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D E C I S I O N
of 19 March 2004

Case Number: T 0280/02 - 3.2.6

Application Number: 96118466.0

Publication Number: 0781538

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:

Non-woven application for water dispersable copolyester

Applicant:

H.B. Fuller Licensing & Financing, Inc.

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 54, 111(1)

Keyword:

"Novelty (yes)"

"Remittal for continuation of the examining proceedings taking account of new relevant prior art"

Decisions cited:

-

Catchword:

-



Case Number: T 0280/02 - 3.2.6

D E C I S I O N
of the Technical Board of Appeal 3.2.6
of 19 March 2004

Appellant: H.B. Fuller Licensing & Financing, Inc.
1200 Willow Lake Boulevard
St. Paul
Minnesota 55110-5132 (US)

Representative: Maiwald, Walter Dr. Dipl.-Chem.
Maiwald Patentanwalts GmbH
Elisenhof
Elisenstrasse 3
D-80335 München (DE)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 19 October 2001
refusing European application No. 96118466.0
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: P. Alting van Geusau
Members: H. Meinders
R. T. Menapace

Summary of Facts and Submissions

- I. European patent application 96118466.0 was refused by the Examining Division by decision posted 19 October 2001.

The reason given for the refusal was that the subject-matter of claim 1 filed during the oral proceedings held before the Examining Division on 11 October 2001 lacked novelty or at least lacked inventive step over the teaching disclosed in:

D2: WO-A-9 518 191.

- II. On 20 December 2001 the Appellant (Applicant) lodged an appeal against this decision and paid the prescribed appeal fee. On 22 February 2002 a statement of grounds of appeal was filed.

In its appeal the Appellant requested setting aside the decision under appeal and grant of a patent on the basis of the set of claims filed on 11 October 2001 in the oral proceedings before the Examining Division, as a **main request**, or according to a set of claims filed as **auxiliary request** with the letter of 27 December 2002.

- III. Claim 1 according to the **main request** reads as follows:

"A disposable article comprising at least two layers, at least one of said layers being a body fluid impermeable barrier and at least one of said layers being a body fluid impermeable cover, each layer is attached to at least one other layer, and wherein at

least one layer selected from the group consisting of the barrier and the cover comprises a copolyester, said copolyester being dispersible in tap water".

IV. In the annex to the summons to oral proceedings to be held on 3 March 2004 dated 27 November 2003 the Board gave its provisional opinion that the refusal of the application could not be based on document D2 as had done the Examining Division. However, the Board was aware of other prior art, namely:

D3: US-A-4 808 178,

D4: JP-A-7 258 939,

D5: abstract in English of D4,

D6: EP-A-0 336 578,

which it considered particularly relevant for the assessment of inventive step. It offered the choice of remittal of the case to the Examining Division for further prosecution (in which case oral proceedings before the Board could be dispensed with) or examination of the application by the Board on the basis of that prior art.

V. With letter of 26 February 2004 the Appellant declared its agreement with setting aside the decision under appeal and remittal of the case to the first instance for further prosecution. Thereupon the oral proceedings were cancelled.

VI. The arguments of the Appellant raised against the decision under appeal can be summarized as follows:

The novelty objection of the Examining Division could not hold, as it was based on the combination of separate items contained in D2, which were not disclosed in combination, but belonged instead to different embodiments discussed in that document.

The diaper according to the invention involved, in its opinion, not less than six layers, each attached to the other by varying adhesive compositions taking into account the special demands of each layer and each being based on water-dispersible copolyester compositions, which were novel and not obvious regarding the disclosure of D2. In contrast to the invention D2 did not relate to products which could be simply flushed after use without further mechanical comminuting, but to articles which were only repulpable by several recycling steps using mechanical comminuting.

Reasons for the decision

1. The appeal is admissible.
2. *Novelty (Article 54 EPC)*
 - 2.1 The invention disclosed in D2 relates to a tap water-dispersible **adhesive composition** (see examples 5, 7B and 9B) which allows paper products, nonwoven assemblies and other disposable products (such as diapers) comprising such adhesives to be more effectively recycled (page 1, first paragraph and

page 3, lines 9 to 11) as opposed to these products using hot melt adhesives. It further relates to a process of applying the water-dispersible adhesive composition **between two substrates** to form a laminate (page 8, lines 25, 26). Finally D2 is concerned with "articles of manufacture" having the water-dispersible adhesive composition **between two substrates such as in diaper construction** (page 9, lines 3 to 6 and claim 21).

After discussion of the composition of the adhesive, D2 mentions it as being applied to one substrate with a second substrate being placed on top of the adhesive forming an article having the adhesive laminated between two substrates (page 19, lines 10 to 14).

There is no further mention in D2 as to how the diapers as such are constructed, nor to how the substrates forming the laminate mentioned in connection with diapers are arranged in the diaper.

2.2 The Examining Division considered in its decision that D2 disclosed with respect to claim 1 according to the main request:

a disposable article comprising at least two layers, each layer is attached to at least one other layer, and wherein at least one layer selected from the group consisting of the barrier and cover comprises a copolyester, said copolyester being dispersible in tap water,

and that D2 did not disclose *expressis verbis* the following feature:

at least one of said layers being a body fluid impermeable barrier and at least one of said layers being a fluid permeable cover.

However, D2 referred to disposable articles such as diapers and such articles were well-known to be constructed with a body side fluid permeable cover and an undergarment side fluid impermeable barrier. Thus it was implicit that the disposable article of D2 had such layers and hence the specification of these well-known layers could not impart novelty to such an article.

2.3 The Board cannot concur with the above mentioned reasoning regarding novelty already for the following reasons:

- D2 does not disclose any of the two substrates layers forming the laminate as suggested for a diaper as being **either the cover or the barrier** of a diaper,

- D2 does not disclose the water dispersible adhesive composition judged by the Examining Division to be a copolyester as being **comprised** by one of the substrates forming the laminate suggested for use in a diaper, i.e. being **contained within** the layer.

Thus the subject-matter of claim 1 of the main request is to be considered novel in respect of D2.

3. *Inventive step (Article 56 EPC)*

3.1 Inventive step was denied by the Examining Division as it was state of the art and logical to each skilled person to provide a diaper as discussed in respect of novelty (see point 2.2 above) with a liquid pervious cover layer as well as a liquid impervious barrier layer.

The Board could concur with the Examining Division on this point, if that feature were the only distinguishing feature. Indeed, for diapers available at the priority date of the application in suit it was standard practice to employ a body fluid permeable cover and a body fluid impermeable barrier. However, this reasoning is no longer applicable in view of the further features establishing novelty over D2, as discussed above.

3.2 As concerns the Appellant's argument that the diaper according to the invention involved not less than six layers, each attached to the other by varying adhesive compositions, the Board points out that the subject-matter of present claim 1 does not mention the features necessary to support this contention.

3.3 However, the Board considers that the prior art cited in the search report does not provide any indication to employ the laminate consisting of two substrates with the tap water dispersible adhesive disposed therebetween as disclosed in D2 as either the cover- or the barrier layer of a diaper, nor to include the adhesive into one of these layers, such that the layer comprises the adhesive as claimed.

3.4 For these reasons the argumentation with which the Examining Division denies inventive step is not convincing and therefore the decision under appeal should be set aside.

4. *Further procedure*

4.1 In respect of the subject-matter of claim 1 according to the main request the Board is aware of further prior art which it considers to be more relevant than the prior art cited so far in examination. In view of the Board's competence pursuant to Article 111(1) EPC introduction of these documents is necessary for complete examination of the present application. The Board notified this opinion to the Appellant with its communication dated 27 November 2003 and annexed copies of these documents (see point V above).

4.2 These documents are relevant for the following reasons:

D3 (US-A-4808178), which is a document cited in a recent appeal case decided by this Board, discloses a disposable article (column 3, lines 1 to 7) comprising at least two layers (12 and 16), at least one of said layers being a body fluid impermeable barrier (16, column 4, lines 56 to 62) and at least one of said layers being a body fluid permeable cover (12, column 5, lines 4 to 14). Each layer is attached to at least one other layer (cover 12 to barrier 16: column 5, lines 46 to 49; barrier 16 to second tissue layer 28 of the absorbent core: column 4, lines 45 to 55; any other intermediate joining of the cover 12 and the barrier 16:

column 3, lines 39 to 51). The attachment of these two layers is done by adhesive (see the indicated passages).

It is well known that many of the adhesives used in the production of disposable articles have the disadvantage that these articles are not easily recyclable (see D2, pages 1 and 2), therefore D2 suggests the use of an adhesive composition dispersible in tap water for forming a laminate with two substrates, which laminate can be used in such disposable articles, e.g. diapers, see page 3, lines 9 to 11; page 9, lines 3 to 6; page 19, lines 10 to 14; examples 5, 7, 7B, 9B, so that the disposable article is more easily recycled. As substrates are suggested nonwoven assemblies (such as nonwoven polypropylene).

The Board therefore considers inventive step needs to be discussed in view of the teachings of D2 and D3, as the body fluid permeable cover 12 mentioned in D3 is generally of an "open" material, such as porous foams, apertured plastic films, natural fibres, synthetic fibres, see column 5, lines 7 to 14 of D3. In that case one would have to consider whether the adhesive used between the cover and the barrier penetrates into the cover material and thus "is comprised in the cover" as claimed in claim 1.

- 4.3 D4 (JP-A-07258939) and the English abstract D5 of this Japanese application concerns a document cited in US-A-6 087 550, granted on the parallel US-Application 08/562038 of the present application.

D5 discloses a water soluble polyester fibre produced from a copolymer which is bonded and fixed by weaving, knitting, or mechanical, chemical or thermal means and formed in the form of a nonwoven fabric or a mesh fabric **to obtain a net-shaped water-soluble sheet material**. It refers for its application to medical and hygienic goods and bedding goods produced by using the material and shows in figure 5d a diaper as an example of such a product.

The problem addressed in the abstract D5 is identical to the one addressed by the present application, namely recycling of these articles, this means that the articles referred to are meant to be disposable articles.

In D6 (EP-A-336578), known to the Board from the same appeal case as D3, the body fluid permeable cover 12 as preferably used in a diaper is described as an apertured formed film. As these films are not recyclable, it would have to be discussed whether the skilled person would look for indications in the state of the art, for instance D4(D5), on how to achieve an apertured material which is recyclable.

- 4.4 To guarantee the Appellant an examination of its case in two instances in view of the newly introduced state of the art, the Board considers it appropriate to remit the case back to the first instance for further examination (Article 111(1) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau