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**Datasheet for the decision
of 17 May 2017**

Case Number: T 2123/12 - 3.2.05

Application Number: 06723517.6

Publication Number: 1996395

IPC: B31F1/07

Language of the proceedings: EN

Title of invention:

Method for producing a multi-ply paper product, tissue paper product and apparatus for producing a multi-ply paper product

Patent Proprietor:

SCA Hygiene Products GmbH

Opponent:

SCA Tissue France

Relevant legal provisions:

EPC 1973 Art. 54, 56

Keyword:

Novelty - yes

Inventive step - yes



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Case Number: T 2123/12 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 17 May 2017

Appellant:
(Patent Proprietor)

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Decision under appeal:

**Interlocutory decision of the opposition
division of the European Patent Office posted on
19 July 2012 concerning maintenance of the
European Patent No. 1996395 in amended form.**

Composition of the Board:

Chairman M. Poock
Members: H. Schram
D. Rogers

Summary of Facts and Submissions

- I. The appellant (patent proprietor) lodged an appeal against the interlocutory decision of the opposition division posted on 19 July 2012 concerning the maintenance of European patent Nr. 1 996 395 in amended form on the basis of auxiliary request 3a filed by the appellant during the second oral proceedings before the opposition division held on 25 June 2012.

The opposition was based on the grounds of opposition under Article 100(a) EPC (lack of novelty, Article 54 EPC, and lack of inventive step, Article 56 EPC) and Article 100(b) EPC (insufficiency of disclosure, Article 83 EPC). More particularly, the respondent (opponent) had submitted that the invention claimed in method claim 1 was not sufficiently disclosed and that the subject-matters of product claims 9 to 15 and apparatus claims 16 to 20 were not new or lacked an inventive step.

The opposition division held that the invention claimed in claim 1 as granted was disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, that the subject-matter of claims 1 and 16 as granted was new and involved an inventive step, but that the subject-matter of claim 9 as granted was not new with respect to document US 3,650,882 (D1). Taking into account that claim 9 encompassed both a dry and a wet product, the tissue paper product known from document D1 in the wet condition disclosed all the features of said claim.

The opposition division further held that the subject-matters of claim 9 of the first and third auxiliary requests were not new, that the subject-matter of claim

9 of the second auxiliary request did not involve an inventive step, but that the grounds of opposition under Article 100(a) and (b) EPC did not prejudice the maintenance of the patent on the basis of claims 1 to 19 filed as auxiliary request 3a.

- II. The appellant requests that the decision under appeal be set aside and that the patent be maintained as granted (main request), or on the basis of any of the sets of claims filed as auxiliary requests 1 and 2 filed during the first oral proceedings before the opposition division held on 27 April 2012.

The respondent did not file any request or submission in the appeal proceedings.

- III. Claim 9 of the main request reads as follows:

"Tissue paper product comprising

- an upper ply (1) comprising cushion protrusions (10) formed therein;
- a lower ply (3); and
- a middle ply (2) being situated between the upper ply and the lower ply, the middle ply comprises wrinkled areas (20, 25, 27) matched with the cushion protrusions of the upper ply such as to fill at least a portion of the cushion protrusions with the middle ply, wherein the length of the middle ply is considerably longer than the length of the upper ply."

- IV. The arguments of the appellant, in writing, are as follows:

Claim 9 as granted was rejected due to lack of novelty over prior art document D1. In accordance with the appealed decision, the subject matter of granted

claim 9 encompasses a tissue paper product in its dry state as well as in its wet state. Further, D1 is interpreted with regard to the disclosed tissue paper product, in the wet condition, to have an inner ply which "would be at least about two times longer than the outer ply i.e. considerably longer than the length of the upper ply in the wet state of the tissue paper" (underlining added). This reasoning and the resulting rejection of claim 9 due to lack of novelty over D1 is incorrect.

Firstly, claim 9 refers to a "tissue paper product". The skilled person immediately and unambiguously recognizes from this term that a used product, i.e. one which is no longer in the finished state after manufacture, is not meant. With reference to paragraph 0003 of the opposed patent, this teaches the general goal with respect to multi-ply papers, as defined in granted claim 9, which should have "desired absorption properties" as well as other properties such as feel and quality, in combination with increased absorption properties. Numbered paragraphs 0005, 0014 (second paragraph thereof), 0018, 0024, 0033 (with particular reference to the description of Figs. 8 to 10), 0037, 0047, 0048 and 0058 repeatedly refer, in the same context, to the "resulting" or "finished" (multi-ply tissue) paper product and these are clearly understood by the skilled person to be intended to have the desired absorption properties before use. After wetting in use, a tissue paper product would not have these expected or required absorption properties. Further, with reference to the types of such products defined in paragraph 0002 of the opposed patent, a consumer would certainly not be attracted to a kitchen towel or a handkerchief which is wet after use. A wet tissue paper

product after use simply cannot be held to be included in the scope of granted claim 9.

Therefore, already for this reason, contrary to the interpretation of the Opposition Division, within the meaning of the opposed patent as a whole, the term "tissue paper product" according to granted claim 9 would not be interpreted by the skilled person to include "wet" products with little or no absorption properties before use or "wet" products after use.

Additionally, unless specific circumstances or indications teach otherwise, it is not a fair and reasonable interpretation of a product claim that the skilled person would assume that the scope thereof normally includes its used condition, and especially not when this used condition results in a substantially irreversible change in the product, compared with its unused condition, such that its becomes unusable or even destroyed. With reference to paragraphs 0001, 0002 and 0003 of the opposed patent, uses such as kitchen paper, toilet paper or a handkerchief are described for a multi-ply tissue paper as defined in claim 9. D1, column 1, lines 7 to 15 refers to similar products and similar intended properties thereof. Such absorption properties are not expected for or provided by wet products. Further, in the actual and neighboring technical fields relating to tissue paper products, commonly used technical terms expressly refer to a wet condition, such as in the term "wet wipe", if the finished, unused product is intended to be in the wet state before use because it is soaked in a lotion or the like. Thus, in accordance with the general principle of construing claims "by a mind willing to understand, not a mind desirous of misunderstanding", as repeatedly stated in EPO Board of Appeal case law,

and taking into account the intended functions of tissue paper products, as defined in the introductory part of the opposed patent and in the introduction of D1, before use, the very broad interpretation of granted claim 9 adopted by the Opposition Division is not reasonable and not in accordance with logical understanding of the skilled person in the technical field of the claimed subject matter and who reads the opposed patent as a whole.

However, under the assumption that granted claim 9 includes "wet" tissue paper products within its scope, the Opposition Division cites the features of the used (wet) tissue product disclosed in D1. For example, of the passages mentioned by the Opposition Division in Section IV of the appealed decision relating to the novelty of granted claim 9, D1, column 1, line 3 I refers to "upon wetting in towel use" (underlining added). For the reasons set out above, it is not justified to cite the used (wet) condition of the tissue product disclosed in D1 with regard to the novelty of granted claim 9. Further, the "dry" (finished) tissue paper product of D1 does not disclose an inner or middle ply that is considerably longer than the outer plies. Therefore, the subject matter of granted claim 9, correctly interpreted not to encompass a used (wet) state of the product, is novel over the teaching of D1.

If, contrary to the above, the Board of Appeal shares the view of the Opposition Division with regard to interpretation of granted claim 9 such that this includes a used "wet" product, the reasoning of the Opposition Division to deny novelty of granted claim 9 based on the teaching of D1 is still incorrect. The teaching of D1 clearly distinguishes between two

conditions, namely the finished product itself (before use) and the product after it has been wetted in use. See D1, column 1, lines 27 to 36, column 2, lines 1 to 4, column 2, lines 20 to 23 (brief description of Figs. 5 and 6), and column 3, lines 25 to 27 and lines 31 to 36.

The Opposition Division interprets, for example, the passage from line 1 to line 4 of column 2, which relates to the finished (dry) product, to the extent that this implies the inner ply, when wet, is at least about two times longer than the outer plies so that the feature of granted claim 9, according to which the length of the middle ply is considerably longer than the length of the upper ply, is known from the wet tissue product of D1. This is a completely wrong reading of the teaching of D1.

The passage of D1 at column 2, lines 1 to 4 and similar passages, such as column 4, lines 14 to 27 cited by the Opposition Division, do not support the interpretation that the inner ply is at least about two times longer than the outer plies in the known product of D1 when this is wet (after use). Clearly, these passages only describe the relative ability of the inner and outer plies to stretch or elongate with respect to each other when wetted. D1, column 2, lines 1 to 4, refers to "stretchable to at least two times" (underlining added) for the inner ply in the finished product, i.e. the dry product before wetting, which means that the inner ply can stretch more than the outer plies when the product is wetted. However, this is not a clear and unambiguous teaching of the respective lengths of the inner and outer plies after being wetted. D1I does not say anything about the relative lengths of the plies.

Further, the Opposition Division incorrectly correlates "stretch" and "length" in asserting that col. 2, lines 1 to 4, teaches twice the "length". For example, if a first material of a unit length has a stretchability or elongation characteristic of 50% and a second material of the same unit length has a stretchability or elongation characteristic of 100%, i.e. twice the stretchability or elongation characteristic of the first material, then the fully stretched first material would have a length of 1.5 units and the second material would have a length of 2 units. Clearly, this second material is not twice as long as the first material when both are in their fully stretched state, even though the second material has twice the stretchability.

Additionally, even though the respective plies of D1 are described to have different degrees of stretchability, there is no disclosure in D1 that, in the wet condition, the length of the inner ply is "considerably longer" than the length of the outer plies when wet. This is because there is no disclosure in D1 of the relative lengths of the inner and outer plies in the dry or in the wet (used) state. The only clear and unambiguous teaching of D1 is that the inner ply can stretch more than the outer plies when wetted. However, this does not necessarily mean the inner ply is considerably longer than the outer plies. On the contrary, although it expands more, the inner ply can still be shorter than the outer plies when both are wetted. This also follows from the embodiment of D1 described at col. 1, lines 68 to 75.

In summary, the appealed decision rejects granted claim 9 due to lack of novelty over D1 based on an unreasonable interpretation that the scope of granted

claim 9 covers wet products before or after use and on an erroneous interpretation of the technical teaching of D1 with regard to length, as opposed to stretch or elongation capability, of the tissue paper product in D1. D1 does not provide any clear and unambiguous teaching of a considerably longer inner or middle ply compared to an outer ply for a tissue paper product according to a reasonably interpreted claim 9 as granted. Further, the lack of disclosure of this feature still applies if granted claim 9 is considered to also cover used (wet) products. Therefore, the subject matter of granted claim 9 is novel over the teaching of D1.

The subject matter of granted claim 9 is also based on an inventive step. The differentiating feature of claim 9 with respect to D1 as the closest prior art is the longer length of the middle ply. In view of the description of the technical effects of the opposed patent at paragraphs 0003, 0010 and 0014, the objective technical problem to be solved is the provision of a tissue paper product in which the optical appearance of the tissue paper product conforms to the thickness of the product that is haptically perceived and which has increased absorption properties.

As follows, for example, from paragraph 0014 of the opposed patent, a tissue paper product with the features of granted claim 9 provides the advantageous effect of having cushions that are supported by the material of the longer middle ply such that the cushions do not easily collapse when touched. Further, on account of the higher amount of fibers present due to this "stuffing", a higher absorption quality of the resulting tissue paper is provided.

The solution of this technical problem by way of a tissue paper product according to granted claim 9 is not obvious to a skilled person starting from D1 and applying common knowledge or the teaching of any other prior art document cited in the present opposition procedure. D1 teaches an entirely different product to that of the opposed patent. In D1, the finished product (before it has been wetted in use) provides unbounded zones which are to be filled with an inner ply that expands only after the towel is wetted in use. See column 1, lines 27 to 38. Therefore, it is in accordance with the teaching of D1 to deliberately leave empty spaces (cushions) into which the inner or middle ply can expand after the product has been wetted in use. In the finished product of D1, before it is wetted, the optical appearance of the product does not conform to the haptically perceived thickness because the cushions will collapse when touched by a user. Furthermore, there is not the same higher absorption quality. Additionally, it is not an obvious measure for the skilled person, either on the basis of common knowledge or on the basis of any teaching of the other prior art documents in the present opposition procedure, to substantially modify the structure of the product known from D1 and arrive at the subject matter of granted claim 9. On the contrary, D1 teaches away from a tissue paper product of granted claim 9 because it expressly teaches the provision of space within the cushions to allow the inner ply to expand upon wetting.

Therefore, granted claim 9 is based on an inventive step.

Reasons for the Decision

1. The appeal is admissible.
2. *Scope of the appeal*
 - 2.1 The method claims 1 to 8 and the apparatus claims 16 to 20 of the main request correspond to the method claims 1 to 8 and the apparatus claims 15 to 19, on the basis of which the opposition division intended to maintain the patent in amended form. Due to the prohibition of *reformatio in peius* (cf decisions G 9/92, G 4/93 [OJ EPO 1994, 875]), neither the respondent nor the board may challenge these claims.
 - 2.2 In the opposition proceedings the grounds of opposition under Article 100(b) EPC 1973 (insufficiency of disclosure, Article 83 EPC 1973) was only raised against the method claims 1 to 8 of the claims as granted. The opposition division held that the invention claimed in claim 1 as granted was disclosed in the patent in suit in a manner sufficiently clear und complete for it to be carried out by a person skilled in the art, Article 83 EPC. Since this ground was not raised against the product claims 9 to 15 as granted, it can be assumed that the invention claimed in claim 9 as granted likewise meets the requirements of said Article, cf point I above, last paragraph. Hence there is no need for further substantiation of this matter.
 - 2.3 The scope of the appeal is therefore restricted, as far as the main request is concerned, to the issue of novelty and inventive step of product claims 9 to 15.

3. *Ground for opposition under Article 100(a) EPC 1973 in combination with Articles 54 and 56 EPC 1973*

3.1 The gist of the invention according to document D1 is stated in column 1, lines 28 to 38, which reads: *"The provision of adhesive bonds in spaced regions provides unbonded zones of the towel structure between bonds. The less extensible outer webs of tissue paper confine the expansion or the extensibility of the inner web largely to the unbonded zones and, upon wetting in towel use, the normal release of the crepe of the inner web tends to cause the unbonded zones to be filled with an expanded inner creped web. This tends to bulk the towel in the wet state which is the converse of that which commonly occurs when towel structures are wetted. Accordingly, the bulking action gives a stability to the toweling material and assists in attaining a product of improved hand",* cf also claim 1.

The dry product illustrated in Figure 3, when wetted, is shown in Figure 5 (cf column 3, lines 30 to 35). In the wet state, the inner ply expanded very considerably in the unbonded zones with respect to the inner ply in the dry state, see also column 1, lines 73 to 75. Document D1 thus discloses a three-ply tissue paper product, whereby the inner ply is considerably longer than the length of the outer plies when said product is wetted.

The appellant has submitted, however, that the term "tissue paper product" according to granted claim 9 would not be interpreted by the skilled person to include "wet" products.

3.2 The opposition division held that the subject-matter of claim 9 of the main request (claims as granted) was not

new with respect to document D1. The reasoning for arriving at this conclusion was as follows (see Reasons, point 4):

Claim 9 encompassed "a tissue paper product in its dry state as well as in its wet state". While document D1 did not disclose explicitly that the length of the middle ply was considerably longer than the length of the upper ply as claimed in claim 9, this document disclosed (see column 2, lines 1 to 4) that the inner ply should be stretchable in the wet condition to at least about two times that of the stretch of the outer plies, i.e. considerably longer than the length of the upper ply in the wet state of the tissue paper.

- 3.3 The board does not consider that the tissue paper product of claim 9 encompasses a wetted product. The patent is silent about the properties of the tissue paper product when wet. While general goals with respect to tissue paper product are to provide softness, an improved hand-feel, good mechanical strength and the desired absorption properties, this does not imply that the claimed product describes a tissue paper both in the wet and dry state.

In the opinion of the board, the skilled person, having regard to the patent specification read as a whole, will construe said claim in a straightforward manner as meaning that the tissue paper product is in a dry condition and that therefore the last feature of claim 9, viz "wherein the length of the middle ply is considerably longer than the length of the upper ply", applies to a dry tissue paper product.

- 3.4 The passage in column 2 of document D1 referred to by the opposition division reads as follows: "In practice,

I have found that it is desirable that, in the finished product, the inner ply should be stretchable to at least about two times that of the stretch of the outer plies, all elongations being measured at break".

In the opinion of the board, the skilled person will understand the term "finished product" as referring to a product in the dry state. Moreover, it cannot be inferred from this passage, whether the actual length of the inner web in the finished product is longer or shorter than, or equally long as the actual length of outer ply.

- 3.5 Document D1 discloses a three-ply paper towel having two outer plies 1 and 12 and an inner web 3 having bonded zones 23 and unbonded zones 24, see column 3, lines 13 to 29, and Figure 3. In this embodiment the stretch of the outer webs and inner web is 30 percent and 120 percent, respectively, and the crepe ratio of the outer webs and inner web is about 1.3 and 2.2, respectively. This does not mean however that the length of the inner web in the finished product is necessarily longer than the length of the outer webs. Figure 3 shows the embossments of the outer plies 1 and 12, and that the inner web 22 is bonded to said outer plies in regular intervals. This Figure suggests that the inner web 22 was bonded to the outer plies while it was in a stretched condition and then released so that the outer plies were bulked further in the unbonded zones by the retraction of the material, cf column 1, lines 68 to 73. The length of the inner web and outer webs between two bonded zones is greater than the distance between said zones, the former due to creping and the latter due to the embossments made by embossing rolls 4 and 21 shown in Figures 1 and 7. Document D1 does therefore not disclose that the length of the

inner web in the embodiment described in column 3, lines 13 to 29 and shown in Figure 3 is considerably longer than the length of the outer webs.

It follows from the above that the subject-matter of claim 9 of the main request (claim 9 as granted) is new with respect to document D1.

- 3.6 There is no hint or suggestion in document D1 that the length of the inner ply must be considerably longer than the length of the outer plies when said product is dry.

Hence it was not obvious to the skilled person, starting from the paper towel known from document D1, to arrive at the subject-matter of claim 9 of the main request.

The subject-matter of claim 9 of the main request therefore also involves an inventive step. Claims 10 and 15 are dependent to claim 9 and relate to preferred embodiments of the tissue paper product of claim 9. These claims thus similarly involve an inventive step.

4. It follows from point 2 above that the patent can be maintained as granted.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is maintained as granted.

The Registrar:

The Chairman:



D. Meyfarth

M. Poock

Decision electronically authenticated