

**Internal distribution code:**

- (A)  Publication in OJ  
(B)  To Chairmen and Members  
(C)  To Chairmen  
(D)  No distribution

**D E C I S I O N**  
**of 22 February 2005**

**Case Number:** T 1196/02 - 3.2.6

**Application Number:** 95906732.3

**Publication Number:** 0737057

**IPC:** A61F 13/15

**Language of the proceedings:** EN

**Title of invention:**

Elastomeric ears for disposable absorbent article

**Patentee:**

KIMBERLY-CLARK WORLDWIDE, INC.

**Opponents:**

SCA Hygiene Products AB  
Paul Hartmann AG  
The Procter & Gamble Company

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 84, 123(2), 56

**Keyword:**

"Amendments - added subject-matter (no) "

"Clarity (yes) "

"Inventive step (yes) "

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 1196/02 - 3.2.6

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.6  
of 22 February 2005

**Appellant:** SCA Hygiene Products AB  
(Opponent I) S-405 03 Göteborg (SE)

**Representative:** Hyltner, Jan-Olof  
Albihns Stockholm AB  
Box 5581  
S-114 85 (SE)

**Party to the proceedings:** Paul Hartmann AG  
(Opponent II) Paul-Hartmann-Strasse 12  
D-89522 Heidenheim (DE)

**Representative:** Friz, Oliver  
Patentanwälte  
Dreiss, Fuhlendorf, Steimle & Becker  
Postfach 10 37 62  
D-70032 Stuttgart (DE)

**Party to the proceedings:** The Procter & Gamble Company  
(Opponent III) One Procter & Gamble Plaza  
Cincinnati  
Ohio 45202 (US)

**Representative:** Boon, Graham Anthony  
Elkington and Fife  
Prospect House  
8 Pembroke Road  
Sevenoaks  
Kent TN13 1XR (GB)

**Respondent:** KIMBERLY-CLARK WORLDWIDE, INC.  
(Proprietor of the patent) 401 North Lake Street  
Neenah  
Wisconsin 54956 (US)

**Representative:** Davies, Christopher Robert  
Frank B. Dehn & co.  
European Patent Attorneys  
179 Queen Victoria Street  
London EC4V 4EL (GB)

**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
24 October 2002 concerning maintenance of  
European patent No. 0737057 in amended form.

**Composition of the Board:**

**Chairman:** P. Alting van Geusau  
**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 24 October 2002 concerning the maintenance in amended form of European patent No. 0 737 057, granted in respect of European patent application No. 95906732.3.

In coming to its decision the Opposition Division considered that claim 1 according to the main request met the requirements of Article 123(2) EPC, that its subject-matter was novel and that it also involved an inventive step over the available prior art represented in particular by documents:

D3: EP-A-0 532 034; and

D14: JP-Y2-4-4744;

filed by Opponent III together with an English translation.

II. The appellant (opponent I) lodged an appeal, received at the EPO on 17 December 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 18 February 2002.

On 5 December 2002 an appeal was lodged by Opponent III which, however, was withdrawn by letter of 18 February 2005.

III. With letter dated 23 September 2003 the respondent (patentee) requested that the patent be maintained in

the amended form according to the main request upheld by the Opposition Division or according to one of the first and second auxiliary requests filed with the letter.

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 doubtful whether there was a clear and unambiguous basis in the application as filed for the claimed combination of the feature that a non-elastomeric extension member was attached to the ear and the features concerning the ranges for the length of the proximal edge and for the ratio of the lengths of the distal to the proximal edges as defined in claim 1.

V. Oral proceedings took place on 22 February 2005.

The appellant and the opponent II, which was represented at the oral proceedings in its quality of party to the proceedings, requested that the decision under appeal be set aside and that the patent be revoked.

As already announced in its letter of 18 February 2005, the other party to the proceedings (opponent III) did not attend the oral proceedings. The proceedings were continued without him (Rule 71(2) EPC).

The respondent withdrew the previous requests and requested that the patent be maintained on the basis of claims 1 to 12 filed during the oral proceedings

together with the description and drawings as attached to the decision under appeal.

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

"A disposable absorbent diaper (10), said diaper defining a front portion (18), a rear portion (20), and a crotch portion (22) connecting the front and rear portions; said diaper comprising: an outer cover(12); a liquid-pervious bodyside liner(14); an absorbent material (16) located between said cover and said bodyside liner; a pair of elastomeric ears (24) separately formed and attached to said rear portion; a fastener (30) joined to said elastomeric ears for attaching said elastomeric ears to said front portion in an overlapping relationship; characterised in that said ears each have a main body (48) of elastomeric material and a non-elastomeric extension member (50), said main body (48) of elastomeric material having a proximal edge (34) joined to the lateral edges of the diaper body defined by the outer cover (12) and bodyside liner (14), a distal edge (36), a first connecting edge (38), and a second connecting edge (40), said first and second connecting edges connecting said proximal and distal edges, said second connecting edge being non-parallel to said first connecting edge and said proximal edge being longer than said distal edge; said non-elastomeric extension member (50) of the ear being attached to and extending the same length as the distal edge (36) of the elastomeric main body (48) thereof along a seam (52), the fastener (30) being a mechanical fastener comprising a hook material arranged to engage loop material (32) on the front portion of the diaper, the fastener being attached to the non-

elastomeric extension member of the ear; said proximal edge having a length of from about 3 inches (7.6 centimeters) to about 7 inches (17.8 centimeters), and the ratio of the length of said distal edge (36) to said proximal edge (34) being from about 1:28 to about 3:4, and wherein, when in use, said second connecting edge defines at least a portion of a leg opening."

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

Claim 1 was restricted to the embodiment of figure 5 of the patent in suit. However, the ranges given in claim 1 in respect of the length of the proximal edge and of the ratio of the lengths of the distal to the proximal edges were disclosed in the application as filed only in connection with the embodiments of figures 2 and 3. Since it could not be derived from the application as filed that these ranges applied to the embodiment of figure 5, claim 1 contravened Article 123(2) EPC. Furthermore, it was not allowable under Article 123(2) EPC to extract only some features of the embodiment disclosed in connection with Fig. 5, but all the features described in combination should be included in the claim, i.e. also the feature that the second connecting edge of the ear had a radius of curvature. This feature was moreover essential for achieving the object underlying the patent in suit of improving the fit of the diaper. Since this feature was not included in claim 1, claim 1 did not meet the requirement of Article 84 EPC that an independent claim should define all the essential features of the invention.

As regards inventive step, the appellant argued that the non-elastomeric extension member did not provide the alleged effect of preventing the edges of the fastener from curling outward in use. In fact, if the extension member was made of a non-elastomeric material which was non-rigid, then the fastener would still curl as in the case in which the extension member was made of an elastomeric material. By means of samples presented during the oral proceedings, in which the extension member was made of a non-elastomeric nonwoven material, the appellant showed that when extending the fastener curling occurred. Curling of the fastener would also be obtained with an extension member made of a plastically deformable material. Moreover, since the radius of curvature of the second connecting edge was not defined, the claimed subject-matter did not achieve any improved fit of the diaper. Accordingly, starting from the closest prior art known from D3 or D14, the claimed-subject did not solve the problems underlying the patent in suit and therefore lacked an inventive step.

VIII. In respect of the formal allowability of claim 1, the party to the proceedings (opponent II) agreed with the arguments of the appellant and additionally submitted that it was not clear what limitation was introduced in claim 1 by the feature that the non-elastomeric extension member was attached to the elastomeric main body along a seam and that it was not clear what was meant by a "seam" in the context of claim 1.

As regards inventive step, it submitted that the skilled person would arrive at the claimed subject-matter starting from D14 as the closest prior art:



D14 did not disclose the nature of the tape fasteners attached to the ears of the diaper. However, the skilled person was generally aware of tape fasteners comprising hook components provided on a tape and arranged to engage a loop material on the front portion of the diaper, as known e.g. from document

D19: EP-A-253 014.

The tape of such fasteners was, conventionally, non-elastomeric. Thus, considering that the ears of D14 were tapered and that in practice the skilled person would obviously select the length of the proximal edge and of the distal edge such as to fall within the ranges of claim 1 for the length of the proximal edge and for the ratio of the length of the distal edge to the length of the proximal edge, the skilled person would arrive in an obvious manner at a diaper of the kind disclosed by D14 but having tape fasteners with a hook material, which diaper was only distinguished from the subject-matter of claim 1 of the patent in suit by the feature that the non-elastomeric extension member extended the same length as the distal edge of the elastomeric main body. However, the skilled person would remark that in such diaper the edges of the fastener would curl outward in use. An obvious workshop modification to prevent this would consist in modifying the non-elastomeric extension member to extend the same length as the distal edge of the elastomeric main body, and therefore the skilled person would arrive at the claimed subject-matter without the exercise of an inventive activity. Furthermore, D3 already disclosed

the attachment of different portions of an ear along the whole length of their respective edges.

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

With the expression "distal edge" it was unambiguously referred throughout the whole application as filed to the edge of the elastomeric main body of the ear. This was confirmed in particular by the disclosure in claim 29 of a "non-elastomeric extension member attached to said distal edge": claim 29 depended on claim 15 which defined the distal edge as the distal edge of the body of elastomeric material. The requirements regarding the length of the proximal edge and the ratio of the lengths of the distal to the proximal edges of the ear defined in claim 1 were specifically disclosed in the description and in claims 27, 28 of the application as filed. The relevant disclosure in the description was preceded by the wording "as a general rule" and therefore the skilled person was provided with a general teaching that in any of the embodiments of the invention the length of the proximal edge and the ratio of the lengths of the distal edge to the proximal edge were within the ranges claimed. As regards the feature concerning the radius of curvature of the second connecting edge, it was disclosed as a preferred feature and therefore could be left out of claim 1 without contravening Article 123(2) EPC.

The claimed subject-matter involved an inventive step. Document D14 did not explicitly disclose the kind of tape fastener used but it was clear for the skilled

person that in D14 an adhesive tape fastener was envisaged. In any case, if the skilled person would consider the use of fasteners with a hook material, then he would put the hook material directly onto the elastomeric ear itself. The provision of a non-elastomeric extension member extending the same length as the distal edge of the elastomeric main body only made sense if the skilled person knew that this feature resulted in a reduction of the tendency of the edges of the fastener to curl outward, thereby allowing easier engagement of the fastener with a loop material. However, the available prior art did not contain any indications in regard of this effect. Although the extent to which this effect was achieved could vary depending on the non-elastomeric material used for the extension member, any non-elastomeric material provided substantial improvements over elastomeric materials due to the absence of return forces.

## **Reasons for the Decision**

1. The appeal is admissible.
2. *Amendments (Articles 123 and 84 EPC)*
  - 2.1 Basis for the amendments of claim 1 is found in original claims 1, 13, 14, 30, on pages 5 (first paragraph), 7 (lines 12 to 23), 8 (lines 18 to 31) of the description and in Fig. 5 of the application as filed.
  - 2.2 The appellant contested that there was a basis in the application as filed for the claimed combination of a

non-elastomeric extension member attached to the ear and the ranges for the length of the proximal edge and for the ratio of the length of the distal edge to the proximal edge referred to in claim 1.

Such combination is indeed not specifically derivable from the claims of the application as filed because the non-elastomeric extension member is only defined in the last two claims 29 and 30 which, respectively, depend on the independent claims 15 and 1 which do not include said ranges. In the description, the ranges are disclosed on page 7 (lines 12 to 15 and 25 to 27) of the application as filed, with specific reference to the embodiments of figures 2 and 3 which do not include a non-elastomeric extension member. However, it is also stated on page 12, at the beginning (line 12) of the third paragraph, that the ranges disclosed for the length of the proximal edge are intended to constitute a "general rule". The following fourth paragraph, which is a continuation of the third paragraph due to the use of the term "further", makes clear that also the disclosure of the ranges for the ratio of the lengths of the distal edge to the proximal edge is to be seen as a general rule. Therefore, it is clear for the skilled reader that such general rules, i.e. the ranges in question, are generally applicable to all embodiments of elastomeric ears disclosed in the application as filed. Turning now to the embodiment of Fig. 5, in which the elastomeric ear consists of a main body 48 and an extension member 50, the question that arises is whether for the application of said general rules the distal edge to be considered is that of the elastomeric ear taken as a whole (i.e. the combination of main body and extension member) or that of the main

body only (this question does not arise in respect of the proximal edge which is in any case unambiguously identifiable as the proximal edge of the main body). In this respect, the skilled reader finds in claims 15 and 29 a clear and unambiguous definition of what is intended with "distal edge" in the case in which the elastomeric ear consists of a main body and an extension member. Since claim 15 refers to a "body of elastomeric material, said material defining a proximal edge, a distal edge, a first connecting edge, and a second connecting edge" and claim 29 dependent thereon specifies a "non-elastomeric extension member attached to said distal edge", it is clear that the distal edge of the elastomeric ear in question is the distal edge of the (main) body of elastomeric material. Therefore, the ranges disclosed in the description of the application as filed for the length of the proximal edge and for the ratio of the lengths of the distal edge to the proximal edge apply also to the embodiment in which the ear consists of an elastomeric main body and a non-elastomeric extension member, the proximal and distal edges being those of the elastomeric main body. Therefore, the definition of claim 1 of the patent in suit referring to the combination of a non-elastomeric extension member and the above-mentioned ranges does not introduce subject-matter extending beyond the content of the application as filed.

- 2.3 The appellant further objected under Article 123(2) EPC that claim 1 omitted the feature shown in figure 5 that the second connecting edge had a radius of curvature.

However, original claim 29, taken in combination with independent claim 15 on which it depends, discloses an

elastomeric ear consisting of an elastomeric main body and a non-elastomeric extension member for which there is no specific restriction concerning the shape, and in particular the radius of curvature, of the second connecting edge. Therefore, the omission of the above-mentioned feature does not contravene Article 123(2) EPC.

- 2.4 Dependent claims 1 to 12 correspond respectively to claims 2 to 11 of the application as filed. Claim 12 which corresponds to granted claim 31 is based upon the disclosure on page 16, lines 15 and 16 of the application as filed.

The description is as amended before the Opposition Division. It reflects the limitations made to claim 1 and in particular the fact that only figure 5 shows an embodiment of the invention.

- 2.5 Hence, the amendments made to the patent in suit do not give rise to objections under Article 123(2) EPC.
- 2.6 Since claim 1 is amended by way of insertion of further restrictions in the definition 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.
- 2.7 The appellant objected under Article 84 EPC that claim 1 omitted a feature essential to the performance of the invention, namely the feature concerning the radius of curvature of the second connecting edge.

The patent in suit however discloses (see column 4, lines 51 to 53 and column 6, lines 13 to 16) that it is desirable or generally preferable to have the second connecting edge concavely arcuate, but other configurations, such as a linear edge as shown in Fig. 4, are acceptable. It is therefore clear that the desired improvement in wearing comfort (see column 1, lines 49 to 55) aimed at by the patent in suit is obtained also in the absence of the above-mentioned feature which, as a consequence, is not a feature essential to the performance of the invention.

2.8 Finally, the Board cannot identify any lack of clarity due to the presence of the term "seam" in claim 1, as argued by the party to the proceedings (opponent II). In fact, it is clear that in the context of claim 1 the ordinary meaning, a line where two edges meet, of this term applies, since a line is formed where the non-elastomeric extension member is attached to the distal edge of the elastomeric main body.

2.9 Therefore, the amendments meet the requirements of Article 84 EPC.

### 3. *Novelty*

Since none of the cited documents discloses a disposable absorbent diaper having the combination of features defined by claim 1, its subject-matter is found to be novel.

In fact, novelty of the claimed subject-matter was no longer in dispute.

4. *Inventive step*

4.1 Document D14 represents the closest prior art because it concerns the same general problem underlying the patent in suit, namely to improve the fit of a diaper (see page 3, first paragraph, of the English translation) and it discloses a disposable absorbent diaper having the most features in common with the subject-matter of claim 1.

4.2 Using the wording of claim 1, D14 discloses (see Fig. 1, 2) a disposable absorbent diaper, said diaper defining a front portion, a rear portion, and a crotch portion connecting the front and rear portions; said diaper comprising: an outer cover(4); a liquid-pervious bodyside liner(3); an absorbent material (2) located between said cover and said bodyside liner; a pair of elastomeric ears (8; see page 5, third paragraph of the English translation) separately formed and attached to said rear portion; a fastener (9) joined to said elastomeric ears for attaching said elastomeric ears to said front portion in an overlapping relationship; wherein said ears each have a main body (8) of elastomeric material, said main body of elastomeric material having a proximal edge joined to the lateral edges of the diaper body defined by the outer cover and bodyside liner, a distal edge, a first connecting edge, and a second connecting edge, said first and second connecting edges connecting said proximal and distal edges, said second connecting edge being non-parallel to said first connecting edge and said proximal edge being longer than said distal edge.



4.3 Contrary to the respondent's opinion, there is no clear and unambiguous disclosure in D14 of the kind of fastener provided by the tape tab 9. Although D14 discloses that the outer cover is made of materials such as a plastic film or a laminated sheet consisting of a plastic film and a non-woven cloth (see page 5 of the English translation) suitable for engaging a tape tab of the adhesive kind, tape tabs comprising a hook material might well engage said outer cover if an appropriate landing zone with loops is provided. As regards the length of the proximal edge and the ratio of the length of the distal edge to the proximal edge, no specific value can be inferred from the description or from the schematic figures of D14. Furthermore, it is not clear whether it is possible to arrange the diaper of D14 such that, when in use, the second connecting edge defines at least a portion of a leg opening.

4.4 Therefore, the subject-matter of claim 1 is distinguished from the disposable absorbent diaper of D14 in that i) the ear has a non-elastomeric extension member attached to and extending the same length as the distal edge of the elastomeric main body thereof along a seam, ii) the fastener is a mechanical fastener comprising a hook material arranged to engage loop material on the front portion of the diaper, iii) the fastener is attached to the non-elastomeric extension member of the ear; iv) said proximal edge has a length of from about 3 inches (7.6 centimetres) to about 7 inches (17.8 centimetres), and v) the ratio of the length of said distal edge (36) to said proximal edge (34) is from about 1:28 to about 3:4, wherein, vi) when

in use, said second connecting edge defines at least a portion of a leg opening.

4.5 These distinguishing features i) to vi) result in improved diaper fit (see column 5, lines 49 to 53 of the patent in suit), multiple fastening (due to the presence of a hook material), and easy fastening. The latter effect is achieved in particular by the selection of a non-elastomeric material for the extension member and by having it of the same length as the distal edge of the elastomeric main body. In fact, as stated in the patent in suit (column 6, lines 29 to 35 of the patent in suit), when the fastener is attached to the extension member and the extension member is non-elastomeric, the fastener tends to remain flat. In contrast, when the fastener is attached to an elastomeric substrate, the edges of the fastener may curl outward so that it is more difficult to engage the fastener with loop material.

4.6 The appellant submitted that the non-elastomeric extension member did not provide the effect of preventing the edges of the fastener from curling outward in use. In support of its submission, the appellant presented during the oral proceedings samples of diapers having elastomeric ears with extension members made of a non-elastomeric material and a hook fastening material thereon. The appellant showed that when, in use, the ears were stretched for engaging the ears with the front portion of the diaper, the fastener would curl. However, with these samples the appellant only showed that the provision of a non-elastomeric extension member does not necessarily result in preventing the formation of curls completely, but did

not demonstrate that no effect at all is obtained in comparison to the case in which the extension member is elastomeric.

- 4.7 Therefore, also considering that the respondent's argument according to which a reduction of curls is achieved because of the absence of a return force when the extension member is non-elastomeric as compared to the case in which the extension member is elastomeric is plausible, the Board takes the view that the above-mentioned effect of easy fastening is effectively achieved.
- 4.8 Therefore, the objective problem solved can be regarded as to provide improved diaper fit, multiple and easy fastening.
- 4.9 Since D14 does not disclose the kind of fastener used for tape tab 9, when putting in practice the teaching of D14 the skilled person would consider the problem of finding an adequate fastener and would obviously consider the use of generally known tape tabs fasteners comprising a hook material such as known e.g. from D19. Since such tape tabs are normally made of a non-elastomeric material, the skilled person would arrive in an obvious manner at a diaper in accordance with the teaching of D14 in which the elastomeric ear comprises an elastomeric main body to which is attached a non-elastomeric extension member (the tape) on which is provided a hook material. In doing this, however, the skilled person would not consider to provide a tape which extends the same length as the distal edge of the elastomeric main body, but would attach the tape only in correspondence of a limited portion of said distal

edge in accordance with the teaching of D14 (see Fig. 1). Therefore, the skilled person would not arrive at a diaper which has the feature of claim 1 of the patent in suit that the non-elastomeric extension member of the ear extends the same length as the distal edge of the elastomeric main body. The provision of this feature, which contributes to an easy fastening and thus to the solution of the technical problem, is not suggested by the other available prior art. In particular, D19 discloses (see Fig. 1) that the tape (5) is attached only in correspondence of a limited portion of the distal edge of the ear as in D14. Document D3 (see Fig. 4) discloses a ear made of different components, namely stretchable inner (46) and outer (48) ear portions (column 8, lines 3 to 12), and a hook panel (52) joining inner and outer ear portions together (see column 8, lines 17 to 20) along respective edges having a same length. However, the hook panel (52) and the outer ear portion (48) do not constitute a tape tab as the element (9) attached to the ear of the diaper of D14, but are themselves components that, together with inner portion (46), constitute the main body of the ear. Thus, D3 would not suggest to the skilled person a modification of the tape tab of D14 such that it extends the same length as the distal edge of the elastomeric main body (8).

4.10 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).

4.11 The subject-matter of the dependent claims 2 to 12 is for preferred embodiments of the diaper of claim 1, thus also involves inventive step.

5. Therefore, the amended patent documents consisting of the claims filed during the oral proceedings and the description and figures as attached to the decision under appeal 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 12 filed during the oral proceedings of 22 February 2005;

**description:** columns 1 to 12 attached to the decision under appeal;

**drawings:** figures 1 to 7 attached to the decision under appeal.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau