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CONDENSER POTTING COMPOSITION

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This invention relates to a composition of matter, and more particularly to a potting compound for condensers.

In the manufacture of wound paper foil condensers, it has been common practice to wind the paper and foil into the form of a condenser and then impregnate the condenser under heat and subatmospheric pressure to expel the moisture, after which the condenser is impregnated with a material for filling the voids. The condenser is then usually placed in a metallic can, which is filled with a potting compound, to seal the condenser from the atmosphere. One of the most common materials used for impregnating the condenser is a halogenated hydrocarbon, such as chlorinated naphthalene. It has been found that when an asphaltic material is used as the potting compound, the potting compound tends, in the course of time, to diffuse into the impregnating medium, where it has a detrimental effect on the dielectric properties of the condenser. This diffusion of these materials in the solid state usually takes place rather slowly and the defects ordinarily do not become noticeable until the condenser has been installed in service for some time, necessitating considerable inconvenience in the replacement of the condenser.

An object of the invention is to provide an effective composition of matter particularly for potting condensers.

In accordance with one embodiment of the invention, a quantity of carnauba wax is mixed with an asphaltic material, and the mixture is used as a potting compound for a condenser impregnated with a halogenated hydrocarbon to provide an indiffusible sealing material for the condenser.

Asphaltic potting compounds may be rendered inactive to diffuse into the hydrocarbon by the addition of a medium which renders the asphaltic material indiffusible into the hydrocarbon impregnating material. A suitable medium for rendering the asphaltic material inactive is a vegetable wax, such as carnauba wax, japan wax or candelilla wax, which may be used in percentages vary from 5% to 60% or more. This range is not limiting and the determining factor is the brittleness or plasticity desired in the mixture. Artificial resins, such as oxidized abietic acid, sold on the market under the name of "Vinsol", may also be used. Any suitable type of asphaltic material may be used, such as petroleum base asphalt, blown asphalt, still run asphalt, or natural asphalt.

When using carnauba wax, the best percentages have been found to be from 5% to 10%, which completely prevents the diffusion of the asphaltic material into the impregnating material and does not render the composition too brittle. The greater the percentage of carnauba wax, the more brittle the composition will be and, therefore, in cases where a higher degree of brittleness is desired, much higher amounts of carnauba wax may be used.

It will be understood that while a specific embodiment of the invention has been disclosed, many changes and modifications may be made therein without departing from the sphere and scope of the invention.

What is claimed is:

1. A condenser potting composition for condensers impregnated with a halogenated hydrocarbon comprising a mixture of asphaltic material and a medium for inhibiting diffusion of said material.

2. A condenser potting composition for condensers impregnated with a halogenated hydrocarbon comprising a mixture of an asphaltic material and carnauba wax.

3. A condenser potting composition for condensers impregnated with chlorinated naphthalene comprising a mixture of an asphaltic material and carnauba wax.

4. A potting composition for condensers impregnated with chlorinated naphthalene comprising an asphaltic material and a vegetable wax.

5. A condenser potting composition for condensers impregnated with a halogenated hydrocarbon comprising an asphaltic material and a vegetable wax.

6. A composition for potting condensers impregnated with a halogenated hydrocarbon comprising an asphaltic material and oxidized abietic acid.

7. A condenser potting composition for condensers impregnated with a halogenated hydrocarbon comprising an asphaltic material and an abietic acid derivative.

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