

No. 859,923.

PATENTED JULY 16, 1907.

C. Z. DAVIS.
ELECTRICAL CONDENSER.
APPLICATION FILED MAY 13, 1907.

FIG. 1.

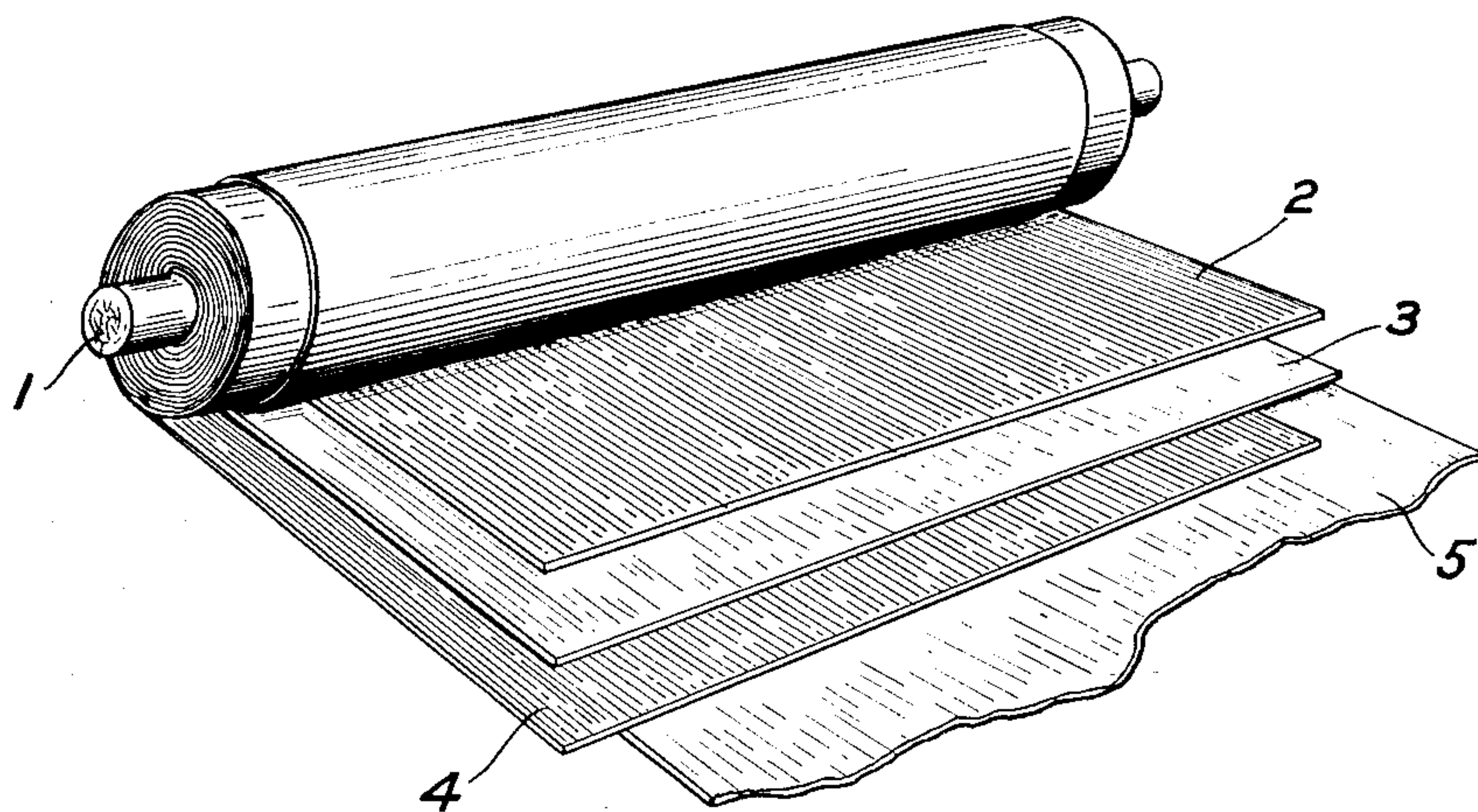
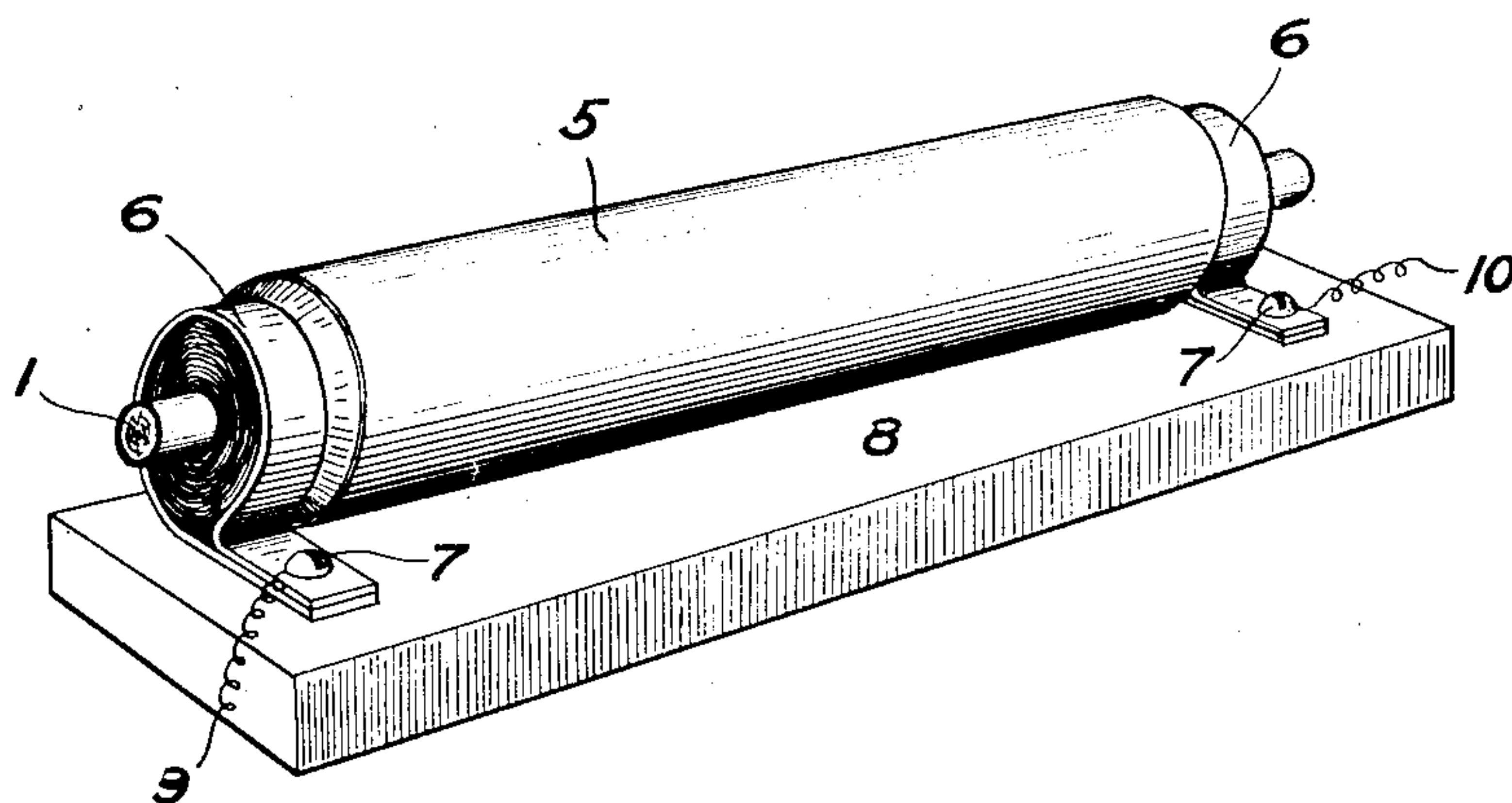


FIG. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CLARENCE Z. DAVIS, OF BUFFALO, NEW YORK, ASSIGNOR TO CYPHERS INCUBATOR COMPANY, OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

ELECTRICAL CONDENSER.

No. 859,923.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed May 13, 1907. Serial No. 373,501.

To all whom it may concern:

Be it known that I, CLARENCE Z. DAVIS, a citizen of the United States, and a resident of Buffalo, in the county of Erie and State of New York, have invented
5 certain new and useful Improvements in Electrical Condensers, of which the following is a specification.

This invention relates to electrical condensers, and consists in the apparatus hereinafter described and claimed.

10 The object of the invention is to produce a compact, efficient and easily constructed condenser.

In the drawings:—Figure 1 shows a condenser embodying this invention in the course of construction; and Fig. 2 shows the completed device.

15 This condenser has a cylindrical form, and is composed of sheets of an electric conductor separated by sheets of a dielectric of suitable character. These sheets arranged alternately are rolled together, preferably upon a core, and thus form a cylindrical
20 condenser. The two sheets of the conductor are ordinarily of tin foil, and project from opposite ends of the roll or cylinder. Then after the sheets are rolled up, the cylinder may be heated to drive all air and moisture therefrom, and if the sheets of dielectric are made of paraffin
25 or waxed paper, the paraffin or wax is slightly melted, and the sheets are sealed together, so as to prevent the introduction of air or moisture. Then the projecting ends of the two sheets are clamped together tightly around the core, so as to make good electrical contact
30 with any outside source. This clamping is, in the present instance, produced by a strap of sheet metal, which is then screwed upon a base. Conducting wires from the strap lead to any suitable point, and when said
35 conductors are connected, the condenser is discharged.

In the drawings, the core 1 may be a rod of glass, wood, vulcanite, or any other suitable substance. The sheets of conducting material 2 and 4 are made of tin foil, and the sheets of the dielectric 3 and 5 may be made in this case of paraffined or waxed paper. The
40 edges of the sheets 3 and 5 of the dielectric match or correspond, while the edges of the sheets 2 and 4 of the conductor do not match, but the edge of the sheet 2 projects, in Fig. 1, toward the right beyond the edges of the sheets 3 and 5, and the left hand edge of said
45 sheet 2 is inside the edge of the sheet 3. The left hand edge of the sheet 4 projects beyond the edges of the

sheets 3 and 5, while the right hand edge of said sheet 4 is within the edges of said sheets 3 and 5, and lies between said sheets.

The sheets 2, 3, 4 and 5 are long strips which may be 50 as long as desired, in proportion to the capacity that the condenser is to have. The width of the sheets is substantially the same. In the drawing the sheets are, say, three inches and a half in width, and may be many feet in length. When rolled together, the end of sheet 55 3 should project beyond the ends of the sheets 2 and 4, so as to insulate the sheets 2 and 4 from each other. The sheet 5 should be considerably longer than the other sheets, so as to be wrapped completely around the outside of the cylinder many times, if desired, and 60 thus to form a protection and thorough insulation thereof.

As noted, the left hand edge of the sheet 4 projects outward from the left hand end of the roll, and the right hand end of the sheet 2 projects toward the right and 65 outward from the right hand end of said roll. The convolutions of each end are then clamped tightly together, so as to make good electrical contact, by means of a metallic strap which tightly incloses and compresses said convolutions, and forms not only a protection for the 70 end of the condenser, but may form its support. For this purpose the ends of the strap 6 are for a suitable distance brought flat against each other, and are then, by means of a suitable bolt or screw 7, passing through said two ends, fastened tightly to a base 8. Conduct- 75 ing wires 9, and 10 are electrically attached to the straps 6, as for instance, by the bolt or screw 7, and the condenser is complete.

What I claim is:—

In an electric condenser, two sheets of dielectric material, two sheets of conducting material lying between and insulated by the sheets of dielectric material, one sheet of conducting material having an edge projecting from between the sheets of dielectric material on one side, and the other sheet of conducting material having an edge 85 projecting from the sheets of dielectric material on the other side, a core on which the sheets are wound, and a separate strap clamp at each end of the condenser inclosing and pressing together the projecting convolutions of the sheet of the conductor at that end.

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Witnesses:

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