and bearing at the other end on said resilient member, and a cover for said casing, said cover having a pair of openings coaxial with said sockets.

4. A fuse plug adapter comprising a pair of prongs externally mounted on the base of a cylindrical insulating casing, said casing having apertures for retaining said prongs, one of said

prongs connected to a socket member retained within the casing for connection with an external conductor, the other prong having a connection strip within the casing for connecting to a removable fuse, a clip coiled at both ends and retained on a support within said casing, one end of said coiled end adapted to retain and make the other contact with said removable fuse, the said fuse also connecting with said contact spring, the other end of said clip which is coiled at both ends, being adapted to connect to another external conductor.

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