May 12, 1925. 1,537,386

E. M. TINGLEY

ELECTROSTATIC CONDENSER

Filed Nov. 24, 1920

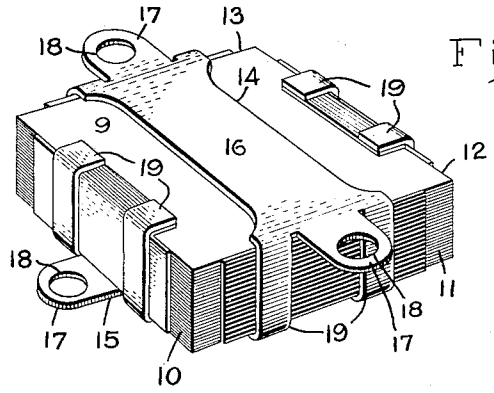


Fig. 1.

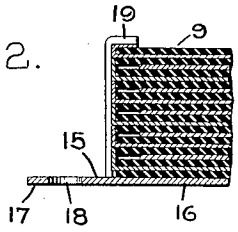


Fig. 2.

Inventor:
Egbert M. Tingley,
by Albert G. Davis
His Attorney.

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UNITED STATES PATENT OFFICE.

EGBERT MOORE TINGLEY, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

ELECTROSTATIC CONDENSER.

Application filed November 24, 1920. Serial No. 426,315.

To all whom it may concern:

Be it known that I, EGBERT MOORE TINGLEY, a citizen of the United States, residing at Elizabeth, in the county of Union, State of New Jersey, have invented certain new and useful Improvements in Electrostatic Condensers, of which the following is a specification.

This invention relates to electrostatic condensers and more particularly to improved means for clamping together the sheets of the condenser.

The objects and advantages of the invention will appear from the following description taken in connection with the accompanying drawing wherein Fig. 1 is a perspective view of a condenser embodying my invention, and Fig. 2 is a detailed section showing the manner of connecting the condenser leaves to the terminal clamps.

As shown in the drawing, my condenser comprises alternate sheets of conducting and insulating material, such for example as tin foil and mica, arranged in the form of a block 9, having sides 10, 11, 12 and 13. Alternate sheets of conducting material extend outwardly at the sides 10 and 12 and are bent upwardly along the edges of the insulating material as is indicated in Fig. 2. The remaining sheets of conducting material extend outwardly at the sides 11 and 13 and are bent upwardly in a similar manner.

As a means for securing the sheets together and to provide terminal connections for the condenser, I employ two clamps 14 and 15. Each of these clamps is formed of a metallic plate or body portion 16 which is adapted to lie against a face of the block 9 and is provided at its ends with terminal projections 17. These projections are perforated at 18 to provide means for securing the condenser to a suitable support or container and to form an electrical connection with the clamp. The plates 16 are also provided at each end with a pair of strips or fingers 19. Each pair of strips extend across the side of the block and are bent at their ends against the opposite face. As may be readily seen from Fig. 1, the clamps are so arranged that the plates 16 bear against opposite faces of the block and have their longitudinal axes at right angles to one another.

In practice, after the block 9 is formed, clamps 14 and 15 are applied, the fingers being pressed tightly into contact with the condenser sheets and the faces of the block, and the entire condenser is then impregnated with china wood oil and then baked, the last operation serving to solidify and harden the oil.

It is obvious that the clamps as above described may be modified to suit the character of the container to which the condenser is to be attached and also to suit varying forms of condensers. Thus, for condensers having more than four sides or those in the form of a circular disc, the body portion 16 of the clamps may take the form of a spider with fingers similar to the fingers 18 at the ends of the spider arms. In all of such constructions, fingers of one clamp will alternate around the periphery of the condenser with fingers of the other clamp.

From the foregoing it will be seen that I have devised a condenser which is simply constructed, and wherein the clamps which serve to hold the sheets of the condenser together also serve as condenser terminals. These clamps may be cheaply formed of sheet metal and may be applied to the condenser body without the necessity of perforating the insulating material. Each clamp is constructed to embrace the entire condenser and is therefore not dependent upon friction alone to hold it in place. It will be noted that the condenser provides electrical terminals which are located at widely separated points. As so constructed, my condenser while applicable to a variety of uses is particularly adapted for use with magnetos or similar apparatus, not only because it is well able to withstand the severe mechanical vibration which is so often incident to uses of this character, but also because as constructed it furnishes a high capacity in an extremely limited space.

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

1. A condenser comprising a block of alternate conducting and insulating sheets and means for clamping together said sheets comprising a member lying against one face of said block and having end fingers embracing two opposite sides of said block and engaging the opposite face thereof, and a similar member lying against said opposite face at substantially right angles to said first member and having end fingers embrac-

ing two other opposite sides of said block and engaging said first mentioned face thereof.

2. A condenser comprising a block of alternate conducting and insulating sheets, alternate conducting sheets extending beyond one side of said block and the intermediate conducting sheets extending beyond another side of said block, a terminal clamp for said block having a body portion lying against one face of said block and having fingers extending over one pair of opposite sides thereof and engaging the opposite face thereof, and a similar terminal clamp having a body portion lying against said opposite face and having fingers extending over another pair of opposite sides of said block and engaging the first mentioned face, the extending portions of said alternate conducting sheets being in electrical connection with a finger of one of said clamps and the extending portions of said intermediate conducting sheets being in electrical connection with a finger of the other of said other terminal clamps.

In witness whereof, I have hereunto set my hand this 19th day of November, 1920.

EGBERT MOORE TINGLEY.