In the first aspect, there is provided a hearing aid comprising a behind-the-ear part adapted to be arranged behind ~~the~~ an ear of a hearing aid user, an in-the-ear part adapted to be arranged at least partially in ~~the~~ an ear canal of the ear, said in-the-ear part comprises a first end surface in which a sound opening for guiding ~~the~~ sound from the hearing aid in ~~the~~ a direction of ~~the~~ an ear drum of the ear is arranged, a second end surface is the surface extending furthest away in the opposite direction from said first end surface, and a connecting part connecting the behind-the-ear part and the in-the-ear part, wherein said first end surface is~~being~~ adapted to be aligned in the ear canal in a direction towards the ear drum when in use, and said second end surface is~~being~~ adapted to abut a part of the ear outside the ear canal when in use, wherein at least one side wall is arranged between said first end surface and said second end surface, and wherein said connecting part is attached to said side wall and has a part that extends from said side wall in an angle of between 20 – 70 degrees from an axis extending from a center of the first end surface to a center of the second end surface, wherein said second end surface of said in-the-ear part is adapted to abut the tragus part of the outer ear.

By this solution a very stable positioning of the in-the-ear part can be achieved, and lateral migration of the ear canal part during chewing or talking can be avoided. Furthermore, the use of an anchor can be avoided.

The above does not exclude that part of the connecting part may extend from part of the second end surface. A major achievement is that it will be possible to arrange the hearing aid in a very stable position avoiding the use of any anchor or any other fastening or securing means, except from the in-the-ear part, the connection part and the behind-the-ear part. Especially, any securing means supporting the in-the-ear part in the Concha can be avoided. Supporting of the in-the-ear part inside the ear canal, e.g. in the form of an open ear plug in a soft material, may however be preferred in many situations. This is also called an instant fit ear plug, and keeps the sound exit centered when the in-the-ear part is arranged in the ear canal

~~In an embodiment of the invention~~As mentioned in the first aspect, the second end surface of said in-the-ear part is adapted to abut the tragus part of the outer ear. Thereby the in-the-ear part is ~~hold~~ held in a very stable position

In an embodiment of the invention the hearing aid is adapted to be arranged at the ear without the use of an anchor. This will be more comfortable to the hearing aid user, as well as less visible, and facilitate cost savings. In a further embodiment the hearing aid is adapted to be arranged at the ear without any supporting elements in the Concha other than said second end abutting a part of the ear outside the ear canal and said connecting part.

In a further embodiment a receiver is arranged in said in-the-ear part and said connecting part comprises an electrical cable connecting the receiver with the behind-the-ear part. The receiver would typically be arranged in a receiver housing. This gives the further advantages of a RITE hearing aid.

In a further embodiment the connecting part is extending from the side wall in an angle between 30 – 60 degrees. This range has been found to be particularly beneficial for the

arrangement of the in-the-ear part. In a further embodiment the connecting part is extending from the side wall in an angle between 40 – 50 degrees.

In a further embodiment the receiver is provided with an extension part at said second end in order for this extension part to abut said part of the ear outside the ear canal when in use. This provides the possibility of fitting small receiver units to persons with a larger than average distance from the ear canal to the tragus part, and achieve the benefits of the abutment against the tragus part.

In an embodiment the connecting part is extending only from one or more side walls, but no part of the connecting part extend from the second end.

In a second aspect the invention is directed at a receiver unit for a hearing aid, where the receiver unit comprises a first end adapted to be aligned in ~~the ear~~a canal of an ear in a direction towards ~~the~~ an ear drum of the ear when in use, and a second end adapted to abutting a part of the ear outside the ear canal when in use, where at least one side wall is arranged between the first end and the second end, and the direction from a center of the first end to a center of the second end defines an axis, wherein an electrical cable is attached to the side wall and is extending from the side wall in an angle ~~to the axis~~of between 20 – 70 degrees to an axis extending from a center of the first end to a center of the second end, wherein said second end is adapted to abut a tragus part of the ear.

In an embodiment of this receiver the electrical cable extend from said side wall in an angle between 30 – 60 degrees.

In an embodiment the second end of the receiver part is adapted to abut the tragus part of the outer ear.

In a third aspect the invention is directed to a method for fitting a hearing aid according to a first aspect of the invention to ~~a person~~the hearing aid user, comprising the steps of arranging the behind-the-ear part behind ~~an~~ the ear of the ~~person~~hearing aid user,

shaping ~~a~~ the connecting part ~~connecting the behind-the-ear part to an in-the-ear part~~, such that the connecting part fits the outer ear of the ~~person~~hearing aid user and the part of the connecting part extends from the side wall in an angle of between 20 – 70 degrees from the axis extending from the center of the first end surface of the in-the-ear part to the center of the second end surface of the in-the-ear part, and arranging the in-the-ear part at the entrance of the ear canal such that the in-the-ear part abuts against the tragus part of the outer ear.

Embodiments of the invention will now be explained in further detail with reference to the figures.

Figure 1 illustrates a hearing aid with a behind-the-ear part, an in-the-ear part and a connection.

Figure 2 illustrates a receiver arranged at the ear canal entrance.

Figure 3 illustrates a receiver in a receiver housing and with an electrical cable.

Figure 4 illustrates a receiver provided with an extension piece arranged at the ear canal entrance.

Figure 5 illustrates a part of an in-the-canal part connected through a sound tube to a behind-the-ear part.

Figure 6 illustrates a horizontal cross sectional view through both ear canals, and showing the position of in-the-ear parts of hearing aids.

Figure 7 illustrates a hearing aid intended for the left ear of a person.

Figure 1 shows a hearing aid 1 with a behind-the-ear part 2 and an in-the-ear part 3. The in-the-ear part 3 is here illustrated as a receiver 5 provided with an instant fit ear plug 6. It could also have been a custom fit ear mold. Sound from the receiver will pass

through an opening 9 in the first end 7 of the in-the-ear part 3. The second end 8 of the in-the-ear part 3 is preferably smooth or substantially smooth without protrusions or indentations. Preferably there are also no sharp edges in the transition from the end 8 to the side walls 15, 16.

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Claims

1. A hearing aid comprising
   - a behind-the-ear part adapted to be arranged behind ~~the~~ an ear of a hearing aid user,
   - an in-the-ear part adapted to be arranged at least partially in ~~the~~ an ear canal of the ear, said in-the-ear part comprises a first end surface in which a sound opening for guiding ~~the~~ sound from the hearing aid in ~~the~~ a direction of ~~the~~ an ear drum of the ear is arranged, a second end surface is the surface extending furthest away in the opposite direction from said first end surface, and
   - a connecting part connecting the behind-the-ear part and the in-the-ear part,

   wherein said first end surface is ~~being~~ adapted to be aligned in the ear canal in a direction towards the ear drum when in use, and said second end surface is~~being~~ adapted to abut a part of the ear outside the ear canal when in use, wherein at least one side wall is arranged between said first end surface and said second end surface, and wherein said connecting part is attached to said side wall and has a part that extends from said side wall in an angle of between 20 – 70 degrees from an axis extending from a center of the first end surface to a center of the second end surface, wherein said second end surface of said in-the-ear part is adapted to abut the tragus part of the outer ear.

~~2. The hearing aid according to claim 1, wherein said second end of said in-the-ear part is adapted to abut the tragus part of the outer ear~~.

~~3.~~2. The hearing aid according to claim 1 ~~or 2~~, wherein said connecting part is extending from a side wall adapted to be arranged vertically or substantially vertical when said hearing aid is arranged on a person standing in an upright position.

~~4.~~3. The hearing aid according to any one of the preceding claims, wherein said connecting part is adapted to extend parallel or substantially parallel to a surface of the tragus part of the ear when said hearing aid is in use.

~~5.~~4. The hearing aid according to any one of the preceding claims, wherein said connecting part is adapted for when in use extending from said in-the-ear part in a direction away from or substantially away from the ear canal.

~~6.~~5. The hearing aid according to any one of the preceding claims, adapted to be arranged at the ear without the use of an anchor.

~~7.~~6. The hearing aid according to any one of the preceding claims, adapted to be arranged at the ear without any supporting elements in the Concha part of the ear other than said second end surface abutting a part of the ear outside the ear canal and said connecting part.

~~8.~~7. The hearing aid according to any one of the preceding claims, wherein a receiver is arranged in said in-the-ear part, and wherein said connecting part comprises an electrical wire connecting said receiver with said behind-the-ear part.

~~9.~~8. The hearing aid according to any one of the preceding claims, wherein said connecting part extends from said side wall in an angle between 30 – 60 degrees.

~~10.~~9. The hearing aid according to any one of the preceding claims, wherein said connecting part extends from said side wall in an angle between 40 – 50 degrees.

~~11.~~10. The hearing aid according to ~~any one of the preceding~~ claims 7 to 9, wherein said receiver is provided with an extension part at said second end surface, said extension part being adapted to abut said part of the ear outside the ear canal when in use.

~~12.~~11. A receiver unit for a hearing aid, said receiver unit comprising a first end adapted to be aligned in ~~the ear~~ a canal of an ear in a direction towards ~~the~~ an ear drum of the ear when in use, a second end adapted to abut a part of the ear outside the ear canal when in use, and at least one side wall arranged between said first end and said second end, wherein an electrical wire is attached to said side wall and extends

from said side wall in an angle of between 20 – 70 degrees to an axis extending from a center of the first end to a center of the second end, wherein said second end is adapted to abut a tragus part of the ear.

~~13.~~12. The receiver according to claim ~~9~~11, wherein said electrical wire extends from said side wall in an angle between 30 – 60 degrees.

~~14.~~13. The receiver according to claim ~~9~~ 11 or ~~10~~12, wherein said second end of said receiver part is adapted to abut the tragus part of the outer ear.

~~15.~~14. A method for fitting a hearing aid ~~according to~~of claim 1 to ~~a person~~the hearing aid user, comprising the steps of

- arranging the behind-the-ear part behind ~~an~~ the ear of said ~~person~~hearing aid user,
- shaping ~~a~~ the connecting part ~~connecting said behind-the-ear part to an in-the-ear part~~, such that said connecting part fits the outer ear of said ~~person~~hearing aid user and the part of the connecting part extends from the side wall in an angle of between 20 – 70 degrees from the axis extending from the center of the first end surface of the in-the-ear part to the center of the second end surface of the in-the-ear part, and
- arranging said in-the-ear part at the entrance of the ear canal such that said in-the-ear part abuts against the tragus part of the outer ear.