(No Model.)

H. GEISENHÖNER & C. SANDMAN.

ARMATURE CONDUCTOR FOR DYNAMO ELECTRIC MACHINES.

No. 535,579. Patented Mar. 12, 1895.

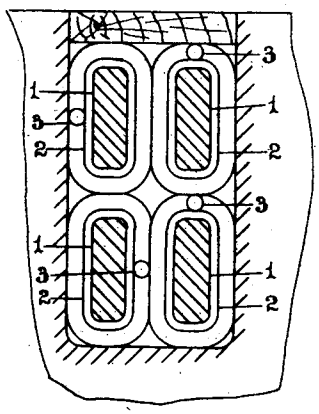


Fig 1

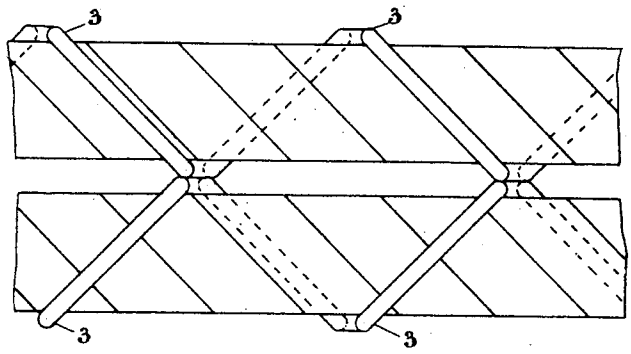


Fig 2

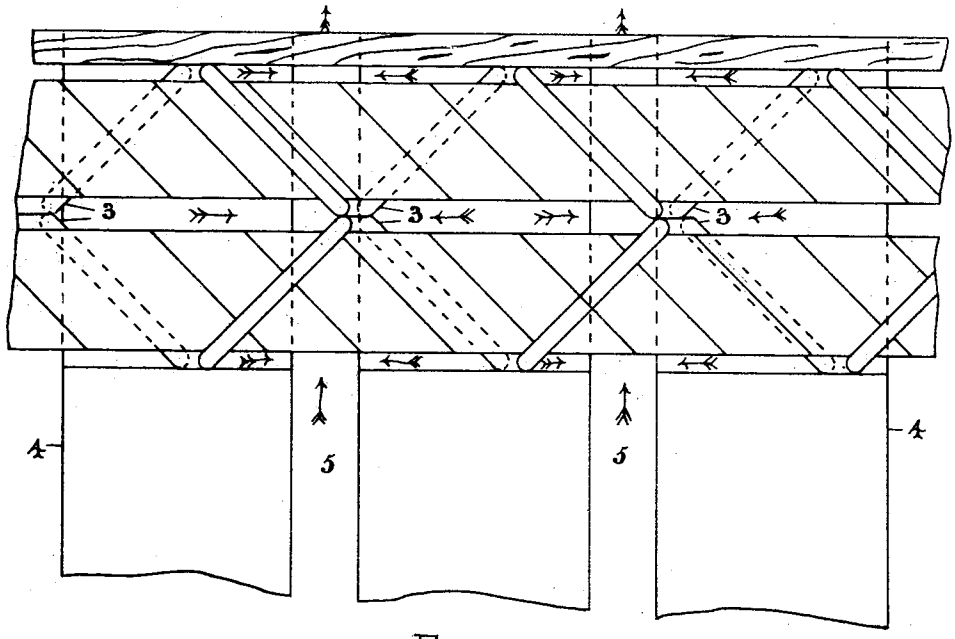


Fig 3

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ARMATURE-CONDUCTOR FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 535,579, dated March 12, 1895.

Application filed January 15, 1895. Serial No. 535,048. (No model.)

To all whom it may concern:

Be it known that we, HENRY GEISENHÖNER, a resident of the city of Schenectady, and CHRISTIAN SANDMAN, a citizen of Germany, and a resident of Niskayuna, in the county of Schenectady, State of New York, have invented a new and useful Improvement in the Manner of Insulating and Ventilating the Conductors of Armatures Used for Conducting and Generating of Electric Currents in Dynamo-Electric Machines, of which the following is a specification.

The object of this invention is to provide a more efficient means of carrying off by radiation, the heat engendered in the conductors of dynamo-electric machines by the generation of electric currents, and also provide a simpler means for the insulation of conductors from each other when arranged in proximity and from the body of the armature core around which they may be arranged than others heretofore in use.

In the accompanying sheet of drawings Figure 1, shows a section of a group of conductors insulated in the manner invented by us. They are shown inserted in a prepared slot of the armature, one slot only being shown. Fig. 2, is a view of the conductors removed from the armature showing the manner of insulating same in plan view. Fig. 3 shows a section of armature core with conductors in place, and manner of ventilating the same.

Similar figures of reference refer to similar similar parts throughout the respective views.

It will be seen on reference to Figs. 1, 2 and 3 that our invention consists in winding around the conductors severally after taping them and coating with liquid or semi-liquid insulating substance, in the manner now in use in the art, of twine or other material of suitable section in a spiral manner as shown in Figs. 2 and 3.

The conductors are usually made of copper and are marked on drawings 1, 1, 1, 1. The tape is marked 2, 2, 2, 2, while the spirally wound twine or other suitable material is marked 3, 3, 3, 3.

It will be seen on reference to Figs. 1 and 3 that on the insertion of the group of conductors in the armature slot prepared to receive them, the armature core being designated by 4, 4, the spirally wound twine around the several conductors will hold apart the conductors from each other and from the armature core leaving between them a space for the circulation of air.

In Fig. 3 are shown air ducts marked 5, 5, that are commonly provided in armature cores at present in use, to assist in the radiation of heat engendered when in use.

It will be noted that the spaces around the several conductors are in connection with the air ducts marked 5, 5. The heated air from around the conductors will tend to escape in the direction shown by the arrows in Fig. 3.

We wish it to be distinctly understood that we do not limit our invention to the insulating and ventilating of armature conductors only, as it is equally useful for the insulation and ventilation of any conductors carrying electric currents.

Having now sufficiently described our invention, we claim as novel and desire to secure to us by Letters Patent—

Armature or other conductors, carrying electric currents, wound around spirally with twine or other suitable material, each successive convolution being spaced an appreciable distance apart from the preceding one, for the purpose of providing, when conductors are arranged in groups, or inserted in slots, a space for the circulation of air, around the conductors, for the purpose of insulating and ventilating the same substantially as described.

HENRY GEISENHÖNER.
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Witnesses:
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