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Datasheet for the decision of 8 May 2018

Case Number: T 0495/14 - 3.2.06

Application Number: 05016288.2

Publication Number: 1621166

IPC: A61F13/15, A61F13/532, B05C1/08, B05C11/10, B05C19/04

Language of the proceedings: EN

Title of invention:
Process for producing absorbent core structures

Patent Proprietor:
The Procter & Gamble Company

Opponents:
Ganahl, Bernhard
Steinecke, Peter
Uni-Charm Corporation
Eigner, Jürgen

Headword:

Relevant legal provisions:
EPC 1973 Art. 54, 56

Keyword:
Novelty - (yes)
Inventive step - (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

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Chambres de recours

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Case Number: T 0495/14 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 8 May 2018

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Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted on 2 January 2014 concerning maintenance of the European Patent No. 1621166 in amended form.

Composition of the Board:

Chairman M. Harrison
Members: M. Hannam
W. Ungler

Summary of Facts and Submissions

I. An appeal was filed by the appellant (opponent II) against the interlocutory decision of the opposition division in which it found that European patent No. 1 621 166 in an amended form met the requirements of the EPC.

II. The appellant requested that the interlocutory decision be set aside and the patent be revoked.

III. The respondent (patent proprietor) requested that the appeal be dismissed or that the patent be maintained according to one of auxiliary requests 1 to 4.

IV. The following documents, referred to by the appellant in its grounds of appeal, are relevant to the present decision:

D5 US-A-5 494 622
D52 WO-A-03/101622

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 subject-matter of claim 1 of the main request appeared to be both novel and to involve an inventive step with respect to the cited prior art.

VI. With letter of 13 April 2018 the appellant indicated that it would not attend the scheduled oral proceedings.

VII. With letters of 16 February 2018, 13 December 2017 and 4 May 2018 respectively, the opponents OI, OIII and OIV, all parties to the appeal proceedings as of right

under Article 107 EPC, indicated that they would not attend the scheduled oral proceedings.

VIII. Oral proceedings were held before the Board on 8 May 2018 in the absence of the appellant and opponents OI, OIII and OIV as previously announced. At the oral proceedings, the respondent filed a new main request to replace that previously on file, whereby the independent claim thereof was cast in a one-part form compared to that which was considered by the opposition division and whereby the description was adapted to more accurately reflect the relevant prior art. At the end of the oral proceedings the requests of the parties were as follows:

The appellant requested in writing that the decision under appeal be set aside and the European patent be revoked.

The respondent requested that the patent be maintained as amended in the following version:
Description: page 2 as filed during the oral proceedings of 8 May 2018; pages 3 to 8 and 11 of the patent specification; pages 9 and 10 as filed on 9 December 2013;
Claims: claims 1 to 14 as filed during the oral proceedings of 8 May 2018;
Drawings: Figures 1 to 6 of the patent specification.

IX. Claim 1 of the main request reads as follows:

"A method for producing a sandwich structure (300) comprising a pattern of particulate material (310), the sandwich structure being a liquid absorbent structure for use in disposable absorbent products, said method comprising the steps of

a - providing at least one flat web material as carrier (320) and as cover (330) material;
b - providing an endless support means (470) for said carrier material (320) having a support pattern,
c - providing a carrier material holding means (472),
d - positioning said carrier material (320) over said support means (470),
whereby said carrier material (320) contacts said support pattern with its support surface and whereby the relative speed between carrier material and the contact surface of said carrier support means is essentially zero;
e - providing a particulate material (310);
f - pre-metering the amount of the particulate material (310),
g - providing a sandwich fixation means (495),
h - combining said cover material (330) with said carrier material (320) and said particulate material (310) being sandwiched there between;
wherein
i - said carrier material (320) is supported only in the region of the support pattern of the support means;
j - said carrier material (320) is deformed by said carrier holding means (472) such that indentations (328) are formed in the unsupported regions,
k - and said particulate material (310) is transferred to said carrier material (320) into said indentations (328); thereby creating a pattern of particulate material by depositing a pre-metered amount of the particulate material and
thereby forming a primary pattern of particulate material,
wherein said particulate material (310) is a superabsorbent and wherein said carrier holding means (472) is a vacuum air suction."

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

The subject-matter of claim 1 was not novel (Article 54 EPC) over D5. Col. 4, lines 16 to 19 disclosed high-absorbency material being 'operably metered', by a K-Tron weight and loss feeder, which corresponded to the claimed pre-metering of particulate material (feature f). The opposition division's interpretation that the claimed 'pre-metered amount' is an exact amount was incorrect. Furthermore, col. 4, lines 3 to 6 disclosed the material being 'operably directed' into the forming means, which indicated that the required amounts were measured before being directed to the carrier material (feature k). Alternatively, transport of the high-absorbency material from its production facility to the point of use could be considered pre-metered amounts of the material.

The subject-matter of claim 1 also did not involve an inventive step (Article 56 EPC) when starting from D5 and combining this with the teaching of D52. Starting from D5, the objective technical problem was to improve control and speed of deposition while maintaining an accurate patterning. D52 was concerned with higher production speeds and raising throughput on a per pad basis and achieved this with a pulsed particle stream. This could be placed between the K-Tron feeder and the supply conduit 52 of D5, thus leading to pre-metering of an exact amount.

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

Claim 1 was novel over D5. Feature f was not disclosed since D5 disclosed a rate at which material was fed to the process, rather than the metering of a discrete

amount of material. Feature k was also not known from D5, this lacking the depositing of a pre-metered amount of the particulate material.

The subject-matter of claim 1 also involved an inventive step even when considering the pulsed particle stream of D52. If this pulsed stream were placed at conduit 52 in D5, this would simply feed particles to the pattern chamber which was an arrangement having no connection with the solution to the objective problem.

Reasons for the Decision

1. *Novelty (Article 54 EPC 1973)*

The subject-matter of claim 1 is novel over D5.

1.1 Save for features f and k, there is consensus between the parties that D5 discloses all features (a to e and g to i) of claim 1.

1.2 As regards feature f (pre-metering the amount of the particulate material), this is known from col. 4, lines 16 to 19 of D5 particularly from the statement that 'the high-absorbency material can be operably metered'. The verb 'to meter' implies a rate of supply i.e. a mass per unit of time. For a rate of supply to be 'operably metered', this implies that the rate of supply is actively controlled to be appropriate for the application in which it is provided. This is no different to the claimed 'pre-metering the amount of the particulate material'.

1.3 The respondent's interpretation of feature f that this concerns the metering of a discrete amount of material is not accepted. In this regard it is noted that 'the amount' in feature f has no antecedent, such that it is left open what specific amount of particulate material is actually being claimed; rather than a discrete amount, 'the amount' as claimed could be an amount relating to a rate of supply which does not define a specific mass of material. It is just such a rate of material supply which is disclosed in D5 through the 'operably metered' wording; the feature f is thus known from D5.

1.4 As regards feature k, this is not disclosed in D5, specifically the part of feature k reading: 'depositing a pre-metered amount of the particulate material and thereby forming a primary pattern of particulate material'. Whilst, as found above, D5 discloses a pre-metering of particulate material, it fails to disclose depositing this specifically pre-metered particulate material to form a pattern of material.

1.5 The appellant's argument that col. 4, lines 3 to 6 of D5 disclosed the material being 'operably directed' into the forming means and that this corresponded to the pre-metered particulate material being deposited to form a pattern, as claimed, is not accepted. With reference to Fig. 2 of D5, it is clear that the particles 90 are supplied to fill the pockets 24 of the absorbent structure via the pattern chamber 30 which acts like a hopper supplying particles. The particles are thus supplied (deposited) in excess of that which is required to fill the pockets, as described in col. 8, lines 53 to 57. The combination of the excess supplied by the hopper action of the pattern chamber

and the sweeping action of the gas flow at exit wall opening 68 results in D5 clearly not depositing a pre-metered amount of the particulate material to form the primary pattern. Instead, an unknown but excess amount (compared to that required) is deposited from the pattern chamber.

1.6 The appellant's alternative argument regarding transport of the high-absorbency material from its production facility to the point of use being 'pre-metered amounts of the material' is also not accepted. Such a transport cannot be considered to provide this feature since it occurs prior to the use of the particulate material in the claimed method and thus cannot involve the deposit of the particulate material to form the primary pattern, as required by feature k of claim 1.

1.7 In summary, therefore, with no further objections under Article 54 EPC 1973 raised by the appellant, the subject-matter of claim 1 is novel.

2. *Inventive step (Article 56 EPC 1973)*

The subject-matter of claim 1 involves an inventive step.

2.1 Starting from D5, and as explained above, this fails to disclose the feature of claim 1 regarding 'depositing a pre-metered amount of the particulate material and thereby forming a primary pattern of particulate material'. Based on this differentiating feature, the objective technical problem may be seen as being the provision of greater control over the pattern of superabsorbent particulate material that is formed on the carrier layer. The appellant had argued that the

problem to be solved involved an improvement in the speed of particulate deposition. However this is not an objective problem, at least because no feature of claim 1 achieves an increase in deposition speed relative to the airlaid feed arrangement of the pattern chamber of D5.

2.2 The sole argument presented by the appellant is for the subject-matter of claim 1 to be obvious in view of the teaching in D52. The pulsed particle stream disclosed in D52 (see page 13, lines 3 to 12) does not however solve the objective technical problem at least since it is not evident how such a pulsed stream would be able to distribute particulate material into the pattern of openings 60 required as depicted in Fig. 7 of D5.

2.3 The appellant's argument regarding the pulsed particle stream being placed upstream of the supply conduit 52 of D5 and therefore anticipating the claimed subject-matter is also not accepted. Placing the pulsed particle stream of D52 upstream of the pattern chamber 30 of D5 would result in the particles being supplied to the pattern chamber, this acting akin to a hopper full of particulate. The supplied particles would thus simply add to those already present in the pattern chamber. The pulsed supply of particulate in this position would thus have no effect on the degree of control of the particulate deposited on the carrier layer, this being dictated in D5 by the vacuum drawing the particles onto the carrier layer and the gas flow at the exit wall 68 sweeping excess particles from the intermediate sections 50 of the carrier layer (see Fig. 2 of D5 and col. 8, lines 57 to 62). No alternative positioning of the pulsed particle stream of D52 relative to the carrier layer was suggested by the appellant, nor can the Board envisage one which would

allow the skilled person to arrive at the subject-matter of claim 1 without involving an inventive step.

2.4 The subject-matter of claim 1 is therefore not obvious when considering the cited prior art and the arguments in this regard presented by the appellant. The subject-matter of claim 1 thus involves an inventive step (Article 56 EPC).

2.5 For the sake of completeness, it is mentioned here that the main request filed at oral proceedings was examined *ex officio* by the Board. Claim 1 was found to have the same scope as claim 1 of the main request previously on file, the claim simply having been cast in the one-part form. As a whole, the claims were found to meet the requirements of the EPC.

3. The respondent adapted the description to more accurately reflect the relevant prior art. To this the Board had no objections.

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 as amended in the following version:
   Description: page 2 as filed during the oral proceedings of 8 May 2018; pages 3 to 8 and 11 of the patent specification; pages 9 and 10 as filed on 9 December 2013;
   Claims: 1 to 14 as filed during the oral proceedings of 8 May 2018;
   Drawings: Figures 1 to 6 of the patent specification

The Registrar: The Chairman:

M. Kiehl M. Harrison

Decision electronically authenticated