

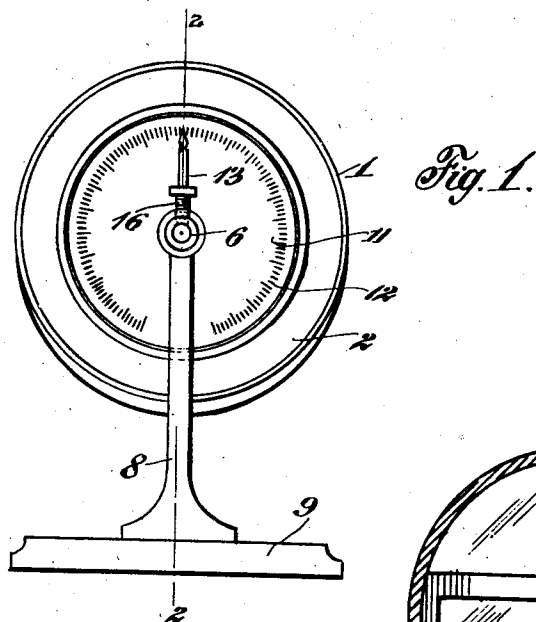
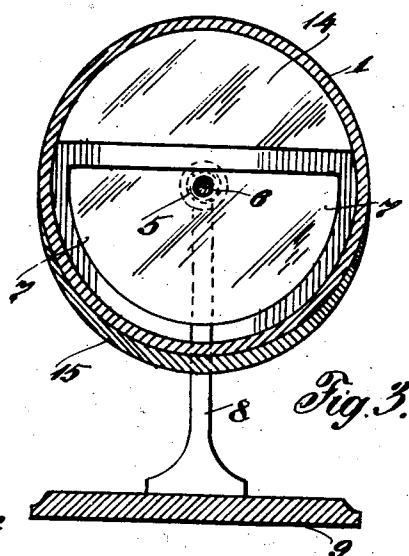
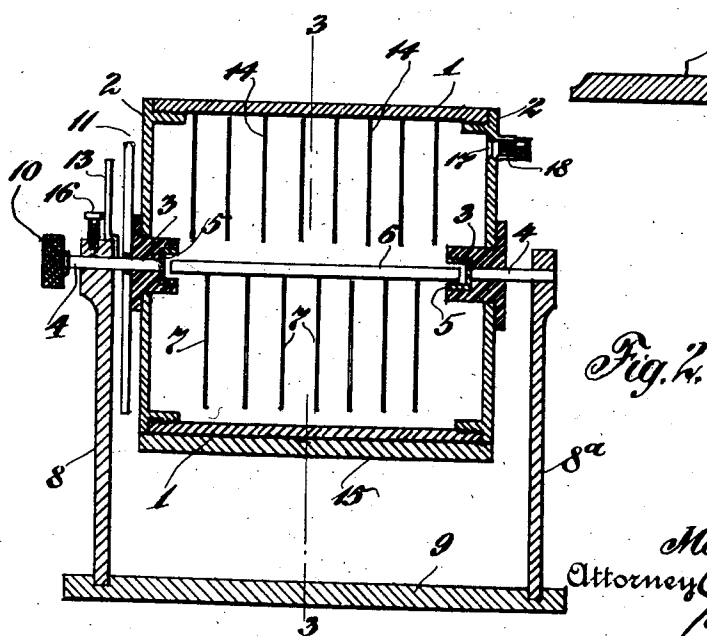
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1,452,610

M. KLOSNER

ELECTRICAL CONDENSER

Filed Sept. 2, 1920



UNITED STATES PATENT OFFICE.

MORRIS KLOSNER, OF NEW YORK, N. Y.

ELECTRICAL CONDENSER.

Application filed September 2, 1920. Serial No. 407,740.

To all whom it may concern:

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

This invention relates to electrical condensers, and has for an object the provision of an apparatus of this character which is of continuously variable capacity whereby the tension may be varied to meet numerous requirements; a further object being to provide an apparatus which is of such air-tight construction as to be capable of containing either compressed air or any adaptable gas capable of being used in electrical condensers.

The above named and other objects are attained by employing my improvements which comprise a set of stationary metal leaves or plates, and a set of adjacent turnably adjustable plates adapted to either partly or completely interleave therewith, casing means for enclosing said sets, means for mounting the parts, means for rotating the adjustable plates, and various other novel features all as hereinafter fully described and specifically set forth in the annexed claims.

In the accompanying drawings forming part of this specification. Figure 1 is an end view of an embodiment of my invention. Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1, and Fig. 3 is a cross sectional view taken on the line 3—3 of Fig. 2.

In the example of my invention shown by the drawings, 1 indicates a metal cylinder having fixed at each end a head 2, by means of any suitable air-tight joint.

Leading horizontally and centrally through each head 2, and fixed thereto by an air-tight joint, is a plug 3 composed of insulating material of any suitable variety. These plugs respectively have fixed thereto an outwardly extended shaft-section 4, having on its inner end a bearing-cup 5, for loosely supporting a longitudinal shaft 6 which carries a set of fixed depending sheet metal segments or leaves 7 which, by their own weight, are maintained in suspended position as indicated by Fig. 3 of the drawings.

The shaft-sections 4 are rotatably mounted in standards 8 and 8^a, which are fixed to

a wooden base 9. Fixed to the outer end of one of the shaft-sections 4, is a knob 10 composed of insulating material, whereby the cylinder 1 may be rotated.

Fastened to the plug 3 which is adjacent to the knob 10, is a dial 11 having a scale 12 which registers with a fixed pointer 13 extended upwardly from the standard 8.

Secured across the inner wall of the cylinder 1, and having their straight-line edges normally over and parallel with the straight-line edges of the leaves 7, is a set of segmental plates or leaves 14, these are adapted to inter-leave with said leaves 7 when the cylinder is turned by means of a knob 10. The leaves 14 are maintained in their normal position, shown by Fig. 3 of the drawings, by means of a balance weight 15 located on the cylinder 1 at a point diametrically opposite said leaves, and said cylinder may be turned to any arbitrarily selected position, by means of the knob 10, and it may be maintained in set position by means of a set-screw 16, which is threaded through the head of the standard 8 and bears on the shaft-section 4.

One head 2, of the cylinder is provided with an adaptable check-valve 17, through which compressed air or gas may be injected into the device, said valve being maintained normally closed by means of a spring 18, thus maintaining the cylinder air and gas-tight when the apparatus is in use.

It is manifest that by employing my improved condenser I may continuously change the correlation of the leaves to vary the tension by simply turning the cylinder to any desirable degree indicated on the dial 13, the set-screw 16 being employed to maintain the desired set correlation of the leaves; the apparatus being of such construction, owing to the novel assemblage of its parts, that it is not only of continuously variable capacity whereby the tension may be arbitrarily differentiated, but it is also air and gas tight for the purpose of containing various conductive agents.

In use the apparatus is interposed in an electric circuit, the cylinder 1 and its mechanically and electrically connected leaves 14 having electrical connection with the negative conductor of the circuit and the leaves 7 in electrical connection with the positive conductor, in any well known manner commonly employed and not herein necessary to describe.

I do not wish to be understood as confining myself to the employment of the specific details of mere mechanical construction as herein described as it is obvious that
5 under the spirit and scope of my invention I may employ slight variations of mechanical detail.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

10 1. A variable condenser comprising a set of stationary leaves and an adjacent set of turnably adjustable leaves, and an air-tight casing for said sets and a weight for automatically maintaining said sets normally in
15 non-interleaved relation, and means for adjusting said last named set whereby the pressure may be varied, the apparatus adapted to be interposed in an electrical
20 circuit.

2. A variable condenser comprising a set of depending leaves mounted upon a non-rotatable horizontal shaft, and a set of adjacent leaves adapted for variable correlation therewith, said sets being insulated
25 from each other, and an air-tight casing for said elements, the last named leaves mounted on said casing, and a weight for automatically maintaining said sets normally in
30 non-interleaved relation.

3. A variable condenser comprising a rotatable air tight cylinder having a set of leaves mounted interiorly thereon, and a set

of non-rotatable leaves mounted within said cylinder and normally out of interleaved
35 relation with said first named said set, said sets being insulated from each other, and means for rotatably moving said cylinder whereby the correlation of the sets of leaves may be varied to produce variable tension,
40 and a weight for automatically maintaining said sets normally in non-interleaved relation, the apparatus adapted to be interposed in an electrical circuit.

4. A variable condenser comprising a rotatable air-tight cylinder, and means for
45 injecting a conductive fluid into said cylinder, and a set of leaves within and carried by said cylinder, and a set of stationary leaves extended through said cylinder and
50 insulated therefrom, said sets normally in non-interleaved relation, and means for mounting said cylinder whereby it may rotate and a weight for automatically maintaining said sets of leaves in non-interleaved
55 relation, and means for rotating said cylinder, and means for fixing it in arbitrarily set position, and indicator-means for gauging the movement of said cylinder, the device adapted to be interposed in an electrical circuit for the purpose of varying the
60 capacity.

Signed at Norfolk, in the county of Norfolk and State of Virginia, this 17th day of August, A. D. 1920.

MORRIS KLOSNER.