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R. ACEVES
ELECTRICAL CONDUCTOR
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1,944,390

Fig. 1.

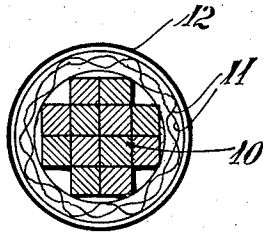


Fig. 2.

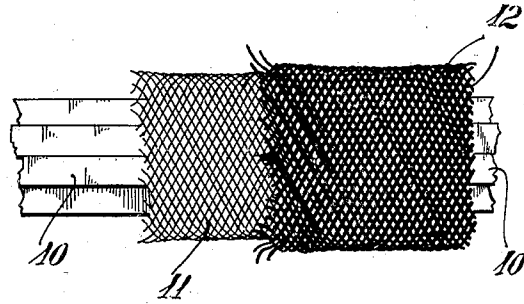
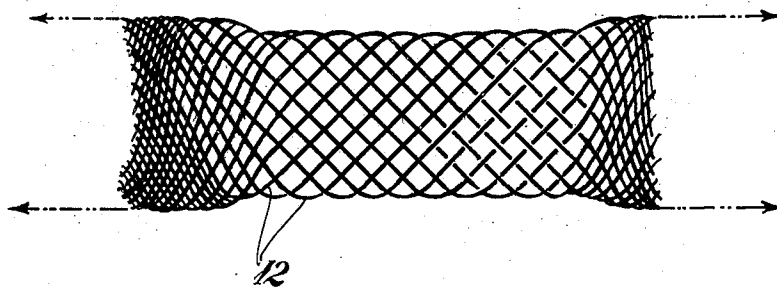


Fig. 3.



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ELECTRICAL CONDUCTOR

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1 Claim. (Cl. 219—46)

This invention relates to improvements in electrical conductors.

The principal object of the invention is to provide a flexible elastic conductor for electrical current.

A further object is to provide a conductor having an extensible covering of conducting material adapted to be heated by the passage of electricity therethrough.

A conductor of this invention is adapted primarily for use in instances where it is desired to apply both heat and pressure as in connection with certain therapeutical and hair waving appliances. These uses, however, are merely cited as examples, it being understood that I do not limit myself in respect to the use to which the conductor may be applied.

According to my invention, the conductor has an elastic core of non-conducting substance surrounded by a covering of conducting material which covering is adapted to be extended and contracted with the elastic core without interfering with the passage of electricity through said covering.

The accompanying drawing illustrates one embodiment of the invention, in which:—

Figure 1 is a cross-sectional view of the conductor;

Fig. 2 is a side elevation thereof, showing the central elastic core, the intermediate covering of non-conducting material, and the outer covering of conducting material, and,

Fig. 3 is a side view of the conductor stretched in the direction of the arrows.

Referring to the drawing, 10 represents a core of non-conducting elastic substances such as rubber. The core may be formed either of a plurality of pieces, as shown, or of a single piece. 11 is an intermediate covering formed of woven cotton, silk, asbestos or other suitable non-conducting material, with the threads crossing one another diagonally or extending on the bias. 12 is an outer covering formed of woven tinsel or wire of a character suitable for conducting electric current and adapted to be heated by the

passage of electricity therethrough. The filaments, wires or metallic threads of the conducting covering 12 also cross one another diagonally or on the bias.

The covering 11 serves to insulate the core 60 from being unduly heated by the passage of electrical current through the conducting covering. While, to these ends, it is advisable to use an intermediate covering 11, such a covering is not an indispensable part of my invention. Furthermore, if desired, an insulating covering, similar to the covering 11, may be applied around the outside of the conducting covering 12.

The fact that the threads, wires or filaments of the woven coverings 11 and 12 cross one another diagonally enable these coverings to be extended or contracted with the extension or contraction of the elastic core. This will be apparent on referring to Fig. 3 where it is seen that when the conductor is stretched lengthwise 75 in the direction of the arrows, the opening or meshes between the threads, wires or filaments of the coverings are enlarged, thus permitting said coverings to stretch with the elastic core to the limit of the extensibility of the coverings, 80 and this stretching may be affected without in any way interfering with the passage of electrical current through the conducting covering 12.

While I have shown the invention embodied in a conductor of circular cross-section, it is to be understood that the conductor may be of other shapes and that various modifications in the construction may be made without departing from the scope or spirit of the invention.

What I claim is:—

A resilient electrical heating unit comprising an elastic core, an intermediate woven covering of non-conducting material, and an outer covering of woven material formed of metallic threads capable of conducting electricity and of being heated by the passage of current, said intermediate and outer woven coverings being adapted to stretch with the core.

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