Dec. 27, 1932. D. L. CRADDOCK 1,892,567

LIGHTNING ARRESTER

Filed June 22, 1932

Fig. 1.

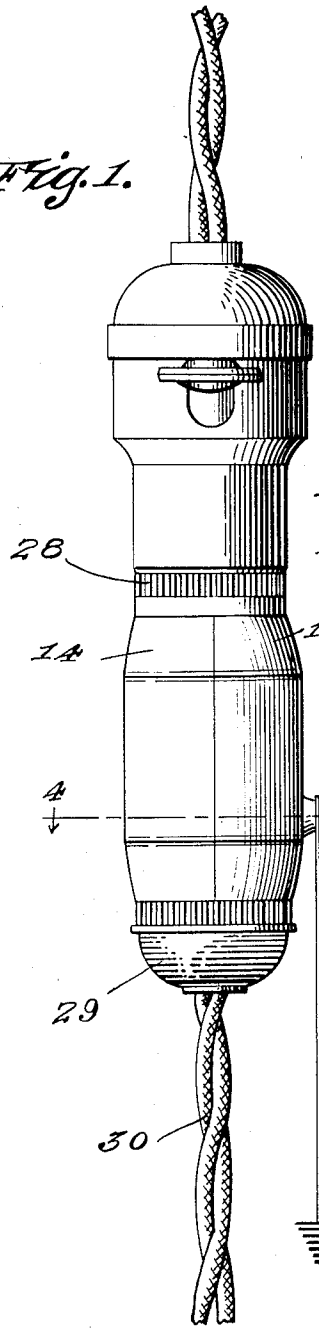


Fig. 2.

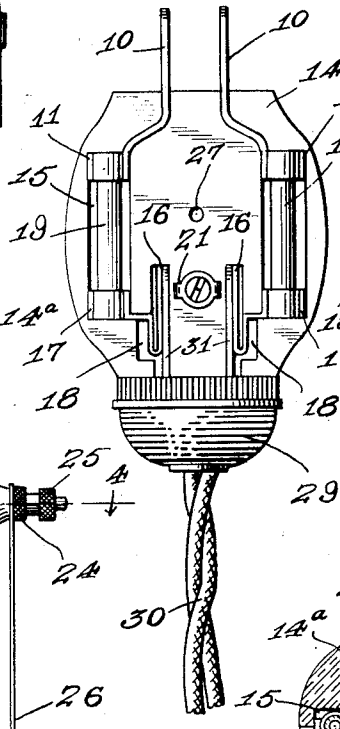


Fig. 3.

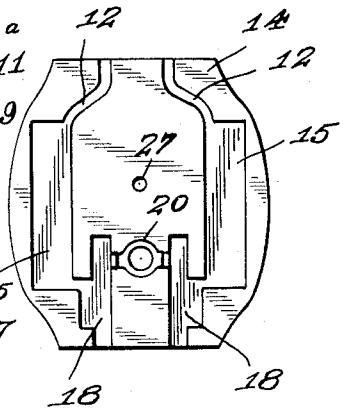
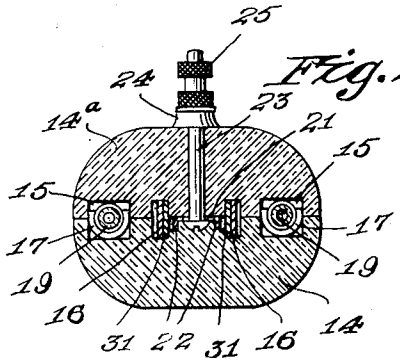


Fig. 4.



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UNITED STATES PATENT OFFICE

DOUGLAS L. CRADDOCK, OF LEAKSVILLE, NORTH CAROLINA

LIGHTNING ARRESTER

Application filed June 22, 1932. Serial No. 618,723.

The object of the invention is to provide a lightning arrester for incorporation in the feed lines for electrical appliances, where such feed lines consist of the conventional flexible cord, so that appliances likely to be burned out in the event of an electric storm, such as radios, may thus be protected; to provide a lightning arrester which may be used in connection with a current tap, socket adaptor or conventional devices of this sort; and generally to provide a lightning arrester which is of simple form and susceptible of cheap manufacture.

With this object in view, the invention consists in a construction and combination of parts of which a preferred embodiment is illustrated in the accompanying drawing but to which embodiment the invention is not to be restricted. Continued use in practice may dictate certain changes or alterations and the right is claimed to make any which fall within the scope of the annexed claims.

In the drawing:

Figure 1 is an elevational view showing the invention applied in operative position.

Figure 2 is an elevational view showing a half of the shell or casing removed.

Figure 3 is an elevational view showing the removed half of the casing or shell.

Figure 4 is a sectional view on the plane indicated by the line 4—4 of Figure 1.

The device constituting the invention comprises the prongs 10 formed with fuse clips 11. These prongs are laid in channels 12 in the two sections of a shell or casing 14 and 14ª. The channels are formed half in one shell section and half in the other, as are also the fuse recesses 15.

Spring contact members 16 are provided and are formed with terminal fuse clips 17. These spring contact members lie in the recesses 18 which open at that end of the shell remote from the channels 12. Fuses 19 each are engaged with the clips 11 and 17.

Between the recesses 18 and the shell section 14ª; a recess 20 is formed in section 14 and in this is seated a plate 21 having angularly turned ends 22 which are adjacent to but out of contact with the spring contacts 16. This plate is secured in place by a stud 23 extending laterally through the section 14ª and secured by means of a nut 24 bearing against the side of the section. A binding nut 25 is mounted on the free extremity of the screw and serves as a means for attaching a ground wire 26.

The two sections 14 and 14ª are assembled by a single bolt or screw passing through the registering eyes or openings 27 in the two sections of the shell.

The prongs 10 and their adjacent clips and the contacts 16 and their clips, together with the connected fuses, merely rest in their recesses when the two shell sections are assembled but by reason of the shapes of the recesses, the parts are held in their proper relationship. The prongs 10 constitute the means for connecting the arrester plug with a plug member 28 inserted in the end of a socket or other receptacle and the plug 29 at the end of the flexible cord 30 may be inserted in that end of the arrester plug designed for such reception, its prongs 31 passing up the recesses 18 and engaging the contact springs 16, between the latter and the turned ends 22 of the plate 21.

Any lightning discharge coming in over the line will then reach ground, jumping across the air gap between the prongs 31 and the turned ends 22 of the plate 21 and passing to the ground over the ground wire 26. Any current following as a result of reducing the resistance of the air gap by the jumping spark will result in blowing one of the fuses 19. The fuse may be easily replaced, however, by separating the two sections of the shell and inserting a new fuse.

The invention having been described, what is claimed as new and useful is:

1. A lightning arrester comprising a shell consisting of complemental sections, and means for securing the same together, a plate mounted on the inner face of one of said sections and provided with outturned extremities, a bolt securing the plate in place and extending to the exterior of the section to provide a ground connection, prongs seated in channels in the sections, contacts seated in recesses in the sections, and fuses connecting

the prongs and contacts, the contact seating recesses opening at the end of the shell for the reception of the prongs of an attachment plug to dispose said prongs between said contacts and the end of said plate but spaced from the latter.

2. A lightning arrester comprising a shell consisting of complemental sections, and means for securing the same together, a plate mounted on the inner face of one of said sections and provided with outturned extremities, a bolt securing the plate in place and extending to the exterior of the section to provide a ground connection, prongs seated in channels in the sections, contacts seated in recesses in the sections, and fuses connecting the prongs and contacts, the contact seating recesses opening at the end of the shell for the reception of the prongs of an attachment plug to dispose said prongs between said contacts and the end of said plate but spaced from the latter, said plate having its extremities turned at angles to the body portion so as to parallel the prongs of the connected attachment plug.

3. A lightning arrester comprising a shell consisting of complemental sections and means for securing the same together, a plate mounted on the inner face of one of the sections, a ground connecting binding post exterior to the shell and electrically connected with said plate, line connecting members seated in channels in the sections, contacts seated in recesses in the sections and electrically connected with the line connections, the contact seating recesses opening at the end of the shell for the reception of the prongs of an attaching plug to dispose said prongs between said contacts and the end of said plate but spaced from the latter.

In testimony whereof I affix my signature.

DOUGLAS L. CRADDOCK.