United States Patent

Shore

[15] **3,676,594**

[45] **July 11, 1972**

[54] SOUND DISPERSER

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[22] Filed: **Nov. 4, 1969**

[21] Appl. No.: **873,984**

[52] **U.S. Cl.** ..... **179/1 VL,** 338/89, 338/190

[51] **Int. Cl.** **H04b 1/12**

[58] **Field of Search** ..... 179/1 GP, 1 GA, 1 G, 1 VL, 179/1 R, 1 F; 338/89, 190

[56] **References Cited**

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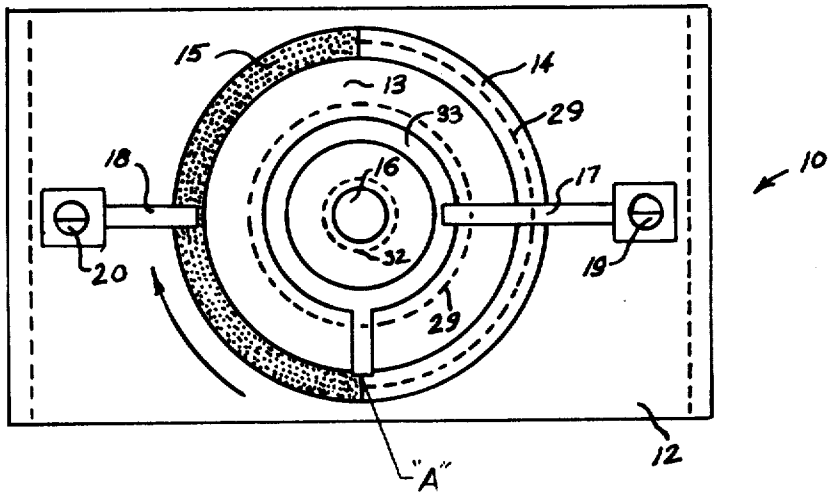
[57] **ABSTRACT**

An audio system having an output which is varied by a rotating disc. The disc has sections of high and low resistance. The audio signal is coupled through a transformer and the resistive disc element to an output transducer, and is also coupled to a second output transducer without being coupled through the resistive disc element.

4 Claims, 3 Drawing Figures



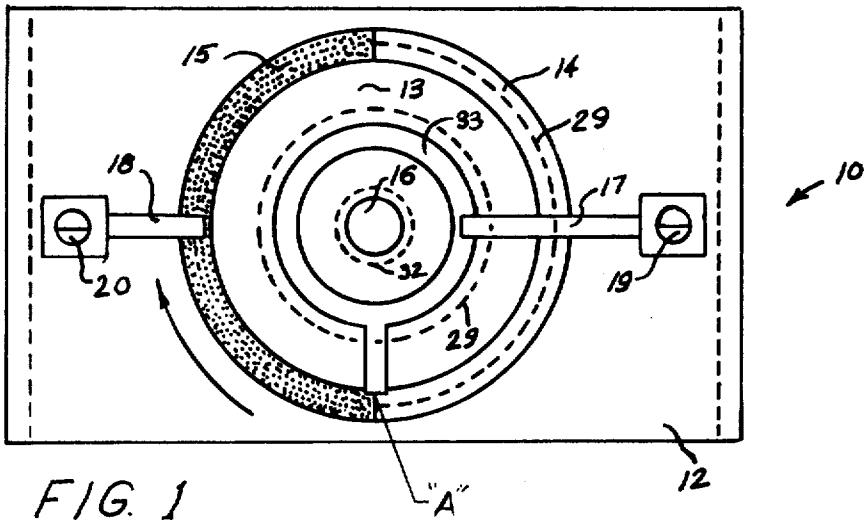


FIG. 1

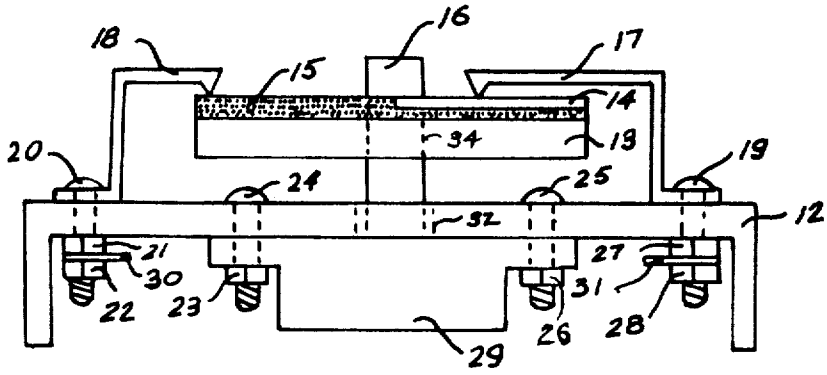


FIG. 2

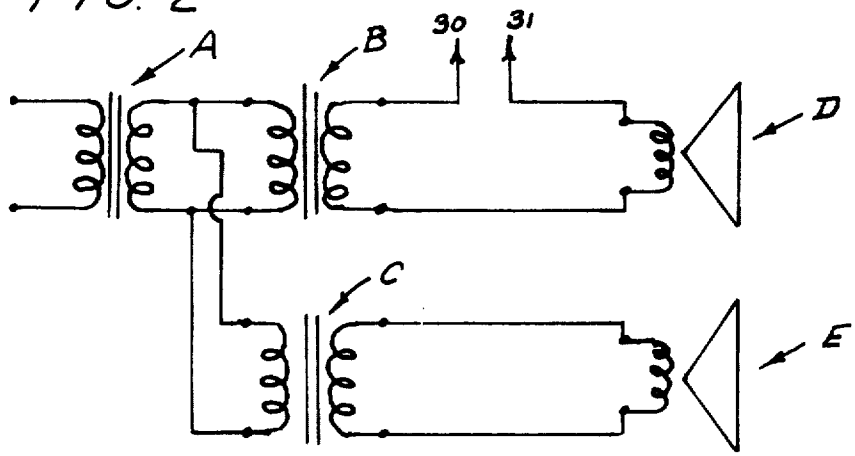


FIG. 3

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SOUND DISPERSER

The invention relates to sound systems and more particularly to a sound accessory to be used in conjunction with audio equipment.

It is an object of this invention to provide a device for the dispersion of sound from various locations and at timed intervals, in a simple and efficient manner, which can readily be connected into sound systems, with slight modification, if any.

Another object of the present invention is to to provide a sound disperser that distributes sound in a manner that is pleasurable to the listener.

Still a further object of the present invention is to provide a sound disperser which can be produced, packaged, and sold in large quantities at a comparatively low cost, and which can be conveniently utilized wherever needed.

Still additional objects, benefits, and advantages of this invention will become evident from a study of the following detailed description taken in conjunction with the accompanying drawing, in which;

FIG. 1 is a top plan view of a sound disperser made in conjunction with the present invention.

FIG. 2 is a front elevational view of the sound disperser shown in FIG. 1.

FIG. 3 is a schematic view of a typical sound system in which the sound disperser may be connected.

Referring now specifically to the drawing, a sound disperser 10 made in accordance with the present invention is shown to include a plastic base 12 to which is mounted an electric motor 29. Motor 29 is secured to base 12 by bolts 24,25 and nuts 23 and 26.

Shaft 16 is part of motor 29, and extends through drilled hole 32 of base 12.

A plastic circular disc 13 is permanently cemented to shaft 16 of motor 29 through drilled hole 34 in plastic disc 13. This circular plastic disc will be free to rotate when electric current is applied to motor 29.

A carbon strip resistor 15 is permanently cemented or bonded to plastic disc 13.

A silver, highly conductive material 14 is permanently and electrically bonded to the carbon strip resistor 15.

A brass collector ring 33 is permanently cemented to plastic circular disc 13, and is electrically bonded to the carbon strip resistor 15, and the silver conductive material 14, at point "A."

A brass electrical contact arm 18 is permanently secured to base 12, by bolt 20 and nut 21, and is in electrical contact with the carbon strip resistor 15, or the silver contact material 14, depending on the position of the plastic disc 13.

A brass electrical contact arm 17 is permanently secured to base 12 by bolt 19 and nut 27, and is in electrical contact at one point with the brass collector ring 33.

Parts 30 and 31 are brass electrical contact posts and are secured, respectively, by bolts 20 and 19 and by nuts 21, 22 and 27, 28.

FIG. 3 is a schematic view of a typical sound system, where A is the output transformer of an audio amplifier, B and C are matching transformers, D and E are speakers.

Contacts posts 30 and 31 shown in FIG. 2 are electrically connected to points 30 and 31 as shown FIG. 3.

The operation of this device will now be readily understood. When electric current is supplied to motor 29, the circular plastic disc 13, the bonded strip resistor 15, the silver contact material 14, the brass collector ring 33 will rotate in a clockwise direction. As rotation proceeds, the electrical resistance between points 30 and 31, as shown in FIG. 3, will vary for each alternate hundred eighty degrees of rotation; and it will remain at a low constant resistance (determined by the nature of the conductive material) for the other alternate hundred eighty degrees of rotation. It is understood that this cycle repeats itself continuously as long as electrical current is supplied to motor 29. This periodic variation in electrical resistance will cause corresponding periodic change in sound level at speaker D, in FIG. 3.

It will now be recognized that the variation in sound level at speaker D, FIG. 3 in conjunction with constant sound level at speaker E FIG. 3, will give the effect of movement or dispersion of sound from the direction of speaker D, FIG. 3.

While this invention has been described with particular reference to the construction shown in the drawing and while various changes may be made in the detail construction it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

Having thus completely described the invention, what is now claimed as new and desired to be protected by Letters Patent of the United States is;

1. A sound disperser comprising a disc having a progressively resistive segment and a comparatively non-resistive segment, a wiper in contact with said disc, motive means continuously driving said disc so that it traverses said wiper repeatedly, a sound transducer, a signal source, means connecting said source to one of said disc and wiper, and means connecting said sound transducer to the other of said disc and wiper.

2. The sound disperser of claim 1, further comprising a transformer coupled between said source and said transducer, said disc and wiper being connected between the secondary of the transformer and said transducer.

3. The sound disperser of claim 2, further comprising a second transducer and a second transformer coupled between the primary of said first transformer and the second transducer.

4. The sound disperser of claim 1, further comprising a second transducer connected to said source.

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