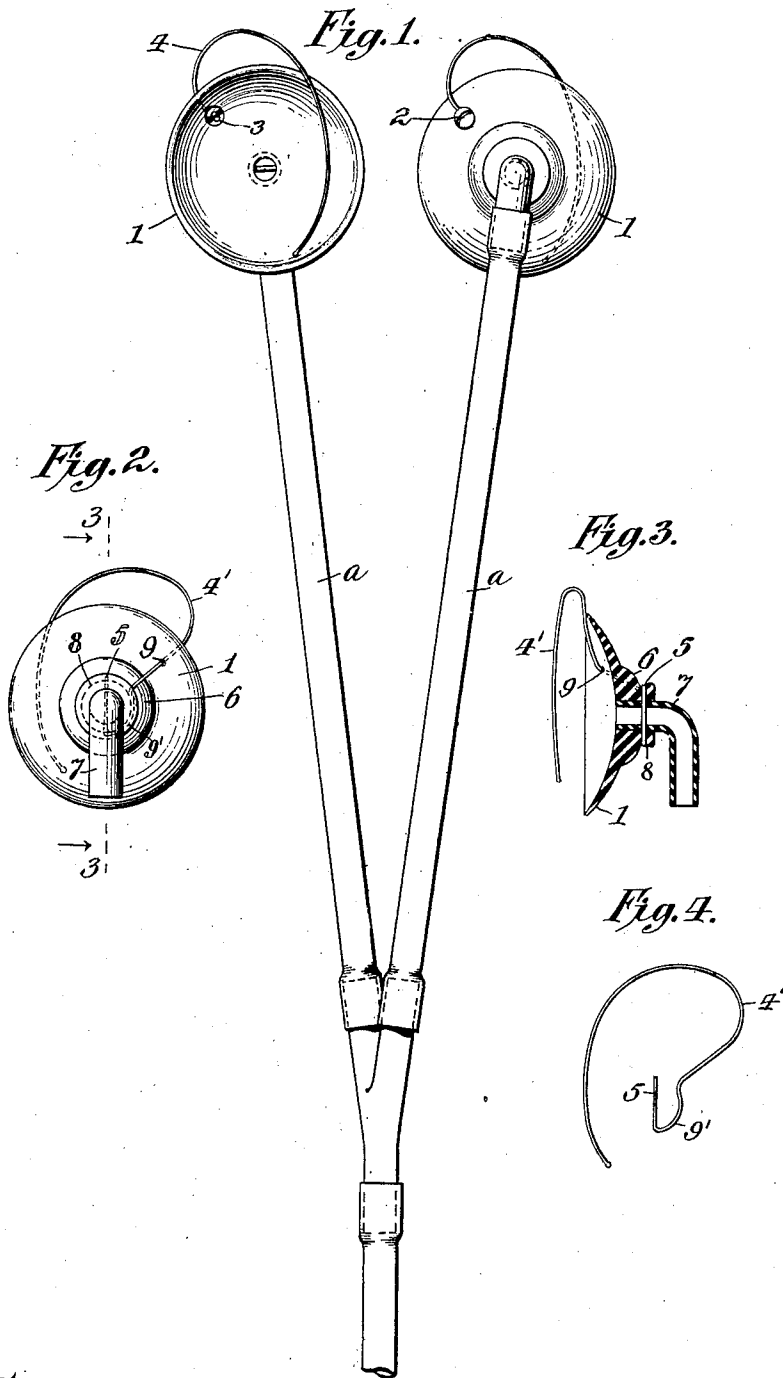


E. L. AIKEN.
EARPIECE.

APPLICATION FILED JUNE 12, 1905.



Attest:
Edgeworth
Delos Holden

Inventor:
Edward L. Aiken
by *Charles L. Aiken* Att'y.

UNITED STATES PATENT OFFICE.

EDWARD L. AIKEN, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO NEW JERSEY PATENT COMPANY, OF WEST ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

EARPIECE.

No. 824,773.

Specification of Letters Patent.

Patented July 3, 1906.

Application filed June 12, 1905. Serial No. 264,754.

To all whom it may concern:

Be it known that I, EDWARD L. AIKEN, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Earpieces, of which the following is a description.

My invention relates to an improved type of earpiece adapted more especially for use with phonographs and other talking-machines, but which is obviously capable of other uses.

Heretofore phonograph listening-tubes have been provided with earpieces shaped to enter the ears, and thereby support the listening-tube; but this is objectionable to many persons who find it uncomfortable to support tubes in this manner and to others who object to introducing foreign substances into the ears. It has also been proposed to use cup-shaped earpieces and support the same by means of a clamp applied to the head. This method is also objectionable, because the clamp is usually heavy and also because the hair is sometimes arranged so that the clamp cannot be readily applied, and, furthermore, heads vary so much in size that one clamp will not fit all heads unless made adjustable, which makes the same a complicated structure. In order to remedy these difficulties, I provide a cup-shaped earpiece having a support which is adapted to rest on the ear, and thereby support the earpiece and listening-tube.

Reference is hereby made to the accompanying drawings, in which—

Figure 1 is a side view of a bifurcated listening-tube which is provided with earpieces constructed in accordance with my invention. Fig. 2 is a plan of an earpiece, showing a modification of my invention. Fig. 3 is a section on line 3 3 of Fig. 2. Fig. 4 is a detail view showing the supporting-wire of Figs. 2 and 3 before it is applied to the earpiece.

The earpiece 1 is preferably a circular shallow hard-rubber cup similar in shape to those commonly used with the ear-tubes *a a* of phonographs. Secured to the earpiece is a wire 4, bent to fit over the ear in a manner

somewhat similar to the arm of a pair of spectacles. This wire may be secured to the earpiece in any suitable manner—as, for instance, the wire may terminate in an eye or loop, through which is passed a small screw 2, the head of which is clamped down upon the loop by means of a nut 3, applied to the thread of the screw, as shown in Fig. 1. I prefer, however, to use a wire 4' of the shape shown in Fig. 4 and pass the end 5 through a hole bored in the boss 6 of the earpiece 1 and the hard-rubber tube 7, to which the flexible tube is applied, thus pinning the parts 6 and 7 together. The boss 6 is provided with a groove 8, Fig. 3, and the loop 9' of the wire 4' lies in said groove, being sprung thereon and held by reason of its elasticity. The wire passes from the groove 8 through an aperture 9 in the cup 1 and is then curved to form the support which is adapted to rest upon the ear. By thus forming the wire 4' it will be practically impossible for the same to work loose, and it forms the means for holding the parts 6 and 7 firmly together.

The earpiece thus formed is so light that the weight can easily be supported by the ear without any discomfort. The earpiece 1 will be held in close proximity to the orifice of the ear, so that the listener can readily hear the sounds conveyed by the tube 2. The earpiece can be worn by any person without any adjustment whatever. It can be applied or removed quickly and readily.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, an earpiece comprising a cup or disk having a central aperture, a tube in said aperture and a wire pinning said tube to said cup and curved to fit over the ear, substantially as set forth.

2. As a new article of manufacture, an earpiece comprising a cup or disk having a central aperture, a tube in the said aperture, and a wire pinning said tube to said cup, passing thence through said cup and curved to fit over the ear, substantially as set forth.

3. As a new article of manufacture, an earpiece comprising a cup or disk provided with

a grooved boss, an aperture through said boss, a tube entering said aperture and a wire sprung about said grooved boss, passing thence through said cup and curved to fit
5 over the ear, substantially as set forth.

4. As a new article of manufacture, an ear-piece comprising a cup or disk provided with a grooved boss, a wire sprung about said

grooved boss and curved to fit over the ear, substantially as set forth.

This specification signed and witnessed
this 10th day of June, 1905.

EDWARD L. AIKEN.

Witnesses:

DELOS HOLDEN,
FRANK L. DYER.