

Oct. 13, 1925.

1,556,775

C. FENSKY

AUDIPHONE

Original Filed Oct. 4, 1923

FIG. 1

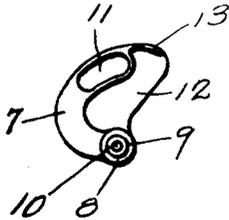


FIG. 2

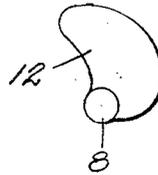


FIG. 4

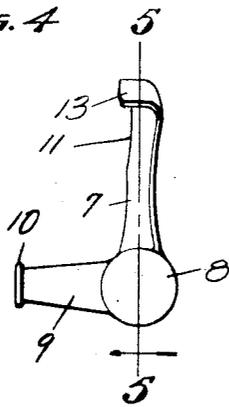


FIG. 3

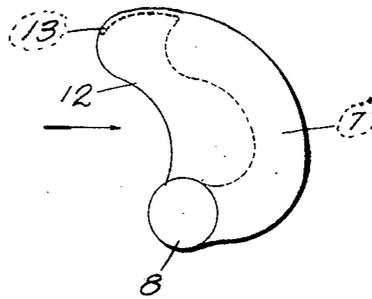


FIG. 6

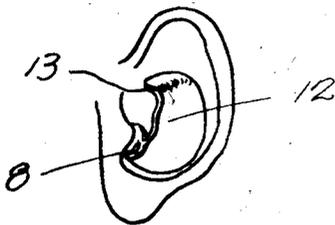
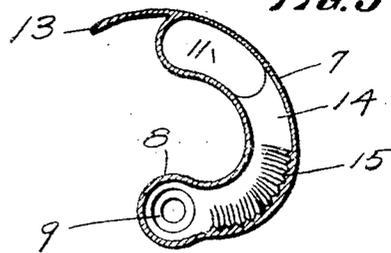


FIG. 5



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# UNITED STATES PATENT OFFICE.

CHARLES FENSKY, OF ST. LOUIS, MISSOURI.

## AUDIPHONE.

Application filed October 4, 1923. Serial No. 666,477. Renewed May 23, 1925.

*To all whom it may concern:*

Be it known that I, CHARLES FENSKY, a citizen of the United States, and resident of the city of St. Louis, and State of Missouri, have invented certain new and useful Improvements in Audiphones, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in audiphones and has for its primary object a device for improving the hearing, which is small enough to be inserted in the ear, and when in position will not attract a great deal of unnecessary attention to the wearer as the present type of devices do in which head-phones and batteries or speaking trumpets are employed.

A further object is to construct an audiphone which is so constructed that when it is placed in position within the ear it will in connection with the ear form a receiving chamber to catch sound waves which are then transferred into the ear.

In the drawings:—

Fig. 1 is a side elevation of the device viewing the same from the inside;

Fig. 2 is a side elevation viewing it from the outside;

Fig. 3 is an enlarged view of Fig. 2.

Fig. 4 is an edge view viewing the same in the direction of the arrow in Fig. 3;

Fig. 5 is a vertical section taken on the line 5—5 of Fig. 4, and

Fig. 6 is a view showing my device in position within an ear.

In the construction of my device I employ a hollow curved member 7 which terminates at one end in a hollow globular or ball shaped member 8. Projecting at right angles to the curved member 7 and formed integral with the ball 8 is a tapered hollow tube 9, which is provided on its outer end with a bead 10. The member 7 is preferably circular in cross section throughout the major portion of its length. Its free end however is flattened so as to be substantially elliptical in cross section. The flattened portion of the member 7 is provided with an opening 11, which opening is on the same side of the device as the tapered hollow member 9. This is for the purpose of causing the opening to lie close to the inside of the outer ear so as to prevent a sudden rush of air due to wind and to eliminate as

much as possible the entrance of dust and foreign matter.

Formed on the outside of the member 7 is a web 12, this web extends forward and is provided with a bent-over upper portion 13. This bent-over upper portion in connection with the member 7 and the inside of the ear forms a chamber into which the sound waves are first received. In this way it is impossible for any sound waves to strike the member 7 and be deflected outwardly, but all waves which reach the chamber formed as aforesaid will be directed into the opening 11, then through the passage way 14 formed in the member 7, from thence into the hollow ball 8 and from there on through the tapered tube 9 into the ear.

A portion of the passage 14 in the member 7 is corrugated as at 15. These corrugations extend only partially around the passage and it is believed that by placing these corrugations within the passage they tend to amplify the sound by causing the sound waves to enter the ear more sharply than if the passage were smooth.

It will be noted that the portion 13 extends forward of the member 7 and is also slightly downwardly inclined. This is for the purpose of preventing the sound waves from rising upward and escaping in that way.

The method of applying my device is as follows—

The tapered tube 9 is inserted in the ear passage and the device then pushed into the ear until it assumes the position shown in Fig. 6. This causes the curved member 7 to lie closely against the inside of the ear with the opening 11 turned toward the head and the web 12 toward the outside of the ear. In this position as afore stated, the web 12 is inside of the outer ear and the turned-over portion 13 together with the ball 8 forms a sound receiving chamber which is opened along its forward end only. All sound waves which enter this chamber have only one means of escape and that is through the opening 11 into the interior of the member 7 from whence they are directed to the interior ear. In this way a great deal more sound is caught by my device than would be possible if the web 12 were omitted.

It will also be noted that there are no sharp turns for the sound waves to make; thereby distorting of the sound is prevented.

This device is an improvement on an application filed by me May 2, 1923, Serial #636,067 for improvements in audiphones.

Having fully described my invention, what I claim is:—

1. An audiphone comprising a hollow curved member having an opening in one side adjacent one end, a hollow globular portion formed integral with the other end of said member, a tapered tubular member and projecting therefrom at right angles to the curved member, and a web formed integral with the curved member and globular member on the side opposite the tube for forming in connection with the inside of the ear, a chamber for the reception of sound waves.

2. An audiphone comprising a hollow curved member having an opening in one side adjacent one end, a hollow globular portion formed integral with the other end of said member, a tapered tubular member and projecting therefrom at right angles to the curved member, and a series of corrugations formed in a portion of the interior of the hollow curved member, and a web formed integral with the curved member and globular member on the side opposite the tube for forming in connection with the inside of the ear, a chamber for the reception of sound waves.

3. An audiphone comprising a hollow

curved member having an opening in one side adjacent one end, a hollow globular portion formed integral with the other end of said member, a tapered tubular member formed integral with the globular member and projecting therefrom at right angles to the curved member, and a web formed integral with the curved member and globular member on the side opposite the tube for forming in connection with the inside of the ear a chamber for the reception of sound waves, said web projecting beyond the end of said curved member and provided with a turned-over portion.

4. An audiphone comprising a hollow curved member having an opening in one side adjacent one end, a hollow globular portion formed integral with the other end of said member, a tapered tubular member formed integral with the globular member and projecting therefrom at right angles to the curved member, and a series of corrugations formed in a portion of the interior of the hollow curved member, and a web formed integral with the curved member and globular member on the side opposite the tube for forming in connection with the inside of the ear, a chamber for the reception of sound waves, said web projecting beyond the end of said curved member and provided with a turned-over portion.

In testimony whereof I have signed my name to this specification.

CHARLES FENSKY.