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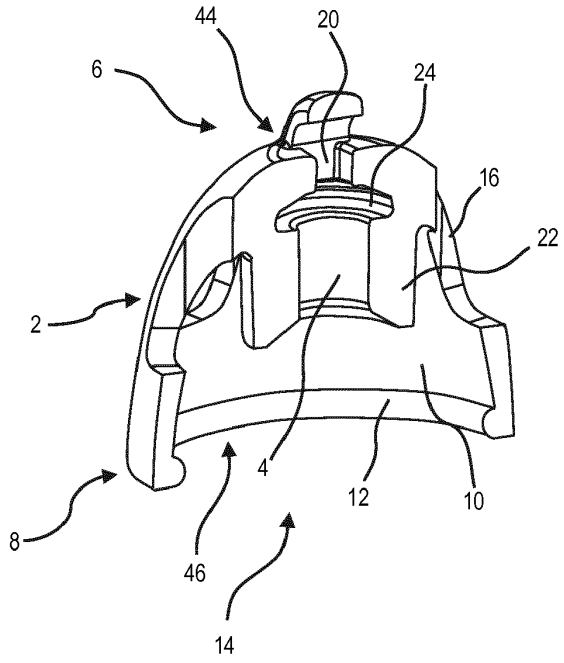
(54) **A REINFORCED DOME FOR A HEARING AID**

(57) A dome (2configured for receiving and retaining a hearing aid receiver (54) is disclosed. The dome (2) is adapted for insertion into an ear canal of the user and comprises an outer surface configured to face the inner wall of the ear canal; a distal portion (6) comprising a tip (44) oriented towards the tympanic membrane when inserted into the ear canal, the tip (44) comprising an opening; a proximal portion (8) comprising an end structure (46) oriented towards the outer ear, the end structure (46) comprising an opening (14) and a receiving portion (4) for selectively receiving and retaining the receiver (54). At least a part of the proximal portion (8) is provided with a reinforcement structure (12).

Fig. 1B



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Description

FIELD

[0001] The present disclosure relates to a dome for a hearing aid. More particularly, the disclosure relates to an improved dome having a reduced risk of collapsing when being inserted into the ear canal than the prior art domes.

BACKGROUND

[0002] In order to provide high user comfort, hearing aid domes are normally very thin, and they are typically made from soft silicone materials. Due to the thin dome walls, these domes tend to collapse and fold, and they can presumably cause pinching or irritation in the canal. Therefore, it would be desirable to have an alternative to the prior art domes that tend to collapse in the ear canal of a user.

[0003] Accordingly, it is an object of the disclosure to provide a dome that is less likely to collapse during insertion into the ear canal than the prior art domes.

SUMMARY

[0004] According to an aspect of the disclosure, the dome is a dome configured for receiving and retaining a hearing aid receiver, said dome being adapted for insertion into an ear canal of the user and comprising:

- an outer surface configured to face the inner wall of the ear canal;
- a distal portion comprising a tip oriented towards the tympanic membrane when inserted into the ear canal, the tip comprising an opening;
- a proximal portion comprising an end structure oriented towards the outer ear, the end structure comprising an opening;
- a receiving portion for selectively receiving and retaining the receiver,

wherein at least a part of the proximal portion is provided with a reinforcement structure.

[0005] Hereby, it is possible to provide a dome having a reduced risk of collapsing when being inserted into the ear canal than the prior art domes. The reinforcement structure reduces the risk of collapsing during insertion into the ear canal. The reinforcement structure may be of any suitable geometry and size.

[0006] According to another aspect of the disclosure, the reinforcement structure extends along at least part of the inside surface. By arranging the reinforcement structure along at least part of the inside surface, the reinforcement structure will not change the outer geometry of the dome. This may be an advantage since the outside surface of the dome should preferably be shaped to fit the ear canal.

[0007] According to an even further aspect of the disclosure, the reinforcement structure extends along the surface of the inside periphery of the dome.

[0008] It may be an advantage that the reinforcement structure extends along the surface of the inside periphery of the dome and is an integrated portion of the wall structure of the dome.

[0009] According to another aspect of the disclosure, at least a portion of the reinforcement structure extends along or adjacent to the end structure (the proximal end of the dome). By the term "adjacent to" is meant that the reinforcement structure may be provided in a (e.g. short) distance from the end structure (the proximal end of the dome like illustrated in Fig. 2E). By arranging the reinforcement structure along or adjacent to the end structure, collapse at the end structure can be prevented. The prior art domes will typically collapse at the end structure.

[0010] In a preferred embodiment, the reinforcement structure follows the inner contour of the dome and hereby extends along the outer surface of the inside periphery of the dome.

[0011] According to a further aspect of the disclosure, the reinforcement structure is integrated into at least a part the material of the proximal end. Hereby, it is possible to provide a firm attachment of the reinforcement structure. In one embodiment, the reinforcement structure is integrated into at least a part the material of the proximal end during a moulding process.

[0012] According to an even further aspect of the disclosure, the reinforcement structure is ring-shaped. Hereby, it is possible to provide a dome, in which the geometry of the reinforcement structure matches the geometry of the dome.

[0013] According to another aspect of the disclosure, the reinforcement structure is made from an elastic material having a hardness of shore A03 to shore A90, preferably Shore A10 to shore A30 such as shore A20 to shoere A25 (measured on the shore A hardness scale). Hereby, it is possible to provide a reinforcement structure being hard enough to reinforce the dome structure sufficiently to prevent the dome from collapsing during insertion into the ear canal.

[0014] According to a further aspect of the disclosure, the dome is made of an elastic material being silicone.

[0015] According to an even further aspect of the disclosure, at least a portion of the reinforcement structure has a semi-circular cross section. Hereby, it is possible to provide a reinforcement structure having desired mechanical properties.

[0016] According to another aspect of the disclosure, at least a portion of the reinforcement structure has a quadrangular cross section.

[0017] According to a further aspect of the disclosure, at least a portion of the reinforcement structure has a homogeneous cross section. Hereby, the manufacturing process can be eased.

[0018] According to an even further aspect of the disclosure, the dome has a dome wall, wherein the total

thickness of the dome wall and the reinforcement structure is larger than the thickness of the dome wall. Hereby, it is possible to provide a dome that can resist the forces that in the prior art may cause the dome to collapse.

[0019] According to another aspect of the disclosure, the dome has a dome wall, wherein the total thickness of the dome wall and the reinforcement structure is larger than 150% of the thickness of the dome wall. Hereby, it is possible to provide a dome that can resist the forces that in the prior art may cause the dome to collapse.

[0020] According to a further aspect of the disclosure, the total thickness of the dome wall and reinforcement structure is larger than 175% of the thickness of the dome wall.

[0021] According to another aspect of the disclosure, the total thickness of the dome wall and reinforcement structure is larger than 200% of the thickness of the dome wall.

[0022] According to an even further aspect of the disclosure, the dome comprises a dome wall having a thickness, wherein the height of the reinforcement structure is larger than or equal to the thickness of the dome wall. Hereby, the height of the reinforcement structure is sufficiently large to prevent the dome from collapsing during insertion into the ear canal.

[0023] According to another aspect of the disclosure, the dome comprises a receiving portion that comprises a number of breaking zones. Hearing aid users applying domes often experience that a dome is stuck in the ear canal - in general because it has not been mounted properly, has been used for a too long period or has been demounted several times to be cleaned (not intended use). By providing the receiving portion with a number of breaking zones, these breaking zones will break when the dome is pulled off the receiver (counter-part). Accordingly, the dome cannot be remounted and needs to be replaced.

[0024] According to a further aspect of the disclosure, the receiving portion is defined by a centrally arranged soft portion. Hereby, the soft part facilitates inserting the counter-part into the receiving portion.

[0025] According to an even further aspect of the disclosure, a stiff portion is provided at or adjacent to one or more of the breaking zones. Hereby, the stiff portion can enable the breaking zones to break.

[0026] According to another aspect of the disclosure, the hearing aid is a hearing aid comprising a behind-the-ear-element and an in-the-ear-element comprising a receiver configured to be received and retained in a dome, wherein the behind-the-ear-element is connected to the in-the-ear-element by a tube, wherein said dome is a dome according to the disclosure.

[0027] According to another aspect of the disclosure, the hearing aid is a receiver-in-the-ear (RITE) style hearing aid, wherein the tube comprises a wire.

BRIEF DESCRIPTION OF DRAWINGS

[0028] The aspects of the disclosure may be best understood from the following detailed description taken in conjunction with the accompanying figures. The figures are schematic and simplified for clarity, and they just show details to improve the understanding of the claims, while other details are left out. Throughout, the same reference numerals are used for identical or corresponding parts. The individual features of each aspect may each be combined with any or all features of the other aspects. These and other aspects, features and/or technical effect will be apparent from and elucidated with reference to the illustrations described hereinafter in which:

- Fig. 1A shows a perspective view of a cut prior art dome;
- Fig. 1B shows a perspective view of a cut dome according to an embodiment of the disclosure;
- Fig. 1C. shows a perspective view of another cut dome according to an embodiment of the disclosure;
- Fig. 1D shows a cross-sectional view of the end portion of a dome according to an embodiment of the disclosure;
- Fig. 1E shows a cross-sectional view of the end portion of a dome according to another embodiment of the disclosure;
- Fig. 2A shows a cross-sectional view of a reinforcement structure according an embodiment of the disclosure;
- Fig. 2B shows a cross-sectional view of a reinforcement structure according another embodiment of the disclosure;
- Fig. 2C shows a cross-sectional view of the end portion of a dome according to an embodiment of the disclosure;
- Fig. 2D shows a cross-sectional view of the end portion of a dome according to another embodiment of the disclosure;
- Fig. 2C shows a cross-sectional view of the end portion of a dome according to a further embodiment of the disclosure;
- Fig. 3A shows a cross-sectional view of a counterpart inserted into a dome according to an embodiment of the disclosure;
- Fig. 3B shows a cross-sectional view of a counterpart being inserted into a dome according to an embodiment of the disclosure;
- Fig. 4A shows a dome according to an embodiment of the disclosure being removed from a hearing aid;
- Fig. 4B shows a dome according to an embodiment of the disclosure being mounted on a hearing aid;
- Fig. 4C shows a dome according to an embodiment of the disclosure before it is attached to the attachment portion of a hearing aid and

Fig. 4D shows a hearing aid comprising a receiver configured to receive a dome according to the disclosure.

DETAILED DESCRIPTION

[0029] The detailed description set forth below in connection with the appended drawings is intended as a description of various configurations. The detailed description includes specific details for the purpose of providing a thorough understanding of various concepts. However, it will be apparent to those skilled in the art that these concepts may be practiced without these specific details. Several aspects of the apparatus and methods are described by various blocks, functional units, modules, components, circuits, steps, processes, algorithms, etc. (collectively referred to as "elements"). Depending upon particular application, design constraints or other reasons, these elements may be implemented using electronic hardware, computer program, or any combination thereof.

[0030] A hearing device may include a hearing aid that is adapted to improve or augment the hearing capability of a user by receiving an acoustic signal from a user's surroundings, generating a corresponding audio signal, possibly modifying the audio signal and providing the possibly modified audio signal as an audible signal to at least one of the user's ears. The "hearing device" may further refer to a device such as an earphone or a headset adapted to receive an audio signal electronically, possibly modifying the audio signal and providing the possibly modified audio signals as an audible signal to at least one of the user's ears. Such audible signals may be provided in the form of an acoustic signal radiated into the user's outer ear.

[0031] The hearing device is adapted to be worn in any known way. This may include i) arranging a unit of the hearing device behind the ear with a tube leading airborne acoustic signals into the ear canal or with a receiver/ loudspeaker arranged close to or in the ear canal such as in a Behind-the-Ear type hearing aid, and/ or ii) arranging the hearing device entirely or partly in the pinna and/ or in the ear canal of the user such as in an In-the-Ear type hearing aid or In-the-Canal/ Completely-in-Canal type hearing aid.

[0032] A "hearing system" refers to a system comprising one or two hearing devices, and a "binaural hearing system" refers to a system comprising two hearing devices where the devices are adapted to cooperatively provide audible signals to both of the user's ears. The hearing system or binaural hearing system may further include auxiliary device(s) that communicates with at least one hearing device, the auxiliary device affecting the operation of the hearing devices and/or benefitting from the functioning of the hearing devices. A wired or wireless communication link between the at least one hearing device and the auxiliary device is established that allows for exchanging information (e.g. control and status signals, possibly audio signals) between the at least one hearing device and the auxiliary device. Such auxiliary devices may include at least one of remote controls, remote microphones, audio gateway devices, mobile phones, public-address systems, car audio systems or music players or a combination thereof. The audio gateway is adapted to receive a multitude of audio signals such as from an entertainment device like a TV or a music player, a telephone apparatus like a mobile telephone or a computer, a PC. The audio gateway is further adapted to select and/or combine an appropriate one of the received audio signals (or combination of signals) for transmission to the at least one hearing device. The remote control is adapted to control functionality and operation of the at least one hearing devices. The function of the remote control may be implemented in a SmartPhone or other electronic device, the SmartPhone/ electronic device possibly running an application that controls functionality of the at least one hearing device.

[0033] In general, a hearing device includes i) an input unit such as a microphone for receiving an acoustic signal from a user's surroundings and providing a corresponding input audio signal, and/or ii) a receiving unit for electronically receiving an input audio signal. The hearing device further includes a signal processing unit for processing the input audio signal and an output unit for providing an audible signal to the user in dependence on the processed audio signal.

[0034] The input unit may include multiple input microphones, e.g. for providing direction-dependent audio signal processing. Such directional microphone system is adapted to enhance a target acoustic source among a multitude of acoustic sources in the user's environment. In one aspect, the directional system is adapted to detect (such as adaptively detect) from which direction a particular part of the microphone signal originates. This may be achieved by using conventionally known methods. The signal processing unit may include amplifier that is adapted to apply a frequency dependent gain to the input audio signal. The signal processing unit may further be adapted to provide other relevant functionality such as compression, noise reduction, etc.

[0035] Now referring to Fig.1B, which illustrates a dome 2 according to an aspect of the disclosure. Fig. 1B illustrates a perspective view of a cut dome 2 according to an embodiment of the disclosure. The dome 2 comprises a body portion having a dome wall 16 provided with an inside surface 10.

[0036] The dome 2 comprises a distal end 6 provided with a canal 20. The dome 2 comprises a centrally arranged wall structure 22 defining a concave receiving portion 4 configured to receive at least a portion of a receiver of a hearing aid. An annular recess 24 is provided in the proximal end of the receiving portion 4. The recess 24 is configured to receive a protruding portion of a receiver hereby providing a firm attachment of the receiver in the receiving portion 4.

[0037] The dome 2 comprises a proximal end 8, in

which end 8 an opening 14 is provided. A reinforcement structure 12 formed as an annular structure protruding radially is provided at proximal portion of the inside surface 10. The reinforcement structure 12 has a semi-spherical cross section.

[0038] Fig. 1A illustrates a perspective view of a cut prior art dome 38. The dome basically corresponds to the dome 2 shown in Fig. 1A, it, however, is not provided with a reinforcement structure. Accordingly, the prior art dome 38 tend to collapse when being inserted into the ear canal.

[0039] Fig. 1C illustrates a perspective view of another cut dome 2 according to an embodiment of the disclosure. The dome 2 is almost identical to the one shown in Fig. 1B. the dome 2, however, has a reinforcement structure 12 having a rectangular cross section. The longitudinal axis X of the dome 2 is illustrated. It can be seen that the canal 20 extends along the longitudinal axis X of the dome 2.

[0040] Fig. 1D illustrates a cross-sectional view of the end portion of a dome according to an embodiment of the disclosure. It can be seen that the dome comprises a dome wall 16 provided with a smooth inside surface 10 and a reinforcement structure 12 having a quadrangular cross section provided at the proximal end of the inside surface 10. The height H_1 of the reinforcement structure 12 is indicated. It can be seen that the height H_1 of the reinforcement structure 12 is slightly smaller than the thickness T_2 of the reinforcement structure 12 and the dome wall 16. On the other hand, the thickness T_1 of the dome wall 16 basically corresponds to the thickness of the reinforcement structure 12.

[0041] Fig. 1E illustrates a cross-sectional view of the end portion of a dome according to another embodiment of the disclosure. The dome comprises a dome wall 16 having a smooth inside surface 10 provided with a reinforcement structure 12 having a slightly different cross section provided than the reinforcement structure 12 of the dome shown in Fig. 1D. The reinforcement structure 12 is "rounded off" and is provided at the proximal end of the inside surface 10. The height H_2 of the reinforcement structure 12 is smaller than the total thickness T_2 of the reinforcement structure 12 and the dome wall 16. The thickness T_1 of the dome wall 16 is smaller than the thickness of the reinforcement structure 12.

[0042] Fig. 2A illustrates a cross-sectional view of a reinforcement structure 12 according an embodiment of the disclosure. The reinforcement structure 12 has a semi-circular cross section. The radius R_2 is indicated. R_2 may be in the range 0.2-0.6 mm such as 0.3-0.5 mm, preferably approximately 0.4 mm.

[0043] Fig. 2B illustrates a cross-sectional view of a reinforcement structure 12 according another embodiment of the disclosure. The reinforcement structure 12 has the same proportions as the one shown in Fig. 2A, however, its radius R_1 is smaller. R_1 may be in the range 0.1-0.5 mm such as 0.2-0.4 mm, preferably approximately 0.3 mm. The reinforcement structure 12 may preferably be provided as a ring-shaped structure extending along the inside surface of a dome.

[0044] In one embodiment according to the disclosure, the reinforcement structure extends through the inner surface of the dome.

[0045] In one embodiment, the dome may be made in silicone having a hardness in the range shore 10-30, such as shore 15-25, preferably approximately shore 20 (measured on the shore A hardness scale).

[0046] Fig. 2C illustrates a cross-sectional view of the end portion of a dome according to an embodiment of the disclosure. The dome has a dome wall 16 having an inner surface 10. A reinforcement structure 12 is provided at the proximal end of the dome. The reinforcement structure 12 protrudes from the dome wall 16 and has a thickness that is slightly larger than the thickness T_1 of the dome wall 16. The total thickness T_2 of the reinforcement structure 12 and the dome wall 16 is indicated. The cross section of the reinforcement structure 12 basically corresponds to a quarter of a circle and has a height H_1 that is smaller than the total thickness T_2 of the reinforcement structure 12 and the dome wall 16.

[0047] Fig. 2D illustrates a cross-sectional view of the end portion of a dome according to another embodiment of the disclosure. The dome comprises a dome wall 16 provided with an inner surface 10 and a reinforcement structure 12 provided at the proximal end of the dome. The reinforcement structure 12 protrudes from the dome wall 16 and has a thickness that is significantly larger than the thickness T_1 of the dome wall 16. The total thickness T_2 of the reinforcement structure 12 and the dome wall 16 is shown. The reinforcement structure 12 has a height H_3 that is larger than the total thickness T_2 of the reinforcement structure 12 and the dome wall 16.

[0048] Fig. 2E illustrates a cross-sectional view of the end portion of a dome according to a further embodiment of the disclosure. The dome comprises a dome wall 16 provided with an inner surface 10 and a reinforcement structure 12 provided in a non-zero distance from the proximal end of the dome. Accordingly, the reinforcement structure 12 extends adjacent to the end structure 46. The reinforcement structure 12 protrudes from the dome wall 16 and has a thickness that is smaller than the thickness T_1 of the dome wall 16. The total thickness T_2 of the reinforcement structure 12 and the dome wall 16 is indicated. The reinforcement structure 12 has a height H_2 that basically corresponds to the total thickness T_2 of the reinforcement structure 12 and the dome wall 16.

[0049] Fig. 3A illustrates a cross-sectional view of a counter-part 18 inserted into a dome 2 according to an embodiment of the disclosure, whereas Fig. 3B illustrates a cross-sectional view of the counter-part 18 being inserted into the dome 2. The counter-part 18 may be the distal portion (front portion) of receiver of a hearing aid.

[0050] The dome 2 comprises a receiving portion 4 having a conical geometry and extending in extension of a centrally arranged canal 20. A cavity 48 extends between and hereby connects the receiving portion 4 and

the canal 20. The cavity 48 comprises an annular groove 36 arranged adjacent to thin structure constituting the central portion of a breaking zone 30. The thin structure extends between the annular groove 36 and a slit 28 provided in the dome 2.

[0051] The central portion of the structure forming the receiving portion 4 comprises a soft portion 40 made of a softer material than the remaining portion of the dome 2. Accordingly, the protruding portion 34 of the counter-part 18 can be received by the cavity 48 of the dome 2 upon radial compression of the soft portion 40. The counter-part 18 comprises a canal 20' that is in fluid communication with the canal 20 of the dome 2.

[0052] The structures of the dome 2 in region adjacent to the breaking zone 30 constitute a stiff portion that is made in a material that is stiffer than the remaining portion of the dome 2. Accordingly, the breaking zone 30 will break when somebody tries to remove the counter-part 18 from the cavity 48.

[0053] Moreover, the dome 2 will generate a "click sound" when the counter-part 18 is brought into engagement with the cavity 48. Hereby, the user receives a consistent "ON feedback" when the counter-part 18 is mounted in a correct manner in the cavity 48 of the dome 2. The counter-part 18 will break when removed. Hereby, one can make sure that old domes 2 are not reused.

[0054] The construction described with reference to Fig. 3A and 3B can prevent that users of domes experience that a dome is stuck in the ear canal due to an incorrect mounting, usage for a too long period or when having been demounted several times to be cleaned (not intended re-use).

[0055] In a preferred embodiment according to the disclosure, the dome 2 may have two or more, preferably three or more breaking zones 30. The use of a hard part will increase the tactile feeling (click) when the user mounts the dome 2.

[0056] Fig. 4A illustrates a dome 2 according to an embodiment of the disclosure being removed from a receiver 54 of a hearing aid. The receiver 54 is connected to a wire 52.

[0057] Fig. 4B illustrates a dome 2 according to an embodiment of the disclosure being mounted on a receiver 54 of a hearing aid corresponding to the one shown in Fig. 4A. A wire 52 is attached to the receiver 54.

[0058] Fig. 4C illustrates a dome 2 according to an embodiment of the disclosure before it is attached to the attachment portion 56 of a receiver 54 of hearing aid corresponding to the one shown in Fig. 4A. A wire 52 is attached to the receiver 54 and the dome comprises a tip 44 provided with an opening (not shown).

[0059] Fig. 4D illustrates a hearing aid 50 corresponding to the one shown in Fig. 4A. The hearing aid 50 comprises a receiver 54 having an attachment portion 56 configured to receive a dome 2 according to the disclosure. A wire 52 connects the receiver 54 and the body portion of the hearing aid 50.

[0060] It should be noted that the dome and the reinforcement ring of the dome, as described herein could similarly be used with a classic behind the ear type hearing aid, where the receiver is arranged in the behind the ear unit, and connects with a sound tube guiding the sound from the receiver into an earpiece, where the earpiece comprises a dome constructed as described herein.

[0061] As used, the singular forms "a," "an," and "the" are intended to include the plural forms as well (i.e. to have the meaning "at least one"), unless expressly stated otherwise. It will be further understood that the terms "includes," "comprises," "including," and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof. It will also be understood that when an element is referred to as being "connected" or "coupled" to another element, it can be directly connected or coupled to the other element, but an intervening element may also be present, unless expressly stated otherwise. Furthermore, "connected" or "coupled" as used herein may include wirelessly connected or coupled. As used herein, the term "and/or" includes any and all combinations of one or more of the associated listed items.

[0062] It should be appreciated that reference throughout this specification to "one embodiment" or "an embodiment" or "an aspect" or features included as "may" means that a particular feature, structure or characteristic described in connection with the embodiment is included in at least one embodiment of the disclosure. Furthermore, the particular features, structures or characteristics may be combined as suitable in one or more embodiments of the disclosure. The previous description is provided to enable any person skilled in the art to practice the various aspects described herein. Various modifications to these aspects will be readily apparent to those skilled in the art, and the generic principles defined herein may be applied to other aspects.

[0063] The claims are not intended to be limited to the aspects shown herein, but is to be accorded the full scope consistent with the language of the claims, wherein reference to an element in the singular is not intended to mean "one and only one" unless specifically so stated, but rather "one or more." Unless specifically stated otherwise, the term "some" refers to one or more.

[0064] Accordingly, the scope should be judged in terms of the claims that follow.

Claims

1. A dome configured for receiving and retaining a hearing aid receiver, said dome being adapted for insertion into an ear canal of the user and comprising:

   - an outer surface configured to face the inner

wall of the ear canal;
- a distal portion comprising a tip oriented towards the tympanic membrane when inserted into the ear canal, the tip comprising an opening;
- a proximal portion comprising an end structure oriented towards the outer ear, the end structure comprising an opening;
- a receiving portion for receiving and retaining the receiver,

wherein at least a part of the proximal portion is provided with a reinforcement structure.

2. A dome according to claim 1, wherein the reinforcement structure extends along at least part of the inside surface of the inside periphery of the dome.

3. A dome according to one of the preceding claims, wherein at least a portion of the reinforcement structure extends along or adjacent to the end structure.

4. A dome according to one of the preceding claims, wherein the reinforcement structure is integrated into at least a part the material of the proximal end.

5. A dome according to one of the preceding claims, wherein the reinforcement structure is ring-shaped.

6. A dome according to one of the preceding claims, wherein the reinforcement structure is made from an elastic material having a hardness of shore A03 to shore A90.

7. A dome according to one of the preceding claims, wherein at least a portion of the reinforcement structure has a semi-circular cross section.

8. A dome according to one of the preceding claims, wherein at least a portion of the reinforcement structure has a homogeneous cross section.

9. A dome according to one of the preceding claims, wherein the dome has a dome wall and the total thickness of the dome wall and the reinforcement structure is larger than the thickness of the dome wall.

10. A dome according to one of the preceding claims, wherein the receiving portion comprises a number of breaking zones.

11. A dome according to claim 10, wherein the receiving portion is defined by a centrally arranged soft portion.

12. A dome according to claim 11, wherein a stiff portion is provided at or adjacent to one or more of the breaking zones.

13. A hearing aid comprising a behind-the-ear-element and an in-the-ear-element comprising a receiver configured to be received and retained in a dome, wherein the behind-the-ear-element is connected to the in-the-ear-element by a tube, wherein said dome is a dome according to one of the preceding claims.

14. A hearing aid according to claim 13, wherein the hearing aid (50) is a receiver-in-the-ear style hearing aid, wherein the tube comprises a wire.

Fig. 1A

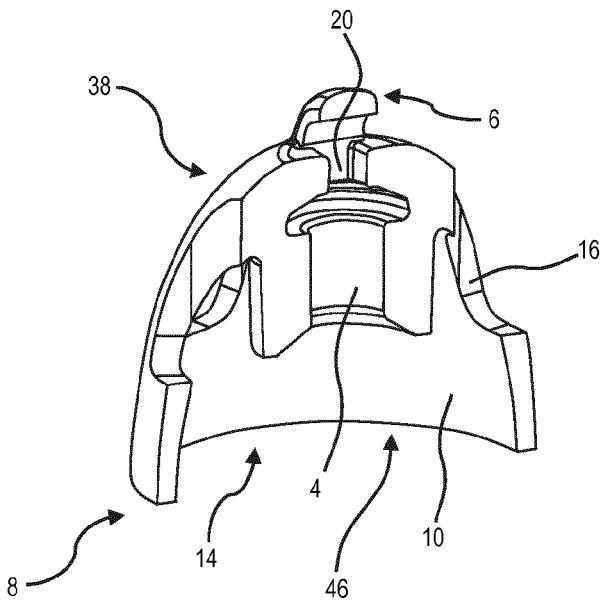


Fig. 1B

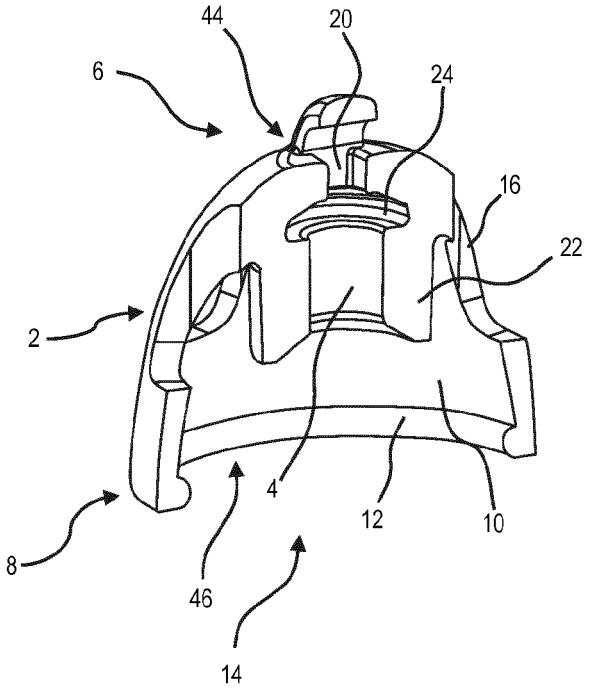


Fig. 1C

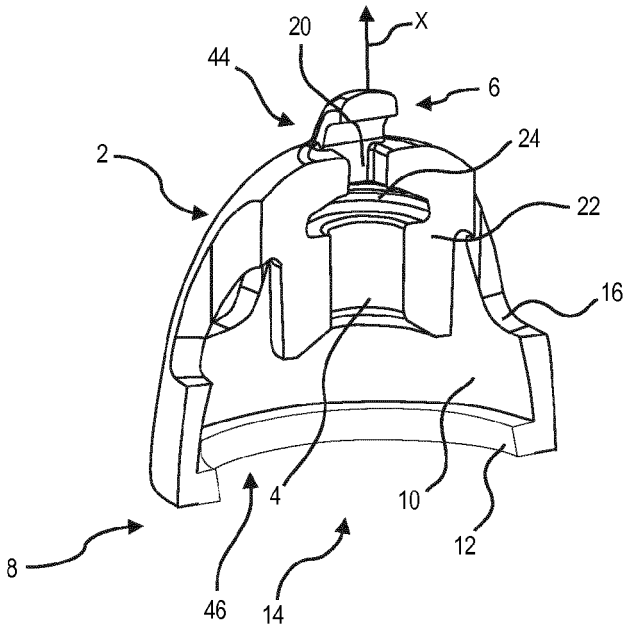


Fig. 1D

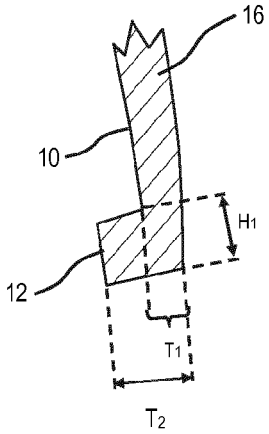


Fig. 1E

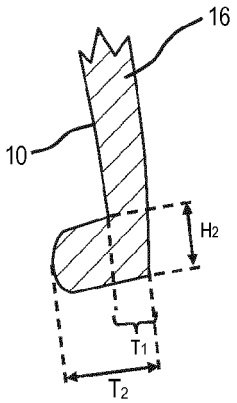


Fig. 2A

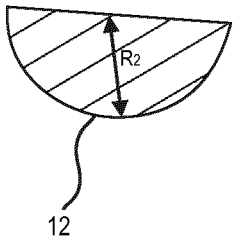


Fig. 2B

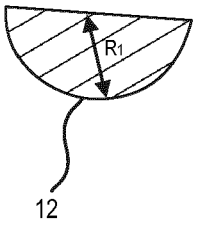


Fig. 2C

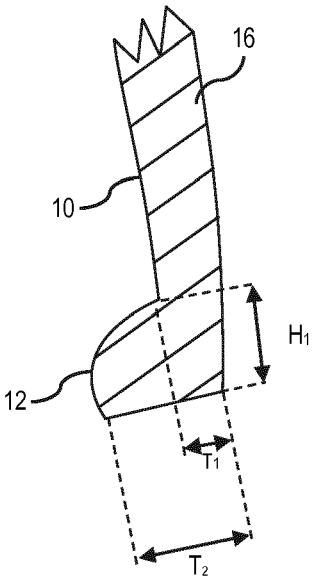


Fig. 2D

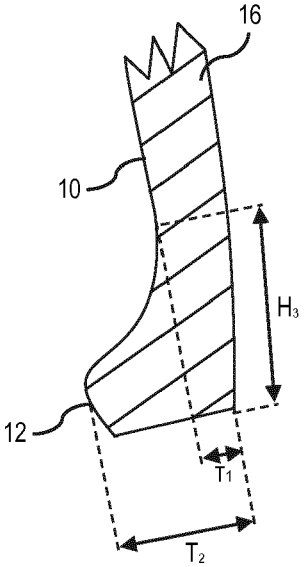


Fig. 2E

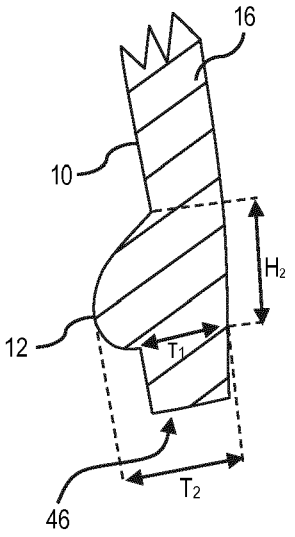


Fig. 3A

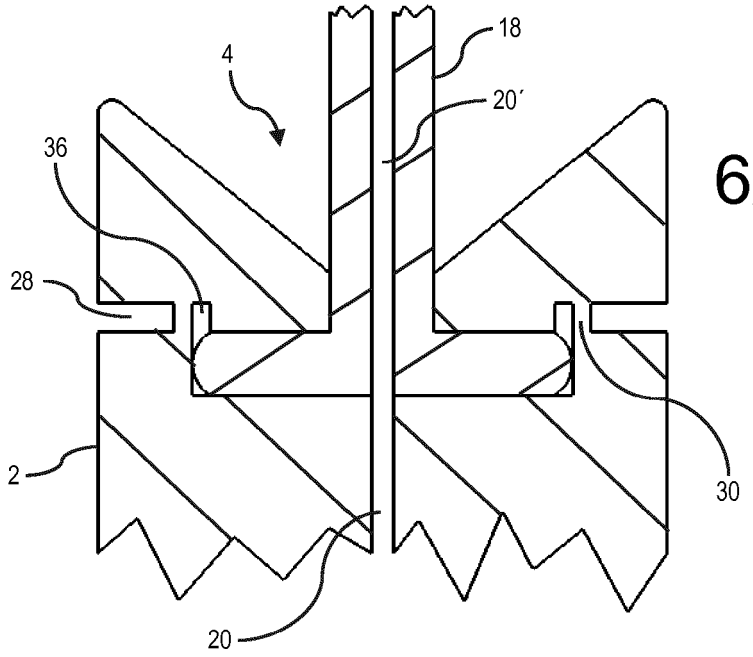


Fig. 3B

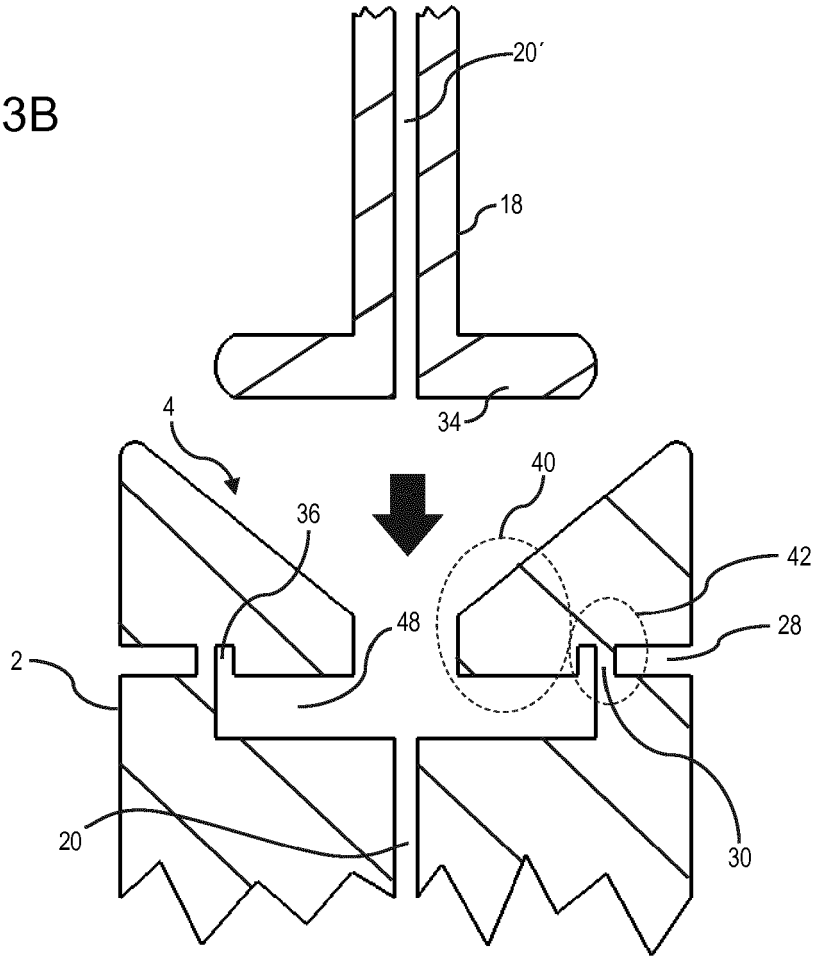


Fig. 4A

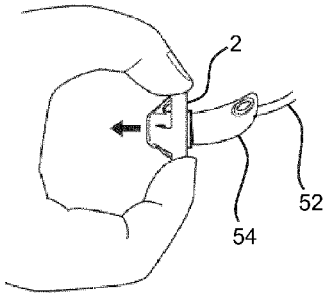


Fig. 4B

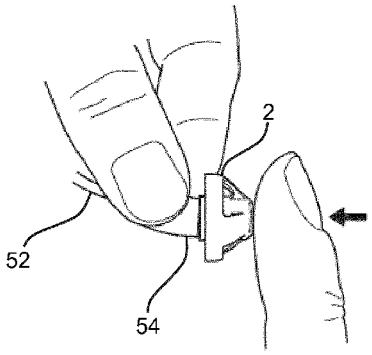
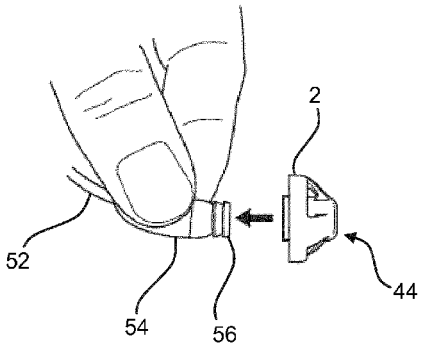


Fig. 4C



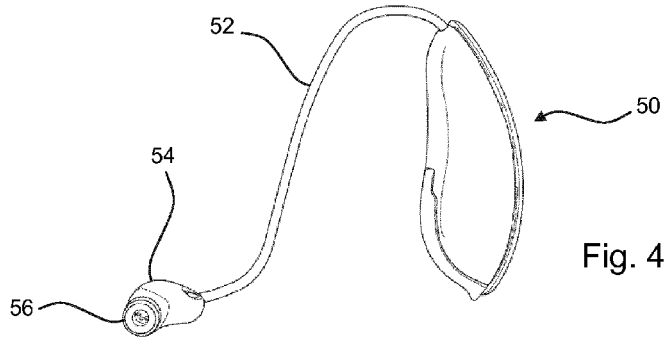


Fig. 4D

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EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	22 August 2018	Peirs, Karel

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