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D E C I S I O N
of 20 September 2000

Case Number: T 0330/98 - 3.2.6

Application Number: 92903421.3

Publication Number: 0565606

IPC: A61F 13/46

Language of the proceedings: EN

Title of invention:

Absorbent article having rapid acquiring, multiple layer
absorbent core

Patentee:

THE PROCTER & GAMBLE COMPANY

Opponent:

Coloplast A/S
Camelot Superabsorbents Ltd

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 123(2)

Keyword:

"Admndments - added subject-matter (no)"
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:

G 0009/91, G 0010/91, T 0782/92, T 1002/92

Catchword:

-



Case Number: T 0330/98 - 3.2.6

D E C I S I O N
of the Technical Board of Appeal 3.2.6
of 20 September 2000

Appellant:
(Opponent I)

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted 9 February 1998
rejecting the opposition filed against European
patent No. 0 565 606 pursuant to Article 102(2)
EPC.**

Composition of the Board:

Chairman: P. Alting van Geusau

Members: T. Kriner
J. C. M. De Preter

Summary of Facts and Submissions

I. Appellant I (opponent I) and appellant II (opponent II) each lodged an appeal on 2 April 1998 and 17 April 1998 respectively, against the decision of the Opposition Division, dispatched on 9 February 1998, concerning the rejection of the oppositions against European Patent No. 0 565 606. The appeal fees were paid simultaneously with the appeals and the statements setting out the grounds of appeal were filed on 5 June 1998 and 19 June 1998, respectively.

II. The oppositions had been filed against the patent as a whole and based on Article 100(a) together with Articles 52(1), 54(1), 56 EPC, and on Article 100(c) together with Article 123(2) EPC.

In its decision the Opposition Division held that the grounds for opposition did not prejudice the maintenance of the patent unamended and that therefore the opposition was to be rejected.

III. From the documents considered by the Opposition Division, the following documents played a role during the appeal proceedings:

D1a: Swedish brochure on Conveen incontinence pad, dated 1988

D1b: German brochure on Conveen incontinence pad

D1c: English brochure on Conveen incontinence pad, dated 1988

D2: Schematical drawing showing the cross section of

a Conveen incontinence pad

- D3a: Copy of a letter from Finess AB, Sweden, dated 16 June 1995
- D3b: Results of measurements on double layer tissue used in Conveen incontinence pads performed on 7 April 1995
- D4a: Copy of a letter from Allied Colloids LTD, dated 8 September 1995
- D4b: Results of measurements according to the "tea bag test" on "Salsorb 88" used in Conveen incontinence pads performed on 6 June 1995
- D7: EP-A-0 397 110
- D8: "Composite webs with superabsorbent fibers", Conference Paper by Mr. Thomas J. Dugdale, INSIGHT Conference, Toronto, 23 to 24 September 1987
- D10: US-A-4 411 660.

In addition to these documents, the following documents have been cited during the appeal proceedings:

- D14: US-A-4 935 022
- D15: Brochure of ARCO Chemical Company referring to FIBERSORB SA-7000, dated 1988
- D16: WO 91/11165

- D16a: Front page of EP-A-0 512 001
- D17: US-A-5 217 445 (priority document of D16)
- D18: Declaration of Mr Jens Pedersen dated 30 October 1996 and supplementary declaration of Mr Jens Pedersen dated 3 June 1998 with annexes, concerning the Conveen incontinence pad
- D19: Advertisement for Conveen incontinence pad in Danish publication "Helse", No: 5, Oct-Nov 1987
- D20: Advertisement for Conveen incontinence pad in Dutch publication "Zeker Zijn", September 1988
- D21a - D21g:
Copies of sale invoices of Coloplast from September 1989 to October 1990
- D22: Sales report from 1 October to 31 December 1990
- D23: "Novel superabsorbent fibers", article by Thomas J. Dugdale in Nonwovens World, February 1987.

Documents D1a to D4b and 18 to 22 refer to an alleged public prior use in respect of the Conveen incontinence pad.

IV. Oral proceedings took place on 20 September 2000.

The appellants requested that the decision under appeal be set aside and the patent revoked in its entirety.

In addition to the grounds raised in the opposition proceedings, appellant I based its request in appeal

also on the ground that the contested patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) in conjunction with Article 83 EPC).

The respondent (patent proprietor) requested that the appeal be dismissed and the patent be maintained as granted (main request) or in amended form on the basis of one of the auxiliary requests 1 to 3 filed with a letter of 11 August 2000.

With respect to the new ground of opposition under Article 100(b) EPC, the respondent did not agree to its introduction into the proceedings.

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

"A multiple layer absorbent core (42) suitable for use in an absorbent article (20), said absorbent core (42) comprising

at least one acquisition/distribution layer (46, 46') having a fluid acquisition/distribution rate of at least about 2 cubic centimeters of synthetic urine per second when said acquisition/distribution layer is tested according to the Fluid Acquisition/Distribution Test under a pressure of 28 grams per square centimeter; and

a storage layer (48, 48') positioned subjacent said acquisition/distribution layer, characterized in that:

said storage layer at least partially comprises an absorbent gelling material which is capable of

absorbing synthetic urine at such a rate that said absorbent gelling material reaches at least about 40% of its absorptive capacity in less than or equal to 10 seconds when said absorbent gelling material is tested according to the Tea Bag Test, or, which has a total absorptive capacity of at least about 25 times its dry weight and is capable of absorbing at least about 0.8 grams of synthetic urine per second per gram of absorbent gelling material and wherein the Fluid Acquisition/Distribution Test comprises a liquid impervious sample support for supporting a test sample of the acquisition/distribution layer (46, 46')".

Claim 2 of the main request reads as follows:

"An absorbent article (20) comprising a liquid pervious topsheet (34), a liquid impervious backsheet (36) joined to said topsheet, an absorbent core (42) positioned between said topsheet (34) and said backsheet (36), wherein said absorbent core (42) comprises:

a multiple layer absorbent core comprising at least two pairs of layers (46, 46', 48, 48') wherein at least one pair of layers (46, 46') comprises an acquisition/distribution layer (46) and a storage layer (48) positioned subjacent said acquisition/distribution layer, wherein

said acquisition/distribution layer (46) has a fluid acquisition/distribution rate of at least about 2, more preferably at least about 4, most preferably at least about 8 cubic centimeters of synthetic urine per second when said acquisition/distribution layer is tested according to the Fluid Acquisition/Distribution Test under a pressure of about 28 grams per square

centimeter, characterized in that:

said storage layer at least partially comprises an absorbent gelling material which is capable of absorbing synthetic urine at such a rate that said absorbent gelling material reaches at least 40% of its absorptive capacity in less than or equal to 10 seconds when said absorbent gelling material is tested according to the Tea Bag Test, or, which absorbent gelling material has a total absorptive capacity of at least 25 times its dry weight and is capable of absorbing at least about 0.8 grams of synthetic urine per second per gram of absorbent gelling material;

wherein said at least one pair of layers (46, 48) is in fluid communication with at least one adjacent pair of layers (46', 48')".

Claim 1 of the auxiliary request 1 corresponds to claim 1 of the main request.

Claim 2 of the auxiliary request 1 differs from claim 2 of the main request by the addition of a feature according to which:

"the Fluid/Acquisition Test comprises a liquid impervious sample support for supporting a test sample of the acquisition/distribution layer (46, 46').

Claims 1 and 2 of the auxiliary request 2 differ from claims 1 and 2 of the main request by the addition of a feature which requires that

"the acquisition/distribution layer (46, both claims; 46' claim 1 only) has a density of less than or equal

to about 0.1 grams per cubic centimeter".

Claims 1 and 2 of the auxiliary request 3 include the amendments of auxiliary request 1 and auxiliary request 2.

VI. In support of its request appellant I relied essentially on the following submissions:

The lack of sufficient disclosure of the invention was not a fresh ground mentioned for the first time in the appeal proceedings. Although it had not been formally raised in the opposition proceedings, it had been indicated at least implicitly in the notice of opposition, because it had been mentioned that claim 1 of the patent in suit was not clear. Since Article 84 and 83 EPC were closely linked, it was obvious that the contested patent had also been attacked on the ground of lack of sufficient disclosure.

The combination of at least one acquisition/distribution layer and a storage layer comprising gelling material which was either capable of absorbing synthetic urine at such a rate that said absorbent gelling material reached at least about 40% of its absorptive capacity in less than or equal to 10 seconds when said absorbent gelling material was tested according to the tea bag test (in the following cited as feature c1), or, which had a total absorptive capacity of at least about 25 times its dry weight and was capable of absorbing at least about 0.8 grams of synthetic urine per second per gram of absorbent gelling material (in the following cited as feature c2) was not disclosed in the originally filed application. Feature c2, as a single requirement for the gelling

material had only been disclosed in claim 4 of the originally filed application documents, which referred to an absorbent core comprising at least two pairs of layers. In the summary of the invention on page 6 of the originally filed application, feature c2 was presented as a preferred embodiment of feature c1, what could only mean that a storage layer comprising feature c2 must also comprise feature c1. Since there was no support in the originally filed application for an absorbent core having only a single pair of layers and the absorptive capacity and absorption rate of a storage layer defined by feature c2, the person skilled in the art could only be left with the impression that the feature of having at least two pairs of layers was indispensable for the lower limit values defined by feature c2, if these lower limit values were used separately from those defined in feature c1. Therefore, claim 1 of the present requests contained subject-matter which extended beyond the content of the application as filed.

Late filed documents D14 to D23 should be admitted, because they were particularly relevant for the discussion of novelty and inventive step. Moreover, D15 was merely a supplementary disclosure to D8 and D14 to D23 presented additional information to prove the public prior use of the Conveen pad and in so far had to be seen as additional information occasioned by the reasons given in the decision under appeal.

Documents D1a to D4b and 18 to 22 proved that the Conveen pad was sold before the priority date of the patent in suit and comprised all features of claim 1 according the present requests. The Fluid Acquisition/Distribution Test could not be carried out

on the tissue material B 2001 of the acquisition/distribution layer of the prior used Conveen pad, but only on the tissue material B 1801 which was used after the priority day of the contested patent. The only difference between these materials was a change of the specific weight value from 20 g/m² (B 2001) to 18 g/m² (B 1801). This resulted merely in a change of the thickness of the tissue material. All other properties did not change. The fact that the air permeability did not change, showed that the density of B 2001 and B 1801 was the same. Since there existed no correlation between the specific weight value of the material and the result of the Fluid Acquisition/Distribution Test and since all other properties remained unchanged, it was obvious that the tissue material B 2001 and B 1801 had the same fluid acquisition/distribution rate when tested according to the Fluid Acquisition/Distribution Test described in the patent in suit. Therefore, the subject-matter of claim 1 lacked novelty.

In any case, the combination of D14 with any of D8 or D15 would lead the skilled person without an inventive step directly to the subject-matter of the contested patent.

D14 referred to an absorbent core and an absorbent article having the structure as defined in the present claims 1 and 2, wherein the acquisition/distribution layer quickly transported fluids in the horizontal direction.

Both, D8 and D15 disclosed an absorbent core which, with respect to the absorbent material SA-7000L, differed solely from the requirements of claim 1 of the

patent in suit in respect of the properties of the acquisition/distribution layer. Furthermore, these documents disclosed that a suitable coordination of the storage layer with the acquisition/distribution layer resulted in a dramatic increase in speed of absorption. Starting from any of the prior art cores disclosed in D8 or D15 and looking for a suitable acquisition/distribution layer, the skilled person, under consideration of D14, would select a layer which transported fluids in the horizontal direction as rapidly as possible. This selection would inevitably result in an absorbent core according to the core defined in claim 1 under consideration where the horizontal acquisition/distribution rate of the acquisition/distribution layer was merely defined by desired values.

Also when starting from D14 and looking for an efficient absorbent gelling material, the skilled person would select the material according to D8 or D15. The use of this material in an absorbent article disclosed in D14 would equally lead in an obvious manner to the subject-matter according to claims 1 and 2.

Furthermore, since the skilled person always sought to improve the performance of absorbent cores or absorbent articles, a selection of the best possible and available materials for such products was without any inventive merit.

VII. Appellant II supported appellant I's view and additionally submitted that claim 1 was not acceptable under Article 123(2) EPC, because only the feature according to which the Fluid Acquisition/Distribution

Test comprised a liquid impervious sample support for supporting a test sample of the acquisition/distribution layer (in the following cited as feature d) was specified in claim 1, whereas according to the disclosure of the description of the patent in suit the test comprised a plurality of important features which had to be met in order to obtain reliable and meaningful test results. Furthermore, there was no basis in the originally filed application for the support to be other than a Plexiglas cube with a 4 inches x 4 inches upper surface.

The taking out of a single important feature of the Fluid Acquisition/Distribution Test and its broadening to any liquid impervious support resulted in added subject-matter and thus a contravention of Article 123(2) EPC.

In addition to the submissions of appellant I concerning novelty and inventive step, appellant II stated that the subject-matter of claim 1 was not new over the absorbent core according to D7 or D14, or at least did not involve an inventive step when considering one of these documents alone. By simply following the teaching of D7 or D14, the skilled person would produce an absorbent core having a fast acquisition/distribution layer and a storage layer containing a fast absorbing material as defined in claim 1 of the patent in suit. Also the subject-matter of claim 2 was obvious in the light of the teaching given in D7 or D14, at least when considering D10.

VIII. The respondent disputed the views of appellant I and appellant II. His arguments can be summarized as

follows:

The new ground according to Article 100(b) EPC could not be introduced into the proceedings, because it was clear from G 9/91 and G 10/91 that the Board had no discretion to consider such a fresh ground for the first time in the appeal proceedings where, as in the present case, the patent proprietor did not agree to its introduction in the appeal proceedings.

Features c1 and c2 related to two different requirements of the absorbent gelling material. Page 29 of the originally filed documents clearly described in the last two paragraphs that features c1 and c2 were not equivalents, but alternative ways to express the rate at which an absorbent gelling material absorbs fluid. This was additionally shown by originally filed claim 1 which referred exclusively to feature c1, and originally filed claim 4 which referred exclusively to feature c2.

From the summary of the invention on page 5 of the originally filed documents it was clear that the absorbent article of the invention comprised at least one pair of layers. Reading page 6 in connection with page 5 would lead to the conclusion that the absorbent gelling material used in the storage layer preferably had to meet the requirements according to feature c2. Therefore, the original disclosure of the patent in suit clearly comprised an absorbent core having at least one acquisition/distribution layer and a storage layer comprising an absorbent gelling material which met only the requirements of feature c2.

Furthermore, it was not necessary that claim 1

specified all the features of the Fluid Acquisition/Distribution Test, because this test was defined in detail in the description. From the description it was also clear that the upper surface had to be a liquid impervious one. The only reason for the introduction of feature d into claim 1 was to show the difference between the test of the invention and the test according to D7 which comprised a liquid pervious sample support. Hence, the introduction of feature d could not result in a contravention of Article 123(2) EPC.

None of the cited documents disclosed an absorbent core comprising all the features of claim 1.

The prior used Conveen pad met most requirements of claim 1, but lacked the prescribed fluid acquisition/distribution rate of the fluid acquisition/distribution layer. The conclusion that the fluid acquisition/distribution rate of the tissue materials B 2001 and B 1801 was the same, based on a mere speculation and was not supported by evidence. The statement in D3a according to which all properties of these materials were unchanged, referred obviously only to the mechanical properties listed in this document. However, none of these properties related to the fluid handling ability. Since there were many possibilities to change the fluid handling properties of a material without changing its mechanical properties, the fluid acquisition/distribution rate of B 2001 and B 1801 tissues could be completely different. Even if the air permeability was the same for both materials, this did not mean that also the fluid acquisition/distribution rate was unchanged. Furthermore, the appellants' opinion according to which the air permeability did not

change when the thickness of the tissue layer was changed, was wrong, because the air permeability of a given material was indeed dependent on its thickness. Anyhow, there was no support for the conclusion that the B 2001 and B 1801 tissues had the same fluid acquisition/distribution rate, on the contrary, it was more likely that this property was different. Since the fluid acquisition/distribution rate established for the B 1801 tissue was close to the lower limit of the rate defined in claim 1, the statement that the prior used Conveen pad having the B 2001 tissue was novelty destroying was not proven up to the hilt as required for a public prior use where practically all the evidence in support of it lay in the power and knowledge of the opponent (T 472/92, OJ/EPO 1998, 161).

The present invention was directed to a combination of an acquisition/distribution layer which was able to transport liquid very rapidly sideways and a storage layer comprising a high-speed absorbent gelling material. The use of such an absorbent material required that the fluid was rapidly and evenly distributed over the storage layer and the size of the storage layer was adapted to the size of the acquisition/distribution layer. The claimed combination was neither known from nor suggested by the state of the art.

D14 referred to an absorbent core having a large acquisition/distribution layer and a relatively small storage layer having a high percentage of superabsorbent material. Since a high-speed absorbent gelling material in such a storage layer would inevitably result in a gel-blocking effect, the skilled person would not consider its use, but prefer a slower

superabsorbent material. For the rapid storing of fluid the skilled person would rely on the superabsorbent contained in the acquisition/distribution layer of D14. Therefore, a combination of D 14 with any of D8 or D15 was not obvious.

Moreover, D8 and D15 did not disclose a layer which could be regarded as an acquisition/distribution layer but merely a thin tissue layer, and the absorbency of the absorbent gelling materials cited in these documents had not been tested in synthetic urine, but only in a saline solution.

D7 contained no teaching which would lead the skilled reader to design an article which operated like the invention. The purpose of the acquisition/distribution layer according to D7 was not only to rapidly uptake surges of liquid, but also to temporarily hold such surges. Consequently, the speed of the absorbent gelling material was of much less relevance than in the present invention and given the particular functioning of this known absorbent core, the skilled person had no reason to select a high speed absorbent gelling material.

Reasons for the Decision

1. The appeals are admissible.

2. *Late filed documents*

In accordance with the case law of the Boards of Appeal, late filed documents should only very exceptionally be admitted into the appeal proceedings,

if they are prima facie highly relevant (see T 1002/92). Since the Board is of the opinion that documents D16, D16a to D17 and D23 are less relevant than the documents cited in time, these documents have not been introduced into the appeal proceedings. Documents D14, D15 and D18 to D22, however have been admitted, because D14 and D15 are crucial for the discussion of novelty and inventive step and D18 to D22 concern further evidence for the alleged public prior use, in respect of the Conveen pad.

3. *Insufficiency of the disclosure*

According to G9/91 and G 10/91, a fresh ground for opposition may not be introduced into the appeal proceedings without the agreement of the patentee. Such a fresh ground is to be understood as a new objection under Article 100 EPC against the patent in suit which was neither raised nor substantiated in the notice of opposition nor introduced into the proceedings by the Opposition Division under Article 114(1) EPC.

In the present case, an objection according to Article 100(b) EPC was not formally raised nor substantiated as a ground of opposition in the notice of opposition and has been mentioned for the first time in the appeal proceedings. The Opposition Division has already considered the clarity objection raised by appellant I and decided that even if it could be regarded as an objection according to Article 100(b) EPC, it would not succeed as a ground of opposition. Therefore, the Opposition Division saw no reason to consider this ground of its own motion (see point 4 of the contested decision).

Under these circumstances and the fact that the respondent did not agree to the introduction of the additional ground of opposition, it cannot be introduced in the present appeal proceedings.

4. *Amendments of the claims*

- 4.1 With respect to the objection of appellant I concerning Article 123(2) EPC, the question has to be answered whether or not the originally filed application discloses an absorbent core having a single pair of layers comprising a storage layer which includes an absorbent gelling material having the absorptive capacity and absorption rate defined by feature c2 independently of the requirements defined by feature c1 (feature c1 and c2, see point VI of this decision).

In the summary of the invention on page 5 of the originally filed documents, it is described that the multiple layers of the invention comprise at least one pair of layers (see last paragraph of page 5). The following two paragraphs on page 6 refer to the acquisition/distribution layer and storage layer forming such a pair of layers. With respect to the storage layer it is described that it comprises an absorbent gelling material which reaches at least about 40% of its absorptive capacity in less than or equal to about 10 seconds. Preferably, this will be a material which has a total capacity of at least about 25 times its dry weight in fluid, such as urine, and a liquid acquisition rate of greater than or equal to about 0.8 grams of synthetic urine per second per gram of such material.

This portion of the description teaches that the

multiple layer absorbent core having at least one pair of layers, comprises a storage layer containing absorbent gelling material which, in a first embodiment meets the requirements of feature c1, and, in a preferred embodiment, meets the requirements of feature c2.

The last two paragraphs of page 29 and the first paragraph of page 30 of the originally filed description explain that feature c1 expresses in a first way the requirements of an absorbent gelling material for the present invention, and feature c2 expresses in an alternative manner the requirements of a preferred absorbent material.

Hence, the teaching of pages 5 and 6 cannot be interpreted in such a way that the preferred absorbent gelling material has to meet the requirements of features c1 and c2.

For these reasons, the Board does not share the opinion of appellant I that feature c2 as a single requirement for the absorbent gelling material has only been disclosed in claim 4 of the originally filed documents, and that the feature of having at least two pairs of layers is indispensable for the requirements according to feature c2, if these requirements are used separately from those according to feature c1.

- 4.2 The Fluid Acquisition/Distribution Test referred to in claim 1 and the corresponding test apparatus is described in detail on pages 48 to 53 of the originally filed documents. From this description, in particular from page 52, paragraph 3 in connection with Figure 10, it is clear that the top surface of the sample platform

is liquid impervious. Otherwise the fluid within the sample 100 would not flow in a horizontal direction only. Therefore, feature d is at least implicitly disclosed in the originally filed application (feature d, see point VII of this decision).

Since the description defines only a single Fluid Acquisition/Distribution Test, claim 1 gives the unequivocal teaching that the claimed fluid acquisition/distribution rate has to be established according to this test.

The test per se does not form part of the claimed absorbent core, but only the fluid acquisition/distribution rate. Therefore, the features of the test cannot be regarded as technical features of the invention in the sense of Rule 29(1) EPC, and it is not necessary for any of them to be contained in claim 1.

In the light of this conclusion, the incorporation of feature d in claim 1 cannot be regarded as a feature which has been picked out of a plurality of essential features, but only as a redundant piece of information about the Fluid Acquisition/Distribution Test for the determination of the fluid acquisition/distribution rate.

- 4.3 With respect to the above assessments, neither the combination of at least one acquisition/distribution layer and feature c2 without feature c1, nor the introduction of feature d into claim 1 results in a contravention of Article 123(2) EPC.

5. *Main request*

5.1 Novelty

5.1.1 With respect to the alleged public prior use, D21f shows that the product Conveen stay dry having the product number 5471 was sold by Coloplast to Smith, E. & Co Ltd. in Hull in October 1990 and D21g shows that the Conveen products having the numbers 269464, 269472 and 273003 were sold by Coloplast to ADA in Göteborg in October 1990.

A Conveen stay dry pad having the number 5471 is shown in D1c and Conveen pads having the numbers 269464, 269472 and 273003 are shown in D1a.

According to the statement of Mr. Jens Pedersen (see D18, declaration dated 30 October 1996, point 4) these Conveen pads comprise (cf. D2):

a multiple layer absorbent core comprising at least one acquisition/distribution layer (double layer tissue) and a storage layer (absorbent body) positioned subjacent said acquisition/distribution layer and comprising a superabsorbent material;

wherein said acquisition/distribution layer was made in 1990 of a double tissue layer purchased from Finess AB and designated as Quality B 2001 (see point 8), and

said superabsorbent material was "Salsorb 88" purchased from Allied Colloids Limited (see point 7).

As shown in the test results of D4b, "Salsorb 88" has a total absorptive capacity of at least about 25 times its dry weight and is capable of absorbing at least about 0.8 grams of synthetic urine per second per gram

of the superabsorbent material.

Measurements of the horizontal acquisition/distribution rate of the double layer tissue have been carried out on Quality B 1801 purchased from Finess AB which has been used for the acquisition/distribution layer since 1991. As shown in the test results of D3b, this double layer tissue has a fluid acquisition/distribution rate of at least about 2 cubic centimeters of synthetic urine per second (in fact a mean value of 2.13 cc/sec) when said acquisition/distribution layer is tested according to the Fluid Acquisition/Distribution Test under a pressure of 28 grams per square-centimeter and when the test sample of the acquisition/distribution layer is supported on a liquid impervious sample support.

The submitted evidence undisputedly proves that Conveen pads have been made available to the public before the priority date (03.01.91) of the patent in suit, and that these pads meet most requirements of claim 1, except the one concerning the fluid acquisition/distribution rate of the fluid acquisition/distribution layer.

Therefore, the question to be answered is whether or not the double layer tissue of the quality B 2001 has the same or a higher fluid acquisition/distribution rate as the double tissue layer of the quality B 1801 which has been tested in accordance with the Fluid Acquisition/Distribution Test defined in the contested patent.

According to D3a, the tissue B 2001 has a specific weight of 20 g/m² and the tissue B 1801 has a specific

weight of 18 g/m². Consequently, the tissue material of the prior used Conveen pad must either be thicker than the tested material or it must have a higher density.

The statement of appellant I that the change from B 2001 tissue to B 1801 tissue resulted only in a change of the thickness of the tissue material is not supported by the submitted evidence.

D3a gives the information that the tissue materials B 2001 and B 1801 differ by their specific weight value only, and that all other properties of these tissue materials are the same. Since the difference of the specific weight value inevitably requires a difference of the thickness and/or the density of the tissue materials, "all other properties" cannot include the thickness and the density.

If D3a refers, however, exclusively to the properties cited in this document which comprise amongst others the thickness of the tissue material, the density must have changed. Contrary to the opinion of appellant I, in this case the specific weight value and the fluid acquisition/distribution rate are correlated in such a way that a higher density results in a lower fluid acquisition/distribution rate. Therefore, if the density is changed, it is to be expected that the fluid acquisition/distribution rate of the tissue material B 2001 is lower than the one of the tissue material B 1801. Since the mean value of the test results presented in D3b (2.13 cm³/sec) is only slightly above the lower limit of 2 cm³/sec, this change of density could result in a fluid acquisition/distribution rate which does not meet the requirements defined in claim 1.

The argument of appellant I that the density of the B 2001 tissue and the B 1801 tissue must be the same for the reason that both tissue materials have the same air permeability, is not convincing. Since the air permeability of a material is dependent amongst other factors on its thickness, this argument could also be used to conclude that the thickness did not change.

In the light of the above assessments it is evident that the submitted evidence is not sufficient to prove with certainty that the fluid acquisition/distribution rate of the B 2001 tissue and the B 1801 tissue is the same or higher. According to the case law of the Boards of Appeal, a public prior use has generally to be proven beyond any reasonable doubt (see T 782/92) and where practically all the evidence in support of the alleged prior use lies within the power and knowledge of the opponent, which applies in the present case, because the appellant I has the single example of the Conveen pad in his possession, it should be proven up to the hilt (see T 472/92 cited above).

Therefore, it has to be concluded that the subject-matter of claim 1 is new over the prior-used Conveen pad.

5.1.2 D7 discloses a multiple layer absorbent core comprising at least one acquisition/distribution layer (46) and a storage layer (48) positioned subjacent said acquisition layer, the storage layer comprising an absorbent gelling material which is capable of absorbing synthetic urine.

It is true that D7 does already suggest providing an acquisition/distribution layer which is capable of

distributing fluids in a horizontal direction, and an absorbent gelling material having a high retention capacity. However, D7 does not disclose an acquisition/distribution layer and an absorbent gelling material which meet the requirements defined in claim 1.

Hence, the subject-matter of claim 1 is also new over D7.

- 5.1.3 D14 discloses a further multiple layer absorbent core comprising an acquisition/distribution layer (103) and a storage layer (104) positioned subjacent said acquisition/distribution layer, said storage layer comprising an absorbent gelling material (see claim 1) which is capable of absorbing synthetic urine and which has a total absorptive capacity of at least about 25 times its dry weight (see column 13, lines 38 to 44).

However, D14 neither describes an acquisition/distribution layer having the fluid acquisition/distribution rate defined in claim 1, nor an absorbent gelling material which is capable of absorbing at least about 0.8 grams of synthetic urine per second per gram of absorbent gelling material or which meets the requirements of the tea bag test defined in claim 1.

Therefore, the subject-matter of claim 1 is also new over D14.

5.2 Inventive step

- 5.2.1 Starting from an absorbent article comprising an absorbent core having the structure defined in claim 1

as it is disclosed in D7 or in D14, the object underlying the subject-matter of the contested patent is to provide an absorbent core which allows to continuously acquire, distribute and store exudates without gel-blocking or saturation in the region where the exudates are deposited (see patent in suit, page 3, lines 15 to 24).

5.2.2 According to the patent, this object is achieved by the provision of an acquisition/distribution layer having an acquisition and laterally distribution rate with a specified high value and a storage layer comprising an absorbent gelling material which has an absorptive capacity and an absorption speed of a further specified high value.

5.2.3 The surge management layer of the absorbent core according to D7 serves to quickly collect and temporarily hold discharged liquids, and to transport such liquids from the point of initial contact to other parts of the absorbent structure, particularly the retention portion (see page 9, lines 2 to 4). The proper operation of this known absorbent core requires a surge management layer which is able to rapidly absorb and store the fluid but also allows a rapid horizontal spreading of fluid, and a retention layer which is able to absorb the liquid from the surge management layer after a certain period of time (see page 11, lines 36 to 42). However, the absorbent core of D7 neither requires that the layer for acquisition and distribution has a high laterally distribution rate, nor that the storage layer includes an absorbent gelling material having a high absorptive speed. On the contrary, since the surge management layer is provided for temporarily holding the discharged liquid, there is

no need for a high speed absorbent gelling material.

Consequently, the skilled person has no reason to select a layer for acquisition and distribution which has a high lateral distribution rate and an absorbent gelling material which has a high absorption speed as specified in claims 1 and 2.

5.2.4 The upper layer of the absorbent core according to D14 is provided for rapidly acquiring and transporting fluids to other areas of this layer. It is obvious that this requires a layer having a high acquisition and lateral distribution rate. Additionally, the upper layer is provided for storing a portion of the acquired fluid. For this purpose it contains an absorbent gelling material and is of larger size than the storage layer arranged below the upper layer. The storage layer contains a relatively high percentage of absorbent gelling material having a high absorptive capacity. As a result of the different size of the upper and lower layer, a relatively high amount of fluid has to be transferred via the area of contact between the upper to the lower layer. If the absorbent gelling material in the storage layer of the absorbent core according to D14 had a high absorption speed, this would inevitably result in gel blocking in the upper area of the storage layer. Therefore, in the Board's opinion the skilled person would select an absorbent gelling material having a relatively slow absorbent rate so that fluid can be stored over the whole volume of the storage layer and not a high absorbent rate as defined in claims 1 and 2 of the contested patent.

5.2.5 D8 and D15 disclose an absorbent gelling material (SA-7000L) which has a total absorptive capacity of at

least 25 times its dry weight and is capable of absorbing at least about 0.8 grams of saline per second per gram of absorbent gelling material. Moreover, D8 describes that the addition of a tissue layer to a web of another absorbent gelling material (SA 6000) dramatically increases the speed of absorption.

However, D8 also indicates that "other webs such as perforated polyethylene, spunbond polypropylene and spunbond PBT each have a different effect. Some speed up, some slow down absorption speed."

Therefore, D8 provides a general teaching according to which the tissue layer may have an effect on the speed of absorption, but fails to indicate the reason for the different absorption speeds. Consequently, D8 cannot be seen as a prior art which would lead the skilled person to the development of a two layer absorbent core with the particular combination of fluid acquisition/distribution and absorption capacity rates as specified in claim 1.

Even if the composite of the web and the tissue layer is regarded as an absorbent core, and it is assumed that the increase of absorption speed can be achieved with all superabsorbents comprising SA-7000L and that a change from saline to synthetic urine does not influence the absorptive capacity and absorption speed of SA-7000L, D8 suggests at most a multiple layer absorbent core comprising at least one tissue layer and a storage layer comprising an absorbent gelling material which meets the requirements according to claim 1 of the patent in suit. However, the tissue layer cannot be regarded as an acquisition/distribution layer in the meaning of the patent in suit, in particular not as an acquisition/distribution layer

having a high acquisition and lateral distribution rate, because as follows from the above analysis of the disclosure of D8 no information about the structure or function of the tissue layer is given in D8, let alone about the interaction between the tissue layer and the web of superabsorbent.

As a result of the lack of information of the tissue layer, there is no reason for the skilled person to substitute the tissue layer by an acquisition/distribution layer which is particularly adapted to rapidly acquire and horizontally spread liquids.

5.2.6 The evaluation above shows that the two-layer structure of the absorbent core according to the patent in suit is well known (see for example D7 or D14), and that additionally an acquisition/distribution layer having a high acquisition and laterally distribution rate (see D14) and a storage layer comprising an absorbent gelling material which has a high absorptive capacity and a high absorption speed (see D8 or D15) are well known in themselves. Nevertheless, there is no suggestion that such an acquisition/distribution layer and such a storage layer should be combined in any of the absorbent cores according to D7 or D14.

5.2.7 Such a suggestion is also not derivable from the further available documents which were no longer relied upon by the appellants and which do not come closer than the prior art discussed here above.

5.2.8 In view of these assessments, the Board comes to the conclusion that the subject-matter of claims 1 and 2 according to the main request cannot be derived in an

obvious manner from the available prior art and accordingly involves an inventive step. Claims 1 and 2 together with claims 3 to 7 according to the patent specification which include all features of claim 1 or claim 2 and the description and drawings of the patent specification, therefore can be maintained unamended.

6. *Auxiliary requests*

As the respondent's main request is allowable, there is no need to consider the auxiliary requests.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau