V. G. APPLE.

ARMATURE INSULATION.

APPLICATION FILED MAR. 21, 1918.

1,284,552. Patented Nov. 12, 1918.

Fig. 1.

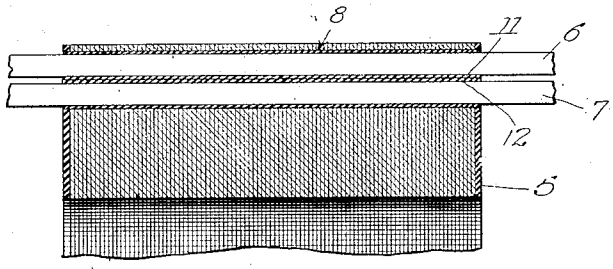


Fig. 2.

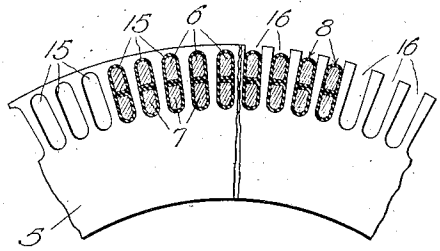


Fig. 3.

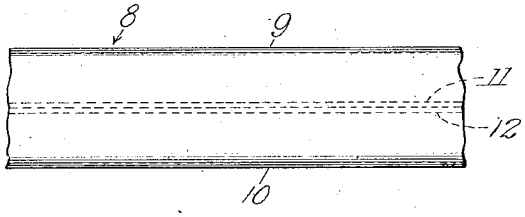
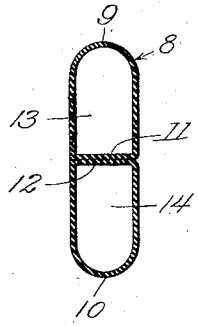


Fig. 4.



Inventor.
Vincent G. Apple.
Fonda Dain & Cook
Attys.

UNITED STATES PATENT OFFICE.

VINCENT G. APPLE, OF DAYTON, OHIO.

ARMATURE INSULATION.

1,284,552. Specification of Letters Patent. Patented Nov. 12, 1918.

Application filed March 21, 1918. Serial No. 223,847.

To all whom it may concern:

Be it known that I, VINCENT G. APPLE, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Armature Insulations, of which the following is a specification.

My invention relates to improvements in insulating coverings or jackets for armature conductors.

One of the objects of my invention is to provide a durable, tough, single piece insulating structure or jacket for conducting wires or parallel conducting bars, that are to be contained in the same slot or orifice of an armature core.

Another object of my invention is to provide a single piece of insulating material, that will surround a pair of bars, and of such shape or configuration that there will be two layers of the material between the adjacent edges of the bars to fill up the necessary space of separation.

And still another object of my invention is to provide an enveloping insulation, or jacket, for the conducting bars of an armature which can be cemented in the opening, or grooves of the armature core, and into which the conductors may be subsequently inserted.

Other and further objects of my invention will become readily apparent to persons skilled in the art from a consideration of the following description when taken in conjunction with the drawings, wherein:—

Figure 1 is a section through an armature core showing two conductors in a single orifice therein inclosed in my insulating jacket.

Fig. 2 is an end view of the core showing the conductors and jackets in cross section.

Fig. 3 is a longitudinal view of the jacket.

Fig. 4 is an enlarged cross section of the same.

In all the views the same reference characters are employed to indicate similar parts.

5 is an armature core of the usual construction, which may be a ring of the disk type, having orifices or slots near its periphery within which to insert the conducting bars 6 and 7. These bars are shown in Fig. 1, as having been placed in the core in the jacket 8. The jacket is more particularly shown in Fig. 4 to consist of a single piece of thin, tough insulating material, preferably of a porous nature, bent upon itself at each end, as at 9 and 10, and having its terminal ends 11 and 12, tucked in, near its mid-portion and crossing its shorter diameter at this point, so as to include two layers of insulation between the adjacent bars. It will be understood from the disclosure that the spaces or openings, 13 and 14, are to contain the conducting bars of the armature.

The jacket 8 is to extend the full width of the core 5 and it may, preferably, be cemented in the orifices in which it is placed, within the core, prior to introducing the conductors, after which the spaces intervening between the interior of the jacket and the respective bars may be filled with liquid insulating material which will subsequently harden and hold the conducting bars firmly and immovably in place in the armature core, thereby preventing chafing or wearing of the insulating material.

In Fig. 2, I have shown the jacket placed in orifices, as at 15 and also as they will appear when placed in slots open from the face of the armature, as at 16. In the latter instance the insulating jackets surround the upper edge of the outer conducting bar and the terminal ends of the jacket is tucked under the outer bar, so to speak, so as to protect the entire surface of the bar that would otherwise be exposed, and furthermore serving as an additional means to hold the bar in its place within the slots.

It will be observed that the raw edges of the jackets are contained within the jacket itself, thereby presenting smooth strong surfaces on the outside for more fully protecting the inclosed conductors.

The material of which this jacket may be made, may be of a porous nature, to absorb a liquid insulator so that after the jackets and wires have been placed in the armature core the entire structure may be submerged in an insulating liquid, which will permeate the pores of the surrounding jacket, and make of it a strong tough insulator of the highest quality, and serve to retain the conductors firmly in place to prevent relative movement.

While I have herein shown a single embodiment of my invention, for the purpose of clear disclosure, it is manifest that changes may be made in the structure within the scope of the appended claims.

Having described my invention, what I claim is:—

1. An insulating jacket for armature conductors comprising a sheet of flexible, relatively thin insulating material, bent back upon itself at each longitudinal edge to its transverse midportion, with its wall terminals tucked in and extended across the jacket to its opposite wall, thus dividing the jacket into two longitudinally-extending compartments to receive armature conductors.

2. An insulating jacket, for armature conductors, comprising a sheet of flexible insulating material, formed of a single sheet with two longitudinally extending compartments separated by a double wall.

3. The combination with an armature core having conductor openings near its perimeter, of insulating, separator, porous jackets, one in each said opening, each jacket comprising a separate compartment for each conductor, and said jackets and spaces around the conductors filled with a self hardening insulating liquid.

In testimony whereof I hereunto set my hand.

VINCENT G. APPLE.