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CHAMBER OR PASSAGEWAY FOR USE IN THE REPRODUCTION OF SOUND

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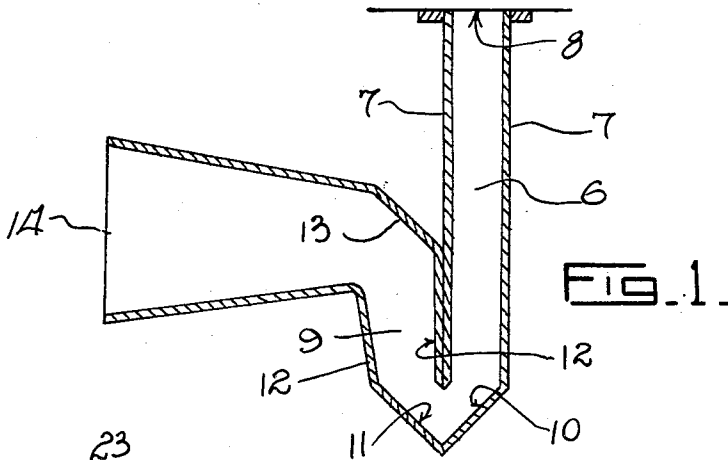


FIG. 1.

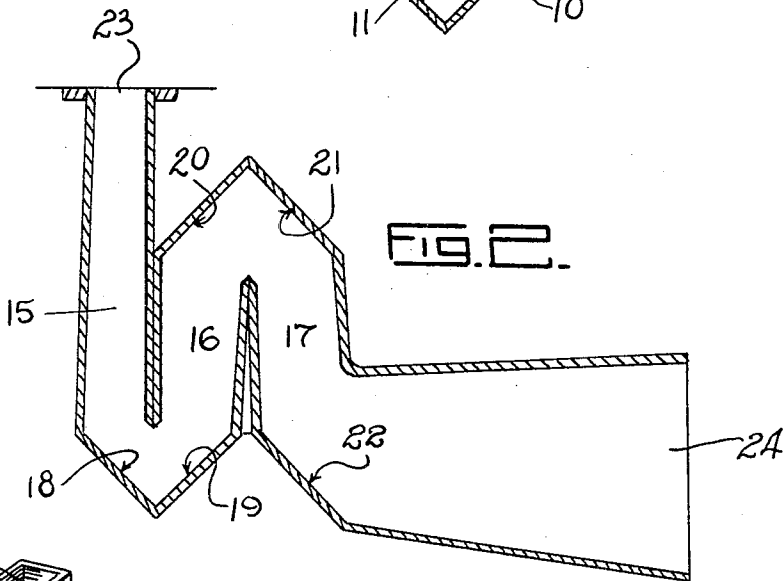


FIG. 2.

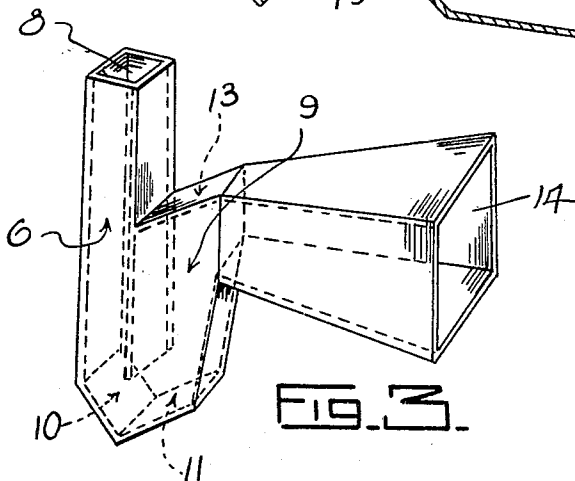


FIG. 3.

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CHAMBER OR PASSAGEWAY FOR USE IN THE REPRODUCTION OF SOUND

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This invention relates to improvements in chambers or passageways for use in the reproduction of sound, especially to those employed in combination with machines for the mechanical reproduction of sound, and has been devised with the view to providing a chamber or chambers of the class mentioned of gradually increasing sectional area, and one in which there is a softening or mellowing effect produced on overtones, and further, a construction which will take up the least possible space for the length of chamber or passageways desired.

According to the invention I employ a plurality of passageways or the like whose ends are connected together by means of deflecting surfaces or plates. These deflectors are so positioned in angular relation to one another, that sound vibrations or waves travelling along one passageway will strike a deflector at the end thereof, the sound waves being thrown from this deflector to an oppositely disposed deflector which deflects the waves along the succeeding passageway. There is a plurality of passageways, each connected by means of an angularly positioned deflector, but each passageway is so constructed with tapering or gradually increasing sides, that the sectional area is larger the further the sound waves have to travel.

The initial passageway or passageways immediately adjacent the reproducing means may in some cases have straight or parallel sides, but each succeeding passageway is of increasing sectional area.

The end of the sound chamber terminates in a suitable bell or mouth.

But to more effectively described my invention I will now refer to the accompanying drawings in which

Figure 1 is a sectional elevation of one form of the invention in which there are two passageways or chambers one having parallel sides and the other sides of gradually increasing area.

Figure 2 is an alternate form of the invention with three passageways or chambers, all chambers being of gradually increasing sectional area.

Figure 3, is a diagrammatic perspective

view to illustrate a complete unit showing the gradual increasing sides.

The same reference numerals indicate like parts throughout the drawings.

In the form illustrated in Figure 1, 7 is the first passageway or chamber, the sides 7-7 of which are parallel. The upper end or throat 8 is attached to the sound producing mechanism, while the lower end is open and is connected to a second passageway or chamber 9 by means of two angularly positioned deflectors 10 and 11 respectively. The sides 12-12 of the chamber 9 are tapered or of gradually increasing size, the upper end of this chamber terminating in a further deflector 13. This deflector directs the sound waves out into the bell shaped mouth 14.

In the modified form of the invention illustrated in Figure 2, I provide a plurality of passageways or chambers 15, 16 and 17 respectively, the respective area of each chamber being of gradually increasing sectional area consequent on the sides of each chamber being tapered. The ends of each of these chambers 15, 16 and 17 are coupled by means of opposed deflectors 18, 19, 20, 21, and 22 whereby sound waves delivered into the neck or throat 23 of the chamber 15 will be in turn deflected into the succeeding passageways 16 and 17 and discharged through the bell or mouth 24.

I would clearly have it understood that the above examples are only by way of explanation of my invention, and I could have two passageways with parallel sides to give a "mellowing" effect, or where I desire a large increase in the volume of sound, I may provide a number of chambers or passageways of gradually increasing area, the successive ends of which are coupled by means of the angularly disposed deflectors.

I claim:

In chambers or passageways for use in the reproduction of sound a plurality of passageways in successive communication and connected by sound deflecting members so arranged that the sound entering the chamber first strikes a deflecting member arranged at approximately right angles to a second deflecting member, having above it and parallel

thereto a third deflecting member arranged
at approximately right angles to a fourth de-
flecting member beneath which and parallel
thereto is a fifth deflecting member, capable
5 of deflecting the sound outwards, and the
walls of the passageways gradually tapering
outwardly towards the succeeding passage-
way so that each passageway is of increasing
cross sectional area and the end of the pas-
10 sageway terminating in a bell shaped mouth.
In testimony whereof I have hereunto set
my hand.

SAMUEL JAMES JACKSON.

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