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File Number: T 384/91 - 3.4.2

Application No.: 82 306 422.5

Publication No.: 0 084 221

Title of invention: Method for the manufacture of a thin optical membrane

Classification: G02B 5/00, B29D 11/00

Interlocutory D E C I S I O N
of 11 November 1992

Applicant: Advanced Semiconductor Products

Opponent: Mitsui Petrochemical Industries Ltd.

Headword: "Conflict" between Article 123 paragraphs (2) and (3) EPC

EPC Article 123(2), (3)

Keyword: "Conflicting requirements of Article 123 paragraphs (2) and (3)
EPC"
"Referral to the Enlarged Board of Appeal"

Headnote follows



Case Number : T 384/91 - 3.4.2

Interlocutory D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 11 November 1992

Appellant :
(Proprietor of the patent)

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Representative :

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Respondent :
(Opponent)

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Representative :

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Decision under appeal :

Decision of the Opposition Division of the
European Patent Office dated 26 February 1991,
posted on 13 March 1992 revoking European patent
No. 0 084 221 pursuant to Article 102 (1) EPC.

Composition of the Board :

Chairman : E. Turrini
Members : W. Hofmann
C. Payraudeau

Summary of Facts and Submissions

- I. European patent No. 0 084 221 was granted on 28 October 1987 on the basis of European patent application No. 82 306 422.5. The granted patent contains 20 claims for a method of making an optical membrane. Claim 1 reads as follows:

"A method of making an optical membrane from a solution comprising at least one polymer and at least one solvent, characterized by the steps of depositing the solution on a horizontal surface of a support (8) which is rotatable about a substantially vertical axis: accelerating the support (8) from a first to a second speed of rotation to centrifugally spread the solution radially outwardly; forming the membrane during rotation of the support (8) by evaporation of the solvent in the solution, the radial stresses imposed on the membrane and the said evaporation of the solvent causing the membrane formed to be taut on the surface and substantially free of striae; and removing the membrane, after formation, from the surface of the support (8)."

- II. The patent was opposed by the Respondent (Opponent). The opposition was based on Article 100(a), (b) and (c) EPC.
- III. The Opposition Division revoked the European patent pursuant to Article 102(1) EPC.

The Opposition Division held that Claim 1 contained a feature, i.e. the expression "substantially free of striae", extending beyond the content of the application as filed (Article 123(2) EPC). The following document was, inter alia, mentioned in the decision:

(D3) Webster's dictionary, definition of word "stria".

IV. The Proprietor of the patent (Appellant) lodged an appeal against this decision. The Appellant filed a declaration of an optical expert and cited the following document:

(D6) Dictionary of science and technology, revised edition, W & R Chambers, definition of words "stria", "striation" and "striae".

V. In a communication of the Board pursuant to Article 11(2) of the Rules of Procedure of the Boards of Appeal, the allowability of the claims in view of Article 123(2) and (3) EPC was discussed and the following document cited:

(D8) Applied optics and optical engineering, ed. by R. Kingslake, Vol. I, Academic Press, 1965, pages 170 and 171.

VI. Oral proceedings, requested by the Appellant and the Respondent, were held.

VII. The Appellant requests that the decision under appeal be set aside and that the case be remitted to the Opposition Division with the order to proceed with the examination of the opposition on the basis of the patent documents according to the following main and auxiliary requests filed during the oral proceedings:

main request:

patent as granted with the following amendments:

- in Claim 1 the expression "at least one solvent" is replaced by "a solvent" and the expression "on the surface" is deleted,

- in Claims 4, 5, 6 and 7 the expression "at least" before "partly controlled" is deleted,

first auxiliary request:

patent as granted with the following amendments:

- in Claim 1 the expression "at least one solvent" is replaced by "a solvent",
- in Claims 4, 5, 6 and 7 the expression "at least" before "partly controlled" is deleted,

second auxiliary request:

patent as granted with the following amendments:

- in Claim 1 the expression "at least one solvent" is replaced by "a solvent" and the expression "substantially free of striae" is replaced by "of substantially uniform thickness",
- in Claims 4, 5, 6 and 7 the expression "at least" before "partly controlled" is deleted,

third auxiliary request:

patent as granted with the following amendments:

- claims according to the first auxiliary request,
- insertion at the end of the description of the phrase "The words "substantially free of striae" in Claim 1 did not appear in the application as filed. However, there is no contravention of EPC Art 123(2) because these words are to be understood as equivalent to "of substantially uniform thickness",

fourth auxiliary request:

patent as granted with the following amendments:

- in Claim 1 the expression "at least one solvent" is replaced by "a solvent", the expression "on the surface" is deleted and the expression "substantially free of striae" is replaced by "of substantially uniform thickness",
- in Claims 4, 5, 6 and 7 the expression "at least" before "partly controlled" is deleted,

fifth auxiliary request:

patent as granted with the following amendments:

- claims according to the main request,
- insertion at the end of the description of the phrase according to the third auxiliary request.

The Appellant furthermore requests the referral of the question of allowability of the second to the fifth auxiliary requests to the Enlarged Board of Appeal (sixth auxiliary request).

VIII. The Respondent requests that the appeal be dismissed.

IX. The Appellant's submissions may be summarized as follows:

It is incorrect to revoke the patent on the ground that the expression "substantially free of striae" in Claim 1 introduces subject-matter extending beyond the content of the application as filed. A correct interpretation of this feature is essential in order to determine whether new matter has been added, whereby, according to Article 69(1) EPC, the meaning should not be determined in isolation from the remainder of the text of the patent. This view corresponds to established law, as it can be inferred from point 4. of the decision G 2/88 of the Enlarged Board of Appeal (EPO OJ 1990, 093) and points 2.3 and 2.4 of the decision T 371/88 (EPO OJ 1992, 157). Since the absence of striations is claimed, it is irrelevant what the presence thereof may indicate or be associated with. The feature "substantially free of striae" in the context of the patent must be interpreted as meaning "of substantially uniform thickness", the scope of this expression being indicated in the application as originally filed on 2 December 1982, page 1, lines 6 to 14. The correctness of this interpretation is, indeed, supported by the filed declaration of a person skilled in

the art. Since the granted Claim 1 does not contravene paragraph 2 of Article 123 EPC, no problem arises with paragraph 3.

(It should be remarked that, here and in the following, cited page and line numbers of the original application refer to the document filed on 2 December 1982 and not to the retyped copy filed on 4 February 1983.)

- X. The Respondent contested the Appellant's view and submitted essentially the following arguments:

The present matter is not concerned with how to interpret words that have always been in the patent specification. It is, therefore, incorrect to try to interpret the disputed words in relation to the remainder of the specification as though they were rightly there; in other words, it is not legitimate to take an expression and look throughout the application as filed for a passage supporting such expression. The correct approach to the problem is to see what the expression means or may mean and, then, determine whether the meaning or meanings, in case more than one are possible, is or are "directly and unambiguously derivable" from the originally filed text. The fact that the disputed words are not immediately clear, is very important. If one or more of several possible meanings are beyond the original disclosure, the words are not allowable. It is not sufficient for the Appellant to allege that there is one meaning which arguably does not add subject-matter, if there are other possible meanings which do. In the present case, the expression "substantially free of striae" is obscure, ambiguous and unclear, although it cannot be said that it is devoid of meaning. The prior art allows interpretations of the word "striae", like narrow grooves or channels or variations in refractive index, for which, however, any

support in the application as filed is completely missing. Moreover, the method steps as originally disclosed are too general to give any information how the formation of striae could be avoided. Since the deletion of the feature "substantially free of striae" is not possible as contravening Article 123(3) EPC, the revocation of the patent should be confirmed. The solution of inserting a sentence in the description, according to the third and fifth auxiliary requests, is not allowable, because new matter is thereby introduced.

Reasons for the Decision

1. Amendments

- 1.1 With the exception of the feature "substantially free of striae", Claim 1 according to the main and first auxiliary requests does not contain subject-matter extending beyond the application as filed.

The feature "taut", with or without the additional specification "on the surface", is considered to be originally disclosed on page 10, lines 8 to 11, since, if the membrane is taut after evaporation of the solvent and the evaporation took place while the membrane was on the support surface, the membrane must necessarily be taut on the surface. The scope of protection conferred by Claim 1 is also independent of the presence of the specification "on the surface", since Claim 1 must in any case be understood in this sense.

- 1.2 However, the words "substantially free of striae" cannot be found expressis verbis in the application as filed, this fact being accepted by the Appellant himself (see letter of 10 March 1989, point 4. of the observations). In

order to determine whether information is identifiable in the original application, which would introduce the feature "substantially free of striae" by technical implication, the meaning of the said feature and, therefore, of the word "stria" must be established.

The Board agrees with the Appellant as to the fact that for investigating an alleged extension of the subject-matter of a patent application or patent beyond the content of the application as filed, the subject-matter of the application or patent as a whole should be compared with the original content of the application. Similarly, for investigating the question of extensions after grant of the protection conferred by a claim, the description and drawings shall be used to interpret the claims, in the sense of Article 69(1) EPC including the Protocol on the Interpretation of this Article. The Board is thus in full agreement with the decisions G 2/88 and T 371/88 cited by the Appellant.

However, this does not mean that a claimed feature, which has no correspondence in the description, would automatically assume a meaning and scope according to the disclosure of the description, however far this may be away from the claimed feature.

In the present case, since the word "stria" is nowhere defined in the granted patent itself, there is no other way but to start from the meaning commonly accepted in the field of optics, which is considered to be the relevant technical field, in order to investigate whether the subject-matter of the patent including the feature in suit goes beyond the content of the original application, or not.

1.3 According to D8, i.e. a handbook dealing with applied optics and optical engineering, manufacturing process features and variations may be the source of areas in optical glass that have a refractive index sharply deviating from the bulk average; these areas usually assume the shape of filaments termed "striae". Indeed, the author of the declaration filed with the letter of 5 May 1992 (see point 3., "... , my first thought was that ...") confirms that this is a very usual meaning, which a skilled person first considers. The chapter of D8 giving this definition specifically deals with optical glasses. The definition should, however, also apply to optical polymers since both types of material are equivalently used in optics. The author of the said declaration considers that such a meaning would be inconsistent with the fact that the patent deals with thin optical membranes. However, the Board does not see why filament shaped refractive index variations should not be conceivable in thin optical membranes as well. The further text of the patent also does not exclude such a possibility.

Therefore, it is one meaning of Claim 1 in suit, that the steps of the method of making the optical membrane result in a membrane which substantially does not exhibit any filament shaped area having a refractive index sharply deviating from the bulk average.

A further meaning of the word "stria" is, according to D6, "faint ridge or furrow, streak, linear mark", whereby this definition corresponds to the common meaning of the word, as known from the dictionary D3 that is meant for the general public. This meaning is also relevant in the present case, since D6 is a dictionary of science and technology. Therefore, Claim 1 in suit can also be interpreted in the sense that the steps of the method of

making the optical membrane result in a membrane which substantially does not exhibit any faint ridge or furrow, streak, or linear mark. There is nothing in the remainder of the patent which would render such an interpretation unreasonable.

It therefore follows that the added feature of Claim 1 "substantially free of striae", although not being precise in its scope, nevertheless is not void of technical meaning. Although directed to the product, it forms a limiting feature of method Claim 1, since it determines that the method steps must be such that the substantial freedom from striae is achieved. That this result might already be automatically achieved by the method steps specifically mentioned in the claim, is neither plausible, nor has such an argument been submitted by the Appellant.

- 1.4 On the other hand, the originally filed application discloses, inter alia, methods for measuring accurately the index of refraction of a thin optical membrane (see page 4, line 10 to page 6, line 27) and for making such a membrane (see page 8, line 1 to page 10, line 12 and Figure 1). With regard to the features of the manufacturing method, it is stated on page 9, lines 1 to 5 that "membrane thickness and diameter depends primarily upon the viscosities of polymer and solvent, the rate of acceleration and speed of the rotatable support on which we form the membrane, and the final speed of rotation". Moreover, it is mentioned on page 9, lines 16 to 18 that "variations in membrane thickness can be controlled by adjusting the rate of evaporation and the kind and quantity of thermal treatment, if any, that the membrane undergoes after formation". The influence of the manufacturing method features on physical parameters of the membrane like thickness and diameter is, therefore, explicitly mentioned. Nowhere in the description is,

however, disclosed, either explicitly or implicitly, that the said method features are chosen so that the membrane made according to the said process does not exhibit any filament shaped area having a refractive index sharply deviating from the bulk average.

With regard to the meaning of "stria" as "faint ridge or furrow, streak, linear mark", no place can be found in the original application wherefrom it could be unambiguously derived that the features of the process are so chosen that the membrane made according to said process does not exhibit any faint ridge or furrow, streak, or linear mark. In particular, although the description draws the attention to the influence that the manufacturing method features have on physical parameters of the membrane, as mentioned above, and stresses the importance of a uniform thickness (see page 1, lines 6 to 14), it fails to disclose uniformity of the membrane in this respect. A uniform thickness, however, does not necessarily imply the absence of striae in the sense of visible, e.g. coloured streaks and linear marks without surface deformation, and the absence of striae in the sense of faint ridges or furrows does not necessarily imply uniform thickness.

1.5 Therefore, in view of the fact that the meaning of the feature "substantially free of striae" as mentioned above cannot be derived from the application as filed, the feature in suit, contained in Claim 1 according to the main and first auxiliary requests, represents subject-matter extending beyond the content of the application as filed in the sense of Article 123(2) EPC.

1.6 Claim 1 according to the second and fourth auxiliary requests does not contain subject-matter extending beyond the application as filed. As regards, in particular, the feature "of substantially uniform thickness" now replacing

"substantially free of striae", this feature is disclosed on page 1, lines 6 and 7 of the original description. This amendment, therefore, does not contravene Article 123(2) EPC.

However, it affects the scope of protection conferred by Claim 1. Whereas according to the granted Claim 1 only such a method is protected, the parameters of which are chosen to lead to a membrane substantially free of striae, the amended Claim 1 also protects a method which although leading to substantially uniform thickness, nevertheless produces striae. This could easily be the case if, for instance, the striae consist of variations of refractive index or of otherwise visible streaks or linear marks without surface deformation. Moreover, even in the case of variations of thickness it is very doubtful whether for the more general condition "uniform thickness" the same considerations regarding the limits defined by the term "substantially" apply as for the more special condition "free of striae". Fine ripples unacceptable under the aspect of substantial freedom from striae might be accepted under the aspect of substantially uniform thickness which, for instance, requires, as shown in the present application, that the thickness of the membrane should not vary from edge to edge by more than 2%.

Therefore, the amendment of Claim 1 according to the second and fourth auxiliary requests extends the protection conferred in the sense of Article 123(3) EPC.

- 1.7 The wording of Claim 1 according to the third and fifth auxiliary requests is equal to that of Claim 1 according to the first auxiliary and main requests. It is very doubtful whether the sense of the claimed feature "substantially free of striae" could be shifted by the requested insertion to the description. But in any case

the insertion itself of the proposed sentence at the end of the description goes beyond the content of the application as filed, in the sense of Article 123(2) EPC, because the expression "substantially free of striae" on the one hand and the alleged fact that it is equivalent to "of substantially uniform thickness" on the other hand are not supported by the original disclosure.

1.8 It appears that, under the circumstances of the present case, the requirements for fulfilling paragraph 2 and paragraph 3 of Article 123 EPC go in opposite directions, since any attempt to remove the feature "substantially free of striae", added incorrectly before grant, would result in extending the scope of protection conferred by the granted Claim 1.

2. Relationship between Article 123(2) and Article 123(3) EPC

2.1 No difficulty arises between paragraphs 2 and 3 of Article 123 EPC as long as the patent has been correctly granted. The special nature of the present case lies in the fact that the situation mentioned in paragraph 1.8 above was not predetermined on the filing date by the content of the application and/or the existing prior art, but was created during the examination procedure. Although the Applicant (Appellant) is fully responsible for the amendments to the application documents which he files or to which he agrees, some share of responsibility also falls upon the Examining Division who did not object to the above-mentioned amendment. The question of original disclosure of a feature is certainly a matter of judgement and an amendment may be made by an Applicant believing in good faith that it is allowable. It is not a satisfactory situation that an Applicant can never be quite sure whether amendments he proposes or accepts during the examining procedure lead him into an inescapable trap.

2.2 Such situations have occurred in the past.

In the case T 231/89 (Headnote in EPO OJ 1992, No. 6) an additional limiting feature was added to the claim during examination proceedings with the EPO's approval. The Opposition Division regarded the feature as not originally disclosed and its deletion in the granted claim as contravening Article 123(3) EPC, thus not allowable, and consequently revoked the patent. The Board 3.2.2 in its decision (see paragraph 3.1) took the view that

"it would be unjust to declare a patent invalid on ground of Article 100(c) EPC for the reason alone that an amendment introducing a limiting feature during prosecution with the approval or recommendation of the Office extended the subject-matter of the patent beyond the content of the application whilst the removal of the same feature is, on the other hand, to be prevented under Article 123(3) EPC. In such cases a reasonable and justified interpretation of the two sub-articles (2) and (3) of Article 123 EPC is necessary. The conjunctive application of both paragraphs taken absolutely and independently one of the other would, however, lead to a paradox result ending in the revocation of the granted patent in such cases, a measure which the Board considers not appropriate and not intended by the Convention. The contradictory situation is then only avoidable if the two paragraphs are interpreted in their mutual relationship, i.e. one being applied as primary, i.e. independent, and the other as subsidiary i.e. dependent. Two alternative possibilities then arise:

a) sub-article (2) is taken as independent, therefore the added feature is to be deleted in the granted claim notwithstanding sub-article (3) or

b) sub-article (3) is taken as independent, therefore the added feature can remain in the granted claim notwithstanding sub-article (2).

The Board is of the opinion that when such scope limiting feature in a claim is irrelevant in respect of novelty and inventive step of the claimed subject-matter, the application of alternative b) appears appropriate and reasonable. On the other hand, if a factually added feature in a claim is void of technical meaning within the given context, the above mentioned alternative a), i.e. deletion of such feature, would appear justified"

In the present case, the feature "substantially free of striae" is not void of technical meaning so that alternative a) given in decision T 231/89 would not apply.

In order to verify whether alternative b) applies, the Board would have to check whether the above-mentioned feature is irrelevant in respect of novelty and inventive step. However, probably as in many similar cases, novelty and inventive step have not yet been finally decided upon by the Opposition Division, and the Board would to some extent have to bind the first instance with its judgment on novelty and inventive step. Moreover, the Board is quite generally of the opinion that relevancy of a feature with respect to novelty and inventive step could not now be determined once and for all, since this situation might change in future proceedings concerned with the patent (continuation of the opposition procedure, nullity procedure). But mainly, the Board doubts that it is possible to deny the application of an unconditional Article of the EPC, even if it may appear to be less relevant in a given case.

2.3 In case T 938/90 (unpublished) the Examining Division had incorporated a feature into the main claim and granted a patent. The Opposition Division revoked the patent on the grounds that the subject-matter of the main claim extended beyond the content of the application as filed. The Board 3.3.3 took the view that the situation in this case was entirely different from that of case T 231/89, because the added feature was not technically meaningless at all and could not be disregarded when assessing novelty and inventive step. For this reason, the Board did not follow former decision T 231/89 and confirmed the revocation of the patent.

In general, such a decision may seem hard (and sometimes unjust) in view of the facts mentioned in point 2.1 above.

2.4 Also of interest might be a consideration of how German jurisprudence has dealt with problems relevant to the present case (see, in particular, the article of H. Schwanhäusser in GRUR 1991, No. 3, pages 165 to 169 and GRUR 1992, pages 295, 296 as well as the decision "Flanschverbindung" of the Bundespatentgericht, dated 28 June 1988, (GRUR 1990, No. 2, pages 114 to 116) and the book by R. Schulte, Patentgesetz, 4th edition, 1987, Carl Heymanns Verlag KG, page 234, paragraphs 4.22 and 4.23). It is interesting to note that revocation or nullity of the whole patent are not seen as an unavoidable consequence in cases of added subject-matter which cannot be deleted without extending the scope of the protection conferred by the granted claim. Indeed, it is either allowed that the added feature remains in the claim or that it is taken out, and it is tried to avoid the corresponding violation of the patent law by inserting into the description a declaration concerning the nature

and legal consequences of the said feature. In the present case, the third and fifth auxiliary requests would correspond to this line of thought, although, in the view of the Board, the wording of the added sentence in the description is not what would be required.

2.5 In view of the foregoing and taking into account that

- the interpretation of the relationship between paragraph 2 and paragraph 3 of Article 123 EPC is an important point of law, which needs to be clarified,

- the revocation of the patent is considered as unsatisfactory and unjust and does not appear to be necessary to duly protect the rights of third parties, and that, in the present case,

- the added feature has a technical meaning (otherwise it could not limit the scope of protection conferred by the claim) and it cannot yet be decided whether the said feature will be irrelevant in respect of novelty and inventive step, and

- no features can be identified in the application as filed which could replace the added feature without extending the scope of protection of the claim,

the Board comes to the conclusion that a decision of the Enlarged Board of Appeal is required in order to clarify this point of law and to ensure uniform application of the law (Article 112(1)(a) EPC).

Order

For these reasons, it is decided that:

The following point of law is referred to the Enlarged Board of Appeal for decision:

"If a European patent as granted contains subject-matter which extends beyond the content of the application as filed and also limits the scope of protection conferred by the claims, is it possible during the opposition proceedings to maintain the patent in view of paragraphs 2 and 3 of Article 123 EPC?".

The Registrar:

The Chairman:

P. Martorana

E. Turrini