

BUFFERING COVER FOR PREVENTING PAINS IN USING EARPHONES

Technical field

The present invention is related to a buffering cover to
5 improve adherence and to prevent pains when wearing earphones which
deliver sounds of various portable small-sized recorders, radios,
etc. by inserting them into earholes inside of earflaps for a long
time.

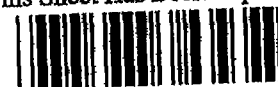
10 Background Art

Generally, circumference of the insertion portion of
earphones contacts external ear opening of earflaps when wearing
insert earphones (hereinafter referred to as 'earphones') by adhering
them to ears. Long-time use of earphones sometimes has caused
15 problems of feeling non-homogeneity due to continuous added pressure
and friction of the insertion portion, failure to cut off external
noise due to inferior adherence, and particularly, cause of pains by
stimulating nerves of inner earflaps. Further, repetitive long-time
uses of earphones have caused diseases including skin disease,
20 tympanitis, etc., and have led to hearing defect as these diseases
are transferred. There have been other damages coming from long-time
wearing of earphones.

In order to release a pain which is added to ears when wearing
earphones as described in the above, circumference of the insertion
25 portion of earphones is covered with foam sponge or rubber material.
However, effects of lightening pains have been insignificant for
conventional covers and their lives have been short dated due to
inherent characteristics and deformation of materials for the cover.

30 Disclosure of Invention

It is therefore an object of the present invention to resolve
problems of conventional buffering covers of earphones. The
ring-shaped cover of earphones made of a soft resin is equipped with
air rooms to double the buffering effect so that the cover envelops
35 around circumference of the insertion portion of earphones.



Brief Description of Drawings-

The foregoing and other objects, aspects, and advantages will be better understood from the following detailed description of preferred embodiments of the invention with reference to the drawings, in which:

Figure 1 is a separate perspective view showing how the present invention is used in the first embodiment of the invention:

Figure 2 is a cross-sectional view showing how the present invention is used in the first embodiment of the invention:

Figure 3 shows the second embodiment of the invention:

Figure 4a is a cross-sectional view of Figure 3:

Figure 4b is another cross-sectional view of Figure 3:

Figure 5 show the third embodiment of the invention; and

Figure 6 is a cross-sectional view of Figure 5.

Best Mode for Carrying out the Invention

Referring now to the drawings, and more particularly to Figures 1 and 2, there are shown earphones in the present invention. In forming the buffering cover 1 which is connected to the circumference of the insertion portion 6 of earphones 5, the present invention is characterized by the fixing-in portion 4 which is grounded to the insertion portion 6, the connection portion 3 which is grounded to the inner earflaps, and the air room 2 which absorbs the pressure added to the fixing-in portion 4 and connection portion 3.

Illustrated below are the method of fixing the buffering cover 1 made of a highly elastic soft resin material into the circumference of the insertion portion 6 of one of earphones 5 and the operation of earphones when they are worn.

Firstly, one end of the above fixing-in portion 4 is grounded to the insertion portion 6 and is pressed by one hand, and another end of the fixing-in portion 4 is pulled by another hand to cover the insertion portion 6 of the earphone 5. It is natural that the diameter of the above buffering cover 1 is a little smaller than that of the insertion portion 6 of the earphone 5 so that the fixing-in



portion 4 is closely adhered to the insertion portion 6 by inherent elasticity of the buffering cover 1. The connection portion 3 is grounded safely to the inner earflap if the buffering cover 1 is combined simply and then the earphone 5 is inserted into an earhole 5 as described in the above. The force imposed on the connection portion with the earphone 5 inserted into the inner earflap as the wearer moves around is absorbed and extinguished by buffering action of the air room 2, and therefore, direct stimulation or pain of the ear does not occur. Particularly, adherence by using the air room 10 does not generate non-homogeneity while wearing as the touch is very soft and adherence is tight, and further it is possible to maintain superior tone quality as external noises are cut off effectively. The cover in the present invention may be combined to the circumference of various-shaped insertion portions since the 15 buffering cover 1 is variable according to internal elasticity even for an earphone of which circumference of the insertion point is oval or arced.

Figures 3, 4a, and 4b are related to the second embodiment of the present invention. The air pocket 2a is formed radially around 20 the buffering cover 1 so that the air room 2 inside has a buffering characteristic when it is connected to the earhole.

Figures 5 and 6 show the third embodiment of the present invention. The round air tube 2c is fixedly attached to the insertion portion 6 of the earphone 5 so that the air room 2 has a buffering 25 property as the air room 2 is combined to the earhole roundly as a whole.

Also in case of the above second and third embodiments, the ear is not stimulated as the air pocket 2a and air tube 2c are grounded smoothly to the grounding portion of an earhole, and 30 high-quality hearing of earphone sound is enabled with external noises cut off since adherence is improved, if the buffer cover 1 is inserted and fixed into the insertion portion 6 of the earphone 5.

Industrial Applicability

35 As illustrated in the above, the present invention is very



practical and useful in that no non-homogeneity is felt although earphones are worn for a long time since the air room formed in the cover of the earphone softens the touch and improves adherence when wearing; generation of diseases due to skin contact can be
5 effectively prevented since the cover in the present invention does not stimulate earholes; and hearing of high-quality sounds is enabled as noises delivered externally are cut off remarkably.

While the invention has been described in terms of a few preferred embodiments, those skilled in the art will recognize that
10 the invention can be practiced with modification within the spirit and scope of the appended claims.

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What Is Claimed Is

1. A buffering cover of an earphone for preventing pains in wearing which is connected to an earphone by means of a fixing-in portion and a connection portion, characterized by that an air room
5 is formed to said buffering cover to give a buffering effect.

2. A buffering cover of an earphone for preventing pains in wearing in claim 1, wherein said air room is formed radially in said buffering cover.

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3. A buffering cover of an earphone for preventing pains in wearing in claim 1, wherein said air room is formed in the form of a tube in said buffering cover.

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