

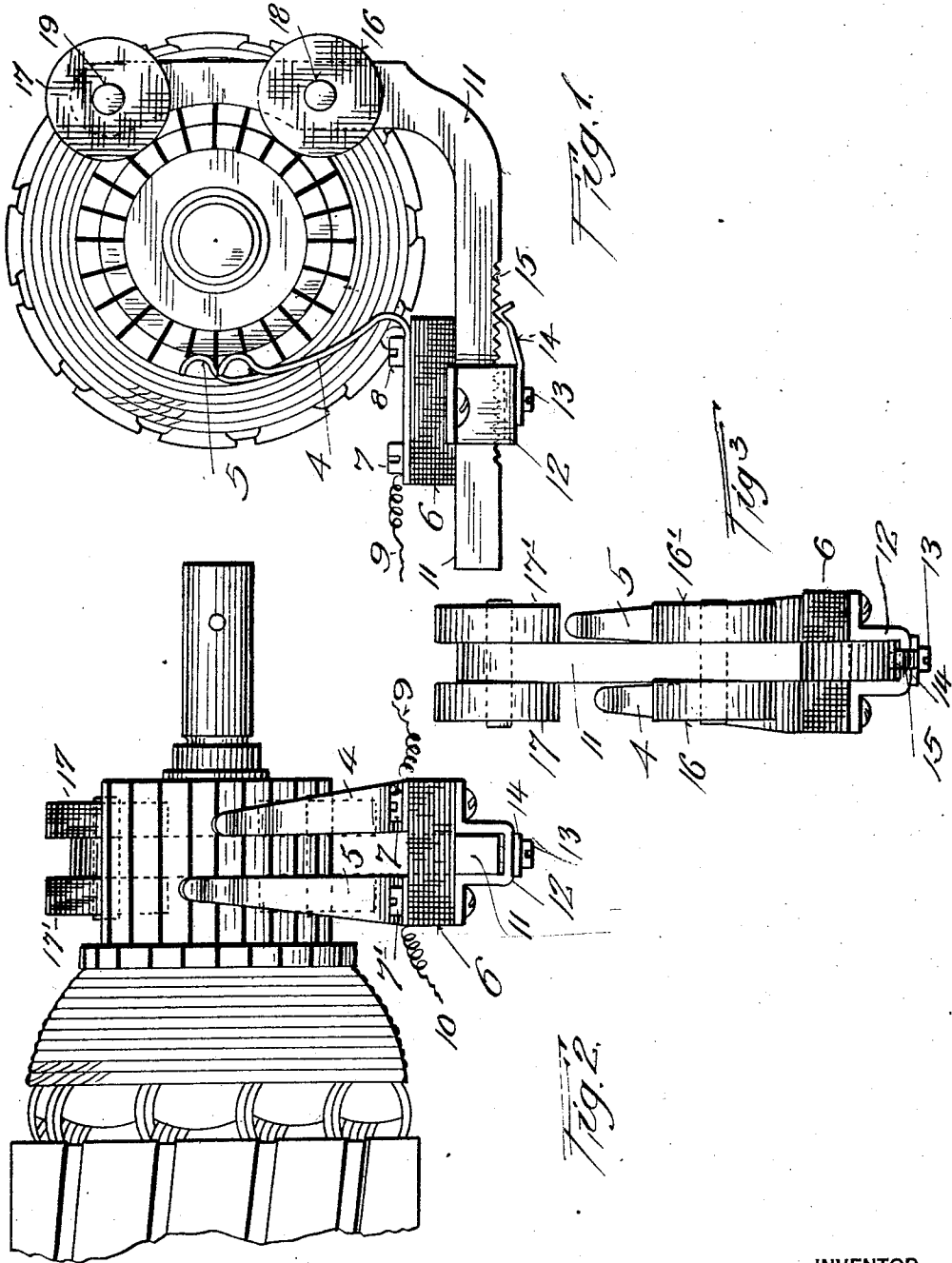
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T. J. OMAN .

TESTING DEVICE FOR ARMATURES AND THE LIKE

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INVENTOR

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BY *his* ATTORNEYS

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UNITED STATES PATENT OFFICE.

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TESTING DEVICE FOR ARMATURES AND THE LIKE.

Application filed August 13, 1921. Serial No. 492,170.

To all whom it may concern:

Be it known that I, THEODORE J. OMAN, a citizen of the United States, residing at Elmhurst, county of Queens, State of New York, have made a certain new and useful Invention in Testing Devices for Armatures and the like, of which the following is a specification.

My invention relates to improvements in devices for testing out circuits in armatures of dynamos or the like, and includes in its objects the production of a simple, yet efficient, structure, which is easily manufactured and readily applied to greatly facilitate the detection of leaky, broken, open or short circuited portions of armature windings.

A further object includes the provision of a pair of resilient contact fingers, properly insulated and provided with suitable terminals for connecting to any desired testing indicator and carried on a supporting arm for ready application and quick adjustment.

Other objects of the invention will appear more fully hereinafter from the specification and the appended claims.

I attain these objects by the mechanism illustrated in the accompanying drawing in which:

Figure 1 is a side elevation showing the application of my device to the commutator of a dynamo armature;

Fig. 2 is a front view of my device; and, Fig. 3 is a rear view thereof.

Similar numerals refer to similar parts throughout the several views.

Referring now to the drawing, a pair of contact fingers, 4 and 5, of slightly different lengths and shaped substantially as shown, are made from any suitable conducting, and preferably resilient, material and are mounted on an insulation supporting block 6, by any suitable means, as screws 7, 7' and 8. Screws 7, 7' each serve as a terminal for the respective fingers 4 and 5 and as a binding post for the respective conductors 9 and 10, from the terminals of any selected indicating or testing instrument as a millivoltmeter, for example, which in practice is included in the circuit, as is well understood.

Block 6 may be made from any suitable insulating material, as hard rubber, fibre composition, phenolic condensation product or the like, which will properly provide an insulating base for the contact fingers. This

base is suitably carried on an L-shaped arm or support 11, by a yoke 12, and this yoke 12 may be provided with a set screw 13, or a set or holding spring 14, or equivalent, for engagement with serrations 15, on the support, to thus hold the supporting block and contact fingers in position. Obviously, if desired, the serration on the supporting arm may be omitted and other holding devices may be substituted for those shown on one limb of the supporting arm. The other limb or member of the arm is provided with two pairs of rollers 16, 16' and 17, 17', and each pair is suitably mounted on journal pins 18 and 19. These rollers are made from any desired insulating material and are properly spaced to afford, with the two contact arms 4 and 5, what may be termed a three-point bearing on the commutator and distributed about its axis. The material of the supporting arm between the two sets of rollers may be cut away, as shown in Fig. 1, to give clearance for the commutator bars.

It is obvious that this arrangement of the two pairs of spaced rollers, their relation to the contact fingers at their points of contact, automatically centers and positions my testing device and holds the same in definite and fixed relation to the commutator while it is being tested. It is also apparent that the testing may be carried out quickly, and with great facility, and that by simply adjusting the supporting block and contact fingers in the manner disclosed herein, commutators of various diameters may be accommodated.

While I have disclosed a specific embodiment of my invention, I do not thereby wish to be understood as thus limiting myself, as obviously various modifications falling within the scope and spirit of my invention will readily suggest themselves to those skilled in the art.

What I claim, therefore, as new and useful, and of my own invention, and desire to protect by Letters Patent is:—

1. In an armature testing device, a supporting member comprising two limbs at substantially right angles, spaced insulation members on one of said limbs, and an adjustable insulation member carried on the other of said limbs and having independent contact fingers.

2. In an armature testing device, a supporting member comprising two limbs at

substantially right angles, pairs of spaced insulation members on one of said limbs and a slidable insulation member carried on the other of said limbs, said slidable member carrying two separate contact fingers for contacting different commutator bars.

3. In an armature testing device, a supporting member comprising two limbs at substantially right angles, spaced insulation members on one of said limbs, an adjustable insulation block slidably mounted on the other of said limbs, a pair of resilient contact fingers secured to said block but insulated from each other and forming with the spaced insulation members on the first named limb, positioning means on the commutator of the armature to be tested.

4. A testing device of the character described, comprising an L-shaped support, spaced insulation rollers secured on one arm of said support, a slidable insulation block

carried on the other arm of the aforesaid support, and separate insulated contact fingers projecting from said insulation block in a direction substantially parallel with the first named arm.

5. A testing device of the character described, comprising an L-shaped support, spaced insulation rollers secured in pairs on one arm of said support, a movable insulation block adjustably mounted on the other of said arms and having secured electrically separated resilient contact fingers for forming contact with adjacent commutator bars and binding screws also carried by said movable block for connecting the fingers to a testing instrument.

In testimony whereof I have hereunto set my hand on this 2nd day of August, A. D. 1921.

THEODORE J. OMAN.