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SOUND CLARIFYING DEVICE

Filed Feb. 11, 1930

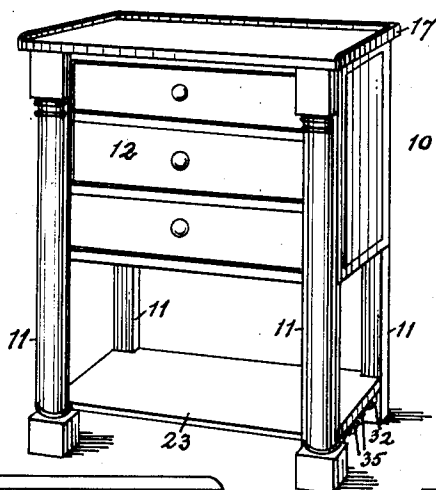


Fig. 1

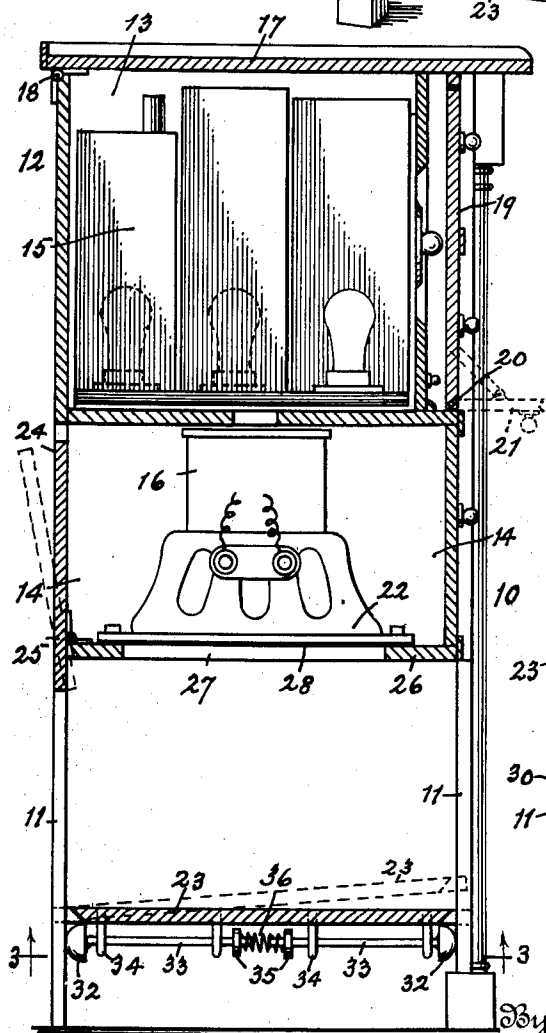


Fig. 2

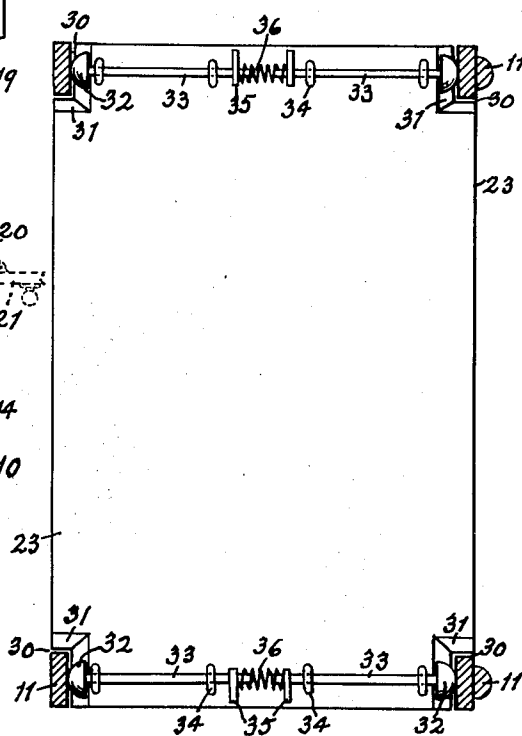


Fig. 3

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## UNITED STATES PATENT OFFICE

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## SOUND CLARIFYING DEVICE

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This invention relates to a device for clarifying the sound produced by electrostatic transmitters or electrodynamic oscillators issued from a loud speaker located in the sound chamber of a cabinet having a radio or phonograph, by the application of acoustical principals, so that the length of the reverberations of the sound issued by the loud speaker will be in proper relation to the acoustic properties of the room or studio in which the apparatus is located.

The object of the invention is to provide a radio cabinet or the like with a sounding board, located below the loud speaker unit whereby the sound produced by the loud speaker is diffracted downwardly so as to impinge or strike against the sounding board.

Another object of the invention is to so position the sounding board at a predetermined distance and angle in its relation to the sound issuing from the loud speaker, so that the sound will be modulated and neutralized in any defective annunciation of the loud speaker.

Another object of the invention is to provide a radio cabinet with an adjustable sounding board below the mouth of the loud speaker in close proximity to the sound chamber.

And still another object of the invention is to provide a radio cabinet with adjustable means for diffracting the sound from the loud speaker in relation to the acoustical properties or conditions of the room or studio in which it is located.

With these and other objects in view, the invention consists of certain features of construction, as hereinafter shown and described and then specifically pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Fig. 1 represents a perspective view of a radio cabinet showing the sounding board in a horizontal position.

Fig. 2 is a vertical cross-section of the cabinet on a larger scale, showing the relative

location of the radio chassis, the loud speaker and the sounding board, and

Fig. 3 is an inverted cross-sectional plan view taken on the line 3—3 of Fig. 2.

In the drawings the numeral 10 designates a radio cabinet of which the legs 11 are preferably made square. The upper section 12 of the cabinet is divided into an upper and a lower compartment 13—14 respectively. Into the upper compartment 13 is arranged a radio chassis 15 and into the lower compartment or the sound chamber 14 the loud speaker 16. The top 17 of the cabinet is hinged at the back at 18. The front panel 19 is hinged to the cabinet at 20 and may be swung outward to a horizontal position as indicated in dotted lines at 21 for the manipulation of the radio set.

The loud speaker 16 is located in the sound chamber 14 directly underneath the radio chassis 15 with the mouth 22 mounted in a horizontal position, so that the sound will be projected downward on to the sound board 23. The back panel 24 of the sound chamber 14 is hinged at 25 to the back of the cabinet 10, the object thereof is so as to regulate the volume of air into the sound chamber.

The loud speaker 16 is supported and fastened on to a horizontal shelf 26 provided with an opening 27 to register with the opening 28 of the loud speaker 16. It is to be understood that the loud speaker and the radio chassis will be hooked up in the usual way, peculiar to their individual design and construction.

The sounding board 23 located below the loud speaker 16 has the corners 30 cut out so as to loosely fit against the inner square edges of the legs 11. The lower portion of the cut out is beveled at 31 so as to allow the sounding board to be tilted to a degree best suited to the acoustic condition of the room or studio. The sounding board 23 is held in a locked position in relation to the legs 11 by soft rubber tips 32 which are fastened to the ends of rods 33, slidingly mounted in bearings 34 attached to the under part of the sounding board.

In close proximity to the inner ends of the rods 33 are fastened small lugs 35 which sur-

round the rod and also projecting outwardly to form a hand grip. Interposed between the lugs 35 and surrounding the rods 33 is a coil spring 36 which has a tendency to keep the lugs apart, so that the soft rubber tips 32 coact with the inner portions of the legs 11 and will hold the sounding board 23 in a predetermined position. When it becomes necessary to change the location of the sounding board, the lugs 35 are pressed together and after the position is determined, the pressure is released from the lugs and the springs will force the rubber tips against the legs thereby holding the sounding board in a fixed position.

15 We claim:—

1. A device for clarifying sound comprising a cabinet having legs and a chamber, a loud speaker with its mouth pointing downwardly located in the chamber, a sound board arranged between the legs below the mouth of the speaker to diffract the sound vibrations issuing from the mouth of the speaker, and means including rods slidably mounted on the board engaging the legs for adjusting the board.

2. A device for clarifying sound comprising a cabinet having legs and a chamber, a loud speaker with its mouth pointing downwardly located in the chamber, a sound board arranged between the legs below the mouth of the speaker to diffract the sound vibrations issuing from the mouth of the speaker, and means including pairs of rods slidably mounted on the board engaging the legs for adjusting the board to move it to and from the mouth of the speaker.

3. A device for clarifying sound comprising a cabinet having legs and a chamber, a loud speaker with its mouth pointing downwardly located in the chamber, a sound board arranged between the legs below the mouth of the speaker to diffract the sound vibrations issuing from the mouth of the speaker, and means including pairs of spring pressed rods slidably mounted on the bottom of the board engaging the legs for adjusting the board to tilt it or to position it at any angle to and from the mouth of the speaker.

4. A device for clarifying sound comprising a cabinet having legs and a chamber, a loud speaker with its mouth pointing downwardly located in the chamber, a sound board arranged between the legs below the mouth of the speaker, and pairs of spring-actuated rods mounted on the board, said rods each having a tipped rubber end to clutch the inner portion of a leg thereby locking the board to the legs.

0 Signed at New York, in the county of Bronx and State of New York, this 8th day of February, A. D. 1930.

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