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D E C I S I O N
of 23 November 2004

Case Number: T 0715/02 - 3.2.6

Application Number: 95103693.8

Publication Number: 0677284

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:
Containment flap, method of making same and absorbent article comprising same

Patentee:
KIMBERLY-CLARK WORLDWIDE, INC.

Opponent:
SCA Hygiene Products AB

Headword:
-

Relevant legal provisions:
EPC Art. 123(2), 84, 56

Keyword:
"Amendments - support in the claims of the application as filed"
"Clarity - essential features"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0715/02 - 3.2.6

D E C I S I O N
of the Technical Board of Appeal 3.2.6
of 23 November 2004

Appellant: (Opponent)
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Respondent: (Proprietor of the patent)
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Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 16 May 2002 concerning maintenance of European patent No. 0677284 in amended form.

Composition of the Board:

Chairman: H. Meinders
Members: G. Pricolo
J. H. Van Moer

Summary of Facts and Submissions

I. The appeal is from the interlocutory decision of the Opposition Division posted on 16 May 2002 concerning the maintenance in amended form of European patent No. 0 677 284, granted in respect of European patent application No. 95103693.8.

In coming to its decision the Opposition Division rejected the patentee's main request pursuant to Rule 71(a) EPC because it was not substantiated and was filed after the final date for making written submissions in preparation for the oral proceedings. It further considered that claim 1 as amended in accordance with the first auxiliary request met the requirements of Article 84 and 123(2),(3) EPC and that its subject-matter was novel and also involved an inventive step over the available prior art represented in particular by documents:

D1: EP-A-0 300 615;

D4: EP-A-0 263 720.

II. The appellant (opponent) lodged an appeal, received at the EPO on 10 July 2002, against this decision and paid the appeal fee that same day. The statement setting out the grounds of appeal was received at the EPO on 13 September 2002.

III. With letter dated 5 June 2003 the respondent (patentee) requested that the patent be upheld in the form allowed by the Opposition Division and filed amended documents

forming the basis for new first to fifth auxiliary requests for maintenance of the patent in amended form.

IV. In an annex to the summons to oral proceedings pursuant to Article 11(2) Rules of Procedure of the Boards of Appeal the Board expressed its preliminary opinion that it was questionable whether the containment flap according to claim 1 as maintained by the Opposition Division was novel over the disclosure in D1 of a leg cuff. As regards the auxiliary requests in which claim 1 was directed to an absorbent article, novelty over D1 appeared to be given since this document did not disclose an absorbent article having both leg cuffs and containment flaps.

V. With letter dated 22 October 2004 the respondent filed new main and auxiliary requests in which claim 1 was directed to an absorbent article.

VI. Oral proceedings took place on 23 November 2004.

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

The respondent requested that the appeal be dismissed and that the patent be maintained on the basis of claims 1 to 16 and description filed during the oral proceedings, with the figures of the patent as granted, and withdrew all the auxiliary requests on file.

VII. Claim 1 of the respondent's request reads as follows:

"1. An absorbent article (32) having a front portion (34), a rear portion (36) and a crotch portion (38) connecting said front and rear portions (34,36), said

crotch portion (38) having opposite longitudinal side portions (40) comprising respective elasticized longitudinally-extending leg cuffs (48), said article (32) comprising: a liquid-permeable bodyside liner (44); an outer cover (42); an absorbent core (46) located between said bodyside liner (44) and said outer cover (42); and a pair of containment flaps (10) extending longitudinally from said front portion (34) to said rear portion (36), each said containment flap (10) comprising a proximal edge (12) joined to said bodyside liner (44) in said crotch portion (38) and said front and rear portions (34,36), and a distal edge (14) opposite said proximal edge (12), said containment flap (10) comprising: a first layer (16) made of heat-fusible material; a second layer (18) made of heat-fusible material; at least one elastic member (20) located between said first and said second layers adjacent said distal edge (14); characterized in that a first pattern of bonds (22) joins said first and second layers (16,18) together, said first pattern of bonds (22) being located between said elastic member (20) and said distal edge (14), and wherein said first pattern of bonds (22) is provided by thermal bonds and said elastic member (20) is intermittently, thermally attached to said first and/or second layers (16,18)."

VIII. The submissions of the appellant can be summarised as follows:

The patent in suit as amended was restricted to the embodiment of figure 3 in which the containment flap comprised a first pattern of bonds between the elastic member and the distal edge and a second pattern of bonds between the elastic member and the proximal edge.

It was clear for the skilled person that there was a functional relationship between these patterns of bonds, and therefore by claiming only the first pattern of bonds rather than the combination of first and second patterns of bonds claim 1 contravened Article 123(2) EPC.

Furthermore, the second pattern of bonds was a feature necessary for achieving the object underlying the patent in suit of preventing the elastic member from contacting the skin of a person wearing the absorbent article. In fact, in use the elastic strived to take a straight configuration whilst the flap adapted to the curved configuration of the wearer's body. Under these conditions, in the absence of the second pattern and in particular if the elastic only comprised a limited number of attachments, in the zones between the attachments the elastic would move from between the first and second layers and directly contact the skin of a wearer. Therefore, amended claim 1 was not allowable under Article 84 EPC because it lacked the essential feature relating to the presence of the second pattern of bonds.

Moreover, under these conditions the distal edge of the containment flap could not "blouse" when the absorbent article was in use – as the patent required - and therefore this effect was not obtained with the absorbent article of claim 1. In any case, this effect was described in the patent in suit only in relation to the embodiment in which the first and second layers were formed of a single, integral piece of material and claim 1 was not restricted to this specific embodiment.

Accordingly, the technical problem solved when starting from the article of the closest prior art D4 was only to be seen as being to reduce the contractive force needed to gather the containment flap. Document D1 disclosed a leg cuff's construction solving the problem of reducing the contractive force needed to gather it, and therefore the skilled person would consider applying this known construction, which comprised a pattern of bonds between the elastic member and the distal edge, to the containment flap of D4. The construction of the leg cuff of D1 also comprised an intermittent attachment of the elastic members since they were attached by means of a bonding pattern, i.e. by means of at least 3 bonding points.

Moreover, the leg cuff of D1 also provided the "blousing" effect which was to be seen in the buckling of the first and second layers when the absorbent article was put in use due to the presence of hinge segments provided by the unbonded segments between bonds.

IX. In support of its request the respondent relied essentially on the following submissions:

It was clear both from the description and the claims of the application as filed that the feature relating to the presence of a second pattern of bonds between the elastic member and the proximal edge of the containment flap was an optional and not an essential feature. Therefore, the requirements of Article 123(2) EPC were met.

Claim 1 resulted from a combination of granted claims 1, 9 and 23 and therefore could not be objected to under Article 84 EPC because lack of clarity was not a ground for opposition. Anyway, the second pattern of bonds was not a feature necessary for achieving the object underlying the patent in suit of preventing the elastic member from contacting the skin of a person wearing the absorbent article. When the absorbent article was worn, the elastic moved in the direction towards the distal edge of the containment flap, i.e. against the first pattern of bonds. Therefore it did not move away from between the first and second layers of the containment flap as suggested by the appellant. Furthermore, the claim should be read in the context of the patent in suit aiming at avoiding the elastic contacting the skin of the wearer.

D4 disclosed a containment flap having a folded edge which enclosed the elastic and thereby prevented it from directly contacting the skin of a wearer. In the absorbent article in accordance with claim 1 of the patent in suit the first pattern of bonds located between the elastic member and the distal edge of the containment flap formed a cushioning zone keeping the elastic away from the distal edge of the flap and thus provided a more comfortable edge contacting the skin of the wearer. Starting from D4, the skilled person would not even consider there was a problem of improving containment flap comfort, because he would consider that the folded end enclosing the elastic already provided sufficient comfort. Furthermore, there was no reason for a skilled person to adopt the leg cuff construction of D1 for solving the problem of reducing the contractive force needed to gather the containment

flap. Indeed, the elastic of the containment flap of D4 was already contractible enough and also affixed at two end portions in accordance with the specific teaching of D1 in respect of this problem. Moreover, leg cuffs and containment flaps provided substantially different functions in the absorbent article of D4 and therefore there was no reason for a skilled person to apply the leg cuff construction of D1 to the containment flap of D4.

Reasons for the Decision

1. The appeal is admissible.

2. *Article 123(2) and (3) EPC*

2.1 Claim 1 includes all the features of claims 1, 9 and 23 of the application as filed. It additionally includes the feature that the longitudinal side portion of the absorbent article comprises respective elasticized longitudinally-extending leg cuffs. Basis for the inclusion of this feature in claim 1 is found on page 16, line 32, of the description of the application as filed. Accordingly, the amendments of claim 1 do not introduce subject-matter extending beyond the content of the application as filed.

2.2 The appellant argued that claim 1 contravened Article 123(2) EPC because it did not include the feature according to which a second pattern of bonds was provided between the elastic member and the proximal edge of the containment flap as shown in the

embodiment of figure 3 to which the patent in suit was restricted.

This argument cannot be followed because the basis for the general definition of claim 1 can be found in the originally disclosed combination of features of claims 1, 9 and 23 of the application as filed which does not include the feature concerning the second pattern of bonds. Furthermore, the specific disclosure of the embodiment of figure 3 does not have the effect of limiting the general disclosure of the originally claimed combination to additionally include this feature. In fact, it is even stated in the relevant passage of the description (see page 8, first paragraph of the application as filed) that the second pattern of bonds is an optional feature ("containment flap ... **may further comprise** a second pattern of thermal bonds").

2.3 Dependent claims 2 to 14 and 16 correspond respectively to claims 2 to 6, 10, 11, 14 to 19 ,21, 8 and 20 of the application as filed.

The description of the patent in suit is adapted to be consistent with the claims as amended.

2.4 Hence, the amendments do not introduce subject-matter which extends beyond the content of the application as filed and therefore the requirements of Article 123(2) EPC are met.

2.5 Since claim 1 is directed to an absorbent article comprising a containment flap having all the features of claim 1 as granted, the amendments made result in a restriction of the protection conferred by the patent

in suit and therefore do not give rise to objections under Article 123(3) EPC.

3. *Clarity (Article 84 EPC)*

The appellant's objection under Article 84 EPC is based on the fact that claim 1 lacked the essential feature relating to the presence of the second pattern of bonds between the elastic member and the proximal edge of the containment flap. According to the appellant, this feature was necessary for achieving the object underlying the patent in suit of preventing the elastic member from contacting the skin of a person wearing the absorbent article because in the absence of this feature the elastic member would slip out between the first and second layer and directly contact the skin of the wearer.

However, the object underlying the patent in suit (see column 2, paragraph [0009]) is not as specific as argued by the appellant but is more general and consists in providing an absorbent article which is generally flexible and relatively easy to manufacture. Therefore the appellant's objection already fails on this ground, irrespective of the question whether claim 1 can or cannot be objected to under Article 84 EPC as submitted by the respondent. The respondent considered that the alleged lack of clarity was already present in the claims as granted (claim 1 resulting essentially from the combination of granted claims 1, 9 and 23) and thus not objectionable because Article 84 EPC is not a ground of opposition. In any case, since no reasons have been advanced by the appellant or identified by the Board as to why the second pattern of

bonds might be essential for solving this more general problem, the clarity objection fails.

In fact, the appellant's objection is rather related to the question of inventive step (see below) than of clarity.

4. *Novelty*

Since none of the cited documents discloses an absorbent article having leg cuffs and a pair of containment flaps each comprising first and second layers joined together by a pattern of bonds located between the distal edge and the elastic member thereof, the subject-matter of claim 1 is found to be novel.

Novelty of the subject-matter of claim 1 was in fact not in dispute.

5. *Inventive step*

5.1 The Board shares the view of the parties that document D4 represents the closest prior art because it concerns the same problem underlying the patent in suit, namely providing an absorbent article having a containment flap which is generally flexible and easy to manufacture (see D4, column 11, lines 42 48 and column 12, line 27 ff.). It discloses an absorbent article having the most features in common with the subject-matter of claim 1.

Using the wording of claim 1, D4 discloses (see figures 1 and 3) an absorbent article (diaper 20) having a front portion (22), a rear portion (24) and a crotch

portion (26) connecting said front and rear portions, said crotch portion (26) having opposite longitudinal side portions comprising respective elasticized longitudinally-extending leg cuffs (gasketing cuffs 56; see column 4, lines 11,12), said article comprising: a liquid-permeable bodyside liner (38); an outer cover (42); an absorbent core (44) located between said bodyside liner and said outer cover; and a pair of containment flaps (barrier cuffs 62; see column 4, line 13) extending longitudinally from said front portion to said rear portion, each said containment flap (62) comprising a proximal edge (64) joined to said bodyside liner (38) in said crotch portion and said front and rear portions, and a distal edge (66) opposite said proximal edge, said containment flap (62) comprising: a first layer (upper portion of channel portion 70 in Fig. 3) made of heat-fusible material (column 11, lines 54 to 57); a second layer (lower portion of channel portion 70) made of heat-fusible material (it is made of the same material of the first layer); at least one elastic member (77) located between said first and said second layers adjacent said distal edge. D4 further discloses that the first and second layers are joined together by a pattern of bonds (92) which, among other possibilities, can be thermal bonds (see column 12, lines 40 to 42 in combination with lines 52 to 54) and, also among other possibilities, that the elastic member can be thermally attached to the first and second layers (see column 16, lines 26 to 37).

The subject-matter of claim 1 is distinguished from the absorbent article of D4 by a first pattern of thermal bonds joining said first and second layers together

located between said elastic member and said distal edge, and by the elastic member being intermittently attached to said first and/or second layers.

5.2 The general problem stated in the description of the patent in suit (see paragraph [0009]) is already solved by D4 because the containment flaps (barrier cuffs 62) are flexible (column 11, lines 42 to 54) and easy to manufacture (column 12, line 27 ff.). Thus the technical effect of the above-mentioned distinguishing features must be determined in order to define the objective technical problem solved by the absorbent article of claim 1 with respect to D4.

When the diaper of D4 is in use, the containment flaps (62) of the absorbent article assume a raised position in which, as shown in Fig. 2, the distal edges (66) are spaced away from the liquid-receiving surface (44) (column 11, lines 48 to 54). In this position, the elastic member is in direct contact with the distal edge which in turn is in direct contact with the body of the wearer. In contrast thereto, in the absorbent article according to claim 1 by means of the first pattern of thermal bonds located between the elastic member and the distal edge there is formed a cushioned zone maintaining the elastic away from the distal edge of the flap thereby providing a more comfortable surface for contacting the skin of the wearer.

Therefore, the objective technical problem consists in providing improved wearing comfort of the containment flap of the absorbent article.

5.3 The appellant argued that this object was not achieved with the absorbent article of claim 1 because the latter did not comprise the feature concerning the second pattern of bonds provided between the elastic member and the proximal edge and therefore the elastic member could directly contact the skin of the wearer (see above point 3 relating to clarity).

This argument cannot be followed because when the absorbent article is in use it conforms to the general shape of the body and assumes a curved configuration in which the elastic members, which are attached to the first and second layers of the containment flaps, exert a force in a direction substantially towards the distal edges of the containment flaps and are thus maintained against the first pattern of bonds, whereby a direct contact with the skin of the wearer is avoided. Moreover, it is clear for a skilled person that the elastic members provided between first and second layers of the containment flap should remain there not only when the absorbent article is in a flat configuration as shown in Fig. 5 of the patent in suit but also when the absorbent article is used. In order to obtain this result, the provision of a pattern of bonds between the elastic member and the proximal edge is not a *conditio sine qua non*; other possibilities are available to the skilled person, such as adequate joining of the containment flap to the bodyside liner or adequate dimensioning of the first and second layers.

5.4 The problem of improving the wearing comfort of an absorbent article is a constant preoccupation of manufacturers and in this context the skilled person would consider improving the wearing comfort of the

various components of the absorbent article, in particular of the containment flaps. Therefore, contrary to the respondent's assertion, the skilled person having knowledge of the disclosure of D4 would consider the posing of the above-mentioned objective technical problem.

However, the available prior art does not provide any indications suggesting to the skilled person to modify the containment flap of the absorbent article of D4 so as to include the above-mentioned distinguishing features, in particular the feature concerning the first pattern of thermal bonds located between the elastic member and the distal edge, in order to solve the above-mentioned objective technical problem.

In this respect, the appellant specifically referred to document D1, which discloses an absorbent article having (see Fig. 1) a leg cuff (50) comprising elastic members (18) located between first and second layers (60,62) joined together by patterns of bonds (68), one of said patterns (right side in Fig. 3) being located between the elastic member (18) and the distal edge. However, the leg cuff of D1 fulfils its gasketing function by lying generally flat against the skin of a wearer rather than by assuming a raised position as does the containment flap of the absorbent article of D4 when in use (see column 11, lines 42 to 54; Fig. 2). Accordingly, in the leg cuff of D1 only the first layer (upper layer 60 in Fig. 3 of D1) prevents the elastic member (18) from directly contacting the skin. Thus, the (first) pattern of bonds located between the elastic member and the distal edge of the leg cuff does not serve to provide a cushioned zone maintaining the

elastic further away from the skin of the wearer as in the containment flap of the absorbent article according to claim 1 of the patent in suit. In fact, the patterns of bonds of D1, including said (first) pattern of bonds between the elastic member and the distal edge, serve to join the first and second layers together and to provide hinge segments 70 alternately placed along the bonds 68 which permit the first and second layers to buckle, thereby reducing the contractive force needed to gather the cuffs 50 (see column 9, lines 5 to 12).

5.5 In this respect it is noted that even if such buckling of the first and second layers might generally correspond to a "blousing" effect, as submitted by the appellant, there is no indication suggesting that it could provide improved wearing comfort in a containment flap which, when in use, lies in an upright position rather than flat against the skin of a wearer as a leg cuff.

Finally, there is no reason for a skilled person to consider reducing the contractive force needed to gather the containment flap of D4 by applying to it the teaching of D1 concerning a leg cuff. Although D1 discloses that the reduction of the contractive force results in improved wearing comfort of the leg cuff (see D1, column 1, lines 39 to 41), there is no indication that this would also be the case for a containment flap which in use, as explained above, in comparison with a leg cuff, is positioned differently with respect to the wearer. Furthermore, D4 specifically teaches (see column 16, lines 21 to 23) that the elastic members of the containment flaps should preferably be secured along their entire length

rather than only at their ends. Since the latter is a measure which results in a reduction of the contractive force (because in such case the elastic members do not need to contract also the attachment, consisting e.g. of adhesive; see also D1, column 1, lines 35 to 39), D4 conveys to the skilled person the information that a reduction of the contractive forces of the containment flap is not desirable. There is therefore no reason for the skilled person to consider the inclusion, in the containment flap of D4, of the measures for reducing the contractive forces taught by D1.

5.6 For these reasons the subject-matter of claim 1 is not obvious to a person skilled in the art. Its subject-matter thus involves an inventive step (Article 56 EPC).

The subject-matter of the dependent claims 2 to 16 is for preferred embodiments of the article of claim 1, thus also involves inventive step.

6. Therefore, the amended patent documents consisting of the claims and description filed during the oral proceedings and the figures of the patent as granted form a suitable basis for the maintenance of the patent in 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 first instance with the order to maintain the patent on the basis of the following documents:

claims: 1 to 16 filed during the oral proceedings of 23 November 2004;

description: columns 1 to 15, with the insertion of column 2a, filed during the oral proceedings of 23 November 2004;

drawings: figures 1 to 10 of the patent as granted.

The Registrar: The Chairman:

M. Patin H. Meinders