June 30, 1942. W. L. MORRISON 2,288,539

RADIO DEVICE

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Fig. 1

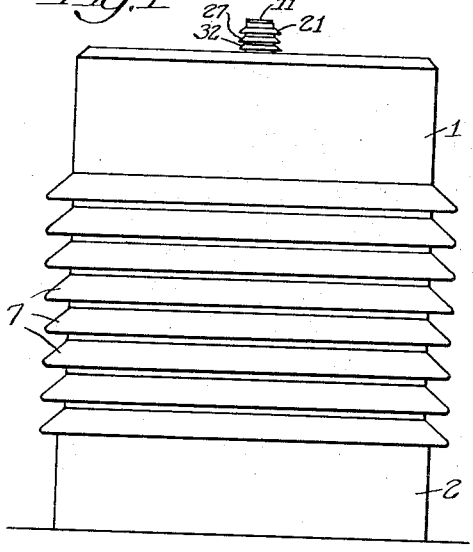


Fig. 2

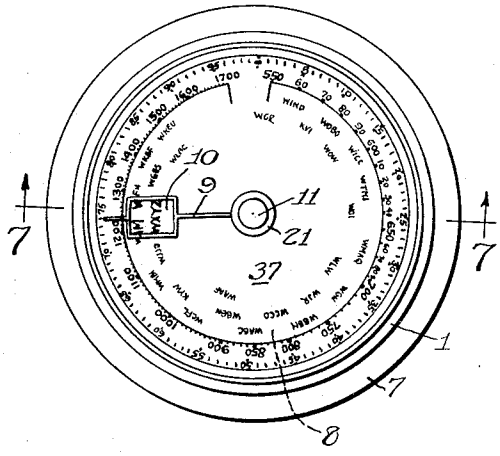


Fig. 3

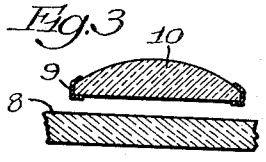


Fig. 4

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Fig. 5

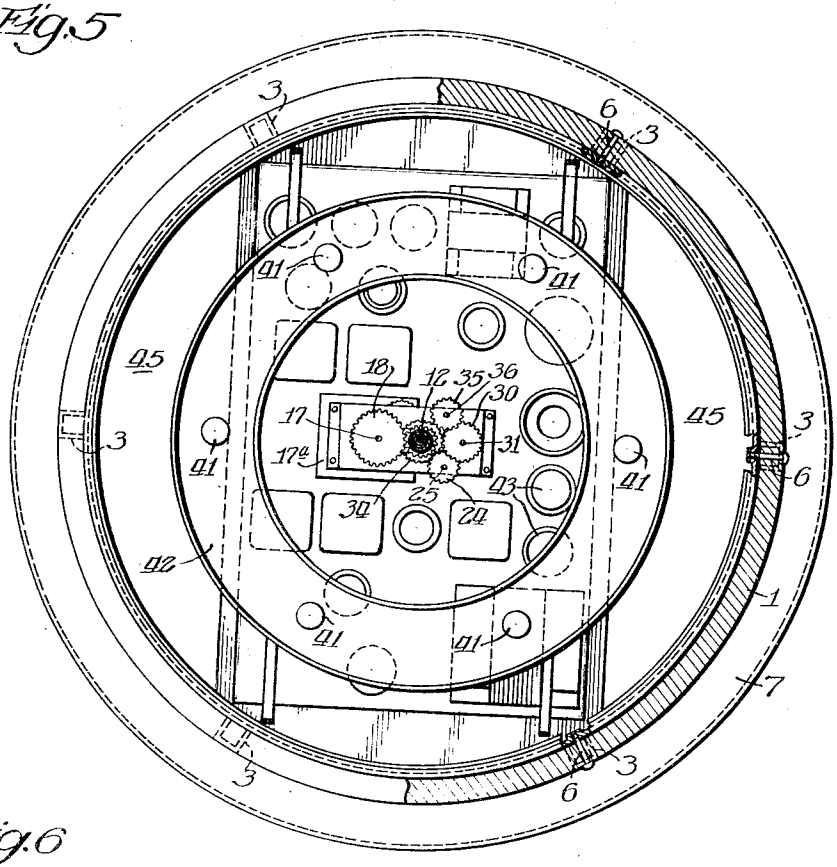
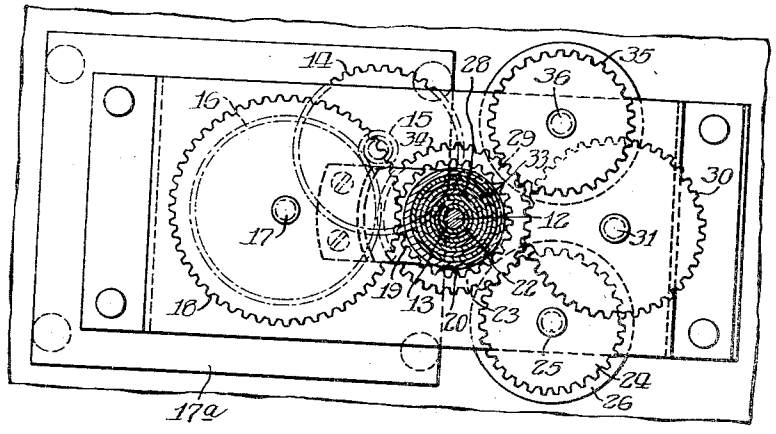


Fig. 6



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Fig. 7

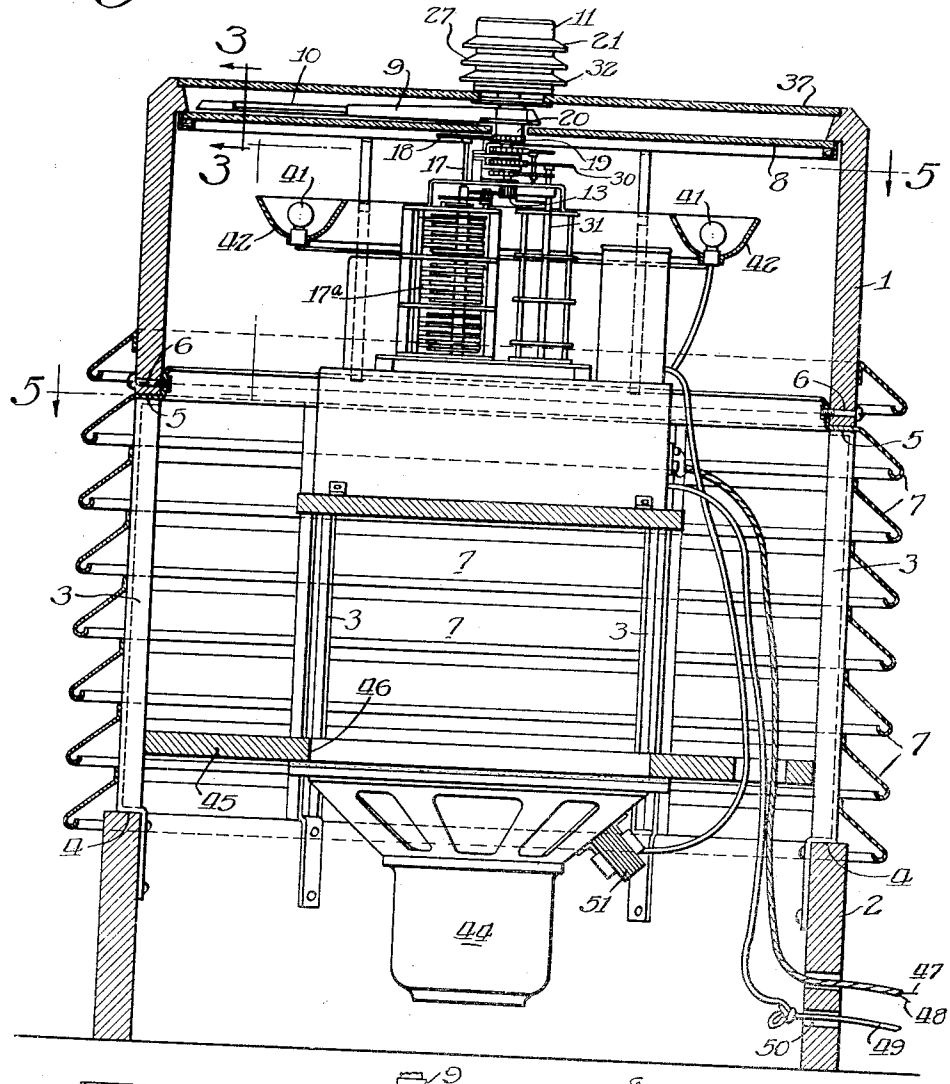
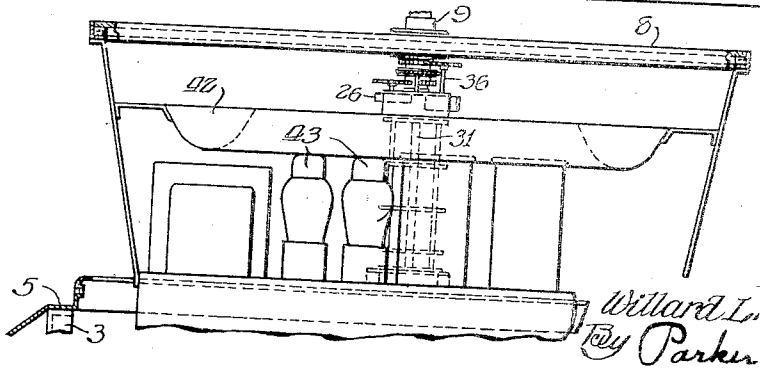


Fig. 8



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Patented June 30, 1942

2,288,539

UNITED STATES PATENT OFFICE

2,288,539

RADIO DEVICE

Willard L. Morrison, Lake Forest, Ill.

Application April 13, 1936, Serial No. 74,026

7 Claims. (Cl. 250—14)

This invention relates to radio devices and has for its object to provide a new and improved device of this description.

The invention has as a further object to provide a radio device wherein the dial is in a horizontal position. The invention has as a further object to provide a radio device wherein the dial forms the top of the casing or cabinet. The invention has as a further object to provide a radio device wherein there are openings extending entirely around the casing or cabinet through which the sound escapes. The invention has as a further object to provide a radio device having a cylindrical casing or cabinet wherein the dial is horizontal and forms the top of the casing or cabinet and the control knobs are at the center of the dial. The invention has other objects which are more particularly pointed out in the accompanying description.

Referring now to the drawings, Fig. 1 is a view of one form of device embodying the invention;

Fig. 2 is a plan view of the device shown in Fig. 1;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 7;

Fig. 4 is an enlarged vertical sectional view of the device shown in Fig. 1, with parts omitted;

Fig. 5 is a sectional view taken on line 5—5 of Fig. 7;

Fig. 6 is a sectional view taken on line 6—6 of Fig. 4;

Fig. 7 is a sectional view taken on line 7—7 of Fig. 2; and

Fig. 8 is a view, with parts omitted, of the upper part of the mechanism, with the upper section of the casing removed.

Like numerals refer to like parts throughout the several figures.

Referring now to the drawings, I have illustrated in the drawings one form of radio device embodying the invention. In this construction the casing or cabinet of the device is cylindrical in form and is preferably made in sections. As herein shown, there is an upper section 1 and a lower section 2. These sections are connected by a plurality of connecting members 3 which may be of any desired form of construction, but which are preferably comparatively thin metal members having at the bottom shoulders 4 which rest on the lower section 2 and at the top shoulders 5 upon which the upper section 1 rests. There are removable fastening devices 6 which connect the upper section 1 with these connecting members, so that the upper section may be easily and quickly removed to secure access to the interior mechanism.

It will be seen that the central portion of the device is open to permit the sound to escape. I prefer to provide some means for preventing the mechanism from being observed through this open central section and also of directing the sound outwardly. I prefer to provide over this central section a plurality of projecting members 7 which extend outwardly from the casing and which may be of any suitable form and arranged in any suitable manner. In Figs. 1 and 7 these members are shown as being inclined outwardly, being in the form of louvers. They may extend straight out if desired. These projecting members, in addition to preventing the interior mechanism from being seen, form an ornamental construction, as is clearly shown in Fig. 1. These members may be separate or they may be stamped out of a single piece.

The dial 8 is horizontal and forms the top of the casing or cabinet. This dial may have the usual graduations and numbers and any other data desired. In view of the fact that the dial is horizontal and forms the top of the casing or cabinet, there is room for a great quantity of data and the data and graduations may run all the way around the dial. In Fig. 2 I have illustrated the dial as having the ordinary graduations and numbers, and also having the kilocycles and the designation of the stations located at the proper position.

There is an indicating device 9 mounted on a centrally located shaft, which indicating device is moved around the dial to the indications representing the different stations. I prefer to provide the indicating device with a magnifying glass 10 attached thereto, which passes over certain of the indications, such as the names of the stations, so that they may be easily read. The indicating device as shown in Fig. 2 has an opening therethrough through which the characters which represent the names of the stations may be read, although I prefer to have a magnifying glass extending across this opening. This opening is of the proper size so that when the pointer is at the indication representing the station, the letters of the name of the station will all come within this opening. This also assists in insuring the indicating device being in the proper position for the station, for in addition to the pointer which is to be brought opposite the indication on the dial, the opening is of such size that when all the letters indicating the name of the station are clearly seen through the opening,

the pointer is then in its proper position. This is clearly seen in Fig. 2. In view of the large number of broadcasting stations, these letters and indications must be small and the magnifying glass permits them to be made small so that a large number of them can be crowded upon the dial, whereas, without the magnifying glass, a lesser number would have to be used in order to be legible. Any desired type of radio mechanism may be utilized and I have not attempted to show such mechanism in detail, but have simply attempted to show more or less diagrammatically certain of the operating parts. In this device the control knobs or members are located at the center of the dial and are provided with a shafts which pass through the dial at its center. As herein shown, there is a tuning member 11 which is connected to a shaft 12, which has thereon a pinion 13 which is connected by the gears 14, 15 and 16 with the shaft 17 of the condenser 17a. The gears 14, 15 and 16 are reduction gears for the purpose of permitting the indicating device 9 to be moved through 360°, while the condenser elements are moved through a much smaller arc. The condenser shaft 17 is provided with a gear 18 which connects with the pinion 19 attached to a sleeve 20 carrying the indicating device 9. There is shown a tone control member 21 which is connected by a hollow shaft 22 with a gear 23 meshing with a gear 24 attached to the shaft 25, connected with the tone control device or resistance 26. There is shown a band switch 27 which is connected by a hollow shaft 28 with a gear 29 which meshes with the gear 30 attached to the band control shaft 31. There is shown a volume control and switch 32 which is connected by a hollow shaft 33 with the gear 34 which meshes with the gear 35 attached to the control shaft 36. It will be seen that the radio mechanism may be regulated and controlled as desired and that the indicating device may be moved to connect with any desired station.

I prefer to provide a transparent protecting device 37 which is placed over the dial 8 and the indicating device 9, as clearly shown in Figs. 4 and 7. This device has an opening through the center for the various shafts and there is a member 38 fastened to it by means of the plate 39 and the fastening devices 40. I prefer to provide some means for lighting up the dial and I have indicated for that purpose the lights 41 and the reflecting device 42. In Fig. 8 there is indicated some of the tubes 43 and other parts of the receiving mechanism.

The speaker 44 which is preferably a dynamic speaker is preferably located at the bottom of the casing or cabinet below the baffle member 45 and attached thereto, the baffle member having opening 46 therethrough. The speaker directs the sound both upwardly and downwardly. The sound passes out through the open spaces between the projecting members 7 and passes out in all directions.

I have indicated wires leading to the device and consisting of the ground wire 47, the aerial wire 48 and the connection to the electric circuit 49, as passing into the casing at the bottom through openings 50. I have also indicated the transformer 51 associated with the dynamic speaker.

It will thus be seen that this device may be set out in the middle of the room, if desired, or in any part of the room, and it matters not which portion is presented to view, it will show a complete symmetrical, good-looking closed construction. It will be seen that I have here not only a circular dial, but a cylindrical cabinet with the circular dial on top. As clearly shown in Fig. 2, the dial 8 is horizontal and completely covers the top of the casing or cabinet and is provided with indications representing the different stations. There are a plurality of sets of indications associated with this dial, an outer set extending circumferentially around the dial, consisting of numbered graduations, an adjacent inner set extending circumferentially around the dial, representing the kilocycles for various stations, and within these graduations and between them and the center of the dial, are characters or letters representing various stations, the characters or letters of each stations extending in a circumferential direction around the dial. The indicating device 9 has a pointer at the end thereof and an opening between the pointer and the center of the dial, through which the letters or characters which represent the names of the stations are read. As clearly shown in Fig. 2, this opening through the indicating device 9 is of the proper size in a circumferentially extending direction and the letters are so proportioned, that when the pointer is at the indication representing a given station, the letters of the name of the station are read through this opening. The opening and the letters are so proportioned that the letters which represent the given station, when the pointer points to that station, can all be read through the opening, these letters preferably extending substantially across the opening in a circumferential direction, the two end letters being substantially at the opposite edges of said opening in a circumferential direction. In order to have a very large number of stations on the dial, there are several sets of these letters representing the stations, arranged circumferentially, one within the other, with the letters extending in a circumferential direction around the dial, the letters in the different sets being staggered, so that they can all be used and so that when any one set of letters for one station shows through the opening in the indicating device, the indicating device will be in the proper position to bring that station in and without interference with other stations. The opening through the indicating device is of sufficient length radially to permit any one of these sets of letters to be seen through it. This opening and the letters on the dial extending in a circumferential direction therearound assist in assuring the indicating device being in the proper position for the station, for when the letters of any given station all show through the opening, the pointer is in the proper position to point to the other indication on the dial representing this particular station. When a very large number of letters representing various stations are used, the magnifying glass permits them to be made small so that a large number of them can be thus crowded upon the dial and yet easily read.

I claim:

1. A cylindrical casing for housing a radio receiving device including a loudspeaker, said casing having an upper and a lower section separated by a space, connecting members connecting the upper and lower sections, and a series of spaced members extending horizontally around the casing between the said upper and lower sections and having sound discharge openings between them through which the sound is dis-

charged said spaced members projecting outwardly outside the casing.

2. A cylindrical casing for housing a radio receiving device including a loudspeaker, said casing having an upper and a lower section separated by a space, connecting members connecting the upper and lower sections, and a series of projecting devices extending horizontally around the casing between the said upper and lower sections and having spaces between them through which the sound is discharged, said projecting devices having their outer faces substantially parallel and projecting outwardly outside the casing.

3. A radio device comprising a casing, a radio receiving set including a loud speaker therein, said casing having an upper section, a section below the upper section, comprising a plurality of upright connecting members spaced apart, a plurality of horizontally extending members spanning the spaces between said upright members and separated vertically so as to have horizontally extending open spaces therebetween, through which the sound from the loud speaker passes out into the room, said horizontally extending members being on the outside of the upright connecting members and being inclined with relation to the upright members, whereby the upright members are concealed without interfering with the horizontally extending open spaces between said horizontally extending members.

4. A radio device comprising a hollow cylindrical casing open at the top, a flat circular horizontal dial having its periphery extending all the way around the open top of said hollow cylindrical casing, said dial forming the top of said casing and cooperating with said cylindrical casing to form a enclosed space, radio receiving apparatus including a tuning control means and a volume control means housed in said space, a member supported within said space and extending vertically through an opening in said dial to a point spaced above the dial, dial members concentric with and independently turnable about said vertical member in spaced relation, one above the other, to occupy a location above the dial, means connecting one of the dial members to the tuning control means and means connecting the other of the dial members to the volume control means, said dial being provided with a series of numbered graduations extending circumferentially around the periphery thereof, which graduations represent a plurality of broadcasting stations, said graduations being viewable from all points above the dial entirely thereabout, said dial having a series of characters between the graduations intermediate the periphery thereof and the center of the dial consisting of letters, which represent the names of the stations indicated on the dial, the letters of each station extending in a circumferential direction around the dial, and a movable indicating device movably mounted at the center of the dial and provided with a pointer which moves along said graduations when the indicating device is moved, said indicating device having an opening therethrough between the center of said dial and said pointer through which said letters are read as the indicating device is moved, said opening and said letters being so proportioned and related that when the letters representing any given broadcasting station are exposed through said opening, the pointer is in proper position with said numbered graduations to tune the radio device to said broadcasting station.

5. A radio device comprising a hollow cylindrical casing open at the top, a flat circular horizontal dial having its periphery extending all the way around the open top of said hollow cylindrical casing, said dial forming the top of said casing having a series of sound escape openings located intermediate its upper and lower ends, a series of spaced members forming a part of said casing and inclined with relation to the vertical and associated with said sound escape openings which conceal the sound escape openings and still permit the escape of sound therethrough, said dial being provided with a series of numbered graduations extending circumferentially around the periphery thereof, which graduations represent a plurality of broadcasting stations, said graduations being viewable from all points above the dial entirely therearound, said dial having a series of characters between the graduations intermediate the periphery thereof and the center of the dial consisting of letters, which represent the names of the stations indicated on the dial, the letters of each station extending in a circumferential direction around the dial, a movable indicating device movably mounted at the center of the dial and provided with a pointer which moves along said graduations when the indicating device is moved, said indicating device having an opening therethrough between the center of said dial and said pointer through which said letters are read as the indicating device is moved, said opening and said letters being so proportioned and related that when the letters representing any given broadcasting station are exposed through said opening, the pointer is in proper position with said numbered graduations to tune the radio device to said broadcasting station, said letters and opening assisting in bringing the indicating device to its proper position for the station desired, and a magnifying device extending across said opening, whereby a larger number of stations may be crowded on the dial and still be legible.

6. A radio device comprising a hollow cylindrical casing open at the top, a flat circular horizontal dial having its periphery extending all the way around the open top of said hollow cylindrical casing having a series of sound escape openings located intermediate its upper and lower ends, a series of space members forming a part of said casing and inclined with relation to the vertical and associated with said sound escape openings which conceal the sound escape openings and still permit the escape of sound therethrough, said dial forming the top of the casing, said dial being provided with a series of indications extending circumferentially around said dial and consisting of letters representing various radio stations, the letters for any given station extending in a circumferential direction around said dial and being viewable from all points above the dial entirely therearound, a movable indicating device having its lower edge substantially equally spaced from said dial throughout its length and movably mounted at the center of the dial, said indicating device having an opening therethrough bounded by side members extending in a radial direction of the dial and end members extending circumferentially of the dial, said opening having a width in a circumferential direction of said dial to expose all the letters representing an individual station when brought opposite said letters, the said

letters for said station when exposed through said opening extending substantially parallel to said end members, one of the end letters for said station being in proximity to one of said side members and the other end letter of said station being in proximity to the other side member.

7. In a combined article of furniture and radio receiving set, a stand provided with a base and a top section supported above the base, said top section having side, bottom and top walls cooperating to form an enclosed space, radio receiving apparatus including tuning control means and volume control means housed in said space, a member supported within said space and extending vertically through an opening in the top wall aforesaid to a point spaced above the latter wall, dial members concentric with and independently turnable about said vertical member in spaced relation, one above the other to occupy a location above the top wall of the top section, means connecting one of the dial members to the tuning control means, and means connecting the other of the dial members to the volume control means.

WILLARD L. MORRISON.