

Internal distribution code:

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

**Datasheet for the decision
of 29 March 2021**

Case Number: T 0266/16 - 3.2.07

Application Number: 09790146.6

Publication Number: 2323819

IPC: B26B21/56, B26B21/60

Language of the proceedings: EN

Title of invention:

RAZOR BLADES

Patent Proprietor:

The Gillette Company LLC

Opponent:

Edgewell Personal Care Brands, LLC

Headword:

Relevant legal provisions:

EPC Art. 56, 83, 123(2), 123(3), 113(1), 116(1)

RPBA Art. 12(4)

RPBA 2020 Art. 12(8), 25(2)

Keyword:

Late-filed facts - admitted (no)

Inventive step - (yes)

Sufficiency of disclosure - (yes)

Amendments - allowable (yes) - broadening of claim (no) -
added subject-matter (no)

Decisions cited:

G 0009/91, T 2619/11, T 1705/07, T 1067/08

Catchword:



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 0266/16 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 29 March 2021

Appellant: The Gillette Company LLC
(Patent Proprietor) One Gillette Park
Boston, MA 02127 (US)

Representative: Hoyng Rokh Monegier B.V.
Rembrandt Tower, 30st Floor
Amstelplein 1
1096 HA Amsterdam (NL)

Respondent: Edgewell Personal Care Brands, LLC
(Opponent) 1350 Timberlake Manor Parkway
Chesterfield, MO 63017 (US)

Representative: dompatent von Kreisler Selting Werner -
Partnerschaft von Patent- und Rechtsanwälten mbB
Deichmannhaus am Dom
Bahnhofsvorplatz 1
50667 Köln (DE)

Decision under appeal: **Interlocutory decision of the Opposition**
Division of the European Patent Office posted on
2 December 2015 concerning maintenance of the
European Patent No. 2323819 in amended form.

Composition of the Board:

Chairman K. Poalas
Members: G. Patton
R. Cramer

Summary of Facts and Submissions

I. Both the opponent and the patent proprietor lodged an appeal in the prescribed form and within the prescribed period against the decision of the opposition division maintaining European patent No. 2 323 819 in amended form.

II. The opposition filed was directed against the patent in its entirety and based on Article 100(a) EPC (lack of novelty and inventive step) and Article 100(b) EPC (insufficiency of disclosure).

The opposition division held that the then main request and the then first auxiliary request contravened Article 123(2) EPC and that the second auxiliary request fulfilled the requirements of the EPC. Thus, the patent was maintained on the basis of the then second auxiliary request.

III. In a communication pursuant to Article 15(1) RPBA 2020 dated 20 February 2020 issued by the Board in preparation of the oral proceedings eventually scheduled for 31 March 2021 the Board provided its preliminary, non-binding opinion that the impugned decision would likely be set aside and that the patent would likely be maintained in accordance with the set of claims according to the patent proprietor's main request, corresponding to the then main request underlying the impugned decision.

The opponent withdrew their appeal with letter dated 16 February 2021. They announced with letter dated 18 March 2021 that they would not attend the oral proceedings scheduled for 31 March 2021 and withdrew

their auxiliary request for oral proceedings with letter dated 24 March 2021.

The scheduled oral proceedings were then cancelled.

- IV. The patent proprietor (hereafter "appellant") requested with the statement setting out the grounds of appeal dated 12 April 2016 and with letter dated 28 August 2016

that the impugned decision be set aside and that the patent be maintained in amended form on the basis of one of the sets of claims filed as main request and as first to fifth auxiliary requests with the statement setting out the grounds of appeal dated 12 April 2016, and as sixth to twelfth auxiliary requests with the letter dated 28 August 2016.

As an auxiliary request to the main request oral proceedings were requested.

- V. The opponent (hereafter "respondent") requested with the statement setting out the grounds of appeal dated 12 April 2016 and with letters dated 15 August 2016 and 16 November 2016

that the impugned decision be set aside and that European Patent No. 2 323 819 be revoked. As the opponent's appeal was subsequently withdrawn, the Board assumes that their final request is that the appeal of the patent proprietor be dismissed.

- VI. The following documents of the opposition proceedings are relevant to the present decision:

D10: EP-B-0 363 648;
D11: EP-B-0 255 834;
D12: EP-B-0 126 128;
D13: GB-A-2 258 469; and
D14: US-A-5 275 672.

VII. Claim 1 of the **main request** reads as follows:

"A razor blade comprising:
a substrate (11) with a cutting edge being defined by a sharpened tip (12), characterized by said substrate having a thickness (21) of between 1.3 and 1.6 micrometers measured at a distance (20) of four micrometers from the blade tip, a thickness (23) of between 2.2 and 2.7 micrometers measured at a distance (22) of eight micrometers from the blade tip, a thickness (25) of between 3.8 and 4.9 micrometers measured at a distance (24) of sixteen micrometers from the blade tip, a ratio of thickness (21) measured at four micrometers to the thickness (23) measured at eight micrometers of at least 0.55 and a ratio of thickness (23) measured at four micrometers to the thickness (25) measured at sixteen micrometers of at least 0.30, wherein the substrate is a martensitic stainless steel having a carbide density of at least 200 carbides or more per 100 square micrometers as determined by optical microscopic cross-section."

VIII. The appellant essentially argued as follows (the arguments are discussed in more detail in the Reasons for the Decision below):

The first embodiment illustrated in figure 1 and described in the original description from page 2, line 17, to page 3, line 8, shows that a substrate having the geometry of claim 1 and a tip radius of 125 to 300

angstroms of claim 2 is preferably composed of martensitic stainless steel with small, finely distributed carbides. Original claim 2 expresses the preferred carbide density claimed now in claim 1 and also exemplified on page 3, lines 4 to 8 of the original description. Thus, a support for the combination of features of claims 1 and 2 of the main request is provided in the application as originally filed.

The impugned decision has not cited any feature of said first embodiment of the original description which would have been left behind from the combination of claims 1 and 2. There is therefore no unallowable intermediate generalisation.

Claims 3 to 11 of the main request concern the additional layers to be applied to the substrate. A basis is provided as general statements in the original description, page 1, line 31 to page 2, line 6. These statements make clear that the additional layers are to be applied to substrates described on page 1, lines 21-29 and in accordance with said first embodiment shown in original figure 1 and described in the original description at page 2, line 17 to page 3, line 8.

As a consequence, the combination of claims 1 and 3 to 11 has a basis in the application as originally filed.

The impugned decision does not deal with the objections of insufficiency of disclosure based on Article 100(b) and 83 EPC since the opposition division understood that this legal issue was no longer maintained. Furthermore, the objection raised by the respondent in appeal proceedings with respect to this legal issue has

not been formulated as such during the opposition proceedings. For these reasons, the objection should not be admitted into the appeal proceedings. In addition, said objection is unsubstantiated.

Example 1 "after treatment" of D10 is a failed or comparative example and, hence, cannot be regarded as a realistic starting point to objectively assess inventive step of claim 1.

In the event that example 1 of D10 would be arbitrarily selected as the closest prior art, there would be no indication that when combined with the teaching of D13 the final geometry will be as disclosed in said example such that the skilled person would not arrive at the claimed subject-matter in an obvious manner.

Neither D12 nor D14 discloses the claimed microstructure with respect to the range of carbide density. Thus, the skilled person would not arrive at the claimed subject-matter in an obvious manner when combining the teaching of either D12 or D14 with example 1 "after treatment" of D10.

D11 and D12 are silent on the microstructure of the stainless steel. As a consequence, even if the skilled person would think of starting from D11 or D12 as the closest prior art, they would not arrive at the claimed subject-matter in an obvious manner.

IX. The respondent essentially argued as follows (the arguments are discussed in more detail in the Reasons for the Decision below):

Claim 1 of of the main request consists of a combination of original claims 1 and 2. Claims 2 to 11

of the main request are based on original claims 3 to 12, respectively.

None of the original claims 3 to 12 are disclosed as depending on original claim 2, but just on original independent claim 1, be it directly or via their dependency on some other previous dependent claims.

Therefore, in view of the dependencies of claims 2 to 11 with claim 1, the main request violates Article 123(2) EPC.

Since claim 1 of the main request encompasses new embodiments not originally disclosed or foreseen as a result of the new dependencies among the claims, the requirements of Article 123(3) EPC are not fulfilled.

At no time during opposition proceedings a declaration to no longer maintain the originally submitted objections concerning Article 100(b) EPC was made. During the oral proceedings before the opposition division the respondent merely stated in this respect that they would not make any further arguments than those already submitted in writing.

In case the appellant would argue that D10 would give the skilled person no motivation to manufacture a razor blade with the geometry and the substrate material as both defined in claim 1, then the question has to be answered how the razor blade according to claim 1 can be manufactured at all in relation to Articles 100(b) and 83 EPC.

The subject-matter of claim 1 of the main request does not involve an inventive step on the basis of the following objections:

- starting from D10 as the closest prior art in view of the teaching of one of D12, D13 or D14; and
- in view of either D11 alone or D12 alone.

Claim 1 differs from example 1 of D10 taken as the closest prior art only in the claimed carbide density. In view of the technical effect associated to this microstructure the problem to be solved can be seen as to modify the razor blade of D10 such as to enable the making of a thinner, stronger edge. The claimed solution to the problem is known from D13. Hence, the skilled person would apply the teaching of D13 to the razor blade of D10 and arrive at the claimed subject-matter in an obvious manner.

Even if D14 discloses a steel having a carbide density falling outside the claimed range, the skilled person would try steels with a different range of carbide density. Such try and error investigations are part of the daily work of the skilled worker so that also documents D10 and D14 in combination make evident that the subject matter of claim 1 does not involve an inventive step.

D12 discloses a martensitic stainless steel as claimed, so does document D10. The disclosed thickness range in document D10 encompasses the claimed range and razor blades with the entire thickness range as disclosed in document D12 can be formed by ion bombardment like in D10. Therefore, documents D10 and D12 preclude inventive step of the subject-matter of claim 1.

Both documents D11 and D12 deal with razor blade cutting edge geometries defined by geometric parameter ranges within which the claimed ranges of thickness falls. Hence, in view of the overall disclosure of both

documents D11 and D12, the claimed ranges of thickness cannot involve an inventive step, at least due to the reason that no surprising results can be achieved with the claimed ranges of thickness. The same is true with respect to the claimed microstructure of the substrate. The characteristics of martensitic stainless steels and in particular those of the claimed one belong to the skilled person's common general knowledge. Therefore, the subject matter of claim 1 does not involve an inventive step.

Reasons for the Decision

1. *Applicable law*

The revised Rules of Procedure of the Boards of Appeal (RPBA 2020) entered into force on 1 January 2020. Subject to the transitional provisions (Article 25 RPBA 2020), the revised version also applies to appeals pending on the date of the entry into force.

In the present case the statements of grounds of appeal were filed before 1 January 2020 and the replies thereto were filed in due time. Thus, Article 12(4) to (6) RPBA 2020 does not apply, and instead Article 12(4) RPBA 2007 applies to both the grounds of appeal and the replies (Article 25(2) RPBA 2020).

2. *Procedural matters*

The case is ready for decision which is taken in written proceedings without holding oral proceedings in accordance with Article 12(8) RPBA 2020 and with Articles 113 and 116 EPC.

The principle of the right to be heard pursuant to Article 113(1) EPC is observed since that provision only affords the opportunity to be heard and the party's submissions are fully taken into account.

The appellant's request for oral proceedings pursuant to Article 116(1) EPC is auxiliary to its request that the decision under appeal be set aside and that a patent be granted on the basis of the main request filed with the statement setting out the grounds of appeal dated 12 April 2016.

Thus, since the appellant's aforementioned main request is followed by the Board, the auxiliary request for oral proceedings remains procedurally inactive.

3. *Main request*

The reasons below correspond to the Board's preliminary opinion provided to the parties, point 6. It has not been subsequently commented on or contested by the parties.

3.1 The main request corresponds to the main request underlying the impugned decision, point 2 of the reasons.

3.2 The opposition division held that the main request does not fulfil the requirements of Article 123(2) EPC in view of dependent claims 2 to 11 referring back to claim 1, as the application as originally filed would not disclose the resulting combination(s) of features.

3.3 Article 123(2) EPC

3.3.1 The Board follows the appellant in that the first embodiment of original figure 1 is described in the original description from page 2, line 17, to page 3, line 8, and discloses the features resulting from the combination of claims 1 and 2 of the main request. Therefore, this passage of the original description provides the support for claims 1 and 2.

As argued by the appellant, the impugned decision, page 5, fourth to sixth paragraphs, referring to this particular first embodiment of the original description, is silent on "the other related features of the particular embodiment" which would have been left behind from the combination of claims 1 and 2. As a matter of fact the said passage of the original description merely recites the features specified in claims 1 and 2.

As a consequence, the combination of claims 1 and 2 is supported by the application as originally filed.

3.3.2 Claims 3 to 11 of the main request concern the additional layers joined to the substrate, i.e. the interlayer (claims 3-4), the coating layer (claims 5-6), the overcoat layer (claims 7-8) and the outer layer (claims 9-11) which are described in original figure 2 and in the second embodiment of the original description, page 3, line 9 to page 4, line 21. This embodiment relates to a finished razor blade (10) including substrate (11) and said layers. The skilled person reading the original description as a whole would immediately and directly realise that said second embodiment applies to the substrate (11) previously described, said substrate being described as

facilitating the production of the appropriate sharpened edge as mentioned in the first embodiment, page 3, lines 1-8.

As a consequence, the combination of claims 1 and 3 to 11 is supported by the application as originally filed.

3.3.3 The Board concurs with the impugned decision, that the original description, page 1, line 21, to page 2, line 6, does not mention the microstructure of the substrate so that it cannot provide a support for the combination now included in the claims of the main request of the substrate profile and microstructure (claim 1 originating from original claims 1 and 2) and additional layers (claims 3 to 11 originating from original claims 4 to 12). However, the impugned decision, last paragraph of page 5, as well the respondent's arguments in this respect are disproportionally directed to the structure of the claims as filed to the detriment of what the skilled person would derive from the application as originally filed taken as a whole as discussed above, see hereto T 2619/11, not published in EPO OJ.

3.3.4 As a result, the main request fulfils the requirements of Article 123(2) EPC.

3.4 Article 123(3) EPC

Claim 1 of the main request is a combination of claims 1 and 2 of the patent as granted, restricting thereby the claimed scope. Furthermore, the set of claims of the main request meets the requirements of Article 123(2) EPC so that, contrary to the finding of the impugned decision, page 4, second paragraph, and to the respondent's view, no new embodiment not originally

disclosed or foreseen is covered. Consequently, the requirements of Article 123(3) EPC are fulfilled.

3.5 Articles 100(b), 83 EPC

3.5.1 The respondent has raised with their statement setting out the grounds of appeal an objection of insufficiency of disclosure against claim 1 of the second auxiliary request before the opposition division.

However, in view of both the minutes of the oral proceedings before the opposition division (point 1.1 and 6 thereof) and the decision under appeal (point 2.1 of the Reasons) it appears to the Board that the respondent chose to not pursue that objection in a manner to require a decision of the opposition division. The fact that the respondent at the beginning of the oral proceedings limited its request for revocation of the patent in suit on the ground for opposition under Article 100(a) EPC (lack of novelty and inventive step) can objectively only be understood that the opponent did not wish to have this issue further discussed at the oral proceedings and decided upon by the opposition division. Furthermore, according to point 6 of the minutes, the opponent raised no further objections after the chairman had announced that the subject-matter of claim 1 of the second auxiliary request satisfied the requirements of Article 56 EPC. The respondent did not request a correction of the minutes, so the Board assumes they are correct.

Hence, even if the ground for opposition under Article 100(b) EPC had not been formally withdrawn, returning to and reintroducing it now in appeal proceedings after having not relied upon it during the oral proceedings in opposition is contrary to the

proper distribution of functions between the departments of first instance and the Boards of Appeal and unacceptable for procedural economy generally (G 9/91, OJ EPO 1993, 408, point 6; T 1705/07, not published, point 8.4 of the reasons; T 1067/08, not published, points 7.1 to 7.2). Thus, the objection will not be taken into account pursuant to Article 12(4) RPBA 2007.

3.5.2 As a consequence, the appellant's request to remit the case to the opposition division if the objection pursuant to the insufficiency of disclosure were admitted is moot.

3.6 Article 56 EPC

In their written submissions, the respondent only raised objections of lack of inventive step against the subject-matter of claim 1 of the then second auxiliary request underlying the impugned decision and held to meet the requirements of the EPC by the opposition division.

Although formally the respondent did not raise any objections of lack of inventive step against the main request, the Board assumes in the following that these objections were meant to apply in the same way to claim 1 of the main request, as said claim 1 corresponds to that of the then second auxiliary request.

The respondent contests that the subject-matter of claim 1 of the main request involves an inventive step on the basis of the following objections:

- starting from D10 as closest prior art in view of the teaching of one of D12, D13 or D14; and
- in view of either D11 alone or D12 alone.

3.6.1 Starting from D10

Closest prior art - Example 1 "after treatment"

Contrary to the appellant's view, example 1 "after treatment" of D10 is not a failed or comparative example but rather corresponds to the main teaching of D10, i.e. falls within its scope.

As a matter of fact, D10 does not aim exclusively at producing razor blades according to the equation $w=ad^n$ as disclosed on page 2, lines 4 to 22 and described in document GB 2 130 955 mentioned therein. This equation is indeed not specified in claim 1 of D10 but only as a preferred embodiment in dependent claim 2. Furthermore, page 2, lines 23-25 of D10 only mentions that the parameter "a" should be more than 0.7, i.e. not "must be" as alleged by the appellant.

In addition, as pointed out by the respondent, D10, page 3, line 24 explicitly discloses that also other cross-sectional shapes are foreseen, see impugned decision, point 4.1.4 of the reasons.

Thus, even though example 1 "after treatment" does not comply with the teaching on page 2, lines 4-35, it cannot be regarded as a deviant example of D10 and, hence, can be seen as a suitable closest prior art with respect to claim 1 of the main request.

Distinguishing feature(s)

D10 is silent on the microstructure of the stainless steel used for the substrate, see for instance claim 3. Hence, the only feature of claim 1 which is not

disclosed by example 1 "after treatment" of D10 is that the substrate is a martensitic stainless steel having a carbide density of at least 200 carbides or more per 100 square micrometers as determined by optical microscopic cross-section.

Technical effect(s) - problem to be solved

As argued by the respondent, in view of the technical effects associated with the distinguishing feature, the problem to be solved can be seen as to modify the razor blade of D10 such as to enable the making of a thinner, stronger edge, see paragraph 15 of the contested patent.

Inventiveness of the claimed solution - Combination with the teaching of D13

D13 discloses the use of a martensitic stainless steel with the claimed carbide density for making razor blades, see for instance page 6, lines 4-11 and claim 1.

In view of the advantages disclosed with such microstructure such as for instance a high hardness, see page 5, lines 9-13 of D10, the skilled person would immediately think of trying such a stainless steel in example 1 "after treatment" of D10.

The Board concurs with the impugned decision, point 4.1.8 of the reasons, that, by doing so and applying the parameters of example 1 "after treatment" of D10, there is no indication that the final geometry will be as disclosed in said example. Furthermore, contrary to the respondent's view, there is no indication either that the skilled reader would consider to be limited by

the shapes of the razor blades of the examples of D10, even though said blade geometries may be disclosed as advantageous.

In this respect, the reasons put forward above for the selection of the closest prior art also apply when combining with the teaching of other documents such as D13, see impugned decision, point 4.1.4 of the reasons. As a matter of fact, following the respondent's argument, the skilled person would realise that D10 is not limited to cutting edges following the formula of page 2, lines 14-25 but can also be used for making cutting edges of other cross-sectional shapes.

As a consequence, there is no reason why the skilled person would consider to obtain the blade razor geometry of example 1 "after treatment" or even the one according to said formula of page 2, lines 14-25 when implementing the microstructure of the substrate of D13, as long as they are satisfied with the result.

Consequently, the Board cannot find fault in the reasoning and conclusion of the impugned decision, points 4.1.4 to 4.1.11 of the reasons.

Inventiveness of the claimed solution - Combination with the teaching of either D12 or D14

With respect to D12, the Board cannot see any disclosure regarding the microstructure of the stainless steel used, in particular the carbide density.

With respect to D14, the Board cannot see any reason why the skilled person would disregard the explicit teaching in column 5, line 56 to column 6, line 4 of

D14 relating to the maximum carbide density of 150 particles per square microns falling below the claimed range (see impugned decision, point 4.1.12 of the reasons).

Hence, even when considering the combination of the teaching of either D12 or D14 with example 1 "after treatment" of D10, the skilled person would not arrive at the claimed subject-matter in an obvious manner since none of said documents discloses the claimed microstructure.

3.6.2 In view of D11 or D12 alone

D11 being silent on the microstructure of the stainless steel like D10, it appears to be further remote than D10 from the claimed subject-matter. The same applies to D12. As a consequence, even if the skilled person would think of starting from D11 or D12 as the closest prior art, the Board fails to see for which reasons they would consider the claimed solution with respect to (at least) the microstructure of the stainless steel such that they would arrive at the claimed subject-matter in an obvious manner (see impugned decision, point 4.1.13 of the reasons).

3.7 Description

The appellant filed with letters dated 25 February 2021 (page 2) and 23 March 2021 (page 3) an adapted description to the set of claims according to the main request, against which the Board has no objection.

4. *First to twelfth auxiliary requests*

In view of the above, there is no need to discuss the first to twelfth auxiliary requests in the present decision.

Order

For these reasons it is decided that:

1. The decision is set aside
2. The case is remitted to the opposition division with the order to maintain the patent as amended in the following version:

Description:

- page 2 filed with the letter of 25 February 2021
- page 3 filed with the letter dated 23 March 2021
- page 4 of the patent specification,

Claims:

- 1 to 11 according to the main request filed with the statement setting out the grounds of appeal dated 12 April 2016,

Drawings:

- Figures 1 and 2 of the patent specification.

The Registrar:

The Chairman:



G. Nachtigall

K. Poalas

Decision electronically authenticated