

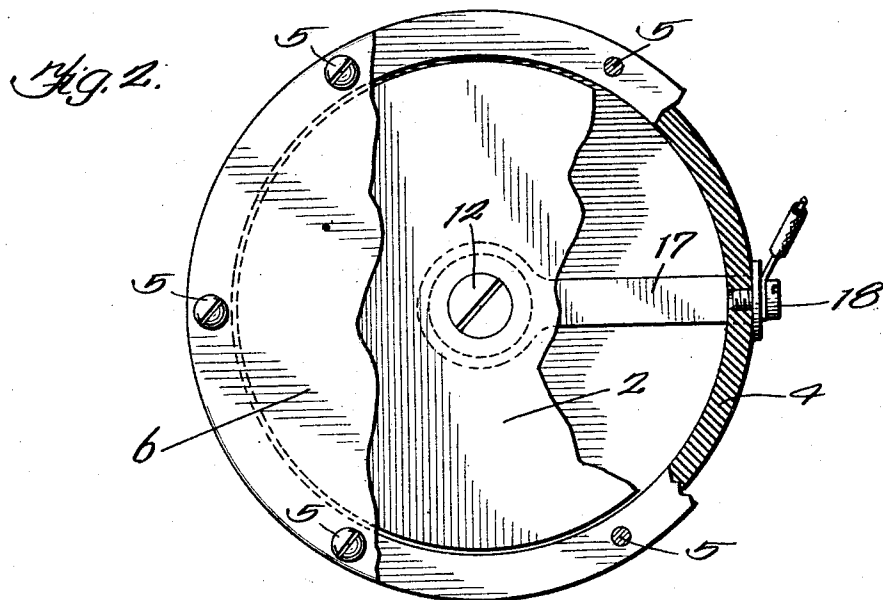
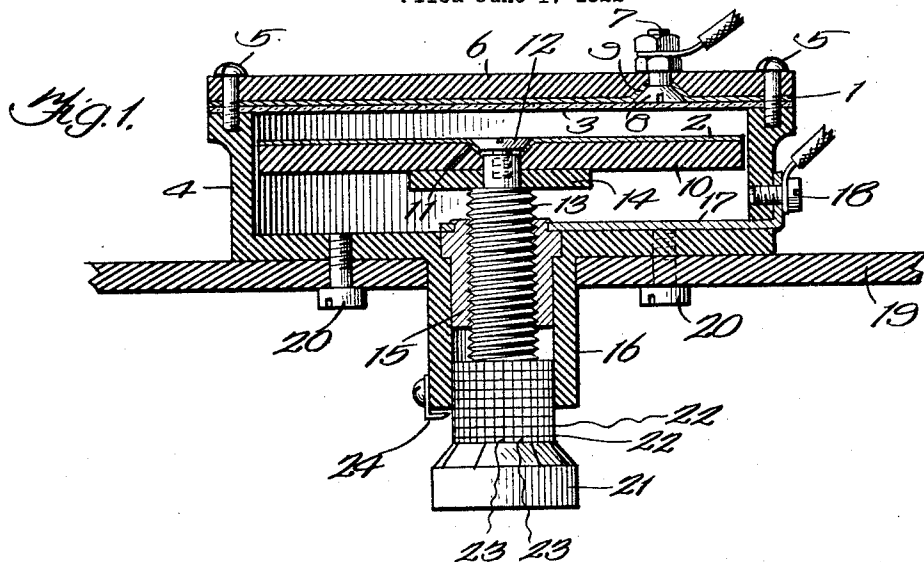
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H. A. DOUGLAS

CONDENSER

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UNITED STATES PATENT OFFICE.

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CONDENSER.

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My invention relates to electrical appliances, being of particular service in connection with condensers.

The device of my invention includes two complementary members of an electrical appliance, one element in the form of a sleeve and a second element in the form of a shaft in threaded engagement with said sleeve, one of these elements being in adjusting relation to one of the aforesaid members and one having circumscribing marks thereon distributed along the same and a plurality of longitudinal marks distributed around the same. Such a structure, employed in a condenser, serves to regulate the condenser capacity smoothly as differentiating from step by step adjustment, the markings enabling the notation of the various adjustments for the purpose of record. This is of particular service when employed in connection with radio systems of communication as it enables the recording of the adjustments which are made to bring radio receivers into tune with different sending stations.

In the preferred embodiment of the invention the condenser plates are substantially parallel and each has a mounting, one of these mountings including the interiorly threaded sleeve in which the shaft is received, this shaft constituting a stem that carries the corresponding condenser plate. The outer end of this stem is desirably enlarged to form a turning knob which carries the aforesaid circumscribing and longitudinal marks.

The invention will be more fully explained by reference to the accompanying drawing in which Fig. 1 is an axial sectional view of a condenser constructed in accordance with the preferred embodiment of the invention; and Fig. 2 is an end view of the condenser with parts broken away.

Like parts are indicated by similar characters of reference in both figures.

The condenser illustrated includes plates 1 and 2 in the form of discs, these plates constituting the condenser sides. These condenser plates are separated by a dielectric 3 of mica or other suitable material. The mounting for the plate 1 is preferably in the form of a cup 4 of insulating material. The condenser plate 1 and the dielectric 3 are secured to the rim of the cup by means of screws 5. A cover 6, of insulating material, is desirably clamped upon the rim

of the cup, the plate 1 and dielectric 3 being clamped between this cover and the rim of the cup by the screws which pass through the cover as well as through the plate and dielectric.

The condenser side 1 is electrically connected through the intermediation of a binding post 7 having a tapered head 8 which is received in a seat 9 pressed into the plate 1 and received in a corresponding recess in the cover 6.

The condenser plate 2 is mounted upon the disc 10 of insulating material, this plate 2 being formed with a seat 11, similarly to the seat 9 of the condenser plate 1, the seat 11 receiving the head 12 of a screw that passes into one end of a threaded shaft 13 whereby this shaft constitutes a stem for the condenser plate 2. The collar 14 of insulating material desirably surrounds the adjacent end of the stem that is reduced to receive this collar which is clamped between the disc 10 and the larger part of the stem 13 by the screw having the head 12. The mounting for the plate 2 also includes the interiorly threaded sleeve 15 which is disposed within the sleeve continuation 16 of the bottom of the cup 4. The stem or shaft 13 is threaded into the bore of this sleeve. The stem 15 is desirably of metal and is in electrical connection with the condenser plate 2 by the metallic screw which assembles it with such condenser plate. The sleeve 15 is also metallic and is employed to effect electrical connection of the condenser plate 2. This sleeve desirably has an annular groove at the end thereof which is adjacent the condenser plate, a metal strip 17 being received in this groove and projecting through the cylindrical wall of the cup 4, the outer end of this strip being turned against the cylindrical side of the cup as indicated in Fig. 1. A binding screw 18 serves to connect any suitable connecting wire with the strip 17. The cup may be mounted upon any suitable support 19 by means of the screws 20.

The outer end of the stem projects through the sleeves 15 and 16 where it is formed with a turning knob 21. This turning knob has a plurality of substantially parallel circumscribing marks 22 thereon which are distributed along the stem. This knob also has a plurality of longitudinal marks 23 thereon which are distributed around the stem. A stationary marker 24 is mounted upon the

sleeve 16 and terminates in close proximity to the marked portion of the knob. The position to which the stem is turned in adjusting the condenser capacity may be very accurately observed with the aid of the marker 24. The various adjustments which are made of the condenser capacity that are employed in tuning radio instruments may be recorded to enable the repetition of such adjustments when desired, the invention being thus of particular use in radio work.

While I have herein shown and particularly described the preferred embodiment of my invention I do not wish to be limited to the precise details of construction shown as changes may readily be made without departing from the spirit of my invention, but having thus described my invention I claim

as new and desire to secure by Letters Patent the following:—

The combination with a body of insulation in the form of a cup; of a cover at the rim of the cup; an interiorly threaded metallic sleeve carried by the cup at its base end; a threaded shaft projecting into the cup and screwed into said sleeve; a condenser plate carried upon the inner end of said shaft; a condenser plate complementary to the aforesaid plate and positioned at said closure; and a conductor connected with said sleeve and extending through the wall of the cup for circuit connection.

In witness whereof, I hereunto subscribe my name this 26th day of May A. D., 1922.

HARRY A. DOUGLAS.