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D. R. DE TAR

1,825,583

ADJUSTABLE ELECTRIC DEVICE

Filed Nov. 11, 1926

Fig. 1.

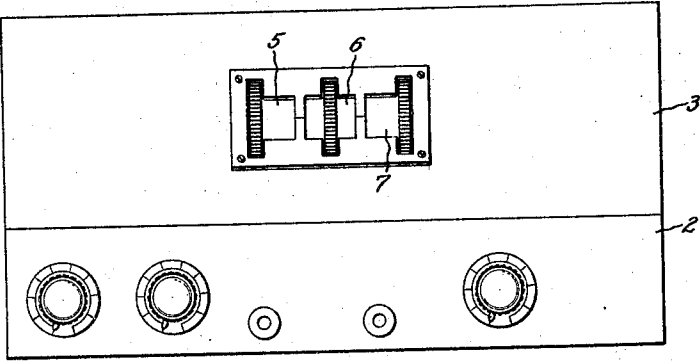


Fig. 2.

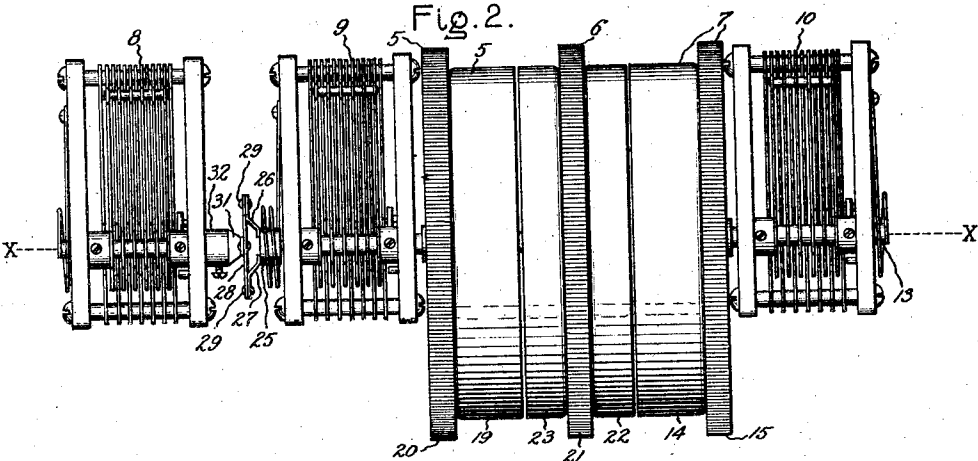
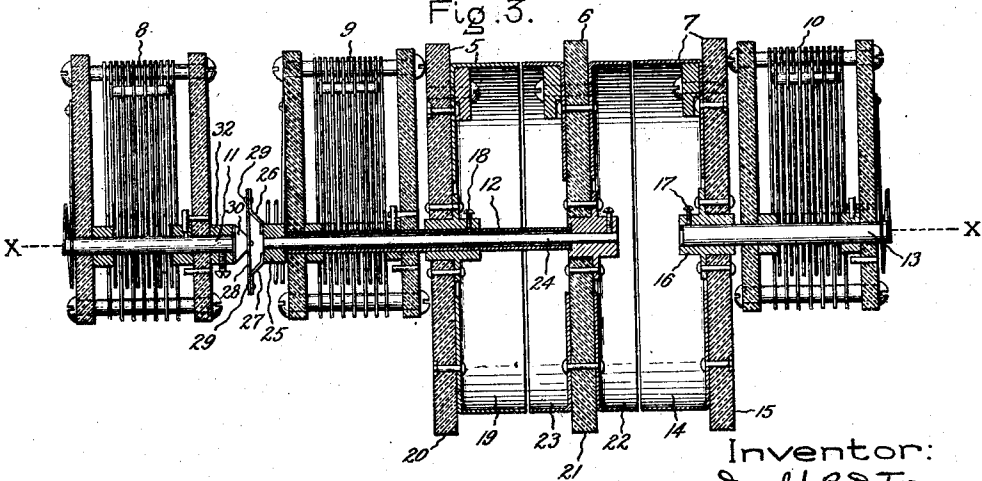


Fig. 3.



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UNITED STATES PATENT OFFICE

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ADJUSTABLE ELECTRIC DEVICE

Application filed November 11, 1926. Serial No. 147,813.

My invention relates to adjustable electric devices such as condensers and the like. More in particular my invention relates to a group of adjustable condensers and especially adapted for use in connection with radio apparatus.

It is an object of my invention to provide a device in which the condensers are under the control of a set of drums mounted along a common axis and in such proximity to each other that they may be all moved simultaneously with one hand or moved independently.

It is an object of the invention to provide a device of the foregoing character in which the control of the condensers is localized at one point on the panel of the apparatus and opposite a window. It is also an object to provide each control drum with spacings for tabulating the radio stations and other data relating to such stations. It is also an object to mount all of the condensers and the control apparatus on a common panel with all of the control shafts in alignment along a common axis. It is also an object to provide drums of sufficiently large diameter so as to make it possible to tune closely without the necessity of using vernier devices.

However, the novel features of my invention are hereinafter more fully set forth and claimed, reference being had to the accompanying drawings in which Fig. 1 is a front view in reduced size of a radio set in a cabinet, and provided with the device of the invention. Fig. 2 shows a number of condensers and their controlling drums assembled and in alignment and removed from the enclosing cabinet according to the invention. Fig. 3 is a view in section through the condensers and drums of Fig. 2.

Referring more in detail to the drawings, it will be seen that the cabinet, Fig. 1, is provided with a panel 2 along which are mounted the several rheostat elements.

The cabinet is also provided with a panel 3 provided with a frame within which suitable windows are provided through which protrude the controlling drums 5, 6 and 7 shown in Figs. 2 and 3. Associated with these drums are the condensers 8, 9 and 10 all of which are suitably mounted on the back of the panel 3 along an axis which is common to all of the condensers and to all of the drums. It will be seen that the rotor element of the condenser 8 is mounted on the shaft 11 while the rotor of the condenser 9 is mounted on the shaft 12 also the rotor of the condenser 10 is mounted on the shaft 13.

It will be seen that the shaft 13 of the condenser 10 projects toward the left of the condenser and supports the drum 7. As shown, the drum consists of two elements namely, the cup-shaped element 14, Fig. 3, and the disc element 15. As shown, the element is secured to the disc element 15, which later is provided with a collar 16 to which the disc is secured and which collar in turn is secured to the shaft 13 by means of the screw 17. It will be seen also that the shaft 12 of condenser 9 projects toward the right in Fig. 3. To this shaft the drum 5 is attached by means of the screw 18. The construction of the drum 5 is similar to that of the drum 7 except that the cup element 19 is on the right side of the disc element 20 instead of on the left. The central drum 6 is provided with a disc 21 and with two cup elements 22 and 23, one on each side of the disc. This drum 6 is secured to the shaft 24, which latter is an extension, so to speak, of the shaft 11 of condenser 8. However, shafts 11 and 24 may be in the form of a single shaft of insulating material. As indicated, the shaft 24 passes through the center of shaft 12, which latter is hollow. Shaft 24 terminates on the left side in a collar 25 which is suitably secured to the

shaft 24. To the left side of the collar there is secured a stirrup in the form of the elements 26 and 27. These elements are riveted at their outer ends to a disc of insulating material 28 by means of the rivet 29. Therefore, by rotating the shaft 24 the disc 28 will also be rotated. To the opposite side of the disc 28, that is, on the left side, Fig. 3, of the disc, there is secured another stirrup similar to the one on the right consisting of the elements 30, Fig. 3, and 31, Fig. 2. This stirrup is secured to the collar 32 on the shaft 11 and therefore rotates with the shaft 11. Obviously, therefore, by rotating the drum 6 the rotor of the condenser 8 may be rotated. The provision of the insulating disc 28 between the shafts 11 and 24 is to maintain the rotors of the condensers 8 and 9 insulated from each other.

On the other hand, by rotating the drum 5 the shaft 12 may be rotated without disturbing the shaft 24 and therefore the condenser 9 may be adjusted independently of the condenser 8. Therefore by means of the construction and arrangement shown the adjustment of the condensers in the set is such that either one of the condensers may be adjusted independently, any two of them may be adjusted simultaneously, or the whole set may be adjusted simultaneously without any difficulty. With this arrangement the operation of the devices is very much simplified.

It will be understood that while I have disclosed my invention in connection with the specific form of device shown and described that I do not care to be limited to the exact form of construction shown and described inasmuch as in view of the disclosure, variations and modifications of the invention will readily be suggested which fall within the spirit of the invention and the scope of the claims contained herein.

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

1. A panel mounting for three tuning devices each provided with a rotor member, comprising three control drums, one for each of said rotor members, grouped side by side and each projecting through the panel, each of said control drums being arranged to rotate with its corresponding rotor member independently of the other control drums and rotor members, said drums and rotor members being arranged to rotate on the same axis, one of said tuning devices being mounted at one side of said group of control drums, two of said tuning devices being mounted at the other side of said group of control drums.

2. A panel mounting for three variable tuning devices each provided with a rotor member and an actuating shaft secured thereto, comprising three control drums each connected to a different one of said rotor

members by a different one of said shafts, said drums being grouped side by side and having their edges projecting through an opening in said panel, each of said control drums being arranged to rotate with its corresponding shaft and rotor member independently of the other control drums and associated shafts and rotor members, said shafts being arranged to rotate on the same axis, the tuning device corresponding to one of the two outside members of said group of three control drums being mounted between said group of control drums and one end of the panel, the tuning devices corresponding respectively to the other side member of said group of three control drums and to the central member of said group being mounted between said group and the other end of the panel.

3. A panel mounting for three tuning devices each provided with a rotor member and an actuating shaft secured thereto, comprising two control drums each connected to a different one of two of said rotor members by a different one of two of said shafts, said drums being grouped adjacent each other and having their edges projecting through a window in said panel, said two rotor members being disposed on opposite sides of said group of two drums, said two shafts being disposed parallel to said panel and arranged to rotate independently of each other about a common axis, and a third control drum interposed between said two control drums and having its edge projecting through said window in said panel, said third drum being connected to the third one of said rotor members by the third one of said shafts, said third shaft extending through one of said two shafts and being arranged to rotate about said common axis independently of said two other shafts.

4. A mounting for three tuning devices, comprising a panel and three control drums, one for each of said devices, all of said drums being mounted to rotate about the same axis, said drums being grouped together side by side and being independently rotatable one with respect to the other, the outer drums of the group being connected respectively to different ones of two of said tuning devices, said two of said tuning devices being mounted on opposite sides of said group, the central drum of the group being connected to the third one of said tuning devices, one of said two tuning devices being mounted between said group of drums and said third tuning device, each drum having a disc mounted in a plane transverse said axis, said central drum of the group having a drum section on each side of its disc, one of the side drums having its drum section on one side of its disc with respect to the central drum, the other of said side drums having its drum section on the op-

posite side of its disc with respect to the
central drum, a window frame in the panel
opposite said drums provided with win-
dows, one for each drum therein, said discs
5 projecting through the windows within said
frame, two guides, one of said guides be-
ing common to the central drum and to one
of the side drums and the other guide be-
ing common to the central drum and to the
10 other side drum.

In witness whereof, I have hereunto set
my hand this 8th day of November, 1926.

DONALD R. DE TAR.

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