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Datasheet for the decision of 12 December 2012

Case Number: T 0992/10 - 3.2.06

Application Number: 98964101.4

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IPC: A61F13/15

Language of the proceedings: EN

Title of invention:
PERSONAL CARE ARTICLE HAVING ZONES WITH DIFFERENT RESISTANCE-TO-STRECH

Patentee:
KIMBERLY-CLARK WORLDWIDE, INC.

Opponents:
SCA Hygiene Products AB
Paul Hartmann AG

Relevant legal provisions:
EPC Art. 123(2), 54, 56

Keyword:
Amendments - added subject-matter (no)
Novelty - (yes)
Inventive step - (yes)

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Case Number: T 0992/10 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 12 December 2012

Appellant I: (Patent Proprietor)	KIMBERLY-CLARK WORLDWIDE, INC. 401 North Lake Street Neenah, WI 54956 (US)
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Appellant III: (Opponent 2)	Paul Hartmann AG Paul-Hartmann-Strasse 12 89522 Heidenheim (DE)
Representative:	Friz, Oliver Dreiss Patentanwälte Postfach 10 37 62 70032 Stuttgart (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted 9 March 2010 concerning maintenance of the European Patent No. 1043964 in amended form.**

Composition of the Board:

Chairman:	M. Harrison
Members:	G. de Crignis
	K. Garnett

Summary of Facts and Submissions

I. By way of its interlocutory decision, the opposition division found that European Patent No. 1 043 964 as amended according to Auxiliary Request 2 met the requirements of the European Patent Convention (EPC).

II. The appellants (opponent OI and OII and the patent proprietor) each filed an appeal against this decision. The parties will hereafter be referred to opponents I and II, and the proprietor respectively)

The opponents objected to lack of clarity of amended claim 1 in the upheld request and to lack of inventive step of the subject-matter of claim 1 with regard to
D1 WO-A-95/19258 or
D7 EP-A-0323 634,
and to insufficient disclosure (Article 83 EPC).

III. The proprietor requested maintenance of the patent based on the main request submitted in the opposition proceedings and alternatively maintenance of the patent based on the first auxiliary request filed in those proceedings.

IV. In a communication annexed to the summons to oral proceedings, the Board indicated its preliminary view that the subject-matter of claim 1 of the main request was not novel, consistent with the finding in the decision under appeal.

V. Oral proceedings were held before the Board on 12 December 2012.

Opponents I and II requested that the decision under appeal be set aside and that the patent be revoked.

The proprietor requested that the decision under appeal be set aside and the patent be maintained on the basis of the final set of claims filed during oral proceedings.

VI. Claim 1 of this set of claims reads as follows:

"A personal care article having a lateral cross-direction (C) and a lengthwise longitudinal direction (L), a front portion (14) and a rear portion (18), and a crotch portion (22) interconnecting the front and rear portions (14, 18), said personal care article (12) comprising an outer cover (24) resiliently stretchable in at least one direction,
wherein at least a first portion of a first zone (40) of said resiliently stretchable outer cover (24) has a pattern of embossments, such pattern of embossments effective to reduce stretchability of said outer cover (24) in the first zone, thereby to provide a first set of properties pertaining to stretch of said outer cover (24), said resiliently stretchable outer cover (24) having at least a second zone (48, 50) wherein said outer cover (24) is not modified to provide the first set of properties, said embossments (34) in the first zone (40) thus causing the first zone (40) to have a different resistance-to-stretch than the second zone (48, 50), said outer cover (24) having resilient stretchability in at least the cross-direction (C) in the front portion (14) of said personal care article, said outer cover (24) having a first waistband section in the front portion (14) and a second waistband section in the rear portion (18), the first zone (40) comprising the first waistband section in the front portion (14) of said personal care article, the first waistband section providing the first set of desired

stretch properties pertaining to the amount of stretch in the waistband section, the first waistband section being devoid of added waist elastic elements, said personal care article having a front edge (16) at the front portion (14), and a rear edge (20) at the rear portion (18), characterized in that: said outer cover (24) is substantially unfolded at said front edge (16) and said rear edge (20); and the first waistband section has a greater resistance-to-stretch than the second zone (48, 50) in the cross-direction (C)."

VII. The arguments of opponents I and II may be summarised as follows:

The subject-matter of claims 1 has been amended to include the wording "in the cross-direction (C)" linked to the feature concerning greater resistance-to-stretch in the first waistband section with regard to the second zone. At least for outer covers being stretchable in more than one direction, such feature was not clearly and unambiguously derivable from the originally filed application (Article 123(2) EPC).

D1 disclosed the claimed subject-matter. The requirement of novelty was thus not met. Figures 12B/C therein disclosed a laminate having a central area being highly stretchable in any direction. There was no teaching that stretch-activation had to be done and therefore, only an already stretch-activated composite was to be considered. Moreover, the property of being elastic was desired for the complete composites shown in Figures 11 and 12, and reference was made to such material (e.g. page 11, lines 3/4). It was neither disclosed nor necessary to use a folded sheet at the waist portion, nor was it required to use further waist

elastics when considering the sheet of Figure 12B as an outer cover in a diaper, as was disclosed.

D7 disclosed a diaper having a resiliently stretchable outer cover. An insert was bonded in the waist sections to the outer cover by attachment means and the stretch elongation in cross-direction in the waist portion was thus reduced. The insert was attached by an **optional** hem of the outer cover. No further waist elastics were present in the embodiments shown in the Figures. Thus the subject-matter of claim 1 also lacked novelty over D7.

Concerning inventive step, the sheet shown in Figure 12B of D1 represented the closest state of the art. It was for use in a personal care article, albeit that no further details of the article were disclosed.

Starting from the elastic composite of this embodiment applied as an outer cover of a disposable diaper (see page 12, lines 17 to 19) and assuming the difference of claim 1 with respect to D1 concerned those features in the characterising part of the claim, the problem to be solved was to rework the embodiment shown in Figure 12B with the desire to provide an article being adaptable to fit also in the area A. The substantial unfolded nature of the outer cover at either end was simply one of several known alternatives that could be applied in the circumstances. Since the provision of a highly stretchable elastic composite sheet as an outer cover was specifically identified in D1 the skilled person had a direct hint to use a pre-activated material for the entire composite when considering the way in which the simple use of securement regions altered the stretchability.

Starting from the same disclosure, an alternative problem to be solved was to provide a better fit of the whole article. In such case the solution would be to use a completely elastic composite for the outer cover. When desiring to customize the stretchability in different directions in the article, the skilled person would deaden elasticity in the longitudinal direction in the waist area. No inventive step was required.

VIII. The arguments of the proprietor may be summarised as follows:

The feature that the first waistband section had to have a greater resistance-to-stretch in the cross direction than the second zone was already implicitly present both in originally filed claim 1 and granted claim 1. Moreover, there was explicit disclosure on pages 17 and 18 for resistance-to-stretch being greater in the embossed zones along the front and rear waistband sections than in the unembossed zones inward therefrom. Hence, the requirement of Article 123(2) EPC was met.

The subject-matter of claim 1 was novel over D1. D1 was concerned with an elastic composite which could be used when wishing to elasticize a waist portion or a crotch portion of a sanitary article. The composite sheet however had to be activated by expansion to become elastically stretchable and contractible (page 2, lines 23 - 25) and the graphs of D1 showing the stress-strain curves of the elastic composites illustrate such behaviour. These graphs (e.g. Figure 1) demonstrated that the resistance-to-stretch was high initially but became lower after activation. Moreover, the stretch-activation of the composite sheet was disclosed (D1, page 5, lines 1 to 8) as being possible

either before the stretch-activated elastic composite was used or it could be achieved during production. In the latter case a ring roller was used for achieving partial stretch in the elastic composite. In such case the material was only partially activated in the bonded areas, which meant that the composite shown in Figure 12B had not necessarily be activated with regard to its stretchability in the area A. Consequently Figure 12B disclosed an area A which had a higher resistance-to-stretch than the waistband section - which was the contrary of the claimed subject-matter. Additionally, D1 did not refer to a defined personal care article, and hence, did not disclose whether the front and rear edges of the outer cover would be folded or unfolded or whether waist elastic elements were used.

D7 disclosed an absorbent article having an outer cover with either an additional elasticized border strip or waist hems. No other possibility was disclosed for the waist sections. Accordingly, the subject-matter of claim 1 was new.

The problem to be solved when starting from the disclosure in D1 was to provide an article having improved fit. Concerning the amount of the composite's stretch in the bonded regions, D1 contradicted the aim of the patent in suit in that it indicated that the bonded regions should be as small in number and area as possible in order not to disturb stretching of the sheet in the bonded areas (page 9, lines 17 - 20). Hence, the subject-matter of claim 1 involved an inventive step.

Reasons for the Decision

1. *Main request - Claim 1 - Amendments*

1.1 Claim 1 has been amended to incorporate the features of granted and originally filed claims 2, 4 and 13 and the further feature which refers to the first waistband section having a greater resistance-to-stretch than the second zone which additionally has been specified such as to apply "in the cross-direction". No literal disclosure for this latter limitation is present and the proprietor did not suggest that there was one.

1.2 First, however, it should be noted that claim 1 specifies with respect to the resilient stretchability of the outer cover, that this is "resiliently stretchable in at least one direction" and that "a first portion of a first zone of said resiliently stretchable outer cover has a pattern of embossments", which pattern of embossments is claimed to be effective to "reduce stretchability of said outer cover in the first zone".

1.3 The features cited above are only consistent on the basis that resilient stretchability in the outer cover is not limited to the first waistband section and, therefore, the wording defining that the first waistband section has a greater resistance-to-stretch than the second zone implicitly includes the fact that the remaining sections and zones (including the second zone) have to have a different - but specific and measurable - resilient stretchability as well.

1.4 Such view is supported additionally by the example (see pages 18 to 21 of the WO-publication) which refers to a test material for the determination of the resistance-

to-stretch and discloses that the composite forming the outer cover itself has to be stretchable up to at least 6 cm (page 21, lines 1/2).

1.5 In acknowledging such resilient stretchability to be present, the Board finds that for any personal care article having a waistband section, the only direction of importance for stretching in that section is the cross-direction. Stretchability and elasticity in any other direction in this section is more or less of no importance at all, even though it may be present. The Board thus concludes that it is implicitly disclosed in the application as filed that the relative resistance-to-stretch between the first and second zones (as defined in the claim) concerns the cross-direction. Hence, the requirement of Article 123(2) EPC is met.

2. *Novelty - Main Request - Claim 1 - D1*

2.1 D1 discloses an elastic composite which comprises a non-woven fabric and an elastic sheet for use in elasticizing an article portion such as a waist portion or a crotch portion of a sanitary article (page 1, lines 1 to 7). The elastic composites of Figures 12A, B, C are specified as having selected areas "stretchable in any directions in the central area A, only in the x direction in the peripheral areas B, and only in the y direction in the peripheral areas C" (page 12, lines 6 to 8). Figure 12B shows an elastic composite sheet having a central area A, bonded transverse end areas B and bonded longitudinal end areas C (page 12, lines 17 to 22) and is disclosed as having selected areas stretchable only in the respectively specified directions such that it can be used *inter alia* for a backsheet of a disposable diaper (page 12, lines 17 - 19).

2.2 D1 further discloses a method of bonding the layers of the elastic composite. Stretch-activation of the composite sheets in D1 is possible either before the stretch-activated elastic composite is used or during the production (page 5, lines 1 to 8). In the latter case, ring rolling with a roll having deep corrugations or grooves (page 4, line 35 to page 5, line 8) is used for achieving stretch in the desired parts of the elastic composite. In view of such explanation, the terminology "highly stretchable" according to D1 merely refers to the possibility of stretch-activation being carried out but does not refer to such stretch-activation actually being performed.

2.3 Hence, it is technically logical that the material of the composite sheet shown in Figure 12B has been only partially activated in the bonded end areas B and C (e.g. by ring-rolling), which means that the composite sheet would not provide an activated stretchability in the area A, and thus there would be a higher resistance-to-stretch in area A than in the waistband section.

2.4 With regard to all the embodiments illustrated in Figures 12A, B and C, it is not disclosed whether stretch-activation has been carried out or not in all areas. Thus there exist at least two possibilities – either all areas have, in some unknown way, been stretch-activated, or one or more of the end areas B and C only have been stretch-activated. Since area A may thus not have been stretch-activated, it is not clearly and unambiguously disclosed that the resistance-to-stretch would necessarily be higher in area B (i.e. that area of the sheet in Fig. 12B which

could be equated with the waist region in a personal care article).

2.5 Additionally, there is no disclosure in D1 whatsoever of whether the outer cover is folded or unfolded at said front edge and said rear edge in a personal care article. Even though it is plausible that folding would not be necessary, there is no specific disclosure in this respect; D1 is simply silent on the matter. Moreover, in D1 there are no details of the personal care article disclosed; hence the attachment and location of the various layers in combination in any such personal care article using the sheet disclosed in Figure 12 cannot be unambiguously derived.

2.6 As a consequence, there is no clear and unambiguous disclosure of the combination of features defined in claim 1 in D1, and therefore the subject-matter of claim 1 is novel over D1 (Article 54 EPC).

2.7 Opponents I and II noted that the composite shown in Fig. 12A was "highly stretchable in both x and y directions" as described on page 12, lines 1 to 2, and argued that the meaning of "highly stretchable" in this context would be understood as implying a low resistance-to-stretch. However, contrary to the opponents' arguments, the terminology "highly stretchable" does not necessarily imply that the composite has a low resistance to being stretched but merely that it can be stretched by a large amount. Indeed this much is already a feature of the materials before stretch activation, as amply demonstrated by Figure 1 of D1 (upper curve A). It is precisely the process of stretch-activation of the composite however which must occur in order to reduce the resistance-to-stretch. Thus, absent an unambiguous disclosure that

area A of the sheets in Figure 12 has been stretch-activated, it cannot be concluded that the resistance-to-stretch is necessarily lower in area A than in area B.

2.8 It was also argued that D1 discloses the possibility (page 4, lines 35 and 36) that the stretch-activation might occur "automatically when the elastic composite attached to a final product is stretched upon wearing." However also this disclosure does not unambiguously imply that area A would, upon wearing, necessarily result in a product where it had less resistance-to-stretch than area B, since the details of the diaper and likewise the manner of attachment of the sheets of Figure 12 in any such diaper are not disclosed. No unambiguous conclusion can therefore be drawn as to what effects might occur in the relative resistance-to-stretch upon wearing.

3. *Novelty - Main Request - Claim 1 - D7*

3.1 D7 discloses a disposable diaper having a resiliently stretchable outer cover (col. 7, l. 12 - 20). An insert is attached in the waist sections to the outer cover. The insert is attached either by inserting it within an elastomeric waist hem formed of the outer cover which could optionally entrap waist elastics or by attaching it between the outer cover and an additional border strip which provides the desired waist elasticity (col. 7, l. 40 - 49; col. 9, l 35 - 46; col. 11, l. 46 - 52; col. 12, l. 48 - 51). No further waist elastics are shown in the embodiments in the Figures.

3.2 Thus, D7 discloses two possibilities: an absorbent article having either an additional elasticized border strip or one having waist hems. Hence, although the

stretch elongation in the waist portion is reduced (col. 7, l. 40 - 56) in this article, there is additionally either a fold of the outer cover at the front and rear edge so as to form hems or there are elastic elements added to the waistband. Claim 1 requires that the outer cover is on the one hand substantially unfolded and on the other hand that the waistband section is devoid of added elastic elements. Therefore, taking either of the options disclosed in D7 separately, these two features of claim 1 are not present at the same time. The subject-matter of claim 1 is thus new with respect to the disclosure in D7.

4. Admissibility of new arguments on inventive step

4.1 The appellant-opponents provided arguments in the statement of the grounds of appeal concerning the version of the patent maintained by the opposition division and put forward in this respect objections concerning lack of inventive step at least with regard to D1.

4.2 Concerning the main request and the first auxiliary request, the opponents provided arguments concerning lack of novelty in their replies to the grounds of appeal of the proprietor.

4.3 The arguments made based on D1 are considered by the Board as - if not convincing the Board with respect to novelty - implicitly also to relate directly to an objection of lack of inventive step. Therefore, the Board exercised its discretion under Article 13(1) RPBA and admitted the amendment of the opponents' cases to make specific arguments on inventive step in relation to D1 in light of the Board's finding on novelty.

5. *Inventive step*

5.1 When starting from the embodiment shown in Figure 12B of D1, which was argued by the opponents as representing the closest prior art (it being noted that claim 1 was drafted in a two-part form, wherein D1 disclosed the features of the preamble), the distinguishing features with regard to claim 1 are that the first waistband section has a greater resistance-to-stretch in the cross-direction than the second zone and that the outer cover is substantially unfolded at the front edge and the rear edge.

5.2 The objective technical problem thus can only be understood to be the provision of an article being adapted to provide suitable elastic characteristics in the waist region. In regard to the feature "the first waistband section has a greater resistance-to-stretch than the second zone in the cross-direction", this feature relates specifically to the elastic behaviour of the article.

5.3 The embodiment disclosed in Figure 12B of D1 is related to a composite material (non-woven fabric and an elastic sheet) whereby, when initially stretched, the non-woven then exhibits reduced resistance to being stretched a second time so that the elastic composite substantially exhibits the elastic characteristics of the elastic sheet on being stretched a second (and further) times (page 4, lines 19 - 26). Such phenomenon is referred to as stretch-activation in D1 and is shown in Figures 3 to 7. There is no suggestion in D1 of reducing the stretchability of the front waistband by using the embossments which are disclosed in D1. Accordingly, the skilled person is not taught that embossments or bonds should be used to restrict the

stretch in the waistband region compared to other regions outside the waistband; D1 also does not even suggest that stretch should be restricted in this region compared to any other region.

5.4 The effect of stretch-activation is depicted in Figure 1 of D1, which shows that the resistance-to-stretch is initially high but decreases after activation. The stretch-activation is disclosed on page 5, lines 1 to 8 as being possible either by previously stretch-activating the elastic composite or stretch-activating during the production process.

5.5 In the first case, applying stretch-activation initially - and hence, before using the elastic composite, D1 aims to provide securement regions (bonding) such that the rows of the securement segments provide reduced stretchability of the elastic composite in the direction parallel to the readily stretchable direction, whilst providing maintained stretchability in the readily stretchable direction (page 11, lines 3 - 12). Accordingly, in such a case the resistance-to-stretch in the cross-direction is not affected by the securement regions when considering region B in Figure 12B.

5.6 In the latter case, a ring roller is used for achieving partial stretch in the elastic composite (page 5, lines 4 to 8). Hence, in such case, the material is only partially activated in the bonded areas which means that the composite sheet shown in Figure 12B would possess no activated stretchability in the area A. Hence, such disclosure leads to Figure 12B disclosing an area A which would have a higher resistance-to-stretch than the area B (which is

considered as equivalent to the waistband section) which is the contrary of the claimed subject-matter.

5.7 Accordingly, a suggestion to have a greater resistance-to-stretch as defined in claim 1 cannot be found when considering the disclosure in D1.

5.8 The opponents' various problem/solution approaches based upon the object of the invention starting from D1 being either to customize the stretchability in different directions of the article or to provide an article being well-fitting are not found convincing. It is not the customizing of the stretchability in different directions which is addressed (stretchability in y-direction is notably not addressed at all). Moreover, D1 is not concerned with the provision of an article and its overall fit but the issue in D1 is to provide an elastic composite which can be used in such an article.

5.9 Additionally, it is noted that D1 does not refer to any specific details of a personal care article, and hence, no disclosure is present therein about whether the front and rear edges of the outer cover should be folded or unfolded or whether additional waist elastic elements should be used in the article. However, given the fact that the relative resistance-to-stretch as defined in claim 1 is already not obvious when starting from D1, this feature requires no further consideration for the assessment of inventive step.

5.10 Although the opponents also argued that, when considering Figures 12 A to C and the related description, it would be obvious if not implicit to stretch-activate the entire sheet and then provide embossment in areas B and C to provide an increase

(albeit small) in resistance to stretch in these areas, the Board however finds that this is a hindsight approach which does not take into account the teaching of D1, in particular when considering page 1, lines 5 to 7, indicating that the object is to elasticize a portion of the article such as a waist portion. No suggestion can be found in D1 to stretch-activate the entire composite sheet first to make it elastic and then to limit its resistance to stretch in the waist region B, at least not when considering the embodiment of the composite shown in Fig. 12B.

5.11 Based on the prior art cited by the opponents and the arguments made in support of their objections of lack of inventive step, the Board finds that the subject-matter of claim 1 does involve an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the Opposition Division with the order to maintain the patent on the following basis:
   (a) Claims 1 to 12 according to the final set of claims filed during the oral proceedings;
   (b) The amended description pages numbered 2 to 13 as filed during the oral proceedings; and
   (c) Figures 1 to 15 as granted.

The Registrar: The Chairman:

M. H. A. Patin M. Harrison

Decision electronically authenticated