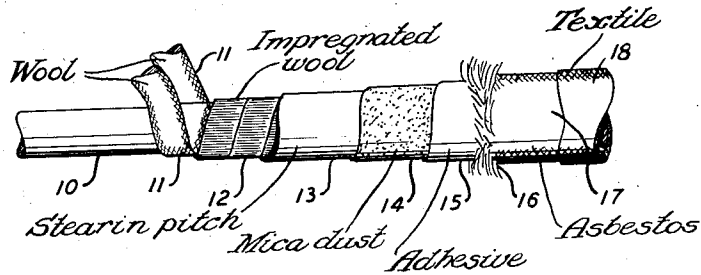


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ELECTRICAL CONDUCTOR
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ELECTRICAL CONDUCTOR

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8 Claims. (Cl. 173—264)

This invention relates to electrical conductors and a method of insulating them and more particularly to the kind of electrical conductors known as power wires used principally to supply electrical power to domestic heating devices such as ovens, stoves, toasters, percolators, irons and the like.

Such conductors are often called upon to carry far heavier currents than are the wires used for lamps, vacuum cleaners and the like, and also may often be exposed to unusual conditions of external heat and moisture.

One object of the present invention is to provide a conductor having a multilayered sheath which is in high degree moisture proof and fire-proof and which is both flexible and durable.

One embodiment of the invention contemplates a method and its product which comprises taking a bare metallic conductor strand, applying a sheath of natural wool fibre, impregnating the wool sheath with a moisture proofing material such as asphalt, coating the impregnated sheath with stearin pitch or the like, covering the stearin pitch coating with mica dust, applying a thin coating of adhesive thereto, braiding a layer of asbestos fibre strands over the adhesive, applying a thin flour paste solution to the braided asbestos sheath and polishing the surface. In some instances a textile outer sheath may be braided over the whole.

Other objects and features of the invention will appear from the following detailed description of one embodiment thereof taken in connection with the appended drawing which represents the partially uncovered end of a conductor constructed in accordance with the invention.

In the embodiment of the invention herein disclosed, a metal conductive strand 10 forms the core of the cord. This strand 10 may be a bare solid wire as shown or may be an intertwisted or interbraided bundle of fine wires.

As here disclosed, two flat strands or tapes 11 of wool fibre are wound or served on the core, one over the other with opposite spiral directions, to form a double layer of wool sheathing. This layer might also be formed by braiding woolen strands instead of serving woolen tapes or ends. In some instances it may be advantageous to treat the wool before serving or braiding with a preservative solution, as for example with a 16% solution of glycerol which renders the wool fibres more resistant to disintegration under heat.

The wool sheath 11 is then impregnated with waterproofing material such as asphalt, gilsonite, rosin and rosin oil, or the like as indicated at 12.

A layer 13 of stearin pitch or the like is applied over the asphalt impregnated wool which covers the tackiness of the asphalt, adds to the moisture proof quality of the sheathing and is flame proof in itself to a considerable degree.

The stearin pitch may then be coated with mica dust or other anti-sticking material as indicated at 14, to further cover any tackiness and to prevent adjacent coils from sticking or quasi welding together during further handling in manufacture.

A thin coating 15 of an adhesive material such as mucilage for example is then applied over the mica dusted or plain stearin pitch and a sheath 16 of asbestos fibre yarns is applied thereover preferably by braiding although this may also be served on or otherwise applied, as for example by felting.

The asbestos covering is then wet with a polishing paste such as a mixture of one volume of wheat flour with ten volumes of boiling water, or a 10% solution of alum in water, or other appropriate material, and is compacted and polished as at 17 by a rotary polishing machine or other appropriate means.

In some instances the conductor thus made is then ready for use. In other instances a mechanically protecting final outer sheath of textile fibres may be applied over the asbestos, preferably by braiding. Also in some instances the coating of the stearin pitch with mica dust may be omitted especially where the conductor is not coiled before the adhesive and the asbestos are applied. Furthermore in some instances the adhesive between the stearin pitch and the asbestos may be dispensed with. However, in the preferred procedure all the steps are included.

The embodiment of the invention herein disclosed is illustrative merely and may be modified and departed from in many ways without departing from the scope and spirit of the invention as pointed out in and limited only by the appended claims.

What is claimed is:

1. As a new article of manufacture, an electrical conductor comprising a metallic conductive core, a cover thereon of wool fibres impregnated with moisture proof material, a layer of fire proofing material over the impregnated wool cover, and a sheath of asbestos fibres thereover.

2. As a new article of manufacture, an electrical conductor comprising a metallic conductive core, a cover thereon of wool fibres treated with glycerol and impregnated with moisture proof material, a layer of fire proofing material

over the impregnated wool cover, and a sheath of asbestos fibres thereover.

3. As a new article of manufacture, an electrical conductor comprising a metallic conductive core, a cover thereon of wool fibres impregnated with asphalt, a layer thereover of stearin pitch, and a sheath of asbestos fibres thereover.

4. As a new article of manufacture, an electrical conductor comprising a metallic conductive core, a cover thereon of wool fibres impregnated with asphalt, a layer thereover of stearin pitch, a coating of mica dust thereon, and a sheath of asbestos fibres thereover.

5. As a new article of manufacture, an electrical conductor comprising a metallic conductive core, a cover thereon of wool fibres impregnated with moisture proof material, a layer of fire proofing material over the impregnated wool cover, a sheath of asbestos fibres thereover, and an outer sheath of textile strands over the whole.

6. As a new article of manufacture, an elec-

trical conductor comprising a metallic conductive core, a cover thereon of wool fibres treated with glycerol and impregnated with moisture proof material, a layer of fire proofing material over the impregnated wool cover, a sheath of asbestos fibres thereover, and an outer sheath of textile strands over the whole.

7. As a new article of manufacture, an electrical conductor comprising a metallic conductive core, a cover thereon of wool fibres impregnated with asphalt, a layer thereover of stearin pitch, a sheath of asbestos fibres thereover, and an outer sheath of textile strands over the whole.

8. As a new article of manufacture, an electrical conductor comprising a metallic conductive core, and a cover thereon of wool fibres treated with glycerol to render the same heat-resistant.

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