

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CORNING INCORPORATED
Petitioner

v.

DSM IP ASSETS B.V.
Patent Owner

Case IPR2013-00052
Patent 7,276,543 B2

Before FRED E. McKELVEY, GRACE KARAFFA OBERMANN,
JENNIFER S. BISK, SCOTT E. KAMHOLZ, and ZHENYU YANG,
Administrative Patent Judges.

YANG, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

A. *Background*

Pursuant to 35 U.S.C. §§ 311-319, Corning Incorporated (“Corning”) petitioned for an *inter partes* review of claims 1-34 of U.S. Patent No. 7,276,543 B2 (“the ’543 patent”). Paper 3 (“Pet.”). On May 2, 2013, the Board denied the petition as to claims 1-10 but instituted trial for claims 11-34 on several grounds of unpatentability. Paper 13 (“Dec.”). Thereafter, Patent Owner DSM IP Assets B.V. (“DSM”) filed a Response (Paper 43 (“PO Resp.”)), and Corning filed a Reply (Paper 56 (“Reply”)). Later, DSM filed a Supplemental Response (Paper 67 (“Supp. Resp.”)), and Corning filed a Reply thereto (Paper 68 (“Supp. Reply”)).¹

Oral hearing was held on February 11, 2014. *See* Paper 87 (“Tr.”).

The Board has jurisdiction under 35 U.S.C. § 6(c) and issues this final written decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

Corning has proved by a preponderance of the evidence that claims 11-23 and 26-31 of the ’543 patent are unpatentable. It, however, has failed to meet its burden of proof regarding the unpatentability of claims 24, 25, and 32-34.

B. *Related Proceedings*

Corning and DSM simultaneously are involved in nine other *inter partes* reviews based on patents claiming similar subject matter:

IPR2013-00043, IPR2013-00044, IPR2013-00045, IPR2013-00046,

¹ The Board authorized these filings in resolving certain discovery disputes. Paper 54.

IPR2013-00047, IPR2013-00048, IPR2013-00049, IPR2013-00050, and IPR2013-00053.²

C. The '543 Patent

The '543 patent relates to an optical fiber coating prepared from a radiation curable composition. Ex. 1001, Abstract; *see also id.* at 1:16-18. The composition comprises an oligomer, a reactive diluent, and a plurality of free radical photoinitiators with certain absorption characteristics. *Id.* at 3:11-44.

Claim 11, the sole independent claim in this proceeding, reads:

11. A radiation-curable composition comprising

(A) an oligomer,

(B) a reactive diluent, and

(C) a photoinitiator package of at least two free radical photoinitiators having an overall absorption spectrum in methanol which is the sum of the absorption spectra of each individual photoinitiator wherein said overall absorption spectrum has a minimum value of a molar extinction coefficient (ϵ) in a range between 280 nm (λ_1) and 320 nm (λ_2) of at least about $525 \text{ l mol}^{-1} \text{ cm}^{-1}$ or wherein said overall absorption spectrum has an average value of ϵ in a range between 280 nm (λ_1) and 320 nm (λ_2) of at least about $980 \text{ l mol}^{-1} \text{ cm}^{-1}$.

Ex. 1001, 27:45-57.

² IPR2013-00053 addresses claims 35-57 of the '543 patent.

D. Reviewed Grounds of Unpatentability

The Board instituted trial on the following grounds of unpatentability:

Claim(s) Challenged	Basis	Reference(s)³
11-14, 16-21, 26, 27, 29, 30, and 32-34	§ 102	Szum '041
24 and 25	§ 103	Szum '041 and Ciba
11-22 and 26-30	§ 102	Snowwhite
23	§ 103	Snowwhite, Fouassier, and Levy
31	§ 103	Snowwhite and Zahora
31	§ 103	Szum '041, Snowwhite, and Zahora

II. ANALYSIS

A. Claim Construction

In the Decision to Institute, the Board adopted Corning's interpretation of several terms. Dec. 5-6. After the institution of the trial, the parties disputed the construction of "percentage reacted acrylate unsaturation (%RAU)" only. Pet. 16-17; PO Resp. 16-18; Reply 2-7. As we dispose of all issues on other grounds, we do not need to reach any claim construction in this Final Decision.

³ Szum, U.S. Patent No. 5,664,041 (Ex. 1002) ("Szum '041"); Ciba-Geigy Corp., Photoinitiators for UV Curing: A Formulator's Guide (Ex. 1006) ("Ciba"); Snowwhite et al., Int'l Pub. No. WO 98/47954 (Ex. 1003) ("Snowwhite"); JEAN-PIERRE FOUASSIER, PHOTOINITIATION, PHOTOPOLYMERIZATION, AND PHOTOCURING: FUNDAMENTALS AND APPLICATIONS 71-72 (1995) (Ex. 1011) ("Fouassier"); Levy, U.S. Patent No. 6,042,943 (Ex. 1012) ("Levy"); Zahora et al., Int'l Pub. No. WO 98/50317 (Ex. 1004) ("Zahora").

B. Unpatentability Analysis

1. Claims 11-23 and 26-31

In instituting this *inter partes* review, the Board concluded that “Corning has demonstrated that there is a reasonable likelihood of prevailing on its challenge to the patentability” of claims 11-23 and 26-31. *See* Dec. 8-12, 18-20, 22; *see also* 35 U.S.C. § 314(a). After the Board institutes a review, the patent owner “may file a response to the petition addressing any ground for unpatentability not already denied.” *See* 37 C.F.R. § 42.120(a). In its Scheduling Order, the Board cautioned DSM that “any arguments for patentability not raised in the response will be deemed waived.” Paper 14, 2.

In its Patent Owner’s Response, DSM chose “not to substantively respond to Corning’s Petition with respect to claims 11-23 and 26-31.”⁴ PO Resp. 3. In its Supplemental Response, however, DSM asserted that “Corning’s GPC [gel permeation chromatography] data does not prove that Corning properly synthesized the prior art oligomers.” Supp. Resp. 5. Even though DSM did not state so explicitly, this allegation relates to DSM’s patentability argument for claims 11-23 and 26-31. After all, if DSM’s contentions bear out, Corning’s test data using the oligomers of questionable quality could not serve as the basis to prove unpatentability of any claim.

According to Professor Bowman, the expert for DSM, when synthesizing an oligomer, the presence of a significant amount of low

⁴ DSM stated that it instead submitted a Motion to Amend under 37 C.F.R. § 42.121. PO Resp. 3. The record, however, does not include any Motion to Amend in this proceeding.

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