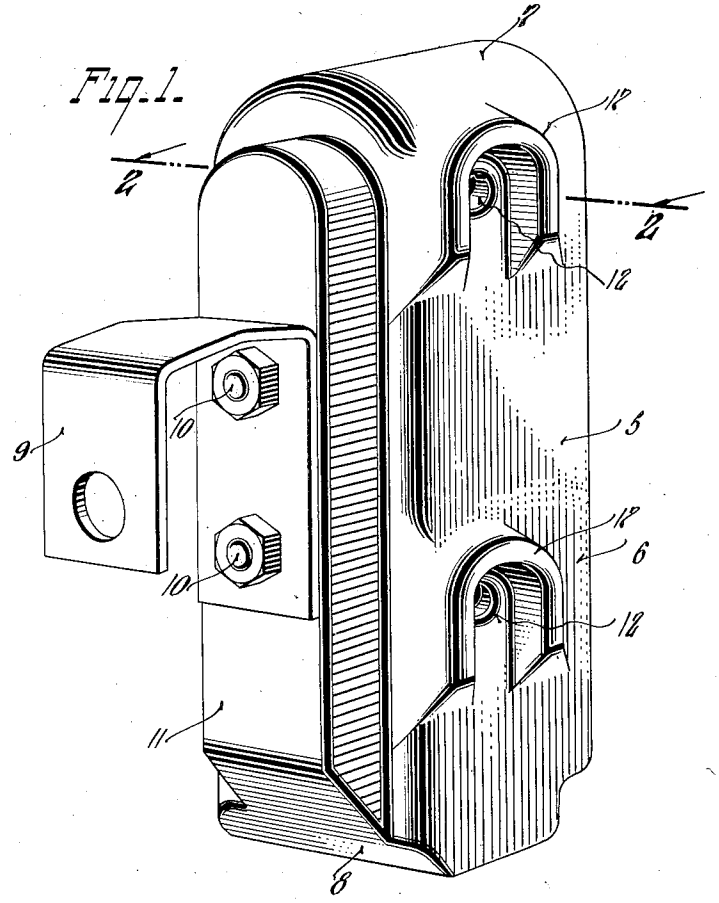
April 28, 1931. A. G. STEINMAYER 1,802,450

FUSE BOX

Filed Aug. 31, 1928 2 Sheets-Sheet 1

Fig. 1.



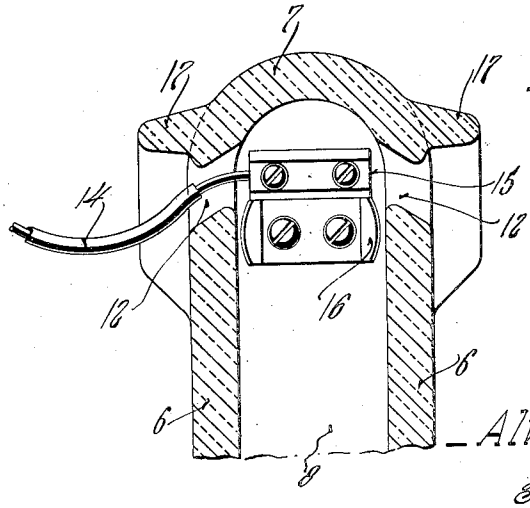


Fig. 2.

Inventor

Alwin G. Steinmayer

By Ira Milton Jones.

Attorney

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Fig. 3

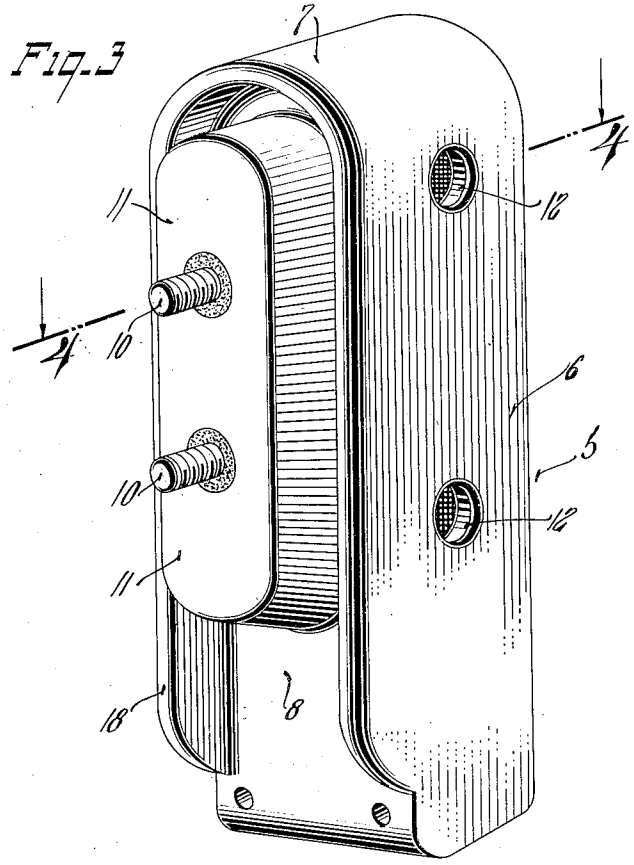


Fig. 4.

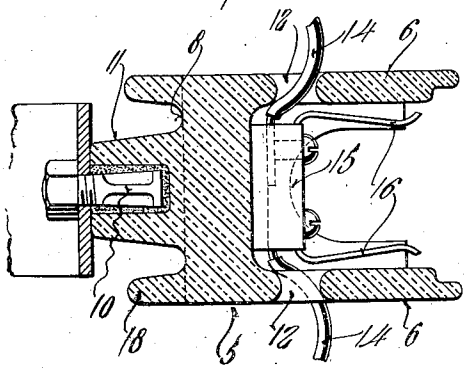
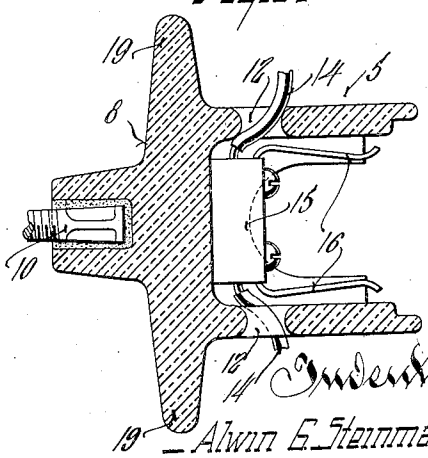


Fig. 5.



Inventor
Alwin G. Steinmayer
By Ira Milton Jones
Attorney

Patented Apr. 28, 1931 1,802,450

UNITED STATES PATENT OFFICE

ALWIN G. STEINMAYER, OF MILWAUKEE, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO LINE MATERIAL COMPANY, OF SOUTH MILWAUKEE, WISCONSIN, A CORPORATION OF DELAWARE

FUSE BOX

Application filed August 31, 1928. Serial No. 303,236.

This invention relates particularly to fuse boxes and housings for electrical appliances and has as an object to provide a housing of the character described which is formed entirely of insulating material and provided with means for increasing the creepage distance between its mounting means and the point at which the line conductors enter the housing.

Another object of this invention resides in the provision of a fuse box or housing of the character described in which means are provided for increasing the creepage distance between the entrance holes.

A further object of this invention resides in the provision of a fuse box or housing of the character described in which the means for increasing the creepage distance between the entrance holes and the support also functions as a rain shield over the holes.

And a still further object of this invention resides in the provision of fins or petticoats extended from the housing between the entrance holes through which the conductors enter and the attaching members by which the housing is secured to its support whereby the creepage surface is increased to obtain a greater flash-over value with a minimum amount of insulating material.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated several complete examples of the physical embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of a fuse box embodying the features of my invention;

Figure 2 is a longitudinal sectional view taken through Figure 1 on the plane of the line 2—2;

Figure 3 is a perspective view of a fuse box embodying a slightly modified form of my invention;

Figure 4 is a transverse sectional view taken through Figure 3 on the plane of the line 4—4; and

Figure 5 is a view similar to Figure 4 illustrating another form of my invention.

Referring now more particularly to the accompanying drawings, in which like numerals designate like parts throughout the several views, 5 represents a housing for enclosing a fuse or other electrical equipment. The housing is adapted to be mounted from any suitable support by an attaching member 9 secured to the housing by screws 10 having their rear portions embedded in a boss 11 extended from the housing wall 8 in any suitable manner. The boss 11 extends substantially throughout the major length of the box and has its top end preferably rounded concentric with the housing's arcuate end wall 7. The side walls 6 of the housing are provided with apertures 12 through which conductors 14 extend to be connected with contact members 15, only one of which is shown, secured in any suitable manner on the inner face of the wall 8. The contact members 15 are provided with clips 16 for the engagement of terminals of the fuse or other electrical equipment, not shown.

It is desirable, especially when higher voltages are being handled, to provide as large a creepage distance as possible between the apertures 12, through which the conductors 14 extend, and the attaching screws 10 and consequently the support for the housing and, in that embodiment illustrated in Figure 1, increased creepage distance is obtained by the provision of hood shaped fins 17 extended from the side walls 6 and surrounding the major portion of the apertures. The fins or hoods 17 besides increasing the creepage distance between the screws 10 and the apertures 12 likewise increase the creepage distance from one aperture to the other and also provide a convenient rain shield to minimize the amount of rain which can drive into the box through the entrance apertures.

In that form of my invention illustrated

in Figures 3 and 4, the hood shaped fins 17 are omitted and a fin or petticoat 18 extends rearwardly from the wall 8 and substantially surrounds the attaching boss 11 but is spaced therefrom and concentric thereto throughout its major portion. The fin 18 forms a continuation of the side walls 6 and 7 of the housing as illustrated and in this manner the creepage distance from the conductors entering the housing or box through the apertures 12 to the supporting beams is greatly increased.

That embodiment of my invention illustrated in Figure 5 is substantially the same as that illustrated in Figures 3 and 4 except that the fin 18 is replaced by a petticoat 19 extending laterally from the sides of the housing throughout the length of the sides 6 and extending across the arcuate top wall 7.

From the foregoing description taken in connection with the accompanying drawing it will be readily apparent to those skilled in the art to which an invention of this character appertains that I provide novel and practical means for increasing the creepage distance from the conductors entering entrance apertures of a fuse box and its supporting means and from one aperture to the other to greatly increase the flash-over value with but a relatively small additional use of the insulating material.

What I claim as my invention is:

1. A housing for an electrical device formed of insulating material and having an opening flush with the external surface of the housing and through which a conductor passes, an attaching member for the housing, and means integral with the housing and substantially surrounding the opening at a slight distance therefrom for increasing the creepage distance between the opening and the attaching member.

2. A housing for an electrical device formed of insulating material and having an opening through which a conductor passes, an attaching member for the housing, and a substantially hood shaped fin for increasing the creepage distance between the opening and the attaching member.

3. A housing for an electrical device formed of insulating material and having openings flush with housing walls through which conductors pass, an attaching member for the housing, and means integral with the housing and spaced from the edges of the openings for increasing the creepage distance between the openings and the attaching member and between adjacent openings.

4. A housing for an electrical device formed of insulating material and having an opening flush with a wall of the housing and through which a conductor passes, an attaching member for the housing, and a substantially hood shaped member formed adjacent the opening and integral with the housing wall for increasing the creepage distance between the opening and the attaching member and for providing a rain shield for the opening.

5. A device of the character described, including a housing formed of insulating material and having an opening in one wall, a contact positioned within the housing with which a conductor is adapted to be electrically connected, the conductor passing through the opening, a mounting member for the housing, and an integral fin extended from the housing whereby the creepage distance from the opening through which the conductor passes to the mounting member is increased.

6. A housing for an electrical device formed of insulating material and having an opening flush with a wall of the housing and through which a conductor passes, an attaching member for the housing, and means integral with the housing and spaced from the edge of the opening for increasing the creepage distance between the opening and the attaching member.

7. In an electrical device housing formed of insulating material and having an opening in and flush with one housing wall through which a conductor passes to the interior of the housing, means for mounting the housing from a support, and a projection extended from the wall of the housing and integral therewith with its foundation adjacent to but spaced slightly from the opening to shield the entrance thereto and increase the electrical creepage distance between the opening and the mounting means.

8. In an electrical device housing molded of insulating material and having openings in and flush with an outer wall of the housing leading to its interior and through which conductors pass, a projection extended from the housing outer wall and molded integral therewith and adjacent to but spaced slightly from each opening to shield the entrances thereto and increase the electrical creepage distance between the openings.

9. In an electrical device housing molded of vitreous insulation material and having openings leading to its interior, mounting means for securing the housing to a support, and substantially U-shaped ribs molded integral with the housing outer wall and substantially surrounding the openings to increase the electrical creepage distance between the openings and between the openings and the mounting means.

10. In an electrical device housing provided with conductor receiving openings through and flush with wall portions of the housing, an external surface portion integral therewith spaced from the openings and formed in such manner as to increase the electrical creepage distance of the external surface of the housing.

11. In an electrical device housing formed of insulating material and having an opening in one wall through which a conductor passes to the interior of the housing, means mounting the housing from a support, and a substantially U shaped fin, having a part disposed above the opening and molded integral with the housing wall to shield the entrance to the opening and increase the electrical creepage distance between the opening and the mounting means.

12. In an electrical device housing formed of insulating material and having an opening in one wall through which a conductor passes to the interior of the housing, means for mounting the housing from a support, and a fin formed integral with the housing wall, said fin being substantially uniform in cross section throughout its entire extent and being disposed between the opening and the mounting means to increase the electrical creepage distance between the opening and the mounting means.

13. In an electrical device housing formed of insulating material and having an opening in one wall through which a conductor passes to the interior of the housing, means for mounting the housing from a support, and a substantially U shaped fin extended from the wall of the housing and formed integral therewith, said fin having a portion disposed above the opening to form a shield to the entrance thereof and another portion disposed between the opening and the mounting means to increase the electrical creepage distance between the opening and the mounting member and being substantially uniform in cross section throughout its entire extent.

14. In an electrical device housing formed of insulating material and having an opening in one wall through which a conductor passes to the interior of the housing, means for mounting the housing from a support, and a substantially U shaped fin extended from the wall of the housing and formed integral therewith, said fin having a portion disposed above the opening to form a shield to the entrance thereof and another portion disposed between the opening and the mounting means to increase the electrical creepage distance between the opening and the mounting member.

15. In an electrical device housing formed of insulating material and having a wall opening for the passage therethrough of a conductor, means for mounting the housing from a support, and a fin formed integral with the housing wall between the opening and the mounting means to increase the electrical creepage distance between said opening and mounting means.

In testimony whereof I have hereunto affixed my signature.

ALWIN G. STEINMAYER.