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**Datasheet for the decision
of 28 January 2020**

Case Number: T 0044/16 - 3.2.06

Application Number: 11155400.2

Publication Number: 2399558

IPC: A61F13/15, A61F13/511,
A61F13/84, A61F13/514

Language of the proceedings: EN

Title of invention:

Disposable diapers

Patent Proprietor:

The Procter & Gamble Company

Opponent:

Kimberly-Clark Worldwide, Inc.

Headword:

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - mixture of technical and non-technical features

Decisions cited:

Catchword:



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Case Number: T 0044/16 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 28 January 2020

Appellant:
(Patent Proprietor)

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Representative:

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Respondent:
(Opponent)

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Representative:

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 16 November
2015 revoking European patent No. 2399558
pursuant to Article 101(3) (b) EPC.**

Composition of the Board:

Chairman M. Harrison
Members: M. Hannam
A. Jimenez

Summary of Facts and Submissions

- I. An appeal was filed by the appellant (patent proprietor) against the decision of the opposition division revoking European Patent No. 2 399 558, in which it found *inter alia* that the subject-matter of claim 1 as granted did not involve an inventive step.
- II. D3 was filed for the first time with the grounds of appeal. The appellant requested that the decision under appeal be set aside and the patent be maintained as granted.
- III. The respondent (opponent) requested that the appeal be dismissed.
- IV. The following documents, referred to by the appellant in its grounds of appeal, are relevant to the present decision:

D1 US-B-6 652 500
D2 US-A-4 801 494
D3 US-A-4 690 679
- V. The Board issued a summons to oral proceedings and a subsequent communication containing its provisional opinion, in which it indicated *inter alia* that the ground for opposition under Article 100(a) EPC appeared to prejudice maintenance of the patent as granted since the subject-matter of claim 1 seemingly lacked an inventive step.
- VI. Oral proceedings were held before the Board on 28 January 2020. The final requests of the parties were unchanged from those indicated above.

VII. Claim 1 of the main request (claim 1 as granted) reads as follows:

"A disposable diaper including a colored topsheet, wherein said topsheet has a basis weight of from 12 gsm to 18 gsm and comprises a plurality of bonded points, wherein each of said points has a surface area of from 2 mm² to 5 mm² and wherein the cumulated surface area of the plurality of bonded points is from 10% to 25% of the total surface area of the topsheet."

VIII. The appellant's arguments may be summarised as follows:

The subject-matter of claim 1 involved an inventive step. D3 was not relied upon in support of the appellant's case. From paragraphs [0002] to [0005] of the patent it was evident that the invention concerned a relatively thin nonwoven material topsheet comprising a pattern of bonded points which provided a balance between material softness and strength. D1 presented the most promising starting point for considering inventive step but failed to disclose the topsheet being coloured and the topsheet having a basis weight from 12 gsm to 18 gsm. The technical problem to be solved had to include the effect of the coloured topsheet since this aspect went beyond mere aesthetics for the consumer, it contributing to the consumer's perception of softness of the topsheet and thus its increased attractiveness. The coloured topsheet also had an effect going beyond aesthetics due to it assisting the appreciation of the bonded pattern. Further, the coloured topsheet when considered in combination with the bonding pattern on the low basis weight topsheet together had a technical effect. The problem could thus be seen as how to provide better visibility of the bonding pattern. As regards the

claimed basis weight range, extrapolation of a film basis weight from D3 to D1 was not valid since the specific film material of D1 was undefined. The problem relating to visibility of the bonding pattern in the patent was also related to a non-woven topsheet, rather than an apertured film.

IX. The respondent's arguments may be summarised as follows:

D3 was not relevant with respect to the basis weight of topsheets in D1, not least due to its age. It should thus not be admitted. The subject-matter of claim 1 lacked an inventive step. D1 was the closest prior art and disclosed all claimed features save for the topsheet basis weight range and it being coloured. These two features did not combine to solve any common technical problem, the coloured topsheet presenting nothing more than an aesthetic effect. In as far as the basis weight of the topsheet was concerned, claim 1 of the patent covered both films and nonwoven sheets, and in regard to a film topsheet the technical problem this choice of basis weight solved when starting from D1 was simply to provide a suitable or alternative basis weight. Moreover, col. 5, line 66 onwards of D1 disclosed low thickness films which had therefore to have a low basis weight, as shown not least by the appellant's written arguments albeit based on D3, and thus depriving the subject-matter of claim 1 of any inventive activity.

Reasons for the Decision

1. *Article 100(a) EPC - inventive step*
- 1.1 At oral proceedings the Board preliminarily indicated that, in view of its age (published in 1987), D3 was seemingly not relevant for interpretation of a typical basis weight of the apertured film topsheets disclosed in D1. In response to subsequent specific questioning on the matter by the Board, the appellant stated that it no longer relied on D3 in support of its case.
- 1.2 The ground for opposition under Article 100(a) EPC prejudices maintenance of the patent as granted because the subject-matter of claim 1 does not involve an inventive step.
- 1.3 The Board finds, and both parties also accepted, that D1 discloses all features of claim 1 except for:
 - the topsheet being colored; and
 - the topsheet having a basis weight of from 12 gsm to 18 gsm.
- 1.4 The feature of the topsheet being coloured is found to be a purely aesthetic feature lacking a technical effect. This is at least in part based on the patent's own statement in paragraph [0004] where it is stated, in relation to the bonding pattern on a coloured sheet, that "such a highly visible pattern increases the attractiveness of the product". Paragraph [0004] of the patent also indicates that on low basis weight fabrics, any bonding pattern is barely noticeable and that this adversely affects not only attractiveness of the product but also the consumer's perception of material softness. Page 3, lines 41 to 44 of the patent discloses a coloured topsheet as overcoming these

drawbacks. Yet, the Board finds that attractiveness of a product or the perception of material softness are merely subjective attributes, such that the feature providing such attributes is found to lack technical character.

1.4.1 The appellant's argument that the coloured topsheet had an effect going beyond aesthetics due to it assisting the appreciation of the bonded pattern is not persuasive. First, any such additional effect is nothing more than a bonus effect of applying an aesthetic feature. Further, being able to 'appreciate the bonded pattern' on the topsheet is anyway clearly in itself not a technical effect. Moreover, even considering the purported benefit of 'an increased perception of softness of the topsheet' (see patent, page 2, lines 25 to 26) as a result of the colour, the topsheet softness itself certainly does not change as a result of it being coloured. Additionally any consumer perceiving the topsheet to be softer, as a result of the colour providing greater visibility of the bonding pattern, is also entirely devoid of any technical content with such 'perception' being subjective and dependent upon the particular consumer observing the topsheet.

1.4.2 The appellant's further argument that the feature of the coloured topsheet combined with the feature of the bonding pattern on the low basis weight topsheet together had a technical effect does not address the objection of a lacking technical effect of the coloured topsheet itself. It is not asserted that features directed to a topsheet of low basis weight or with a particular bonding pattern lack technical character, rather it is the aspect of the topsheet being coloured which lacks a technical effect, since the bonding

pattern is a feature already known from D1 (and this was not disputed). Considering a combination of features as the appellant argues, in the present case, cannot be seen as anything more than possibly disguising the fact that one of these features considered alone lacks a technical character and thus is not taken into account when considering inventive step (as is established case law of the Boards of Appeal), this indeed being the case for the coloured topsheet. In the case of two differentiating technical features taken together providing a common technical effect, or solving a common technical problem, these can of course also be considered together when determining whether an inventive step is involved. However, in the present case where the feature of the coloured topsheet does not have technical character, this is not taken into account when considering inventive step, the features thus being considered in isolation rather than in combination as suggested by the appellant.

- 1.4.3 For completeness sake it is noted that, even if the coloured topsheet were seen to have technical character, claim 1 does not require the topsheet to be uniformly coloured. Nothing even indicates the bonded points themselves to be coloured such that the appellant's suggestion that the coloured topsheet improves the visibility of the bonded points, and would thus solve a problem of improved perception of softness (even if this were seen as technical), is not accepted. In this regard it is also noted that D2 (see col. 3, lines 39 to 41) already discloses a coloured topsheet such that this feature, even if it were to be regarded as having technical character, would anyway not contribute to the recognition of an inventive step in

the subject-matter of claim 1.

- 1.4.4 Lacking a technical effect, the feature relating to the topsheet being coloured cannot contribute to the recognition of an inventive step in the subject-matter of claim 1. The appellant's technical problem of providing better visibility of the bonding pattern, based on the topsheet being coloured, is therefore also found not to be objective.
- 1.5 Based on the remaining differentiating feature of claim 1 over D1, i.e. the topsheet having a basis weight of from 12 gsm to 18 gsm, the objective technical problem to be solved may be seen as 'to provide a suitable basis weight for the topsheet'.
- 1.6 Regarding the appellant's argument that the technical problem related to the visibility of the bonding pattern in the patent, and this was related to a non-woven topsheet, this is not accepted. Claim 1 of the patent is not limited to a non-woven topsheet, so no such limitation is required in the formulated objective technical problem. The validity of the problem posed in point 1.5 above is thus not put into question by this argument, the appellant moreover indicating that it had no argument in support of the presence of an inventive step in the subject-matter of claim 1 should the coloured topsheet not be able to contribute to this defence.
- 1.7 The claimed solution is obvious based on the disclosure in D1 alone when combined with the knowledge of the skilled person.
 - 1.7.1 It is noted that col. 5, line 66 to col. 6, line 3 of D1 discloses an apertured film of a thickness between

about 0.025 mm and about 1.0 mm, such an apertured film being the preferred material of the topsheet of the diaper of D1 (see col. 5, lines 11 to 15). Paragraph 8 of the appellant's letter of grounds of appeal argues, albeit in respect of D3 but nonetheless credibly as an argument by itself, that an apertured topsheet of thickness 0.11 mm and a certain perforation percentage has a (basis) weight of 34 gsm. It is self evident, and certainly not contradicted by the appellant, that material thickness has a direct relationship to the material basis weight.

- 1.7.2 If one takes the apertured film in col. 5 of D1 of thickness 0.025 mm to 1.0 mm, it may have a basis weight, if the same polymer were used, of about 7.7 gsm up to about 308 gsm and, at the lower end of the range of disclosed values, being very close to the range claimed (i.e. 12gsm to 18gsm).
- 1.7.3 Nothing inventive can be recognised by the Board in regard to merely selecting a topsheet basis weight at a value of 12 to 18 gsm, not least since this would be in or close to the lower end of the range quoted in D1. It would thus be obvious for the skilled person, starting from the disposable diaper of D1 and wishing to solve the objective technical problem of selecting a suitable basis weight for the topsheet, to adopt the topsheet basis weight range defined in claim 1, and thus to arrive at the claimed subject-matter without the exercise of an inventive step.
- 1.7.4 Even though the appellant argued that extrapolation of a film basis weight in D3 (mentioned in its written comments on D3) to D1 would depend on the specific film material of D1, which was undefined, this is as such not decisive in the present case. The selection of a

suitable basis weight (even if it were not directly derivable from D1 on the basis of values from D3) is simply that, a suitable choice and nothing more, that a skilled person would make according to the circumstances which apply in the diaper under consideration. Specifically asked by the Board whether there was any further technical problem to be considered in regard to the topsheet basis weight selection, the appellant confirmed that it had no further argument in support of an inventive step based on the claimed range of basis weight alone.

- 1.8 In view of no further arguments being presented in defence of claim 1, the Board finds the subject-matter of claim 1 not to involve an inventive step for the reasons stated above.
- 1.9 The ground for opposition under Article 100(a) EPC thus prejudices maintenance of the patent as granted.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



M. H. A. Patin

M. Harrison

Decision electronically authenticated