Jan. 26, 1932. J. A. FRIED 1,842,376

ELECTRICAL CONDENSER CASING

Filed June 2, 1925

Fig. 1

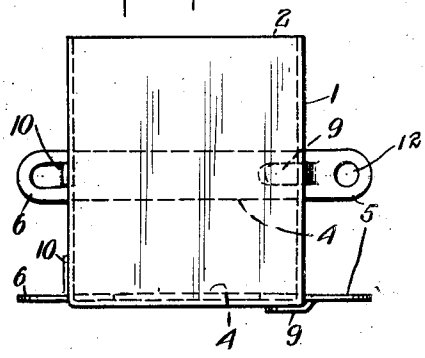


Fig. 2

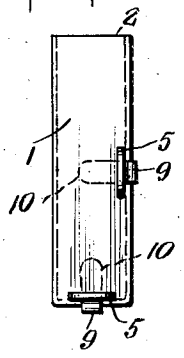


Fig. 3

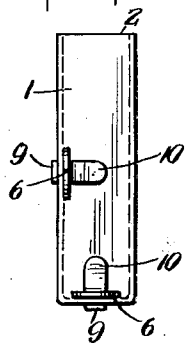


Fig. 4

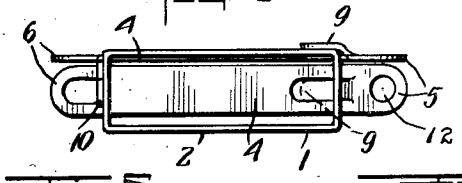


Fig. 5

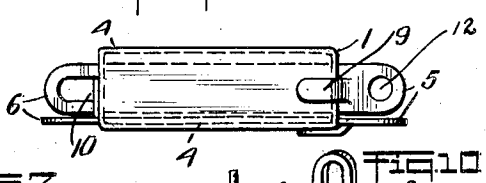


Fig. 6

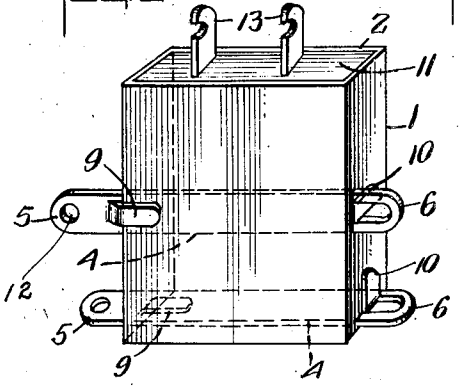


Fig. 7

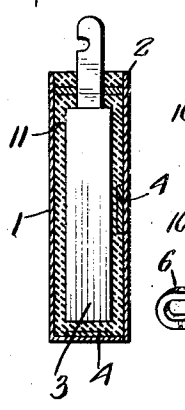


Fig. 10

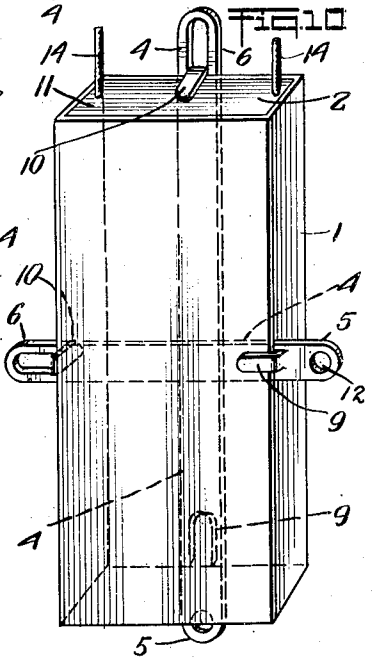


Fig. 8

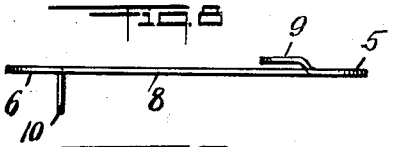
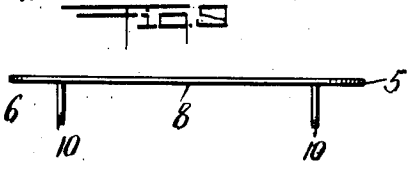


Fig. 9



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Patented Jan. 26, 1932 1,842,376

UNITED STATES PATENT OFFICE

JOSEPH A. FRIED, OF FLUSHING, NEW YORK, ASSIGNOR TO DUBILIER CONDENSER CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE

ELECTRICAL CONDENSER CASING

Application filed June 2, 1925. Serial No. 34,429.

My invention relates to improvements in containers or casings for electric condensers; particularly to a container provided with a supporting and anchoring member to enable it to be mounted with the condenser in operative position.

An object of my invention is to provide a satisfactory container of simple yet effective construction and of inexpensive material. Another object of my invention is the provision of means whereby the said container may be satisfactorily fastened upon a base board or firmly anchored to any desired supporting device without injury to the walls of the said container.

Heretofore, containers intended to protect and cover electric condensers have been generally made of metal, molded or otherwise formed to the shape of the box. When such boxes are made in one piece by folding and bending the material by machinery, the cost of their production is higher than is desirable; nevertheless such boxes are frequently made. Many conditions exist, however, in which condensers that do not necessitate the enclosure of the condenser in so substantial a box as one made of metal are employed; and for many purposes where the condenser is not exposed to rough treatment or handling, a casing composed of cheaper and weaker material, such as cardboard or formed of papier-mâché will give long and excellent service.

One of the greatest drawbacks heretofore encountered in the use of a casing for a condenser made of a weaker material than sheet metal, has been the difficulty experienced in rigidly attaching to the container anchoring lugs for fastening the container firmly to a supporting surface. Usually individual lugs, rivetted to or claw-crimped upon the thin walls of such a container are used. Experience teaches that lugs so attached are too easily torn away; the adjacent walls of the container then being so damaged that the condenser as an electrical unit has to be discarded. In my improved container the use of relatively cheap and weak material is retained and the risk of damage is practically eliminated.

For a clearer understanding of this and other advantageous features, reference is had to the accompanying drawings, wherein;

Figure 1 is a front view of a container or casing for a condenser according to my invention;

Figure 2 is a side view thereof;

Figure 3 an opposite side view;

Figure 4 a top view;

Figure 5 a bottom view;

Figure 6 a perspective view;

Figure 7 a vertical section through such a casing with a condenser therein;

Figures 8 and 9 are longitudinal edge views of supporting strips or members for such a casing; and

Figure 10 is a perspective view of another form of casing and enclosed condenser.

The same numerals identify the same parts throughout.

At 1 is shown a casing in box form, of rectangular or other shape, having at least one flat side which preferably is made of stiff paste board, pressed papier-mâché or the like. All joints and seams are sufficiently closed so as to be leak proof for hot paraffin or other similar waxes. This casing is closed at the bottom, but open at the top 2 to permit insertion of the condenser 3. In the casing and projecting therefrom at both ends is a supporting strip or member 4, the extremities of which constitute anchorage lugs 5, 6 through which fastening devices may be passed to enable the mounted container to be upon any desired device to support same. In Figures 1 to 7 inclusive the casing is shown with a member 4 at the bottom and through the sides above the bottom, but Figure 10 shows in addition to the transverse strip a longitudinal member 4 with flat lugs 5 and 6 protruding from the top and bottom of the container, this strip 4 running lengthwise through the casing 1. The location of the lugs 5 and 6 is thus a matter of choice, depending to a certain extent upon the size of the space available for mounting the container and also upon the shape of the box and the weight of the contents within same.

The strips or members 4 are constructed as follows:—

In one form, Figure 8, a flat strip of thin but sufficiently rigid metal 8 for instance of tinned iron or brass is rounded at its ends, and cut sufficiently long to project for the required distance outside of the particular container to which it is to be attached. At predetermined distances from the longitudinal center of the flat strip 8 metal tongues 9 and 10 are punched, tongue 9 being bent during this operation substantially parallel with the strip 4, while the other tongue 10 is at first not bent at all to facilitate the insertion of the strip into the casing. The strip 8 is applied to the container in the following manner. The end of the strip provided with the tongue 10 is inserted into a slit provided in the side of the casing 1. The strip is then pushed over the inner surface of the flat rear wall of the box and through a similar slot in the opposite side wall of box 1. After pressing strip 8 home with tongue 9 resting upon the exterior of the rear wall and with the edge of that wall firmly seated in the crotch of tongue 9, tongue 10 is bent as desired, either at right angles to the front into close approximation to the adjacent outer face of the adjacent side wall of the box, or bent backward so as to clamp upon the surface of the back wall of the box. In Figures 1 to 6, two such strips, one adjacent the bottom and another above the bottom may be utilized; both passing through the box from side to side. In the sectional view of Figure 7 the condenser 3 is shown surrounded by and embedded in insulating and fixative wax 12 serving as a filler for the condenser. The wax is melted and poured into the container after the insertion therein of the condenser and around the latter, and this wax completely covers both the condenser, and that portion of the strips 4 within the container. After cooling, a twofold purpose is accomplished, namely, not only is the condenser rigidly held in the proper position in the container, but the strip 8 also is given firm support by the encompassing wax filler. As indicated in Figure 9, both lugs 9 and 10 may be bent at right angles to engage the opposite sides of the casing 1.

Figure 10 indicates the strip 8 affixed to the casing 1 in the vertical position. Obviously an additional transverse strip may be attached also to this form of container, or even a third strip, if so desired, may be inserted and located adjacent the lower part of the casing.

While I have described my improved form of strip 8, as embodying the two-punched tongues 9 and 10, I have found that where the container is very small and its contents relatively light, the presence of tongue 10 can be dispensed with, thereby saving the cost of an operation and at the same time introducing no particular hazard as regards the stability of the anchorage.

Figures 1 to 5 inclusive show a bottom strip and a transverse strip at the back. In Figures 6 and 10 the transverse strip is at the front. The lugs 5 are additionally perforated at 12 but the lugs 6 have apertures left by the tongues 10 for fastening screws. In Figure 6 terminals 13 of the condenser project out through the wax 11; and in Figure 10, similar terminals or conductors appear at 14.

Of course if tongue 10 is omitted the lug 6 will be perforated, like the lug 5, in each strip.

I may, of course, make changes in the structural details set forth herein without departing from the scope or principle of my invention.

Having described my invention, what I believe to be new and desire to secure and protect by Letters Patent of the United States is:—

1. A condenser, a casing made fast thereto and enclosing same, and a supporting member passing along and through the casing, and having projecting ends to enable the casing and condenser to be mounted, said member having a tongue to engage the casing and prevent displacement of said member relative to said casing.

2. A condenser, a casing enclosing same, and a supporting member passing through the casing, and having projecting ends to enable the casing and condenser to be mounted, said member having a tongue to engage the casing and prevent displacement of said member relative to said casing, said tongue being parallel to said member.

3. A condenser, a casing fixed thereto and enclosing same, and a supporting member passing along and through the casing, and having projecting ends to enable the casing and condenser to be mounted, said member having a tongue to engage the casing and prevent displacement of said member relative to said casing, said tongue being at right angles to said member.

4. A condenser, a casing fixed thereto and enclosing the casing, and a supporting member passing along and through the casing and having projecting ends to enable the casing and condenser to be mounted, said member having tongues to engage the casing and prevent displacement of said member relative to said casing.

5. A casing, a condenser in the casing and a supporting member running lengthwise through the casing, said member having tongues to engage the casing at opposite points, one tongue being parallel to it and the other at right angles thereto.

6. A casing, a condenser in the casing, supporting members extending through the casing from side to side adjacent the bottom and between the bottom and top of said casing, and tongues on said members to engage the casing at opposite points, one tongue on each

member being substantially parallel therewith, and the other at right angles to same.

7. A condenser comprising a casing, a condenser body and a sealing compound within the casing, terminal means for the condenser extending through the casing, and a mounting member extending into said compound, the compound comprising a means for affixing the mounting member to the casing.

8. A condenser comprising a casing, a condenser body and embedding compound within the casing, terminal means for the condenser extending through the casing, a mounting member extending through the casing and into said embedding compound, the compound comprising a means for positioning said mounting member with respect to the casing.

9. A condenser comprising a casing, a condenser body within the casing, terminal means for the condenser extending through the casing, a mounting member extending into the casing, an embedding compound filling the space between the condenser body and the casing and adhering to said mounting member and comprising a positioning means therefor.

10. A condenser comprising a casing having a condenser body therein, an embedding compound for the body within the casing, terminal means for the condenser extending through the casing, a mounting strip passing through the casing and said compound, the compound comprising a means for affixing the mounting strip to the casing.

11. A condenser comprising a casing of fragile material, a condenser body within the casing and an embedding compound between said body and casing, terminal means for the condenser extending through the casing, a mounting strip of rugged material extending through the casing and into said embedding compound, the compound serving to affix the mounting member to relieve strain on the casing.

12. A condenser comprising a casing of cardboard material, a condenser body within the casing and an embedding compound between said body and casing, terminal means for the condenser extending through the casing, a metallic mounting member extending into the casing and compound, said compound serving to affix the mounting member and prevent the casing from being torn by said member.

In testimony whereof I affix my signature.

JOSEPH A. FRIED.