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Datasheet for the decision of 8 July 2015

Case Number: T 2168/12 - 3.2.06

Application Number: 02793608.7

Publication Number: 1455712

IPC: A61F13/15

Language of the proceedings: EN

Title of invention:
ABSORBENT ARTICLE

Patent Proprietor:
SCA Hygiene Products AB

Opponents:
The Procter & Gamble Company
Paul Hartmann AG

Headword:

Relevant legal provisions:
EPC 1973 Art. 54, 56

Keyword:
Novelty - (no) - auxiliary request (yes)
Inventive step - auxiliary request (yes)

Decisions cited:

Catchword:

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Case Number: T 2168/12 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 8 July 2015

Appellant: (Opponent 1)	The Procter & Gamble Company One Procter & Gamble Plaza Cincinnati, OHIO 45202 (US)
Representative:	Briatore, Andrea Procter & Gamble Service GmbH IP Department Frankfurter Strasse 145 61476 Kronberg im Taunus (DE)
Appellant: (Opponent 2)	Paul Hartmann AG Paul-Hartmann-Strasse 12 89522 Heidenheim (DE)
Representative:	DREISS Patentanwälte PartG mbB Friedrichstrasse 6 70174 Stuttgart (DE)
Respondent: (Patent Proprietor)	SCA Hygiene Products AB 405 03 Göteborg (SE)
Representative:	Valea AB Box 1098 405 23 Göteborg (SE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 7 August 2012 concerning maintenance of the European Patent No. 1455712 in amended form.**

Composition of the Board:

Chairman	M. Harrison
Members:	M. Hannam
	M.-B. Tardo-Dino

Summary of Facts and Submissions

I. Appeals were filed by the appellants (opponent I and opponent II) against the interlocutory decision of the opposition division in which it found that European patent No. 1 455 712 in an amended form met the requirements of the EPC.

II. The appellants each requested that the decision under appeal be set aside and the patent be revoked.

III. The respondent (proprietor) requested that the appeals be dismissed, auxiliarily that the patent be maintained in amended from according to one of auxiliary requests 1 to 10 filed with the response to the grounds of appeal.

IV. The following documents cited by the appellants are relevant to the present decision:

D1 US-A-5 614 283
D2 EP-A-0 518 340
D3 EP-A-0 875 224

V. The Board issued a summons to oral proceedings and subsequently a communication containing its provisional opinion, in which it indicated *inter alia* that the subject-matter of claim 1 of the main request appeared not to be novel over D2.

VI. With letter of 8 June 2015, appellant/opponent I indicated that it would not be represented at oral proceedings.

VII. With letter also of 8 June 2015, the proprietor filed a new auxiliary request 1a, previous auxiliary request 1

being re-numbered auxiliary request 1b. It furthermore filed a definition of the term 'cavity' taken from the Merriam-Webster online dictionary.

VIII. Oral proceedings were held before the Board on 8 July 2015, during which the proprietor withdrew auxiliary requests 1a and 1b and filed a replacement auxiliary request 2 which it numbered auxiliary request 1.

The appellant/opponent I, solely in writing, requested that the decision under appeal be set aside and that the European patent be revoked.

The appellant/opponent II also requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent (proprietor) requested that the appeals be dismissed, auxiliarily that the patent be maintained according to auxiliary request 1 filed during oral proceedings.

IX. Claim 1 of the main request reads as follows:

"Absorbent article having a first essentially liquid permeable surface layer (13), an essentially liquid impermeable backing layer (14) and, located between said liquid permeable surface layer (13) and said liquid impermeable backing layer (14), an absorbent body (15) comprising at least one layer, characterized in that the absorbent article has cavities (20) which are essentially cone—shaped or have a pyramid-like or funnel-like shape, including those cavities having more sides than a pyramidal shape, and extend at least through part of the absorbent body (15), and in that said cavities (20) have a tip part (21) and a base

(22), the tip part (21) having a smaller circumference than the base (22) and being located towards or in the liquid permeable surface layer (13) and the base (22) being located away from the liquid permeable surface layer (13)."

Claim 1 of auxiliary request 1 reads:

"Absorbent article having a first essentially liquid permeable surface layer (13), an essentially liquid impermeable backing layer (14) and, located between said liquid permeable surface layer (13) and said liquid impermeable backing layer (14), an absorbent body (15) comprising at least one layer, the absorbent article having cavities (20) which are essentially cone-shaped or have a pyramid-like or funnel-like shape, including those cavities having more sides than a pyramidal shape, said cavities (20) having a tip part (21) and a base (22), the tip part (21) having a smaller circumference than the base (22) and being located towards the liquid permeable surface layer (13) and the base (22) being located away from the liquid permeable surface layer (13), characterized in that the cavities (20) extend through the whole of the absorbent body (15)."

X. The appellant/opponent I's arguments may be summarised as follows:

As regards the main request, the subject-matter of claim 1 lacked novelty relative to D2 with Fig. 10 and page 5, lines 13 to 14 disclosing cavities of a pyramidal shape.

Regarding the first auxiliary request, the subject-matter of claim 1 lacked novelty and did not involve an

inventive step with reference to Fig. 1 of D1 and Fig. 10A of D3.

XI. The appellant/opponent II's arguments may be summarised as follows:

The subject-matter of claim 1 of the main request lacked novelty over D2. A cavity, whether unfilled, partially filled or completely filled remained a cavity. It was also apparent that Fig. 10 of D2 alone anticipated claim 1, since the important feature of the claimed cone-shape or pyramid-like shape is the tapered nature of the shape; the dome-shaped cavities of Fig. 10 met this requirement. Further, a possibility of slight irregularities on the surface of the cavities in D2 due to the superabsorbent being present did not detract from these still presenting an essentially cone-shaped, pyramid-like or funnel-like shape.

As regards the first auxiliary request, the subject-matter of claim 1 was not novel over D2. Fig. 10 showed the cavities 210 extending through the entire core 214, the trapezoidal cavities of Fig. 8 thus implicitly extending to the same extent. Claim 1 at least did not involve an inventive step. Starting from D2 with the differentiating feature that the cavities extended through the whole of the absorbent body, the objective technical problem could be seen as to provide a good flow of fluid into the cavities. Providing an opening in the top of the cavities of D2 was obvious for the skilled person wishing to solve this problem. If the problem were to improve breathability, page 6, lines 36 to 37 of D2 disclosed leaving the cavities unfilled which would also lead to improved breathability of the absorbent article. The outer backing layer of Fig. 2e of the patent would hinder breathability such that not

all embodiments of the invention solved the posed problem.

XII. The respondent's arguments may be summarised as follows:

The subject-matter of claim 1 was novel over D2. The term 'cavity' should be understood as defined in the patent i.e. as an unfilled space which provided the benefit of breathability. This was further supported by the dictionary definition of a cavity as 'an unfilled space within a mass'. If a cavity were filled, it would no longer be a cavity. The patent solely disclosed unfilled cavities. The Fig. 10 embodiment of D2, even with the trapezoidal cavities of Fig. 8, did not unambiguously disclose cavities of conical or pyramidal shape since lumps of superabsorbent powder sticking to the structural layer 202 would hinder such an interpretation of the cavity shapes.

Regarding the first auxiliary request, the subject-matter of claim 1 was both novel and inventive over the prior art. D2 did not disclose that the cavities extended through the whole of the absorbent body, since the structural layer 202 limited the extent to which the cavities extended through the absorbent body. Page 5, line 58 also stated that 'overlying the structural layer 202 is a core 214' from which it was clear that the cavities bounded by the structural layer could thus not extend to the polymer cover 212. Starting from D2, the objective technical problem was to improve the breathability of the absorbent article. D2 itself provided no hint to the claimed solution since it was concerned with rapid absorption and retention of fluid, the cavities being for superabsorbent containment. If the cavities of D2 were to extend through the whole

absorbent core, they would be open at both ends leading to an undesirable loss of superabsorbent. There was also no clear teaching that unfilled cavities, as disclosed on page 6 for certain other embodiments, could be used in the Fig. 10 embodiment.

Reasons for the Decision

1. Main request

1.1 Lack of novelty

The subject-matter of claim 1 lacks novelty with respect to D2 (Article 54 EPC 1973).

1.1.1 As accepted by the parties, document D2 discloses the following features of claim 1, the reference signs in parentheses referring to D2:

An absorbent article (Fig. 10; page 5, line 51) having a first essentially liquid permeable surface layer (polymer cover 212; page 6, line 13), an essentially liquid impermeable backing layer (208; page 6, line 20) and, located between said liquid permeable surface layer (212) and said liquid impermeable backing layer (208), an absorbent body (214) comprising at least one layer.

Whilst not accepted by the proprietor, D2 is found also to disclose:
the absorbent article having cavities (110; page 5, lines 53 to 56) which are essentially cone—shaped (trapezoidal cross-section; page 5, line 55 referring back to Fig. 8 and page 5, lines 13 to 14), and extend

at least through part of the absorbent body (214, see Fig. 10), and in that said cavities (110) have a tip part (see Fig. 8) and a base (see Fig. 8), the tip part having a smaller circumference than the base and being located towards or in the liquid permeable surface layer (212) and the base being located away from the liquid permeable surface layer (212).

1.1.2 The proprietor's argument that the term 'cavity' defined an unfilled space, and that therefore D2 did not disclose cavities, is not accepted. As used in claim 1, the term 'cavity' is very broad with no suggestion that it is limited to an unfilled space. Even the dictionary definition referred to by the proprietor does not limit a cavity to an unfilled space; indeed, the definition is not held to exclude the cavities, initially empty, being (part) filled later and yet still being referred to as cavities on account of their initial designation before being filled. Furthermore, there is no basis in the usage of the term in the prior art that a cavity must be unfilled. On page 5, lines 7 to 8 and lines 55 to 56 of D2, for example, partial filling of cavities is disclosed yet that does not result in their no longer being referred to as cavities. Indeed if, as in claim 1, an absorbent article has cavities, irrespective of whether these cavities are unfilled, partially filled or completely filled, the cavities *per se* will still be present in the absorbent article. The proprietor's reference to several passages in the patent to show that only unfilled cavities are meant in claim 1 is also not persuasive. A claim must be interpreted in a technically sensible manner and be given the broadest, technically logical interpretation (see also Case Law of the Boards of Appeal, II.A.6, Interpretation of claims) and, without a specific definition of the term

'cavity' in the patent, a reference to the description to interpret the term is inappropriate. Such a broadest technically sensible interpretation does not restrict the claimed cavity to an unfilled space, but rather the space forming the cavity in the absorbent article may be unfilled, partially filled or even fully filled.

1.1.3 The possibility of superabsorbent powder disturbing the conical or pyramidal shape of the cavities in D2, as alleged by the proprietor, is not detrimental to the cavities 110 of D2 nonetheless anticipating the claimed cavities. The shape of the claimed cavities is expressed in very inexact terms i.e. essentially cone-shaped and pyramid-like or funnel-like shape. The possible irregularities to an exact pyramid-like shape (as disclosed in the Fig. 8 in combination with Fig. 10 embodiment of D2) caused by typically dry, free-flowing superabsorbent powder adhering to the inner walls of the cavities 110 would thus not be of such a magnitude to not allow the cavities 110 to be considered of pyramid-like shape. It is also found that the irregular 'base' of the pyramid-like shape of the cavity 110 in Fig. 8 (caused by the depicted uneven distribution of the superabsorbent 104) does not detract from the cavity 110 presenting a pyramid-like shape, with the consequence that the claimed cavities are anticipated by D2.

1.1.4 Opponent II's opinion that the arcuate-shaped cavities in Fig. 10 of D2 anticipated those claimed in claim 1 is not accepted. Whilst the tapering form of the cavities towards the liquid permeable surface layer was indeed important in the patent for capillary effects to restrain liquids from moving towards the backing layer of the absorbent article, this did not have as a corollary that any tapering shape of cavity in the

prior art would anticipate the claimed cavities. The cavities are claimed to be essentially cone-shaped or to have a pyramid-like or a funnel-like shape such that it is these shapes for which protection is sought, not a generalisation of these shapes derived from the technical effect of such shapes disclosed in the description. It thus follows that simply a tapering shape of cavity, such as in Fig. 10, does not anticipate the claimed cavities. The Fig. 10 cavities are further not considered to be of a 'funnel-like' shape; a 'funnel' is technically understood to have an opening at its tapered end such that fluids can be guided to its smaller diameter outlet. The arcuate-shaped cavities 210 of Fig. 10 clearly lack such an outlet and would thus not be considered by the skilled person to possess a 'funnel-like' shape.

It thus follows that the claimed cavities are solely anticipated in D2 via the Fig. 10 embodiment combined with the reference (on page 5, lines 53 to 55) to the cavity shape disclosed in Fig. 8.

1.1.5 The subject-matter of claim 1 thus lacks novelty with respect to D2 (Article 54 EPC 1973) such that the main request is not allowable.

2. First auxiliary request

2.1 Novelty

The subject-matter of claim 1 is novel over the cited prior art (Article 54 EPC 1973).

2.1.1 With respect to D1, particularly Fig. 1 to which opponent I refers in its argument, the cavities 43 are incorrectly oriented with respect to the claimed

orientation of tip and base, neither do the cavities extend through the whole of the absorbent body, the distribution layer 44 being part of the absorbent body yet not including any portion of the cavities. D1 thus fails to anticipate the claimed subject-matter.

2.1.2 Regarding D3 and Fig. 10A to which opponent I refers, this solely discloses an absorbent structure in which cavities, comprised by regions below the fabric 10, extend to a second fabric layer 1 forming containers 8 filled with absorbent material 34. D3 therefore at least fails to disclose an absorbent article with a liquid impermeable backing layer.

2.1.3 As regards D2, this fails to disclose cavities extending through the whole of the absorbent body. Referring to Fig. 10 it cannot unambiguously be seen that the cavities 210 extend through the full depth of the absorbent core 214, at least due to the structural layer 202 occupying a portion of the absorbent body depth. That this feature of claim 1 is lacking in D2 is further supported by page 5, line 58 which states that 'overlying the structural layer 202 is a core 214'; it therefore cannot unambiguously be extracted that the core 214 does not extend in the region directly above the cavities 210 which would restrict the extent to which the cavities can extend through the absorbent body.

2.1.4 Opponent II's contention that the trapezoidal cavities of Fig. 8 would implicitly extend through the whole absorbent body is not convincing. The trapezoidal cavities 110 in Fig. 8 are depicted without a polymer cover which would be necessary to enable the extent of the absorbent body relative to the cavities to be determined. There is thus no unambiguous disclosure in

D2 that the trapezoidal cavities extend through the whole of the absorbent body; indeed the arrangement of cavities 110 in Fig. 8, if used as substitutes for the cavities 210 of Fig. 10 with a similar polymer cover 212 arrangement, would not unambiguously extend through the whole of the absorbent body at least due to the varying heights of cavities depicted allowing the core 214 to extend above the cavities.

2.1.5 The subject-matter of claim 1 is thus novel over the cited documents D1 to D3 (Article 54 EPC 1973).

2.2 Inventive step

The subject-matter of claim 1 involves an inventive step (Article 56 EPC 1973) over the documents and arguments presented by the appellants.

2.2.1 Starting from D2 which discloses all features of claim 1 save for the cavities extending through the whole of the absorbent body (see point 2.1.3 above), the objective technical problem may be seen as how to improve the breathability of the absorbent article. It is firstly noted that D2 is directed to rapid absorption and retention of fluids (see page 2, lines 36 to 37) rather than to the breathability of the absorbent article. D2 thus provides no direct teaching as to how the breathability of an article could be improved. Further, the cavities of D2 have the function of retaining superabsorbent material for absorption and retention of fluid. Modifying the cavities to extend through the whole of the absorbent core would necessitate the cavities being open to the polymer cover 212 such that retention of the superabsorbent in the cavities would be lost. This would make the absorbent article of D2 ineffective in absorbing and

retaining fluid which would dissuade the skilled person from such a modification.

2.2.2 The objective technical problem proposed by opponent II (to provide a good flow of fluid into the cavities) does not appear to be truly objective when considering the disclosed effect of the cavities extending through the whole of the absorbent body (see para. [0007] of the patent). Indeed, aiding fluid flow into the cavities is not sought after in the patent since this would promote leakage from the garment facing surface of the article. The objective problem when starting from D2, with the differentiating feature of claim 1 being that the cavities extend through the whole of the absorbent body, is thus, as disclosed in the patent in para. [0007], to improve the breathability of the absorbent article.

2.2.3 Opponent II's argument that providing an opening in the top of the cavities of D2 was obvious for the skilled person is not convincing. The cavities of D2 are provided as containers for superabsorbent particles (page 5, lines 3 to 5) in order to absorb and retain fluids. Providing an opening in the cavities would allow the superabsorbent to escape thus nullifying the purpose of the cavities provided in D2 and dissuading the skilled person from carrying out such a modification.

2.2.4 The argument that unfilled cavities improving breathability were known from D2 is not accepted. The reference to unfilled cavities on page 6, lines 36 to 37 of D2 is prefaced with 'in certain other embodiments'. It is thus not apparent whether such unfilled cavities are envisaged in conjunction with the Fig. 10 embodiment, let alone with the Fig. 10

embodiment when incorporating the trapezoidal cavities known from Fig. 8. With this lack of clear guidance, the claimed 'cavities extending through the whole of the absorbent body' in order to improve breathability cannot be considered as being presented as an obvious modification to the skilled person.

2.2.5 Opponent II's further argument that the outer backing layer of Fig. 2e of the patent would hinder breathability did not persuade the Board that the subject-matter of claim 1 lacked an inventive step. Firstly the outer backing layer 14 is preferably made of an essentially breathable material (see col. 11, lines 21 to 22 of the granted patent) such that it provides no hindrance to breathability. Furthermore the term 'breathability' does not restrict the movement of moisture or air from the cavities only through the surface layer 13 or the outer backing layer 14 but rather also comprises transfer between adjacent cavities. As such, even if the outer backing layer 14 itself were not breathable, the breathability of the absorbent article *per se*, particularly between adjacent cavities, would be unaffected.

2.2.6 With claim 1 of this request essentially comprising a combination of claims 1 and 2 as granted, the arguments of opponent I directed to claim 2 as granted in section 4 of its grounds of appeal are addressed hereafter. With respect to these arguments, which suggest a lack of an inventive step with respect to D1 and D3, the simple references to Fig. 1 of D1 and Fig. 10A of D3 do not provide any indication of how these figures either alone or together or in combination with the general knowledge of the skilled person would deprive the subject-matter of claim 1 of an inventive step.

2.2.7 The subject-matter of claim 1 thus involves an inventive step (Article 56 EPC 1973) over the cited art when considering the appellants' arguments based on these documents.

2.3 The proprietor adapted the patent specification to bring this into accordance with the amended claims. To these adaptations opponent II had no objections.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside

2. The case is remitted to the opposition division with the order to maintain the patent on the basis of:
   - Claims 1 to 9 of the first auxiliary request filed during the oral proceedings,
   - pages 2,3,5,6 of the description filed during the oral proceedings,
   - pages 4 and 7 of the description, and figures, as granted.

The Registrar: The Chairman:

Ms. L. Malécot-Grob M. Harrison

Decision electronically authenticated