BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Internal distribution code:
(A) [ ] Publication in OJ
(B) [ ] To Chairmen and Members
(C) [ ] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 10 August 2006

Case Number: T 1365/04 - 3.2.06

Application Number: 97950558.3

Publication Number: 1006970

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:
An absorbent structure that has a high degree of utilization

Patentee:
SCA Hygiene Products AB

Opponent:
Paul Hartmann AG

Headword:
-

Relevant legal provisions:
EPC Art. 54(1), 56, 84, 114(2)
EPC R. 57a

Keyword:
"Inventive step (main request) - no"
"Clarity (second auxiliary request) - no"
"Admissibility (first, third and fourth auxiliary request) - no"

Decisions cited:
-

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1365/04 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 10 August 2006

Appellant I: (Opponent)
Paul Hartmann AG
Paul-Hartmann-Straße 12
D-89522 Heidenheim (DE)

Representative:
Friz, Oliver
Patentanwälte
Dreiss, Fuhlendorf, Steimle & Becker
Gerokstraße 1
D-70188 Stuttgart (DE)

Appellant II: (Patent Proprietor)
SCA Hygiene Products AB
S-405 03 Göteborg (SE)

Representative:
Bergstrand, Mikael Gudmundsson
Albihns GmbH
Bayerstraße 83
D-80335 München (DE)

Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 30 September 2004 concerning maintenance of European patent No. 1006970 in amended form.

Composition of the Board:

Chairman: P. Alting van Geusau
Members: G. Kadner
R. Menapace

Summary of Facts and Submissions

I. The mention of grant of European patent No. 1 006 970 with 10 claims in respect of European patent application No. 97950558.3 filed on 16 December 1997 as an international application was published on 10 April 2002.

II. Notice of opposition was filed against this patent requesting revocation based on the grounds of Article 100(a) EPC.

By decision posted on 30 September 2004, the Opposition Division maintained European patent No. 1 006 970 in amended form on the basis of the second auxiliary request. The following prior art documents had been considered:

E1: US-A-5 334 177
E2: EP-A-0 698 385
E3: US-A-4 820 295
E4: EP-A-0 254 476
E5: EP-A-0 397 110
E6: EP-A-0 032 793
E7: WO-A-01/49 912
E8: US-A-5 490 846

III. Notice of appeal was filed against this decision by Appellant I (Opponent) on 30 November 2004 and by Appellant II (Patentee) on 8 December 2004, each together with payment of the respective appeal fee. Both statements setting out the grounds of appeal were filed on 2 February 2005 wherein Appellant I pursued its request for revocation of the patent and

Appellant II its main and first auxiliary requests for maintenance of the patent.

IV. In a communication pursuant to Article 11(1) of the Rules of Procedure of the Boards of Appeal dated 26 May 2006 accompanying the summons to oral proceedings, the Board expressed its preliminary opinion that the Opposition Division's conclusions in respect of the main and first auxiliary requests did not give rise to a different conclusion, and that the second auxiliary request needed further consideration in respect of Articles 83, 84 and 56 EPC.

V. During the oral proceedings held on 10 July 2006 Appellant I (Opponent) filed:

Anlage 2: edana, Recommended Test: Nonwovens Thickness, February 96

Anlage 3: ASTM D 5729-97, Standard Test Method for Thickness of Nonwoven Fabrics

Appellant II (Patentee) requested that the decision under appeal be set aside and that the patent be maintained as granted or on the basis of the first, second, third or fourth auxiliary request as submitted during the oral proceedings.

Appellant I (Opponent) requested that the decision under appeal be set aside and that the European patent No. 1 006 970 be revoked.

Independent claim 1 as granted (main request) reads as follows:

"An absorbent structure in an absorbent article, such as a diaper, an incontinence guard, a sanitary napkin or like article, wherein the structure includes mutually opposing end-edges (16, 17) and longitudinally extending side-edges (14) extending therebetween, wherein the structure includes a liquid-acquisition and liquid-dispersing core (11) of high bulk, porous material, wherein the core (11) (*) is disposed between said longitudinally extending side-edges (14) and extends over at least a substantial part of the structure in its longitudinal direction and is in liquid communication with a liquid storage part (12) that surrounds the liquid-acquisition and liquid-dispersing core (11) at least along the long sides of said core and has an effective mean pore size which is smaller than the effective mean pore size of the liquid-acquisition and liquid-dispersing core (11), characterized in that the density of the liquid storage part (12) increases in a direction outwards towards the longitudinally extending side-edges (14) of the absorbent structure (3)."

Claim 1 of the second auxiliary request comprises the wording of granted claim 1, to which was added:

"..., and in that the liquid storage part (12) contains between 2 and 80 %, preferably between 10 and 50 %, superabsorbent calculated on the total weight, and in that the liquid-acquisition and liquid-dispersing core (11) is comprised of wadding material or nonwoven material comprised of synthetic fibres, and in that the

liquid storage part includes hydrophilic fibres of cellulose fluff pulp, and in that the material of the core (11) has a void volume greater than 90 %."

VI. The first, third and fourth auxiliary requests were not allowed into the proceedings for the following reasons given during the oral proceedings:

(i) In claim 1 of the first auxiliary request, which includes the wording of granted claim 1, the terminology "has a border (13) and" was inserted in line 8. Although disclosed in the description, this amendment was not occasioned by the grounds for opposition (Rule 57a EPC). Since in the claim it is specified that the liquid-dispersing core (11) at least along the long sides of said core has an effective mean pore size which is smaller than the effective mean pore size of the liquid-acquisition and liquid-dispersing core, such a "border" is already present in the wording of the claim, so that the amendment does not provide any further clarification or restriction.

(ii) Claim 1 of the third auxiliary request was amended by introducing features taken from granted claims 6 and 8 concerning the density of the liquid storage part 12 at a portion closest to the liquid acquisition core 11, and the density ratio between the side edge density and the density closest to the liquid acquisition core.

During the opposition proceedings, the appeal proceedings in writing, and also during the oral proceedings, all previous amendments of claim 1

were directed to the introduction of features concerning the material and the void volume of the core 11, the liquid storage part containing superabsorbent, and hydrophilic fibres of cellulose fluff pulp included in the storage part, taken from granted claims 2, 4, 5 and description [0021].

The amendments according to the third auxiliary request turned in a totally different technical direction which had never been the subject of discussion previously. Hence, the new subject-matter could not be thoroughly dealt with and decided upon during the oral proceedings; this may even have necessitated remittal to the first instance. This means that its admittance at such a late stage would have delayed the proceedings in an undue manner, so that the Board exercised its discretion under Article 114(2) EPC.

(iii) The fourth auxiliary request was equally late filed and was not clearly allowable. It suffered from a deficiency concerning the measurement of the density of the storage part in that it could not be determined in a reliably repeatable manner due to the absence of any disclosure of the measurement method to be applied in the patent in suit. There was also no standard measurement method generally used by the skilled person.

VII. In support of its requests, Appellant II (Patentee) essentially relied upon the following submissions:

The subject-matter of granted claim 1 was novel when compared with the disclosure of E1. In E1 there was only one core having a varying density but no liquid-acquisition and liquid-dispersing core surrounded by a liquid storage part at least along the side edges. In particular, E1 did not disclose a liquid storage part having an increasing density in a direction outwards towards the longitudinally extending side edges. The varying capillary gradient was not achieved by increasing the density but by other measures, which would not directly lead to a different density of the material, such as varying the denier of the synthetic fibres or varying the concentration of the fibres in the fibre mix. None of the other cited prior art documents E2, E3 and E4 disclosed a liquid storage part having a density which increased from the liquid-acquisition and liquid-dispersing core in a direction outwards towards the longitudinally extending side-edges.

The claimed solution was not obvious since none of the prior art documents alone nor their combination would lead the skilled person to the absorbent structure of claim 1.

VIII. The arguments of Appellant I (Opponent) can be summarised as follows:

The subject-matter of claim 1 (main request) lacked novelty when compared with the disclosure of E1. The skilled person would immediately recognize that the

varying capillary gradient in E1 would equate with an increasing density towards the edges because the materials described in E1 were the same as those used in the patent in suit.

In any case, it lacked an inventive step since the skilled person applying the fibres used in E1 would inevitably arrive at the same result as claimed in claim 1.

Claim 1 according to the second auxiliary request was not allowable under Article 84 EPC. As was evident from the prior art documents E6, E7, E8 and also from "Anlage 2" and "Anlage 3", a defined pressure was necessary in order to determine the void volume or the density of a fluffy material. In each of the cited documents, a different pressure was used during the measurement, and no standard measuring method was available. Since any necessary definition of the pressure during the measurement was missing in the description of the patent in suit, the claim at least lacked clarity.

Reasons for the Decision

1. The appeals are admissible.

2. *Main request*

2.1 Novelty (Article 54(1) EPC)

The closest prior art represented by E1 discloses an absorbent structure in an absorbent article, such as a

diaper 1, the structure including mutually opposing end-edges and longitudinally extending side-edges extending therebetween. The structure includes a liquid-acquisition and liquid-dispersing core "a" of high bulk, porous material which is disposed between said longitudinally extending side-edges and extends over a substantial part of the structure in its longitudinal direction and is in liquid communication with a liquid storage part "b", "c" that surrounds the liquid-acquisition and liquid-dispersing core "a" along the long sides of said core and has an effective mean pore size which is smaller than the effective mean pore size of the liquid-acquisition and liquid-dispersing core (Figures 1, 2; column 2, lines 25 to 30, column 3, line 66 to column 4, line 20).

Appellant II (Patentee) argued that E1 would not disclose a core and a surrounding storage part but only a composite core having a capillary gradient. However, the function of the core "a" and surrounding cores "b", "c", ... (up to six) in E1 is comparable with that of the subject-matter of claim 1 having a core 11 and a surrounding storage part 12. Technical function rather than nomenclature is decisive for establishing a possible difference between the subject-matter claimed and the prior art.

E1 does not clearly and unambiguously disclose the characterizing feature of claim 1 that the density of the liquid storage part increases in a direction outwards towards the longitudinally extending side-edges of the absorbent structure. Although the capillary gradient from the core towards the storage part can be achieved by a varying density, this

property is not necessarily present because there are also other possibilities, as is also supported by E4 (page 39, lines 19 to 25).

Therefore the subject-matter of claim 1 is novel.

2.2 *Inventive step (Article 56 EPC)*

Starting from the prior art disclosed by E1, the object underlying the patent in suit is to provide a structure which is able to acquire large volumes of liquid rapidly, even in the case of repeated wetting, and spread the liquid towards unused parts of the absorbent body. This technical problem is solved by an increasing density of the liquid storage part in a direction outwards towards the longitudinally extending side-edges of the absorbent structure.

2.3 A similar problem is addressed in E1 (column 2, lines 6 to 13) where the solution is achieved in an absorbent structure by a capillary gradient, the inner zone having a greater average pore size than the outer parts of the absorbent structure. This decreasing average pore size is obtained, for example, by the application of wadding components comprising mixtures of synthetic fibre or filament and cellulose-based fibres in the core and in the storage part wherein the portion of the cellulose-based fibres in the mixture increases towards the outer regions (column 4, lines 21 to 55). The skilled person trying to put that teaching of E1 into practice will, in practice, inevitably end up with an increase of density at the outer region if he uses the same sort of cellulose based fibres for the fibre mix in the centre and towards the outer regions because

much more material will be needed to provide a smaller average pore size when compared to the centre portion. As the person skilled in the art would, already for reasons of economy, not be inclined to use different materials, the teaching of E1 immediately leads him to an absorbent structure having all the features of claim 1. Its subject-matter is therefore deprived of an inventive step.

3. *Second auxiliary request*

3.1 Amendments (Article 123(2) EPC)

Admissibility of the amendments made to claim 1 was not contested by Appellant I (Opponent). The Board does not see a reason to decide this issue because claim 1 is already at variance with another requirement of the EPC (see below).

3.2 Clarity (Article 84 EPC)

One of the added features is "that the material of the core (11) has a void volume greater than 90 %". There is no further indication, either in the claims or in the patent specification, how to measure this void volume. Appellant II (Patentee) argued that the skilled person would carry out that measurement at atmospheric pressure.

However, because of its fluffy nature, in particular for core materials with a high void volume, a defined pressure higher than the atmospheric pressure is necessary for sufficiently accurate determination of the volume of the bulky material because the limits of

the structure are not clearly defined. As can be derived from the prior art according to E8 (column 7, line 65 to column 8, line 29), a control pressure is applied when measuring the volume of the bulky material.

There is also no standard measurement method which would be carried out by the skilled person. "Anlage 2" and "Anlage 3" show different materials with a different control pressure used, and even within one method different pressures are applied depending on the thickness of the material.

Consequently, since the feature of a void volume greater than 90 % cannot be determined in a reliable and repeatable manner, claim 1 is unclear within the meaning of Article 84 EPC.

4. Since none of the main or auxiliary requests is allowable, the patent cannot be maintained.

Order

For these reasons it is decided that:

1. The Proprietor's appeal is dismissed.

2. The patent is revoked.

The Registrar: The Chairman:

M. Patin P. Alting van Geusau