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

D E C I S I O N
of 4 April 2006

Case Number: T 1164/04 - 3.2.06

Application Number: 96936171.6

Publication Number: 0862402

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:
Water dispersible and flushable absorbent article

Patentee:
THE PROCTER & GAMBLE COMPANY

Opponent:
Kimberly-Clark Worldwide, Inc.

Headword:
-

Relevant legal provisions:
EPC Art. 54(2), 56, 111(1)

Keyword:
"Novelty (no) - main request"
"Inventive step (no) - first auxiliary request"
"Remittal - second auxiliary request"

Decisions cited:
-

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1164/04 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 4 April 2006

Appellant: (Proprietor of the patent)	THE PROCTER & GAMBLE COMPANY One Procter & Gamble Plaza Cincinnati, Ohio 45202 (US)
Representative:	Kremer, Véronique Marie Joséphine Procter & Gamble Service GmbH D-65823 Schwalbach am Taunus (DE)
Respondent: (Opponent)	Kimberly-Clark Worldwide, Inc. 401 North Lake Street Neenah, Wisconsin 54956 (US)
Representative:	Davies, Christopher Robert Frank B. Dehn & Co. St Bride's House 10 Salisbury Square London EC4Y 8JD (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted 29 July 2004 revoking European patent No. 0862402 pursuant to Article 102(1) EPC.**

Composition of the Board:

Chairman: P. Alting van Geusau
Members: G. Pricolo
W. Sekretaruk

Summary of Facts and Submissions

I. The appeal is from the decision of the Opposition Division posted on 29 July 2004 revoking European patent No. 0 862 402, granted in respect of European patent application No. 96 936 171.6.

Claim 1 as granted reads as follows:

"A water dispersible and flushable absorbent article (20), the absorbent article comprising: a liquid pervious topsheet (24), a liquid impervious backsheet (26) disposed beneath said topsheet and an absorbent core (28) disposed between said topsheet and said backsheet characterized by said topsheet comprising a first fibrous assembly having a temporary wet strength resin incorporated therein, wherein portions of a body surface of said top sheet have preferably been provided with a first resinous material, said backsheet comprising a second fibrous assembly having a temporary wet strength resin incorporated therein, said backsheet being coated on the topsheet facing surface with a second resinous material wherein said second resinous material is water resistant, and said topsheet and said backsheet being joined using a water soluble adhesive in at least an area of peripheral bonding to encapsulate said absorbent core there between."

II. In the decision under appeal the Opposition Division considered that the subject-matter of claim 1 as granted was distinguished from the disclosure of document

D1: WO-A-92/02199;

in particular by the feature that a temporary wet strength resin was used. D1 disclosed a topsheet made of cellulose rayon that carried a resin identified as "Biopol®", which was chemically stable upon exposure to water. In contrast thereto, an essential feature of the temporary wet strength resin in accordance with the patent in suit was that it underwent rapid decomposition upon exposure to large quantities of water, as would be encountered in a lavatory. However, the subject-matter of claim 1 was obvious in the light of D1 taken together with the disclosure of document

D2: US-A-3 913 579;

which disclosed the use of a temporary wet strength resin in a fibrous assembly.

III. The appellant (patent proprietor) lodged an appeal, received at the EPO on 25 September 2004, against this decision and paid the appeal fee on the same day. With the statement setting out the grounds of appeal, received at the EPO on 2 December 2004, the appellant filed amended claims forming the basis for a first auxiliary request.

Claim 1 of the first auxiliary request adds to claim 1 as granted, after the two expressions "incorporated therein", the following wording:

"said fibrous assembly being a wet laid tissue".

IV. In a communication accompanying the summons to oral proceedings pursuant to Article 11(1) of the Rules of

Procedure of the Boards of Appeal, the Board expressed the preliminary opinion that the restrictive interpretation of "temporary wet strength resin" by the Opposition Division could not be followed. There was no requirement in the disclosure of the patent in suit for such a resin to undergo rapid decomposition in water; it only had to be such as not to prevent the fibrous assembly from rapidly losing mechanical integrity and dissociating into fragments on flushing. Concerning the first auxiliary request, the Board pointed out that it had to be discussed (Article 123(2) EPC) whether there was a basis in the application as filed for the inclusion in claim 1 of the feature that the topsheet was a wet laid tissue in the absence of the feature that the tissue was apertured.

V. Oral proceedings, at the end of which the decision of the Board was announced, took place on 4 April 2006.

The appellant requested that the decision under appeal be set aside and that the patent be maintained as granted, either on the basis of the claims filed as first auxiliary request with the statement of grounds of appeal, or on the basis of the claims filed as second or third auxiliary requests during the oral proceedings.

The respondent (opponent) requested that the appeal be dismissed.

Claim 1 of the second auxiliary request adds to claim 1 as granted, respectively after the first and the second expression "incorporated therein", the following features:

"said first fibrous assembly being a wet laid nonwoven";

and

"said second fibrous assembly being a wet laid tissue".

The former feature is replaced in claim 1 of the third auxiliary request by the following feature:

"said first fibrous assembly being a wet laid apertured tissue".

VI. The arguments of the appellant in support of its request can be summarized as follows:

The term "temporary wet strength resin" was understood by the person skilled in the art as relating to resins which were capable of providing some strength properties to a wet fibrous assembly, but which after a relatively short period of soaking, from about some seconds to a few minutes, dissolved or decomposed in water thereby rapidly losing their wet-strengthening properties. The fibrous assemblies of the article in accordance with the patent in suit thus readily dispersed into small pieces when exposed to water. In contrast thereto, the article of D1 disintegrated in water into its insoluble constituents, such as the topsheet and backsheet. There was no indication in D1 that the fibrous topsheet or backsheet quickly dissolved in water. The "Biopol®" resin provided in the fibrous assembly constituting the topsheet was an insoluble biodegradable thermoplastic material. The fibrous assembly of D1 thus remained substantially

intact in water for a long period of time, weeks or months, until it was naturally biodegraded by the action of bacteria. D1, in its introductory portion, disclosed that the backsheet could comprise a fibrous assembly consisting of a layer of paper or tissue, e.g. toilet tissue. However, there was no disclosure or suggestion that this general teaching could be applied to the specific embodiments of D1. Indeed, it was stated in D1 that it was preferable to use, for the backsheet, a water-soluble polymeric film rather than a layer of paper. Accordingly, the skilled person would not consider the use of a paper layer in the embodiments of absorbent articles according to D1. Moreover, the reference to paper or tissue in D1 did not necessarily imply the presence of a resin, since paper and tissue without resin were known and available on the market. Accordingly, the subject-matter of claim 1 was novel and inventive over the disclosure of D1.

Claim 1 according to the first auxiliary request was allowable under Article 123(2) EPC because the application as filed generally disclosed that a suitable topsheet might be manufactured from wet-laid materials.

VII. The respondent essentially argued as follows.

There was no mention in the patent in suit of the "temporary wet strength resin" being capable of rapidly dissolving or decomposing in water. The patent in suit only required that the temporary wet strength resin did not prevent the fibrous assembly from losing mechanical integrity and dissociating into fragments under the

agitation conditions encountered when a conventional toilet was flushed. It was not necessary for this purpose to provide a resin which was water-soluble. It was sufficient that the resin network within the tissue layer was not too tight, allowing tearing of the fibrous assembly in localized areas where no resin was provided. D1 disclosed that the topsheet, which preferably comprised a fibrous assembly with a Biopol® resin incorporated therein, could be disintegrated and dispersed when flushed down a lavatory. Accordingly, the Biopol® resin was a temporary wet strength resin within the meaning of the patent in suit. The general teaching of D1 according to which the backsheet could comprise a fibrous assembly consisting of a layer of paper, such as toilet tissue, directly applied to the particular embodiments, in particular those of Figs. 7 and 8. Since toilet tissue usually contained a resin to impart wet-strength, and since D1 disclosed that the backsheet should disintegrate and disperse when flushed down a lavatory, the toilet tissue disclosed by D1 necessarily comprised a temporary wet strength resin. Accordingly, the subject-matter of claim 1 lacked novelty over D1. In any case, it did not involve an inventive step because a layer of tissue was an obvious alternative to the water-soluble polymeric film used in particular in examples 7 and 8 of D1. Moreover, a tissue layer provided improved softness over a plastics water-soluble film and was more resistant to storage in humid conditions.

Claim 1 according to the first auxiliary request was not allowable under Article 123(2) EPC because there was no basis in the application as filed for the

topsheet being a wet-laid tissue which was not apertured.

Reasons for the Decision

1. The appeal is admissible.

2. *Main request - patent as granted*

2.1 *Novelty*

2.1.1 Using the wording of claim 1 of the patent in suit, D1 discloses a water dispersible and flushable absorbent article (see page 3, last paragraph to page 4, first paragraph), the absorbent article comprising (reference is made to the nappy shown in the embodiment of Fig. 8; see also page 22, lines 17 to 27): a liquid pervious topsheet (cover layer 8), a liquid impervious backsheet (2) disposed beneath said topsheet and an absorbent core (5) disposed between said topsheet and said backsheet, said topsheet (8) comprising a first fibrous assembly having a wet strength resin incorporated therein (see page 22, lines 1 to 3: the resin is a biodegradable thermoplastics such as Biopol®), said backsheet (2) being coated on the topsheet (8) facing surface with a second resinous material (3) wherein said second resinous material is water resistant (see page 19, lines 12 to 16), and said topsheet (8) and said backsheet (2) being joined using a water soluble adhesive in at least an area of peripheral bonding to encapsulate said absorbent core there between (water soluble adhesive 10 and water soluble adhesive strips

11 and 12 are at least in a peripheral portion of the absorbent article, see page 22, lines 20 to 27).

2.1.2 In accordance with the view expressed by the Opposition Division in the decision under appeal, the appellant submitted that the resin Biopol® incorporated in the fibrous assembly of the topsheet was biodegradable but not a temporary wet strength resin, i.e. a resin which underwent rapid decomposition in water.

Although the skilled person generally knows that a "wet strength resin" is a resin that imparts strength to paper when wet, he cannot derive from common general knowledge what specific properties a "temporary wet strength resin" must have. It is noted that in the absence of any evidence in this respect, the appellant's submission that the skilled person would know what a "temporary wet strength resin" is, must be regarded as an unsubstantiated allegation. Accordingly, as confirmed by the Opposition Division (see page 5, 2nd paragraph, of the decision under appeal), the skilled person would turn to the description for interpreting this expression. However, the Board's view diverges from that of the Opposition Division as regards the indications given by the description in this respect, for the following reasons. A definition of "temporary wet strength resin" is given only in paragraph [0054] of the patent in suit. There it is stated that "*a temporary wet strength resin helps the topsheet 24 maintain its mechanical integrity during use of the sanitary napkin 20 yet does not interfere with the dispersibility of the topsheet when the used sanitary napkin 20 is flushed*". In this passage there is no reference to any properties of the resin to rapidly

decompose in water. Nor is such reference found in the subsequent passage, which refers to examples of suitable resins. In particular, the passage stating that "*when Parez® 631 NC is used at a level between about 0.5% and about 1.0% in the wet laid apertured tissue, the topsheet 24 has a satisfactory balance of mechanical integrity during use and dispersibility during disposal*" makes clear that the quantity of resin, and not only its nature, plays a role in conferring a temporary wet strength to the topsheet. It remains to examine what properties of the resin are implied by the statement that it does not "*interfere with the dispersibility of the topsheet when the used sanitary napkin is flushed*". In this respect, the appellant specifically referred to par. [0047] of the patent in suit, according to which "*the coated webs […] rapidly lose mechanical integrity and dissociate into fragments on immersion in water*". Having regard to the additional disclosure, in the same paragraph, of the backsheet dispersing into fragments under "*the mild agitation conditions encountered when a conventional toilet is flushed*", and to the disclosure in the above-mentioned paragraph [0054] referring to the dispersibility of the topsheet when flushed, it is clear that "dispersibility" implies the loss of mechanical integrity and dissociation into fragments of the fibrous assembly when flushed. However, there is no disclosure of the number and dimensions of fragments. Furthermore, the patent in suit discloses (see par. [0047] and [83]) that the backsheet and the topsheet behave substantially the same as a sample of a commercially available Charmin® toilet tissue, in that they disperse into smaller particles (page 13, lines 46,47). Since the fibrous assembly loses

mechanical integrity when wet, the topsheet may dissociate into fragments due to the mechanical action of water agitation. In order not to interfere with dispersibility, the resin present in the fibrous assembly must therefore be such to allow the topsheet to dissociate into fragments under the mechanical action of water agitation. For this to happen, it is not necessary that the resin decomposes when immersed in water. It is sufficient that the resin's presence (in particular its quantity, distribution, or strength, etc.) is such that it does not resist fragmentation of the fibrous assembly on flushing. Therefore, the expression "temporary wet strength resin" can only be understood in the light of the description of the patent in suit as referring to a resin that imparts strength to a fibrous assembly when wet but which at the same time allows the fibrous assembly to disperse when flushed.

Document D1 clearly discloses that the topsheet (cover layer 8) must be capable of disintegration or degradability, and dispersion by the action of the water flow in the lavatory (see page 15, lines 31 to 3 and page 23, lines 27 to 30). Accordingly, the Biopol® resin can only be such as to allow the fibrous assembly of the topsheet to disperse when flushed. It is, therefore, a temporary wet strength resin within the meaning of the patent in suit.

In this respect it is noted that, since dispersion does not necessarily result from the decomposition of the resin, the fact that the Biopol® resin is biodegradable (i.e. that it decomposes after a relatively long period

of time) does not exclude that it allows the fibrous assembly to disperse when flushed.

2.1.3 In the example of Figs. 7 and 8 of D1, the outer layer (2), which corresponds to the backsheet in accordance with the patent in suit, is made of a film of water soluble plastics material (see page 19, lines 11 to 12 in combination with page 22, lines 16 to 27). In the introductory portion of the description, D1 discloses that the outer layer can be made of any suitable material, for instance tissue, provided it loses its integrity when disposed of in a water flushing system (page 5, lines 24 to 30). This general teaching applies to the composite material consisting of a layer of soluble material and a liquid impervious barrier only (see page 5, lines 7 to 10). There is however no clear and unambiguous teaching in D1 that an outer layer made of tissue could replace the film of water soluble plastics material in the absorbent article specifically disclosed in Figs. 7 and 8, which comprises a plurality of layers, in particular an absorbent layer, and in which the solubility of the outer layer (2) in water is described as playing a role in the process of dispersion of the absorbent article as a whole (see page 23, last paragraph).

Therefore, D1 does not disclose the feature of claim 1 of the patent in suit according to which the backsheet comprises a second fibrous assembly having a temporary wet strength resin incorporated therein. In this respect it is additionally noted that the disclosure in D1 of paper such as paper for bags or tissue used for disposable handkerchiefs, table napkins and toilet tissue (page 5, last paragraph) cannot be regarded as

an unambiguous disclosure of a fibrous assembly with a wet strength resin: although the use of a wet strength resin is well known and very diffused in these products, there is no evidence that these products only exist with a resin incorporated therein.

Therefore, the subject-matter of claim 1 is novel over D1.

2.2 *Inventive step*

2.2.1 The provision of a backsheet comprising a fibrous assembly, rather than a layer of plastics material, in the nappy of Fig. 8 of D1, has as a result an alternative construction of the backsheet which is still dispersible when disposed of by flushing (see page 5 of D1, lines 29, 30) but has improved softness.

Accordingly, the objective technical problem solved can be seen in providing an alternative construction of the backsheet which has improved softness.

2.3 The skilled person would consider the posing of this problem since the backsheet of a nappy comes into contact with the skin of the wearer (partially, in the crotch area). In studying document D1 the skilled person would find on page 5, last paragraph, the indication that the layer of soluble material for the composite material could consist of a layer of tissue used for disposable handkerchiefs, table napkins and toilet tissue, rather than a layer of plastics material. Knowing that a layer of tissue is generally softer than a layer of plastics, the skilled person would regard it as obvious to replace the outer layer (2) of plastics

material in the nappy of D1 with a layer of tissue in order to solve the above-mentioned problem. In doing this, the skilled person would readily recognize that the tissue must be of the kind having a wet strength. Indeed, humid conditions are often present in use, and D1 discloses (see page 6, lines 11 to 15) that the outer layer must have strength and handling capability such that it does not tear easily and remains undamaged in normal use. Therefore, the skilled person would obviously consider the use of a generally known tissue having a wet strength resin incorporated therein. Since in accordance with the teaching of D1 (page 5, lines 28 to 30) such tissue must disintegrate and disperse when disposed of by flushing, the skilled person would only consider the use of resins which temporarily provide a wet strength, i.e. temporary wet strength resins. Therefore, the skilled person would arrive in an obvious manner to the subject-matter of claim 1.

2.4 Therefore, the appellant's main request is not allowable for lack of inventive step (Articles 52(1), 56 EPC) of the subject-matter of claim 1.

3. *First auxiliary request*

3.1 Claim 1 of the first auxiliary request differs from claim 1 as granted in that it defines that each of the first and second fibrous assemblies is a wet laid tissue.

Although the application as filed discloses that the second fibrous assembly may be a wet laid tissue (see in particular original claim 1), there is no clear and unambiguous disclosure of the first fibrous assembly

being, generally, a wet laid tissue. Indeed, the application as filed consistently refers, in connection with the first fibrous assembly, to a wet laid tissue in combination with the feature that the tissue is apertured (see original claim 1), or with the feature that the tissue is provided with fibrils (see original claim 14) or sufficient inherent porosity (see page 21, lines 1 to 25).

The appellant referred to paragraph [0051] of the patent in suit, according to which the topsheet may be manufactured from a wide range of materials such as air laid, wet laid, or carded nonwoven materials. However, this general reference to air laid (nonwoven) materials cannot be regarded as a specific disclosure of wet laid tissues.

3.2 Therefore, since the first fibrous assembly is disclosed in the application as filed as being a wet laid tissue only in combination with other features which are not present in claim 1, the amendments made constitute a generalization of the originally disclosed technical information and thereby introduce subject-matter extending beyond the content of the application as filed, contrary to the requirements of Article 123(2) EPC. As a consequence, the appellant's first auxiliary request cannot be allowed.

4. Second auxiliary request

4.1 Claim 1 of the second auxiliary corresponds to claim 1 of the first auxiliary request with the only difference that the first fibrous assembly is defined to be a wet laid nonwoven rather than a wet laid tissue, which

feature finds its basis in the passage on page 17, lines 9 to 17 of the application as filed, which corresponds to paragraph [0051] of the patent as granted. Since claim 1 is amended by way of introduction of additional features, the amendments made restrict the scope of protection.

Claims 2 to 7 are identical to claims 2 to 7 of the patent as granted.

Accordingly, the amendments made to the claims do not give rise to objections under Article 123(2) and (3) EPC.

4.2 However, the appellant has created a new set of facts by introducing in claim 1 features taken from the description of the patent in suit. Since this was requested by the appellant and the respondent did not object, and in order to give the parties the opportunity to prosecute their rights at two levels of jurisdiction, the Board makes use of its powers under Article 111(1) EPC to remit the case to the first instance for further prosecution on the basis of the claims in accordance with the second auxiliary request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The main request and the first auxiliary request are rejected.

3. The case is remitted to the Opposition Division for continuation of the opposition proceedings.

The Registrar: The Chairman:

D. Sauter P. Alting van Geusau