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INSULATING COVER FOR BUS BARS

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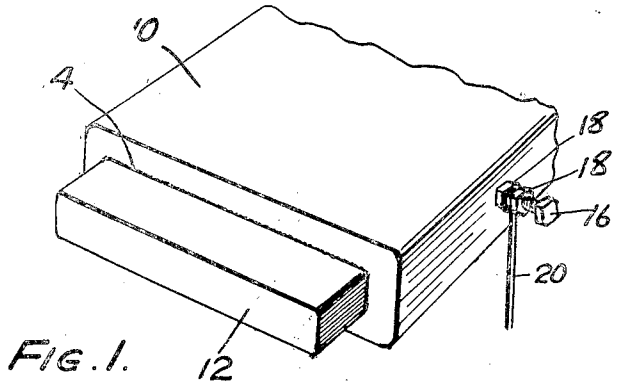


FIG. 1.

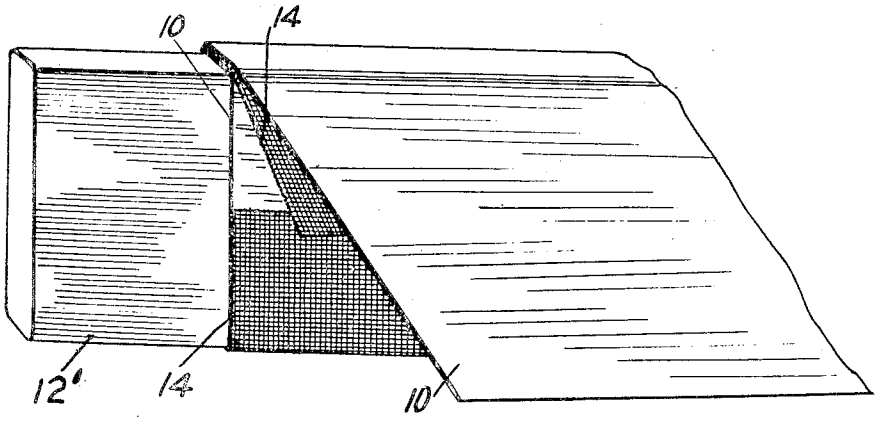


FIG. 2.

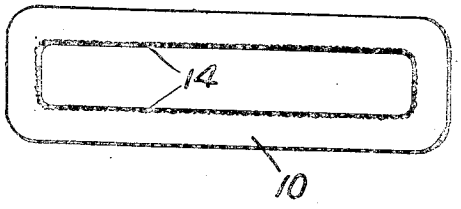


FIG. 3.

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INSULATING COVER FOR BUS BARS

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3 Claims. (Cl. 174—140)

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This invention relates to an improvement in insulating covers for conductor or bus bars having metalized inner surfaces for contact with the bars.

One of the objects of my invention is to provide a bus bar covering for eliminating the corona effect produced between the bus bar and its covering, due to the minute air gap between the covering and the bus bar, which corona produces carbon tracks on the surface of the insulating cover and in time causes insulation failure.

Another object of my invention is to provide a bus bar cover having a lining of copper or any other conducting metal, which can be grounded through a proper resistor to avoid the formation of a corona.

Another object of my invention is to provide a conducting lining which will be in contact with multitudinous places over the face of the bus bar and at the same time be perfectly anchored throughout its entire area to the covering.

Another object of my invenition is the provision of a method by which such covers can be made at a low cost and of the proper shape to be slipped on a bus bar, or a bar for conducting a high voltage current.

Having now described, in a general way, the nature and purpose of this invention, I will proceed for illustrative purposes, to a description of a preferred embodiment thereof, with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a conductor bar having an insulating cover, in accordance with my invention.

Figure 2 is a perspective view of a portion of a mandrel, showing the method of winding a covering thereon, and,

Figure 3 is an end view of a completed cover.

In Figure 1, the covering is designated by the reference character 10, on a conductor bar 12, and 14 designates the metal lining, embedded in the cover and contacting with the conductor bar 12.

In the form shown the conducting lining is formed of copper screening, and the covering is formed as hereinafter described.

The reference character 16, designates a screw threaded through the covering and into contact with the metal lining, and connected to the screw between nuts 18, 18, is a grounded wire 20 having a resistor of the proper capacity therein, to prevent the formation of a corona between the conductor and the covering.

The metal lining is preferably formed of copper screening, although any other metal conducting screening, pierced, or perforated sheet may be used for the lining.

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The covering is formed by supporting a mandrel 12' the shape of the conducting bar 12 for winding strip material, then winding a turn or two of dielectric material 10 thereon, and then wrapping in the metal sheet 14 to produce an overlapping layer of the metal lining and then continuing the winding of dielectric material 10, until the required thickness of insulating wall is built up.

After the covering on the bar or mandrel has been built up, the mandrel is removed from the winding supports, and is then placed in a proper mold for compressing the dielectric material and after curing the cover is removed from the mandrel.

As the metal of the liner is harder or more dense than the dielectric material, portions thereof will cut through the dielectric material and will be exposed on the inner surface and will be in direct contact with the face of a bar over which it is slipped.

The cover may be made in different lengths and may be sawed into various lengths to cover the portions of bars to be insulated, and may then be drilled and tapped for a grounding screw or the lining may be grounded in any desired manner.

Any type of dielectric material which requires molding after wrapping may be used, but I preferably use a paper or fabric impregnated with a synthetic resin having insulating capacity, as, for example, a phenol formaldehyde type resin, and which may be applied by wrapping and then formed in a mold under heat and pressure.

What I claim to secure by Letters Patent is:

1. An insulating covering for a conductor bar having a layer of dielectric material on the inner surface, a layer of copper screening on said inner-layer of dielectric material, a plurality of layers of dielectric material on the screening portions of the screening extending through the inner layer of the dielectric and portions of the dielectric layers thereon, said layers being bonded to each other by an insulating cement.

2. An insulating covering of tubular shape for a conductor bar having a layer of dielectric material on the inner surface, a layer of foraminous conducting metal on said inner layer of dielectric material, a plurality of layers of dielectric material wound on the layer of foraminous conducting metal bonded to each other by an insulating cement, portions of the foraminous conducting

metal extending through the inner layer of dielectric and portions of the dielectric thereon.

3. An insulating covering of tubular shape for a conductor bar having a layer of dielectric material on the inner surface, a layer of foraminous conducting metal on said inner layer of dielectric material, a plurality of layers of dielectric material wound on the layer of foraminous conducting metal bonded to each other by an insulating cement, portions of the foraminous conducting metal extending through the inner layer of dielectric and portions of the dielectric thereon, and a grounding contact extending from the foraminous sheet through the wall of the tube.

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