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Datasheet for the decision of 18 September 2008

Case Number: T 0477/07 - 3.2.06

Application Number: 96945073.3

Publication Number: 0961603

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:
Absorbent articles having a separating means

Patentee:
THE PROCTER & GAMBLE COMPANY

Opponent:
SCA Hygiene Products AB

Headword:
-

Relevant legal provisions:
EPC Art. 56
EPC Art. 13

Relevant legal provisions (EPC 1973):
EPC Art. 56
RPBA Art. 13

Keyword:
"Inventive step (no)"
"Late-filed request - not admitted"

Decisions cited:
-

Catchword:
-

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Case Number: T 0477/07 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 18 September 2008

Appellant: (Opponent)	SCA Hygiene Products AB S-405 03 Göteborg (SE)
Representative:	Egeröd, Lisbeth Valea AB Lindholmspiren 5 S-417 56 Göteborg (SE)
Respondent: (Patent Proprietor)	THE PROCTER & GAMBLE COMPANY One Procter & Gamble Plaza Cincinnati, Ohio 45202 (US)
Representative:	Briatore, Andrea Procter & Gamble Italia S.p.A. Italian Research Center Via Aterno 128-130 I-66020 Sambuceto di San Giovanni Teatina (Chieti) (IT)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted 19 January 2007 rejecting the opposition filed against European patent No. 0961603 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: P. Alting Van Geusau
Members: G. L. de Crignis
K. Garnett

Summary of Facts and Submissions

I. By decision of the opposition division announced during the oral proceedings on 12 December 2006 and posted on 19 January 2007 the opposition against the European Patent No. 0 961 603, granted on application No. 96 945 073.3 was rejected.

Claim 1 as granted reads:
" A disposable absorbent article comprising, a liquid pervious topsheet, an absorbent core and a breathable backsheet, said absorbent core being positioned intermediate said topsheet and said backsheet, said topsheet, core and backsheet each comprising at least one layer, said core comprising a fluid storage layer, said backsheet comprising an outer layer,
each of said layers having a wearer facing surface and a garment facing surface and each of said wearer facing surfaces forming a common interface with an adjacent garment facing surface of an adjacent layer,
said article has a backsheet portion extending form said garment facing surface of said fluid storage layer to said garment facing surface of said outer layer and wherein at least one garment facing surface in said backsheet portion is separated from an adjacent wearer facing surface by a gas-permeable separating means in the form of a layer such that not more than 50% of the surface of said common interface is in direct contact, characterised in that said outer layer of said backsheet is a microporous 2-dimensional polymeric apertured film, the apertures having average diameters of from 150 micrometers to 5 micrometers."

II. The opposition division held that the subject-matter claimed complied with the requirements of the EPC. In particular, the subject-matter of claim 1 was held to be novel and to involve an inventive step when compared in particular to the prior art disclosed in documents

D1 EP-A-0 710 472
D2 EP-B1-0 293 482
D3 US-A-3 881 489
D4 US-A-4 341 216
D5 DE-A-37 17 992 and
D6 GB-A-2 115 702.

III. On 16 March 2007 a notice of appeal against this decision was filed by the opponent. The appeal fee was paid the same day, followed by the statement of grounds of appeal filed on 29 May 2007, in which the appellant substantiated the objections in respect of inventive step under Article 100(a) EPC.

IV. On 5 February 2008, the Board summoned the parties to oral proceedings pursuant to Rule 71(1) EPC and annexed a communication including consideration in respect of inventive step.

V. With letter of 8 August 2008 the respondent (patent proprietor) submitted new auxiliary requests 1 to 4 and a data sheet concerning "Celgard 2400", a microporous membrane having a pore size of 0.12µm x 0.04µm.

VI. Oral proceedings were held on 18 September 2008. The appellant requested that the decision under appeal be set aside and that the patent be revoked. The respondent (patentee) requested that the appeal be

dismissed, alternatively that the patent be maintained on the basis of the first auxiliary request filed with letter of 8 August 2008, alternatively on the basis of the second auxiliary request filed during the oral proceedings, alternatively on the basis of the fourth auxiliary request filed with letter of 8 August 2008.

Claim 1 of the first auxiliary request is based upon claim 1 as granted with additionally the following features:
"wherein said article is a sanitary napkin or a panty liner" and
"wherein said separating means is a 2-dimensional apertured polymeric film or an apertured formed polymeric film, and wherein said separating means comprises apertures having an average diameter of at least 100 micrometers".

In claim 1 of the second auxiliary request it is further added:
"and wherein said separating means does not substantially hinder the transfer of gaseous materials between the layers which it separates".

Claim 1 of the fourth auxiliary request corresponds to claim 1 of the first auxiliary request except that the separating means is limited to the apertured formed film.

VII. In support of its requests the appellant essentially relied upon the following submissions:

The subject-matter of claim 1 as granted was not novel over the disclosure in D6. D6 disclosed a sanitary

napkin comprising an absorbing layer 13 which corresponded to the fluid storage layer claimed in claim 1 of the patent in suit and a 2-dimensional porous polymeric film 12 as an outer layer backsheet material. In the embodiment shown in Figure 3 of D6, three layers of water-absorbing tissue 14 were provided between the absorbing layer 13 and the porous film 12. The tissue did not differ from the claimed separating means.

Taking the tissue layers 14 in D6 to be part of the absorbent core, the embodiment shown in Figure 3 of D6 represented the closest prior art. When assessing inventive step starting from this embodiment, the problem to be solved was to reduce the risk of leakage. The skilled person faced with such a problem knew from D3 that an improvement with regard to leakage was to be expected by using a multi-layered backsheet construction. D3 referred to two liquid pervious layers cooperating in order to form a liquid impervious backing. No inventive step was necessary to arrive at the subject-matter of claim 1.

The subject-matter of claim 1 of the first auxiliary request did not involve an inventive step either. The use of a polymeric film material for the separating means was already well-known in the art and did not add a new or inventive aspect. Furthermore, the feature relating to the separating means comprising apertures having an average diameter of at least 100 micrometers did not appear to be relevant for solving a technical problem.

Starting from the embodiment disclosed in D6, Figure 3, the skilled person would be aware of the disclosure of D4. In this document, an outer sheet of thermoplastic perforated film was combined with an inner panel 24 which could also be a thermoplastic perforated film. The inner panel as a whole or specific perforated regions of it could be used to reduce and optimize the breathability of the backsheet. Hence the skilled person would be aware that using a thermoplastic film between the backsheet and the absorbent core would be effective to adapt the breathability of the backsheet. US-A-3,929,135 which was also specified in the patent in suit as background information for apertured formed polymeric films was exhaustively discussed in D4 as well. Thus, there could be no doubt for the skilled person that such a layer was suitable as a separating means.

The second auxiliary request should not be admitted into the proceedings. It was late filed (i.e., only during the oral proceedings) and the unclear wording of the additional phrase in its claim 1 rendered it not clearly allowable.

Claim 1 of the fourth auxiliary request was identical to claim 1 of the first auxiliary request with regard to the separating means being an apertured formed polymeric film. Hence, the arguments set out above in this respect applied also to this request. Consequently, no inventive step could be recognized in the subject-matter of this claim.

VIII. The submissions of the respondent can be summarized as follows:

The subject-matter of claim 1 was novel. D6 did not comprise a separating means. The description of Figure 3 referred to the absorbent tissue papers 14 as forming part of the absorbent core. The absorbent core was formed by the laminate of cotton-like pulp 13, the water-absorbing tissues 14 and rayon staple cotton 15. Hence, this structural unit could not be divided up into individual components in order to identify a separating means as claimed in claim 1 of the patent in suit.

The subject-matter of claim 1 involved an inventive step when starting from the teaching of D6. There was no suggestion for the skilled person to combine the backsheet consisting of a 2-dimensional apertured polymeric film with a further layer. D3 referred to a breathable liquid impervious backsheet comprising two layers. The first layer was a perforated film and the second layer was a fibrous tissue. Hence, the skilled person starting from D6 would either be prompted to replace the outer sheet, i.e. the 2-dimensional apertured film, by a perforated polymeric film or by hydrophobizing the absorbent tissue in D6. However, the skilled person would not be led to create an absorbent product in accordance with claim 1 of the patent in suit when starting from D6.

The subject-matter of claim 1 of the first auxiliary request specified the material of the separating means. When starting the assessment of inventive step from the embodiment of Figure 3 in D6, the skilled person would not consider the disclosure of D4 as it referred to an inner panel 24 being mainly impermeable in the central

area. Thus, the teaching of D4 resulted in a reduced breathability of the backsheet. Hence, the teaching of D4 differed from the object of the patent in suit and would not be considered by the skilled person.

The second auxiliary request should be admitted into the proceedings. The additional wording was clear to the skilled person.

The subject-matter of claim 1 of the fourth auxiliary request was limited to the separating means being an apertured formed film. Contrary thereto, D4 did not refer to a formed film for the inner panel 24. Thus, there existed various options for the skilled person and no reason was apparent why he would choose such films. Accordingly, an inventive step was involved.

Reasons for the Decision

1. The appeal is admissible.

2. *Main Request - Novelty over D6*

2.1 The point in dispute is whether in D6 a feature is disclosed which corresponds to "at least one garment facing surface in said backsheet portion is separated from an adjacent wearer facing surface by a gas-permeable separating means" as defined in claim 1 of the patent in suit.

2.2 D6 discloses in the embodiment shown in Figure 3, three layers 14 of water-absorbing tissue which are located

between the absorbing layer 13 and the outer porous film 12. The tissue layers 14 are referred to in D6, page 17, l. 2 to 7 as forming part of the absorbent unit of the sanitary napkin. This absorbent unit comprises "*a laminate of the cotton-like pulp 13, the water-absorbing paper 14 and the rayon staple cotton*". Furthermore, the same laminate is disclosed with regard to Figures 2 and 3 on page 16, lines 27 to 33. Accordingly, the tissue layers 14 in Figure 3 of D6 represent part of the absorbent laminate. Hence, they do not clearly and unambiguously represent a separate layer or separating means within the meaning of this feature of claim 1 of the patent in suit. Thus, the subject-matter of claim 1 is novel over D6.

3. *Main Request - Inventive step*

3.1 Starting from the embodiment shown in Figure 3 of D6 as the closest prior art, the subject-matter of claim 1 of the patent in suit differs by the above identified feature specified as a gas-permeable separating means.

According to the description of the patent in suit the separating means may consist of any layer, sheet, film, lattice or net which separates the absorbent core from the backsheet to an extent of at least 50% and which is gas-permeable. It can either be comprised of one element or a number of elements, be comprised of the same piece and type of material or of separate pieces or types of material, be centred relative to the other components or not and either be symmetrical or unsymmetrical about its principal longitudinal and transverse centrelines; it may be planar, folded or pleated. Suitable materials include polymeric materials

such as polyethylene, polypropylene and adhesive materials.

3.2 By modifying the known absorbent article by incorporation of such a separating means, reduction of leakage through the gas permeable (but also to some extent liquid permeable) backsheet may be expected.

In accordance therewith, the object cited in the patent in suit (see paragraphs [0004 - 0009]) refers to the prevention of wet-through. The objective technical problem to be solved is thus to be seen in the improved avoidance of leakage when using a breathable backsheet.

3.3 D3 relates to a breathable, liquid impervious backsheet for absorbent devices. The backing comprises a first layer being a perforated polyethylene film, and a second layer being a hydrophobic porous creped tissue. The latter layer represents a separating means with regard to the perforated polyethylene film and the absorbent core. The passage of gases is the object of the invention in D3 (col. 2, l. 8 - 21). The combination of the two backsheet layers ensures that the passage of gases is permitted and a breathable but liquid impervious backsheet-combination is provided (col. 2, l. 28 - 36). It is emphasized with regard to the first and second layer of the backsheet that "*Each of these layers is pervious to liquids by itself but when placed together so one is superposed on the other, they cooperate to form a liquid impervious backing*" (col. 3, l. 28 - 35).

3.4 Hence, when trying to improve the wet-through characteristics, the skilled person would consider

these advantages and insert an additional layer between the absorbent core and the backsheet film of D6 and thus arrive at the subject-matter of claim 1 without the exercise of inventive skills. An improvement with regard to leakage is to be expected when additionally providing such a layer. Consequently, the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC).

3.5 The respondent's argument that the skilled person would either replace the outer sheet of D6 by a perforated polymeric film or would hydrophobize the absorbent tissue of D6 is not convincing.

The first possibility would not improve the resistance to leakage: The outer layer in D3 consists of a perforated polyethylene film. To replace the 2-dimensional apertured polymeric film of D6 by such a perforated polyethylene film would in fact worsen the leakage resistance and thus would not be considered. The second possibility contradicts the respondent's view (which the Board has accepted - see point 2.2 above) that the tissue layers of D6 were to be considered as part of the absorbent core. Thus, when desiring to improve leakage resistance, the use of a further layer between the absorbent core and the backsheet is an obvious development in view of the teaching of D3.

4. *First Auxiliary Request - Inventive step*

4.1 The first auxiliary request differs from the main request in that, according to claim 1 of the former, the separating means is specified as being a 2-

dimensional apertured polymeric film or an apertured formed polymeric film, wherein said separating means comprises apertures having an average diameter of at least 100 micrometers.

4.2 Again, the embodiment shown in Figure 3 of D6 represents the closest prior art, as set out under points 2.2 and 3.1 above. The distinguishing feature with respect to the subject-matter claimed in claim 1 is the provision of a separating means which is a 2-dimensional apertured polymeric film or an apertured formed polymeric film.

4.3 The feature concerning the average diameter of the separating means cannot play any role in the discussion of inventive step because, in the absence of any disclosure about how the average diameter of the apertures in the separating means is to be determined, no technical sensible meaning can be attributed to this feature.

4.4 The objective technical problem to be solved by the subject-matter of claim 1 of the first auxiliary request can be seen in an improved leakage resistance, in particular with regard to the use of a breathable backsheet as already set out for the main request.

4.5 The provision of a breathable backsheet is the main object of the invention in D4 and is reflected in the title. D4 refers to a breathable backsheet having two layers cooperating such as to be liquid impervious (col. 1, l. 61 - 65). A suitable material for the outer sheet is a thermoplastic film which has been perforated in any convenient manner (col. 5, l. 5 - 8). In

particular, the outer sheet can be provided with tapered capillaries described in US-A-3,929,135 (col. 5, l. 30 - col. 6, l. 24). (US-A-3,929,135 is also referred to in the description of the patent in suit (paragraph [0030]) as providing suitable apertured formed films.)

4.6 Due to its position between the absorbent core 23 and the outer backsheet layer 25, the inner panel 24 of D4 represents a separating means. With regard to the property of gas-permeability of the inner panel, D4 throughout refers to an overall breathable backsheet and discloses a thermoplastic film wherein front and rear regions are perforated and the central region is left unperforated (col. 7, l. 30 - 32, Figures 2/6).

4.7 The material for the inner panel 24 should meet the stated criteria (col. 7, l. 30 - 34) which include liquid impermeability, flexibility, thickness, being innocuous to human skin and compatibility with other elements of the disposable article. These are the same criteria which apply for the outer sheet 25. The exhaustive discussion in columns 5 and 6 of D4 of a thermoplastic film having tapered capillaries described in US-A-3,929,135 and thus representing an example meeting the above referenced criteria would lead the skilled person directly to the use of such a thermoplastic film for the inner panel 24 of the backsheet layer.

4.8 Hence, when starting from the embodiment of Figure 3 in D6, which napkin comprises a backsheet made of a microporous 2-dimensional polymeric apertured film, the skilled person trying to improve leakage resistance

would get from the teaching of D4 the knowledge that an inner panel having a liquid impervious central region can prevent wet-through and that via its vapour permeable (perforated) front and rear regions the breathability of the whole article can be maintained. Hence, no inventive step can be attributed to such a combination. Therefore, the subject-matter of claim 1 of the first auxiliary request does not involve an inventive step as required according to Art. 56 EPC.

4.9 The respondent's view that D4 would be disregarded by the skilled person because of its mainly impermeable central area and reduced breathability in this area cannot be accepted because the wording of claim 1 does not exclude such areas either and further does not define a specific breathability in any specific area of the separating means.

5. *Second Auxiliary Request*

5.1 Amendments

The subject-matter of claim 1 of the late-filed second auxiliary request comprises the subject-matter of claim 1 of the first auxiliary request and comprises additionally the following wording: *"and wherein said separating means does not substantially hinder the transfer of gaseous materials between the layers which it separates"*.

The additional wording is based upon page 6, lines 9 to 15 of the originally filed PCT-application. Hence, the requirements of Article 123(2) EPC are met.

5.2 Admissibility

Although by the amendment a further limitation so as to avoid the impermeable regions of the separating means in D4 is apparently intended and to this extent would meet the requirements of Rule 80 EPC, in the absence of any clear meaning of the term "substantially" defining the intended limitation the amended claim is not clearly and unambiguously allowable because it cannot overcome the objections in respect of inventive step developed in relation to the first auxiliary request. Therefore, the late-filed second auxiliary request is not admitted into the proceedings.

6. *Fourth Auxiliary Request - Inventive step*

The assessment of the subject-matter of claim 1 of this request cannot differ from that already considered when discussing the separation means claimed in the assessment of inventive step for claim 1 of the first auxiliary request (see in particular point 4 above). No inventive step can be attributed to such a combination. Therefore, the subject-matter of claim 1 does not involve an inventive step as required according to Art. 56 EPC.

7. Consequently the subject-matter of claim 1 of the respondent's main request, first and fourth auxiliary request is not allowable for lack of inventive step (Art. 56 EPC) and the second auxiliary request is not admitted into the proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar | The Chairman

M. Patin | P. Alting van Geusau