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D E C I S I O N
of 22 May 2001

Case Number: T 0905/98 - 3.2.6

Application Number: 92115518.0

Publication Number: 0532005

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:

Absorbent article

Patentee:

KIMBERLY-CLARK WORLDWIDE, INC.

Opponents:

SCA Hygiene Products AB
The Procter & Gamble Company

Headword:

-

Relevant legal provisions:

EPC Art. 56, 83, 123(2), 100(b)

Keyword:

"Inventive step - yes"

Decisions cited:

G 0004/92, T 0912/91, T 0133/92

Catchword:

-



Case Number: T 0905/98 - 3.2.6

D E C I S I O N
of the Technical Board of Appeal 3.2.6
of 22 May 2001

Appellant: KIMBERLY-CLARK WORLDWIDE, INC.
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Respondents: SCA Hygiene Products AB
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 16 June 1998
revoking European patent No. 0 532 005 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: P. Alting van Geusau
Members: G. Pricolo
M. Vogel

Summary of Facts and Submissions

I. The mention of the grant of European patent No. 0 532 005 in respect of European patent application No. 92 115 518.0 filed on 10 September 1992 was published on 27 November 1996.

II. The patent as a whole was opposed by the respondents (opponents I and II) under Article 100(a) on the grounds that the subject-matter of claim 1 lacked an inventive step, under Article 100(b) on the grounds that the patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, and under Article 100(c) on the grounds that the subject-matter of the patent extended beyond the content of the application as originally filed.

III. By decision posted on 16 June 1998 the Opposition Division revoked the patent. The Opposition Division held that the subject-matter of claim 1 lacked an inventive step in the light of the prior art reflected by documents

D4: GB-A-2 242 821;

D5: EP-A-0 070 163.

IV. Of the other documents filed in the opposition proceedings, the following documents played a role during the appeal proceedings:

D3: EP-A-0 422 504;

D11: US-A-4 883 707.

V. The appellant (patent proprietor) lodged an appeal, received at the EPO on 26 August 1998, against that decision and simultaneously paid the appeal fee. The statement setting out the grounds of appeal was received at the EPO on 26 October 1998.

VI. With the letter dated 10 March 1999 in response to the appellant's grounds of appeal, respondent II filed document

D12: US-A-4 652 484.

VII. Oral proceedings took place on 22 May 2001.

The appellant requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of

Claims: 1 to 11, as filed during the oral proceedings

Description: pages 2, 8, 9, 14 to 18, 20 to 22 as granted
pages 3, 3a, 4 to 7, 10 to 13, 19 as filed during the oral proceedings

Drawings: Figures 1A to 1C, 6A to 6C, as filed during the oral proceedings
Figures 2, 3, 7 to 18c as granted according to the main request;

or that the patent be maintained according to the first or second auxiliary request filed with the letter dated 20 April 2001. The appellant further requested that document D12 not be admitted into the appeal

proceedings.

Respondent I requested that the appeal be dismissed.

Nobody was present on behalf of respondent II, who had been duly summoned pursuant to Rule 71(1) EPC. The proceedings were continued without him (Rule 71(2) EPC). According to the latest written submissions, respondent II requested that the appeal be dismissed.

VIII. Claim 1 according to the main request reads as follows:

"1. An absorbent article (10), comprising: a backsheet layer (30) which has length and width dimensions and which includes a front waistband section (12), a rear waistband section (14), and an intermediate section (16) interconnecting said front and rear waistband sections; an absorbent body (32) which is superposed on said backsheet layer (30); an intermediate liquid permeable transfer layer (28) which is disposed in facing relation with said absorbent body (32) to generally sandwich said absorbent body between said backsheet (30) and transfer layer (28), said transfer layer (28) having an appointed inward surface (29) and a width dimension which is substantially coextensive with said backsheet width over at least a portion of said backsheet intermediate section; and a liquid permeable bodyside liner layer (46) located on said inward surface (29) of said transfer layer (28), said bodyside liner layer (46) having a width dimension which is less than the width of said transfer layer (28), wherein said bodyside liner (46) is consisting of: a bonded carded web which has a basis weight within the range of 26 - 32 gsm and is composed of bicomponent fibers and, wherein said bonded carded web is a

nonwoven bonded carded web consisting of a fibrous inner side layer (72) and a fibrous outer side layer (74); said inner side layer (72) having a basis weight within the range of 10 - 14 gsm and composed of polyethylene/polyester bicomponent fibers having a fiber size within the range of .14 - .32 tex pf (1.3 - 2 dpf); said outer side layer (74) having a basis weight within the range of 14 - 17 gsm, and composed of polyethylene/polyester bicomponent fibers having a fiber size within the range of .27 - .32 tex pf (2.4 - 2.9 dpf)".

IX. In support of its requests the appellant relied essentially on the following submissions:

The omission of the ranges for the penetration rate index, the retention index and the flowback index, that were defined in claim 1 of the originally filed patent application, did not extend the subject-matter of claim 1 of the main request beyond the content of the application as filed. Indeed these indexes were always referred to in the description as relating merely to particular aspects of the invention.

The additional features of the dependent claims were disclosed in the original application not only in connection with a bodyside layer consisting of a single layer, but also in connection with a bodyside layer consisting of two layers. Therefore, also the dependent claims of the main request did not introduce any new subject-matter.

The skilled person was in a position to reproduce the invention, since the bodyside liner was defined in extreme detail and all other components of the

absorbent article according to claim 1 of the main request were known per se. The absorbent article having the structural features claimed also directly provided the desired effects of improving leakage resistance, lessening flow back and rewet and improved the manner in which the liquid was directed to the absorbent portion.

With respect to the question of inventive step, document D4 was not to be taken into consideration, because it was published on 16 October 1991, after the priority date (11 September 1991) of the patent in suit and was not, therefore, a valid prior art document. Furthermore, the introduction of document D12 at a late stage, i.e. in appeal proceedings, was to be rejected as inadmissible, because it was not at first sight highly relevant.

Document D3, representing the closest prior art, did not disclose a bodyside layer consisting of two layers.

Even taking into account the teaching of document D11, or of document D12, the skilled person would not arrive at the subject-matter of claim 1 of the main request, since none of these documents disclosed the specific combination of basis weights and fiber sizes claimed for the two layers composing the bodyside liner.

- X. During oral proceedings, respondent I declared that the objections of insufficient disclosure (Article 83 EPC) and of unallowable extension of the subject-matter of claim 1 (Article 123(2) EPC) were no longer maintained. With respect to the views of the appellant that were disputed, the arguments of respondent I can be summarized as follows:

Dependent claims 2 to 5 and 8 to 11 defined additional features that were disclosed in the original application only in connection with a bodyside layer consisting of a single layer. Since there was no clear disclosure that those additional features were to be applied also to a bodyside layer consisting of two layers, claims 2 to 5 and 8 to 11 of the main request represented subject-matter extending beyond the content of the application as originally filed, contrary to the requirements of Article 123(2) EPC.

The closest prior art was represented by document D3. This document was very general with respect to the topsheet (bodyside liner) and left open what topsheet was to be used. The skilled person would have found a suitable topsheet in document D11, and therefore, would have applied the teaching of D11 to the absorbent article of D3, thereby providing a two-layered bodyside liner. D11 disclosed a fiber size of 3 or less denier for the inner side layer and, although it explicitly disclosed only a fiber size of 3 denier or more for the outer side layer, all the examples given in D11 (column 3) of suitable fibers had sizes close to the limit value of 3 denier. Hence, the skilled person was taught to use fibers with low denier in the outer side layer of the topsheet. Furthermore, the basis weight ranges in D11 covered the ranges given in claim 1 of the main request and D11 disclosed that the optimum weight ratio between the two layers of the topsheet was in the range of 1:3 to 3:1, thus allowing for a low denier layer having a lower basis weight than the high denier layer. Accordingly, the bodyside liner construction as defined in claim 1 of the main request was previously known from D11, and therefore, the combination of D3 with D11 directly led to the subject-

matter of claim 1 of the main request.

XI. In its written submissions, respondent II essentially argued as follows:

Claim 1 filed with the statement setting out the grounds of appeal extended the scope of protection, contrary to Article 123(3) EPC, because it did not include the feature of a basis weight range for the bonded carded web of 15 to 40 gsm.

Claim 1 was not consistent with the description, contrary to the requirements of Article 84 EPC, because the latter contained embodiments that no longer fell within the scope of the claim.

Moreover, the subject-matter of claim 1 did not involve an inventive step. Starting from the prior art disclosed by document D4, the distinguishing features relating to the multi layer structure did not provide any particular technical effects with respect to the embodiments shown in the patent in suit where a single layer structure was used, and were obvious in view of the teachings of D11 and D12.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1 Claim 1 of the main request is essentially based upon the combination of features of original claims 1, 9 and 12.

Claim 1 further includes the features that the transfer layer and the bodyside liner layer are permeable. These features are disclosed in the original application, for instance on page 5, line 22 and on the paragraph bridging pages 9 and 10 of the published patent application.

The range of 26 to 32 gsm for the basis weight of the bonded carded web, which falls within the range of 15 to 40 gsm originally defined in claim 1, is disclosed on page 14, line 6 of the published patent application. By including the range of 26 to 32 gsm in the definition of claim 1, the objection under Article 123(3) EPC raised by respondent II in the written submissions is overcome.

The following features of original claim 1 have been excised from claim 1 of the main request:

the bodyside liner is constructed to provide for a Penetration Rate index of at least about 1.5 ml/sec and Retention index of not more than about 0.8 gm and/or a Flowback index of not more than about 2 gm. Although, at the oral proceedings, respondent I declared that he no longer maintained objections under Article 123(2) EPC against claim 1, in view of the provisions of Article 114(1) EPC the Board finds itself obliged to consider the question whether the deletion of the above mentioned features results in subject-matter which extends beyond the content of the application as filed.

In this respect, it has to be noted that independent claim 2 as originally filed does not define the above mentioned features. Claim 2 is directed to an article including all the other features of claim 1, in which,

however, the basis weight and the fiber size are limited to the values of, respectively, 27 gsm and 1.8 dpf, these values being within the broader ranges of, respectively 15 to 40 gsm and 1 to 3 denier defined in claim 1. Furthermore, the above mentioned features are defined in original claims 3 to 6, dependent from claim 2, thereby making it clear that said features are to be seen merely as optional and not as essential features for the article of claim 2. Therefore, for a bodyside liner layer having a basis weight of about 27 gsm and a fiber size of 1.8 denier (dpf tex), the originally filed application undoubtedly discloses that the above mentioned features can be dispensed with.

The description, page 12, lines 1 to 5 and 29 to 32 of the published patent publication, refers to other basis weights and fiber sizes of the bonded carded web. On the following lines 33 to 44, there is disclosed that in a "particular aspect" and in "another" aspect and in a "further" aspect, the invention provides for a Penetration Rate index of at least about 1.5, a Retention index of not more than about 0.8 gm, and a Flowback index of not more than about 2 gm. When reading these passages, it becomes clear that said ranges for the Penetration Rate, Retention and Flowback indexes are only particular (or further, i.e. optional) aspects also for other combinations of basis weight and fiber size than that specifically claimed in original claim 2.

Therefore, the Board comes to the conclusion that the originally filed patent application, taken as a whole, discloses that the above mentioned feature is not an essential, but merely a preferred feature, and its excision from claim 1 does not constitute an

infringement of Article 123(2) EPC.

Claim 1 of the main request has been amended by including additional limitations with respect to claim 1 as granted and therefore no objections under Article 123(3) EPC arise.

- 2.2 Dependent claims 2 to 11 of the main request recite the features of dependent claims 3 to 7, 10, 11, 13 to 15 as originally filed.

Respondent's I submissions that the features of claims 2 to 5 and 8 to 11 were not disclosed in combination with a bonded carded web consisting of an inner side layer and an outer side layer cannot be followed by the Board. Claim 12 as originally filed relates to a two-layered bonded carded web, each layer having basis weight and fiber size within ranges identical to that defined in claim 1 of the main request. Since original claim 12 refers back to "any one of the preceding claims", including preceding claims 3 to 6 and 11, and claims 13 to 15 also refer back to the preceding claims, including claim 12, the combination of the two-layered bonded carded web (claim 12) with the features of original claims 3 to 6, 11 and 13 to 15 is clearly disclosed. Since these claims 3 to 6, 11 and 13 to 15 define, respectively, the additional features of claims 2 to 5 and 8 to 11 of the main request, the Board concludes that there was a basis in the original application for dependent claims 2 to 5 and 8 to 11 of the main request.

- 2.3 The description has been amended to adapt it to the claims according to the main request. In particular, embodiments that do not fall within the scope of the

claims have been either excised from the patent specification, or it has been made clear that they do not fall within the scope of the claims.

The amendments of the description overcome the objection of inconsistency (Article 84 EPC) between the claims and the description raised by respondent II in the written submissions.

- 2.4 It follows that none of the amendments of the main request give rise to objections under Article 123(2) and (3) EPC.

3. *Sufficiency of disclosure*

All objections under Article 83 were withdrawn by respondent I at oral proceedings, and respondent II did not raise this question in the appeal proceedings.

The Board is satisfied that the patent contains sufficient information enabling a skilled person to reproduce an absorbent article as claimed in claim 1 of the main request, since examples are given of backsheet layers (page 7, lines 7 to 9), absorbent bodies (page 9, first paragraph), transfer layers (page 6, lines 40 to 42), and bodyside liners including a two-layered carded web (page 13, lines 3 to 10). The skilled person is thus given a clear and complete teaching of how to achieve the object underlying the invention (see page 3, lines 22, 23 of the patent publication), consisting in providing improved handling of liquid surges and more effectively uptaking and retaining repeated loadings of liquid during use. Therefore, the requirements of Article 83 EPC are met.

4. *Novelty*

Novelty of the subject-matter in accordance with claim 1 of the main request follows from the fact that none of the cited documents discloses an absorbent article comprising a body side liner consisting of a two-layered bonded carded web having a width dimension which is less than the width of the transfer layer.

Novelty was in fact not disputed.

5. *Inventive step*

- 5.1 Document D4 was undisputedly regarded as the most relevant prior art by the parties during the written proceedings, following the position of the Opposition Division. However, document D4 was published on 16 October 1991, after the priority date, 11 September 1991, of the patent in suit. Having regard to Article 89 EPC, document D4 does not constitute prior art within the meaning of Article 54(2) EPC.

In agreement with the parties present at the oral proceedings, the Board considers document D3 to represent the most relevant prior art. This document discloses (see Figure 1) an absorbent article comprising in combination: a backsheet layer (20) which has length and width dimensions and which includes a front waistband section, a rear waistband section, and an intermediate section interconnecting said front and rear waistband sections; an absorbent body (40) which is superposed on said backsheet layer; an intermediate liquid permeable transfer layer (50) which is disposed in facing relation with said absorbent body to generally sandwich said absorbent body between said

backsheet and transfer layer, said transfer layer having an appointed inward surface; and a liquid permeable bodyside liner layer (30) located on said inward surface of said transfer layer (see page 4, line 54 to page 5, line 15).

Moreover, the disclosure of document D3 contemplates the following options:

- the transfer layer may have a width dimension which is substantially coextensive with said backsheet width over at least a portion of said backsheet intermediate section (see page 9, lines 38 to 42);
- the bodyside liner (30) may cover an area which is smaller than the area of the backsheet (20) (see page 5, lines 21, 22);
- the bodyside liner (30) may consist of a bonded carded web which has a basis weight within the range of 20 to 34 gsm (overlapping the range claimed of 26 to 32 gsm) and is composed of fibers having a denier of about 1.5- 3d (page 6, lines 13 to 20).

5.2 Document D3 does not disclose that the bodyside liner consists of a fibrous inner side layer and a fibrous outer side layer; said inner side layer having a basis weight within the range of 10 to 14 gsm and composed of polyethylene/polyester bicomponent fibers having a fiber size within the range of .14 to .32 tex pf (1.3 to 2 denier); said outer side layer having a basis weight within the range of 14 to 17 gsm, and composed of polyethylene/polyester bicomponent fibers having a

fiber size within the range of .27 to .32 tex pf (2.4 to 2.9 denier).

The Board is satisfied that these features effectively contribute to the solution of the problem underlying the claimed invention, (see page 3, lines 22, 23 of the patent publication), consisting in providing improved handling of liquid surges and more effectively taking up and retaining repeated loadings of liquid during use (see page 13, lines 11 to 13).

5.3 Whether the distinguishing features provide a different technical effect than the embodiments of the patent in suit where a bodyside liner consisting of a single layer is used, as pointed out by respondent II, is irrelevant, because the technical problem solved by the invention must be evaluated in the light of the prior art, not in the light of embodiments of the patent in suit, which, even if they do no longer fall within the scope of the claims as amended, do not form part of the state of the art.

5.4 Document D11 discloses a nonwoven fabric suitable for use as bodyside liner layer for diapers (column 2, lines 36 to 39). The bodyside liner consists of a nonwoven bonded carded web which has a basis weight within the range of ca. 18 to 48 gsm (15 to 40 grams per square yards) and includes two layers of bicomponent fibers (see claim 1). The inner side layer has a fiber size of 3 denier or less and the outer side layer has a fiber size of 3 denier or greater (see claim 1 and column 3, lines 36 to 37 and 43 to 44). Example 4 (column 7) specifically discloses an inner side layer having a basis weight of 12 gsm (10 gm/sqy) and composed of polyethylene/polyester bicomponent

fibers having a fiber size of 1.7 denier in combination with an outer side layer having a basis weight of 12 gsm (10 gm/sqy) and composed of polyethylene/polyester bicomponent fibers having a fiber size of 3 denier.

Document D11 neither discloses an outer side layer having a fiber size within the range of 2.4 to 2.9 dpf, nor a combination of an inner side layer having a basis weight within the range of 10 to 14 gsm with an outer side layer having a basis weight of 14 to 17 gsm, as required by claim 1 of the main request.

5.5 Respondent I argued that since all examples given in column 3 of D11 relate to fiber sizes close to the limit value of 3 denier, the skilled person would use a low denier fiber size for the outer side layer. In the Board's view, even if the examples of D11 disclose the use of fiber sizes close to the low limit value of 3 denier, there is no disclosure in D11 that fiber sizes below said low limit value could be used. In the light of the teaching of D11, the use of a fiber size below 3 denier for the outer side layer requires that the skilled person deviates from the explicit teaching of D11, and hence performs a further step for whose obviousness there is no evidence.

Moreover, although document D11 discloses that the optimum ratio between the basis weight of the high denier layer and that of the low denier layer can range from approximately 1:3 to 3:1 (see column 3, lines 56 to 65), and this can be considered, as submitted by respondent I, as a disclosure that the low denier layer may have a lower basis weight than the high denier layer, this cannot be regarded as a disclosure of the

particular combination of ranges for the basis weights of inner and outer side layers defined in claim 1 of the main request. Indeed, since the basis weight ratio is a relative parameter, a given basis weight ratio can be achieved by freely selecting one of the two basis weights. Therefore, as a given basis weight ratio does not anticipate a specific combination of basis weights having said given ratio, also the disclosure in D11 of a broad range for the basis weight ratio does not anticipate the specific combination claimed of basis weight ranges having a ratio falling within said range.

- 5.6 Document D12 is not considered to be late filed in the sense of Article 114(2) EPC, since it was already extensively discussed in document D11 (see column 2, lines 3 to 33) and it was filed by respondent II for completeness, in direct response to the arguments submitted by the appellant with regard to D11 in the grounds of appeal.

D12 discloses a nonwoven fabric suitable for use as bodyside liner layer for diapers (column 1, lines 10 to 14), including a fibrous inner side layer (first sublayer, see claim 1) and a fibrous outer side layer; said inner side layer having a basis weight of 5 to 15 gsm (see claim 1) and composed of polyethylene/polyester bicomponent (claim 4) fibers having a fiber size within the range of 1 to 3 denier (claim 1); said outer side layer having a basis weight within the range of 8 to 35 gsm and composed of polyethylene/polyester bicomponent fibers having a fiber size within the range of 1.5 to 6 denier.

D12 neither discloses that the web is carded, nor the provision of an outer side layer combining a basis weight within the range of 14 to 17 gsm (being a sub-range of the broader range of 8 to 35 gsm disclosed by D12) with a fiber size within the range of 2.4 to 2.9 denier (being a sub-range of the broader range of 1.5 to 6 denier disclosed by D12), as required by claim 1 of the main request.

5.7 It follows from the above that the combination of the teaching of D3 with either that of D11 or D12 does not lead to the subject-matter of claim 1. Nor does a combination of D3 with the remaining available prior art (from which document US-A-5 143 779, (D8) cited in the decision of the Opposition Division is excluded, because it is not prior art within the meaning of Article 54(2) EPC, having been published on 1 September 1992 after the priority date of the patent in suit), since the latter fails to disclose a bodyside liner consisting of a nonwoven bonded carded web consisting of two layers.

6. In view of these assessments, the Board comes to the conclusion that the subject-matter of claim 1 of the main request cannot be derived in an obvious manner from the prior art and accordingly involves an inventive step. This claim, together with dependent claims 2 to 11, the description and drawings as amended during the oral proceedings of 22 May 2001 therefore form a suitable basis for maintenance of the patent in amended form. Under these circumstances, there is no need to consider the appellant's auxiliary requests.

7. Finally, the Board finds that considering and deciding in substance on the maintenance of the patent on the basis of the claims as amended during oral proceedings in the absence of respondent II does not conflict with the decision of the Enlarged Board of Appeal G 4/92 (OJ EPC 1994, 149). According to this decision, a party who fails to appear at oral proceedings must have the opportunity, in accordance with Article 113(1) EPC, to comment on new (and therefore surprising) facts and evidence submitted in these proceedings. The submission during oral proceedings of the amended main request is, however, neither a "fact" nor can it be "evidence" within the meaning of the above decision, so that decision does not apply in the present case (see e.g. T 912/91, T 133/92, unpublished).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent on the basis of the following documents:

Claims: 1 to 11, as filed during the oral proceedings on 22 May 2001

Description: pages 2, 8, 9, 14 to 18, 20 to 22 as granted
pages 3, 3a, 4 to 7, 10 to 13, 19 as filed during the oral proceedings on 22 May 2001

Drawings: Figures 1A to 1C, 6A to 6C, as filed during the oral proceedings on 22 May 2001
Figures 2, 3, 7 to 18c as granted

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau