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**D E C I S I O N**  
of 22 October 2002

**Case Number:** T 0809/99 - 3.2.6

**Application Number:** 89300178.4

**Publication Number:** 0324577

**IPC:** A44B 18/00

**Language of the proceedings:** EN

**Title of invention:**

Disposable diaper with improved hook fastener portion

**Patentee:**

MINNESOTA MINING AND MANUFACTURING COMPANY

**Opponent:**

Kuraray Co., Ltd

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 84, 123(2), 123(3)

**Keyword:**

"Clarity of claims (main request) - no"  
"Admissibility of amendments (first and second auxiliary requests) - no"  
"Adjournment of the proceedings (third auxiliary request) - no"  
"Admissibility of new claims filed during oral proceedings - no"  
"*Reformatio in peius* - yes"

**Decisions cited:**

G 0001/99, G 0010/91

**Headnote:**

On appeal the non-appealing patent proprietor is primarily restricted to defending the claims as maintained by the Opposition Division. If these claims are not allowable, the principle of prohibition of *reformatio in peius* applies, i.e. an amended claim which would put the opponent and sole appellant in a worse situation than if it had not appealed must be rejected.

The only exception to this principle as set out in G 1/99 requires consideration of a particular sequence of possibilities for overcoming the deficiency presented by the claim(s). The first solution for overcoming the deficiency to be considered (an amendment introducing one or more originally disclosed limiting features which would not put the opponent-appellant in a worse situation than it was in before it appealed) in fact concerns a limitation of the scope of the claim. Such limitation can also be achieved by deleting the alternative embodiment in the claim, which led to the deficiency.

The proprietor's argument that the limitation to only one of the two alternatives would render the scope of protection too narrow for it to be commercially interesting is not a valid reason for dismissing this solution and proceeding to the next possible solution indicated in G 1/99 (reasons 2.4).



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Case Number: T 0809/99 - 3.2.6

**D E C I S I O N**  
**of the Technical Board of Appeal 3.2.6**  
**of 22 October 2002**

**Appellant:** Kuraray Co., Ltd  
(Opponent) 2045-1, Sakazu  
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Okayama Prefecture (JP)

**Representative:** Strehl Schübel-Hopf & Partner  
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**Respondent:** MINNESOTA MINING AND MANUFACTURING COMPANY  
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**Representative:** VOSSIUS & PARTNER  
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**Decision under appeal:** Interlocutory decision of the Opposition Division  
of the European Patent Office posted 10 June 1999  
concerning maintenance of European patent  
No. 0 324 577 in amended form.

**Composition of the Board:**

**Chairman:** P. Alting van Geusau  
**Members:** G. C. Kadner  
J. C. M. De Preter  
H. Meinders  
M. J. Vogel

## Summary of Facts and Submissions

- I. The mention of the grant of European patent No. 0 324 577 in respect of European patent application No. 89300178.4 filed on 10 January 1989 and claiming a US-priority of 11 January 1988 was published on 10 March 1993.
- II. Notice of opposition was filed against this patent based on an alleged lack of novelty of the claimed subject-matter. After expiry of the nine months period pursuant to Article 99(1) EPC the Opponent additionally relied on an alleged lack of inventive step and, in respect of the alleged lack of novelty filed evidence in support of an alleged public prior use.
- III. By decision announced during the oral proceedings on 4 February 1999 and posted on 10 June 1999 the Opposition Division maintained the patent in amended form. Since for the present decision only the subject-matter of claim 9 is relevant the text of this claim is cited below:

"9.A unitary hook fastener portion (10) of a resiliently flexible polymeric resin comprising a base (11) having generally parallel upper and lower major surfaces (12, 13), and at least 45 spaced hook members per square centimeter projecting at generally a right angle from the upper surface (12) of said base (11) and arranged in spaced rows extending in a first direction parallel to the surfaces of said backing, said hook members having a height from said upper surface (12) of less than 1.5 millimeter and each comprising a stem portion (15) attached at one end to said base (11), and a head portion (17) at the end of said stem portion

(15) opposite said base, which head portion (17) has a rounded surface opposite said stem portion (15), said stem and head portions having generally the same thickness (21) of less than 0.046 centimeter in the said first direction, said stem portion having a width (22) in the range of 0.018 to 0.03 centimeter in a second direction generally at a right angle to said first direction and parallel to the surfaces of said backing, and said head portion having a width at least 0.007 centimeter greater than said stem portion and a total width (23) of less than about 0.1 centimeter in said second direction, adjacent hook members being separated by at least 0.5 millimeter, the total cross sectional area of said head portions in a plane parallel to said upper surface being less than 32 percent of the area of said upper surface."

The Opposition Division was of the opinion that the patent as amended met the requirements of novelty and inventive step after hearing Mr Jean-Philippe Billarant as witness and having due regard to the state of the art cited in the opposition proceedings and the documents submitted in support of the alleged public prior use.

IV. On 13 August 1999 notice of appeal was lodged by the Appellant (Opponent) against the decision together with payment of the appeal fee. The statement of grounds of appeal was filed on 20 October 1999.

The Appellant argued that the patent as maintained by the Opposition Division did not meet the requirements of Articles 84, 123(2) and (3) EPC. In support of its appeal additional documents relating to a further alleged prior use were presented.

V. With letter dated 5 May 2000 the Respondent (Patentee) filed new claims in accordance with a main- and auxiliary request.

VI. In a communication dated 3 June 2002 the Board pointed out that according to the principles developed in connection with *reformatio in peius* the non-appealing Patentee was restricted to defending the claims as maintained by the Opposition Division unless these claims were considered unallowable by the Board. Independent claim 9 of these requests appeared not to be sufficiently clear in respect of the dimensions of the hooks, when provided by cutting the ribs under an angle.

VII. Oral proceedings were held on 22 October 2002.

The Appellant requested that the decision under appeal be set aside and that the European patent No. 0 324 577 be revoked;

auxiliarily that in case the Board decided to continue the proceedings, Mr Billarant, the witness heard by the Opposition Division, be heard once again in respect of the alleged prior use.

The Respondent requested that the appeal be dismissed and that the patent be maintained as upheld by the Opposition Division.

The Respondent further requested that the patent be maintained on the basis of the auxiliary request 1 (claims 1 to 15) or 2 (claims 1 to 13) filed at the oral proceedings;

or, as an auxiliary request 3 that the oral proceedings be adjourned and the proceedings continued in writing to give the Respondent the opportunity to provide evidence that a limitation of the patent to a 90° cutting angle, i.e. rectangular hook members, as suggested as the only possibility to avoid *reformatio in peius*, would have the consequence that the patentee would lose any protection and would thus be inappropriate under G 1/99;

or that the patent be maintained on the basis of claims 1 to 13 of an auxiliary request 4 filed at the oral proceedings.

Again, since only the subject-matter based on claim 9 upheld by the Opposition Division is relevant for this decision reference is only made to the text of the corresponding claims in the auxiliary requests.

Independent claim 9 according to the auxiliary request 1 differs from the corresponding claim according to the main request in that the expression "backing" in lines 8 and 19 of the claim is replaced by "base" and that in line 23 after "0,5 millimeter" the term "in the first direction" is inserted.

Independent claim 8 according to the auxiliary request 2 which is based on claim 9 of the preceding requests reads as follows:

"8. A unitary hook fastener portion of a resiliently flexible polymeric resin being obtainable by a method comprising the steps of extruding a thermoplastic resin through a die shaped to form a base (11) and spaced rows projecting above an upper surface (12) of said

base (11), said rows having a cross sectional shape of hook members to be formed and extending in a first direction; transversally slitting or cutting said rows at spaced locations along their length to form discrete portions of said rows; longitudinally stretching said base (11) at a stretch ratio of at least 2 to 1 to cause spaces between said portions of the rows to form said hook members; said hook members having first and second pairs of opposite sides; said hook fastener portion comprising a base (11) having generally parallel upper and lower major surfaces (12, 13), and at least 45 of said spaced hook members per square centimeter projecting at generally a right angle from the upper surface (12) of said base (11) and arranged in spaced rows extending in said first direction parallel to the surfaces of said base, said hook members having a height from said upper surface (12) of less than 1.5 millimeter and each comprising a stem portion (15) attached at one end to said base (11), and a head portion (17) at the end of said stem portion opposite said base, which head portion (17) has a rounded surface opposite said stem portion, said stem portion having a width (22) in the range of 0.018 to 0.03 centimeter measured between said first pair of opposite sides in a second direction generally at a right angle to said first direction and parallel to the surfaces of said base, said stem and head portions having generally the same thickness of less than 0.046 centimeter measured between said second pair of opposite sides in said first direction, and said head portion having a width at least 0.007 centimeter greater than said stem portion and a total width (23) of less than about 0.1 centimeter in said second direction, said spaces between adjacent hook members in a row being at least 0.5 millimeter measured



in said first direction, when said rows are cut at an angle of 90° with respect to the length of the rows, and the total cross sectional area of said head portions in a plane parallel to said upper surface being less than 32 percent of the area of said upper surface."

Independent claim 8 according to the auxiliary request 4 differs from the corresponding claim of auxiliary request 2 in that after "length of the rows" in the last but third line is inserted "or when said rows are cut at a slanted angle with respect to the length of the rows and compared to the same fastener portion when cut at an angle of 90° with respect to the length of the rows".

VIII. In support of its requests the Appellant essentially relied upon the following submissions:

The introduction of the term "rows" resulted in lack of clarity because of the lack of a definition of the first and second direction with respect to these rows whereas in the claims as granted the first direction was defined with respect to the thickness of the stem and head portions of the hook members.

The feature of the separation distance between adjacent rows, taken from the description, did not help clarify this issue because in case of slanted cutting that distance could be measured in two different ways: perpendicular to the extension of the planes of the adjacent hook members; or in the direction of the rows (the machine direction). Only the latter was unambiguously disclosed, but only for cutting the rows at right angles to the machine direction. Therefore all

requests including the possibility of slanted cutting of the rows were not admissible under Article 84 EPC. Moreover, since another possibility of measurement of the space between adjacent hook members was added, the patent was amended in such a way that Article 123(2) EPC was violated. Going back to the subject-matter of the granted claims was no longer possible because this would extend the scope of protection of the claims over that resulting from the claims as upheld in opposition which could not be allowed under the principle of *reformatio in peius*.

Additionally, the fourth auxiliary request should not be admitted at such a late stage of the proceedings. It was late filed and since it was not clear which lengths of the rows were to be compared, this claim was not clearly allowable and already for that reason not admissible.

IX. The submissions of the Respondent are summarised as follows:

The feature concerning the "rows" to be cut was clearly disclosed and unambiguously derivable from the original application.

According to the definition of the first and second direction with respect to the rows the disclosure of the application was sufficient to indicate that the measurement of the spaces between two adjacent hook members should be in the first direction irrespective of whether the rows were cut at a right angle or at a slanted angle. Since the patent was addressed to persons skilled in the art it was clear that the separation of the hook members by stretching the base

in the first direction was to be measured in that same direction, as was also indicated in the description of a preferred example (page 6, lines 21 to 30).

The gist of the patent obviously included slanted cutting as well as cutting at right angles. Decision G 1/99 (OJ EPO 2001, 381) gave several possibilities as to how reformatio in peius could be avoided, in particular deletion of a feature of the claim was acceptable. In any case, a restriction of the claims to only cutting at right angles, thereby abandoning the possibility of slanted cutting, would render the patent completely without value. Therefore this restriction could not be expected from the Patentee. If the Board accepted to continue the proceedings in writing as was auxiliarily requested, evidence would be provided in support of the above contention relating to the value of the patent.

## **Reasons for the Decision**

1. The appeal is admissible.
2. *Admissibility of amendments*
  - 2.1 Main request

The Opposition Division maintained the patent with an amended claim 9 in which, when compared to the granted claim 9, the feature "adjacent hook members being separated by at least 0.5 millimeter" was introduced. According to the description as originally filed (page 10, lines 22 to 30), the hook members are provided by cutting the ribs at an angle of 90° or

preferably at an angle of 60° to 70° degrees with respect to the length of the ribs. Stretching the strip causes the separation of the hook portions by at least 0.50 millimeter, preferably by between 0.635 and 1.0 millimeter. By this method stem portions are obtainable which have the cross section in the form of a rectangle or of a parallelogram. The wording of claim 9 is such that the direction of cutting of the ribs is left open. In the decision under appeal the Opposition Division (see point 34) concluded that the subject-matter of claim 9 involved an inventive step because of the feature of the claimed distance between the hook portions. It is therefore considered of the utmost importance that such a feature be supported by the description and be clear as required by Article 84 EPC.

In case of the cutting at right angles this distance between adjacent hook members is well defined, as it can only be measured in the first direction. However, in case of slanted cutting the parallel planes of the facing sides of the adjacent hook members form an angle with the first direction, namely the cutting angle. Under those circumstances the distance between adjacent hook members can be measured in two directions: the first direction and the direction perpendicular to the direction of the cut, which means it is at an angle with the first direction. This results in two different measurements.

The Respondent argued that the only direction which could have been meant was the first direction, however this is contrary to what is usually done when distances are measured between parallel planes; there the measuring direction is perpendicular to the planes.

The text passage at the top of page 11 of the description as originally filed, cited by the Respondent in support of its argument, cannot help either. The passage reads: "... and the stretching of the strip will cause separation of the hook portions by at least about 0.50 millimeter ...", thus gives no indication of the direction of measurement of the separation distance between the hook portions.

The same applies in respect of the passage on page 13, lines 14 to 21 of the description as filed, which reads: "Stretching of the base 53 ... elongated the strip 50 in its longitudinal direction. The resulting strip had ... a 0.0977 [sic] center to center machine directional stem spacing ...". The fact that the center to center stem spacing is measured in the machine direction does not necessarily mean that the spacing between adjacent hook members is also measured in that direction. With center to center spacing this measurement is between two points, between which the distance is independent of the direction of cutting; the spacing between adjacent hook members being between the parallel planes containing the facing sides of the hook members, however, is different from the distance measured in the stretching direction.

In view of the small size to be measured and the importance of this feature for defining the subject-matter claimed the conclusion is that the subject-matter of the claim is not sufficiently clearly defined when slanted cutting is involved. Therefore the claim does not fulfill the requirements of Article 84 EPC. As a consequence the main request is not acceptable.

## 2.2 First auxiliary request

Claim 9 differs from claim 9 of the main request in that the feature "adjacent hook members in a row being separated by at least 0.5 millimeter" is supplemented by "in the first direction". This direction is defined as the machine direction or the extension of the rows.

According to Article 123(2) EPC a European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed.

As discussed above, there is no indication in the originally filed specification as to which of the possible two directions of measuring the distance between adjacent hook members in case of **slanted** cutting has to be applied. Only when cutting at 90° there is an unambiguous disclosure that this direction corresponds with the "first direction". However, the claim does not contain the limitation to that manner of cutting. The feature "in the first direction" is not disclosed in combination with slanted cutting in the application as originally filed. Therefore claim 9 contravenes Article 123(2) EPC and for this reason the first auxiliary request cannot be allowed.

### 2.3 Second auxiliary request

Claim 8 comprises the wording "said spaces between adjacent hook members in a row being at least 0.5 mm measured in said first direction, when said rows are cut at an angle of 90° with respect to the length of the rows".

The content of this amendment is as such correct; as discussed above, there is an unambiguous disclosure in

the original application documents of the spacing being measured in the first direction which corresponds to the direction of the length of the rows, when these rows are cut at an angle of 90° with respect to the length of the rows.

However, the wording of the claim "when said rows are cut at an angle of 90° with respect to the length of the rows" does not limit the scope of the claim to cutting at a right angle. The amendment in fact now leads to the claim **no longer** defining any spacing between adjacent hook members in case of slanted cutting. This leads to an extension of the scope of the patent as maintained by the Opposition Division.

It has to be considered whether such extension is acceptable in case the proprietor did not appeal the Opposition Division's decision. According to the principles developed in G 1/99 (supra) in circumstances where the patent as maintained in amended form would otherwise have to be revoked as a direct consequence of an inadmissible amendment held allowable by the Opposition Division in its interlocutory decision, requests may be filed by the non-appealing patent proprietor as follows:

- "- in the first place, for an amendment introducing one or more originally disclosed features which limit the scope of the patent as maintained;
- if such a limitation **is not possible** (emphases made by the Board), for an amendment introducing one or more originally disclosed features which extend the scope of the patent as maintained, but within the limits of Article 123(3) EPC;

- finally, if such amendments are not possible, for deletion of an inadmissible amendment, but within the limits of Article (123(3) EPC."

The amendment as now proposed by the second auxiliary request introduces an originally disclosed feature. However, as already stated, it extends the scope of the patent as maintained. Therefore the first solution referred to in G 1/99 cannot be applied.

Considering now the second possibility referred to in G 1/99, it must first be established that an originally disclosed limitation of the claimed subject-matter is not possible. The Board is not convinced that this is the case here, as a limitation of this claim to only cutting at an angle of 90° with respect to the length of the rows (or with respect to the first direction) indeed is possible. Thus the amendment cannot be allowed as it results in *reformatio in peius* for the Appellant. The second auxiliary request cannot therefore be allowed.

#### 2.4 Third auxiliary request

The Board is well aware that by the restriction to 90° cutting the Respondent would lose part of the protection conferred by the patent as upheld by the Opposition Division.

However, it is clear from the decision G 1/99 that a further amendment that would put the opponent in a worse situation than if it had not appealed should be rejected in principle.

The only **exception** to this principle may be made in



circumstances where the patent as maintained in amended form would otherwise have to be revoked as a direct consequence of an inadmissible amendment held allowable by the Opposition Division. It is also clear that the conditions for such an exception referred to above should be considered in the cited sequence.

Considering the respondent's argument according to which a limitation to the embodiment with 90° cutting would render the scope of protection of the patent too narrow, the Board does not see any reason to suppose that the Enlarged Board considered such a limitation of the scope of protection unacceptable: on the contrary, the first condition referred to above explicitly mentions limitation of the scope of the patent as amended without any further condition to be fulfilled.

Furthermore, when relying on the principles developed in G 1/99, objective considerations based on the information provided by the application at the time of its filing should prevail. So far, no indication whatsoever is derivable from this application at that time that the embodiment based on the 90° cutting angle was technically not feasible or would otherwise not be suitable as a commercial product.

If it is later found that another embodiment is economically more interesting, such a fact being supported by arguments - or even evidence, as was offered by the Respondent - provided after the filing date of the patent in suit cannot serve as proof to the Board that the actual value of the patent was related exclusively to this embodiment at the filing date of the patent in suit.

The request for adjournment of the oral proceedings to give time for providing such further evidence thus has to be dismissed.

2.5 Fourth auxiliary request

By the amendment of claim 9 as upheld by the Opposition Division to read

"said spaces between adjacent hook members in a row being at least 0.5 millimeter measured in said first direction,  
when said rows are cut at an angle of 90° with respect to the length of the rows or when said rows are cut at a slanted angle with respect to the length of the rows and compared to the same fastener portion when cut at an angle of 90° with respect to the length of the rows"

the Respondent attempts to include the embodiment involving slanted cutting. However, again no source for the disclosure of the specific spacing of at least 0.5 millimeter in case of slanted cutting was provided by the Respondent, and the Board cannot identify where it is disclosed in the claimed context in the patent in suit or in the application documents as originally filed. Since the fourth auxiliary request was submitted at the end of the oral proceedings before the Board, i.e. at a very late stage of the proceedings, it can only be admitted into the proceedings on the condition that it is clearly allowable. Since there is no basis for the added features, this condition is not fulfilled, and consequently the fourth auxiliary request is not admitted.

2.6 None of the requests of the patent proprietor being

allowable, the patent must be revoked.

**Order**

**For these reasons it is decided that:**

1. The decision of the Opposition Division is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau