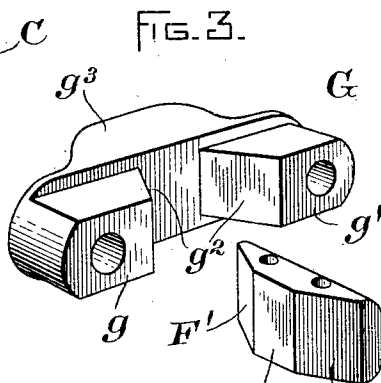
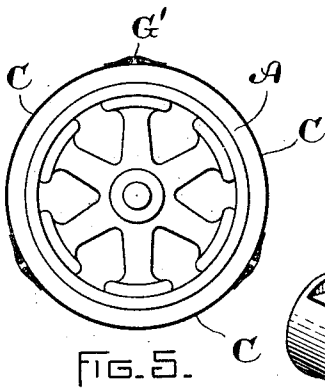
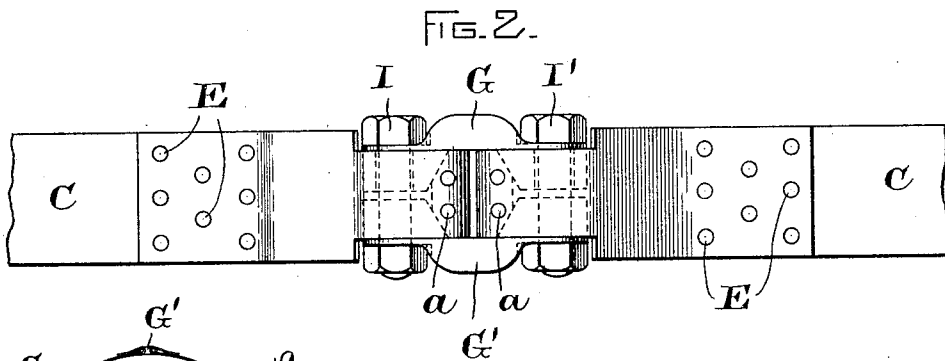
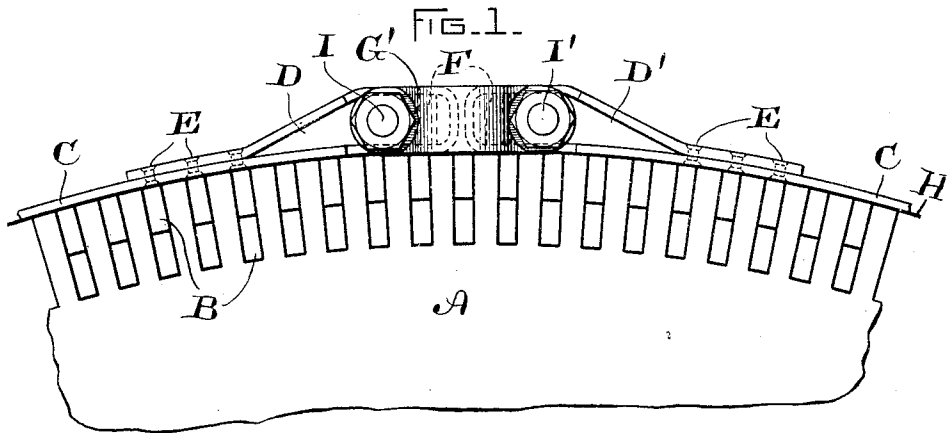


(No Model.)

H. GEISENHÖNER.
BINDING BAND FOR ARMATURES.

No. 583,991.

Patented June 8, 1897.



WITNESSES.

A. H. Abell.
A. McDonald.

INVENTOR.
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att'y.

UNITED STATES PATENT OFFICE.

HENRY GEISENHÖNER, OF SCHENECTADY, NEW YORK, ASSIGNOR TO THE
GENERAL ELECTRIC COMPANY, OF NEW YORK.

BINDING-BAND FOR ARMATURES.

SPECIFICATION forming part of Letters Patent No. 583,991, dated June 8, 1897.

Application filed October 31, 1896. Serial No. 610,651. (No model.)

To all whom it may concern:

Be it known that I, HENRY GEISENHÖNER, a citizen of the United States, residing at Schenectady, in the county of Schenectady, State of New York, have invented certain new and useful Improvements in Binding-Bands for Armatures, (Case No. 481,) of which the following is a specification.

In the construction of armatures it is necessary to provide binding-bands to secure the conductors against centrifugal action when revolving at high rates of speed. These bands are usually made of steel or German-silver wire, the number of turns in each band depending upon the number of bands to be employed and the rate of speed at which the armature is to revolve. A construction of this kind is very suitable for small armatures and would be for large ones, except that it is necessary at times to remove the bands for repairing the armature. The wires forming the bands, being soldered together at intervals, have to be cut to remove them, destroying the band. In small armatures the cost of new bands is not very great, but as the size increases it becomes prohibitive.

The present invention has for one of its objects to provide a binding-band which can readily be removed from the armature without destroying it and one having great strength and simplicity of construction.

The invention further has for its object to provide a removable binding-band for armatures which shall exert a practically equal binding effect over all portions of the core.

The invention also has for its object to provide clamping devices which shall be thin radially with respect to the armature and smooth in contour.

In the accompanying drawings, attached to and made a part of this specification, Figure 1 is a partial end view of an armature. Fig. 2 is a partial plan view of a band. Fig. 3 is a perspective view of a clamp. Fig. 4 is a perspective view of a wedge, and Fig. 5 an end view of an armature.

The armature A is made of laminated iron provided with slots in which are placed the conductors B. The band C is provided with loops D D', formed by bending back the ends

of the band and securing them by rivets E. In addition to the rivets, solder may be employed for increasing the strength of the joint. In the enlarged end of each loop is placed a wedge F, having a rounded outer surface which engages with the band C, and inclined surfaces F', engaged by similar surfaces on the clamps G G'. The wedge F is secured to the band C by solder and rivets a.

The loops D D' are cut away slightly, so that when the clamps G G' are assembled the band will be substantially the same width throughout.

The clamps G G' are provided with projections g g', having inclined surfaces g² engaging with similar surfaces F' on the wedge F. The back portion of the clamp is curved outwardly at g³ for additional strength. At H, I show suitable insulation placed between the armature-conductors B and the band C.

In assembling, the armature A is wound in any desired manner, after which the bands C, having previously been provided with loops D D' and wedges F, are placed in position and the clamps G G' drawn together by means of the bolts I I'. The inclined surfaces of the clamps, engaging with similar surfaces on the wedges, will, when the clamps are drawn together by the bolts I I', draw the ends of the band C together, securing the armature-conductors against movement independent of the armature-core. By this construction I am enabled to provide a simple binding-band which can be readily removed or replaced, and by arranging the surfaces F' and g² as shown the drawing together of the ends is accomplished at a point very nearly in line with the portions of the band lying next the armature-core.

On account of the difficulty experienced in clamping the bands around the armature with an even tension and without disturbing the insulation it is desirable to divide the band into a number of sections, as shown in Fig. 5, the number of such sections being dependent upon the size of the armature. In the present instance three sections are shown, and by tightening the several sets of clamps G G' the band is made to compress the armature with an even tension throughout.

It is preferable to make the clamps G G' and loops D D' with as smooth a contour as possible, to prevent foreign articles from being caught thereby and revolved with the armature.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a binding-band for armatures, the combination of a metal strip, loops formed at the extremities of the strip by bending the ends backward and securing them to the strip, a wedge secured to the strip, and clamps engaging with the wedges for drawing the extremities of the band together.

2. In a binding-band for armatures, the combination of a metal strip, wedges secured to the extremities of the strip, clamps provided with inclined surfaces engaging with similar surfaces on the wedges, and means for securing the clamps together.

3. In a binding-band for armatures, the combination of a plurality of metal strips, each provided with means for securing it at

its extremities, and wedges and bolts for securing the metal strips.

4. In a binding-band for armatures, the combination of a metal strip provided at its extremities with wedges, clamps provided with projections having inclined surfaces engaging with the wedges, the projections on the clamps being arranged to receive the wedges between them, and bolts for drawing the clamps together.

5. As an article of manufacture, a binding-band for armatures, comprising a metal strip having loops formed at its extremities by bending the ends backward and securing them to the strip, and a wedge secured in the extremity of each loop.

In witness whereof I have hereunto set my hand this 26th day of October, 1896.

HENRY GEISENHÖNER.

Witnesses:

B. B. HULL,
E. W. CADY.