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D E C I S I O N
of 19 January 1999

Case Number: T 0226/95 - 3.2.2

Application Number: 87308971.8

Publication Number: 0264238

IPC: A61F 5/44

Language of the proceedings: EN

Title of invention:

Absorbent article having a containment pocket

Patentee:

The Procter & Gamble Company

Opponent:

Peaudouce

Headword:

-

Relevant legal provisions:

EPC Art. 100(a), 56

Keyword:

"Inventive step (yes)"

Decisions cited:

-

Catchword:

-



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Boards of Appeal

Chambres de recours

Case Number: T 0226/95 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 19 January 1999

Appellant:
(Opponent)

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Respondent:
(Proprietor of the patent)

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Representative:

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Decision under appeal:

Interlocutory decision of the Opposition Division
of the European Patent Office posted 5 January
1995 concerning maintenance of European patent
No. 0 264 238 in amended form.

Composition of the Board:

Chairman: W. D. Weiß
Members: R. Ries
C. Holtz

Summary of Facts and Submissions

- I. European patent No. 0 264 238 was granted on 25 September 1991 on the basis of European patent application No. 87 308 971.8.
- II. The granted patent was opposed by the present appellants on the grounds that its subject matter lacked novelty and did not involve an inventive step with respect to the state of the art (Articles 100 a), 52(1), 54 and 56 EPC).

Of the pre-published documents relied upon in the opposition proceedings, only the following are of any significance for the Board's decision:

D1: AU-B-45217/85

D2: GB-A-2 161 059

D3: GB-A-2 159 693

- III. With its decision posted on 5 January 1995 the Opposition Division held that the patent could be maintained in amended form on the basis of the set of claims 1 to 7 filed with letter dated 21 January 1993.
- IV. An appeal against this decision was filed on 27 February 1995 and the notice of appeal received on 3 May 1995 was accompanied by the statement of grounds.
- V. Oral proceedings before the Board of Appeal were held on 19 January 1999.

VI. The appellants requested that the decision under appeal be set aside and the patent revoked in its entirety.

The respondents requested that the decision under appeal be set aside and the patent maintained in amended form on the basis of claims 1 to 7 as submitted at the oral proceedings and the description and figures as defined in the decision under appeal.

Claim 1 as amended reads as follows:

"1. An integral disposable absorbent Article (20) comprising an absorbent core (44, 48) having a garment surface (50), a body surface (52), side edges (46), and waist edges (47), a liquid impervious backsheet (42) positioned adjacent said garment surface (50) of said absorbent core (44, 48); a gasketing flap (58) extending outwardly from and along each side edge (46) of said absorbent core (44, 48); and a flap elastic member (60) operatively associated with each of said gasketing flaps (58) to thereby form gasketing cuffs (56); wherein a first barrier cuff (62) is disposed adjacent each of said gasketing cuffs (56) along the longitudinal edges (30) of the absorbent article, each of said first barrier cuffs (62) having a first proximal edge (64) and a first distal edge (66), each of said first proximal edges (64) being disposed inboard of said flap elastic member (60), preferably outboard of said side edges (46) of said absorbent core (44, 48); a second barrier cuff (262) is disposed adjacent each end edge (32) of the absorbent article (20) so as to extend along at least a portion of said end edge, each of said second barrier cuffs (262) having a second proximal edge (264) and a second distal edge (266); and said first distal edges (66) and said second distal

edges (266) overlap at at least 4 corner points (100) to form a containment pocket around the entire periphery (28) of the absorbent article (20), a spacing elastic member (77) being operatively associated with each of said first barrier cuffs (62) for spacing said first distal edges (66) away from the liquid receiving surface (40) of the absorbent article, a closing means (78) disposed adjacent each of said corner points (100) for securing together said first distal edges (66) and said second distal edges (266) so as to cause said second distal edges (266) to be spaced away from the liquid-receiving surface (40) of the absorbent article by said spacing elastic member (77)."

Dependent claims 2 to 7 relate to preferred embodiments of the integral disposable article defined in claim 1.

VII. The appellants argued as follows:

- The patent at issue aims at providing an absorbent article having a pair of longitudinal barrier cuffs and a pair of lateral barrier cuffs disposed adjacent to each edge of the article which interact to form a containment pocket around a portion of the periphery of the absorbent article so as to provide a restraint against the leakage of body exudates.
- Document D2 addresses the same problem underlying the disputed patent and thus can be taken as closest prior art. The disposable diaper disclosed in D2 comprises a pair of flaps which form longitudinal barrier cuffs positioned along the sides of the diaper and extending inwards from the edges which comprise elasticized means 17. This diaper does not comprise end cuffs around the

waist region. Such an arrangement of transversal barrier cuffs is, however, described in document D3 which discloses a pair of containment flaps (second barrier cuffs) attached to the front and back waist portion of the diaper and extending downward and inward toward the crotch area. Thereby, a faecal barrier is established completely around the waist portion which prevents urine and faeces from leaking out of that area. A skilled person faced with the problem how to further improve the waste retaining properties of the diaper known from document D2, would without inventive considerations add a second pair of flaps around the front and back waist region of the diaper as described in document D3, in order to prevent loss of faecal body motion along the waist region. In the light of the combined teaching of documents D2 and D3, a person skilled in the art would also fix the overlapping corners of the longitudinal and transversal barrier cuffs, e.g. in order to prevent the flaps from folding outward and thus losing their barrier function.

- A similar faecal containment pocket as claimed in the form of an oval shaped aperture cut in the interior facing sheet of the diaper is also known from document D1. The spacing elastic member in the form of longitudinal elastic bands 16 in D1 urge the facing sheet 12 to be spaced away from the underlying absorbent core. The inner border of the flat top sheet around the aperture thus acts as a longitudinal and transversal barrier in the same way as claimed. The only feature not disclosed in D1 is the closing means 78 for connecting the overlapping corners of the side and end cuffs to form a containment pocket by interacting with the spacing means in the side cuffs. Given that a unitary sheet is used in D1,

closing means are superfluous. The elastic bands 16 in D1 act in same way as the combined closing and spacing means, because both exercise a contracting force upon the longitudinal and transversal parts of the top sheet, that force causing them to be spaced away from the liquid receiving surface. Hence, the design of the claimed absorbent article is obvious since it is immediately derivable from the teaching of documents D1, D2 and D3.

VIII. The respondents argued as follows:

- Although D2 provides a diaper having first (side) barrier cuffs, it fails to suggest the presence of gasketing cuffs and does not show a separate pair of second barrier cuffs across each end as claimed in the patent. Given that the ends of the side cuffs in D2 are preferably sealed, transversal barrier cuffs would be redundant in the diaper according to D2. Therefore, a skilled person would not consider to combine the teaching of document D2 with that given in document D3, showing end barrier cuffs which are also attached to the end portions either adhesively or by heat sealing. Even if documents D2 and D3 were combined to design a diaper having side cuffs and end cuffs, there is nothing in both documents suggesting the provision of closing means at the overlapping parts so that the side and end barrier cuffs can interact to cause the edges of the flaps to be spaced away from the core to form a pocket containment.

- The diaper disclosed in D1 is based on a totally different concept. The liquid receiving core is covered with a single hydrophobic facing sheet provided with an oval opening in the crotch

region. Given that a flat top sheet is used, no upstanding barrier cuffs are created to define a faecal trough or pocket containment in the manner defined in the patent in suit. In addition, D1 does not provide a double seal in the form of barrier cuffs and gasketing cuffs as does the diaper claimed in the patent. Thus also the teaching of document D1 cannot make the claimed absorbent article obvious, neither taken alone nor in combination with any of documents D2 or D3. Apart therefrom, a combination of all three documents D1, D2 and D3 as proposed by the appellant to demonstrate the obviousness of a combination claim is not admissible and contrary to the established case law of the EPO.

IX. At the conclusion of the oral proceedings, the Board's decision was announced.

Reasons for the Decision

1. The appeal is admissible.
2. *Amendments*

In comparison with the claims underlying the impugned decision, claim 1 has been amended by incorporating the wording "*so as to cause said second distal edges (266) to be spaced away from the liquid receiving surface (40) of the absorbent article by said spacing elastic member (77).*" This restriction is supported by column 21, lines 21 to 28 of the published patent application (page 28, lines 8 to 12 in the patent application as originally filed) corresponding to column 20, lines 44 to 50 of the patent as granted.

Hence there are no objections to the amendment under Articles 123(2) or 123(3) EPC.

3. *Novelty*

The subject matter of claim 1 is novel, because none of the documents under consideration discloses all the technical features of the claimed disposable absorbent article. This issue not being in dispute, it is not necessary to give further detailed reasons for this finding.

4. *Inventive step*

4.1 The closest prior art

It is the object of the patent in suit to provide a disposable diaper which exhibits improved containment characteristics, especially with regard to loose faecal material. To this end, the patent provides a nappy having longitudinal and transversal barrier cuffs which interact to form a faecal containment pocket (cf. column 2, lines 6 to 21 of the patent).

- Document D1 is concerned with a disposable diaper which exhibits excellent performance in effectively containing and retaining **essentially liquid** discharges such as urine (cf. page 2, lines 14 to 27). In addition document D1 discloses a **flat top sheet** around the oval shaped aperture rather than a (barrier) **cuff** as claimed which is - in the normal understanding of English language - the end part of a sleeve which is thicker than the rest of the sleeve.

- Documents D2 and D3 relate to disposable diapers provided with either side flaps or end flaps,

respectively, both designed to form a faecal barrier or waste containment pocket (cf D2, front page, abstract; D3, page 1, lines 103 to 108). Thus, document D2 or document D3 are both better qualified than D1 to represent the closest prior art.

4.2 *Problem and solution*

Claim 1 is directed to a disposable diaper comprising:

- (a) an absorbent core 44, 48 having
 - a garment surface 50
 - a body surface 52
 - side edges 46 and
 - waist edges 47,
- (b) a liquid impervious backsheet 42,
- (c) a gasketing flap 58 (side flaps) outwardly from and along each side edge 46 of the core 48
- (d) an elastic members 60 forming gasketing cuffs 56,
- (e) a first barrier cuff 62, adjacent each of said gasketing cuffs 56, having
 - a first proximal edge 64 and first distal edge 66 disposed inboard said flap elastic member 60,
 - spacing elastic members 77 for spacing the distal edges 66 away from the liquid receiving surface 40,
- (f) a second barrier cuff 262 adjacent each end edge 32, (extending along at least a portion of the end edges 32) having
 - a second proximal edge 264 and second distal edge 266,

- (g) an overlap at at least four corners 100 of the first and second distal edges to form a containment pocket around the entire periphery 28 and
- (h) closing means 78 being disposed adjacent each of the four corner points 100 for securing together the first distal edges 66 and second distal edges 266 to cause the second distal edges away from the liquid receiving surface 40 by the spacing elastic member 77.

Document D2 fails to disclose at least features (f) to (h) and the spacing elastic member 77 present in feature (e). Starting from document D2 as closest prior art, the problem underlying the disputed patent, is, therefore, to provide a diaper exhibiting significantly improved containment characteristics against the loss of essentially loose faecal material and body exudates in spite of the movements of the wearer.

The solution to this problem consists in a diaper comprising side cuffs having integrated elastic spacers, and transversal end cuffs, whereby the distal edges of the cuffs overlap at four corners and are fixed by closure means, thus providing a frustroconical containment pocket.

Although document D3 discloses a diaper having a front and back waist portion which is provided with inwardly positioned flaps to form a waste containment pocket, the combined teaching of D2 and D3 does not result in the diaper defined in claim 1 of the disputed patent. Contrary to the appellant's view, the use of closing means in the region of overlap is not obvious. As is apparent from the patent specification column 7, lines 40 to 43, the closing means inter alia act to

integrate the movement of the barrier cuffs and prevent their inversion during use. As specified in document D2, page 1, lines 99 to 101, the ends of the flaps 14 are preferably sealed to prevent folding outward when the diaper is worn. In document D3, the end flaps appear to be fixed to the ear portions 13a' at least in part by the fastening means 11 (cf. Figure 1 of D3). Thus, documents D2 and D3 would incite a skilled person to prevent inversion of the flaps in a way different to that claimed in the patent at issue. Moreover, the claimed solution of securing the distal edges of the cuffs by closing means significantly improves the versatility of the diaper, e.g. by the selection of different materials for the side and waist cuffs, and thus implies modifications not envisaged or possible with diapers disclosed in any of documents D2, D3 or even D1. Moreover, none of these documents suggests elastic spacing means 78 along the distal edges 66 of the side cuffs to interact during the movements of the wearer and to raise both the interconnected first and second distal edges above the liquid receiving surface to create a channel 96 that acts as a constraint against leakage. Consequently, the combination of the teaching of documents D2 and D3 cannot lead to the invention.

Reference D1 is more remote and even teaches away from the claimed solution since, as previously mentioned, the diaper known from D1 is designed for a different purpose. To this end, the absorbent core of the diaper in D1 is covered with a single impervious flat top sheet 13 punched out in the crotch portion 12. Although the central crotch region around the longitudinal edges of the facing sheet of the diaper is provided with zones of elasticsation 16 to apply tensioning forces to the facing sheet around aperture 13c and to urge the facing sheet at least in the region adjacent to the aperture away from the underlying absorbent core, no

inducement is discernable in D1 for a person skilled in the art to replace the single top sheet by separate side and end cuffs and to secure the overlapping corner points by closing means to form a faecal containment pocket. This assessment is supported by the fact that the hydrophobic facing sheet 13 which acts to protect the infant's skin from moisture in the absorbent core is forced by the elastics 16 to engage with the body of the wearer, preferably with the infant's legs, to provide a "seal" by which the resistance to leakage in the region of the inside of the tights as well as from the ends of the nappy is significantly enhanced (cf. D1, page 3, last paragraph bridging page 4, paragraph 1). Consequently, the side parts of the impervious top sheet 13 in combination with the elastics are intended to provide a protective barrier between the wearer's skin and the (wet) inner part of the nappy and to seal the nappy around the wearer's legs rather than to form a containment pocket or trough for faecal discharges, as intended by the invention at issue.

5. Consequently, the subject matter of claim 1 involves an inventive step.

Order

For these reasons it is decided that:

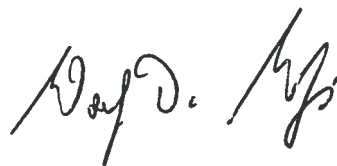
1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent on the basis of claims 1 to 7 as submitted in the oral proceedings, and the description and the figures as defined in the decision under appeal.

The Registrar:



S. Fabiani

The Chairman:



W. D. Weiß