

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MICHAEL S. BOULINEAU  
and THOMAS J. MORAVEC

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Appeal No. 2004-0676  
Application No. 09/562,686

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ON BRIEF

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Before PAK, TIMM, and JEFFREY T. SMITH, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 27 through 37, which are all of the claims pending in the above-identified application.<sup>1</sup>

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<sup>1</sup> The appellants inadvertently stated in their Brief that "[t]his is an appeal from the Office action mailed on September 4, 2002 finally rejecting claims 27-36, all of the claims in the Application." The Notice of Appeal entered May 19, 2003 clearly indicated that the appellants appeal "from the last decision of the examiner" and that the last decision of the examiner involved  
(continued...)

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APPEALED SUBJECT MATTER

Claim 27 is representative of the subject matter on appeal and reads as follows:

27. A method of preparing water-repellent coatings on optical substrates comprising thermal vapor coating said optical substrate with at least one organosilane compound in a vacuum, wherein said thermal vaporization comprises:

impregnating a non-sintered porous inorganic oxide matrix material with at least one compound selected from the group consisting of silane, siloxane and siloxazane compounds;

evaporating the at least one organosilane compound from the matrix material in a vacuum of no more than  $10^{-3}$  mbar at 200°C to 600°C; and

depositing the evaporated at least one organosilane compounds on the surface of an optical substrate heated to 30°C to 300°C;

REFERENCE

The examiner relies on the following prior art references:

Tully et al. (Tully)	4,387,195	Jun. 7, 1983
Dombrowski et al. (Dombrowski)	5,853,800	Dec. 29, 1998

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<sup>1</sup>(...continued)  
the rejections of claims 27 through 37 which are all of the claims in the application. The appellants also questioned the propriety of the examiner's rejections of claims 27 through 37 in their Brief and Reply Brief. Accordingly, we presume that the appellants' appeal is directed to the examiner's final rejection of claims 27 through 37.

REJECTION

The appealed claims stand rejected as follows<sup>2</sup>:

- 1) Claim 31 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention;
- 2) Claims 27 through 37 under 35 U.S.C. § 112, first paragraph, as failing to provide written description for the subject matter presently claimed; and
- 3) Claims 27 through 31 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Dombrowski and Tully.

OPINION

We have carefully reviewed the claims, specification and prior art, including all of the evidence and arguments advanced by both the examiner and the appellants in support of their respective positions. This review has led us to conclude that the examiner's Sections 112 and 103 rejections are well founded. Accordingly, we affirm the examiner's decision rejecting the claims on appeal under Sections 112 and 103. However, pursuant to the provision of 37 CFR

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<sup>2</sup> Except for the rejections set forth below, the examiner has withdrawn those rejections set forth in the final Office action mailed February 20, 2003. See the Answer, pages 3 and 4.

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§ 1.196(b)(2003), we denominate our affirmance of the examiner's Section 103 rejection as including a new grounds of rejection. Our reasons for these determinations follow.

We turn first to the examiner's rejection of claim 31 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention. According to the examiner (Answer, page 5):

Claim 31 depends from claim 17, a cancelled claim. As such, it is impossible for one of ordinary skill in the art to determine the metes and bounds of the claimed subject matter.

The appellants do not dispute this determination. See the Brief and the Reply Brief in their entirety. Accordingly, we affirm the examiner's decision rejecting claim 31 under 35 U.S.C. § 112, second paragraph.

Normally, a claim which fails to comply with the second paragraph of § 112 will not be analyzed as to whether it complies with other statutory grounds for patentability since to do so would of necessity require speculation with regard to the metes and bounds of the claimed subject matter. **See *In re Steele***, 305 F.2d 859, 862-63, 134 USPQ 292, 295-96 (CCPA 1962); ***In re Wilson***, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Nevertheless, in

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this instance, in an effort to avoid piecemeal appellate review and to avoid judicial and administrative inefficiency (*see Ex parte Saceman*, 27 USPQ2d 1472, 1474 (Bd. Pat. App. & Int. 1993) and *Ex parte Ionescu*, 222 USPQ 537, 540 (Bd. App. 1984)), we will presume that claim 31 is dependent claim 27, the only independent claim in this application.

We turn next to the examiner's rejection of claims 27 through 37 under 35 U.S.C. § 112, first paragraph, as failing to provide written description for the subject matter presently claimed.

According to the examiner (Answer, page 4):

Claim 27 recites "...in a vacuum of no more than  $10^{-3}$  mbar..." at line 9 of the claim. Originally-filed claim 2 and page 12 of the specification disclose a pressure of from  $10^{-3}$  to  $10^{-5}$  mbar. This range does not include pressures below  $10^{-5}$  mbar. The originally-filed disclosure does not reasonably convey that the inventors had possession of pressures from  $<10^{-5}$  mbar to 0 mbar.

In response, the appellants argue (Brief, page 11) that:

The maximum limit of  $10^{-3}$  Mbar is clearly disclosed and a preferred range of  $10^{-3}$  Mbar to  $10^{-5}$  Mbar was specifically disclosed. The minimum number is a matter of convenience and to one skilled in the art is an arbitrary point. As the only critical limit is the maximum point and the other point is finite (the pressure cannot go below 0.0 Mbar), the concept of less than  $10^{-3}$  Mbar is clearly disclosed [sic., disclosed] in the specification and the term should be acceptable.

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We initially note that the written description requirement found in the first paragraph of 35 U.S.C. § 112 is separate from the enablement requirement of that provision. **See Vas-Cath Inc. v. Mahurkar**, 935 F.2d 1555, 1561-63, 19 USPQ2d 1111, 1115-17 (Fed. Cir. 1991); **In re Barker**, 559 F.2d 588, 591, 194 USPQ 470, 472 (CCPA 1977), **cert. denied**, 434 U.S. 1064 (1978). As the court stated in **In re Kaslow**, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983):

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claimed language. (citations omitted)

The fact that one skilled in the art might realize from reading a disclosure that something is possible is not a sufficient indication to that person that the something is a part of an appellant's disclosure. **See Barker**, 559 F.2d at 593, 194 USPQ at 474. Precisely how close the original description must be to the claimed subject matter to comply with the written description requirement must be determined on a case-by-case basis.

In the present case, there is no dispute that the claim limitation "a vacuum of no more than  $10^{-3}$  mbar" embraces a pressure

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range below  $10^{-5}$  mbar, i.e.,  $<10^{-5}$  mbar to 0 mbar. However, the specification, as originally filed, discloses (page 17, lines 3-6) that:

On reaching a stable final vacuum, for instance in the range between  $10^{-3}$  and  $10^{-5}$  mbar, the evaporation of the compound of the formula I, II, III and/or IV [in a porous inorganic oxide matrix material] is brought about by heating at temperatures of from 200 °C to 600 °C, or 300 °C to 500 °C.

This original specification then goes on to exemplify evaporating the claimed compound in a porous inorganic oxide matrix material within such pressure range, i.e., a pressure of  $3 \times 10^{-5}$  mbar. See page 18. There simply is nothing in the application disclosure, as originally filed, which reasonably conveys the concept of employing a pressure range of  $10^{-5}$  mbar to 0 mbar (included by the claimed language "no more than  $10^{-3}$  mbar") to evaporate the claimed compound in a porous inorganic oxide matrix material to coat optical substrates. **See *Lockwood v. American Airlines Inc.***, 107 F.3d 1565, 1571, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997) ("One shows that one is 'in possession' of the invention by describing the invention, with all its claimed limitations, not that which makes it obvious..."); ***In re Alton***, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583, **citing *In re Wertheim***, 541 F.2d 257, 263-64, 191 USPQ 90, 97 (CCPA 1976) (Where embodiments of the claimed invention encompassed

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by the claims "are completely outside of the scope of the specification, then the examiner or the Board need only establish this fact to make out a *prima facie* case."). Indeed, the appellants do not refer to **any specific sections** of the original disclosure to demonstrate that such concept is supported by the written description therein. See the Brief and the Reply Brief in their entirety.

It follows that the claims on appeal, by virtue of including the pressure of  $<10^{-5}$  mbar to 0 mbar not disclosed in the original disclosure, violate the written description requirement of 35 U.S.C. § 112, first paragraph. Hence, we affirm the examiner's decision rejecting claims 27 through 37 under 35 U.S.C. § 112, first paragraph, as lacking written descriptive support for the invention presently claimed.

We turn next to the examiner's rejection of claims 27 through 31 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Dombrowski and Tully. The appellants do not dispute the examiner's finding that Dombrowski teaches:

Dombrowski teach a method of preparing water-repellent coatings on optical substrates comprising thermal vapor coating said optical substrate with organosilane compounds in a vacuum [claim 1, c. 5, 1.30 - c. 6, 1. 2], wherein said thermal vaporization comprises:

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impregnating a porous inorganic oxide matrix material with silane, siloxane, and/or siloxazane compounds [claim 1, c. 6, ll. 5-6 and c. 1, ll. 53 - 55];

evaporating the compounds from the matrix material in a vacuum of from  $10^{-3}$  to  $10^{-5}$  mbar at  $300^{\circ}$  to  $500^{\circ}\text{C}$  [claim 1, c. 6, ll. 20-21].

depositing the evaporated compounds on the surface of an optical substrate heated to  $50^{\circ}$  to  $300^{\circ}\text{C}$  [claim 1, c. 6, ll. 20-21].

The examiner notes that the organosilicon compounds of formula (I) may be silanes or siloxanes, with typical examples being perfluoroalkoxylanes [c. 2, l. 58 - c. 3, l. 12]. The temperature range of  $300^{\circ}\text{C}$  to  $500^{\circ}\text{C}$ , taught by Dombrowski, lies within the claimed range of  $200^{\circ}$  to  $600^{\circ}\text{C}$ . The temperature range of  $50^{\circ}$  to  $300^{\circ}\text{C}$ , taught by Dombrowski et al., also lies within the claimed range of  $30^{\circ}$  to  $300^{\circ}\text{C}$ , sharing an endpoint at  $300^{\circ}\text{C}$ . Also, the range of from  $10^{-3}$  to  $10^{-5}$  overlaps that of no more than  $10^{-3}$  claimed, sharing an endpoint at  $10^{-3}$ .

The appellants only argue that (1) Dombrowski does not teach or would not have suggested employing "a non-sintered porous inorganic oxide matrix material" in the above vapor coating method as required by the claims on appeal and (2) the showing in the specification and the Rule 132 declaration of record demonstrates that the claimed invention imparts unexpected results, thereby rebutting any inference of obviousness. See the Brief and the Reply Brief in their entirety. We do not agree.

As indicated *supra*, Dombrowski specifically teaches employing "a porous inorganic oxide matrix" to the coat optical substrate

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with the claimed compounds. Although Dombrowski exemplifies a porous inorganic oxide matrix made of a sintered inorganic oxide material, it does not limit its porous inorganic oxide matrix to only those made of sintered inorganic oxide materials. See column 3, lines 44-55 and column 4, lines 63-64. Had Dombrowski intended to limit its porous inorganic oxide matrix to those made of sintered inorganic oxide materials, it would have included the word "sintered" to the phrase "porous inorganic oxide matrix" as is done in reference to a porous matrix used in a prior vapor coating process at column 2, lines 15-17. However, Dombrowski employs the generic terminology "a porous inorganic oxide matrix" in its specification and claims to encompass both sintered and non-sintered inorganic oxide matrix materials. Thus, from our perspective, Dombrowski as a whole would have suggested to one of ordinary skill in the art the employment of either a sintered or non-sintered porous inorganic oxide matrix in its vapor coating process within the meaning of 35 U.S.C. § 103. **See, e.g., Merck & Co. v. Biocraft Laboratories Inc.**, 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir.), **cert. denied**, 493 U.S. 975 (1989); **In re Petering**, 301 F.2d 676, 682, 133 USPQ 275, 280 (CCPA 1962).

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Having determined that Dombrowski would have rendered the claimed subject matter *prima facie* obvious, we review the showing in the specification and the Rule 132 declaration referred to by the appellants to determine whether the claimed subject matter imparts unexpected results. Our review supports the examiner's factual finding that the showing is not commensurate in scope with the claims on appeal. *See In re Clemens*, 622 G.2d 1029, 1035, 206 USPQ 289, 296 (CCPA 1980); *In re Greenfield*, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978). While the showing is limited to employing two specific porous inorganic oxide matrix materials adsorbed with a specific organosilane compound under specific coating conditions to produce two specific coated substrates, the claims on appeal are not so limited. The appellants simply have not proffered sufficient factual evidence to demonstrate that the showing limited to employing specific porous compositions, organosilane compound and coating conditions is predictive of those employing materially different porous inorganic oxide materials having different porosities, materially different organosilane compounds and patentably different vapor coating conditions covered by the claims on appeal.

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In view of the foregoing, we affirm the examiner's decision rejecting claims 27 through 31 under 35 U.S.C. § 103. However, pursuant to the provision of 37 CFR § 1.196(b), we denominate this affirmance as including a new ground of rejection inasmuch as we rely on a new rationale based on Dombrowski alone in affirming the aforesaid Section 103 rejection.

As a final point, in the event of further prosecution, the examiner is to review the content of the English translation of JP 05-215905 referred to in Dombrowski to determine whether it teaches or would have suggested the coating compounds recited in claims 32 through 37.

#### CONCLUSION

In summary, we affirm the examiner's decision rejecting claim 31 under 35 U.S.C. § 112, second paragraph, claims 27 through 37 under 35 U.S.C. § 112, first paragraph, and claims 27 through 31 under 35 U.S.C. § 103. However, as indicated *supra*, we denominate our affirmance of the aforementioned Section 103 rejection as including a new grounds of rejection.

In addition to affirming the examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b). 37 CFR

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§ 1.196(b) provides, "[a] new ground of rejection shall not be considered final for purposes of judicial review."

Regarding any affirmed rejection, 37 CFR § 1.197(b) provides:

(b) **Appellant(s)** may file a single request for rehearing within two months from the date of the original decision . . . .

37 CFR § 1.196(b) also provides that the **appellant(s)**, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should the **appellant(s) elect** to prosecute further before the Primary Examiner pursuant to 37 CFR § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before

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the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the **appellant(s) elect** prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

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

AFFIRMED; 196(B)

CHUNG K. PAK	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
CATHERINE TIMM	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
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JEFFREY T. SMITH	)	
Administrative Patent Judge	)	

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