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**Datasheet for the decision
of 6 July 2006**

Case Number: T 1364/04 - 3.2.06

Application Number: 99909466.7

Publication Number: 1066007

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:

Absorbent article with a raised portion

Patentee:

SCA Hygiene Products AB

Opponent:

The Procter & Gamble Company

Headword:

-

Relevant legal provisions:

EPC Art. 123(2), 84, 54, 56

Keyword:

"Amendments - broadening of claim (no)"
"Claims - clarity (yes)"
"Novelty (yes)"
"Inventive step (yes - after amendment)"

Decisions cited:

-

Catchword:

-



Case Number: T 1364/04 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 6 July 2006

Appellant I:
(Opponent)

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Appellant II:
(Patent Proprietor)

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Decision under appeal:

Interlocutory decision of the Opposition
Division of the European Patent Office posted
4 October 2004 concerning maintenance of
European patent No. 1066007 in amended form.

Composition of the Board:

Chairman: P. Alting van Geusau
Members: G. L. De Crignis
W. Sekretaruk

Summary of Facts and Submissions

I. European patent No. 1 066 007 granted on application No. 99 909 466.7 claiming a priority of 26 March 1998 from SE 9801020 was maintained in amended form by decision of the opposition division posted on 4 October 2004.

II. The opposition division was of the opinion that the subject-matter of claim 1 in accordance with the patent proprietor's first auxiliary request complied with the requirements of the EPC. In particular, it considered that the patent in suit was disclosed in a manner sufficiently clear and complete for it to be carried out by a skilled person (Article 83 EPC). Furthermore, the subject-matter of claim 1 of the first auxiliary request fulfilled the requirements of Article 84 and of Article 123 (2) EPC, was novel (Article 54 EPC) and involved an inventive step (Article 56 EPC) over the prior art disclosed by

D1 US-A-5 383 869
D2 US-A-5 324 278
D3 US-A-4 235 237
D4 WO-A-97/05840
D5 US-A-5 308 346
D6 EP-A-0 804 917 (US-A-5 425 987)
D7 US-A-4 758 240
D8 SE-B-374 650 with English translation
D9 US-A-4 950 264.

III. On 1 December 2004 the EPO received a notice of appeal against this decision filed by Appellant I (opponent) together with payment of the appeal fee. The statement

setting out the grounds of appeal was received on 14 February 2005. Objections in respect of added subject-matter (Article 123(2) EPC), lack of clarity (Article 84 EPC), insufficiency of disclosure (Article 83 EPC) and lack of inventive step (Article 100(a) EPC) were made against claim 1 as maintained by the opposition division.

- IV. On 10 December 2004 the EPO received a further notice of appeal. It was filed by Appellant II (patent proprietor). On 11 February 2005 the grounds of appeal were received with the request to maintain the patent as granted or in amended form on the basis of the claims according to auxiliary request 1 or 2. On 25 August 2005 claims in accordance with a third auxiliary request were filed.
- V. In an annex to the summons for oral proceedings pursuant to Article 11(1) Rules of Procedure of the Boards of Appeal dated 5 February 2006 the Board expressed its preliminary opinion that support for and interpretation of the claimed features had to be discussed and that at present, none of the respective claims 1 of the requests appeared to meet the formal requirements of the EPC.
- VI. Oral proceedings were held on 6 July 2006. Appellant I requested that the decision under appeal be set aside and that the European patent be revoked. Appellant II requested that the appeal be dismissed and that the patent be maintained on the basis of the main request filed during the oral proceedings.

Claim 1 of this request reads:

"An absorbent article intended for female users, such as a sanitary napkin or an incontinence protector, having such a form and size that it can principally be accommodated in the crotch part of a pair of underpants and having a longitudinal direction, a transverse direction and a thickness direction, wherein the article displays a liquid-permeable layer (2), and a liquid-impermeable layer (3), two longitudinal side edges (11, 12), two transverse end edges (13, 14), and also an absorbent core consisting of at least one absorbent body (5) arranged between the two layers (2, 3), and wherein a raised portion (7) extending in the longitudinal direction and displaying two end parts is arranged at the liquid-permeable layer (2) of the article, characterized in that the raised portion (7) comprises spacing elements (16) comprising raised ridges, extending principally in the transverse direction of the article and between which spacing elements (16) channels (17) are formed on the surface of the raised portion (7) during use of the article which channels (17) extend principally in the transverse direction of the article, and which channels (17) permit liquid flow in the direction towards the side edges (11, 12) of the article."

VII. The arguments of Appellant I were essentially the following:

The feature in claim 1 referring to the channels being formed on the surface of the raised portion during use of the article was disclosed only in combination with activation by wetting during use of the article. In the

embodiment shown in Figure 2 this feature was further only achieved by the collapse of an additional camouflage layer. Moreover, the feature in claim 1 relating to the channels permitting liquid flow "in the direction towards the side edges of the article" was not disclosed in the context of the embodiment of Figure 2. Hence, the claimed combination introduced added subject-matter and therefore the requirements of Article 123(2) EPC were not met.

The existence of dependent claim 2 led to lack of clarity of the subject-matter of claim 1. The addition of "during use" in claim 1 actually rendered the subject-matter of claim 2 redundant. Only an activation by wetting "during use" was disclosed in the patent in suit. Therefore, the subject-matter of claim 1 was disclosed only in combination with that of claim 2 and if not limited in such manner would leave open the question how otherwise the channels were activated during use when not relying on wetting for this purpose. The subject-matter of claim 2 was an essential feature and should be inserted into claim 1.

Apparently the subject-matter of claim 1 was now limited to the embodiment shown in Figures 1 and 2. In this embodiment the raised portion included a preformed absorbent component, the spacing elements, a topsheet and a camouflage layer. A raised portion comprising only the preformed absorbent component was excluded because otherwise the channels were not formed on the surface of the article as mentioned in the patent description.

The subject-matter of claim 1 lacked novelty over D8, D6 or D4. D8 disclosed an entirely flat napkin which in use developed a raised portion by absorption of liquid. The formation of channels was an immediate result of the transverse strips of a plastic support member placed under the absorbent member. D6 disclosed in Figures 1 to 3 an embodiment of a sanitary napkin comprising an expanding layer. The expanding layer was disclosed as a rectangular array of longitudinally and laterally extending incisions which were equivalent to the channels of the patent in suit. D4 disclosed an absorbent article with a scrim surrounding a raised portion, the scrim having transverse elements which generated channels in between.

Anyhow, the subject-matter of claim 1 did not involve an inventive step over the disclosure of D6 or D8.

Starting from D8 the single difference remaining when compared to the article defined in claim 1 under consideration was the formation of channels on the surface of the raised portion. In D8 channels were present between the strips and the strips were covered by the foam-plastic sheet (8). The strips (5) represented the raised ridges and extended in the transverse direction of the article. The problem to be solved by the claimed article was only to be seen in a different appearance of the article. The solution to such problem was only an aesthetic one and was not related to a technical benefit.

Starting from D6, the difference when compared to the article defined in claim 1 under consideration was the choice of the preferred transverse direction of

channels. The incisions in the expanding layer represented channels. The problem to be solved could only be to provide an alternative distribution pattern. The provision of a preferential transverse direction of the incisions was an obvious alternative to the known distribution in all directions.

VIII. The Appellant II (patentee) essentially submitted:

Claim 1 was based on originally filed claims 1 and 3 as well as on features derived from page 3, lines 3 to 20 and page 10, lines 10 to 13 of the originally filed patent application.

Clarity was not an issue in the present proceedings because an activation of the channels by wetting was already referred to in granted claim 2. The addition of the term "during use of the article" related to the formation of the channels and accordingly limited and clarified this feature further. Moreover, the subject-matter of claim 2 was not redundant since claim 1 (also in its originally filed form) left the means of activation open, which for example could also rely on activation by temperature or pressure exerted on the napkin.

The subject-matter of claim 1 was not limited to the embodiment shown in Figures 1 and 2. The raised portion was represented by a preformed absorbent structure comprising spacing elements as defined in the claim. Both the topsheet and the camouflage layer did not form part of the raised portion. The channels were formed between the spacing elements on the surface of the preformed absorbent structure. The particular

embodiment shown in Figures 1 and 2 showed one possibility which was that the channels were not only formed on the surface of the raised portion but also formed on the surface of the hump.

D8 neither disclosed "a raised portion" nor did the spacing elements (strips 5) form channels on the surface of the raised portion. D6 disclosed an expanding layer comprising a rectangular array of longitudinally and laterally extending incisions and thus there was no principally transverse direction of the incisions. Furthermore, the incisions did not correspond in function and structure to the channels of the patent in suit. D4 did not disclose a spacing structure in transverse direction and no channels were formed during use. Hence, the subject-matter of claim 1 was novel.

For the evaluation of inventive step, D6 could be considered as representing the closest prior art. This document was the only one which referred to a "during use" situation and was already discussed in paragraph [0006] of the patent in suit. The problem in D6 related to the rapid acquisition and transmission of sudden gushes. The same problem was referred to in the patent in suit. However, the solution was different and consisted in D6 in the provision of holes and incisions within the expanding layer. In D6 the gushes were handled via vertical holes in the raised portion and thus quickly drawn vertically into the storage layer whereas according to claim 1 of the patent in suit the channels lead the liquid flow in the transverse direction towards the side edges of the articles. No such channels were provided or suggested in D6.

D8 was even further away from the claimed invention. In D8 no channels were formed since the porous sheet was disclosed as having a plane smooth surface. Therefore, also no spacing between the body of the user and the article could be obtained and was intended. To the contrary, D8 referred to direct contact. Therefore, neither D8 nor any other available prior art document disclosed or suggested an absorbent article having spacing elements forming channels on the surface of a raised portion during use of the article.

Reasons for the Decision

1. The appeal is admissible.
2. *Interpretation of "raised portion" in the patent in suit*

In accordance with the application as filed (page 2, third paragraph) a problem connected with known absorbent articles on which a raised portion has been arranged is that that surface which the body fluid meets initially is strictly limited. As a result it is not uncommon during heavy flows of liquid that liquid accumulates between the body of the user and the raised portion and that when the user stands up or moves in another way, a gap occurs between the raised portion and the body of the user with a sudden flow of large quantities of liquid in an uncontrolled manner.

The absorbent article in accordance with the invention (see page 3, first paragraph) is characterised in that

the raised portion presents spacing elements which during use of the article create channels for liquid flow between the raised portion and the body of the user. A controlled distribution of liquid is made possible in such a manner.

Furthermore it is stated in line 22 of page 3, that providing the raised portion of the article with spacing elements means that the raised portion will not seal against the body of the user and that this eliminates the risk of fluid that has not had time to be absorbed by the raised portion being enclosed between the genitalia of the user.

These parts of the original patent application clearly focus on the liquid flow between the raised portion and the body of the user. Since the body of the user is in direct contact with the top sheet of the absorbent article, the channels for liquid flow between the raised portion and the body of the user are formed on the surface of the top sheet. Therefore, the raised portion necessarily includes a part of the top sheet and when "raised portions" is mentioned in the application as filed at least the top sheet is necessarily part of the raised portion. This interpretation is consistent with the other parts of the disclosure of the application as filed.

With reference in particular to the embodiment shown in Figure 2 of the application as filed, Appellant II was of the opinion that the skilled person would interpret the raised portion to include only the first absorbent body 5 while the channels were formed on the surface of

this body by the spacing elements 16, thus between the camouflage sheet 20 and the first absorbent body 5.

However, in view of the requirement that the sides of the channels are formed on the one hand by the spacing elements and on the other by the "raised portion" and body of the user, such an interpretation is not in line with the general teaching of the application as filed, because clearly the upper part of the channels in Figure 2 is not limited by the body of the user but by the camouflage layer 20.

The other parts of the original disclosure relied upon by Appellant II do not lead to a different conclusion mainly for the reason that there is no direct unambiguous disclosure that the channels can also be formed between the topsheet and the first absorbent body 5, instead of being formed by collapse of the topsheet into the space provided by the spacing elements 16.

3. *Article 123(2) EPC*

3.1 The subject-matter of claim 1 is based on originally filed claims 1 and 3 as well as on page 3, lines 3 to 20 and page 10, lines 10 to 13 of the originally filed application documents.

3.2 Claim 1 as originally filed refers to the spacing elements creating channels "during use" of the article. Claim 2 as originally filed refers to the spacing elements only "appearing after wetting". Accordingly, originally filed claim 1 already included further means of activation such as temperature and pressure as

suggested by Appellant II, and no unallowable extension of the subject-matter of claim 1 is present.

- 3.3 Appellant I was of the view that the subject-matter of claim 1 should be limited to the embodiment shown in Figures 1 and 2. This embodiment involved further features like a particular shape of the raised portion and a camouflage layer which collapsed on wetting.

With respect to a particular shape of the raised portion shown in Figures 1 and 2, no such limitation is present in the description or in the claims as originally filed. Hence, no limitation to this embodiment is necessary and the camouflage layer explicitly represents an optional feature.

- 3.4 Appellant I objected as well that the feature referring to the channels permitting liquid flow in the direction towards the side edges of the article had not been originally disclosed.

Originally filed claim 3 specifies that the spacing elements comprise raised ridges which should extend principally in the transverse direction of the article. Considering that the spacing elements during use create channels on the surface of the raised portion, only such a principal direction of the flow of the liquid is conceivable. Therefore, even without a literal basis concerning the channels permitting liquid flow in the direction towards the side edges of the article, the disclosure is clear and unambiguous and the subject-matter is not extended beyond the content of the application as filed.

3.5 Appellant I objected further that there was no clear and unambiguous disclosure in the application as filed concerning the feature of granted claim 1 which requires that the channels are on the surface of the raised portion.

As set out under point 2 above, the term "raised portion" can only be understood as referring to the whole hump. Concerning the embodiment having a camouflage layer it is disclosed that before use of the sanitary napkin, an essentially smooth surface is displayed but by wetting the camouflage layer collapses, whereupon channels between the spacing elements are activated (page 5, lines 1 - 6). Such channels, inevitably, are on the surface of the raised portion. Concerning the embodiment without a camouflage layer, the channels can be formed on the surface of the raised portion for example by the compressed raised portions rising up again (page 3, line 14). The topsheet is defined on page 7, lines 19 - 26, as consisting of soft, skin-friendly materials which are usually used for this purpose. Such layers are sufficiently flexible to conform to underlying structures - even more when wet during use - and thus will also follow the contours of the channels formed directly below. Hence, in all these cases, with or without a camouflage layer, there is a clear and unambiguous disclosure that the channels are created on the surface of the raised portion.

Therefore, the patent has not been amended in a way that it contains subject-matter which extends beyond the content of the application as filed (Article 123(2) EPC).

4. *Article 84 EPC*

4.1 As already discussed partly in relation to Article 123 (2) EPC under point 3 above, the addition of the term "during use" in claim 1 is also clear. An activation by wetting during use according to the subject-matter of claim 2 represents a clear limitation of the subject-matter of claim 1. Further possibilities exist (temperature, pressure) and are well-known to the skilled person and are thus within the scope of claim 1. Thus neither is claim 2 redundant nor is claim 1 lacking clarity.

4.2 It is not necessary to insert further features illustrated in the embodiment of Figures 1 and 2. According to the originally filed description on page 11, line 14 ("The camouflage layer 20 is not critical to the invention and can be excluded"), the camouflage layer shown in these figures does not represent an essential feature. No further essential features have been specified anywhere as essential features and need to be inserted into the subject-matter of claim 1. The formation of the channels either by a collapsing camouflage layer or by wetting the hump and a subsequent rise of the compressed raised portions represent two clear possibilities.

Accordingly, the amendments do not give rise to objections under Article 84 EPC.

5. *Article 54 EPC*

5.1 Lack of novelty of the subject-matter of claim 1 was argued in respect of the napkins disclosed in D8, D6 and D4.

5.2 D8 discloses a napkin (page 1, lines 11/12) which has a liquid-permeable layer (foam-plastic sheet 8), a liquid-impermeable layer (1) and an absorbent core consisting of an absorbent body (absorption pulp (2)) arranged between the two layers (Figures 1, 2). A support member is placed between the absorption pulp (1) and the foam-plastic sheet (8) or it is encapsulated in the foam plastic sheet (8). Concerning the support member, D8 refers to an elastically bendable lattice which in the applied state has transversely extending strips (5) which during use are bent towards the user and thus correspond during use to a raised portion. The strips (5) are produced from a soft elastic plastic material (page 2, lines 33 - 36). The support member causes the shape of the article to be bent.

In D8 the thickness of the foam-plastic sheet (8) is not defined. According to Figure 2 and the corresponding general description, the foam-plastic sheet (8) which is on top of the scrim (5) must be considered capable of equalling all differences in depth of the scrim. D8 thus discloses a substantially smooth surface of the article. According to D8 (page 3, lines 9 - 10) in use pressure is exerted by the inside of the thighs, thereby pressing the foam-plastic sheet against the genital organ. It is the object of D8 to provide "an effective connection of the article with the body of the user" (page 1, lines 18 - 20).

Therefore, no spacing elements which form channels on the surface of a raised portion are disclosed in D8 and the subject-matter of claim 1 is novel over the disclosure of D8.

5.3 D6 discloses a sanitary napkin (Figures 1 to 3) comprising a liquid-permeable topsheet (24), a liquid-impermeable backsheet (26) and an absorbent core (28) arranged between the two layers (24, 26), the absorbent core comprising an expanding layer (46) which is arranged below the liquid-permeable layer (24) of the napkin. The expanding layer (46) represents before use a plane layer below the topsheet. The expanding layer comprises incisions (48) and apertures (49) and swells upon absorption (during use). The incisions (48) are shown in Figure 1 to be present in a rectangular array. Therefore, even if channels were formed by the incisions - which is nowhere stated or shown nor apparent by their function - these channels **would not extend principally in the transverse direction** of the article but rather both in the longitudinal and transverse direction. Thus, the subject-matter of claim 1 is novel over the disclosure of D6.

5.4 D4 discloses a catamenial pad (page 1, first paragraph) comprising a liquid-permeable topsheet (12), a liquid-impermeable backsheet (14) and an absorbent core (16) including a raised portion for improved contact with a user and a scrim (24) surrounding the raised portion at least partly. The scrim allows for sustained body contact (page 7, line 3) and is thus not intended as a spacing structure. The scrim permits fluid to be transferred to the core of the product (page 7, line 10). Hence, D4 neither discloses a spacing element

nor channels being formed during use on the surface, accordingly there can also be no channels extending principally in the transverse direction of the article. Therefore, the subject-matter of claim 1 is novel over the disclosure of D4.

Hence, none of these cited documents discloses all features of claim 1 and the absorbent article according to claim 1 meets the requirement of novelty (Article 54 EPC).

6. *Article 56 EPC*

6.1 D6 represents the only document which refers to a structure expanding or changing during use. D6 is already cited in paragraph [0006] of the patent in suit as prior art. The problem in D6 refers to the rapid acquisition and transmission of sudden gushes (page 3, line 31/32) and is comparable to the problem underlying the patent in suit. Therefore, this document represents the closest prior art.

6.2 The subject-matter of claim 1 of the patent in suit differs from the article disclosed in D6 by the following features:

- a raised portion comprising spacing elements comprising raised ridges extending principally in the transverse direction of the article;
- channels formed on the surface of the article;

- the channels extend principally in the transverse direction and thus permit liquid flow in the direction towards the side edges of the article.
- 6.3 The problem underlying the patent in suit starting from D6 is to provide an article which is capable of absorbing large volumes of liquid in sudden flows and to avoid collection of liquid on the surface of the article (paragraphs [0005] and [0007]). This problem is solved according to the patent in suit by the absorbent article comprising the features of the characterising portion of claim 1, particularly by the creation of channels during use which help to canalize - in the transverse direction - and absorb the liquid in the storage layer and within the channels.
- 6.4 D6 provides an article having an anatomically shaped configuration for a close body contact during use (page 3, line 28 - 30). This configuration during use is provided via an expanding layer comprising apertures (49) and incisions (48). The apertures (49) have a preferred total area of from 15 % to 45 % of the surface area of the body facing surface (page 7, line 29) and create a straight path for sending fluid directly into the non-expanding absorbent element of the absorbent core. The incisions (48) are arranged in an intersecting network or form a pattern of closed contours (page 7, lines 1 - 4). No preferred direction of the incisions (48) is present. They allow free swelling in z-direction of the expanding layer. Furthermore, they provide a preferential path for the diffusion of the fluid within the expanding layer itself (page 8, lines 15 - 18). A preferential path for the diffusion of the fluid is to be distinguished from

a channel which corresponds to a preferential path for the distribution of fluid.

6.5 The combined action of incisions (48) and apertures (49) provides the expanding layer with a much higher swelling rate upon absorption of fluid (page 8, line 24 - 25), provides an effective absorption system and establishes the expansion into a three-dimensional structure of the expanding layer after activation (page 7, line 56 to page 8, line 2). This three-dimensional structure ensures the close body contact during use.

6.6 Neither transversely extending channels nor a preferential path sideways are considered in D6. The apertures (49) are a central element in the napkin of D6. Nowhere in D6 is to be found the suggestion to omit the apertures in the absorption system or to create channels for distribution along or aside the article, far less to provide spacing elements. Hence, D6 neither provides nor suggests spacing elements, raised ridges or transversely extending channels being formed on the surface of the article. Since also none of the other cited documents refers to such elements, even the combination of the sanitary napkin of D6 with any one of the cited documents would not result in the claimed structure.

6.7 D8 is even further away from the claimed invention. As set out for novelty above, in D8 no channels are formed and no spacing between the article and the body of the user is intended or obtained. To the contrary, D8 refers to direct contact. Therefore, D8 neither forms an appropriate starting point for the evaluation of

inventive step nor would it lead in a combination with D6 to the claimed subject-matter.

- 6.8 It follows that the subject-matter of claim 1 as amended involves an inventive step (Article 56 EPC). The patent specification amended in accordance with the Appellant(II)'s main request forms a suitable basis for maintenance of the patent in such amended form.

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 as follows:
 - Claims, no. 1 to 10, filed during oral proceedings on 6 July 2006;
 - description, columns 1 to 9 filed during the oral proceedings on 6 July 2006;
 - drawings, Figures 1 - 4 as granted.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau