

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SIPKE WADMAN and KLAUS B. SCHILDBACH

Appeal No. 97-3669
Application 08/391,745¹

ON BRIEF

Before LEE, TORCZON and CARMICHAEL, Administrative Patent Judges.

LEE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 2-6, 8-14, and 22-28.

Claims 1, 7, and 15-21 have been canceled.

References relied on by the Examiner

Kleiman	4,643,532	Feb. 17, 1987
Won	5,400,157	Mar. 21, 1995
Cornet (European Patent)	0,046,104	Feb. 17, 1982

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The Rejections on Appeal

Claims 4, 5, 8, 24, 25, 27 and 28 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by Aoyama.

Claims 6, 13, 14 and 26 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Aoyama and Kleiman.

Claims 3, 10 and 23 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Aoyama, Cornet, and Won.

Claim 11 stands finally rejected under 35 U.S.C. § 103 as being unpatentable over Aoyama, Cornet, and Kleiman.

Claim 12 stands finally rejected under 35 U.S.C. § 103 as being unpatentable over Aoyama, Cornet, Won and Kleiman.

Claims 2, 9 and 22 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Aoyama and Cornet.

In Paper No. 7, claims 4, 5, 6, 8, 13, 14, and 21-26 were finally rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the applicants regard as their invention. This rejection, however, was withdrawn by the examiner in the examiner's answer. (Paper No. 14, p.1).

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substrate that is furnished with a patterned film of electrode material formed by a particular method. The latter is claimed via independent claim 28 which is in the form of a product-by-process claim. The method according to the present invention is claimed via independent claim 27 which is reproduced below:

27. A method of furnishing a substrate with a patterned film of electrode material, said method comprising providing a surface of said substrate with a layer of an assistant material capable of decomposition and separation from said substrate upon heating with a laser beam, providing a layer of electrode material in contact with a surface of said assistant material, locally heating said layer of assistant material with said laser beam according to a desired pattern, at least to the decomposition temperature of said assistant material, to thereby cause said layer of assistant material to locally decompose and separate from said substrate in a manner so as to cause the layer of said electrode material to be separated from said substrate at areas of said local decomposition and separation of underlying assistant material and thereby form a patterned film of said electrode material on said substrate.

Claims 27 and 28 are the only independent claims.

DISCUSSION

The Anticipation Rejection

Anticipation is established only when a single prior art

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1990); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). See also In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). The prior art reference must either expressly or inherently describe each and every limitation in a claim. Verdegaal Bros. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987).

Claims 4, 5, 8, 24, 25, 27 and 28 are rejected as being anticipated by Aoyama.

The appellants argue (Br. at 7), with respect to the Aoyama reference:

In Aoyama a layer of electrode material is attached to the surface of a substrate by an adhesive, the adhesive strength of which varies as a result of light irradiation. The adhesive is then irradiated by light limited through the electrode material pattern-wise by means of a mask. The layer of electrode material is then pulled away from the exposed or the unexposed areas depending on whether the exposure to light strengthened or weakened the layer of the adhesive material.

According to the appellants, Aoyama nowhere discloses irradiating

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We agree with the appellants. The specification defines "decomposition" as follows (page 3, lines 6-12):

The term "decomposition" as here employed should be broadly interpreted as referring to such processes as, for example, chemical decomposition of an explosive substance, rapid boiling or sublimation of a substance having a high vapour pressure, fast emission of hot combustion gases, rapid thermal expansion of product gases produced in a chemical or physical reaction, etc., all of which result in the release of relatively large amounts of energy over a short timescale, and all of which can be induced by sudden thermal excitation (laser beam).

The specification further explains (page 3, lines 24-27):

Rather than being directly [vaporized] from the substrate surface, as in the known method, the electrode material is instead forcibly detached from the underlying assistant material as a result of that underlying material's laser-induced decomposition.

Reasonably interpreted in light of the specification, the claimed invention requires decomposition of the assistant material in a manner such that large amounts of energy are released over a short timescale, in an explosive manner, such that the electrode material directly above the decomposing material is forcibly detached by the massive release of energy.

Despite the fact that Aoyama's adhesive layer can be made of

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"the adhesive layer can be caused to diminish as a result of a photodecomposing reaction." That language is indicative of a much more gradual, stable, and controlled degradation of the adhesive layer than the kind of all or none type decomposition described in the appellants' specification. The decomposition described in the appellants' specification evidently pulverizes electrode material into fine particles capable of suspension in the atmosphere (Spec. Page 4, lines 1-3), whereas Aoyama's photodecomposing reactions would leave electrode material essentially intact for subsequent removal by peeling.

For the foregoing reasons, the anticipation rejection of claims 4, 5, 8 and 27 cannot be sustained.

Claim 28, on the other hand, is a product-by-process claim, which means the appellants have the burden of establishing that the process further limits the structure. In re Thorpe, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985). In other words, the process by which the product is made does not render patentability to the product claimed if the product is the same as that disclosed by the prior art. That is the case here. Claim

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the product is made and thus is inconsequential in a product-by-process claim wherein patentability must be based on structural features of the product. Here, the end product is one in which selected portions of the electrode material have been removed from the surface of the substrate, the same as that disclosed in Aoyama. While the appellants have argued that a product made by the appellants' process would be more beneficial because it would have extremely sharp edges, such assertions of extreme or improved sharpness are not supported by any objective evidence such as specific test data or declaration evidence. Meitzner v. Mindick, 549 F.2d 775, 782, 193 USPQ 17, 22 (CCPA 1977), cert. denied, 434 U.S. 854, 195 USPQ 465 (1977).

The appellants have grouped claims 24 and 25 with claim 28 (Brief, at 5). Accordingly, we sustain the rejection of claims 24, 25, and 28 under 35 U.S.C. § 102(b) as being anticipated by Aoyama.

The Obviousness Rejections

Claims 6, 13, 14, and 26 have been rejected as being unpatentable over the combination of Aoyama and Kleiman. Claims

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deficient insofar as the rejection of independent claim 28 is concerned. Accordingly, the rejection of claim 26 is sustained. As for claims 6, 13, and 14, as applied by the examiner, Kleiman indeed does not make up for the deficiency of Aoyama. Therefore, the rejection of claims 6, 13 and 14 cannot be sustained.

Claims 3, 10 and 23 have been rejected as being unpatentable over the combination of Aoyama, Cornet and Won. Claims 3 and 10 depend ultimately from claim 27 and claim 23 depends ultimately from claim 28. The appellants essentially argue merely that Cornet and Won do not make up for the deficiency of Aoyama. However, as discussed above, Aoyama has not been shown to be deficient insofar as the rejection of independent claim 28 is concerned. Accordingly, the arguments of the appellants do not demonstrate error in the obviousness rejection of claim 23. The rejection of claim 23 is sustained. As for claims 3 and 10, as applied by the examiner, Cornet and Won indeed do not make up for the deficiencies of Aoyama. Therefore, the rejection of claims 3 and 10 cannot be sustained.

Claims 2, 9 and 22 have been rejected as being unpatentable

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discussed above, Aoyama has not been shown to be deficient insofar as the rejection of independent claim 28 is concerned. Accordingly, the arguments of the appellants do not demonstrate error in the obviousness rejection of claim 22. The rejection of claim 22 is sustained. As for claims 2 and 9, as applied by the examiner, Cornet indeed does not make up for the deficiencies of Aoyama. Therefore, the rejection of claims 2 and 9 cannot be sustained.

Claim 11 indirectly depends from claim 27 and is rejected as being unpatentable over the combination of Aoyama, Cornet and Kleiman. The appellants essentially argue merely that Cornet and Kleiman do not make up for the deficiency of Aoyama. As applied by the examiner, Cornet and Kleiman indeed do not make up for the deficiencies of Aoyama. Accordingly, the rejection of claim 11 cannot be sustained.

Claim 12 indirectly depends from claim 27 and is rejected as being unpatentable over the combination of Aoyama, Cornet, Won and Kleiman. The appellants essentially argue merely that Cornet, Won and Kleiman do not make up for the deficiency of

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CONCLUSION

The rejection of claims 24, 25, and 28 under 35 U.S.C. § 102(b) as being anticipated by Aoyama is affirmed.

The rejection of claims 4, 5, 8, and 27 under 35 U.S.C. § 102(b) as being anticipated by Aoyama is reversed.

The rejection of claim 26 under 35 U.S.C. § 103 as being unpatentable over Aoyama and Kleiman is affirmed.

The rejection of claims 6, 13, and 14 under 35 U.S.C. § 103 as being unpatentable over Aoyama and Kleiman is reversed.

The rejection of claim 11 under 35 U.S.C. § 103 as being unpatentable over Aoyama, Cornet, and Kleiman is reversed.

The rejection of claim 12 under 35 U.S.C. § 103 as being unpatentable over Aoyama, Cornet, Won, and Kleiman is reversed.

The rejection of claims 2 and 9 under 35 U.S.C. § 103 as being unpatentable over Aoyama and Cornet is reversed.

The rejection of claim 22 under 35 U.S.C. § 103 as being unpatentable over Aoyama and Cornet is affirmed.

The rejection of claims 3 and 10 under 35 U.S.C. § 103 as being unpatentable over Aoyama, Cornet, and Won is reversed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JAMESON LEE)	
Administrative Patent Judge)	
)	BOARD OF PATENT
)	APPEALS AND
)	INTERFERENCES
RICHARD TORCZON)	
Administrative Patent Judge)	

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Carmichael, Administrative Patent Judge

DISSENTING-IN-PART

While I join the majority's well-reasoned opinion in all other respects, I must respectfully dissent from that portion reversing the rejection of Claims 2-6, 8-14, and 27. I would instead affirm the examiner's decision *in toto*.

Claims 4, 5, 8, 24, 25, 27, and 28 stand rejected under 35 U.S.C. § 102 as anticipated by Aoyama. The starting point for deciding an appeal of an anticipation rejection is 37 CFR § 1.192(c)(3)(8)(iii), which states that:

For each rejection under 35 U.S.C. 102, the argument shall specify the errors in the rejection and why the rejected claims are patentable under 35 U.S.C. 102, including any specific limitations in the rejected claims which are not described in the prior art relied upon in the rejection.

In other words, the decision is to be based solely on the arguments raised by the appellants in their briefs. It is beyond the scope of this decision to address arguments which could have been raised but were not set forth in the briefs.

In the present case, pursuant to 37 CFR

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requiring no peeling. Appeal Brief at 6-7. Appellants point to nothing else to distinguish their invention from the prior art.

None of those three features is found in the rejected claims. I would affirm the anticipation rejection on that basis. The obviousness rejections stand on the same footing, since Appellants make no further arguments.

Even if one were to consider the (non-argued) limitation that the assistant material must "decompose," that limitation is met by Aoyama. Only by unduly narrowing the term "decompose" could one distinguish the claims over Aoyama. Claims undergoing examination are given their broadest reasonable interpretation consistent with the specification, and limitations appearing in the specification are not to be read into the claims. ***In re Etter***, 756 F.2d 852, 858, 225 USPQ 1, 5 (Fed. Cir. 1985) (in banc).

In the present case, the specification offers no precise definition of the claim term, "decompose." The specification states that:

The term "decomposition" as here employed should

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having a high vapour pressure, fast emission of hot combustion gases, rapid thermal expansion of product gases produced in a chemical or physical reaction, etc., all of which result in the release of relatively large amounts of energy over a short timescale, and all of which can be induced by sudden thermal excitation (laser beam).

Specification at 3, lines 6-12 (emphasis added). Everything following the phrase "for example" constitutes just that, *i.e.* examples. The examples exemplify, but do not circumscribe the meaning of "decompose." Any other result improperly reads limitations from the specification into the claims in violation of *Etter*.

Moreover, even if Appellants intended to limit the claims to an "explosion" or "forceful ejection" (which they apparently do not), they could have done so explicitly, Specification at 8, lines 28-31, or by using a step-plus-function claim, 35 U.S.C. § 112, sixth paragraph.

When properly interpreted under *Etter*, Appellants' claims

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decompose and separate. Aoyama at 6-7. Aoyama even uses the word "photodecomposing" to describe the process. Aoyama at 9, lines 9-13. Aoyama causes the material to "decompose" to the same extent recited in the claims.

Thus, I would affirm.

JAMES T. CARMICHAEL
Administrative Patent Judge

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