Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 24 November 2020

Case Number: T 0135/17 - 3.5.03

Application Number: 11168755.4

Publication Number: 2533550

IPC: H04R25/00

Language of the proceedings: EN

Title of invention:
A hearing device for diminishing loudness of tinnitus

Patent Proprietor:
Oticon A/S

Opponent:
Sivantos Pte. Ltd.

Headword:
Tinnitus alleviation/OTICON

Relevant legal provisions:
EPC Art. 53(c), 54(3)
RPBA 2020 Art. 13(2)

Keyword:

Novelty - Art. 54(3) EPC - main and first auxiliary request (no) - second auxiliary request (yes, after amendment)
Inventive step - no attacks invoked by appellant-opponent
Admittance - fresh ground for opposition under Art. 53(c) EPC - (no): no approval of proprietor
Admittance - auxiliary request filed during oral proceedings - (yes): exceptional circumstances and no fresh case

Decisions cited:

G 0010/91, G 0001/95, G 0001/04, T 0786/11, T 1286/14

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0135/17 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 24 November 2020

Appellant II: (Patent Proprietor)	Oticon A/S Kongebakken 9 2765 Smørum (DK)
Representative:	Cohausz & Florack Patent- & Rechtsanwälte Partnerschaftsgesellschaft mbB Bleichstraße 14 40211 Düsseldorf (DE)
Appellant I: (Opponent)	Sivantos Pte. Ltd. 18 Tai Seng Street No. 08-08 18 Tai Seng Singapore 539775 (SG)
Representative:	FDST Patentanwälte Nordostpark 16 90411 Nürnberg (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 29 November 2016 concerning maintenance of the European Patent No. 2533550 in amended form.**

Composition of the Board:

Chair	K. Bengi-Akyürek
Members:	K. Peirs
	C. Almberg

Summary of Facts and Submissions

I. The present appeals of the opponent and of the proprietor are against the interlocutory decision of the opposition division to maintain the patent in amended form on the basis of the proprietor's auxiliary request.

II. The opposition division exercised their discretion under Article 114(2) EPC not to admit into the proceedings the late-filed ground for opposition under Article 100(a) EPC in conjunction with Article 53(c) EPC, because it would, *prima facie*, not prejudice the maintenance of the patent as granted. Moreover, the opposition division held that the main request underlying the decision under appeal was not allowable for lack of novelty under Article 54(3) EPC of claim 1 as granted over the following document:

D5 WO 2011/127930 A1.

III. Oral proceedings before the board were held on 24 November 2020. The parties' final substantive requests were as follows:

- Appellant I (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

- Appellant II (proprietor) requested that the decision under appeal be set aside and, as a **main request**, that the opposition be rejected or, in the alternative, that the patent be maintained in amended form according to a **first auxiliary request**, filed with the reply to appellant I's

statement of grounds of appeal, or according to a **second auxiliary request**, filed during the oral proceedings before the board, or according to one of **third to fifth auxiliary requests**, filed as second to fourth auxiliary requests with the reply to appellant I's statement of grounds of appeal, respectively.

At the end of the oral proceedings, the board's decision was announced.

IV. Claim 1 of the **main request** (i.e. claim 1 as granted) reads as follows:

"A listening device (100) for a hearing impaired person being subjected to a tinnitus at a tinnitus frequency range, the listening device (100) comprising

- an input transducer configured to provide an electric input signal (118) comprising audio,
- a detector (120) coupled to the input transducer (110) and configured to determine whether the electric input signal (118) is a broadband signal or not and to provide a detection signal (128) in response and
- a controllable filter (130) for filtering the electric input signal (118) that is coupled to the detector (120) and the input transducer (110) and configured to output a filtered electric input signal (138) such that a component of the electric input signal (118) in the tinnitus frequency range is attenuated, if the detection signal (128) indicates that the electric input signal (118) is a broadband signal, and to output an unfiltered electric input signal (138') such that a component of the electric input signal (118) in the tinnitus frequency range is not attenuated, if the detection signal (128) indicates

that the electric input signal (118) is not a broadband signal."

V. Claim 12 of the **first auxiliary request** reads:

"A method of operating a listening device for a hearing impaired person being subjected to a tinnitus at a tinnitus frequency range, the method comprising steps of:

- receiving (210) an electric input signal comprising audio,

- determining (220) whether the electric input signal is a broadband signal or not and providing a detection signal in response,

- forwarding (230) the electric input signal to a controllable filter and outputting a filtered electric input signal such that a component of the electric input signal in the tinnitus frequency range is attenuated, if the detection signal indicates that the electric input signal is a broadband signal, or outputting an unfiltered electric input signal such that a component of the electric input signal in the tinnitus frequency range is not attenuated, if the detection signal indicates that the electric input signal is not a broadband signal, and

- activating or deactivating the controllable filter in dependence of the detection signal and a timer signal."

VI. Claim 1 of the **second auxiliary request** comprises all the features of claim 1 of the main request and adds at the end:

"- an activator coupled to the controllable filter and to the detector, which is configured to activate and deactivate the controllable filter in dependence of

the detection signal, and

- a programmable timer configured to provide a timer signal to the activator, wherein the activator is configured to activate and deactivate the controllable filter in dependence of the detection signal and the timer signal."

VII. Claim 12 of the **second auxiliary request** reads (the amendments with respect to claim 12 of the first auxiliary request underlined by the board):

"A method of operating a listening device for a hearing impaired person being subjected to a tinnitus at a tinnitus frequency range, the method comprising steps of:

- receiving (210) an electric input signal comprising audio,

- by a detector (120) of the listening device (100), determining (220) whether the electric input signal is a broadband signal or not and providing a detection signal in response,

- forwarding (230) the electric input signal to a controllable filter and outputting a filtered electric input signal such that a component of the electric input signal in the tinnitus frequency range is attenuated, if the detection signal indicates that the electric input signal is a broadband signal, or outputting an unfiltered electric input signal such that a component of the electric input signal in the tinnitus frequency range is not attenuated, if the detection signal indicates that the electric input signal is not a broadband signal, and

- by an activator of the listening device coupled to the controllable filter and to the detector, activating or deactivating the controllable filter in dependence of the detection signal and a timer signal,

the timer signal being provided to the activator by a programmable timer of the listening device."

VIII. Amended paragraph [0029] of the patent's description according to the **second auxiliary request** consists of one sentence, namely

"According to a second aspect of the present invention, the above identified technical object is achieved by a method of operating a listening device according to claim 12."

Reasons for the Decision

1. The technical background of the patent

The present invention mainly concerns a listening device for a hearing impaired person who suffers from tinnitus in a particular tinnitus frequency range. The listening device comprises a detector to determine whether or not an electric input signal provided by an input transducer of the listening device is a broadband signal. It further comprises a controllable filter for filtering the electric input signal. If the detector classifies the electric input signal as a broadband signal, the controllable filter is activated such that a component of the electric input signal in the tinnitus frequency range is attenuated. Otherwise, the controllable filter is not active and outputs the electric input signal in an unfiltered fashion. The controllable filter can be implemented as a notch filter. Its selective activation allows to alleviate tinnitus without affecting speech intelligibility.

2. Admittance - fresh ground under Article 53(c) EPC

2.1 The ground for opposing the granted patent based on Article 100(a) in conjunction with Article 53(c) EPC was raised after the expiry of the opposition period under Article 99(1) EPC. Therefore, this ground was late-filed and the opposition division had discretion under Article 114(2) EPC to disregard it. They decided not to admit it into the opposition proceedings because it lacked *prima facie* relevance. However, appellant I invoked that ground again on appeal and requested its admittance.

2.2 Given that such a ground was neither invoked in the notice of opposition nor introduced into the opposition proceedings by the opposition division (on the basis of the criterion of "*prima facie* relevance"), it constitutes a "fresh ground" within the meaning of G 1/95 and G 10/91 (see e.g. T 1286/14, Reasons, point 1.2), and hence is only admissible with the prior consent of the proprietor (cf. G 10/91, Headnote 3). This consent was not given.

2.3 Furthermore, it is apparent from the file that the opposition division did examine *prima facie* relevance of the new ground, in line with G 10/91, Reasons, point 16, before not admitting it (cf. decision under appeal, Reasons, point 1.2). Also, the right to be heard on this issue was respected (cf. minutes of the first-instance oral proceedings). The fact that this ground was relied on in a similar case, as invoked by appellant I, does not alter that conclusion.

2.4 As to the substance (*prima facie* relevance) of this late-filed ground, the board notes in passing that in the present case each step of the independent method

claims of all the claim requests on file is performed exclusively by the components of the claimed listening device *per se* in an automated way, and does not require any involvement of a medical practitioner on the living human body (see e.g. G 1/04, Reasons, point 6.2.1, third sentence).

2.5 In view of the above, the board decided not to admit the fresh ground under Article 100(a) in conjunction with Article 53(c) EPC into the appeal proceedings.

3. Main request: claim 1 - novelty (Article 54(3) EPC)

Claim 1 of the **main request**, i.e. claim 1 as granted, includes the following limiting features (as labelled by the board):

a) a listening device for a hearing impaired person being subjected to a tinnitus at a tinnitus frequency range, the listening device comprising
b) an input transducer configured to provide an electric input signal comprising audio;
c) a detector coupled to the input transducer and configured to determine whether the electric input signal is a broadband signal or not and to provide a detection signal in response;
d) a controllable filter for filtering the electric input signal that is coupled to the detector and the input transducer and configured to output a filtered electric input signal such that a component of the electric input signal in the tinnitus frequency range is attenuated, if the detection signal indicates that the electric input signal is a broadband signal, and to output an unfiltered electric input signal such that a component of the electric input signal in the

tinnitus frequency range is not attenuated, if the detection signal indicates that the electric input signal is not a broadband signal.

D5 anticipates all the features of present claim 1 for the following reasons:

3.1 Document D5 discloses, in view of page 19, lines 13 to 33, page 20, lines 30 to 34 together with page 21, lines 8 to 10 and Figure 8 of that document, a hearing aid with a "tinnitus alleviation programme", i.e. **feature a)**.

3.2 This hearing aid comprises, as apparent from D5 on page 20, line 30 to page 21, line 3, an audio input, denoted in Figure 8 with reference numeral "83", that provides an audio signal, i.e. **feature b)**.

3.3 The hearing aid of D5 (see e.g. page 21, lines 21 to 24) comprises a classifier, shown in Figure 8 with reference numeral "89", which is coupled to audio input 83 and which performs speech *detection*. Moreover, as apparent from claim 3 of D5, this classifier is also able to *detect* whether music is provided from the audio input. Classifier 89 therefore acts as a detector and provides, accordingly, a "detection signal" as claimed. As apparent from Figure 8 and from lines 11 to 20 of page 21 of D5, this detection signal is provided to switch control 84.

3.4 During the oral proceedings before the board, it was discussed whether or not the "music" of D5 can be seen as a "broadband signal" as required by **feature c)**.

3.4.1 While appellant II highlighted the importance of a threshold being implied by the expression "broadband

signal or not" of feature c), the parties agreed during the oral proceedings that a skilled reader would construe the term "broadband signal" as "an electric signal that has a broad range of frequency components".

In the written proceedings, appellant II drew the attention to paragraph [0012] of the patent in suit, where the term "broadband signal" is defined more specifically, and used this definition to construct several examples of "music" on the basis of which D5 and claim 1 would lead to opposite outcomes in terms of switching the controllable filter on or off. Therefrom, appellant II concluded that D5 and claim 1 related to *different* configurations.

3.4.2 This line of argument bears similarities with the case of T 786/11 (Reasons, points 3.1.4 and 3.1.6), where a specific implementation was disclosed in the prior art that falls within the broad ambit of the claim and where it was found to be entirely irrelevant for the assessment of novelty whether a specific embodiment of a prior-art document provides the same "result" as the solution claimed for each and every condition or scenario devisable, in particular for a scenario which is even not mentioned in the application or patent itself. For the present case, the more specific definition on which the argument of appellant II was based is, for a skilled reader, not apparent from claim 1. This applies in particular to the requirement that the signal must have "a bandwidth larger than one third octave, e.g. larger than one octave, relative to a centre frequency f_t of the tinnitus frequency range", which is stated in paragraph [0012] of the patent in suit as a mere example ("e.g.").

3.4.3 By contrast, appellant I convincingly argued that the present case does not relate to different configurations but that the terms "music" and "speech" in D5 rather concern *specific* implementations of a "broadband" and a "non-broadband" signal within the context of features c) and d). This is because, as has been brought forward repeatedly during the opposition and appeal proceedings, a skilled reader would, based on their common general knowledge, readily associate "music" with a "broadband signal" and "speech" with a "narrowband signal". In other words, the skilled reader of document D5 would be clearly aware that, for example, a signal carrying *music* falls within the term "broadband signal" (covering a range of typically 20 to 20.000 Hz), while a signal carrying *human voice or speech* does not fall within this term, since it is commonly classified as a "narrowband signal" (covering a range of typically 300 to 3400 Hz). For the discrimination between "music" and "speech" in D5, a threshold between the "broadband" and "non-broadband" regions, as highlighted by appellant II, must be inherently present in the classifier's programming.

3.4.4 Given that it is generally accepted that a *specific* disclosure falls within the ambit of a *generic* feature in a claim, D5 does indeed anticipate **feature c)**.

3.5 Furthermore, as to **feature d)**, Figure 8 of D5 discloses a controllable filter in the form of switch 86 and band-stop filter 87. This controllable filter is coupled to classifier 89 via switch control 84 and to audio input 83. As explained on page 2, lines 18 to 24 and page 21, lines 11 to 24 of D5, switch control 84 switches band-stop filter 87 into the hearing-aid signal path when classifier 89 detects "music" and switches it out from the signal path when classifier 89

detects "speech". In line with the reasoning of point 3.3 above, the board thus concludes that D5 also anticipates **feature d)**.

3.6 As a result, claim 1 as granted does not comply with Article 54(3) EPC.

4. First auxiliary request: claim 12 - novelty

4.1 Independent claim 12 of the **first auxiliary request** comprises method steps that relate to a one-to-one correspondence with features a) to d). Furthermore, it comprises the general step of "activating or deactivating the controllable filter in dependence of the detection signal and a timer signal".

4.2 It would be immediately apparent to the skilled reader that the method steps corresponding to features a) to d) are disclosed in D5 for the same reasons as set out in points 3.1 to 3.5 above. In addition, the skilled reader would likewise immediately understand that the controllable filter of the hearing aid of D5 is activated or deactivated by switch control 84 in dependence of the detection signal from classifier 89.

4.3 Hence, the only remaining point is whether D5 discloses that activating or deactivating the controllable filter does not solely occur in dependence of the detection signal but also in dependence of a "timer signal".

4.4 While such a timer signal implies, as argued by appellant II during the oral proceedings, a timer, claim 12 does not specify, contrary to claim 1, that this timer is part of the listening device and that it is connected to an activator which is also part of the listening device. The timer signal of claim 12 could be

provided by an external clock, in dependence of which the user switches the hearing aid on or off manually. The skilled reader would in this respect immediately think of applying the standard procedure, as argued by appellant I during the oral proceedings, of the user switching the hearing aid on during the morning of a day when using the hearing aid of D5.

4.5 As a result, claim 12 of the first auxiliary request is likewise not new over D5 (Article 54(3) EPC).

5. Second auxiliary request - admittance (Article 13(2) RPBA 2020)

5.1 The filing of the second auxiliary request during the oral proceedings before the board did not present a fresh case and can be regarded as an appropriate reaction to a novelty objection raised during the oral proceedings against independent method claim 12 of the first auxiliary request. Moreover, it does not increase the technical and procedural complexity of the case.

5.2 Appellant I did not object to the admittance of the second auxiliary request into the proceedings.

5.3 Consequently, exceptional circumstances within the meaning of Article 13(2) RPBA 2020 are present and the board has admitted the second auxiliary request into these appeal proceedings.

6. Second auxiliary request: claims 1 and 12 - novelty

6.1 Claim 1 of the **second auxiliary request** differs from claim 1 of the main request essentially in the addition of the following features (board's emphasis):

e) an activator coupled to the controllable filter and to the detector, which is configured to activate and deactivate the controllable filter in dependence of the detection signal;

f) a programmable timer configured to provide a timer signal to the activator, wherein the activator is configured to activate and deactivate the controllable filter in dependence of the detection signal and the timer signal.

6.2 While **feature e)** is disclosed in Figure 8 of D5 by virtue of switch control 84, there is no disclosure in D5 of a "programmable timer" as per **feature f)**.

6.3 At the oral proceedings before the board, appellant I referred, with respect to feature f), to the following passage on page 19, lines 1 to 6 of D5 (underlining added to reflect appellant I's emphasis):

> "... by evaluating the logged data monitoring i.e. how the tinnitus develops, how, when and for how long the filter is used and so forth, and thereby to alter or adjust the alleviation in an appropriate manner. Furthermore, logging data enables the possibility of giving feedback regarding the alleviation to the user, an audiologist or another relevant person".

Appellant I argued that the word "[f]urthermore" implied a distinction between an *automatic* adjustment of the tinnitus alleviation on the one hand and giving feedback to the audiologist on the other hand. They also emphasised in this respect that, according to lines 17 to 19 of page 21 of D5, digital signal processor (DSP) 88 could control switch control 84 and

that, in accordance with page 23, lines 16 and 17 of D5, the data-logging means could be part of the DSP. Appellant I further noted that D5 was biased to provide automation of a clinical procedure and that any automatic adjustment was simply part of document D5's general notion.

6.4 The board is not convinced that a skilled reader would, at the time when D5 was published, directly and unambiguously understand from the passages cited by appellant I that DSP 88 is able to perform, starting from the logged data, the necessary analysis of how tinnitus develops and to determine *automatically* any necessary adjustments of the alleviation. In particular, it is noted that line 1 of page 19 of D5 is silent about which entity performs the evaluation. The fact that the "audiologist" is mentioned explicitly in line 5 of page 19 of D5 does not necessarily mean that this person is excluded from the evaluation mentioned in line 1 of page 19. DSP 88 may indeed control switch control 84 and incorporate the data logging means, but this does not mean that the DSP is able to interpret the logged data at a level that is required for adjusting an alleviation programme.

Therefore, appellant II correctly argued that there is no teaching in D5 for the automatic adjustment brought forward by appellant I. Moreover, even if this were the case, a programmable timer would not be immediately necessary, given that, as put forward by appellant II, the DSP would simply be programmed to perform the analysis and adapt the tinnitus alleviation accordingly using nothing more than the standard real-time clock present in any DSP. The skilled reader would, however, not readily equate such a clock with a "programmable

timer" as mandated by feature f).

6.5 In view of the above, claim 1 of the second auxiliary requests is new over D5 (Article 54(3) EPC). As the method steps of independent claim 12 correspond to the features of claim 1, the above conclusion holds also for claim 12.

7. Second auxiliary request: claim 12 - Article 123(2) EPC

7.1 Appellant I argued that all the method steps in claim 14 as granted were carried out by the listening device. By explicitly specifying in claim 12 of the second auxiliary request that some method steps were carried out by a particular component of the listening device, it thus appeared that the "other steps" were no longer performed by that listening device, leading to an unallowable intermediate generalisation.

7.2 However, claim 12 of the second auxiliary request is based on a combination of original claim 14 with original claims 5 and 7. Despite the fact that these last two claims refer back to original claim 1 and not to original claim 14, it would be immediately apparent to a skilled reader, based on the direct correspondence between original claims 1 and 14, that these original claims 5 and 7 are readily combinable with original claim 14. Moreover, the "other steps" referred to by appellant I have been disclosed in original claim 14. Hence, from the explicit reference in some steps to a particular component of the listening device carrying out these steps, the skilled reader would not necessarily understand that the "other steps" are no longer carried out by the listening device.

8. Second auxiliary request - support of the claims by the description (Article 84 EPC)

8.1 Amended paragraph [0029] of the patent's description filed during the oral proceedings before the board brings the description in alignment with independent claim 12 of the second auxiliary request.

8.2 Appellant I did not raise any objections in this respect. The parties also agreed that no further amendments of the description are required to fulfil the requirements of Article 84 EPC.

8.3 The board holds that the description underlying the second auxiliary request complies with Article 84 EPC.

9. In the absence of any further objections raised during the appeal proceedings, in particular as regards inventive step (Article 56 EPC), the second auxiliary request is considered allowable under the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division to maintain the patent in amended form in the following version:

Claims:

- 1 to 13 of the second auxiliary request as filed during the oral proceedings before the board;

Description, paragraphs:

- [0001] to [0018], [0020], [0022] to [0028], [0030] to [0039], [0041] to [0050] of the patent specification
- [0019], [0021] and [0040] as filed during the oral proceedings before the opposition division on 6 October 2016
- [0029] as filed during the oral proceedings before the board;

Drawings, sheets:

- 1/2, 2/2 of the patent specification.

The Registrar: The Chair:

B. Brückner K. Bengi-Akyürek

Decision electronically authenticated