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**Datasheet for the decision
of 9 December 2011**

Case Number: T 0122/10 - 3.2.06
Application Number: 03022159.2
Publication Number: 1425989
IPC: A46B 9/04, A46D 3/04
Language of the proceedings: EN

Title of invention:

Toothbrush having a needle-shaped bristle and manufacturing method thereof

Patentee:

Kwon, Young-jun
Kwon, Sung-Wook

Headword:

-

Relevant legal provisions:

EPC Art. 100(c), 123(2)
RPBA Art. 13(1), 12(4)

Keyword:

"Main Request - no disclosure of the method in the originally filed application"
"Auxiliary request 1 - no disclosure of the claimed sequence of method steps in combination"
"Amended auxiliary requests 2 to 4 to be considered under Article 13(1) RPBA"

Decisions cited:

G 0001/03

Catchword:

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Case Number: T 0122/10 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 9 December 2011

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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 20 November 2009
revoking European patent No. 1425989 pursuant
to Article 101(3)(b) EPC.

Composition of the Board:

Chairman: M. Harrison
Members: G. de Crignis
R. Menapace

Summary of Facts and Submissions

- I. European patent No. 1 425 989 was revoked by the opposition division with its decision announced during the oral proceedings on 22 October 2009 and posted on 20 November 2009.
- II. The main request was held not allowable (Article 123(2) EPC) and the subject-matter of claim 1 of the first auxiliary request was found to lack an inventive step in view of
- D1 US-A-6 090 488 and
D17 JP 6-50532 U.
- III. On 19 January 2010 the appellant (patent proprietors 1 and 2) filed an appeal against this decision and paid the appeal fee on the same date. On 29 March 2010 a statement setting out the grounds of appeal was received at the EPO together with a main request and four auxiliary requests.
- IV. Each of the respondents (opponents I, II and III) requested dismissal of the appeal.
- V. In a communication sent on 18 October 2011 as an annex to a summons to oral proceedings, the Board addressed in particular the issue of Article 123(2) EPC in respect of the main and first auxiliary requests and commented on the relevance of D1 with regard to both novelty and inventive step of the subject matter of the claims of all requests.

- VI. With letter of 9 November 2011, the appellant filed amended first to fourth auxiliary requests.
- VII. Oral proceedings were held on 9 December 2011. The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request as filed together with the statement of the grounds of appeal or on the basis of the auxiliary request 1 as filed on 9 November 2011 or one of auxiliary requests 2 to 4 all as filed together with the grounds of appeal on 29 March 2010.

Each of the respondents requested that the appeal be dismissed.

- VIII. Claim 1 according to the main request reads:
"A toothbrush comprising:
needle-shaped bristles of polyester resin, which are 0.1 to 0.2 mm thick before tapering, 13 to 18 mm long, tapered 4 to 8 mm only on one end with a tapered tip thickness of 0.01 to 0.08 mm, and planted to be 7 to 13 mm high in the toothbrush."

Claim 8 of the main request reads:

"A method of manufacturing a toothbrush having needle-shaped bristle tapered only on one end, comprising the steps of:
inserting non-tapered portions of the bristles into through holes of a head insert;
each of the bristles being 0.1 to 0.2 mm thick before tapering, 13 to 18 mm long, and tapered 4 to 8 mm only on one end with a tapered tip thickness of 0.01 to 0.08 mm;

thermally fusing the non-tapered portions of the bristles protruding from the bottom of the head insert, thereby fixing the bristles to the head insert; and attaching the bottom of the head insert to the head of the toothbrush."

IX. Claim 8 of the first auxiliary request reads:

"A method of manufacturing a toothbrush having needle-shaped bristles of polyester resin tapered only on one end and planted to have a height of 7 mm to 13 mm, comprising the steps of:

tapering one end of the bristles by immersion in a strong acid or alkaline solution after cutting the bristles;

inserting non-tapered portions of the bristles into through holes of a head insert;

each of the bristles being 0.1 to 0.2 mm thick before tapering, 13 to 18 mm long, and tapered 4 to 8 mm only on one end with a tapered tip thickness of 0.01 to 0.08 mm;

thermally fusing the non-tapered portions of the bristles protruding from the bottom of the head insert, thereby fixing the bristles to the head insert; and attaching the bottom of the head insert to the head of the toothbrush."

X. Claim 1 according to the second auxiliary request is identical to claim 1 according to the main request.

XI. Claim 1 according to the third auxiliary request includes additionally the feature:

"wherein the needle-shaped bristles differ in length by 1 to 10 mm.", added at the end of the claim.

XII. Claim 1 according to the fourth auxiliary request includes, compared to claim 1 of the main request, the following feature added at the end of the claim:
"wherein the needle-shaped bristles are inserted in a head insert and thermally fused to be fixed to the head insert."

XIII. The appellant argued essentially as follows:

In the main request claim 8 had been amended to specify that the bristles were "13 to 18 mm long". Such disclosure was present in paragraph [0015] of the application as originally filed (see the A-publication), and this immediately followed paragraphs [0012] to [0014] which specified two objects of the invention as being to provide a method, whereby paragraph [0015] made specific reference to these "objects". Although there was also a reference in paragraph [0015] to the planting height of the bristles in the toothbrush and to the material of the bristles, such features could be omitted since the skilled person would recognise that such information was not necessary for performing the method.

Concerning claim 8 of the first auxiliary request, the order of the steps was more clearly defined, the planting height was specified and the material of the bristles was limited to polyester resin. The reference to the immersion of the bristles in a strong acid or alkaline solution was disclosed in paragraph [0022] and could be clearly identified by the skilled person as a method step which would be carried out when tapering polyester bristles. The order of the steps concerning first cutting the bristles and subsequently tapering

them was disclosed when considering paragraph [0019] in combination with the tapering method disclosed in paragraph [0022].

Auxiliary requests 2 to 4 should be admitted into the proceedings. Claim 1 of each of these requests had been amended in order to address objections to the term "non-folded" in claim 1 of the corresponding requests filed on 9 November 2011, which objections were first discussed during the oral proceedings. Also, it was explained (by the appellants) at the start of proceedings that if the term "non-folded" was problematic, the term could be removed in all these requests. Moreover, such requests without the term "non-folded" in claim 1 had already been filed together with the grounds of appeal, and the respondents had therefore already prepared arguments with regard to such requests and were not to be taken by surprise. Additionally, Article 12(1) of the Rules of Procedure of the Boards of Appeal (RPBA) stated that the appeal proceedings shall be based on the statement of grounds of appeal and Article 12(4) RPBA reiterated that everything presented by the parties under Article 12(1) and (2) RPBA shall be taken into account by the Board. Therefore, it was evident that a right existed to return to these requests.

XIV. The respondents argued essentially as follows:

Concerning the main request, the disclosure in paragraph [0015] referred to the bristles of the toothbrush and their characteristic parameters. The passage did not refer to method steps and their sequence. Moreover, the disclosure in paragraph [0015]

concerned a specific material for the bristles (polyester resin) and a specific numerical range for the planting height. There was no disclosure combining the four numerical ranges with a thermofusing step as now claimed.

Concerning the first auxiliary request, the disclosure in paragraph [0022] indicated that processing of bristles made of a material other than polyester resin was difficult when immersed in a strong acid or alkaline solution. But this did not imply that a corresponding step should be performed in the method of the invention on the claimed polyester resin bristles. Paragraph [0021] indicated for example that other means of forming bristles were known.

Concerning the second to fourth auxiliary requests in which the term "non-folded" had been deleted subsequent to the discussion of allowability in view of G 1/03 and under Article 123(2) EPC, such requests should not be admitted. The deletion of this term changed the complete case in a direction which could not have been expected as it represented a broadening of the claim, whereas according to consistent case law of the Boards of Appeal, auxiliary requests should be converging. Moreover, such subject-matter had already been held non-inventive by the opposition division and accordingly was *prima facie* not patentable. Indeed the appellants' reasoning for insertion of the term "non-folded" had been to delimit the subject-matter away from D1.

Reasons for the Decision

1. *Main Request - Claim 8 - Article 100(c) EPC*
- 1.1 Claim 8 of the main request has been amended compared to claim 8 as originally filed - which is identical to claim 8 as granted - by adding the following features: "each of the bristles being 0.1 to 0.2 mm thick before tapering, 13 to 18 mm long, and tapered 4 to 8 mm only on one end with a tapered tip thickness of 0.01 to 0.08 mm;".
- 1.2 Literal support for this wording can be found in the description as originally filed on page 3, lines 21 to 25 (see the A-publication paragraph [0015]) which passage belongs to the "summary of the invention".
- 1.3 The disclosure in paragraph [0015] however additionally specifies that the bristles are formed of polyester resin and that the bristles are planted to be 7 to 13 mm high in the toothbrush.
- 1.4 There is no other disclosure in the application as filed for the combination of ranges of the thickness, tapering length and tapered tip thickness of the bristles. Thus, the application as originally filed does not provide any disclosure of a method, which refers merely generally to needle-shaped bristles and to an unspecified planting height. Instead, the application as filed discloses ranges for the above specified characteristics only for needle-shaped bristles formed of polyester resin and planted to be 7 to 13 mm high in the toothbrush. As a consequence, the characteristics used to define the bristles in the

method of claim 8 represent an intermediate generalisation of the features disclosed in the application as filed for which there is no basis. Consequently the subject-matter of claim 8 extends beyond the content of the application as originally filed (Article 100(c) EPC). Accordingly, it is not necessary to take into account the further objections made by the respondents in regard to Article 100(c) EPC, since at least for this reason the main request is already not allowable.

2. *Auxiliary Request 1 - claim 8 - Article 123(2) EPC*

2.1 Claim 8 of the first auxiliary request has been amended compared to claim 8 of the main request by additionally specifying the needle-shaped bristles as being formed of "polyester resin" and that they are "planted to have a height of 7 to 13 mm". Further, a method step has been added which reads "tapering one end of the bristles by immersion in a strong acid or alkaline solution after cutting the bristles;".

2.2 A literal disclosure of the features concerning the material and the planting height of the bristles can be found as set out above in the description as originally filed on page 3, lines 21 to 25 (see A- and B-publications, paragraph [0015]).

2.3 A disclosure of the method step concerning the tapering of one end thereof after cutting the bristles cannot be found.

2.4 The appellant's reference to page 6, lines 8 to 13 of the originally filed application (corresponding to

paragraph [0022] of the A- and B-publications) concerns the following wording:

"It is preferable to form the bristles of polyester resin, specifically PET (Polyethylene Terephthalate) or PBT (Polybutylene Terephthalate) resin. It is because other materials such as Nylon, acryl, and PP (Polypropylene) resin are inferior in terms of water resistance, durability, and strength, and bristles formed of such a material are entangled when they are immersed in a strong acid or alkaline solution, for tapering. Thus processing is difficult."

This passage, thus, concerns the manufacturing of bristles formed of materials other than polyesters. Moreover, it is not related specifically to the claimed method step concerning tapering the bristles after cutting the bristles.

2.5 The appellant's further reference to page 5, lines 22 to 26 of the originally filed application (corresponding to paragraph [0019] of the A- and B-publications) concerns the Figure 5 embodiment and specifically refers to a one-end tapering compared to traditional dual-end tapered bristles. However, no link is present to the tapering method which is now claimed.

2.6 As a consequence, the definition of the series of method steps in claim 8 has no basis in the application as filed since there is neither an explicit nor an implicit basis for such method steps. Consequently the requirements of Article 123(2) EPC are not met.

Accordingly, the first auxiliary request is not allowable.

3. *Non-admittance of auxiliary requests 2 to 4*

3.1 These requests were filed during the oral proceedings, hence at the latest possible stage in the proceedings. According to Article 13(1) of the Rules of Procedure of the Boards of Appeal (RPBA), it lies within the discretion of the Board to admit any amendment to a party's case after it has filed its grounds of appeal or reply. This Article also states that "the discretion shall be exercised in view of *inter alia* the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy."

3.2 Claim 1 of all these requests has been amended compared to claim 1 of the corresponding requests 2 to 4 filed with letter of 9 November 2011 by deleting the term "non-folded" which was discussed as not being allowable in the course of the oral proceedings in view of its nature as a disclaimer with reference to the decision of the Enlarged Board of Appeal G 1/03.

3.3 Accordingly, the now claimed subject-matter of claim 1 of the second to fourth auxiliary requests is identical to the subject-matter of claim 1 of the corresponding requests 2 to 4 filed with the grounds of appeal. Also, the subject-matter of claim 1 of the second auxiliary request is identical to the subject-matter of claim 1 of the first auxiliary request found not to involve an inventive step by the opposition division.

3.4 The communication of the Board sent prior to the oral proceedings contained a statement in item 2 in relation to a possible interpretation of claim 1 whereby two bristles could be formed from a single folded filament, whereby novelty of the subject-matter of claim 1 would appear to be in doubt having regard to Example 2 in D1. Hence, at least in response to the Board's communication, any doubts concerning such an interpretation could have been presented, and the appellant could have maintained a corresponding set of product claims. However, whilst arguing that a bristle was entirely straight, the appellant chose only to file requests which excluded an interpretation of a bristle being one half of a folded filament via the insertion of the term "non-folded" into claim 1.

3.5 Due to the deletion of the term "non-folded", the subject-matter of claim 1 was broadened significantly with respect to claim 1 of the corresponding requests previously filed, thus raising issues which neither the Board nor the other parties could have been expected to deal with at that stage, even though such subject-matter corresponded to earlier withdrawn requests.

3.6 Thus, the framework of the appeal would have been altered completely if the new requests were admitted; the Board as well as the parties would be faced with arguments as to why this claimed subject-matter would then be novel and why the Board's preliminary view on lack of novelty was incorrect. Moreover, the Board's communication was not the only indication that the subject-matter of claim 1 lacked novelty. Indeed such objection had already been raised by the respondents. Accordingly, the deletion of the feature "non-folded"

would have the effect of changing the appellant's case in a direction which, objectively, could not have been expected, in particular because all of the earlier auxiliary requests 2 to 4 had been amended in this way without reservation. Requests corresponding to the current auxiliary request 2 to 4 could clearly have been maintained as filed with the grounds of appeal, had this been the appellant's intention. Likewise, the appellant chose not to supply any arguments in support of novelty or inventive step of the claims, so it could not be deduced that the appellant had any intention of trying to defend claim 1 of the withdrawn requests in any form, in view of the Board's opinion. The submission of auxiliary requests 2 to 4 without the expression "non-folded" only during the oral proceedings was thus not consistent with the requirements set out in Article 13(1) RPBA, in particular with respect to the need for procedural economy.

- 3.7 Although reference was made to Article 12(4) RPBA which sets out that the Board shall take into account everything presented with the grounds of appeal, and thus in this case auxiliary requests 2 to 4 as presented during oral proceedings, such provision can only be understood to apply if such requests have not previously been withdrawn in the course of the proceedings as was the case here. Once the appellant chose to withdraw its earlier filed requests, the provisions of Article 13(1) RPBA apply since an amendment to the party's case has been made. An interpretation of Article 12(4) in the sense that a party must always have the option to return at any time to previously withdrawn requests would run counter to

the clear intention of Article 13(1) RPBA in terms at least of procedural economy and also the established case law of the Boards of Appeal according to which, when exercising its discretion under Article 13(1) RPBA (and thus considering amendments to a party's case after filing its grounds of appeal or reply thereto), such requests should be convergent.

The purpose of Article 12(4) RPBA is to ensure that the parties' right to be heard on requests it has filed is guaranteed. However, and although not a procedural requirement, in the present proceedings the Board issued a communication giving an opinion on the subject-matter of the requests filed with the grounds of appeal, resulting in the appellant's choice to withdraw same.

3.8 Hence, the late-filed second to fourth auxiliary requests did not fulfil the requirements of procedural economy, taking also into account that no comments were made by the appellant to the (negative) preliminary opinion on novelty and/or inventive step of such requests in the communication issued by the Board.

3.9 The fact that the appellant, at the start of the oral proceedings before the Board, offered to remove the expression "non-folded" from its auxiliary requests 2 to 4, does not alter the foregoing, since already at that stage of proceedings an entirely different legal situation existed for the parties, so that a return to previously filed requests raising issues which were seemingly no longer of importance would not have been anticipated.

Thus the Board exercised its discretion under Article 13(1) RPBA not to admit these requests.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

M. Patin

M. Harrison