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[54] **CONCRETE RESONANT CONE SPEAKER SYSTEM**

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[52] **U.S. Cl.** ..... **181/31 B**

[51] **Int. Cl.** **G10k 13/00**, H04r 1/28

[58] **Field of Search** ..... 181/31 B, 31 R, 31 A, 181/27 R, DIG. 1

[56] **References Cited**

UNITED STATES PATENTS

3,486,578	12/1969	Albarino	181/31 B
3,642,091	2/1972	Nohara et al.	181/31 B

FOREIGN PATENTS OR APPLICATIONS

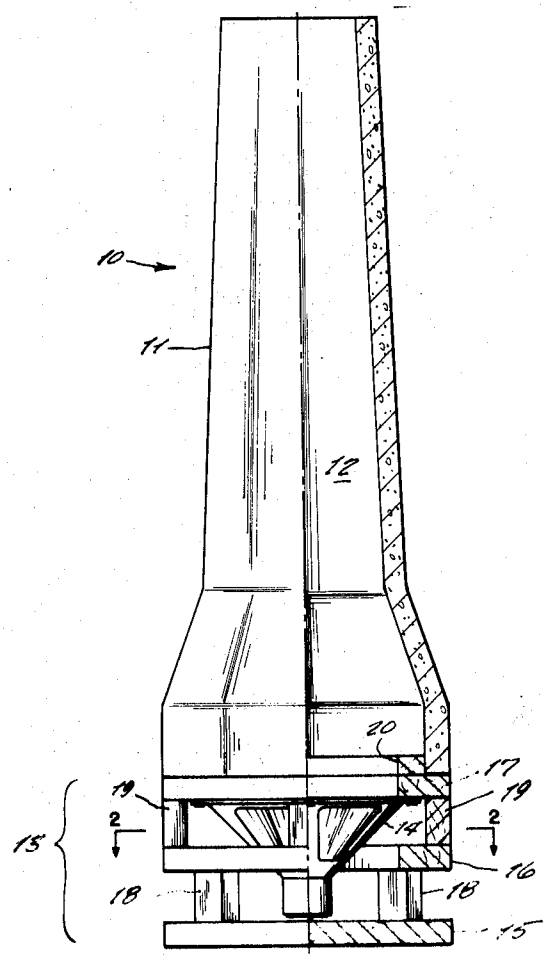
863,085	1/1953	Germany	181/31 A
890,886	3/1962	Great Britain	181/DIG. 1

Primary Examiner—Stephen J. Tomsky

[57] **ABSTRACT**

A speaker system for use in conjunction with a high fidelity system, the speaker system being placed within a room, and including a vertically upstanding truncated cone of hollow character and which tapers upwardly toward a top opening, the lower end of the concrete cone being mounted upon a wood base that supports a speaker, the wood base including a top ring, intermediate ring and flat bottom piece surrounding the speaker, the top ring, intermediate ring and bottom piece being spaced apart by means of the support separators.

1 Claim, 2 Drawing Figures



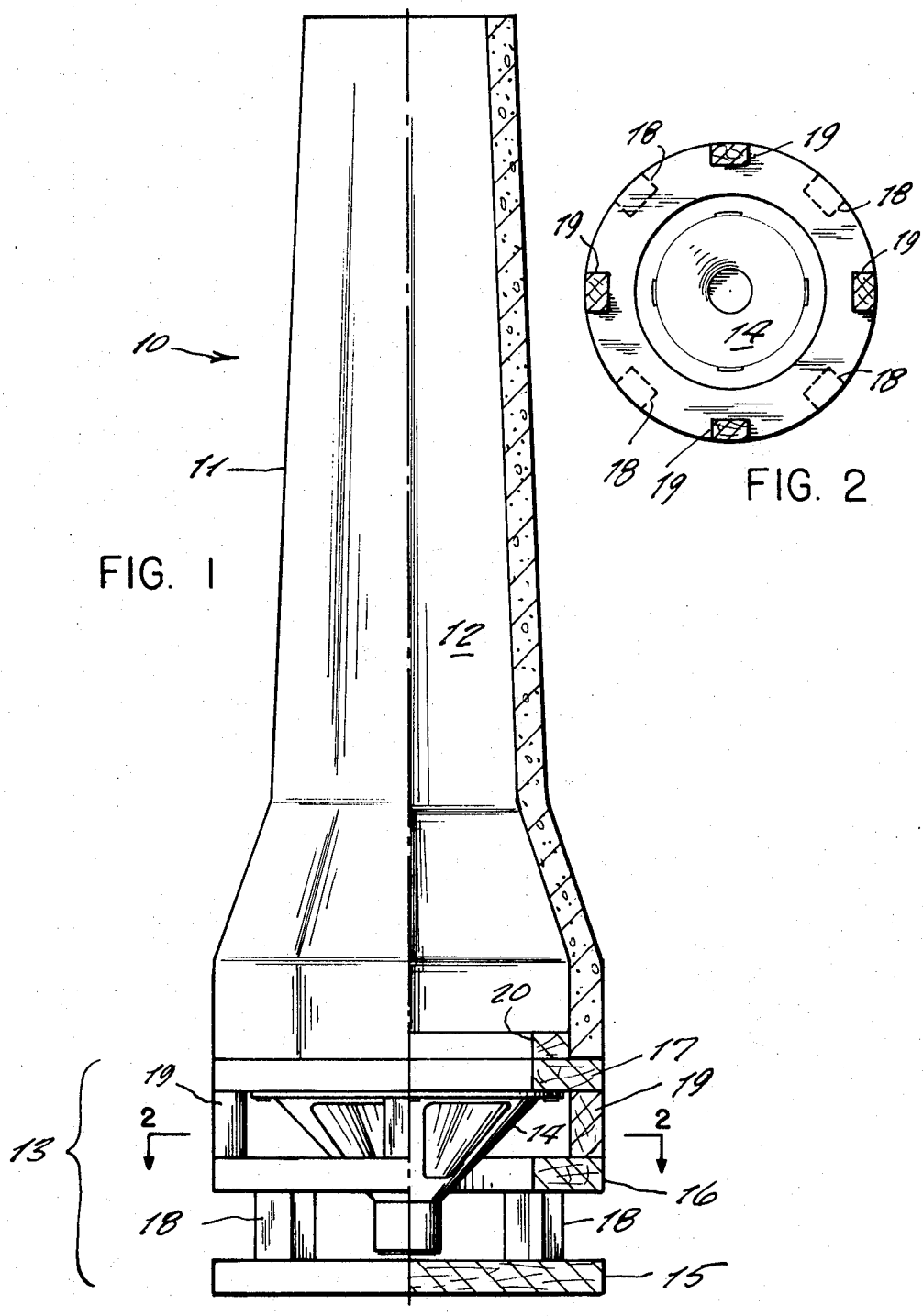


FIG. 1

FIG. 2

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CONCRETE RESONANT CONE SPEAKER SYSTEM

This invention relates generally to sound speaking systems.

A principal object of the present invention is to provide a concrete resonant cone speaker system which gives a false dpeth to a room without an expensive reverberation unit and delay system.

Another object of the present invention is to provide a concrete resonant cone speaker system wherein the delay is accomplished by the time factor required for a sound wave to travel up the concrete cone and bounce off of the ceiling and reach a listener.

Yet a further object of the present invention is to provide a concrete resonant cone speaker system wherein a choking effect of the sound wave occurs as the sound wave travels up the concrete cone, because of the slightly conical shape thereof, much the same as a choke of a shotgun, which helps to prevent the sound wave from spreading before it reaches the ceiling.

Yet a further object of the present invention is to provide a concrete resonant cone speaker system wherein the unit has a 360° sound spread from the base (nondelayed sound) and the sound projecting off of the ceiling.

Other objects of the present invention are to provide a concrete resonant cone speaker system which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other obejects will be readily evident upon a study of the following specification and the accomapnying drawing wherein:

FIG. 1 is a side elevation view of the present invention shown partly in cross-section, and

FIG. 2 is a cross sectional view taken on the line 2—2 of FIG. 1.

Referring now to the drawing in detail, the reference numeral **10** represents a concrete resonant cone speaker system according to the present invention wherein there is a concrete cone **11** made of concrete drainage tile and which comprises a conical side wall around a central opening **12** extending through the truncated cone. The concrete truncated cone is placed upon a wood base **13** and extends vertically upwardly with the tapered end of the truncated cone being at the top.

The wood base **13** supports a speaker **14** located on the vertical axis of the concrete truncated cone so that sound from the speaker is directed into the interior **12** of cone **11**. The wood base **13** is comprised of a circular flat bottom piece **15**, intermediate ring **16**, top ring **17** and a plurality of support separators. A plurality of four support separators **18** are placed between the bottom piece **15** and the intermediate ring **16** while another set

of four support separators **19** are placed between the intermediate ring **16** and the top ring **17**, it being noted particularly in FIG. **2** that the support separators **18** and **19** are out of alignment with each other. A circular support separator **20** of ring shape is fitted within the lower end of central opening **12**, the support separator **20** being secured upon the top ring **17** concentrically therewith. The speaker **14** is secured to the underside of the top ring **17**.

In operative use the hollow tile may contain a tuned resonant column of air. The base is especially designed to isolate the concrete drainage tile from the floor so that it will not be damped by contact with the floor. The support separators **18** and **19** are strategically placed between the rings and the bottom piece in disaligned position as indicated. This isolates the concrete tile much the same way as the tines on a tuning fork are isolated.

There is a 360° low level, linear delay off of the side of the drainage tile, as the sound wave travels up the tile. The lip on the top ring supports separator **20** is fitted into the lower end of the concrete truncated cone. Wood screws are used to secure the speaker to the bottom of the top ring. Wood screws are used to secure the top ring to the support separators and they are also counter sunk to keep them from interfering with the lip of the concrete drainage tile when it is set on top of the base.

What I now claim is:

1. In a concrete resonant cone speaker system, the combination of a wood base for placement upon the floor of a room, and a vertically upstanding concrete truncated cone placed upon said wood base, said wood base containing a speaker in alignment with a lower end of said concrete truncated cone for moving sound waves upwardly through said concrete truncated cone so as to give a false depth to a room without an espensive reverberation unit and delay system, wherein said concrete truncated cone comprises a one piece member made of concrete drainage tile, said concrete truncated cone consisting of a conical side wall around a central opening extending there through, said concrete truncated cone supported upon said wood base being tapered upwardly toward a smaller end at its top, and wherein said wood base consists of a circular bottom piece, an intermediate ring in spaced relation above said bottom piece and a top ring in spaced relation above said intermediate ring, said rings and bottom piece having a plurality of support separators there between, and said speaker being secured to an under side of said top ring.

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