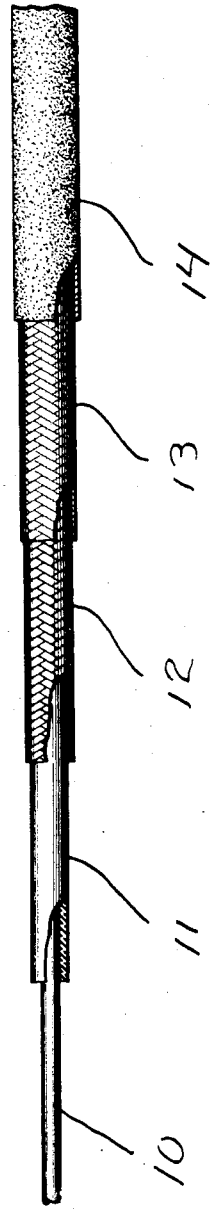
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FLAMEPROOF CABLE

Filed July 5, 1929



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UNITED STATES PATENT OFFICE

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FLAMEPROOF CABLE

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This invention relates to improvements in flame proof or slow burning insulated wires or cables.

According to present practice such wires are made by employing stearin pitch as a flame retardent and by utilizing a waxy material such as paraffin for the outer surface which provides a slick and non-sticky finish. With certain kinds of wire it is desirable that the color or coat characteristic of the wire be secured from the coloring of the braiding. When white braiding is employed the use of stearin pitch is not wholly satisfactory.

It is accordingly, one object of the present invention to provide an insulated wire with a novel flame retardent of such character that such flame retardent is adaptable for use with light and even white colored braiding.

The invention is not, however, limited to flame retardent for wires with white braiding since the novel flame retardent can also be used with colored braiding and particularly with such braiding which is of light or bright color.

It is a further object of the present invention to provide an improved insulated wire or cable which has flame proof characteristics and in which the distinguishing or code coloring of the cable may be secured from the coloring or color characteristics of the braid itself and which cable also has a slick exterior so as to facilitate the drawing of the wire and to prevent the convolutions of the cable sticking to each other or presenting a sticky or tacky surface to the hands of the user.

It is a further object of the present invention to provide an improved insulated wire or cable in which the flame retardent material is kept in place upon the braiding by the outer slick finishing material.

Other objects and advantages will be hereinafter set forth in the accompanying specification and claims and shown in the drawing which by way of illustration shows a preferred embodiment of the invention.

In the drawing:

The figure is an illustration of a wire incorporating the present improvements.

Referring to the drawing 10 is the copper conductor, 11 is the usual rubber insulated covering, 12 is a braid, this may be of white braided yarn fabric or if desired it may be a braid in which the yarn is colored but in distinguishing color.

After the braid is applied in the usual way the braiding is saturated with a solution of water glass or silicate of soda. This is designated 13. The water glass thoroughly impregnates the braid and makes the same flame proof. The use of water glass also affords the desired flame retardent and resisting characteristic to the complete cable. After the water glass is applied to the braid, the cable is thoroughly dried so that all moisture is removed and so that the water glass is changed into a dry condition.

The final step in the preparation of the wire resides in the application of a thin coating of paraffin or wax-like material 14 over the braid which as before stated, is saturated and impregnated with the water glass material. This wax-like material provides a smooth slick and non-sticky finish to the cable so that it can be readily drawn when installed. The wax-like material also provides a non-sticky outer surface for the cable. The waxy material also co-acts with the water glass or silicate of soda material to hold it in place and to prevent its being shaken off from the cable when the latter is shipped or when it is in use.

In the drawing the water glass material which is designated 13 and the thin waxy outer coating designated 14 are shown somewhat exaggerated in thickness for the sake of clarity of illustration. In practice the water glass which is the fire retardent material would thoroughly permeate in the braiding and its presence would only slightly if at all increase the diameter of the braided wire. The paraffin or wax-like outer coating is also somewhat exaggerated in thickness for the same reason. In actual practice this coating is quite thin and its use does not materially increase the thickness of the silicate of soda impregnated braided cable.

Cables made according to the above invention present a brilliance of color heretofore not readily obtainable when other flame retardent materials are employed. Such cable

also has excellent flame retardent characteristics and it has in addition the desirable exterior slick and non-sticky finish.

What I claim is:

1. An insulated wire including a conductor exteriorly insulated with rubber and the rubber being covered over with a light colored braid, said braid being exteriorly covered with silicate of soda for fire proofing purposes and to provide a fire proofing material which is transparent so that the color of the braid can be seen through the transparent silicate of soda material, and a thin coating of transparent wax applied directly over the silicate of soda coating to maintain this coating in place and to provide a transparent slick outer finish which is of transparent nature so that the color of the braid is visible therethrough.

2. A cable comprising the usual conductor, a rubber insulating covering therefor, a braided cover for the insulation, which braiding is of light color and outer coatings for the braiding both of which are transparent so that the light color of the braid may be viewed through said coating, one coating being disposed directly upon the braid and comprising transparent silicate of soda, and the other coating which is upon the outermost portion of the cable comprising a thin layer of transparent wax.

3. A cable having a light colored braided covering impregnated with silicate of soda to provide fire retarding characteristics thereto and to provide a transparent coating through which the light color of the braid may be visible, said cable also having as the outermost coating of the cable an outer surface of transparent wax-like material through which the light color of the braid is visible.

In testimony whereof I hereto affix my signature.

WILLIAM C. ROBINSON.