This invention relates to a sound reproducing device, and more particularly to a loud-speaker built in or enclosed by a cabinet or housing.

The object of the invention is to provide a speaker acoustic box which will provide increased speaker volume without increase in output and will also increase the speaker volume without vibration of the speaker cone.

Another object of the invention is to provide an acoustical box which will improve the clarity of all tones of vocal or instrument presentation, and which will increase the speaker volume without room echo and will also result in increased life span of the speaker.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Figure 1 is a perspective view of the speaker acoustic box, constructed according to the present invention.

Figure 2 is a sectional view taken on the line 2--2 of Figure 1.

Figure 3 is a sectional view taken on the line 3--3 of Figure 2.

Referring in detail to the drawings, the numeral 10 designates a box or housing which is hollow and which may be made of any suitable material such as wood. The box 10 includes a top wall 11 and a bottom wall 12. Figure 2, and the box further includes a front wall 14 and a rear wall 15. A loud-speaker 16 is secured to the front wall 14 as shown in Figure 2, and an opening 17 is arranged in the front wall 14 contiguous to the speaker 16.

The housing 10 further includes a pair of spaced parallel side walls 18 and 19, Figure 3. The rear wall 15 is provided with an opening 20 for the passage therethrough of wires 21 which lead to the speaker 16. Arranged in the housing or box 10 is an inclined baffle 22, and the baffle 22 may extend from the top wall 11 to the rear wall 15. The ends of the baffle 22 are spaced inwardly from the side walls 18 and 19, Figure 3, for a purpose to be later described.

Arranged contiguous to the inner surface of the housing 10 and secured thereto, and covering the front surface of the baffle 22 is a special acoustic lining cloth 23. The baffle 22 defines in the housing a main sound cavity 24, and a secondary sound cavity 25.

From the foregoing it is apparent that there has been provided a speaker acoustic box which can be made of wood of any desired dimension and the box is provided with one or more sound baffle boards 22 of the proper size. The box and baffle board are lined with a special acoustic lining cloth 23 which improves and increases the volume and clarity of any type speaker for public address, radio and television and/or sound track reproduction. A speaker 16 is fastened in place by any suitable means and the opening 20 has the wires 21 passed there-through which connect the speaker 16 with an amplifier unit.

With the present invention tones of increased quality and volume will be reproduced both treble and bass from small diameter diaphragms. With the present invention the method of reflection of tones or sound waves back through the diaphragm without distortion is used and there is no "booming" or distortion of tones reproduced. Further, the speaker diaphragm will not be damaged and no changes in the wiring design of the radio or amplifier are used. Further, the working mechanism of the diaphragm has not been changed but instead the present invention depends on the sound waves crossing and recrossing in both the main sound cavity 24 and the secondary sound cavity 25 to thereby reflect and soften the sound waves on contact with the specific cloth lining 23 and the specific type wood casing 10 to give an increased clear quality natural tone, both treble and bass.

The lining material 23 is preferably less than a quarter inch thick. The device is constructed so as to permit free circulation and depend on sound waves crossing and recrossing to thereby act as a buffer or softening agent in back of the diaphragm. The interior sound board 22 acts as a further means of reverberation of the sound waves. The sound waves weave a pattern of curves that cross and recross in front and back of the sound reflector board.

We claim:

1. In a speaker acoustic box, a hollow housing including horizontally disposed spaced parallel top and bottom walls, and vertically disposed spaced parallel side walls, and vertically disposed spaced parallel front and rear walls, a speaker mounted in the front wall of said housing, an inclined baffle supported in the rear of said housing, wires extending through said housing and connected to said speaker, said baffle extending between said top wall and said back wall, the ends of said baffle being spaced inwardly from the side walls of said housing.

2. In a speaker acoustic box, a hollow housing including horizontally disposed spaced parallel top and bottom walls, and vertically disposed spaced parallel side walls, and vertically disposed spaced parallel front and rear walls, a speaker mounted in the front wall of said housing, an inclined baffle supported in the rear of said housing, wires extending through said housing and connected to said speaker, said baffle extending between said top wall and said back wall, the ends of said baffle being spaced inwardly from the side walls of said housing, there being an opening in the back wall of said housing for the passage therethrough of said wires.

3. The apparatus as described in claim 2, wherein said housing is made of wood, and an acoustic lining arranged on the inner surface of said housing and arranged on said baffle.

4. The apparatus as described in claim 2, wherein said baffle defines in said housing a main sounding cavity and a secondary sounding cavity.

5. A speaker acoustic box comprising a hollow housing including horizontally disposed spaced parallel top and bottom walls of the same size, vertically disposed spaced parallel side walls of the same size, and vertically disposed spaced parallel front and rear walls, a speaker mounted in the front wall of said housing, an inclined baffle supported in the rear of said housing, said baffle extending between said top wall and said back wall, the ends of said baffle being spaced inwardly from the side walls of said housing, said housing being made of wood, and an acoustic lining arranged on the inner surface of said housing and arranged on the lower surface of said baffle.
said baffle defining in said housing a main sounding cavity forwardly of said baffle and a secondary sounding cavity rearwardly of said baffle.

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