



(51) International Patent Classification:
H04R 25/00 (2006.01)

(21) International Application Number:
PCT/SG2009/000231

(22) International Filing Date:
24 June 2009 (24.06.2009)

(25) Filing Language: English

(26) Publication Language: English

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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
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SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR),
OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: HEARING AID WITH A BATTERY CHAMBER HOUSING LOCKING MECHANISM

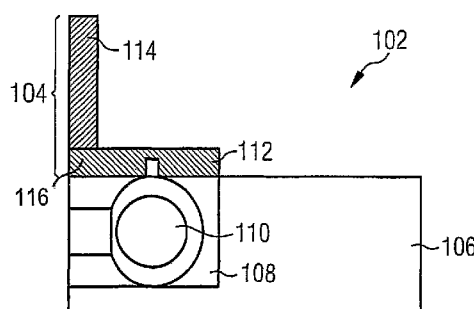


FIG 1

(57) Abstract: In an embodiment, a hearing aid (102) is provided. The hearing aid may include a hearing aid housing (106) a bat-
tery chamber housing (108) positioned within the hearing aid housing and configured to receive a battery and a battery chamber
housing locking mechanism (104) disposed over the battery chamber housing (108) and configured to allow or prevent access to
the battery. The battery chamber housing locking mechanism (104) may include a first battery chamber housing locking portion
(112) disposed over the battery chamber housing and a second battery chamber housing locking portion (114) pivotally coupled to
the battery chamber housing and being arranged such that it may overlap with the first battery chamber housing locking portion to
lock the battery chamber housing and prevent access to the battery.



HEARING AID WITH A BATTERY CHAMBER HOUSING LOCKING MECHANISM

5 Embodiments relate to a hearing aid with a battery chamber housing locking mechanism.

10 A hearing aid is usually fitted in or behind the ear of the user to amplify the sound for the user. Some popular types of hearing aids include behind-the-ear (BTE) hearing aids, in-the-ear (ITE) hearing aids, in-the-canal (ITC) hearing aids, completely-in-the-canal (CIC) hearing aids, etc.

15 A hearing aid usually includes a hearing aid housing within which a microphone for collecting sound waves, a signal processing circuit (also referred to as a speech processing circuit) for processing the collected sound waves and a loudspeaker (which may also be referred to as a receiver in the field of hearing aids) may be housed. To provide power
20 for the microphone, the signal processing circuit and the loudspeaker, the hearing aid usually includes a battery chamber housing positioned within the hearing aid housing and configured to receive a battery.

25 The hearing aid may also include a battery chamber housing locking mechanism or a battery door disposed over the battery chamber housing and configured to allow or prevent access to the battery.

30 As the battery may be very small and may cause safety issues when consumed, it may be desired to enhance the difficulty of accessibility by a certain group of hearing aid users.

35 In various embodiments, a hearing aid may be provided, which may include a battery chamber housing locking mechanism which may provide an increased latching strength while minimizing an increase in size and weight of the hearing aid.

An embodiment relates to a hearing aid. The hearing aid may include a hearing aid housing, a battery chamber housing positioned within the hearing aid housing and configured to receive a battery and a battery chamber housing locking mechanism disposed over the battery chamber housing and configured to allow or prevent access to the battery. The battery chamber housing locking mechanism may include a first battery chamber housing locking portion disposed over the battery chamber housing and a second battery chamber housing locking portion pivotally coupled to the battery chamber housing and being arranged such that it may overlap with the first battery chamber housing locking portion to lock the battery chamber housing and prevent access to the battery.

In an embodiment, the second battery chamber housing locking portion may include a length shorter than the first battery chamber housing locking portion so as to form a depression when the second battery chamber housing locking portion overlaps with the first battery chamber housing locking portion to allow opening of the second battery chamber housing locking portion. The depression may be situated at an end of the second battery chamber housing locking portion, opposite to the end pivotally coupled to the battery chamber housing. The length of the depression may depend on the difference in length between the first battery chamber housing locking portion and the second battery chamber housing locking portion. The depth of the depression may depend on the thickness of the second battery chamber housing locking portion. The first battery chamber housing locking portion may be of the same or different thickness as the second battery chamber housing locking portion. The respective thickness of the first battery chamber housing locking portion and the second battery chamber housing locking portion may depend on user and design requirements.

By way of example, the hearing aid user may be required to position a finger or any suitable means into the depression and exert an appropriate force upwards so as to lift up the

second battery chamber housing locking portion, thereby exposing the first battery chamber housing locking portion.

5 In an embodiment, the first battery chamber housing locking portion may include a first shaped portion and a second shaped portion, the shape of the first shaped portion may be complementary to the shape of the second shaped portion. The first shaped portion may be E-shaped and the second shaped portion may be inverted E-shaped such that the battery may
10 not be visible to a hearing aid user or that the battery may not be displaced from the battery chamber housing when the first shaped portion is in contact with the second shaped portion. The first shaped portion may also be of a circular shape, a square shape, a rectangle shape or of any suitable
15 shape depending on user and design requirements.

In an embodiment, the battery chamber housing may include two sides. At least one portion of the first shaped portion may be in contact with one side of the battery chamber housing
20 and at least one portion of the second shaped portion may be in contact with the other side of the battery chamber housing.

In an embodiment, the second battery chamber housing locking
25 portion may be pivotally coupled to the battery chamber housing via an axis of rotation and the first shaped portion may be positioned away from the second shaped portion to allow access to the battery upon an application of an outward force on the respective sides of the battery chamber housing
30 in a direction along the axis of rotation of the second battery chamber housing locking portion and the first shaped portion may be positioned in contact with the second shaped portion to prevent access to the battery upon removal of the outward force. The application of the outward force may be
35 provided by a hearing aid user.

In an embodiment, the battery chamber housing locking mechanism may further include an activator configured to

provide the application of the outward force. The activator may be an internal activator or an external activator. The internal activator may be an integral part of the battery chamber housing locking mechanism and an external activator
5 may be an external component adapted to provide the application of the outward force.

In an embodiment, the activator may be configured such that the first shaped portion may be positioned away from the
10 second shaped portion upon relaxation of the activator from the first shaped portion and the second shaped portion and the first shaped portion may be positioned in contact with the second shaped portion upon tightening of the activator on the first shaped portion and the second shaped portion.

15 In an embodiment, the first shaped portion may include a first recess with a first inner threaded region.

In an embodiment, the first recess may be a through hole or a
20 blind hole. The through hole or the blind hole may be of a circular shape, a square shape, a triangle shape or of any suitable shape depending on user and design requirements.

In an embodiment, the second shaped portion may include a
25 second recess with a second inner threaded region.

In an embodiment, the second recess may be a through hole or a blind hole. The through hole or the blind hole may be of a circular shape, a square shape, a triangle shape or of any
30 suitable shape depending on user and design requirements.

In an embodiment, the battery chamber housing may include an opening, the opening may be positioned such that the opening may align with the first recess and the second recess along a
35 common axis when the activator may be inserted through the opening on the battery chamber housing into the first battery chamber housing locking portion.

In an embodiment, there may be one opening on the battery chamber housing and the opening may be positioned on either one of the two sides of the battery chamber housing.

5 By way of example, if the opening may be positioned on the side adjacent to the first recess, the first recess may include a through hole and the second recess may include a blind hole. If the opening may be positioned on the side adjacent to the second recess, the second recess may include
10 a through hole and the first recess may include a blind hole. The corresponding blind hole may be arranged and/or configured to act as a stopper for the activator to prevent the activator from going through the opening, the first recess and the second recess.

15

In an embodiment, to facilitate the ease of insertion of the activator, the first recess, the second recess and the opening may be of a similar shape with similar dimensions.

20 In an embodiment, the activator may be aligned parallel to the axis of rotation of the second battery chamber housing locking portion and may be in contact with the first shaped portion and the second shaped portion.

25 In an embodiment, the activator may be an integral part of the battery chamber housing locking mechanism and the activator may include a screw with an enlarged head portion and a threaded shaft portion. The activator may also include a threaded rod or any other suitable components which may be
30 fitted through the opening, the first recess and the second recess. The screw may be activated by hand or by an external means such as a screw-driver or any suitable device.

In an embodiment, the enlarged head portion may be configured
35 to abut against an external surface of the battery chamber housing when the screw may be inserted through the opening on the battery chamber housing into the first battery chamber housing locking portion. The enlarged head portion may also

act as a stopper for the screw to prevent the screw from going through the opening, the first recess and the second recess.

5 In an embodiment, the threaded shaft portion may be configured to engage the first inner threaded region of the first shaped portion and the second inner threaded region of the second shaped portion when the screw may be inserted through the opening on the battery chamber housing into the
10 first battery chamber housing locking portion.

In an embodiment, each of the first shaped portion and the second shaped portion may include a recess configured to allow an insertion of the activator. The recess may be of a
15 circular shape, a square shape, a rectangle shape, a cross shape or of any suitable shape depending on the corresponding shape of the activator. The recess may also include a combination of shapes to accommodate the insertion and turning of the activator thereafter.

20

In an embodiment, the activator may be an external component adapted to provide the application of the outward force. When in use, the activator may be aligned perpendicular to the axis of rotation of the second battery chamber housing
25 locking portion and may be brought into contact with the first shaped portion and the second shaped portion so as to distance the first shaped portion from the second shaped portion and to allow access to the battery.

30 In an embodiment, the activator may include an L-shaped key. The activator may be of any other suitable means as long as the activator includes a portion corresponding to the recess on the first shaped portion and the second shaped portion when the first shaped portion and the second shaped portion
35 may be placed adjacent to each other.

In an embodiment, the hearing aid may further include a programming contact and a programming button positioned on

the hearing aid housing. The programming contact and programming button may be positioned adjacent to the battery chamber housing locking mechanism. The programming contact may allow the manufacturer to program the hearing aid according to the requirements of the hearing aid user. The programming button may allow the hearing aid user to choose an appropriate program according to the requirements of the hearing aid user.

10 In an embodiment, the hearing aid may be a behind-the-ear hearing aid or a custom hearing aid like an In-The-Ear (ITE) hearing aid.

15 In an embodiment, the hearing aid housing may include or may be made of plastic material, rubber material or any other suitable material which may be molded to the desired shape.

20 In an embodiment, the battery chamber housing locking mechanism may include or may be made of the same or different material from the hearing aid housing. The battery chamber housing locking mechanism may include or may be made of plastic material, rubber material or any other suitable material which may be molded to the desired shape.

25 In an embodiment, the first battery chamber housing locking portion may include or may be of the same or different material from the second battery chamber housing locking portion. The first battery chamber housing locking portion may include or may be made of plastic material, rubber material or any other suitable material which may be molded to the desired shape. The second battery chamber housing locking portion may include or may be made of plastic material, rubber material or any other suitable material which may be molded to the desired shape.

35

In the drawings, like reference characters generally refer to the same parts throughout the different views. The drawings are not necessarily to scale, emphasis instead generally

being placed upon illustrating the principles of the invention. In the following description, various embodiments of the invention are described with reference to the following drawings, in which:

5

Figure 1 shows a cross-sectional side view of a hearing aid with a battery chamber housing locking mechanism according to an embodiment;

10 Figure 2 and Figure 3 show respective top views of the first battery chamber housing locking portion in close and open positions according to an embodiment;

15 Figure 4 and Figure 5 show respective top views of the first battery chamber housing locking portion configured to be opened with an internal activator in close and open positions according to an embodiment;

20 Figure 6 and Figure 7 show respective top views of the first battery chamber housing locking portion configured to be opened with an external activator in close and open positions according to an embodiment;

25 Figure 8 and Figure 9 show respective top views of the first battery chamber housing locking portion in close and open positions according to an embodiment; and

30 Figure 10 shows a top view of a hearing aid with a battery chamber housing locking mechanism according to an embodiment.

Fig.1 shows a cross-sectional side view of a hearing aid 102 with a battery chamber housing locking mechanism 104 according to an embodiment. By way of example, Fig.1 shows a behind-the-ear (BTE) hearing aid 102. The hearing aid 102 may include a hearing aid housing 106, a battery chamber housing 108 positioned within the hearing aid housing 106 and configured to receive a battery 110 and a battery chamber

housing locking mechanism 104 disposed over the battery chamber housing 108 and configured to allow or prevent access to the battery 110. The battery chamber housing locking mechanism 104 may include a first battery chamber housing locking portion 112 disposed over the battery chamber housing 108 and a second battery chamber housing locking portion 114 pivotally coupled to the battery chamber housing 108 and being arranged such that it may overlap with the first battery chamber housing locking portion 112 to lock the battery chamber housing 108 and prevent access to the battery 110.

The second battery chamber housing locking portion 114 may include a length shorter than the first battery chamber housing locking portion 112 so as to form a depression when the second battery chamber housing locking portion 114 overlaps with the first battery chamber housing locking portion 112 to allow opening of the second battery chamber housing locking portion 114.

20

The second battery chamber housing locking portion 114 may be pivotally coupled to the battery chamber housing 108 via an axis of rotation 116 and the second battery chamber housing locking portion 114 may be configured to be movable relative to the battery chamber housing 108.

25

Fig.2 and Fig.3 show respective top views of the first battery chamber housing locking portion 112 in close and open positions according to an embodiment.

30

In Fig.2 and Fig.3, the first battery chamber housing locking portion 112 may include a first shaped portion 118 and a second shaped portion 120, the first shaped portion 118 may have a shape complementary to the shape of the second shaped portion 120. The first shaped portion 118 may be E-shaped and the second shaped portion 120 may be inverted E-shaped. The first shaped portion 118 and the second shaped portion 120

35

may be of any suitable shapes depending on user and design requirements.

5 In Fig.2, the first shaped portion 118 may be positioned in contact with the second shaped portion 120 to prevent access to the battery (not shown).

10 In various embodiments, the first shaped portion 118 may have at least one protrusion and the second shaped portion 120 may have at least one corresponding recess being in engagement with the at least one protrusion of the first shaped portion 118. In alternative embodiments, the second shaped portion 120 may have at least one protrusion and the first shaped portion 118 may have at least one corresponding recess being
15 in engagement with the at least one protrusion of the second shaped portion 120. In yet alternative embodiments, the first shaped portion 118 may have at least one protrusion and at least one recess and the second shaped portion 120 may have at least one protrusion and at least one recess being
20 arranged complementary to the at least one protrusion and at least one recess of the first shaped portion 118.

Upon application of an application of an outward force (direction as shown by arrows in Fig.2) on the battery
25 chamber housing 108 (or indirectly on the first shaped portion 118 and the second shaped portion 120) in a direction along the axis of rotation (not shown) of the second battery chamber housing locking portion (not shown), the first shaped portion 118 may be positioned away from the second shaped
30 portion 120 to allow access to the battery as shown in Fig.3. The application of the outward force may be by hand.

Fig.4 and Fig.5 show respective top views of the first battery chamber housing locking portion 112 configured to be
35 opened with an internal activator 122 in close and open positions according to an embodiment.

In Fig.4 and Fig.5, the first battery chamber housing locking portion 112 may also include a first shaped portion 118 and a second shaped portion 120, the first shaped portion 118 may have a shape complementary to the shape of the second shaped portion 120. The first shaped portion 118 may be E-shaped and the second shaped portion 120 may be inverted E-shaped.

The battery chamber housing locking mechanism 104 may further include an activator 122 configured to provide the application of an outward force. The activator 122 may be aligned parallel to the axis of rotation (not shown) of the second battery chamber housing locking portion (not shown) and may be in contact with the first shaped portion 118 and the second shaped portion 120.

The first shaped portion 118 may include a first recess 124 with a first inner threaded region. The first recess 124 may be a through hole.

The second shaped portion 120 may include a second recess 126 with a second inner threaded region. The second recess 126 may be a blind hole.

The battery chamber housing 108 may include an opening 128, the opening 128 positioned such that the opening 128 may align with the first recess 124 and the second recess 126 along a common axis when the activator 122 may be inserted through the opening 128 on the battery chamber housing 108 into the first battery chamber housing locking portion 112.

In Fig.4 and Fig.5, the activator 122 may include a screw 129 with an enlarged head portion 130 and a threaded shaft portion 132.

The enlarged head portion 130 may be configured to abut against an external surface of the battery chamber housing 108 when the screw 129 may be inserted through the opening

128 on the battery chamber housing 108 into the first battery chamber housing locking portion 112.

5 The threaded shaft portion 132 may be configured to engage the first inner threaded region of the first shaped portion 118 and the second inner threaded region of the second shaped portion 120 when the screw 129 may be inserted through the opening 128 on the battery chamber housing 108 into the first battery chamber housing locking portion 112.

10 In Fig.4, the first shaped portion 118 may be positioned in contact with the second shaped portion 120 upon tightening of the activator 122 on the first shaped portion 118 and the second shaped portion 120. Upon relaxation of the activator 122 (direction as shown by arrows in Fig.4) from the first shaped portion 118 and the second shaped portion 120, the activator 122 may be configured such that the first shaped portion 118 may be positioned away from the second shaped portion 120 as shown in Fig.5.

20 Fig.6 and Fig.7 show respective top views of the first battery chamber housing locking portion 112 configured to be opened with an external activator (not shown) in close and open positions according to an embodiment.

25 In Fig.6 and Fig.7, each of the first shaped portion 118 and the second shaped portion 120 may include a recess 134 configured to allow an insertion of an external activator. Each of the recess 134 may include a first recess portion 136 and a second recess portion 138. The first recess portion 136 may include a length longer than the second recess portion 138. By way of example, the first recess portion 136 may be of a rectangle shape and the second recess portion 138 may be of a square shape to accommodate the insertion and turning of the activator thereafter. The first recess portion 136 and the second recess portion 138 may also be of any suitable shapes depending on user and design requirements.

In an embodiment, the activator may be an external activator adapted to provide the application of the outward force. The activator may include an L-shaped key. The activator may be of any other suitable means as long as the activator includes
5 a portion corresponding to the combined first recess portions 136 on the first shaped portion 118 and the second shaped portion 120 when the first shaped portion 118 and the second shaped portion 120 may be placed adjacent to each other such that the respective first recess portions 136 are aligned.

10 When in use, the activator may be aligned perpendicular to the axis of rotation (not shown) of the second battery chamber housing locking portion (not shown) and may be brought into contact with the combined first recess portions
15 136 formed by the first shaped portion 118 and the second shaped portion 120. After turning of the activator, a part of the contact portion of the activator engages the second recess portions 138 on the respective first 118 and second 120 shaped portions thereby spacing the first shaped portion
20 118 away from the second shaped portion 120 and allowing access to the battery.

In Fig.6, the first shaped portion 118 may be positioned in contact with the second shaped portion 120 to prevent access
25 to the battery (not shown). When the first shaped portion 118 may be positioned in contact with the second shaped portion 120, the first recess portion 136 on the first shaped portion 118 may be aligned adjacent to the first recess portion 136 on the second shaped portion 120, thereby forming the larger
30 combined first recess portions 136.

Upon application of an outward force (direction as shown by arrows in Fig.6) on the battery chamber housing 108 (or indirectly on the first shaped portion 118 and the second
35 shaped portion 120) in a direction along the axis of rotation (not shown) of the second battery chamber housing locking portion (not shown), the first shaped portion 118 may be

positioned away from the second shaped portion 120 to allow access to the battery as shown in Fig.7.

Fig.8 and Fig.9 show respective top views of the first battery chamber housing locking portion 112 in close and open positions according to an embodiment.

The operation of the first battery chamber housing locking portion 112 in Fig.8 and Fig.9 is similar to that in Fig.2 and Fig.3 while the first shaped portion 118 and the second shaped portion 120 may be similar in shape to that in Fig.6 and Fig.7. However, unlike the recess 134 in the first shaped portion 118 and the second shaped portion 120 in Fig.6 and Fig.7, each of the first shaped portion 118 and the second shaped portion 120 in Fig.8 and Fig.9 only include one recess portion 140.

In Fig.8 and Fig.9, the recess portion 140 may be of a certain depth or a through hole. The recess portion 140 may be of a rectangle shape or may be of any other suitable shapes. The recess portion 140 of the first shaped portion 118 may be of the same shape as the recess portion 140 of the second shaped portion 120.

In Fig.8, the first shaped portion 118 may be positioned in contact with the second shaped portion 120 to prevent access to the battery (not shown). When the first shaped portion 118 may be positioned in contact with the second shaped portion 120, the recess portion 140 of the first shaped portion 118 may be aligned with the recess portion 140 of the second shaped portion 120.

Upon application of an application of an outward force (direction as shown by arrows in Fig.8) on the battery chamber housing 108 (or indirectly on the first shaped portion 118 and the second shaped portion 120) in a direction along the axis of rotation (not shown) of the second battery chamber housing locking portion (not shown), the first shaped

portion 118 may be positioned away from the second shaped portion 120 to allow access to the battery as shown in Fig.9. The application of the outward force may be by hand.

- 5 Fig.10 shows a top view of a hearing aid 102 with a battery chamber housing locking mechanism 104 according to an embodiment.

10 By way of example, Fig.10 shows a behind-the-ear (BTE) hearing aid 102. The hearing aid 102 may include a hearing aid housing 106, a battery chamber housing locking mechanism 104, a programming contact 142 and a programming button 144 positioned on the hearing aid housing 106.

15 The battery chamber housing locking mechanism 104 may include a first battery chamber housing locking portion 112 disposed over the battery chamber housing (not shown) and a second battery chamber housing locking portion 114 pivotally coupled to the battery chamber housing and being arranged such that
20 it may overlap with the first battery chamber housing locking portion 112 to lock the battery chamber housing and prevent access to the battery (not shown).

The second battery chamber housing locking portion 114 may
25 include a length shorter than the first battery chamber housing locking portion 112 so as to form a depression 146 when the second battery chamber housing locking portion 114 overlaps with the first battery chamber housing locking portion 112 to allow opening of the second battery chamber
30 housing locking portion 114.

The programming contact 142 and programming button 144 may be positioned adjacent to the battery chamber housing locking mechanism 104. The programming contact 142 may allow the
35 manufacturer to program the hearing aid 102 according to the requirements of the hearing aid user. The programming button 144 may allow the hearing aid user to choose an appropriate

program according to the requirements of the hearing aid user.

5 The hearing aid housing 106 may include or may be made of plastic material, rubber material or any other suitable material which may be molded to the desired shape. The battery chamber housing locking mechanism 104 may include or may be of the same or different material from the hearing aid housing 106. The battery chamber housing locking mechanism
10 104 may include or may be made of plastic material, rubber material or any other suitable material which may be molded to the desired shape. The first battery chamber housing locking portion (not shown) may include or may be of the same or different material from the second battery chamber housing
15 locking portion 112. The first battery chamber housing locking portion may include or may be made of plastic material, rubber material or any other suitable material which may be molded to the desired shape. The second battery chamber housing locking portion 112 may include or may be
20 made of plastic material, rubber material or any other suitable material which may be molded to the desired shape.

While the invention has been particularly shown and described with reference to specific embodiments, it should be
25 understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the invention as defined by the appended claims. The scope of the invention is thus indicated by the appended claims and all changes which come within the
30 meaning and range of equivalency of the claims are therefore intended to be embraced.

CLAIMS

1. A hearing aid, comprising:

5 a hearing aid housing;

a battery chamber housing positioned within the hearing aid housing and configured to receive a battery; and

10 a battery chamber housing locking mechanism disposed over the battery chamber housing and configured to allow or prevent access to the battery; the battery chamber housing locking mechanism comprising :

15 a first battery chamber housing locking portion disposed over the battery chamber housing; and

a second battery chamber housing locking portion pivotally coupled to the battery chamber housing and
20 being arranged such that it overlaps with the first battery chamber housing locking portion to lock the battery chamber housing and prevent access to the battery.

25 2. The hearing aid of claim 1,

wherein the second battery chamber housing locking portion comprises a length shorter than the first battery chamber housing locking portion so as to form a depression when the
30 second battery chamber housing locking portion overlaps with the first battery chamber housing locking portion to allow opening of the second battery chamber housing locking portion.

35 3. The hearing aid of claim 1 or 2,

wherein the first battery chamber housing locking portion comprises a first shaped portion and a second shaped portion,

wherein the shape of the first shaped portion is complementary to the shape of the second shaped portion.

4. The hearing aid of claim 3,

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wherein the second battery chamber housing locking portion is pivotally coupled to the battery chamber housing via an axis of rotation and the first shaped portion is positioned away from the second shaped portion to allow access to the battery upon an application of an outward force on the battery chamber housing in a direction along the axis of rotation of the second battery chamber housing locking portion and the first shaped portion is positioned in contact with the second shaped portion to prevent access to the battery upon removal of the outward force.

15

5. The hearing aid of claim 4,

wherein the battery chamber housing locking mechanism further comprises an activator configured to provide the application of the outward force.

20

6. The hearing aid of claim 5,

wherein the activator is configured such that the first shaped portion is positioned away from the second shaped portion upon relaxation of the activator from the first shaped portion and the second shaped portion and the first shaped portion is positioned in contact with the second shaped portion upon tightening of the activator on the first shaped portion and the second shaped portion.

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7. The hearing aid of any one of claims 3 to 6,

wherein the first shaped portion comprises a first recess with a first inner threaded region.

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8. The hearing aid of claim 7,

wherein the first recess is a through hole or a blind hole.

9. The hearing aid of any one of claims 3 to 8,

wherein the second shaped portion comprises a second recess with a second inner threaded region.

10. The hearing aid of claim 9,

wherein the second recess is a through hole or a blind hole.

11. The hearing aid of claim 9 or 10,

wherein the battery chamber housing comprises an opening, the opening positioned such that the opening aligns with the first recess and the second recess along a common axis when the activator is inserted through the opening on the battery chamber housing into the first battery chamber housing locking portion.

12. The hearing aid of any one of claims 5 to 11,

wherein the activator is aligned parallel to the axis of rotation of the second battery chamber housing locking portion and is in contact with the first shaped portion and the second shaped portion.

13. The hearing aid of any one of claims 5 to 12,

wherein the activator comprises a screw with an enlarged head portion and a threaded shaft portion.

14. The hearing aid of claim 5,

wherein each of the first shaped portion and the second shaped portion comprises a recess configured to allow an insertion of the activator.

15. The hearing aid of any one of claims 1 to 14,
further comprising a programming contact and a programming
5 button positioned on the hearing aid housing.

16. The hearing aid of any one of claims 1 to 15,
wherein the hearing aid is a behind-the-ear hearing aid.

10 17. The hearing aid of any one of claims 1 to 16,
wherein the hearing aid housing comprises plastic material.

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FIG 1

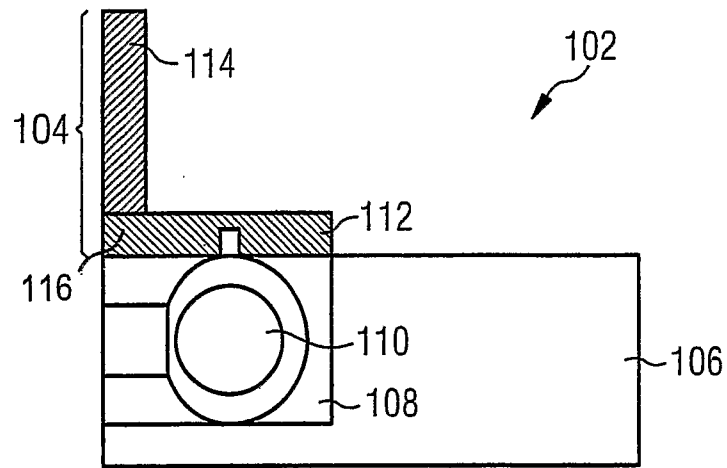


FIG 2

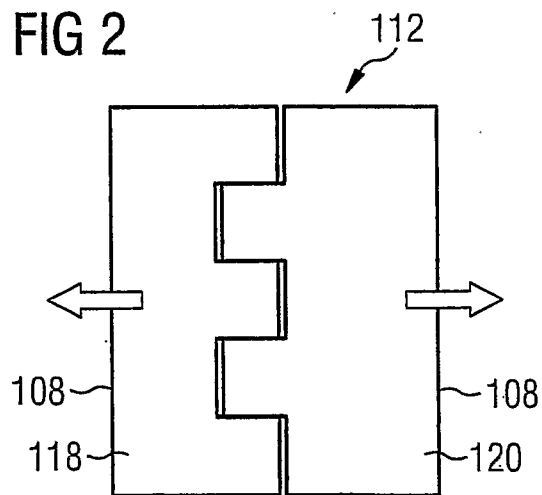
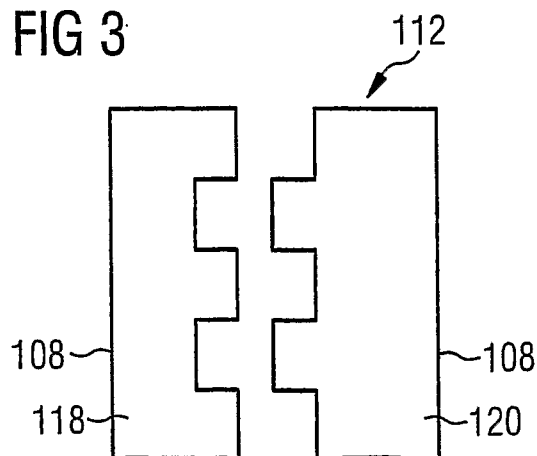


FIG 3



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FIG 4

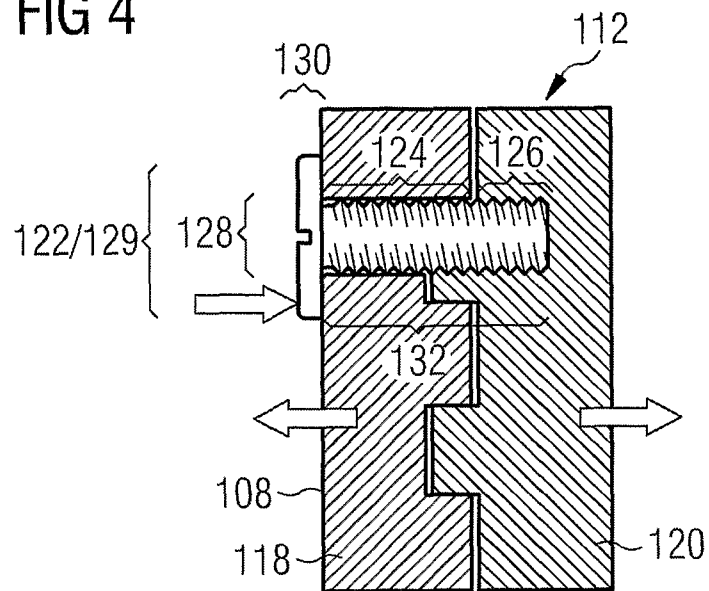
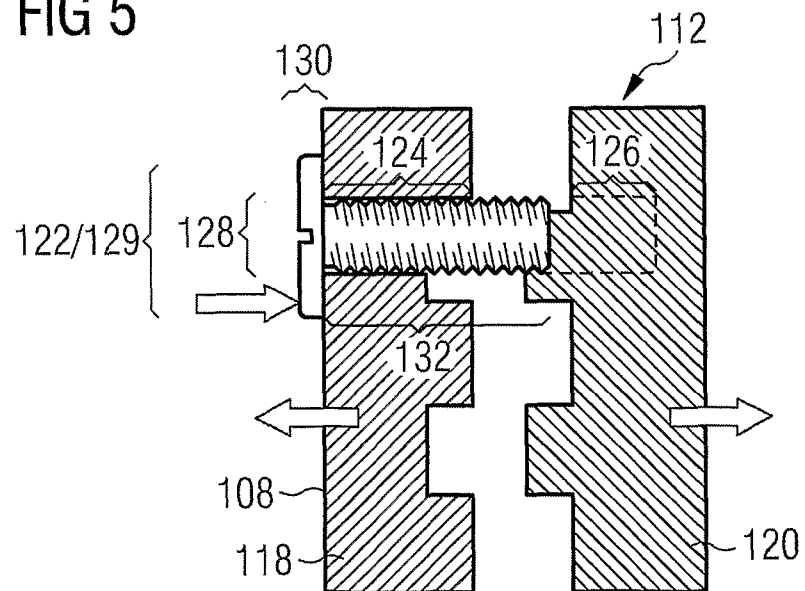


FIG 5



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FIG 6

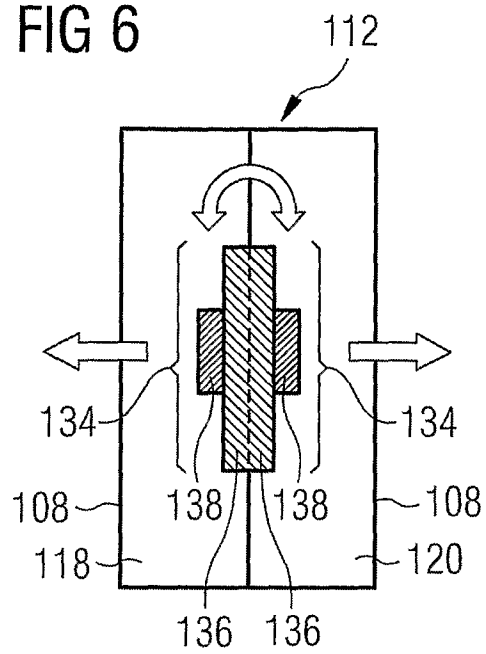


FIG 7

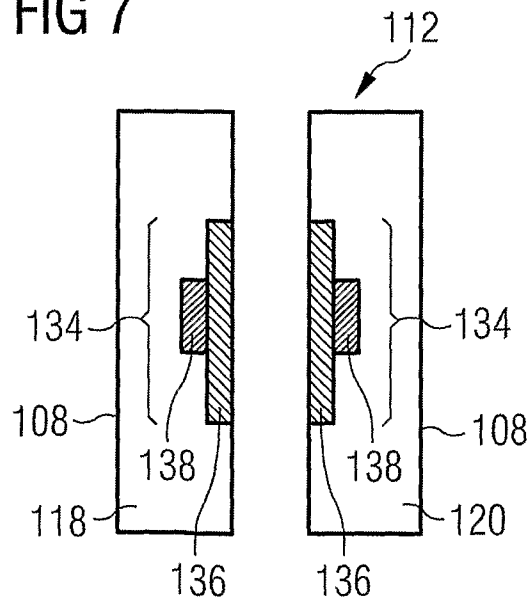


FIG 8

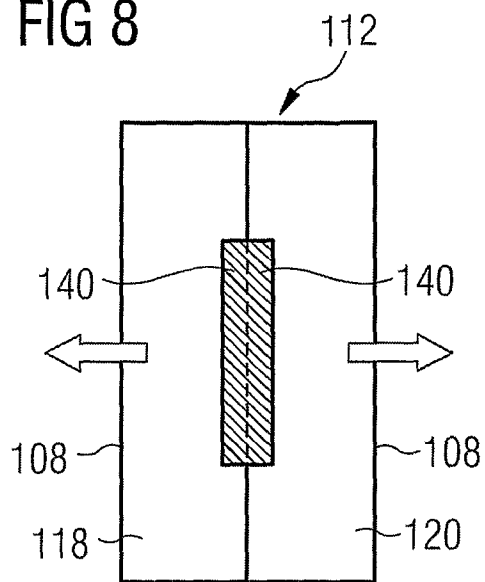


FIG 9

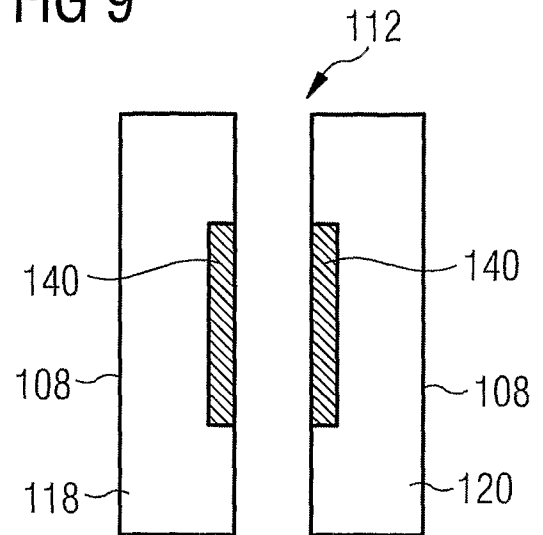
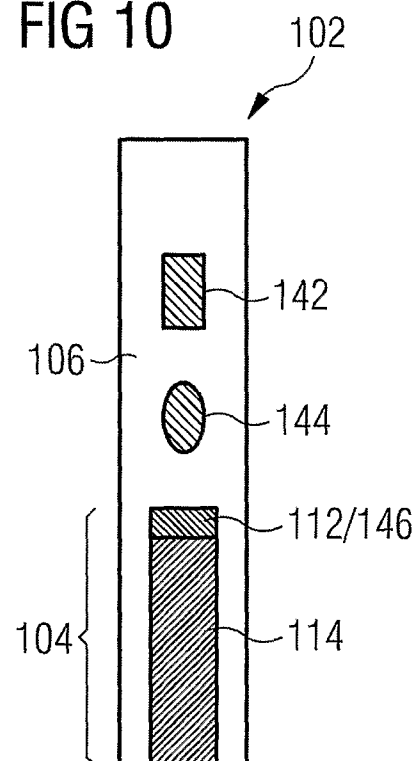


FIG 10



INTERNATIONAL SEARCH REPORT

International application No.
PCT/SG 2009/000231

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁸: **H04R 25/00** (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁸: H04R 25/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, EPODOC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4272591 A (Brander) 9 June 1981 (09.06.1981) <i>Abstract; Claim 1, Fig. 1</i>	1
	--	
A	DE 9312849 U (Danavox) 11 November 1993 (11.11.1993) <i>Abstract; Claim 1</i>	1
	--	
A	DE 19636800 A1 (Klostermeier) 12 March 1998 (12.03.1998) <i>Abstract; Claims 1-3</i>	1

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search
30 November 2009 (30.11.2009)Date of mailing of the international search report
15 December 2009 (15.12.2009)Name and mailing address of the ISA/ AT
Austrian Patent Office
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/SG 2009/000231

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
US	A	4272591		US	A	4272591	1981-06-09
DE	A	9312849		none			
DE	A	19636800		US	A	5790672	1998-08-04
				IT	A1	MI972045	1999-03-08
				DE	A1	19636800	1998-03-12