March 28, 1933. L. T. FALEY 1,903,101

METHOD OF AND MEANS FOR SANDING-IN ARMATURE BRUSHES FOR GENERATORS MOTORS, MOTOR GENERATORS, OR STARTERS AND THE LIKE

Filed April 29, 1926

Fig. 1.

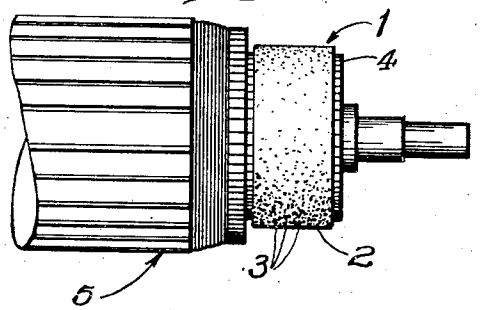
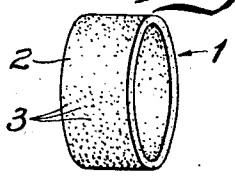


Fig. 2.



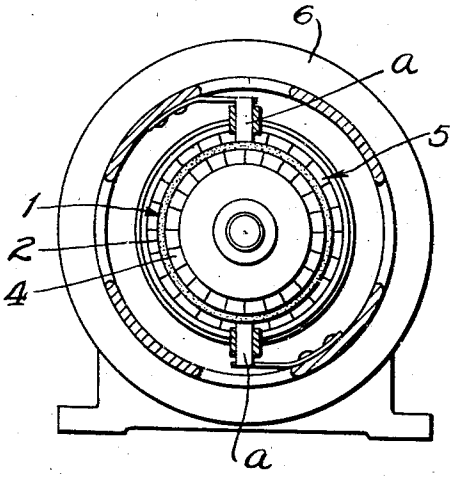


Fig. 3.

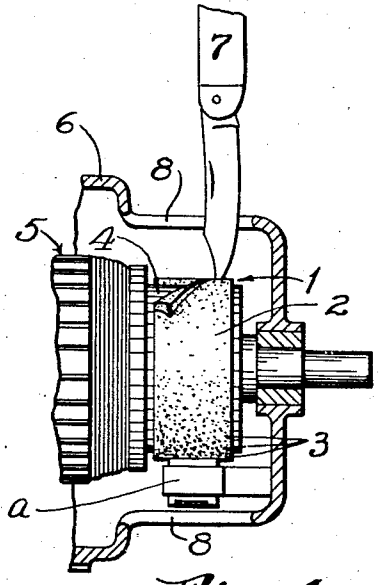


Fig. 4.

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UNITED STATES PATENT OFFICE

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METHOD OF AND MEANS FOR SANDING-IN ARMATURE BRUSHES FOR GENERATORS, MOTORS, MOTOR-GENERATORS, OR STARTERS AND THE LIKE

Application filed April 29, 1926. Serial No. 105,615.

This invention relates to novel means whereby the armature brushes of motors, generators, motor-generators or starters and the like may be easily, quickly and efficiently made to conform to the periphery of the commutator before the device leaves the shop of the manufacturer or repairman, and without requiring the device to be rotated for any great length of time to accomplish this result.

An object is to provide novel means adapted for attachment to the commutator of generators, motors, etc. before assembly and which will quickly sand-in the armature brushes, and may be removed without disassembly of the device, to the commutator of which, such means are attached.

The invention includes the method of sanding-in the armature brushes and the means for accomplishing such result, as well as the method of making the sanding-in device.

Other objects, advantages, and features of invention may appear from the accompanying drawing, the subjoined detail description and the appended claims.

The accompanying drawing illustrates the invention and its use in a manner I at present deem preferable.

Figure 1 is a fragmental view of an armature having my novel resilient grit containing band applied to the commutator thereof preparatory to inserting the armature in its respective housing.

Fig. 2 is a perspective view of the resilient grit containing band detached from the commutator.

Fig. 3 is a transverse sectional view of a generator, motor, motor-generator, starter or the like, assembled and ready for the sanding-in operation of the brushes.

Fig. 4 is a fragmental sectional view showing the method of removing the resilient band from the commutator.

The invention comprises a highly resilient or elastic rubber base 1 having an outer periphery that will present an abrasive surface 2. This may be accomplished by thoroughly intermingling with such base while the same is in the process of manufacture, any suitable grit or abrasive material 3 such as No. F. F. 150 or 180 emery turkish, sand, carborundum, or aloxite grains, in the following proportions, to-wit, about 60% to 75% of such grit or abrasive material and the balance a good live rubber composition containing the usual ingredients to provide a base that will have a good tensile strength and which will stretch easily.

The base 1 may be made in a seamless tube or in flat sheets and cut into strips the ends of which are cemented or otherwise secured together to form a band that is adapted to be stretched over a commutator 4 of an armature 5.

It may in some instances be preferable to form the abrasive surface by securing the grit to a highly resilient and flexible base of rubber or the above flexible base of rubber having the grit thoroughly intermingled therewith, by taking 2 parts water and 1 part of good #60 hide glue (heated) or a good cold glue such as Le Pages and coating a surface of the base therewith and then dusting such coated surface with a grit material as above set forth and then allowing the glued surface with grit dusted thereon to dry and then lightly brushing the grit surface with such glue.

The resilient grit containing band may be made in various diameters, widths, and thicknesses to suit the various commutators and also it is apparent that fine or coarse grit material may be used either in the rubber base or dusted thereon.

The method of sanding-in armature brushes with my novel device comprises selecting a resilient grit containing band having the desired diameter, thickness and content and size of grit material, then stretching said band over the commutator of an arma-

ture before inserting the armature in its respective housing so that the friction of the band will hold the band in mounted position, then inserting said armature and band in its housing 6 so that the armature brushes *a* rest upon said band, then rotating the armature by hand or machine and thereby sand-in the brushes.

A flexible band having a fine grit thoroughly intermingled therewith and an outside coating of coarse grit material may be used to rapidly sand-in the brushes. When a band of this character is used the coarse grit on the outside of the band rapidly cuts away the brushes and soon partially wears off leaving the fine grit in the base to finish the sanding-in operation. The grit that may wear off of the band is easily blown from the housing 6 so that it will not injure the generator or the like.

A knife 7 or similar device may then be inserted through the usual openings 8 formed in the housing 6 and the band is then severed as shown in Fig. 4 so that the band may be pulled from under the brushes *a* and through the opening 8 without requiring the armature to be withdrawn from the housing.

I claim:

1. The method of sanding-in armature brushes which method comprising securing a continuous sheet or band of grit containing rubber which may readily be sprung over and automatically secure itself to the commutator of an armature; then assembling said armature in its respective housing so that the armature brushes rest upon said rubber sheet; then rotating said armature to sand-in said brushes; and then removing said rubber sheet from said commutator.

2. The method of sanding-in armature brushes which method comprises securing a grit containing rubber band to the commutator of an armature, then assembling said armature in its respective housing so that the armature brushes rest upon said band, then rotating said armature to sand-in said brushes; then cutting said band so that said band may be removed from said commutator without removing said armature from its housing; and then withdrawing said band from under said brushes and out of said housing without removing the armature from said housing.

3. In a commutator brush seating in device, a flat elastic band adapted to be stretched over the commutator and frictionally engage the same for rotation therewith, said band being of substantially the same width as the width of the commutator and an abrasive substance embedded in the outer peripheral face of the elastic band to contact with the commutator brush.

4. The method of sanding-in armature brushes and the like, which method comprises securing an extensible and contractible band having an abrasive associated therewith to the commutator of an armature, and which band is extended to receive the commutator and will automatically secure itself to the commutator by its natural contractibility; then assembling the armature in its respective housing so that the armature brushes rest upon said band; then rotating said armature to sand-in said brushes; and then removing said band from said commutator.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 21st day of April, 1926.

LLOYD T. FALEY.