

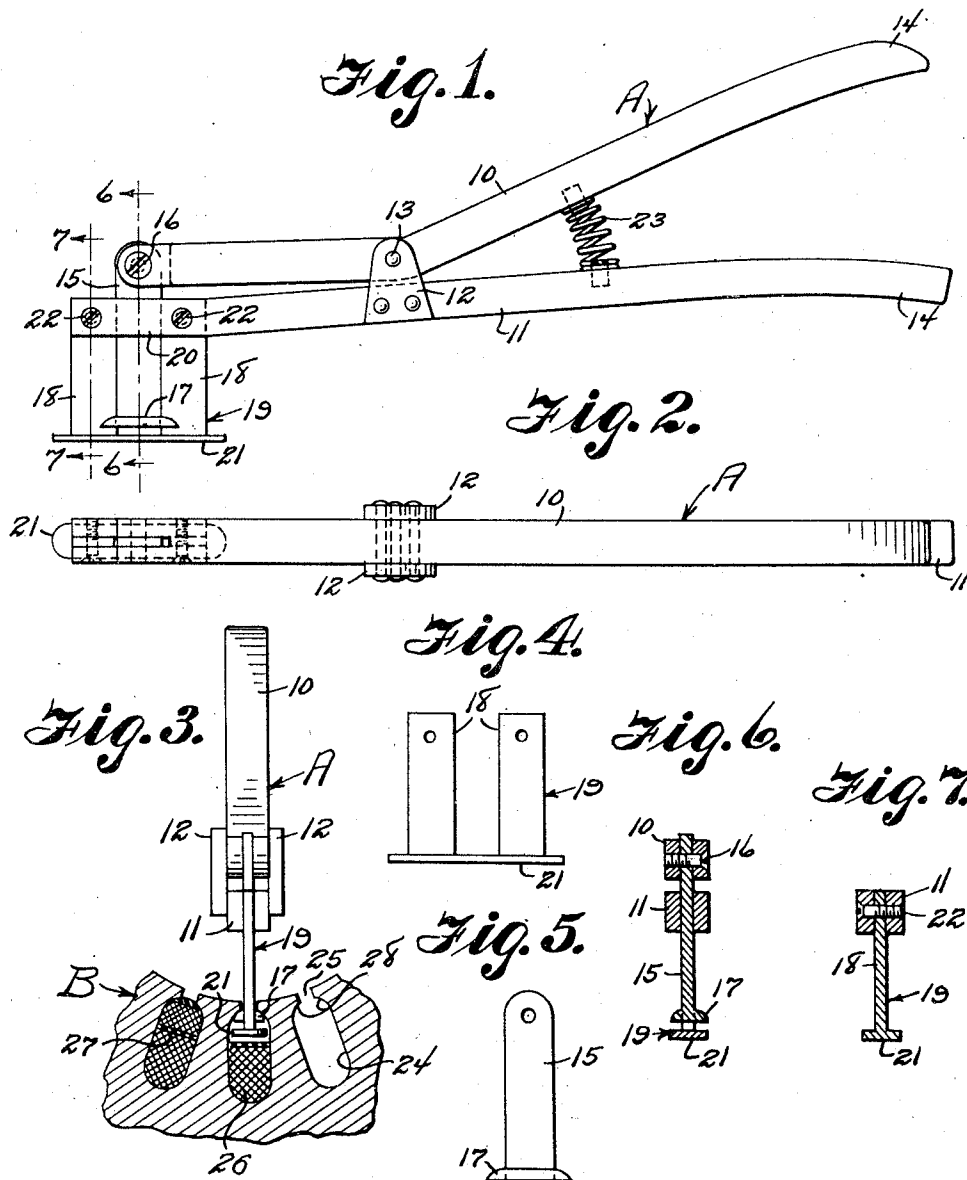
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TAMPER PLIERS

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TAMPER PLIERS

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4 Claims. (Cl. 29—205)

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The invention relates to pliers, and more especially to a tamper tool for use in insulating electric rotors, stators in constructing electric motors, generators and similar electric apparatus.

The primary object of the invention is the provision of a tool of this character, wherein the coil insulation in a rotor, stator or other like structure in the building of electric motors, generators and similar apparatus can be pressed into place or tamped with dispatch and accuracy, without excessive labor on the part of the operator of the tool.

Another object of the invention is the provision of a tool of this character, wherein the construction thereof is such that plier action is afforded thereby for the tamping of winding coils and insulation therefor into place in the erection of electric motors, generators or the like, without difficulty and breakage to the coils, insulation and adjuncts thereto.

A further object of the invention is the provision of a tool of this character, wherein the construction thereof is specially designed for electric motor, generator and similar apparatus and repairing thereof, and such tool is hand controlled and readily and easily operated.

A still further object of the invention is the provision of a tool of this character, which is simple in construction, easy to handle, thoroughly reliable and efficient in operation, strong, durable, quick acting, capable of being manipulated with one hand of an operator, applied and removed from the work with dispatch, and inexpensive to manufacture.

With these and other objects in view the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawing:

Figure 1 is a side elevation of the tool constructed in accordance with the invention.

Figure 2 is a top plan view thereof.

Figure 3 is an end view showing the tool in position for tamping operation.

Figure 4 is a detail view of the holding jack of the tool.

Figure 5 is a detail side view of the tamping plunger of the tool.

Figure 6 is a sectional view taken on the line 6—6 of Figure 1 looking in the direction of the arrows.

Figure 7 is a sectional view taken on the line 7—7 of Figure 1 looking in the direction of the arrows.

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7—7 of Figure 1 looking in the direction of the arrows.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing, A designates generally the tool constructed in accordance with the invention, while B fragmentarily denotes the rotor of an electric motor construction, with which the tool is specially designed for use in tamping the windings and insulation in place in the building or repairing of such rotor, which latter is of a conventional type.

The tool A comprises a pair of levers 10 and 11, respectively, the latter intermediate of its length has built thereon a bearing 12 for a pivot 13 swingingly connecting the lever 10 superposed to the said lever 11. These levers 10 and 11 are formed with gripping handle ends 14. The lever 10 at its end opposite the handle end 14 is bifurcated to receive therein a holding prop 15, which is pivoted at 16 in the said bifurcation and is formed with an abutment head 17 having suitable clearances for the double legs 18 of a tamping plunger 19, which has the legs 18 detachably fitted in a bifurcated or forked end 20 of the lever 11. This tamping plunger 19 has a presser head 21, the legs 18 of which guide it in the movements thereof relative to the prop 15, which has its head 17 superposed and next to the head 21. The fasteners 22 secure the legs 18 in the end 20.

Between the levers 10 and 11 next to the handle ends 14 is arranged a coiled compression spring 23 which urges the said levers apart at such handle ends, causing the plunger 19 to move reversely to the movement of the prop 15 under such spring action.

The rotor B is shown formed with transverse slots 24 for coil winding, and each of these slots is provided with an entrance slit 25 which is considerably less in width than the said slot, the latter accommodating the windings indicated generally at 26, introduced therein through the slit 25, while co-acting with such windings are the insulating strips or mediums 27, and the purpose of the tool constituting the present invention is for tamping the windings and strip or medium in place within the slot 24 without damage thereto.

In the use of the tool for the purpose stated the heads 17 and 21 in their normal close relation to each other are slipped into either of the opposite open ends of the slot 24 with the prop and plunger protruding through the slit 25 with the head 17 of the prop making contact with the

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opposed edges 28 to the slit 25, and the head 21 of the plunger 19 overcasting the windings and insulation strip next thereto, so that when the tool A is operated by hand the plunger 19 with its head 21 will press and tamp such windings and insulation in place in the slot 24, the prop when engaging the edges 28 being for the purpose of holding the lever 10 rigid and against movement relative to the plunger, which under movement of the lever 11 will lower into the slot 24 and its head 21 tamp the windings and insulation confined within this slot. The tool A is released from the slot 24 by slipping it out through either open end thereof.

The tool is constructed in size corresponding to the character and size of the work to be operated upon for tamping purposes of the windings and insulation therefor in rotors, stators of electric motors, generators and other similar electrical apparatus.

What is claimed is:

1. A tool of the kind described, comprising a pair of pivotally connected levers superposed relative to each other, a holding prop for the uppermost lever and connected thereto and a tamping plunger having a pair of depending legs detachably fixed to the lowermost lever and slidably interfitted with the prop parallel therewith on opposite sides thereof in the same vertical plane.

2. A tool of the kind described comprising a pair of pivotally connected levers superposed relative to each other, a holding prop for the uppermost lever and pivotally connected thereto, a forked end on said lowermost lever, and a tamping plunger having a pair of depending legs detachably fitted in the forked end of the lowermost lever and slidably interfitted with the prop parallel therewith on opposite sides thereof in the same vertical plane.

3. A tool of the kind described, comprising a pair of pivotally connected levers superposed relative to each other, a holding prop for the uppermost lever and pivotally connected within the bifurcated end of said lever, a forked end on

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said lowermost lever, a tamping plunger having a pair of depending legs detachably fitted in the forked end of the lowermost lever and slidably interfitted with the prop parallel therewith on opposite sides thereof and in the same vertical plane, an abutment head on the holding prop, having slots in the ends thereof for reception of the depending legs of said plunger and a presser head on the plunger.

4. A tool of the kind described, comprising a pair of pivotally connecting levers, superposed relative to each other, a holding prop for the uppermost lever and pivotally connected within the bifurcated end of said lever, a forked end on said lowermost lever, a tamping plunger having a pair of depending legs detachably fitted in the forked end of the lowermost lever and slidably interfitted with the prop parallel therewith on opposite sides thereof and in the same vertical plane, an abutment head on the holding prop having slots in the ends thereof for reception of the depending legs of said plunger, a presser head on the plunger connecting the legs of said plunger and extending beyond the sides thereof and means acting on the levers to normally hold the said heads close together.

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