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EUGENE T. TROTTER, OF BROOKLYN, NEW YORK.

COVERING FOR ELECTRIC CONDUCTORS AND METHOD OF PREPARING THE SAME.

1,067,951. Specification of Letters Patent. Patented July 22, 1913.

No Drawing. Application filed November 8, 1910. Serial No. 591,380.

To all whom it may concern:

Be it known that I, EUGENE T. TROTTER, a citizen of the United States of America, and a resident of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Coverings for Electric Conductors and Methods of Preparing the Same, of which the following is a specification.

My invention relates to coverings for electric conductors and methods of producing the same, the main object of my present invention being to treat an ordinary insulated conductor in such a way that the insulation thereof shall be rendered water and flame-proof.

In carrying out my invention I apply a plastic coating to the exterior of insulated conductors, such plastic compound being of such a nature as to be plastic or fluid when at a temperature considerably above that of the normal atmospheric temperature, yet becomes hard and solid at and around normal atmospheric temperatures. The composition which I have heretofore found as giving good results comprises stearin pitch and manganese oxid in the proportion of five parts of the former to one part of the latter. The stearin pitch may be heated for several hours,—four hours being the duration of time I have successfully employed,—at a temperature of about 350 degrees Fahrenheit. Thereafter the pitch may be allowed to cool until it reaches a temperature of about 240 degrees Fahrenheit at which time the manganese oxid may be gradually incorporated therein. The proportion of manganese oxid employed may of course be varied to suit individual requirements. The material may be agitated so as to cause a thorough mixture of the constituent parts after which it is ready for use and may be applied to a conductor in any suitable manner such as by the methods commonly employed for this purpose,—for instance, the conductor may be drawn through a bath containing this material, the surplus or excess material being wiped off or otherwise removed if necessary. Thereafter and while the compound is still hot, and hence in a plastic and sticky condition, I preferably apply powdered mica thereto in quantities just sufficient to substantially cover the exterior of the coated article. The mica will adhere to the plastic compound because of its sticky condition and will become substantially incorporated therein so that it will become a permanent part of the finished article when the plastic compound is finally dry and hard. The application of the mica may be accomplished in any suitable manner as by drawing the coated conductor through a vessel containing the mica, the surplus or excess quantity, if desired, being brushed, wiped, or scraped off. Thereafter the conductor so prepared is allowed to dry and is then ready for use.

The plastic compound composed of stearin pitch and manganese oxid has both water-proof and flame-proof qualities to a high degree. While it is not actually fire-proof, in that the flame from a Bunsen burner will consume it, yet it is flame-proof to the extent that if the Bunsen burner be removed the flame will not travel beyond the point where the flame from the burner was applied.

The mica covering produces a fine finish, the co-efficient of friction of which is relatively low so that the drawing of the conductors through conduits will be facilitated. Moreover, it protects the compound beneath it to the extent that the finished article will withstand the standard test adopted by companies using such articles, viz., that it will not stain paper upon which it is laid when subjected to a temperature of 130 degrees Fahrenheit for thirty minutes. Moreover, the mica finish produces a lustrous effect which is pleasing and attractive to the eye. Again the composition is of such a character that it will not be unduly brittle at low temperatures, that is to say, it will not crack or break at any temperature to which such articles are normally subjected.

What I claim is:

1. A covering for insulating material of electric conductors consisting of a water-proofing and flame-resisting coating, comprising stearin pitch and manganese oxid in the proportion of five parts of the former to one part of the latter.

2. The herein described method of preparing a water-proofing and flame-resisting

compound which consists in subjecting stearin pitch for several hours to a temperature of about 350 degrees Fahrenheit, then lowering the temperature thereof to about 240 degrees Fahrenheit, and in then adding manganese oxid thereto in the proportion of about one part manganese oxid to five parts of stearin pitch and mixing the two materials thoroughly.

EUGENE T. TROTTER.

Witnesses:
D. HOWARD HAYWOOD,
LYMAN S. ANDREWS, Jr.