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D E C I S I O N
of 19 April 2005

Case Number: T 0354/02 - 3.2.7

Application Number: 93912682.7

Publication Number: 0650543

IPC: D21J 7/00

Language of the proceedings: EN

Title of invention:
Method and plant for the continous production of objects from pulp material

Patentee:
BRØDRENE HARTMANN A/S

Opponent:
Leopack B.V.

Headword:
-

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

Keyword:
"Admittance of late filed document (yes)"
"Remittal to the first instance (no)"
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0354/02 - 3.2.7

D E C I S I O N
of the Technical Board of Appeal 3.2.7
of 19 April 2005

Appellant: (Opponent)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 29 January 2002 rejecting the opposition filed against European patent No. 0650543 pursuant to Article 102(2) EPC.

Composition of the Board:

Chairman: H. Meinders
Members: K. Poalas
E. Lachacinski
P. A. O'Reilly
C. Holtz

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the decision of the Opposition Division on the rejection of the opposition against the European patent No. 0 650 543.

The opposition was filed against the patent as a whole based on Article 100(a) EPC (lack of novelty and lack of inventive step).

The Opposition Division held that the grounds for opposition mentioned in Article 100(a) EPC did not prejudice the maintenance of the patent as granted. The Opposition Division found that document

D19: US 3 190 791 A

being filed after expiration of the time limit for filing an opposition was not more relevant than the documents that had been filed in due time and did not admit said document into the proceedings.

II. Oral Proceedings before the Board of Appeal took place on 19 April 2005.

(a) The appellant requested that document D19 be admitted into the proceedings and that the case be remitted to the first instance, subsidiarily that the decision under appeal be set aside and that the European patent be revoked.

(b) The respondent requested that the appeal be dismissed and that the patent be maintained as granted.

III. Independent claims 1 and 5 as granted read as follows:

"1. Method for the continuous production of objects from a pulp material, said method comprising the steps of
a) moulding blanks or preforms of at least approximately the same shape as the finished objects by aspirating pulp mass against a liquid-permeable mould surface,
b) removal from the moulding surface and complete or partial drying of the blanks or preforms thus produced, and
c) final finishing processing of the completely or partially dried blanks or preforms so as to produce the final objects,
characterized in
d) that a combination of a plurality of blanks or preforms, and elements providing a bridge system interconnecting said blanks or preforms are moulded together as an integral body having a mechanical strength and a shape sufficient to allow it after having been removed from the mould surface and dried, to be conveyed in a positive manner by means of suitable conveying means through a processing line consisting of a number of work stations sequentially situated in the direction of conveying, each work station being adapted to perform its own finishing operation on the blanks or preforms constituting parts of each integral body, and to subsequently liberate the blanks or preforms from the bridge system

interconnecting them and to remove the blanks or preforms and the bridge system elements from the processing line."

"5. Plant for the continuous production of objects from pulp material while carrying out the method according any one or any of the claims 1-4 and of the kind comprising
a) at least one suction-moulding station (10, 12) for moulding blanks or preforms (46) of at least approximately the same shape as the finished objects by aspirating pulp mass against a liquid-permeable moulding surface,
b) a drying station (18) for complete or partial drying of the blank or preform thus produced,
c) at least one work station for finishing processing of the final object, and
d) a conveying path (20) for conveying the blank or preform to the work station or stations,
characterized in
e) that the suction-moulding station (10, 12) is adapted to produce integral bodies (46, 48) each consisting of a plurality of blanks or preforms (46) mutually connected through bridges (48), said integral bodies being adapted to be conveyed along said conveying path (20),
f) that the work station or stations is/are adapted to finish-process blanks or preforms in each integral body simultaneously, the station or stations for this purpose comprising a number of working means corresponding to the number of blanks or preforms, said working means being placed in substantially the same configuration as the configuration of the blanks or preforms in the integral body and adapted to process

the blanks or preforms substantially simultaneously, and
g) that the plant comprises at least one station (Fig. 10) adapted to disrupt the bridges with a view to liberating the individual finished-processed objects (46) from each other".

IV. The appellant argued in written and oral submissions essentially as follows:

(a) Admittance of document D19 into the proceedings

Document D19 disclosed not only the steps a), b) and c) of the preamble of claim 1 of the patent in suit but also the feature d) of the characterising part of said claim. A plant having the features a) to g) of claim 5 of the patent in suit was known from document D19.

Since the subject-matter of claims 1 and 5 of the patent in suit was not novel over document D19, said document was a relevant document and should be admitted into the proceedings.

(b) *Remittal of the case to the first instance*

In order to have document D19 examined in two instances the case should be remitted to the first instance.

(c) *Interpretation of claim 1*

The phrase "to allow it after having been removed from the mould surface and dried, to be conveyed

in a positive manner by means of suitable conveying means through a processing line consisting of a number of work stations sequentially situated in the direction of conveying, each work station being adapted to perform its own finishing operation on the blanks or preforms constituting parts of each integral body, and to subsequently liberate the blanks or preforms from the bridge system interconnecting them and to remove the blanks or preforms and the bridge system elements from the processing line", in claim 1 of the patent in suit, **only** meant that the moulding should produce such a mechanical strength and shape to the integral body that the remaining method steps of the characterising part of claim 1 could be performed. The integral bodies needed only to be removable from the mould surface, to be dried, to be further conveyed through a processing line in which finishing operations were performed on the blanks or preforms and to withstand liberation of the blanks and preforms from the bridge system.

Therefore, the method according to claim 1 disclosed method steps a) to c) and of step d) only the integral body moulding and the blank or preform removal step.

(d) *Novelty*

According to the method known from document D19 (see column 4, lines 47 to 54) the moulded pulp articles were an integral part of a continuous web and were efficiently transportable to subsequent

operations and equipment, namely to the drying unit 73 and the slitting and cutting unit 75. Slitting and cutting were finishing treatments similar to the ones listed as examples of a "subsequent finishing treatment" on page 2, lines 23, 24 of the patent in suit and therefore this slitting and cutting fell within the meaning of the "subsequent finishing treatment" as claimed. Therefore, document D19 disclosed the entire limited set of method steps of claim 1 as interpreted by the appellant.

For these reasons the subject-matter of claim 1 of the patent in suit was not novel over D19.

Since, as said in the two preceding paragraphs, a "subsequent finishing treatment" as described on page 1, lines 23, 24 of the patent in suit was known from document D19 in the form of slitting and/or cutting, and a work station for carrying out such a treatment was also known from this document, the subject-matter of claim 5 of the patent in suit also was not novel over D19.

(e) *Inventive Step*

Even if the interpretation given by the appellant was not followed, document D19 still disclosed finishing units in the form of the press unit 65, the drying station 73 and the slitting and cutting station 75. In the case that a post-pressing or an additional drying operation was needed a skilled person would install such an additional finishing station between the drying station 73 and the

slitting and cutting station 75 in the processing line known from document D19 without exercising any inventive activity.

Therefore, the subject-matter of claims 1 and 5 of the patent in suit did not fulfil the requirements of Article 56 EPC.

V. The respondent argued essentially as follows:

(a) *Admittance of document D19 into the proceedings*

Document D19 did not disclose the feature of the "number of work stations sequentially situated in the direction of conveying, each work station being adapted to perform its own finishing operation on the blanks or preforms constituting parts of each integral body" after the integral body had been removed from the mould and had been dried, as claimed in claim 1 and it did not disclose the feature f) of claim 5 of the patent in suit.

Therefore, document D19 was not a relevant document and should not be admitted into the proceedings.

(b) *Remittal of the case to the first instance*

The Opposition Division defined in its decision the features of claims 1 and 5 of the patent in suit which were not disclosed in document D19 and then decided correctly that the subject-matter of granted claims 1 and 5 was novel and inventive

over the teaching of document D19. Since the Opposition Division evaluated already the teaching of document D19 in respect to the subject-matter of claims 1 and 5, the case need not be remitted to the first instance.

(c) *Interpretation of claim 1*

It was clear to a skilled person reading claim 1 with a mind willing to understand that all the steps mentioned in the characterising part of claim 1 were an integral part of the method of claim 1.

(d) *Novelty*

Document D19 did not disclose the feature of the "number of work stations sequentially situated in the direction of conveying, each work station being adapted to perform its own finishing operation on the blanks or preforms constituting parts of each integral body" after the integral body had been removed from the mould and had been dried, as claimed in claim 1, nor the corresponding feature f) of claim 5.

(e) Inventive step

Since the features mentioned under point V (d) above differentiate the method of claim 1 and the plant of claim 5 from the disclosure in document D19 there is no indication to be found in said document about the use of an additional finishing

treatment before separating the blanks or preforms from the web.

The subject-matter of claims 1 and 5 of the patent in suit therefore involved an inventive step.

Reasons for the Decision

1. *Admittance of document D19 into the proceedings*

The Board agrees with the parties that a method according to the preamble of claim 1 and a plant having the features a) to d) according to the preamble of claim 5 of the patent in suit are disclosed in document D19.

Therefore, document D19 could be considered closest prior art for the purpose of discussing inventive step.

For this reason, the Board finds that document D19 is relevant enough to be admitted into the proceedings in order to give the parties the opportunity to present their arguments concerning inventive step of the subject-matter of claims 1 and 5.

In such a case also a discussion on novelty is relevant, since the appellant is of the opinion that document D19 is not only the closest prior art document, but also that it discloses all features of the claimed method and plant.

2. *Remittal of the case to the first instance*

According to the first two paragraphs of point 2.2 of the reasons for the decision under appeal the Opposition Division found that the subject-matter of claims 1 and 5 was novel and inventive over the disclosure of document D19.

As a consequence this document was considered not being more relevant than the documents that had been filed within the time for filling an opposition.

The Board considers this reasoning to mean that this document was not able to produce an outcome of the case which was different from the one produced on the basis of the documents filed in due time, and not that a relative weighting of the relevance of the documents filed in due time and of those filed outside of the opposition period was performed.

Since document D19 was taken into consideration by the Opposition Division as to its substance, the Board sees no reason to remit the case to the first instance for a renewed examination of this document (Article 111(1) EPC).

3. *Interpretation of claim 1*

The appellant argues that the expression starting with "to allow it" in claim 1 should be taken literally, with the result that the method of claim 1 consisted only of the steps a) to c) of the preamble of claim 1 and part of the step d) of the characterizing portion of this claim.

The Board cannot follow this argument for the following reasons:

According to T 190/99, point 2.4, not published in OJ, with which the Board fully agrees, the skilled person, when considering a claim should rule out interpretations which are illogical or which do not make technical sense. He should construe the subject-matter of the claims by a mind willing to understand, not a mind desirous of misunderstanding.

In the present case the entire patent is directed to the production of articles which undergo finishing treatment and which obviously need to have the ability to be conveyed to such finishing stations (see page 2, lines 22 to 24 and page 3, lines 3 to 5). The Board considers therefore that the skilled person wishing to make technical sense of the text of claim 1, understands immediately that claim 1 consists not only of the method steps a) to c) of the preamble, but also of the step d) of the characterising part of said claim.

4. *Novelty*

4.1 Claim 1

4.1.1 The method step of claim 1 according to which the integral body - after drying and before liberation of the blanks or preforms from the bridge system - is "conveyed in a positive manner by means of suitable conveying means through a processing line consisting of a number of work stations sequentially situated in the

direction of conveying, each work station being adapted to perform its own finishing operation on the blanks or preforms constituting parts of each integral body", is not disclosed in document D19, for the following reasons:

Document D19 discloses a method for the continuous production of objects form a pulp material, whereby moulded pulp articles form an integral part of a continuous web. They are first treated in the press unit 65, after which they are removed, as a web, from the Fourdrinier wire 22 and the porous dies 23 and are transported to the drying unit 73. In the slitting and cutting unit 75 this web is then slit and cut to provide individual moulded pulp articles (see column 4, lines 33 to 38). According to the passage quoted by the appellant (see column 4, lines 47 to 54) the moulded pulp articles "comprise an integral portion of a continuous web, they are effectively and efficiently transportable to subsequent operations and equipment" after the web has been lifted off the wire 22 at the sectioned drum 15a.

According to claim 1 the moulded blanks or preforms are dried first and are then conveyed through a pressing line with a number of finishing stations, after which the blanks or preforms are liberated from the bridge system interconnecting them.

In document D19, however, there is no information about any operation applied to the moulded pulp articles between the drying unit 73 and the slitting and cutting unit 75.

In the pulp moulding apparatus of document D19 the web with the integrated molded pulp articles leaves the Fourdrinier wire 22 and the porous dies 23 as shown in the upper right end of figure 1 and is then transported to the successively positioned stations 73 and 75. The first of said stations is a drying unit for drying the web with the integrated molded pulp articles, and the second, directly following the first is a slitting and cutting unit 75 for providing individual moulded articles, i.e. for separating the moulded pulp articles from the web. An additional treatment of the moulded pulp articles after they have been dried in the drying section and before they have been separated from the web in the slitting and cutting unit is not foreseen in the apparatus of document D19.

Therefore, the method step of claim 1 concerning the finishing treatment of moulded pulp articles after drying and before being liberated of the web of which they form an integral part, is not known from document D19.

4.1.2 The appellant argued that, given that slitting is a different finishing operation than cutting and that the mould pulp articles of document D19 undergo a slitting and a cutting operation successively, a finishing operation as claimed in claim 1 was known from document D19. This cannot be followed by the Board for the following reasons:

Document D19 defines the slitting and cutting unit 75 as a unit "to provide individual molded pulp articles" (see column 3, lines 62, 63 and column 4, lines 37, 38). Firstly, there is no information in document D19

about the way of operating the unit 75. The unit 75 of document D19 is obviously a unit capable of applying slitting and/or cutting operations. There is no information in document D19 that only slitting or only cutting is applied to the web. For the case of applying both slitting and cutting there is no information in document D19 that these operations are applied consecutively or simultaneously. For the case of a consecutive operation, no indication is given which sequence is applied. Secondly, slitting and cutting are defined in document D19 as common operations provided in the unit 75 for separating the molded pulp articles from the web. Thirdly, the finishing operation defined in the characterising part of claim 1 of the patent in suit is performed on the moulded pulp articles before said articles are separated from the web.

Therefore, document D19 does not define a slitting operation as a finishing operation after drying and before separating the molded pulp articles of the web as claimed in claim 1 of the patent in suit.

4.1.3 The Board also cannot follow the argument put forward by the appellant that operations of slitting and cutting performed by the unit 75 of document D19 fall within the definition of "subsequent finishing treatment" given in lines 22 to 24 of page 2 of the patent in suit.

None of the examples of a "subsequent finishing treatment" mentioned in lines 22 to 24 of page 2 of the patent in suit, like a post-pressing operation, an edge-cutting operation and imprinting as listed in the quoted passage, provides separation of the moulded pulp

articles from the web as is the purpose of the slitting and cutting unit 75 of D19. Therefore, the operation of the slitting and cutting unit 75 cannot be seen as such a "subsequent finishing treatment" in the meaning of the patent in suit.

4.1.4 For the above mentioned reasons the subject-matter of claim 1 is novel over the disclosure of D19.

4.2 Claim 5

The arguments presented under point 4.1 above and directed to the method claim 1 apply mutatis mutandis to the plant according to claim 5 having the at least one work station for finishing treatment according to feature f). Such a work station is not disclosed in document D19.

Therefore, the subject-matter of claim 5 is novel over the disclosure of D19.

5. *Inventive step*

5.1 Claim 1

5.1.1 As discussed in point 4.1.4 above the finishing treatment on the blanks and preforms after drying and before being separated from the web as claimed in claim 1 of the patent in suit is neither explicitly nor implicitly disclosed in document D19.

5.1.2 The finishing treatment of the blanks and preforms before they are separated from the web as proposed in the characterizing part of claim 1 of the patent in

suit allows that blanks and preforms of different shapes, sizes and in different numbers can be conveyed together and undergo a finishing treatment while still being connected to each other as an integral body. The time consuming individual treatment of said blanks and preforms after having been separated into individual articles is thereby avoided. By processing in this manner a rational production of pulp material articles of different shapes and sizes and in different quantities can be achieved (see page 2, line 56 to page 3, line 1 of the patent in suit).

5.1.3 Document D19 is directed to the difficulty of handling individual wet pulp articles from the forming dies (see column 1, lines 30 to 32). It proposes a pulp forming apparatus in which a continuous web is formed which includes moulded pulp articles as an integral portion thereof so that the web can be removed from the Fourdrinier wire 22 and the porous dies 23 and the moulded pulp articles can subsequently be transported in the form of a continuous web to the drying unit 73 and to the slitting and cutting unit 75 to provide individual moulded pulp articles (see column 1, lines 43 to 47 and column 4, lines 33 to 38).

Document D19 does not address the problem of a finishing treatment of the moulded pulp articles before being separated from the web nor does it teach a finishing treatment after drying and before separating the moulded pulp articles from the web. It therefore cannot provide the skilled person with any indications for a finishing treatment as claimed in claim 1 of the patent in suit.

5.1.4 For the above-mentioned reasons, the subject-matter of claim 1 of the patent in suit involves an inventive step within the meaning of Article 56 EPC.

5.2 Claim 5

Since document D19, see point 5.1 above, does not address the problem of a finishing treatment of the moulded pulp articles before being separated from the web nor does it teach a finishing treatment after drying and before separating the moulded pulp articles from the web, it cannot provide the skilled person with indications to the need of a work station for a substantially simultaneous finishing treatment of blanks or preforms grouped together in an integral body as claimed in claim 5 of the patent in suit.

Therefore, the subject-matter of claim 5 of the patent in suit involves an inventive step within the meaning of Article 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Nachtigall H. Meinders