

M. MEIROWSKY.
 APPARATUS FOR INSULATING.
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989,791.

Patented Apr. 18, 1911.

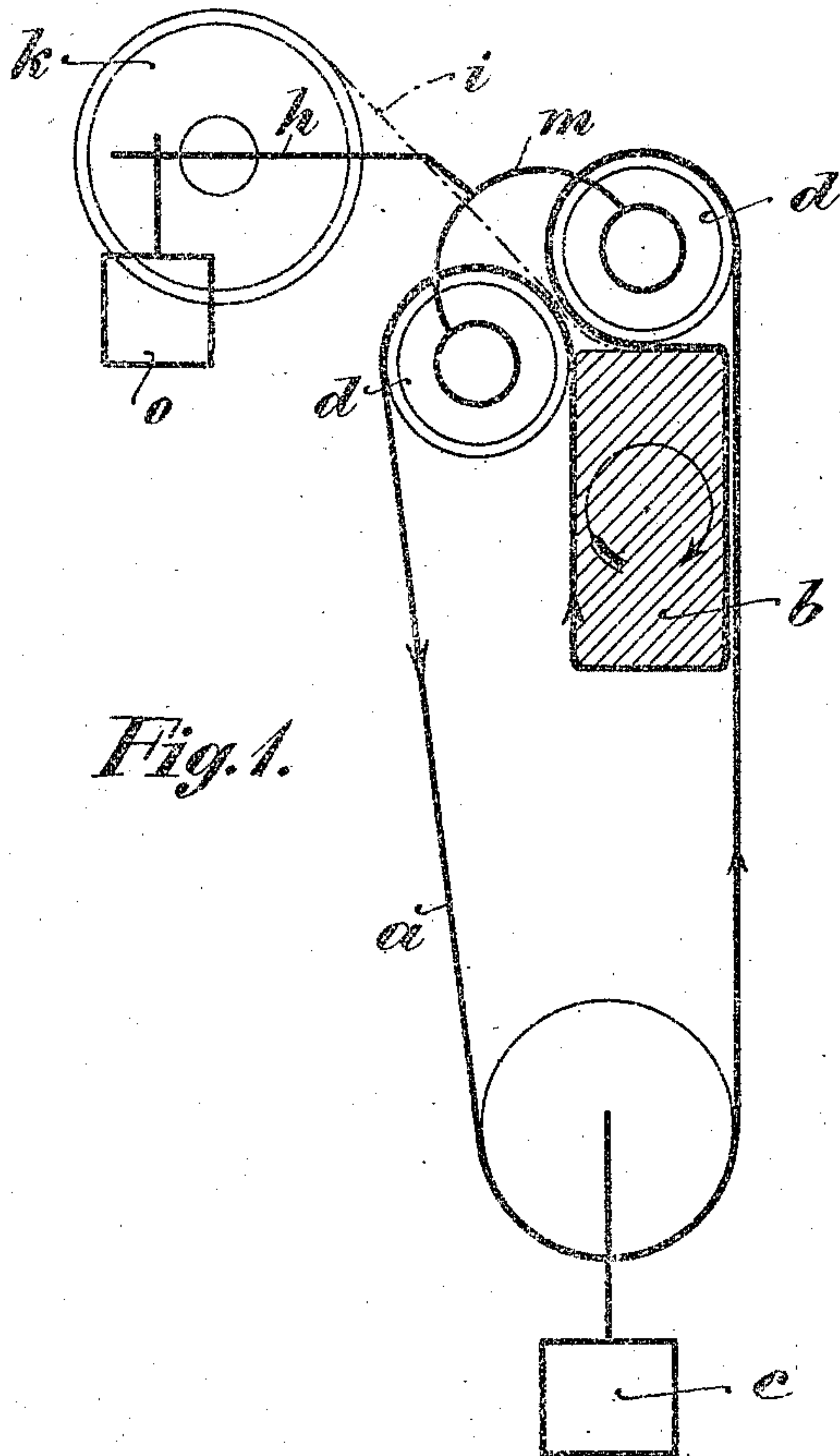


Fig. 1.

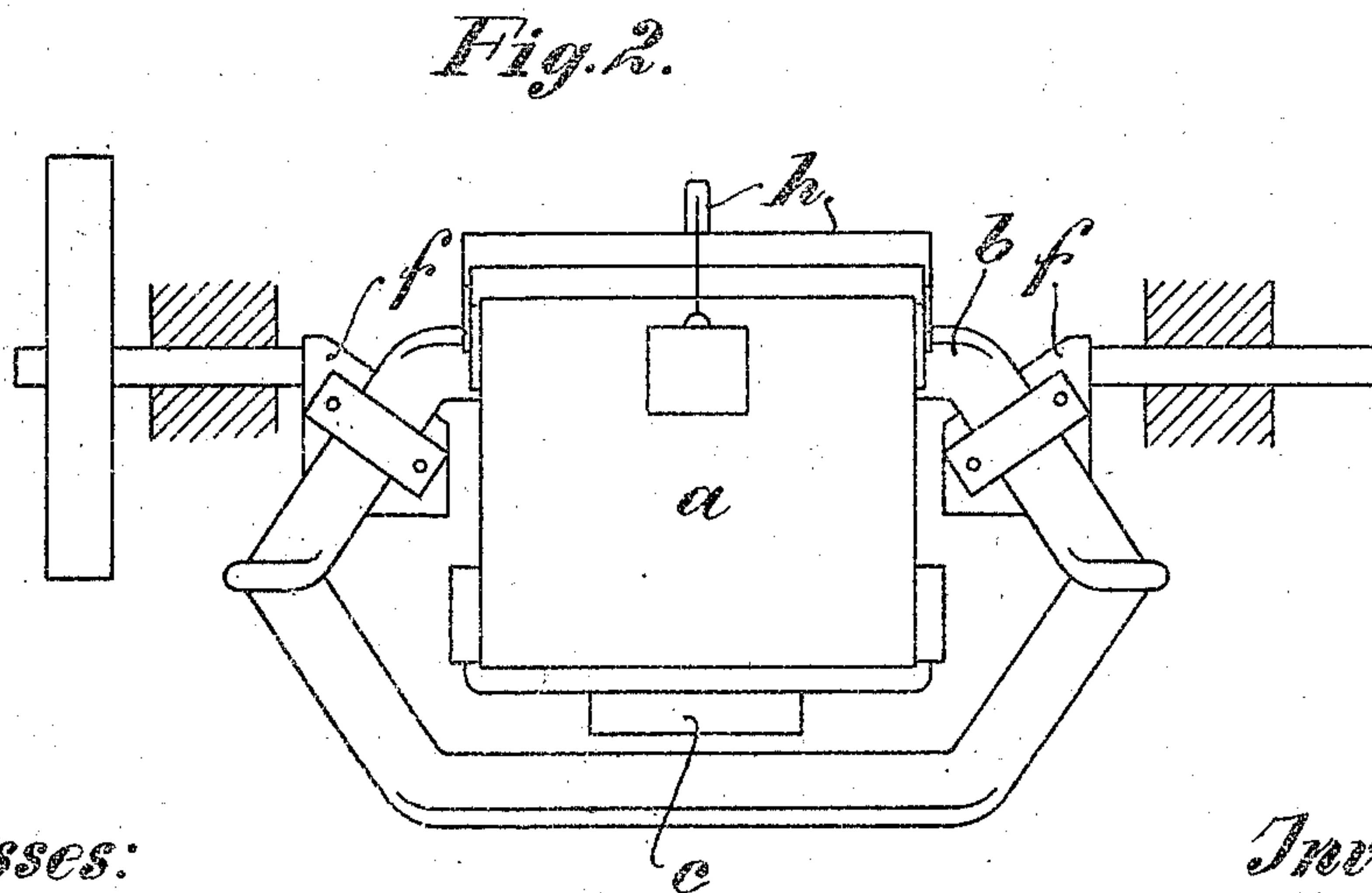


Fig. 2.

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UNITED STATES PATENT OFFICE.

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APPARATUS FOR INSULATING.

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To all whom it may concern:

Be it known that I, MAX MEIROWSKY, a subject of the King of Prussia, German Emperor, residing at Cologne-Ehrenfeld, in the Province of the Rhine, Kingdom of Prussia, German Empire, have invented certain new and useful Improved Apparatus for Insulating, of which the following is a specification.

This invention relates to an apparatus for the production of a stratified insulating casing or tube and particularly to an apparatus for the insulation of formwound armature coils by mica or like insulating material.

According to my invention the body to be insulated (armature coil, armature bar or the like) is set in revolution so as to wind on the insulating material. It, thereby, imparts movement also to an endless band hung around it and kept in tension so that the insulating material introduced between the band and the core to be insulated is uniformly pressed on whatever the cross section of the core, and defoliation is prevented. If in this process, as is necessary when mica or micanite plates are used, the insulating material is heated by hot rolls, then according to the invention the endless band surrounds these hot rolls also which are thus set in rotation, and a point of entry for the insulating material can be provided between the rolls and the core where these come closest together.

The apparatus is described more particularly with reference to the accompanying drawings in which one form of construction of the device is illustrated.

Figure 1 shows diagrammatically how a core *b* of rectangular cross section, for example one of the long sides of a formwound armature coil, is provided with an insulating sheath according to the process described. The endless band *a* tensioned by a weight *c* is so wound over the core *b* and the loosely arranged hot rolls *d, d* (*i. e.* the rolls are not provided with bearings) that a point of entry is formed for the plates or band of insulating material *i* coming from the drum *k*. The rolls *d, d* are connected together by the arch *m* and may carry upon a lever *h* a weight *o* which in conjunction with the weight *c* maintains the whole system in equilibrium. The weight *c*, however, is not essential. Also in a suitable construction the drum *k* could be formed as a weight. If the core *b* is set in rotation in known man-

ner the band *a* tensioned by the weight *c* travels around and through friction turns the rolls *d, d* so that the insulating material *i* is wound on with uniform pressure being heated before it reaches the core. Any splitting off of the mica or the like is prevented since it is immediately pressed against the core or the preceding layer. Since the core serves to support the whole winding device this can be adapted to any desired cross action of core by a suitable adjustment of the weight *c* suspended on belt *a* which maintains the constant uniform pressure. The endless belt *a* is preferably tensioned as shown by means of a weight *c* but the tension can be applied by springs or the like. Further by applying the tension exerted by the weight, spring or the like in the proper direction, the endless band need not be left hanging down but can extend horizontally or in any desired direction.

Fig. 2 indicates on a smaller scale how the device can be used for insulating an armature coil. The coil of which one of the long sides *b* is to be wound is secured by means of the chucks *f, f* to a rotating shaft in such a way that the long axis of the coil side coincides with that of the shaft. The whole winding device is kept in the upright position by the weight *c* while the side of the coil which is not being wound rotates around the device. When an object of ring form is being insulated, as for example this armature coil, the belt *a* can obviously only be tensioned by means of a weight.

Having now particularly described and disclosed the nature of my said invention and in what manner the same is to be performed, what I claim is:—

1. Apparatus for the class described, comprising a rotatable core, and an endless band engaging said core and adapted to exert pressure on the core to apply insulating material thereto.

2. Apparatus of the class described, comprising a rotatable core, heating rolls, and an endless band engaging said core and said rolls for the purpose described.

3. Apparatus of the class described, comprising a rotatable core, heating rolls, means for feeding insulating material between said core and said rolls, and an endless band engaging the core and the rolls for the purpose described.

4. Apparatus of the class described, com-

prising a rotatable core, loosely mounted heating rolls, and an endless band engaging the core and the rolls.

5 5. Apparatus of the class described, comprising a rotatable core, heating rolls, an endless band engaging said core and said rolls, and means for applying tension to said band.

10 6. Apparatus of the class described, comprising a rotatable core, heating rolls, an endless band engaging said core and rolls, means for connecting the rolls, and means for maintaining equilibrium of the apparatus.

15 7. Apparatus of the class described, com-

prising a rotatable core, heating rolls adjacent to the core, an endless band engaging the core and the rolls for applying insulating material to the core, means for applying tension to the band, and means for supplying 20 insulating material between the rolls and the core.

In testimony, whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MAX MEIROWSKY.

Witnesses:

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