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**Datasheet for the decision
of 5 September 2013**

Case Number: T 1598/10 - 3.2.07

Application Number: 04743468.3

Publication Number: 1646481

IPC: B26B 21/22, B26B 21/40

Language of the proceedings: EN

Title of invention:
Safety Razors

Patent Proprietor:
The Gillette Company

Opponent:
Eveready Battery Company, Inc.

Headword:
-

Relevant legal provisions:
EPC Art. 54(1), 56, 83

Keyword:
"Main request: novelty (yes) - Extrapolation of relative measurements in a schematic drawing of the prior art not allowable if that is not the intention of the drawing"
"All requests: inventive step (no)"

Decisions cited:
T 0312/94, T 0748/91

Catchword:
-



Case Number: T 1598/10 - 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 5 September 2013

Appellant: Eveready Battery Company, Inc.
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted 4 June 2010
rejecting the opposition filed against European
patent No. 1646481 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman: H. Meinders
Members: G. Patton
I. Beckedorf

Summary of Facts and Submissions

- I. The appellant (opponent) lodged an appeal against the decision of the Opposition Division to reject the opposition against the European patent No. 1 646 481.

The opposition was filed against the patent as a whole and was based on Article 100(a) EPC (lack of novelty and lack of inventive step).

The Opposition Division held that these grounds did not prejudice the maintenance of the patent as granted.

- II. The respondent (patent proprietor) replied to the appeal and filed auxiliary requests 1 to 4 with a letter dated 22 February 2010, but faxed on 23 February 2011.

The Board provided the parties with its preliminary non-binding opinion annexed to the summons for oral proceedings that the subject-matter of independent claim 1 of the main request did not present an inventive step on the basis of D9 and the general knowledge of the skilled person and that it appeared doubtful that the additional features of claim 1 of auxiliary requests 1 and 2 could further distinguish the claimed subject-matter over D9.

In reaction the respondent filed a new auxiliary request 2 to replace the one on file, with the letter dated 23 July 2013.

III. Oral proceedings took place on 5 September 2013 during which the followings aspects, *inter alia*, were discussed:

- novelty of claim 1 of the patent as granted over document D9,
- inventive step of the subject-matter of claim 1 of the patent as granted as well as of claim 1 according to the new auxiliary request 2 in view of document D9 and the general knowledge and practice of the person skilled in the art,
- inventive step of the subject-matter of claim 1 according to auxiliary request 4 in view of document D9 combined with documents D1 and D2.

The appellant stated that it maintained its objection based on the ground of opposition according to Article 100(b) EPC but insofar relied solely on its written submissions.

The respondent stated that it withdrew its auxiliary requests 1 and 3 filed with the letter dated 22 February 2010, but faxed on 23 February 2011.

The present decision was announced at the end of the oral proceedings.

IV. The appellant requested that the decision under appeal be set aside and that the patent be revoked.

V. The respondent requested that the appeal be dismissed (main request) or, alternatively, that in setting aside

the decision under appeal the patent be maintained in amended form on the basis of one of the sets of claims filed as new auxiliary request 2 with letter dated 23 July 2013 and auxiliary request 4 with letter dated 22 February 2010, but faxed on 23 February 2011.

VI. Claim 1 of the main request (patent as granted) reads as follows:

"A safety razor blade unit comprising an upper face, a bottom face and front and rear faces, a plurality of cutting edges (10, 11, 12) positioned between first guard and cap surfaces (26, 29) at the upper face, and a further cutting edge (37) positioned between second guard and cap surfaces (33, 34) at the rear face, the distance (d1) between the first guard and cap surfaces, measured in a plane (t1) tangential thereto, being greater than (d2) that between the second guard and cap surfaces, characterized in that a passage (35) for through flow of rinsing water connects a gap between the further cutting edge (37) and the second guard surface (33) with an opening (38) at the bottom face."

Claim 1 of the new auxiliary request 2 reads as follows (in bold the amendments with respect to claim 1 of the main request; emphasis added by the Board):

"A safety razor blade unit comprising an upper face, a bottom face and front and rear faces, a plurality of cutting edges (10, 11, 12) positioned between first guard and cap surfaces (26, 29) at the upper face, and a further cutting edge (37) positioned between second guard and cap surfaces (33, 34) at the rear face, the distance (d1) between the first guard and cap surfaces,

measured in a plane (t1) tangential thereto, being greater than (d2) that between the second guard and cap surfaces, characterized in that a passage (35) for through flow of rinsing water connects a gap between the further cutting edge (37) and the second guard surface (33) with an opening (38) at the bottom face; **wherein the plane (t2) tangential to the second guard and cap surfaces (33, 34) is at an angle (θ) in the range 10° to 90° to the plane (t1) tangential to the first guard and cap surfaces (26, 29).**"

Claim 1 of the auxiliary request 4 reads as follows (in bold the amendments with respect to claim 1 of the main request; emphasis added by the Board):

A safety razor blade unit comprising an upper face, a bottom face and front and rear faces, a plurality of cutting edges (10,11, 12) positioned between first guard and cap surfaces (26,29) at the upper face, and a further cutting edge (37) positioned between second guard and cap surfaces (33, 34) at the rear face, the distance (d1) between the first guard and cap surfaces, measured in a plane (t1) tangential thereto, being greater than (d2) that between the second guard and cap surfaces, **wherein the blade unit is mounted or mountable on a supporting structure (40) for pivotal movement about an axis (A) extending longitudinally of the blade unit, and comprising a stop (44) for abutment with the supporting structure to limit pivotal movement of the blade unit at an end position, wherein the end position of pivotal movement is a rest position into which the blade unit is arranged to be biased by a spring structure, shaving forces exerted on the blade cutting edges (10,11, 12) at the upper face during a**

shaving stroke acting to pivot the blade unit away from the end position, and shaving forces exerted on the further cutting edge (37) during a shaving stroke acting to pivot the blade unit to engage the stop (44) in abutment with the supporting structure (40), characterized in that a passage (35) for through flow of rinsing water connects a gap between the further cutting edge (37) and the second guard surface (33) with an opening (38) at the bottom face.

VII. The documents of the opposition and appeal proceedings which are of relevance for the present decision are the following:

D1: US-A-5 794 354

D2: US-B-6 276 061

D9: US-A-4 901 437

VIII. The appellant argued essentially as follows

New ground of opposition (Article 100(b) EPC)

The skilled person cannot perform the invention since the first and second guard and cap surfaces, the planes t_1 and t_2 and the distances d_1 and d_2 cannot be determined, due in particular to inconsistencies with the disclosure in the contested patent (figure 2) and to the guard and cap surfaces depending on parameters only applicable in use. In addition, the "gap between the further cutting edge and the second guard surface" specified in the characterising part of claim 1, is also not defined.

Main request

D9 discloses all the features of claim 1, including the positioning of the cutting edges at the rear and upper faces and the distances d_1 and d_2 , the latter being measured from figure 5. Hence, novelty is not given.

In case " d_1 is larger than d_2 " would be a distinguishing feature over the closest prior art D9, the skilled person would immediately think of reducing this dimension of the razor blade unit to dedicate it to shaving areas of more difficult access, i.e. a smaller distance d_2 , so that he would arrive at the claimed solution in an obvious manner.

New auxiliary request 2

The additional feature with respect to claim 1 of the main request that the plane t_2 is at an angle θ in the range of 10° to 90° to the plane t_1 is disclosed in D9, figure 5. Therefore, the objections raised against claim 1 of the main request still hold against claim 1 of new auxiliary request 2.

Should the additional feature be considered as a further distinguishing feature over D9, still no inventive step could be acknowledged since there is no information in the contested patent that the claimed limit of 90° is critical.

Auxiliary request 4

D9 is the closest prior art for claim 1 of auxiliary request 4. It does not disclose the additional feature with respect to claim 1 of the main request that:

the blade unit is mounted or mountable on a supporting structure for pivotal movement about an axis extending longitudinally of the blade unit, and comprising a stop for abutment with the supporting structure to limit pivotal movement of the blade unit at an end position, wherein the end position of pivotal movement is a rest position into which the blade unit is arranged to be biased by a spring structure, shaving forces exerted on the blade cutting edges at the upper face during a shaving stroke acting to pivot the blade unit away from the end position, and shaving forces exerted on the further cutting edge during a shaving stroke acting to pivot the blade unit to engage the stop in abutment with the supporting structure.

The problem to be solved associated with this distinguishing feature is to further improve the safe shaving of different skin areas with the safety razor blade unit of D9 by providing, on the one hand, flexible cutting and, on the other hand, more effective cutting. The skilled person faced with the said problem would consider D2 from which he will unambiguously and immediately derive the distinguishing feature. Inventive step can therefore not be acknowledged.

IX. The respondent argued essentially as follows

New ground of opposition (Article 100(b) EPC)

This is a new ground and, hence, it should not be admitted into the proceedings since consent is not given. Furthermore, in fact it relates to lack of clarity/lack of consistency, which is not a ground of opposition. In any case, claim 1 is clear in itself and what is shown in figure 2 of the patent with respect to t1, d1 and d2 falls outside claim 1.

Main request

D9 does not disclose a cuboid razor blade unit with upper, bottom, front and rear faces as claimed. In addition, the distances d1 and d2 cannot be derived from the disclosure of D9, in particular cannot be measured from the schematic drawing of figure 5. Novelty should therefore be recognized.

D9 deals with a different problem than that of the contested patent and the blades in the razor unit of D9 are for different purposes. The skilled person would therefore, firstly, not consider D9 as the closest prior art and, secondly, would not be led to the problem of shaving difficultly accessible areas, so a *fortiori* not be led to the claimed solution. Consequently, inventive step has to be acknowledged.

New auxiliary request 2

Measurements cannot be performed on schematic drawings of the prior art such as figure 5 of D9. Furthermore,

there is no teaching anywhere in D9 of an angle θ below 90° . Hence, plane t2 at an angle θ in the range of 10° to 90° to the plane t1 is to be regarded as a distinguishing feature over D9. It solves the problem of further improving the safe shaving of different skin areas with the blade unit of D9 by providing better access to restricted areas. Since D9 does not address this problem nor provide the solution, inventive step should be recognized.

Auxiliary request 4

There is no reason for the skilled person to provide the razor unit of D9 with a connector comprising a pivot and a biasing means. In any case, the skilled person would have no motivation to adopt the solution of D2 since D9 does not address the problem of shaving areas of restricted access or of trimming long hair like it is done in D2. Should the skilled person think of adapting the razor of D9, he will come up with a biasing towards the centre position since he would have no reason to select a particular face of the blade unit of D9 to engage the stop in abutment when shaving. Consequently, the skilled person would not think of engaging the stop in abutment for an accurate positioning and/or applying a high force when shaving with the blade 28 of the unit of D9 since the latter is not intended to be used for trimming.

In addition, there is no biasing means disclosed in D2. Figure 3 is schematic and it is not allowable to derive from it any specific teaching on a biasing means since the whole disclosure of D2 is silent about such biasing means. Furthermore, the text referring to figure 3,

column 2, lines 13-14, explicitly mentions that the blade unit is "applied to the skin" so that figure 3 should be seen as showing the blade unit 2 touching the skin 8.

Reasons for the Decision

1. *New ground of opposition according to Article 100(b) EPC*

1.1 The appellant has raised a new ground based on insufficiency of disclosure.

1.1.1 It considers that d_1 cannot be determined since the plane t_1 is not properly defined due to the fact that it is not clearly established what is to be taken into account for the guard (26) and cap (29) surfaces (figure 2), more particularly whether and how the fins (25) should be used for determining the guard surface and to which point of the lubricating strip (cap surface) the distance d_1 should extend.

It further argues that the contact points of the tangential plane t_1 with the guard and cap surfaces depend on parameters **in use** such as skin type, applied pressure, time elapsed between two shavings or where shaving is performed. Consequently, the first guard and cap surfaces are not defined as discrete points of these structures but rather as portions of these structures in contact with skin during shaving so that they cannot be determined with accuracy.

A similar objection is raised for the distance d2 with respect to the second guard and cap surfaces.

As a consequence, the skilled person cannot perform the invention since the first and second guard and cap surfaces, planes t1, t2 and distances d1 and d2 are undefined.

1.1.2 The appellant also considers that the "gap between the further cutting edge and the second guard surface" specified in the characterising part of claim 1 is also not defined since the start of the second guard surface is undefined. It is further undefined over which distance the gap between the further cutting edge and the second guard surface extends. For this reason as well, the skilled person cannot perform the invention.

1.2 This **new** ground of opposition is not admitted in the proceedings since it is raised for the first time in the appeal proceedings and, as correctly argued by the respondent, relates more to lack of clarity/lack of consistency, which is not a ground of opposition. In any case, the respondent does not consent to its admission.

1.2.1 The Board shares the respondent's view that the wording used in claim 1 is clear in itself.

For the purposes of determining what is the subject-matter claimed, the Board finds as follows.

The elastomeric strip (24) **and** the backstop (23) define together the first guard surface and the plane t1 is tangential to it (column 6, lines 1-3 and lines 31-37).

The distance d_1 is measured **in that plane** between the (tangential) points of contact of that plane with the first cap surface and the first guard surface. There is indeed only one possible first point of contact between the tangential plane and the first guard surface and likewise between the tangential plane and the first cap surface, between which the distance d_1 is measured.

Further, as argued by the respondent, the measurement of d_1 is not performed in use.

The above applies equally to d_2 .

It is noted that, what is shown in figure 2 about t_1 , d_1 and d_2 , as argued by the appellant and admitted by the respondent, is inconsistent with claim 1 and falls outside the scope of claim 1. The plane t_1 drawn in figure 2 is not tangential to the first guard surface and the distances d_1 and d_2 are not between points of contact of tangential planes with guard and cap surfaces.

- 1.2.2 The objection against the gap between the further cutting edge and the second guard surface is not regarded as relevant since claim 1 refers to "**a** gap" not the complete gap between the further cutting edge and the second guard distance, the claimed gap being functionally defined in that the rinsing water can flow through the passage.

2. *Main request*

2.1 Novelty (Article 54(1) EPC)

2.1.1 The feature designation of claim 1 as granted is the following:

A safety razor blade unit comprising

- a) an upper face, a bottom face and front and rear faces,
- b) a plurality of cutting edges (10, 11, 12) positioned between first guard and cap surfaces (26, 29) at the upper face,
- c) and a further cutting edge (37) positioned between second guard and cap surfaces (33, 34) at the rear face,
- d) the distance (d1) between the first guard and cap surfaces, measured in a plane (t1) tangential thereto, being greater than (d2) that between the second guard and cap surfaces,
- e) characterised in that a passage (35) for through flow of rinsing water connects a gap between the further cutting edge (37) and the second guard surface (33) with an opening (38) at the bottom face.

2.1.2 The appellant has objected lack of novelty of the subject-matter of claim 1 on the basis of D9 only.

D9 discloses a safety razor blade unit (20) comprising an upper face, a bottom face and front and rear faces, a plurality of cutting edges (of blades 30, 32) positioned between first guard (a first "soap bar" 24) and cap (26) surfaces at the upper face, and a further

cutting edge (29 of blade 28) positioned between second guard (a second "soap bar" 24) and cap (26) surfaces at the rear face, wherein a passage for through flow of rinsing water connects a gap between the further cutting edge (29) and the second guard surface (24) with an opening at the bottom face (column 1, lines 6-8; column 5, line 4 to column 6, line 49; column 7, line 35 to column 8, line 35; figures 1-5 and 11-12).

2.1.3 Contrary to what is stated in the impugned decision (points 2.5.1 and 2.5.2), the Board does not see any inconsistency in the blade edge of blade (28) being positioned at the **rear** face like in the contested patent and the blade edges of blades (30, 32) being positioned at the **upper** face. The blade edges of blades (30, 32) and the blade edge of blade (28) in the razor unit of D9 are positioned according to respective planes making an angle with each other as it appears clearly from figures 1 and 5, said planes being unambiguously definable like in the contested patent by the respective tangential planes to the respective guard and cap surfaces.

There is no specific angle between the planes t1 and t2 specified in claim 1 and the corresponding planes and faces in D9 unambiguously fit the purpose of the contested patent, column 4, lines 31-35, in that the angle "*ensures that the blade edge or edges at the rear face are held safely clear of the skin surface when shaving with the blade edges at the upper surface of the blade unit and vice versa*". Furthermore, the aim of having two planes with blade edges positioned in each of them is in D9, like in the contested patent, [0004], for shaving different parts of the body with the same

razor unit, i.e. concave surfaces like underarms with the curved blade (28) and other parts like the face or the legs with the straight blades (30, 32) (column 5, lines 15-21).

Therefore, the position of the edges of blades (30, 32) and the edge of blade (28) in the razor unit of D9 corresponds **structurally and functionally** to that of the blade unit of claim 1 of the contested patent. Consequently, the Board is of the opinion that D9 discloses that the further cutting edge 28 is positioned at the **rear face**. Contrary to the respondent's opinion, this interpretation does not result from isolating figure 5 from the rest of the disclosure of D9 so that T 312/94 (not published in OJ EPO) is not relevant for the present case.

- 2.1.4 For the respondent, the skilled person would consider that a blade unit with upper, bottom, front and rear faces as claimed is of a cuboid type as disclosed in D1 or D2, not of a type as in D9 with angular upper and lower surfaces. Due to this, the blade unit of D9 cannot fall within claim 1.

The respondent argues that if, as put forward by the appellant, the claimed "upper face" in figure 5 of D9 is to be defined as the face comprising the straight blades 30, 32 **only** (the upper/left-hand face in the figure 5 submitted by the respondent during the oral proceedings before the Board) and the claimed "rear face" as the face comprising the curved blade 28 (the upper/right-hand face in that same figure), the two faces opposite these two, making an angle with each other have to be split in exactly the same manner (a

lower/left-hand and a lower/right-hand face), in order to be consistent. As a result, only what is opposite the "upper face" can be the claimed "bottom face", i.e. the lower/left-hand face. The other, lower/right-hand face, located vis-à-vis the rear face, can then not be regarded as also corresponding to the claimed "bottom face". Consequently, the passage in the razor blade unit of D9, which has its opening in this other face, does not have its opening at the bottom face as claimed. This provides a clear structural difference of the claimed razor blade unit over that of D9.

The respondent further argues that the claimed "upper face" should in fact be seen in figure 5 of D9 as the complete surface comprising the straight blades 30, 32 **and** the curved blade 28, if the passages should both have their openings at the bottom face as claimed. It considers that the disclosure of D9 should be taken as it is; it should not be modified by rotating figure 5 in order to come up with one part of the upper face becoming artificially the rear face. The result is a rear face in the blade unit of D9 which does not comprise any blade at all, i.e. no tangential plane t_2 or distance d_2 to be measured, leading in that case as well to a clear structural difference of the claimed razor blade unit over that of D9.

In view of the above, the respondent is of the opinion that feature a) should be regarded as a distinguishing feature over D9.

- 2.1.5 The Board cannot share the respondent's view since, as put forward under point 2.1.3 above, the position of the edges of blades (30, 32) and edge of blade (28) in

the razor unit of D9 corresponds **structurally and functionally** to the definition of the upper and rear faces of claim 1 of the contested patent. Figure 5 of D9 does not need be rotated to come to this conclusion. In fact, the way there are called, upper or rear face, does not play a role when assessing whether the disclosure of D9 fulfils the claimed requirements.

In addition, the entire lower surface of the razor unit of D9, figure 5, fulfils the structural and functional requirements of the "bottom face" specified in claim 1 of the contested patent as well, i.e. it is where the opening of the passage for the through flow of rinsing water is located and it is opposite the upper face.

In any case, the term "bottom face" may also be interpreted functionally, i.e. that face of the razor blade unit of figure 5 of D9 that takes the "bottom" position, when the unit is rinsed.

Finally, it is not excluded from claim 1 that the specified faces comprise sloped and/or angle parts like the razor blade unit of D9. This is indeed, as discussed above, further illustrated by figure 2 of the contested patent itself, where the front face in figure 2 can indeed be seen as restricted to only the "vertical" part of the front member 3 while the bottom face may encompass the sloped surface of the front member 3. The term "cuboid" as used by the respondent is in fact not used in claim 1.

In view of the above, the disclosed razor blade unit is considered to comprise upper, bottom, front and rear

faces in accordance with claim 1 of the contested patent.

2.1.6 As already discussed under point 1 above, the appellant considers that, in view of the description, more particularly figure 2, claim 1 is unclear and encompasses many possibilities in terms of the planes t_1 , t_2 and the respective distances d_1 and d_2 . Therefore, having this in mind when measuring the distances d_1 and d_2 in figure 5 of D9, one would inevitably come to the result that in the razor blade unit of D9 d_1 is larger than d_2 .

The Board cannot share the appellant's view since, as a general principle and independently from the interpretation of claim 1, measurements cannot be performed on a schematic drawing of the prior art. By the same token a ratio $d_1/d_2 > 1$ cannot be determined either. This is especially the case when the determination of d_1 and d_2 depends strongly on how the tangential planes are drawn and where the contact points of these planes with the guard and cap surfaces are established. In the present case the local thicknesses and/or the slight curve of the lines make this rather arbitrary, as argued by the respondent. Indeed, even by enlarging figure 5 of D9, one has difficulty in assessing and measuring exactly d_1 (d_2 is less of a problem as admitted by the respondent), so that, in some cases, d_1 could end up being larger than d_2 , and in other cases, it could be the opposite.

This holds all the more true since there is no information in D9 that it was the actual intention of the inventor of this prior art invention to have a

particular relationship between these distances, let alone d_1 larger than d_2 (T 748/91 not published in OJ EPO). Therefore, the Board is of the opinion that feature d) cannot be derived directly and unambiguously from the disclosure of D9.

Consequently, the subject-matter of claim 1 is novel.

2.2 Inventive step (Article 56 EPC)

2.2.1 As argued by the appellant, D9 can be taken as an appropriate starting point for discussing inventive step since it is, like the contested patent, in the technical field of safety razor blade units aiming at shaving different skin areas with the same blade unit (D9, column 5, lines 17-21; contested patent, [0004] and column 3, lines 9-17).

2.2.2 As discussed under point 2.1 above, the only distinguishing feature of claim 1 over D9 is feature d).

2.2.3 The technical effect associated with this distinguishing feature is to be able to shave different areas with the same razor blade unit, including areas where access is restricted, for instance by adjacent facial features (see contested patent, column 2, lines 2-6 and lines 31-44; column 3, lines 9-17).

2.2.4 The objective technical problem can therefore be regarded as improving access to restricted areas while maintaining safe shaving of different areas with the safety razor blade unit of D9.

2.2.5 The skilled person faced with the said problem would immediately think of adapting the faces of the blade unit of D9 where cutting edges are positioned, to the respective space(s) at its disposal where shaving is intended. For the face bearing the straight blades 30, 32 in the razor blade unit of D9 for easy to shave areas (large space at disposal such as the face or the legs), the skilled person would have no reason to change the distance between the guard and the cap surface. To the contrary, the rear face bearing the curved blade 28 in the razor blade unit of D9 is already for shaving areas of more difficult access, i.e. concave surfaces such as underarms. To provide for improved access the skilled person would immediately think of reducing the size of that part of the razor blade unit dedicated to contact with the skin in order to be able to better reach and shave such skin parts safely. By doing so, he would reduce the distance d_2 and arrive in an obvious manner at the claimed solution of d_1 being larger than d_2 so that the subject-matter of claim 1 of the main request lacks inventive step (Article 56 EPC).

2.2.6 The respondent considers that the problem D9 intends to solve is to reach a precise alignment of the razor blades in the cartridge (column 1, line 16 to column 2, line 46). Furthermore, the blades in the razor of D9 are for different purposes than in the contested patent, i.e. for shaving flat or concave surfaces, so that nothing in D9 points towards a trimming blade for restricted areas such as close to facial obstructions. Since D9 is not concerned with the problem underlying the invention of shaving such more restricted areas, it cannot be the closest prior art and, if at all,

starting from it the skilled person would not come to the claimed solution.

The Board cannot share the respondent's view for the reasons already given under points 2.2.1 and 2.2.5 above. In addition, claim 1 is not restricted to any specific use(s) for the blades, in particular not to a trimming blade so that D9 is unambiguously relevant for its subject-matter and can be regarded as an appropriate starting point. This is the case even though, as argued by the respondent, other documents could also possibly be considered as closest prior art. The claimed subject-matter should indeed be inventive in view of any appropriate starting point.

3. *New auxiliary request 2*

3.1 With respect to claim 1 of the main request, claim 1 of the new auxiliary request 2 includes the following additional feature:

i) the plane (t2) tangential to the second guard and cap surfaces (33, 34) is at an angle (θ) in the range of 10° to 90° to the plane (t1) tangential to the first guard and cap surfaces (26, 29)

3.2 D9 can still be considered as an appropriate starting point for discussing inventive step for claim 1 of new auxiliary request 2 for the same reasons as given under point 2.2.1 above.

3.3 The Board shares the appellant's view that an angle θ can be derived from figure 5 of D9. The figure provides indeed a teaching on how the upper and rear faces should be constructed relative to each other in order

to be able to shave a part of the body with one face while not hurting it with the other face. This was unambiguously the intention of D9 (column 5, lines 17-21).

Drawing tangential plane t2 is not a problem and has been properly done by the appellant in annex 1 of its notice of opposition, as admitted by the respondent. Drawing tangential plane t1, on the contrary, is under discussion since, as already discussed under point 2.1.6 above, the thicknesses and/or curves of the lines in figure 5 of D9 might indeed influence its angular position. However, taking the best possible alternative for the respondent, drawing it while still "touching" the guard and cap surface limits, i.e. maximizing the angle θ when drawing t1 in figure 5 of D9, still leads to an angle θ of less than 90° . As a consequence, the Board considers that feature i) is disclosed in D9 and, hence, the above reasoning against claim 1 of the main request also applies against claim 1 of the new auxiliary request 2.

- 3.4 The respondent contests that measurements can be done on schematic drawings of the prior art. It considers that the angle θ in figure 5 of D9 is indeterminate and that there is no teaching in the whole disclosure of D9 for an angle θ below 90° . Hence, feature i) is to be considered as a further distinguishing feature over D9. The technical effect associated with this feature is to *better ensure that the blade edge or edges of the rear face are held safely clear of the skin surface when shaving with the blade edges at the upper face of the blade unit and vice versa* (contested patent, column 4, lines 31-35). The problem to be solved is therefore to

further improve the safer shaving of different skin areas with the blade unit of D9 by providing a better access of the blade unit to a restricted area. Since D9 does not address this problem nor provide the solution, inventive step should be recognized.

The Board cannot share this view, already for the reasons given under point 3.3 above. However, should feature i) be considered as a distinguishing feature of this claim 1 over the unit of D9, as argued by the respondent, it would still not support an inventive step. Indeed, there is no indication whatsoever in the contested patent that the limit of 90° is **critical** for obtaining the effect. As it appears from the contested patent itself, column 4, lines 27-31, the effect is also obtained for an angle θ of up to 135° . As a result, this technical effect would also unambiguously be provided by the razor blade unit of D9 since the angle θ shown in figure 5 is clearly below the said limit of 135° . As the effect obtained is the same, the problem to be solved would have to be a less ambitious one, i.e. merely finding an alternative angle with respect to D9. However, starting from D9, the skilled person will arrive by trial and error at the claimed range so that, even if feature i) were to be considered as a distinguishing feature, it would not support an inventive step (Article 56 EPC).

4. *Auxiliary request 4*

4.1 With respect to claim 1 of the main request, claim 1 of auxiliary request 4 includes the following additional feature:

- ii) the blade unit is mounted or mountable on a supporting structure (40) for pivotal movement about an axis (A) extending longitudinally of the blade unit, and comprising a stop (44) for abutment with the supporting structure to limit pivotal movement of the blade unit at an end position, wherein the end position of pivotal movement is a rest position into which the blade unit is arranged to be biased by a spring structure, shaving forces exerted on the blade cutting edges (10,11, 12) at the upper face during a shaving stroke acting to pivot the blade unit away from the end position, and shaving forces exerted on the further cutting edge (37) during a shaving stroke acting to pivot the blade unit to engage the stop (44) in abutment with the supporting structure (40)
- 4.2 D9 can again be considered as an appropriate starting point for claim 1 of auxiliary request 4 for the same reasons as given under point 2.2.1 above.
- 4.3 Feature ii) is not disclosed by D9 and, hence, is a distinguishing feature additional to feature d) (see point 2.2.2 above). Feature ii) has the technical effect, as argued by both parties, of providing the same razor blade unit with, on the one hand, a flexible unit when shaving with one face (upper face) due to the spring effect and, on the other hand, a more effective cutting when shaving with the other face (rear face) due to the stop (column 4, lines 19-26 and column 7, lines 12-35). The spring effect is indeed required for following the skin contours when shaving large areas, while the stop is necessary for precisely positioning

and applying a high force when shaving difficult to access areas like under the nose and near the ears and/or for trimming long hair like sideburns.

Feature ii) can therefore be regarded as further improving the technical effect obtained by feature d) of safely shaving different areas with the same razor blade unit, including areas where access is restricted (see point 2.2.3 above).

4.4 Consequently, as agreed by both parties, the problem to be solved is to further improve the safe shaving of different skin areas with the safety razor blade unit of D9 while improving flexibility and efficiency.

4.5 The skilled person faced with said problem would consider D2 since, like D9 and the contested patent, it concerns a razor for shaving different skin areas with the same razor blade unit (column 1, lines 9-27).

Indeed, D2 discloses a safety razor blade unit (2) comprising an upper face, a bottom face and front and rear faces, a plurality of cutting edges (of "shaving blades" (3)) positioned between first guard and cap surfaces (hair lifter (6) and lubricating strip (5)) at the upper face, and a further cutting edge ("trim blade" (4)) positioned at the rear face (column 2, lines 22-29; figure 1). In the razor of D2, the blade unit (2) is mounted or mountable on a supporting structure (handle 1) for pivotal movement about an axis (7) extending longitudinally of the blade unit, and comprising a stop (rest position 10) for abutment with the supporting structure (1) to limit pivotal movement of the blade unit at an end position (10), wherein the

end position (10) of pivotal movement is a rest position into which the blade unit is arranged to be biased by a spring structure, shaving forces exerted on the blade cutting edges (12) at the upper face during a shaving stroke acting to pivot the blade unit away from the end position (10), and shaving forces exerted on the further cutting edge (13) during a shaving stroke acting to pivot the blade unit to engage the stop (10) in abutment with the supporting structure (1) (column 1, line 64 to column 2, line 2; figures 2, 2a, 3, 3a and 4).

As put forward by the appellant, a biasing means is unambiguously disclosed in D2 even though not explicitly mentioned. Indeed, the skilled person looking at figure 3 would immediately derive that a spring is present in the connector since without it the blade unit 2 would flip down due to gravity. The unit's stop 11 (see figure 1) would indeed come to abutment with the handle 1 and would make roughly a right angle with it. As that is not the case in figure 3, there must be a spring which biases the blade unit 2 towards an upward position, i.e. rest position 10, when shaving with the trimming blade 4. This also means that the blade unit 2 will pivot away from this position when shaving with the regular shaving blades 3 (figures 2 and 2a). This construction for adjusting the blade unit to the contours of the face when shaving, which is in accordance with claim 1, is therefore known. It is also usual in the field as illustrated for instance by D1 (column 1, lines 7-13; column 1, line 32 to column 2, line 25; column 3, lines 1-25; figures).

Therefore, a skilled person will unambiguously and immediately derive feature ii) from the disclosure of D2.

The skilled person will not see any difficulties to adapt the connecting structure of D2 into the razor blade unit of D9, more particularly adapting the cavity 38 for receiving the razor handle connector. This is all the more true since D9 explicitly mentions that "any means" is contemplated for connecting the blade unit to the handle. The skilled person will indeed have to decide on how the unit is attached to the handle. He will think of the means known from D2, especially in view of the advantages of combining regular shaving with other types of shaving like sideburn trimming or near nostril shaving (see D2, column 1, lines 9-27). In doing this, he will certainly also incorporate the rest position and the biasing means of D2 into the razor of D9 and arrive at the blade unit of claim 1, since the skilled person would attribute, as already discussed, the spring effect in D2 for the face with the shaving blades 3 (for "regular shaving") correspondingly to the face with the straight blades 30, 32 of D9, i.e. for shaving the face or legs, while the stop effect in D2 for the trim blade 4 (for "sideburns trimming or a near nostril haircut") to the face with the curved blade 28 of D9, i.e. for shaving areas of more restricted access (D2, column 1, line 64 to column 2, line 2).

As a result, starting from D9 the skilled person using his general knowledge together with the teaching of D2 would arrive at the claimed subject-matter in an obvious manner (Article 56 EPC).

4.6 The respondent considers that there is no reason for the skilled person to adapt the razor of D9 with a connector comprising a pivot and a biasing means. The passage of D9, column 5, lines 38-45, mentioning "any means" does not imply that the skilled person would think of such a connector.

In any case, the skilled person would have no motivation to adopt the solution of D2 since D9 does not address the problem of shaving areas of restricted access or of trimming long hair like in D2.

Should the skilled person think of adapting the razor of D9, he will come up with a biasing towards the centre position. As a matter of fact, he would have no reason to select a particular face of D9 for engaging the stop in abutment when shaving. Blade 28 of D9 is set back with respect to plane d2 and, hence, is not thought for trimming like in D2. Consequently, the skilled person would not think of engaging the stop in abutment for an accurate positioning and/or applying a high force when shaving with the blade 28 since the latter is not intended to be used for trimming.

Finally, there is no biasing means disclosed in D2. Figure 3 is schematic and it is not allowable to derive from it any specific teaching of a biasing means since the whole disclosure of D2 is silent about a biasing means. Furthermore, the text referring to figure 3, column 2, lines 13-14, explicitly mentions that the blade unit is "applied to the skin" so that figure 3, which is schematic, should be seen in fact as the blade unit 2 touching the skin 8.

4.7 The Board cannot share the respondent's view. Indeed, the skilled person faced with the problem given under point 4.4 above, will look for a solution in the technical field of razor blade units mounted or mountable on a handle and, by doing so, would inevitably come across D2. The fact that "any means" is mentioned in D9 for connecting the blade unit to the handle will obviously not lead the skilled person towards a specific solution but will certainly encourage him to consider any feasible solution, especially if, like in D2, explicit advantages are mentioned of regular shaving as well as trimming long hair with the two faces of the **same** blade unit (column 1, lines 9-27).

When adapting the solution of D2 to the razor blade unit of D9 the skilled person will select to engage the stop in abutment when shaving with the curved blade 28 of the blade unit of D9. Indeed, the curved blade aims at accessing concave skin areas, i.e. skin areas to which access is restricted, for which an accurate positioning is crucial in order to avoid hurting with the blade edges on the other face. It is admitted, as argued by the respondent, that the curved blade 28 in the blade unit of D9 is not intended for trimming long hair such as sideburns and might also be regarded as mounted set back with respect to the plane d2. This, however, does not play a role since, as explained above, the curved blade 28 is for shaving concave areas which are regarded as skin areas to which access is restricted.

In any case, the face with blades 30, 32 in D9 aims at shaving the face or the legs so that following the skin

contour is necessary, implying that a stop in abutment is not to be chosen for this face (contested patent, column 1, lines 40-48). This leaves the stop-abutment facility as the only possibility for the face with the blade 28. The shaving faces of the blade unit of D9 being explicitly unsymmetrical in their intended use, the skilled person will exclude biasing towards the centre position, which is, in any case, not the teaching of D2. Consequently, by including the connector of D2 into the razor of D9, he has only one possible configuration and thus arrive at the claimed subject-matter in an obvious manner.

The Board is of the opinion that, for the reasons already given above, a biasing means is immediately and unambiguously derivable from the disclosure of D2 even though figure 3 is schematic. If it would have been intended to represent the blade unit 2 touching the skin 8, it would certainly have been done, as in figure 2. Finally, the skilled person would read D2 with the general knowledge available to him at the time of the priority date of D2 (1999). That knowledge included the information that a biasing means in a connector between a blade unit and handle for following the skin contour already belonged to the usual practice, as illustrated for instance by D1 (column 1, lines 7-13), of which the priority dates date back to 1991 and 1992.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The patent is revoked.

The Registrar:

The Chairman:

G. Nachtigall

H. Meinders