

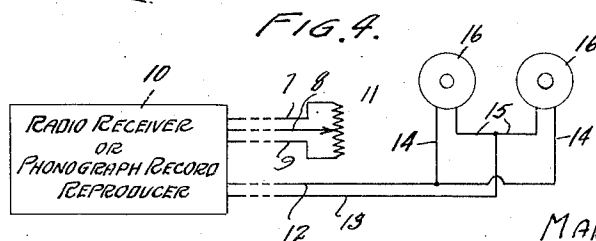
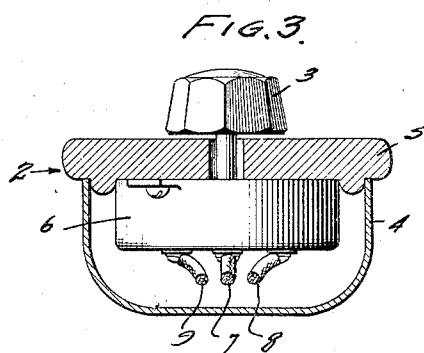
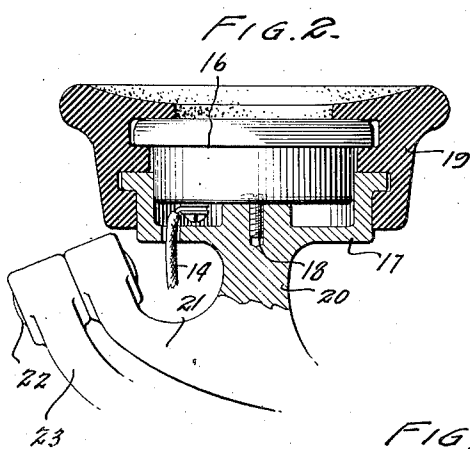
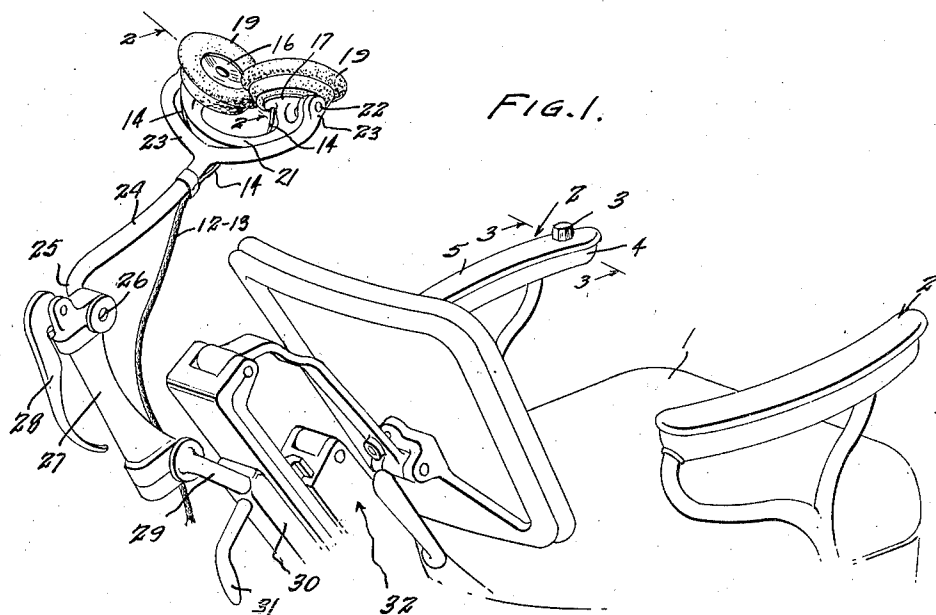
Feb. 21, 1939.

M. H. GRAY

2,148,347

SONIFEROUS DEVICE

Original Filed April 22, 1936



Inventor

MARION H. GRAY

by Lemmes & Lemmes

Attorneys

## UNITED STATES PATENT OFFICE

2,148,347

## SONIFEROUS DEVICE

Marion H. Gray, Little Rock, Ark.

Application April 22, 1936, Serial No. 75,817  
Renewed July 18, 1938

5 Claims. (Cl. 179—1)

My invention relates to soniferous devices and more particularly to devices of such nature adapted to be used with a chair or other like structures adapted to support the weight of a user.

An object of my invention is to permit music, speech, or other oral entertainment to be transmitted to the user with a minimum of extraneous noise in the locality in which the device is placed.

A further object of my invention is to provide a construction for a chair, such as the chairs used by dentists, optometrists, barbers, beauty operators, etc., which will permit the patient to be entertained with speech or music from either a phonograph record or radio.

Yet another object of my invention is to provide a device which is simple in construction, easy to operate, repair and replace, and which is sturdy, strong and durable.

With these and other objects in view, which may be incident to my improvements, the invention consists in the parts and combinations to be hereinafter set forth and claimed, with the understanding that the several necessary elements comprising my invention may be varied in construction, proportions and arrangement, without departing from the spirit and scope of the appended claims.

In order to make my invention more clearly understood, I have shown in the accompanying drawing means for carrying the same into practical effect without limiting the improvements in their useful applications to the particular constructions, which, for the purpose of explanation, have been made the subject of illustration.

In the drawing,

Figure 1 is a perspective view of my device attached to a chair, such as a dental chair;

Fig. 2 is a view taken along the line 2—2 of

Figure 1, looking in the direction of the arrows;

Fig. 3 is a view taken along the line 3—3 of Figure 1, looking in the direction of the arrows;

Fig. 4 is a diagrammatic view of a wiring system which may be used with my device.

My device depends upon the bone transmission of sound. If soniferous vibrations are transmitted to a bone of the head, the one whose head bones are set in vibration will hear the sounds, even though they are not audible to anyone else even closely adjacent the hearer.

In dental offices, beauty shops, barber shops, etc., the noise of a radio or phonograph is often objectionable. Particularly is this true where there might be several phonographs or radios, each giving different programs. By having an

arrangement such as I contemplate, the user can vary the volume of music and turn it on and off at will. Therefore, the user's program will not be objectionable to others in the same room.

In the drawing I have designated a chair, such as the chairs in a dentist's office, barber shop, beauty parlor, optometrist's office, etc., with the numeral 1. The chair 1 is provided with arms 2. One of the arms 2 is provided with a volume control and cut-off button 3. The arm 2 comprises a hollow body 4 having a molded top 5. Attached to the molded top 5 is a casing 6 in which the volume control and cut-off switch is operated by turning the button 3. Leading from the casing 6 are leads 7, 8 and 9 which pass to a radio receiver or phonograph, which I have indicated diagrammatically in Figure 4 by the numeral 10. The volume control in the casing 6 I have diagrammatically illustrated by the potentiometer 11.

From the radio receiver or phonograph record reproducer wires 12 and 13 lead respectively to wires 14 and 15 which supply current impressed with electrical undulations to loud speaker receivers 16. The loud speaker receivers 16 are carried by supporting frames 17 to which they are bolted as indicated at 18. The frames 17 carry rubber pads 19 which are adapted to fit against the head of the user when seated in the chair 1. The loud speaker receiver elements mounted on the casings 17 transmit through the bones of the head of the user to his auditory nerves the program either of the phonograph record reproducer or radio receiver.

The support members 17 are each carried on extensions 20 of a yoke 21 which is pivoted at either end as indicated at 22 on another yoke 23 which is carried by an arm 24. The arm 24 is provided with a downturned end 25 which is pivoted as indicated at 26 on a support 27. A locking lever 28 is provided to permit the arm 24 to be adjusted to various angular positions on the pivot 26. The details of this mechanism are well known and a detailed description is not believed to be necessary.

The support 27 is provided with an extension 29 which fits within a slide 30. A locking lever 31 adjusts the height of the support 27. The extension 29 of the support 27 being adapted to slide in slideway 30 may be locked in place by lever 31. This construction is well known and the details thereof are not given.

The back of the chair is provided with a spring mechanism and supports which I have indicated generally by the numeral 32. The details of this

mechanism are not necessary to understand the device and are standard.

By adjusting the position of the extension 29 in the slideway 30, the height of the head rest can be determined. The pivoting of the yoke 21 on the pivots 22 permits of angular adjustment of the head of the user to a comfortable angle.

The radio program or the music or speech from the phonograph record reproducer produces soniferous vibrations in the loud speaker mechanisms 16. The volume of these sounds can be determined by simple adjustment of the button 3 on the arm of the chair. The button 3 will also permit the sound to be cut off entirely. The head of the user rests against the rubber pads 19 and the sounds pass through the bones of the head of the user to his auditory nerves, thus permitting him to hear the program but not causing inconvenience to others in near proximity.

The sound vibrations are in part transmitted through the upper surface of the pad 19 and also through the air between the loud speakers 16 and the back or sides of the user's head. The pads 19 fit over the head of the user and entrap the air between the head of the user and the top of each reproducer or loud speaker 16. Thus the sound does not get out into the room but is readily transmitted to the auditory nerves of the user.

While I have shown and described the preferred embodiment of my invention, I wish it to be understood that I do not confine myself to the precise details of construction herein set forth, by way of illustration, as it is apparent that many changes and variations may be made therein, by those skilled in the art, without departing from the spirit of the invention, or exceeding the scope of the appended claims.

I claim:

1. A chair with a head rest, a soniferous device incorporated in the head rest, whereby sounds

are conducted to the auditory nerves of the user through the head bones of the user from the head rest, and volume control mounted on the arm of the chair to control the sound volume emitted by the soniferous device.

2. A chair with a head rest, a plurality of supporting pads carried by the head rest adapted to fit on either side of the head of the user, a soniferous device incorporated in the head rest, whereby sounds are conducted to the auditory nerves of the user through the head bones of the user from the head rest, and volume control mounted on the arm of the chair to control the sound volume emitted by the soniferous device.

3. A chair with a head rest, a yoke on the head rest, pads on the yoke, a soniferous device incorporated in each pad whereby sounds are conducted to the auditory nerves of the user through the head bones of the user from the pads, the volume control mounted on the arm of the chair to control the sound volume emitted by the soniferous device.

4. A chair with a head rest, speaker mechanisms located on the head rest behind each ear of the user whereby sounds are conducted to both sets of the auditory nerves of the user through head bones of the user adjacent such auditory nerves.

5. A chair with a head rest, said head rest comprising a plurality of supporting pads adapted to fit on either side of the head of the user and movable to adjust themselves to the conformation of the head of the user, soniferous devices incorporated in each of the pads whereby sounds are conducted to the auditory nerves of the user through the head bones of the user on either side of the head, said pads being adapted to rest against the head of the user adjacent to and behind each ear of the user.

MARION H. GRAY.