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**Datasheet for the decision
of 30 August 2011**

Case Number: T 0641/09 - 3.2.07

Application Number: 02803856.0

Publication Number: 1453643

IPC: B26D 7/10

Language of the proceedings: EN

Title of invention:

Method for cutting a poly (vinyl alcohol) member

Patentee:

Reckitt Benckiser (UK) Limited

Opponent:

Henkel AG & Co. KGaA
The Procter & Gamble Company

Headword:

-

Relevant legal provisions:

EPC Art. 56

Relevant legal provisions (EPC 1973):

-

Keyword:

"Inventive step: no"

Decisions cited:

-

Catchword:

-



Case Number: T 0641/09 - 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 30 August 2011

Appellant: Henkel AG & Co. KGaA
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Representative: Bomhard, Andreas
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Other Party: The Procter & Gamble Company
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Respondent: Reckitt Benckiser (UK) Limited
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Representative: Brown, Andrew Stephen
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 5 February 2009
rejecting the opposition filed against European
patent No. 1453643 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: H. Meinders
Members: P. O'Reilly
I. Beckedorf

Summary of Facts and Submissions

- I. Oppositions were filed against European patent No. 1 453 643 as a whole based on Article 100(a) EPC (lack of inventive step).

The opposition division decided to reject the oppositions.

- II. The appellant (opponent I) filed an appeal against that decision.

- III. The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed. In the following this is addressed as the "main request". The auxiliary request filed with letter of 21 July 2011 was withdrawn.

The party as of right (opponent II) requested that the decision under appeal be set aside and that the patent be revoked.

- IV. Claim 1 of the **main request** reads as follows:

"A process for cutting a PVOH member, which comprises cutting the member with a cutting edge, the cutting edge having a temperature of from 110 to 160°C."

- V. The documents of the opposition proceedings cited in the present decision are the following:

E3: "Pouches perform disappearing act" in Plastics in
converting, reprinted from Converting Magazine,
August 1998

E4: GB-A-991 464

E6: US-A-4 396 449

and of the appeal proceedings:

E7: US-A-5 543 439

E8: "114266 Polyvinyl alcohol", Data sheet from Merck
KGaA.

VI. The arguments of the appellant may be summarised as
follows:

The subject-matter of claim 1 of the main request does
not involve an inventive step.

The closest prior art document is E4 which discloses
all the features of the claim except for the range of
temperatures for the cutting edge. However, it is
indicated in E4 (see page 2, lines 4 to 7) that the
heated element may be used to soften or melt the film.
These are two alternative possibilities. Although on
page 2, lines 36 to 40, reference is made to a red hot
cutting wire this is in the context of the second
alternative, i.e. melting, as evidenced by the
preceding sentence (see page 2, lines 33 to 36) which
indicates that the temperature should be high enough to
melt the films.

E7 shows (see table in column 7, lines 15 to 45) that
PVOH may have melting points between 100°C and 230°C.
The claimed temperature range would therefore mean that
the PVOH would be softened or melted depending upon its
melting point, as indicated in E4. There is moreover no

proof that the claimed temperature range solves any problem, and in particular not any problem that is mentioned in the patent.

VII. The arguments of the party as of right may be summarised as follows:

The subject-matter of claim 1 of the main request does not involve an inventive step.

The closest prior art document is E4 which discloses all the features of the claim except the range of temperatures. In paragraph [0008] of the patent various problems are mentioned. However, the patent contains no evidence that any of these problems are actually solved. An objective problem must therefore be defined. The only possible objective problem is to find an alternative process. Both E4 (see page 2, lines 4 to 7) and E6 (see column 3, lines 59 to 61) refer to softening. It is also well known for instance that a hot knife cuts through butter, i.e. above ambient temperature and in the softening range. The skilled person also knows that the temperature should not be too high since the patent in paragraph [0008] indicates that it is known that the water-solubility is reduced when excess heat is applied. The application as originally filed indicated that the temperature only needed to be elevated and indicated that this meant more than 100°C. The temperature range of from 110 to 160°C is therefore arbitrary and not linked to any effects. Therefore on the basis of either the teaching of E4 alone, or on the basis of the combined teaching of E4 plus E6 or common general knowledge the subject-matter of the claim is obvious.

VIII. The arguments of the respondent may be summarised as follows:

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

E4 is the closest prior art document but it does not disclose the claimed range of temperatures. It gives no hint to a temperature within the claimed range and indeed leads away from such temperatures since it indicates on page 3, lines 36 to 40, that the cutting wire may be red hot which would imply temperatures of several hundreds of degrees. It should be emphasised that the claim specifies an absolute range of temperatures and not a range relative to the melting point of PVOH, i.e. below the melting point.

Also, E6 leads away from the claimed temperature range since it indicates (see column 1, lines 16 to 24) that wires are heated to about 400°F (approximately 200°C) above the degradation temperature of the polymer to be cut. Since the degradation temperature is already high this implies temperatures for the cutting wires far above the claimed range of temperatures, which constitutes a prejudice for the skilled person against the present much lower temperatures.

Reasons for the Decision

1. *Inventive step*

1.1 In the view of the Board the closest prior art document is E4. This was furthermore the view of the opposition division and was agreed with by the parties.

1.2 The process of claim 1 is distinguished over the disclosure of this document by the feature that the elevated temperature of the cutting edge is from 110 to 160°C. This also was the view of the opposition division and was agreed with by the parties.

1.3 According to the patent in suit (see paragraph [0008]) a knife or blade having a higher temperature can be used to cut PVOH (poly (vinyl alcohol)) without contaminating the blade with molten or burnt PVOH and without affecting the water-solubility of the PVOH. Also the knife or blade may require less sharpening. Thus, avoiding contamination of the blade and reducing sharpening of the knife or blade could be considered to be the problems to be solved. Also, retaining water-solubility is mentioned as a problem.

The above mentioned paragraph was also present in the application as originally filed (see page 2, line 24 to page 3, line 6). It was followed by a paragraph (see page 3, lines 8 to 11) indicating, however, that the invention provided a process with: "the cutting edge having a temperature of at least 100°C". The temperature range of from 110 to 160°C was mentioned on page 4, lines 24 to 26, as being preferable but no reason was given as to why it was preferable.

The appellant and the party as of right have pointed out that there is no evidence that any of these problems are solved by carrying out the process with the cutting edge in the claimed range of temperatures. They therefore argued that the problem to be solved was to find an alternative. The respondent acknowledged that the patent contained no data which could support its arguments that carrying out the process in the claimed range of temperatures solved any of these problems.

1.4 E4 is concerned with the packaging of thermoplastic films (see page 1, lines 12 and 13). On page 2, lines 53 to 60, of this document it is indicated that in a copending application the packaging may be made of water soluble films such as films of polyvinyl alcohol. In the next paragraph (see page 2, lines 66 to 71) it is stated that "The present invention is not, of course, limited to the use of water-soluble films but will serve very well with any form of thermoplastic film..." which means that it also applies to PVOH films. In the process according to E4 it is further indicated on page 2, lines 4 to 7, that "The heated element, which is used to soften or melt the substance of the film, may be carried by the refractory wedge, and may enter the recess with it". It may therefore be considered that the heated (cutting) element may be used to soften or melt PVOH films. The question therefore arises for the skilled person as to which temperatures are required to soften or melt PVOH films.

1.5 The opposition division considered that the melting point of PVOH was known to the skilled person as being

between 180 and 240°C referring to the International Preliminary Examination Report which had been prepared by one of its own members (see point 12 of the decision grounds).

According to E8, however, the melting point is 160°C to 240°C. For the Board the skilled person may therefore expect that a PVOH depending upon its composition could provide the softening as mentioned in E4 below a temperature 160°C.

- 1.6 The opposition division further considered that even in order to soften the film the skilled person would not necessarily choose a temperature of the cutting edge which is lower than the melting point of the film (see point 15 of the decision grounds).

It did not, however, explain why it would not be obvious for the skilled person to do this, given that the patent itself indicates that it is known that higher temperatures are to be avoided (see paragraph [0008]). At the oral proceedings the respondent also stated that the claimed temperature range did not depend on the melting temperature.

- 1.7 The Board notes that the opposition division accepted that the claimed temperature range was an optimum range and that thus contamination of the cutting blade is avoided, the cutting is improved and the amount of re-sharpening is reduced (see point 15 of the decision grounds). It accepted these arguments despite the fact that there was no evidence to support them. As indicated above in point 1.3 the respondent agreed that there was no data in the patent to support any argument

involving solving the problems stated in the patent actually being solved.

1.8 Finally, even with respect to the references in E4 to melting this would imply temperatures within the claimed range being actively considered, dependent upon the properties of the PVOH to be cut, since E7 shows that the melting temperature of PVOH can be as low as 100°C (see column 7, lines 15 to 45).

1.9 The Board concludes therefore that the claimed temperature range is arbitrary and that the skilled person when carrying out the teaching of E4 would consider temperature values which fall within the claimed range as being suitable values for the cutting edge depending upon the properties of the particular PVOH to be cut.

Therefore, the subject-matter of claim 1 of the main request does not involve an inventive step in the sense of Article 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

G. Nachtigall

H. Meinders