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**Datasheet for the decision
of 5 November 2019**

Case Number: T 1673/15 - 3.4.03

Application Number: 00964947.6

Publication Number: 1216436

IPC: G03F7/34, G03F7/36

Language of the proceedings: EN

Title of invention:

METHOD AND APPARATUS FOR THERMAL PROCESSING OF A PHOTSENSITIVE
ELEMENT

Patent Proprietor:

E. I. du Pont de Nemours and Company

Opponent:

Headword:

Relevant legal provisions:

EPC 1973 Art. 100(a), 56, 100(b), 83

Keyword:

Withdrawal of opposition during appeal
Admissibility of appeal - (yes)
Sufficiency of disclosure - (yes)
Inventive step - (yes)
Patent maintained amended

Decisions cited:

Catchword:



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Case Number: T 1673/15 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 5 November 2019

Appellant: E. I. du Pont de Nemours and Company
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted on 12 June 2015
revoking European patent No. 1216436 pursuant to
Article 101(3) (b) EPC.

Composition of the Board:

Chairman G. Eliasson
Members: M. Papastefanou
W. Van der Eijk

Summary of Facts and Submissions

- I. This appeal is against the decision of the opposition division revoking European patent No. 1 216 436 B1 on the grounds that the Main Request before it contained subject-matter going beyond the content of the originally filed application (Articles 100(c) and 123(2) EPC) and that the First, Second and Third Auxiliary Requests before it did not involve an inventive step (Articles 100(a), 52(1) and 56 EPC).

The opposition was based on all the grounds of opposition under Article 100(a), (b) and (c) EPC. In the decision under appeal, the opposition division concluded *inter alia* that the claimed subject-matter of the First Auxiliary Request before it fulfilled the requirements of sufficiency of disclosure (Article 83 EPC) and novelty (Articles 52 (1) and 54(1) EPC).

- II. The appellant - patent proprietor (hereafter "appellant") requested that the decision under appeal be set aside and that the patent be maintained on the basis of the Main Request or one of First to Eighth Auxiliary Requests, all filed with the statement of grounds of appeal.

After the board issued its preliminary opinion, the appellant withdrew the Second to Sixth and the Eighth Auxiliary Requests.

- III. In its reply to the appeal, the respondent - opponent requested that the appeal be dismissed or be held inadmissible and that none of the Second to Eighth Auxiliary Requests be admitted into the proceedings.

With a subsequent letter the opponent withdrew the

opposition and is, hence, no more party to the appeal proceedings.

IV. Reference is made to the following documents:

D1: US 5,279,697 A1

D2: WO 98/13730 A1.

D3: WO 96/14603 A1

V. At the end of the oral proceedings before the board, the appellant's final request was that the decision under appeal be set aside and that the patent be maintained on the basis of the Main Request or one of the First or Second Auxiliary Requests, all filed with the statement of grounds of appeal, the Second Auxiliary Request being the former Seventh Auxiliary Request.

VI. The Main Request of the appellant consists of the following patent documents:

- Claims 1 to 6, of the Main Request filed with the statement of grounds of appeal;
- Description:
 - Pages 2, 3 and 4, filed during the oral proceedings before the Board;
 - Pages 5-23 of the patent specification;
- Drawings: 1 to 19 of the patent specification.

VII. Claim 1 of the Main Request is worded as follows:

An apparatus for forming a relief pattern from a photosensitive element comprising a flexible substrate (15) having an exterior surface (23) and an interior surface (15a), and a composition layer (17) on the substrate capable of being partially liquefied, the

composition layer having an exterior surface (27) and an interior surface (17a), with the composition layer and flexible substrate joined at their respective interior surfaces, comprising:

a roller mounted for rotation for supplying an absorbent material to the exterior surface of the composition layer; wherein the roller is mounted for rotation in a first frame portion (12) and the drum (18) is mounted for rotation in a second frame portion, and wherein at least one of the first and second frame portions are movable relative to each other;

a drum (18) mounted for rotation with means for supporting the photosensitive element (16) on an outer circumferential surface of the drum (22) with the exterior surface of the flexible substrate (23) contacting said outer surface, the drum (18) positioned for delivering the photosensitive element to the absorbent material;

second heating means for heating the roller (106) to a temperature capable of heating the exterior surface of the composition layer (27) to a temperature T_4 which is equal or greater than a temperature T_2 sufficient to cause a portion of the layer to liquefy, while the absorbent material is contacting the exterior surface of the layer;

pressure means for causing the photosensitive element (11) and the absorbent material to come into contact between the drum (18) and the roller (106) at a pressure sufficient for at least a portion of the liquefied material of the composition layer (31) to be absorbed by the absorbent material; and

separation means for separating the photosensitive element (11) from the absorbent material;

said apparatus characterised by the second heating means (300) being for heating the roller (106) while maintaining the exterior surface of the flexible

substrate (23) at a temperature T3 which is at least 20°F (10°C) below temperature T4 and by said apparatus comprising first heating means (300) for applying heat to the exterior surface of the composition layer (27) on the drum (18) adjacent where the absorbent material contacts the layer at the roller, the first heating means adapted to heat the exterior surface of the layer (27) to a temperature T1 which is equal to or greater than temperature T2, while maintaining the exterior surface of the flexible substrate (23) at a temperature T3 at least 20°F (10°C) below temperature T1.

- VIII. The wording of the claims of the Auxiliary Requests is not relevant for this decision.
- IX. The appellant's main argument was that the mention of the "IR preheat lamp" in Example 7 of D2 was a mistake in view of the fact that the apparatus of D1 did not contain such an IR preheat lamp. The skilled person would therefore ignore it. Since the apparatus of D1 did not comprise any other heating means that would correspond to the first heating means of the claim, the claimed apparatus would not be obvious in view of a combination of D1 and D2.

Reasons for the Decision

1. Admissibility of the appeal
 - 1.1 In its reply to the appeal, the former respondent (opponent) pointed out that, in its decision regarding lack of inventive step, the opposition division had considered document D2 as being the closest prior art and had concluded that the obvious combination of D2 with D1 rendered the subject-matter of claim 1 of the First Auxiliary Request then on file (corresponding to

the current Main request) obvious. In contrast to that, the proprietor in its statement of grounds of appeal argued for the presence of inventive step in claim 1 of the Main Request starting from D1 as closest prior art. Hence, there was no *"sufficient link between the contested decision and the grounds of appeal"*. The appeal was therefore inadmissible (see former respondent's letter dated 4 March 2016, page 1, point B).

1.2 The board notes that the reasoning of the opposition division was based on Example 7 of D2 (starting on page 23 of D2) in which there is a direct reference to the apparatus ("processor") of D1 (page 23, line 20). The opposition division's objection was essentially based on the features of the apparatus of D1 and on the question of whether it would have been obvious for the skilled person to combine it with the description of Example 7 of D2, especially in relation to the "infrared preheat lamp" mentioned therein (page 23, lines 22 and 23 of D2); see points 22 to 33 of the impugned decision.

1.3 In the statement setting out the grounds of appeal, the appellant stated that "[t]he apparatus taught in document D1 is the closest prior art and D1 is identified in the introduction to this application" (last lines on page 2). The subsequent argumentation related to the features of this apparatus and whether it could be considered obvious to combine it with the disclosure of Example 7 of D2, in particular in relation to the "infrared preheat lamp" (see pages 3 to 6 of the statement of grounds of appeal).

1.4 In the board's view, the basis of the argument regarding inventive step was in both the impugned decision and the statement of grounds of appeal the disclosure related to the apparatus of D1. The particularity of having a direct reference to D1 in the Example of D2 renders it irrelevant which of the two documents was formally selected as closest prior art.

1.5 The board considers, therefore, that the statement of the grounds of appeal was sufficiently addressing the grounds of refusal and, hence, that the appeal is admissible.

2. Main Request

The claims of the Main Request correspond to the claims of the First Auxiliary Request underlying the decision under appeal and to claims 1 to 6 of the patent as granted.

2.1 Sufficiency of Disclosure (Articles 100(b) and 83 EPC 1973)

2.1.1 In the decision under appeal, the opposition division came to the conclusion that the current Main Request fulfilled the requirements of Article 83 EPC (see points 7 to 14 of the impugned decision).

2.1.2 In its reply to the grounds of appeal, the former respondent had argued that the Main Request did not fulfil the requirements of Article 83 EPC mainly because it was not possible for the skilled person to determine whether he was working within the claimed scope or not (see points 136 to 141 of the former respondent's letter of 4 March 2016).

2.1.3 The board notes that, according to established case law of the boards of appeal, the question of whether a skilled person is working or not within the claimed scope ("forbidden area" of a claim) is related to the definition of the scope of protection sought (Article 84 EPC) and not to the sufficiency of disclosure of the invention (Article 83 EPC); see *Case Law of the Board of Appeals of the EPO*, 9th Edition, July 2019, II.C.6.6.4 and II.C.8.2.

Moreover, since the claims of the Main Request correspond to granted claims 1 to 6, they are not open to objections under Article 84 EPC.

2.1.4 In the board's view, therefore, this objection of the former respondent is not relevant with respect to the ground of opposition under Article 100(b) EPC 1973.

2.1.5 The board is, thus, satisfied that the Main Request fulfils the requirements of Article 83 EPC 1973 and that the opposition ground under Article 100(b) EPC 1973 does not prejudice the maintenance of the patent according to this request.

2.2 Novelty (Article 100(a) and 54(1) EPC 1973)

2.2.1 In the opinion of the opposition division the subject-matter of the claims of the Main Request (First Auxiliary Request in the impugned decision) was new in view of documents D1, D2 and D3 (see points 15 to 20 of the decision under appeal).

2.2.2 In its reply to the grounds of appeal, the former respondent essentially re-iterated its objections from the first instance proceedings, arguing that the subject-matter of claim 1 is not new in view of

documents D1, D2 or D3 (see points 11 to 66 of the letter of the former respondent dated 4 March 2016).

- 2.2.3 The board notes that the former respondent did not bring forward any arguments that contradict the conclusions of the opposition division that none of D1, D2, and D3 disclosed, directly and unambiguously, an apparatus according to claim 1 of the (current) Main Request comprising first heating means adapted to heat the exterior surface of the layer at a temperature sufficient to cause at least a portion of the layer to liquefy (see points 15 to 20 of the impugned decision).

The board shares, therefore, the opposition division's conclusion that the subject-matter of claim 1 of the Main Request is new over the disclosures of D1, D2 and D3.

- 2.3 Inventive Step (Articles 100(a), and 56 EPC 1973)

- 2.3.1 In the decision under appeal, the opposition division came to the conclusion that the subject-matter of claim 1 of the Main Request (then First Auxiliary Request) did not involve an inventive step in view of documents D2 and D1 (see points 22 to 33 of the decision under appeal).

It is uncontested that in Example 7 of D2 (starting on page 23) there is a direct reference to the apparatus ("processor") of D1 (page 23, line 20). The opposition division, combining the disclosure of Example 7 of D2 with the description of the apparatus in D1 reached the conclusion that the skilled person would arrive at the claimed apparatus in an obvious manner.

2.3.2 A point of contention during the opposition procedure was how the "infrared (IR) preheat lamp" mentioned in Example 7 of D2 (page 23, lines 22 and 23) was to be understood in view of the fact that there was no such lamp in the apparatus described in D1.

The opposition division was of the opinion that the mention of three different settings for the heating means in Example 7 of D2 (page 23, lines 21 to 24) indicated that there were three distinct heating means in the apparatus. The infrared lamp was, thus, a further heating means, which was added to the apparatus of D1. This infrared lamp was external to the drum and placed in a similar way as the first heating means (300) of the claim (see also Figure 6 of the patent); see points 25 to 29 of the impugned decision.

The appellant pointed out that, since there was no infrared lamp in the apparatus of D1, its mention in Example 7 of D2 in relation with the reference to D1 was a mistake and should not be taken into account. It pointed out further, that the infrared lamp in Example 7 of D2 was characterised as "preheat lamp" and this meant therefore that the infrared lamp was used to (pre)heat the drum, i.e. it was internal to the drum of the apparatus. There was nothing in D2 or D1 that would lead the skilled person to add an external heating means like the first heating means of claim 1 in the apparatus of D1 without hindsight (see pages 3 to 6 of the statement of the grounds of appeal).

2.3.3 For ease of understating, the board repeats here the relevant passage of Example 7 of D2:

"After irradiation the imaged multilayer plate was thermally developed, to remove the unexposed

*regions of Layer C and the part of Layer D which was over these regions, using a processor of the type described in U.S. Patent 5,279,697. The circumferential speed of the processor was fixed internally at 30 inches/minute (76.2 cm/minute), **The infrared (IR) preheat lamp was set to 50% of full power**; the temperature of the roll supporting the multilayer plate was set at 72°C; the temperature of the developing roll bearing the absorbent material was set at 140°C; and six passes (each pass being against fresh absorbent material) were used to thermally develop the plate."* (page 23, lines 17 to 26; emphasis by the board; the U.S. Patent mentioned corresponds to D1).

The "roll supporting the multilayer plate" is the preheating drum 18 in D1. The "developing roll bearing the absorbent material" is the hot roller 78 in D1 (see Figure 6).

- 2.3.4 In the board's view, the skilled person reading this passage would first look up the mentioned processor (i.e. apparatus) in D1. As can be seen in Figure 6 of D1, the described apparatus is similar to the claimed apparatus (compare with Figure 6 of the patent). It is, however, evident that the apparatus of D1 does not comprise any infrared preheat lamp (see "300" in Figure 6 of the patent - the "first heating means" of the claim).

In the board's opinion, the skilled person would conclude that either the mention of the infrared preheat lamp in D2 or the reference to D1 was a mistake. In either case, the skilled person would not reach the conclusion that the processor mentioned in Example 7 of D2 was to be understood as the apparatus

of D1 with an additional infrared lamp, especially since no hint of such lamp is to be found in D1 and no indication of a possible addition of such a lamp to the apparatus of D1 is present in D2.

- 2.3.5 In D1 the apparatus comprises a drum with preheating means, which heat the layer up to a temperature that is below the melting point of the non-irradiated part of the layer (see column 7, lines 27 to 37 and column 9, lines 20 to 31). Moreover, it is specifically mentioned that the substrate layer has a much higher melting point than the temperature of the preheated drum so that its mechanical properties are not "significantly altered" by the preheating (see column 7, lines 38-42).

The melting of the layer is achieved by the hot roller (78), which elevates the temperature of the web (76) of the absorbing material to a temperature exceeding the melting point of the upper layer of the film (see column 9, lines 58 to 66). D1 is concerned with determining the suitable processing temperature and speed for the preheated drum and the hot roller as well as other design criteria of the apparatus in combination with the properties of the film sheet to be processed (see column 10, lines 17 to 20). There is a detailed discussion (starting in line 21 of column 10) about the properties of the processed film, the speed and the temperatures of the roller and the drum. There is never any hint or suggestion of adding further heating means in the described apparatus.

In the board's opinion, there is nothing in D1 that would motivate the skilled person to add a further heating means, such as an infrared preheat lamp in the apparatus of D1.

2.3.6 Even if the opinion of the opposition division were to be followed, considering plausible that the skilled person reading Example 7 of D2 would come to the conclusion that there were indeed three distinct heating means in the apparatus ("processor"), the infrared lamp, the roll supporting the multilayer plate (drum) and the developing roll bearing the absorbent material (hot roller - second heating means of the claim), the board's view is that the skilled person would still not arrive at the claimed apparatus.

2.3.7 In Example 7 of D2 the infrared lamp is characterised as "preheat lamp". The only indication about the temperature of this lamp is that it is set at 50% of its power, which, without any indication about the lamp's nominal power, does not provide any useful information.

The board agrees with the appellant that, in the context of D1, "preheating" the layer is to be understood as heating the layer to a temperature near but below its melting point (i.e. below the temperature T2 of claim 1; see also column 7, lines 30 to 37 of D1).

Since in Example 7 of D2 the apparatus of D1 is used, the "preheat infrared lamp" should be interpreted in the same context as in D1, i.e. that the lamp is used to preheat the composition layer at a temperature near but below its melting point (i.e. below T2).

2.3.8 In the board's view, therefore, there is nothing in D1 (or D2) that would motivate or suggest to the skilled person to adapt the infrared preheat lamp to heat the exterior surface layer to a temperature that is equal to or greater than its melting point, i.e. to a

temperature at which at least a portion of the exterior layer would liquefy.

Hence, the board's conclusion is that even if the skilled person were to combine the disclosures of D2 and D1, he would not arrive at the claimed apparatus.

2.3.9 Since D3 does not disclose any apparatus comprising heating means corresponding to the first heating means of claim 1, a possible combination of D1 or D2 with D3 would not lead to the subject-matter of claim 1 of the Main Request, either.

2.3.10 The board's view is, therefore, that the subject-matter of claim 1 of the Main Request involves an inventive step within the meaning of Article 56 EPC 1973. The same applies for claims 2 to 6, which depend on claim 1, directly or indirectly.

2.4 Concluding, the board is satisfied that, taking into account the amendments made by the proprietor (appellant), the patent and the invention to which it relates meet the requirements of the EPC and EPC 1973 and the patent is to be maintained on the basis of the Main Request (Article 101(3)(a) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the European patent No. 1 216 436 in amended form, as follows:
 - Claims 1 to 6, of the Main Request filed with the statement of grounds of appeal;
 - Description:
 - Pages 2, 3 and 4, filed during the oral proceedings before the board;
 - Pages 5-23 as in the patent specification;
 - Drawings: 1 to 19 as in the patent specification.

The Registrar:

The Chairman:



S. Sánchez Chiquero

G. Eliasson

Decision electronically authenticated