

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COSTCO WHOLESALE CORP.,
Petitioner,

v.

ROBERT BOSCH LLC,
Patent Owner.

Case IPR2016-00038
Patent 6,292,974 B1

Before PHILLIP J. KAUFFMAN, WILLIAM V. SAINDON, and
BARRY L. GROSSMAN, *Administrative Patent Judges*.

KAUFFMAN, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. OVERVIEW

Costco Wholesale Corp. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1, 2, and 8 of U.S. Patent No. 6,292,974 B1 (Ex. 1001, “the ’974 patent”). Pet. 1. Robert Bosch LLC (“Patent Owner”) filed a Preliminary Response (Paper 15, “Prelim. Resp.”) to the Petition. We instituted *inter partes* review of claims 1, 2, and 8. Paper 16 (“Dec.”).

We discuss preliminary matters, such as motions, in Section II below.

We held an oral hearing on January 18, 2017. *See* Paper 66 (“Tr.”); *see also* Ex. 1206 (Petitioner’s transcript errata).

We have jurisdiction under 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the claims on which we instituted trial.

For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1, 2, and 8 the ’974 patent are unpatentable.

B. RELATED PROCEEDINGS

The parties indicate that the ’974 patent is at issue in: *Robert Bosch LLC v. Alberee Products Inc. et al.*, No. 12-574-LPS (consolidated with No. 14-142-LPS) (D. Del.) (“the related litigation”). Pet. 1; Paper 5, 1.

The parties are currently involved in the following *inter partes* proceedings (“these proceedings”):

Case #	U.S. Patent #	Abbreviation
IPR2016-00034	6,973,698	“the ’698 patent”
IPR2016-00036	6,944,905	“the ’905 patent”
IPR2016-00038	6,292,974	“the ’974 patent”
IPR2016-00039	7,228,588	“the ’588 patent”
IPR2016-00040 ¹	7,484,264	“the ’264 patent”
IPR2016-00041	8,099,823	“the ’823 patent”

Two of the patents at issue in these proceedings, the ’905 patent and the ’974 patent, were at issue in prior litigation between Patent Owner and Pylon Manufacturing Corporation. Paper 36, 2. *Robert Bosch LLC v. Pylon Manufacturing Corporation* (D. Del., Case No. 08-542 (SLR)) (“the Pylon litigation”). See Paper 35, 1.

In these proceedings, sometimes a party submitted an identical paper or exhibit in all of the proceedings even though that paper or exhibit may not be applicable, or applies in a different manner, to a particular proceeding. At other times, we are able to apply the analysis of one proceeding to another.

¹ The ’264 patent (IPR2016-00040) is a division of the application that became the ’588 patent (IPR2016-00039). IPR2016-00040, Ex. 1001, 1 (62). The remaining patents are not related.

C. EVIDENCE AND ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner asserts that the challenged claims are unpatentable under the following grounds:

Claims Challenged	§	References(s)
1, 2, 8	103(a)	Prohaska ² and Appel ³
1, 2, 8	103(a)	Prohaska and Hoyler ⁴

Pet. 3.

II. PRELIMINARY MATTERS

A. PETITIONER'S MOTION TO STRIKE AND MOTION TO EXCLUDE

These Motions deal with Exhibits 2005 and 2007. Exhibit 2005 is a transcript from the Pylon litigation between Patent Owner and a third party, and a portion of the transcript includes the testimony of Mr. Merkel, a named inventor on the '974 patent.⁵ Paper 35, 1; Ex. 1001, [75]. Exhibit 2007 is the Declaration of Martin Kashnowski, a Robert Bosch LLC employee. Ex. 2007 ¶ 1. Patent Owner filed both Exhibits in conjunction with Patent Owner's Response as evidence relating to secondary considerations. See PO Resp. 7–15.

² U.K. Patent Application No. GB 2 106 775 A, published Apr. 20, 1983 (Ex. 1004).

³ U.S. Patent No. 3,192,551, issued July 6, 1965 (Ex. 1005).

⁴ German Patent No. 1,028,896, published June 24, 1954 (Ex. 1006). The certified English translation begins at page 6.

⁵ At times, the questioner mistakenly refers to the '974 patent as the '947 patent. See, e.g., Ex. 2005, 226:3, 234:18.

In the Motion to Strike, Petitioner contends that we should strike Mr. Merkel's trial testimony from the Pylon litigation as a matter of routine discovery because Patent Owner did not make Mr. Merkel available for cross-examination.⁶ Paper 35, 1–5 (citing 37 C.F.R. §§ 42.12, 42.51–53). We deal with the hearsay issue Petitioner raises in the Motion to Strike (Paper 35, 5, n.2) in the analysis of Petitioner's Motion to Exclude.

In the Motion to Exclude, Petitioner seeks to exclude: (1) Mr. Merkel's former trial testimony (Ex. 2005, 210–264), (2) portions of Mr. Kashnowski's testimony (Ex. 2007 ¶ 6, second, third, and fourth sentences), and (3) those portions of Patent Owner's Response that rely on evidence that is excluded. Paper 50, 1–2.

The background section that follows pertains to both Motions. For the reasons that follow, both motions are *denied*.

1. *Background*

On April 15, 2010, in Wilmington, Delaware, Mr. Merkel testified in the Pylon litigation. Paper 35, 1; Paper 60, 3; Ex. 1106, Tab A, ¶ 4. Mr. Merkel was then living in Germany and was an employee of Robert Bosch GmbH, Patent Owner's parent company. Ex. 2005, 210:4–211:3. English is a second language for Mr. Merkel and he testified with the aid of a translator. *Id.*

⁶ Exhibit 2005 has native page numbers (129–393) one line down from the top right corner, and exhibit page numbers (1–265) in the lower right corner. For example, the first page of the exhibit has native page 129 and exhibit page number 1. For consistency, we reference exhibit page numbers. Where a party cites to native page numbers, we convert to exhibit page numbers.

On July 22, 2016, Patent Owner submitted, as evidence related to secondary considerations, a transcript from the Pylon litigation that includes the testimony of Mr. Merkel (Ex. 2005) and a declaration from Mr. Kashnowski (Ex. 2007). *See* PO Resp. 7–15.

On July 29, 2016, Petitioner objected to Exhibits 2005 and 2007 on several grounds, including hearsay under Federal Rules of Evidence 801–804.⁷ Paper 29, 2, 4; Paper 35, 1–2; Paper 50, 2–4.

On August 12, 2016, in response to those objections, Patent Owner served (on Petitioner), as supplemental evidence, a declaration from Mr. Merkel regarding his availability. Paper 36, 1; Ex. 1106 ¶ 4. Mr. Merkel states that he is a former employee of Patent Owner’s parent company Robert Bosch GmbH, and currently lives in Germany. Ex. 1106, Tab A ¶¶ 1–3; *see also* Paper 5, 1 (regarding parent company). Mr. Merkel states that he will not voluntarily give a deposition in this case because of his cardiac health. Ex. 1106, Tab A ¶¶ 5–6. Subsequently, Petitioner filed Mr. Merkel’s Declaration as Tab A of Exhibit 1106, following which Patent Owner filed a copy as Exhibit 2021.

During discussion of the matter, Patent Owner proposed that Mr. Merkel answer written questions, and Petitioner declined, seeking cross-examination in person. *See* Paper 35, 2; Ex. 1106 ¶ 6; Ex. 1106, Tab C, 12. Subsequently, Petitioner asked that Patent Owner voluntarily withdraw Mr. Merkel’s testimony, and Patent Owner declined. Paper 35, 2; Ex. 1106, Tab E, 31. Following this, Petitioner requested a conference call with the

⁷ The objections were filed within five business days of service of Patent Owner’s Response and Exhibit 2005. *See* 37 C.F.R. § 42.64(b).

Board and asked that either: (1) Mr. Merkel be made available for cross-examination or (2) the Board authorize a Motion to Strike Mr. Merkel's testimony. Paper 35, 2. During the call, Counsel for Patent Owner represented that, prior to creating Mr. Merkel's Declaration that was served as supplemental evidence, Patent Owner had not contacted Mr. Merkel in years. Ex. 1106 ¶ 3. We authorized Petitioner to file a Motion to Strike and authorized Patent Owner to file a response. Paper 31.

2. *Analysis of Motion to Strike*

Petitioner cites to our rules in support of the contention that, as a matter of routine discovery, we should strike Mr. Merkel's testimony from the Pylon litigation (Ex. 2005) because Patent Owner did not make Mr. Merkel available for cross-examination. Paper 35, 1. Patent Owner counters, and we agree, that the testimony at issue is not "affidavit testimony prepared for the proceeding" as recited in 37 C.F.R. § 42.51(b)(1)(ii); rather, the testimony at issue is Mr. Merkel's trial testimony from earlier District Court litigation. Paper 36, 3–4.

Petitioner also makes three similar assertions, with supporting case citations, that striking Mr. Merkel's testimony is warranted because Patent Owner did not make Mr. Merkel available for in-person cross-examination. Paper 35, 3–5. All of the cases cited by Petitioner are routine, non-precedential decisions.⁸

⁸ See Standard Operating Procedure 2, ¶ III.E (Revision 9) (stating that in contrast to a routine opinion, a precedential opinion "is binding authority in subsequent matters involving similar facts or issues").

First, Petitioner contends that a party must make a witness available when proffering that witness's testimony. *See* Paper 35, 3 (citing *HTC Corp. v. NFC Technology, LLC*, Case IPR2014-01198, slip op. at 3 (PTAB Nov. 6, 2015) (Paper 41) and *Square Inc. v. REM Holdings 3, LLC*, Case IPR2014-00312, slip op. at 2–3 (PTAB Dec. 9, 2014) (Paper 37)); *see also* Paper 35, 2 (citing *Square Inc* for the proposition that Petitioner is entitled to cross-examination). In *HTC Corp.*, the Board expunged a declaration from a nonparty witness where that witness declined cross-examination for “personal reasons” and caused considerable delay in the proceeding. *HTC Corp.*, slip op. at 1–5. The case at hand is distinguishable in several respects: the document at issue is a trial transcript rather than a declaration, Mr. Merkel is unavailable based on an alleged medical condition rather than “personal reasons,” and Petitioner does not allege that Mr. Merkel caused delay in this proceeding. *See id.* In *Square Inc.*, where the witness was outside the United States, the Board determined that cost alone was not a sufficient reason to preclude in-person cross-examination. *Square Inc.*, slip op. at 2–3. Here, in contrast, cost is not the sole issue; it is uncontested that the witness (Mr. Merkel) is unavailable due to a medical condition that allegedly precludes travel.

Second, Petitioner contends that submittal of Mr. Merkel's testimony subjects him to cross-examination, adding that this point is reinforced by Patent Owner “having submitted an affidavit from Mr. Merkel” in these proceedings. Paper 35, 4 (citing *IBG LLC v. Trading Techs. Int'l, Inc.*, Case CBM2015-00179, slip op. at 2–3 (PTAB Apr. 15, 2016) (Paper 39)). To the extent that Petitioner suggests that Patent Owner filed Mr. Merkel's Declaration in this proceeding, that is incorrect. As explained above, Patent

Owner served that Declaration as supplemental evidence, and Petitioner, not Patent Owner, filed it as an exhibit (Tab A of Ex. 1106). Patent Owner's service of Mr. Merkel's Declaration as supplemental evidence was not improper.

We disagree with Petitioner's characterization of *IBG* and with the assertion that the holding is applicable to this case. In *IBG*, as the sole evidence that a reference was prior art, the petitioner submitted a witness's deposition testimony from prior litigation between the patent owner and a third party. *IBG*, slip op. at 1–2. The Board determined that it was the petitioner's responsibility to produce the witness for cross-examination, and the Board cautioned, that if not produced, the witness's availability would be considered when weighing his deposition. *Id.* at 3. Consequently, *IBG* does not stand for the proposition that if a party fails to produce a witness for cross-examination the deposition of that witness will be stricken or excluded; rather, the Board stated that such failure would impact the weight afforded that evidence, not its admissibility. Further, *IBG* is distinguishable from the case at hand in that in *IBG* the petitioner made an assertion that the witness was "unavailable," but the Board did not make such a finding, and here, it is uncontested that the witness is unavailable.⁹ *Id.*

Third, Petitioner asserts that because the routine discovery period is closed and Patent Owner failed to make Mr. Merkel available, Mr. Merkel's testimony from earlier District Court litigation "must be stricken, expunged from the record, and given no weight." Paper 35, 4–5 (citing *IBG* and three

⁹ In *IBG* the evidence at issue was a deposition rather than trial testimony.

other Board decisions). We address *IBG* above. The remaining three cases are distinguishable for the reasons that follow.

Arisdyne is distinguishable in that it dealt with the highly unusual situation of live testimony before at least one member of the panel. *Id.* at 1–2. *Arisdyne Sys., Inc. v. Cavitation Tech., Inc.*, Case IPR2015-00977, slip op. at 2–3 (PTAB Dec. 15, 2015) (Paper 32).

In *John’s Lone Star*, the petitioner submitted affidavit testimony from a witness triggering cross-examination under 37 C.F.R. § 42.51(b)(1), and because petitioner did not make that witness available for cross-examination, the Board expunged that testimony. *John’s Lone Star Distrib., Inc. v. Thermolife Int’l, Inc.*, Case IPR2014-01201 (PTAB May 13, 2015) (Paper 31). As noted above, Mr. Merkel’s testimony from earlier District Court litigation is not in the form of affidavit testimony and does not trigger 37 C.F.R. § 42.51(b)(1).

Ikaria is distinguishable in that it was an unopposed motion to expunge. *Ikaria, Inc. v. Geno LLC*, Case IPR2013-00253 (PTAB Apr. 24, 2014) (Paper 22).

Petitioner has not persuaded us that expunging Mr. Merkel’s testimony from the Pylon litigation is warranted as a matter of routine discovery. See 37 C.F.R. §§ 42.20(c), 42.22.

3. *Analysis of Motion to Exclude*

As stated above, Petitioner seeks to exclude: (1) Mr. Merkel’s former trial testimony (Ex. 2005, 210–264), (2) portions of Mr. Kashnowski’s testimony (Ex. 2007 ¶ 6, second, third, and fourth sentences), and (3) those portions of Patent Owner’s response that rely on evidence that is excluded. Paper 50, 1–2.

a) Mr. Merkel's former testimony

Petitioner argues that, “the deadline for Patent Owner to submit supplemental evidence passed on August 12, 2016.” Paper 50, 9–10. To the extent that Petitioner suggests it was improper for Patent Owner to submit Mr. Merkel's Declaration with Patent Owner's Opposition to Petitioner's Motion to Exclude, we disagree. As explained above, Patent Owner timely served Mr. Merkel's Declaration on Petitioner as supplemental evidence, and Petitioner filed Mr. Merkel's Declaration as Tab A of Exhibit 1106. *See* 37 C.F.R. § 42.64(b)(1).

Petitioner contends that the “Board does not even have the power to review this exhibit because it is neither an ‘affidavit’ nor a ‘deposition transcript.’” Paper 50, 5 (citing 37 C.F.R. §§ 42.12, 42.53(a), 42.53(f)(7), 42.61(a), and 42.104(b)(5); Paper 64, 2).

We disagree. Petitioner's contention based on our rules does not belong in a Motion to Exclude because a Motion to Exclude deals with the admissibility of evidence under the Federal Rules of Evidence. *See* 37 C.F.R. §§ 42.62 (applying the Federal Rules of Evidence to *inter partes* reviews), 42.64; Office Patent Trial Practice Guide, 77 Fed. Reg. 48,758 (August 14, 2012) (“Admissibility of evidence is generally governed by the Federal Rules of Evidence.”). As stated in the Office Patent Trial Practice Guide, the parties may submit motions to exclude regarding evidence “believed to be inadmissible.” Office Patent Trial Practice Guide, 77 Fed. Reg. 48,758. Further, a motion to exclude “must explain why the evidence is not admissible (*e.g.*, relevance or hearsay).” *Id.* at 48,767. Even considering Petitioner's contention based on our rules, for the reasons given by Patent Owner (Paper 60, 2–3), § 42.53(a) applies to testimony taken for

the proceeding at hand and does not preclude our consideration of Mr. Merkel's prior testimony in litigation. Paper 60, 2–3.

The testimony in question is hearsay because Mr. Merkel's testimony in the Pylon litigation was not made while testifying at the current proceeding, and is being offered to prove the truth of the matter asserted.¹⁰ Fed. R. Evid. 801(c); Paper 50, 6–7. Consequently, this testimony is inadmissible unless an exception applies. Fed. R. Evid. 802. Patent Owner contends that the exception of Federal Rule of Evidence 804(b)(1) applies, and Petitioner contends that it does not. See Paper 50, 8–12; Paper 60, 3–7; Paper 64, 1–3.

Petitioner does not disputed that Mr. Merkel is unavailable due to an infirmity or physical illness, namely his cardiac health.¹¹ Paper 60, 3–4; Ex. 1106, Tab A ¶¶ 5–6; Fed. R. Evid. 804(a)(4). Further, it is undisputed that the testimony at issue was given by a witness at trial. Fed. R. Evid. 804(b)(1)(A). Therefore, the focus of our inquiry is whether Pylon had an opportunity and similar motive to develop Mr. Merkel's testimony through cross-examination as Petitioner does in this proceeding. Patent Owner, as the proponent of former testimony, bears “the burden of establishing that [the transcript] came within the former testimony hearsay exception.” See generally, *United States v. Kennard*, 472 F.3d 851, 856 (11th Cir. 2006) (citation omitted); see also, e.g., *United States v. Omar*, 104 F.3d 519, 522

¹⁰ Regarding the matter asserted in the proffered testimony, see PO Resp. 9–11.

¹¹ Patent Owner asserts, and we agree, that on this preliminary question of the admissibility of Exhibit 2005, we may consider Mr. Merkel's Declaration. Paper 60, 4; Fed. R. Evid. 104(a).

(1st Cir. 1997) (“And, the evidence in question being hearsay, it was the defendants’ burden to prove each element of the [804(b)(1)] exception they invoked.”).

Petitioner contends that Patent Owner cannot demonstrate that the exception of Fed. R. Evid. 804(b)(1) applies because there is not sufficient identity of issues between the Pylon litigation and the proceeding at hand. Paper 50, 10. In particular, Petitioner emphasizes Mr. Merkel’s failure to mention any prior art references. *Id.* Further, according to Petitioner, the Pylon litigation was primarily interested in derivation. *Id.*

Patent Owner contends that Pylon had a like opportunity and motive. Paper 60, 3 (citing *Lloyd v. Am. Export Lines, Inc.*, 580 F.2d 1179, 1187 (3d Cir. 1978); *Supermarket of Marlinton, Inc. v. Meadow Gold Diaries, Inc.*, 71 F.3d 119, 128 (4th Cir. 1995); *Clay v. Johns–Manville Sales Corp.*, 722 F.2d 1289, 1295 (6th Cir. 1983)). In particular, Patent Owner asserts that Pylon was asserting the obviousness of Patent Owner’s patents, to include the ’974 patent, and some of the same prior art overlaps with this proceeding. *Id.* at 5; Ex. 2005, 22:2–3. Patent Owner contends that Mr. Merkel’s testimony is offered to prove that:

(i) no commercially viable beam blades existed before 2002, when Bosch satisfied the long-felt need for them, (*id.* at 218:16–220:2); (ii) Bosch’s first commercial beam blade (Aerotwin) and later product (Icon) practice the challenged claims, (*id.* at 225:22–226:1); (iii) these blades included a flexible spoiler with diverging legs mounted on top of the blade, as well as plastic end caps, (*id.* at 231:12–232:4); and (iv) beam blades are sensitive to changes caused by adding structures, (*id.* at 260:23–263:8).¹²

¹² This quote was altered by converting native page numbering to exhibit numbering.

Paper 60, 5. According to Patent Owner, this evidence was relevant in the Pylon litigation for the same reason it is relevant here, as objective evidence of non-obviousness regarding consequences of modifications to beam blades. *Id.* at 6.

In response, Petitioner makes several contentions in support of the argument that Patent Owner has not demonstrated that Pylon was a “predecessor in interest” that had an opportunity and similar motive to develop what Petitioner would have sought to develop on cross-examination of Mr. Merkel in this case. Paper 64, 1–3. First, Petitioner contends that Mr. Merkel’s assertion could have been presented by “any number of witnesses.” Paper 64, 1. This contention is not a factor for consideration under Fed. R. Evid. 804(b)(1).

Second, Petitioner repeats the appeal to 37 C.F.R. § 42.53(a). Paper 64, 2. This contention is unpersuasive for the reasons given above.

Third, Petitioner asserts that Patent Owner had a powerful motive to shield Mr. Merkel from cross-examination because Mr. Merkel was found to have falsely taken credit for subject matter conceived by a third party. Paper 64, 2 (citing *Robert Bosch, LLC v. Pylon Mfg. Corp.*, 775 F. Supp. 2d 739, 745 (D. Del. 2011) (“Merkel and Leutsch committed a material omission by presenting Fehrsen’s ideas as their own during the prosecution of the ’974 patent”)).¹³ This factor is also not relevant to our inquiry under Fed. R. Evid. 804(b)(1).

Fourth, Petitioner emphasizes that the Pylon litigation took place in 2010 and Petitioner’s opportunity for cross-examination would have been in

¹³ Notably, Petitioner does not make this argument in the Reply (Paper 33).

2016. Paper 64, 2–3. Petitioner adds that Patent Owner engaged in a “pattern of discovery misconduct” during the related litigation. *Id.* at 3 (citing *Robert Bosch LLC v. Alberee Products, Inc.*, 171 F. Supp. 3d 283, 291–92 (D. Del. 2016)).

The passage of time is not directly relevant to our inquiry. What matters, as stated above, is whether Pylon had opportunity and similar motive to develop Mr. Merkel’s testimony through cross-examination.

Regarding the alleged pattern of misconduct, in the related litigation, the Court stated

[a]mong the issues that have been repeatedly addressed are the failure of Bosch LLC to produce discovery ordered by the Court, for reasons including Bosch LL’s insistence that the documents are in the control of its parent Bosch GmbH and Bosch GmbH for some time refused to provide them to Bosch LLC.

Bosch LLC, 171 F.Supp3d at 292 (citing D.I. 285 at 1).¹⁴ The Court went on to state that Bosch LLC (Patent Owner) failed to comply with a discovery order and that Costco (Petitioner) was entitled to some relief, and the court authorized Costco to file a motion to dismiss as a sanction for Bosch LLC’s (Patent Owner’s) conduct. *Id.* at 292–293. Petitioner does not provide argument or evidence regarding subsequent action in this case.

The question at hand is whether Pylon had opportunity and similar motive to develop Mr. Merkel’s testimony through cross-examination. Petitioner has failed to explain cogently how Patent Owner’s misconduct during discovery in the related litigation is relevant to that inquiry.

¹⁴ “D.I.” refers to C.A. No. 12–574–LPS. See *Bosch LLC*, 171 F.Supp3d at 285, n. 1.

Petitioner contends that the prosecution history of the '974 patent undermines Mr. Merkel's prior testimony. Paper 50, 6–7. Even if the prosecution history contradicts Mr. Merkel's testimony, that does not render Mr. Merkel's testimony inadmissible.

We agree with Patent Owner that Mr. Merkel's testimony in the Pylon litigation relates to secondary considerations and that those same secondary considerations are at issue here as well.

We agree with Patent Owner that the presence of the defense of derivation in the Pylon litigation did not negate Pylon's motive and opportunity to cross-examine Mr. Merkel with regard to the obviousness of the claimed subject matter. Paper 60, 7.

In light of this, Mr. Merkel's former trial testimony is admissible under Federal Rule of Evidence 804(b)(1). Consequently, Petitioner has not persuaded us that Mr. Merkel's testimony should be excluded. *See* 37 C.F.R. §§ 42.20(c), 42.22.

Patent Owner also asserts that Mr. Merkel's testimony is admissible under the residual hearsay exception. Paper 60, 8. We agree with Petitioner that Patent Owner has failed to demonstrate that the evidence “is more probative on the point[s] for which it is offered than any other evidence that the proponent can obtain through reasonable efforts.” Paper 64, 3–4. Fed. R. Evid. 807(a)(3).

b) Mr. Kashnowski's testimony

Petitioner seeks to exclude Mr. Kashnowski's testimony as inadmissible on two bases: (1) under 37 C.F.R. §§ 42.61, 42.65, and (2) as hearsay. Paper 50, 12–15; Paper 64, 4–5.

(1)37 C.F.R. § 42.65

Petitioner contends that Mr. Kashnowski's testimony (Ex. 2007 ¶ 6 second, third, and fourth sentences) deals with test results, but Patent Owner does not provide the information required by 37 C.F.R. § 42.65(b), rendering the testimony inadmissible under 37 C.F.R. § 42.61(a). Paper 50, 12–14.

Paragraph 6 of Mr. Kashnowski's Declaration, with the sentences at issue underlined, follows:

Both the Aerotwin blade and the Icon blade included a flexible spoiler with diverging legs mounted on the top of the blade, as well as plastic end caps. Bosch tested these products extensively before releasing them. One aspect tested was noise. The Bosch beam blades were quiet in operation, including when the wiping direction changes and the wiper strip flips from one side to the other. Those features were part of the reason for the great customer demand for these products. Both products solved many of the problems associated with conventional blades.

Rule 42.65 does not apply because Mr. Kashnowski's testifies as a factual witness, not as an expert. *See* 37 C.F.R. § 42.65 ("Expert Testimony; tests and data"); Paper 60, 10 (asserting the Mr. Kashnowski is a factual witness). Nor is the testimony at issue an attempt to submit expert testimony by a factual witness. *See* Paper 60, 10–11 (explaining the context of the evidence). Patent Owner relies on the evidence in the following manner:¹⁵

Bosch tested these products extensively before releasing them. Ex. 2007 at ¶ 6. One aspect tested was noise. Ex. 2007 at ¶ 6. The Bosch beam blades were quiet in operation, including

¹⁵ Patent Owner also relies on the first sentence of paragraph 6 of Exhibit 2007 in support of the assertion that the Aerotwin and Icon blades practice the challenged claims. *See* PO Resp. 11. We need not address this evidence because Petitioner does not challenged the first sentence of paragraph 6 of Exhibit 2007.

when the wiping direction changes and the wiper strip flips from one side to the other. Ex. 2007 at ¶ 6.

PO Resp. 11–12. Patent Owner is not utilizing Mr. Kashnowski’s testimony to explain the details of a technical test or data. Rather, Patent Owner utilizes this evidence to support the more generalized contention that the products were tested to reduce noise.¹⁶

Patent Owner goes on to assert that,

These features were part of the reason for the great customer demand for these products. Ex. 2007 at ¶ 6; Ex. 2005 at 270:14–271:3. Both products solved many of the problems associated with conventional blades. Ex. 2007 at ¶ 6.

Id. at 12. These assertions pertain to the fifth and sixth sentences of paragraph 6 of Exhibit 2007, sentences that are not challenged by Petitioner. *See* Paper 50, 2 (specifically identifying the second, third, and fourth sentences). Even if Petitioner intended to seek exclusion of the fifth and sixth sentences, our analysis above is equally applicable.

Petitioner has not persuaded us that Rule 42.65 prohibits use of evidence in this manner or is an improper attempt to skirt that rule.

c) Hearsay

Petitioner contends that

Mr. Kashnowski’s testimony regarding wiper testing and consumer demand in paragraph 6 of his declaration constitutes inadmissible hearsay because it conveys “a statement” made by a declarant who is not “testifying at the current trial or hearing,”

¹⁶ *3D-Matrix* is distinguishable in that there the proffering party sought to submit what amounted to expert testimony. *3D-Matrix Ltd. v. Menicon Co.*, Case IPR2014-00398, slip op. at 7–9 (PTAB Aug. 1, 2014) (Paper 11) (discussing a calculation of the pH level of acidic and amino acid residue).

and it is offered by Patent Owner “in evidence to prove the truth of the matter asserted in the statement.”

Paper 50, 14 (citing Fed. R. Evid. 801(c)). In particular, Petitioner asserts that the evidence does not establish that Mr. Kashnowski actually observed the test, and that Mr. Kashnowski’s statement may simply be repeating what he was told by another. *Id.* 14–15.

Mr. Kashnowski’s statement was made while testifying in the current proceeding. Mr. Kashnowski’s statement is silent regarding how the information was obtained, and does not explicitly repeat the statement of another. Regarding the lack of information that Mr. Kashnowski observed the tests, although Petitioner objected under Fed. R. Evid. 602, Petitioner did not preserve that objection by asserting that rule in the Motion to Exclude. *See* Paper 29, Paper 50, 14–15 (not asserting Fed. R. Evid. 602); Paper 60, 12; 37 C.F.R. § 42.64(c).

Consequently, Petitioner has not demonstrated effectively that the testimony at issue is inadmissible hearsay.

d) Related Portions of Patent Owner’s Response

Given that we deny Petitioner’s Motion to Exclude with regard to Mr. Merkel’s testimony and Mr. Kashnowski’s Declaration, there are no associated portions of Patent Owner’s Response to consider for exclusion.

B. PATENT OWNER’S MOTION TO EXCLUDE

Exhibit 1100 is the Declaration of David Peck.

Petitioner served and filed the Declaration of David Peck (Ex. 1100) on October 24, 2016, in conjunction with Petitioner’s Reply. Within five business days, on October 31, 2016, Patent Owner objected for several

reasons, including Federal Rules of Evidence 701 and 702. *See* Paper 37, 1–2; Pet Reply, 24 (Certificate of Service); 37 C.F.R. § 42.64(b)(1). Petitioner does not challenge the timeliness or specificity of Patent Owner’s objections. *See* Paper 57; 37 C.F.R. § 42.64(b)(1).

1. *Person of Ordinary Skill at the Time*

Patent Owner seeks to exclude paragraphs 7, 9–11, 18, 19, 21, and 23–26 because, according to Patent Owner, Mr. Peck is not qualified to give technical expert opinions regarding a person of ordinary skill in the art at the time of the invention. Paper 49, 1–4. In support, Patent Owner contends that: Mr. Peck’s Declaration does not address the level of skill in the art, Mr. Peck’s experience began after the critical data of the ’974 patent, and Mr. Peck has never been a wiper-blade designer to include beam style wipers. Paper 49, 2–4.

Petitioner counters that Mr. Peck has a Bachelor of Science in mechanical engineering and has held various automotive engineering roles. Paper 57, 1. Petitioner enumerates other experience, and concludes that Mr. Peck qualifies to testify in the form of an opinion regarding windshield wiper design under Fed. R. Evid. 702. *Id.* Reviewing this evidence, we are persuaded that Mr. Peck’s qualifications align with the challenged subject matter sufficiently so that his knowledge is helpful in understanding the evidence and determining facts in issue. *See* Ex. 1100, 3, 15–19.

Patent Owner responds that Petitioner ignores the distinction between beam and conventional wipers. Paper 63, 1–3. Patent Owner adds that Mr. Peck’s only experience with beam wipers is an explanation from a third party (Mr. Swanepoel) regarding how certain beam wiper design software works. *Id.* at 3.

We find Petitioner's argument more persuasive and adopt it here. *See* Paper 57, 1–10. In particular, we emphasize that Mr. Peck need not be a person of ordinary skill in the art to testify as an expert under Federal Rule of Evidence 702. Nor must his qualifications perfectly match the patent at issue.

2. *Financial Issues, Commercial Success, or Consumer Demand*

Patent Owner seeks to exclude paragraphs 15, 18, and 21 of Exhibit 2007 because, according to Patent Owner, Mr. Peck is mechanical engineer with experience in designing wiper-blade production equipment, but is not qualified to give expert opinions regarding financial issues, commercial success, or consumer demand. *Id.* at 5–6. Patent Owner's observation that Mr. Peck is mechanical engineer with experience in designing wiper-blade production equipment supports our determination in the previous section.

Patent Owner is correct that there are situations where expert testimony should be excluded due to a lack of expertise in the matters asserted. This is not such a case.

Paragraph 18 of Mr. Peck's Declaration describes wiper noise testing procedures, not a matter related to financial issues, commercial success, or consumer demand. *See* Paper 57, 11 (asserting that the paragraphs at issue do not deal with finance or marketing). The remaining paragraphs deal with issues of finance, commercial success, or consumer demand, but not in a complicated or technical manner. In paragraph 15 Mr. Peck states that the Trico Innovision Wiper was a success rather than a failure as illustrated by a demand sufficient to trigger increased production. In paragraph 21 Mr. Peck states that one of the most important sources of wiper noise is blade reversal failure and this noise is most important to customers. These statements are

straightforward assertions that do not require specialized financial, commercial success, or consumer demand expertise. Further, we agree with Petitioner that the information conveyed is properly based on facts or data Mr. Peck was made aware of or personally observed. See Paper 57, 11–12; Fed. R. Evid. 703.

3. *Conclusion*

Consequently, Patent Owner’s Motion to Exclude portions of Mr. Peck’s Declaration (Ex. 1100 ¶¶ 7, 9–11, 15, 18, 19, 21, and 23–26) is *denied*.

C. MOTIONS FOR OBSERVATION

Patent Owner submitted a Motion for Observation on Cross-examination of Mr. Davis, and Petitioner submitted a response. Papers 51, 56. Patent Owner submitted a motion for Observation on cross-examination of Mr. Peck, and Petitioner submitted a response. Papers 52, 59. Generally, we are persuaded by each of Petitioner’s responses. We considered both sets of observations in making our analysis below.

III. THE CLAIMED SUBJECT MATTER

A. ILLUSTRATIVE CLAIM

Claim 1 is the sole independent challenged claim and follows:

1. A wiper blade for windows of motor vehicles, comprising a curved, band-shaped, spring-elastic support element which distributes a pressure applied by a wiper arm and has a concave and a convex surface which defines corresponding planes;

an elongated rubber-elastic wiper strip placeable on a window to be wiped and mounted to said concave surface of said support element which faces the window, substantially longitudinally parallel to said concave surface;

a connection device provided for a wiper arm and arranged directly on a convex side of said support element; and

a component which is separate from said wiper strip and is mounted directly to the convex surface of said support element so as to form a leading-edge face extending in a longitudinal direction of the support element and forming, as seen crosswise to its longitudinal extension, an acute angle with a plane which extends parallel to a plane formed by said convex surface.¹⁷

B. CLAIM INTERPRETATION

In an *inter partes* review, we interpret the claims of an unexpired patent using the broadest reasonable construction. *See* 37 C.F.R.

§ 42.100(b). In our Institution Decision, we did not expressly construe any claim term. Dec. 7–9. During the trial, the parties did not expressly construe any claim term, nor ask that we do so. *See* Pet. Reply, *passim*; PO Resp., *passim*. In light of this, we do not expressly construe any claim term. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (only those terms which are in controversy need to be construed, and only to the extent necessary to resolve the controversy).

¹⁷ Formatting added for clarity.

IV. PATENTABILITY

A. SCOPE OF REPLY

Patent Owner contends that portions of Petitioner's Reply are improper, and consequently, the Board should not consider those portions. Paper 55. Petitioner disagrees. Paper 58.

In our order authorizing submittals on this issue, we informed the parties that a portion of Petitioner's Reply is improper if: (1) that portion is beyond the scope of a reply under 37 C.F.R. § 42.23(b), or (2) Patent Owner did not have sufficient notice and opportunity to respond (*see, e.g., Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015) (applying a similar standard in *inter partes* review as in prosecution: "this court has determined whether the Board relied on a 'new ground of rejection' by asking 'whether applicants have had fair opportunity to react to the thrust of the rejection.'"))). *See* Paper 43. In the discussion below, we apply that standard, and address each of Patent Owner's contentions.

B. CREDIBILITY OF DR. DAVIS

Patent Owner contends that the opinions of Petitioner's technical expert, Dr. Davis, are not credible for two reasons. PO Resp. 15–19. Petitioner disagrees. Pet. Reply. 20–22. We examine Patent Owner's contentions in turn.

1. *Alleged Failure to Admit Certain Facts*

It is undisputed that Dr. Davis's Curriculum Vitae (CV) does not mention producing a report for Patent Owner related to the '698 patent in

2013 during an ITC investigation (“the 2013 ITC report”).¹⁸ See PO Resp. 15–16; Pet. Reply 20–22. It is undisputed that Dr. Davis’s Declaration in IPR2016-00034¹⁹ copies some portion of Dr. Davis’s 2013 ITC report.²⁰ PO Resp. 16; Pet. Reply 20–22. Dr. Davis stated during his deposition that the declarations submitted in these proceedings were his own work produced by someone else typing his thoughts, with revisions by himself alone or in coordination with others. See Ex. 2002, 5:17–7:2; PO Resp. 17. When asked if he could recall work on other earlier proceedings related to the ’698 patent, he indicated that he remembered looking at that patent “like five years ago,” but did not recall his opinions from that time. See Ex. 2002, 102:2–11; PO Resp. 17.

Patent Owner contends that if Dr. Davis does not recall his opinions from the 2013 ITC report when he just copied a large portion of that report into his Declaration for IPR2016-00034, then “his memory is too poor for his opinions to be relied upon.” PO Resp. 18. Alternatively, Patent Owner contends that if someone else prepared the Declaration at issue, then Dr. Davis was not candid during his deposition when he said he prepared the Declaration, and for that reason, his opinions should not be relied upon. *Id.*

¹⁸ Patent Owner cites to a portion of Dr. Davis’s CV at pages 43–44 of Exhibit 1013 of IPR2016-00034, and that same portion is also found at pages 31–32 of Exhibit 1008 of this proceeding.

¹⁹ Exhibit 1013 in that proceeding.

²⁰ A portion of Dr. Davis’s Declaration in IPR2016-00034 (Exhibit 1013) is filed as Exhibit 2013 in this proceeding, and portions of Dr. Davis’s 2013 ITC report are filed as Exhibit 2010.

Dr. Davis's statement that the 2013 ITC report was produced, "like five years ago," indicates that the period provided is a rough estimate. In that context, the difference between the estimate of five years and the actual time of approximately three years does not cast appreciable doubt on Dr. Davis's credibility. Further, Dr. Davis's inability to remember his opinions regarding the '698 patent related to the 2013 ITC report even when he had copied a portion of that report for the Declaration submitted in IPR2016-00034, casts little or no doubt on his credibility. There were "quite a few" earlier ITC investigations, so that the report in question was one of several reports. *See* Ex. 2002, 101:20–25. Further, as Patent Owner acknowledges, the 2013 ITC report and the Declaration at issue differ in that indefiniteness was an issue in the ITC report, but no ground of unpatentability presented in this proceeding is based on indefiniteness.

We agree with Petitioner that Dr. Davis's deposition testimony is consistent with the fact that portions of his 2013 ITC report were included in the declaration submitted in IPR2016-00034. *Pet. Reply 21.*

2. *Alleged Incomplete Disclosure*

Patent Owner contends it is unclear that all information inconsistent with Dr. Davis's opinions has been provided as required by 37 C.F.R. § 42.51(b)(1)(iii). *PO Resp. 18.* As an example of an inconsistency, Patent Owner mentions that Dr. Davis expressed no difficulty understanding the claims of the '698 patent in his Declaration, yet, in the 2013 ITC report Dr. Davis opines that those same claims are indefinite (*i.e.*, not understandable). *Id.* at 18–19. Patent Owner has not explained cogently how Dr. Davis's understanding of the '698 patent at issue in IPR2016-00034 impacts Dr. Davis's credibility in the case at hand. *See Pet. Reply 21–22*

(arguing that Dr. Davis’s opinion regarding patents other than the patent at issue in this proceeding is immaterial).

3. Conclusion

The factors discussed above detract somewhat from Dr. Davis’s testimony, but not so much to warrant that we give his testimony overall little or no weight. Our analysis below reflects this determination.

C. LEVEL OF SKILL IN THE ART

Petitioner contends that, as of the date of the claimed invention, the level of skill in the art included knowledge of certain specified prior art. Pet. 17–18; Ex. 1008 ¶ 15; *see also* Pet. 3–5. Petitioner adds that the level of skill also included the ability to make predictable use of the materials described according to their established functions. *Id.* at 18.

Patent Owner contends that a person of ordinary skill would have had either an undergraduate degree in mechanical engineering or a similar discipline, or several years of experience in the field of wiper blade manufacture and design. PO Resp. 1 (citing Ex. 2003 ¶¶ 16–19). Patent Owner contends that Petitioner confused the “content of the prior art” *Graham* factor with the level of skill in the art *Graham* factor.²¹ *Id.* at 2.

²¹ The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966) (cited with approval in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007)).

Patent Owner contends that the point of identifying the level of skill in the art is to avoid hindsight and add objectivity to the obviousness analysis. *Id.*

Petitioner responds by reiterating that the level of ordinary skill in the art includes a degree of ingenuity or problem solving skill. Pet. Reply. 1–2 (citing *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 279 (1976)). Petitioner adds that Patent Owner is wrong to assert that ordinary skill in the art connotes merely a level of education or work experience. *Id.* at 2 (citing to PO Resp. 1). Petitioner goes on to assert that the prior art of record reflects the level of skill in the art.

The distance between the parties is not great. Patent Owner’s specified level of skill in the art (either an undergraduate degree in mechanical engineering or a similar discipline, or several years of experience in the field of wiper blade manufacture and design) is not inconsistent with Petitioner’s contention that the asserted prior art reflects the level of skill in the art. Similarly, Petitioner’s contention that the level of skill in the art includes some level of ingenuity or problem solving is not inconsistent with Patent Owner’s assertion. *See, e.g., KSR Int’l v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“A person of ordinary skill is also a person of ordinary creativity.”).

We agree with Patent Owner that the point of identifying the level of skill in the art is to avoid hindsight and add objectivity to the obviousness analysis. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the significance of the level of skill in the art is to serve as a prism or lens to view the prior art and the claimed invention). Yet, Patent Owner does little to explain how Petitioner’s view of the level of skill in the art impacted the obviousness analysis. For example, Patent Owner does not contend that the

proposed modification is beyond the level of skill in the art, nor does Patent Owner contend that Petitioner has failed to demonstrate an expectation of success.

The parties' definitions of one of ordinary skill in the art are substantially similar, and neither party states how any difference in the parties' articulated levels of skill impacts the proceeding. For purposes of this Decision and based on the current record, we agree with and apply Petitioner's definition of the level of ordinary skill in the art. The prior art of record is reflective of the level of skill in the art. To the extent that the parties disagree on the level of skill in the art with regard to the knowledge of a person of ordinary skill, we address what was known in the art in our chronology discussion below.

D. CHRONOLOGY

The following generally chronological discussion pertains to all four *Graham* factors, and is applicable to all of the challenged claims and both grounds of unpatentability.²²

1. Prior to the '974 Patent

Conventional wipers were known prior to the critical date of the '974 patent. See PO Resp. 8; Ex. 2003 ¶ 21; Ex. 2007 ¶ 2; see also PO Resp. 4 (citing Exs. 2008 and 2009 as examples of known conventional wipers). Conventional wipers, also known as yoke or yoke-style wipers, include a

²² Much of what Patent Owner labels as "secondary considerations" (see PO Resp. 7–15) pertains to all four *Graham* factors and is addressed in this section.

series of flexible rails that distribute force along the wiper blade. Ex. 1008 ¶ 19; PO Resp. 4; Ex. 2003 ¶ 21. Barth is an example of a conventional, yoke wiper, as illustrated in Figure 1 below:

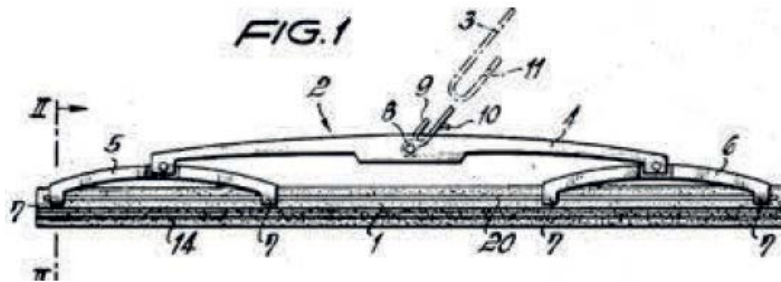


Figure 1 depicts a yoke-style wiper structure, having a support structure comprised of main member 4 and intermediate members 5 and 6 to support blade 14. See Ex. 1008 ¶ 19 (reproducing this Figure from Barth); Ex. 1007, 2:52–53, 3:6–35, Figs. 1, 2.

Beam wipers were known prior to the critical date of the '974 patent. See Pet. 2–3; Pet. Reply 2–3; PO Resp. 9 (“beam blades were described in paper patents long before the invention as issue here”); Ex. 2003 ¶ 23; Ex. 1005. Beam wipers, also known as flat wipers, use metal strips adjacent the wiper blade to distribute the load along the length of the wiper blade rather than the yokes. Ex. 1008 ¶ 22. Figure 5 of Appel is reproduced below:

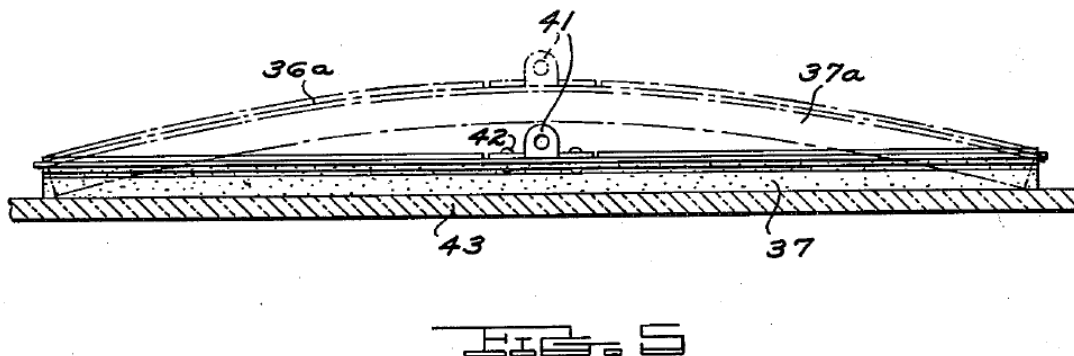


Figure 5 of Appel is a side elevation of a beam-style wiper structure.²³ Ex. 1005, 2:4–5, Fig. 5.

Patent Owner emphasizes that although the '974 patent was not the first beam wiper, it was the first “commercially viable” beam wiper. PO Resp. 9 (citing Ex. 2007 ¶ 3, Ex. 2005, 239:6–16, 218:16–220:2). While the '974 may be the first commercially viable beam wiper, that does not alter the fact that beam wipers were known in the art prior to the '974 patent.

The problem of wind-lift in conventional wipers was known prior to the critical date of the '974 patent. Wind-lift is the force caused by the air stream striking a wiper blade laterally, producing a lifting force that diminishes the contact pressure of the wiper on the windscreen.²⁴ Pet. 10–11; Ex. 1004, 1:8–16.²⁵ Dr. Davis explains that Prohaska, for example, countered the problem of wind lift with both a flexible strip extending almost the entire length of the wiper element to stiffen it, and a spoiler formed or attached on the flexible strip to maintain contact pressure with the windscreen. Pet. 11–12, 19, 22–23; Ex. 1004, 1:43–52, 2:56–58, 2:71–75, 3:16–21, Figs. 3, 6; Ex. 1008 ¶¶ 27–29.

Patent Owner acknowledges that wind lift was a known problem for conventional blades, but argues that it was not a known problem in beam

²³ Figure 5 depicts the blade then not depressed against the windshield (dotted lines) and when depressed against the windshield (solid lines). The curvature of the blade permits uniform contact pressure with the windshield. Ex. 1005, 3:75–4:3.

²⁴ The air stream, or relative wind, is caused by movement of the vehicle that the wipers are installed on. See Ex. 1001, 3:32–38.

²⁵ Citations to Exhibit 1004 are page numbers followed by a colon and then the line number. For example, “2:56” refers to page 2, line 56.

blades. PO Resp. 5. In support, Dr. Dubowsky opines that wind lift was not a recognized problem in beam blades. Ex. 2003 ¶¶ 59–60 (citing Ex. 1004, 1:8–11). Dr. Dubowsky also opines that a person of ordinary skill would have thought that the lift off problem was a result of too high a profile, and characterizes Prohaska as disclosing that lift results from the yoke. *Id.*

Dr. Dubowsky’s opinion that wind lift was not a recognized problem in beam blades is conclusory in that it is not supported by any underlying facts or data.²⁶ Consequently, this opinion is entitled to little weight. 37 C.F.R. § 42.65. Further, Dr. Dubowsky reads more into Prohaska than is disclosed. Contrary to Dr. Dubowsky’s assertion, Prohaska does not disclose that wind lift results from the yoke; rather, Prohaska more broadly describes that the air stream “striking the wiper blade laterally” produces the lifting force. Ex. 1004, 1:8–11; *see also* Pet. Reply 7–8 (stating that Dr. Dubowsky mischaracterizes Prohaska).

Petitioner responds that Barth (Ex. 1007) demonstrates that wind lift is caused by the inverted triangle cross-sectional profile of a wiper’s rubber strip, a feature common to conventional and beam wipers. Pet. Reply 3. Figures 3 and 4 of Barth follow.

²⁶ *See also* Ex. 2003 ¶ 25 (opining that Patent Owner encountered an “unexpected amount of wind lift at high speed” without providing any underlying facts or data for that opinion).

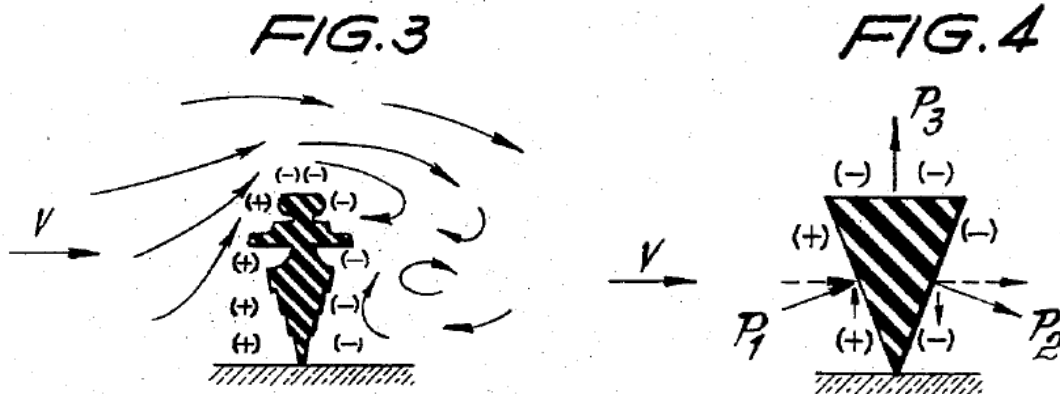


Figure 3 depicts the cross sectional profile of the wiper strip²⁷ as a "pine tree profile," and Figure 4 simplifies that profile to an isosceles triangle with the point nearest the windshield and the base remote from the windshield.²⁸ Ex. 1007, 4:7–10, 4:21–25, Figs. 3, 4. These Figures illustrate "the theory of air flow and lift-off forces as it pertains to the prior art." *Id.* at 2:52–53.

Petitioner explains, with support from Dr. Davis, that Barth discloses that it was known that a wiper strip having an inverted isosceles triangle cross sectional profile ("pine tree profile") creates over-pressure on the lateral side facing the airflow and under-pressure on the opposite lateral side, resulting in forces that tend to lift the blade away from the windshield. Pet.

²⁷ Carrier 1 of Barth is also known as a "wiper strip," that is, the portion of the wiper that contacts the window, often a rubber-elastic strip (Ex. 1007, 3:6–9, Figs. 1, 2). See, e.g., Ex. 1001, 2:62–65 (strip 15), Figs. 1, 2; Paper 15, 5 ("an elongated rubber-elastic wiper strip"); Ex. 2003 ¶ 21; Ex. 1006, 5 ("rubber strip").

²⁸ In Figure 4 Barth simplifies the "pine tree profile" to a triangle on edge with the base remote from the windshield. Ex. 1007, 4:21–25. Given the orientation of Figures 3 and 4 we subsequently refer to this as an inverted isosceles triangle profile.

Reply 3, 5–8; Ex. 1007, 4:8–39, Figs. 3, 4; Ex. 1101 ¶ 8–11; Ex. 2002 127:25–128:17.

Thus, prior to the critical date of the '974 patent, it was known that wiper blades having an inverted isosceles triangle cross sectional profile produce a lift off force on the wiper when subject to relative wind in both conventional and beam blades.

Patent Owner contends that Petitioner's argument in the Reply that wind lift was a known problem in beam wipers is improper. Paper 55, 1–2 (referring to the arguments at Pet. Reply 3:3–5, and Section II.A. (pp. 5:13–8:13)). According to Patent Owner, prior to Petitioner's Reply, Patent Owner had no notice that the Barth reference was alleged to have taught that wind lift is a problem for beam blades. *Id.* Patent Owner elaborates that had there been notice, Patent Owner would have contested this point. *Id.* For the reasons that follow, we are not persuaded by this contention.

Although Barth (Ex. 1007) was not the basis of any ground of unpatentability, Barth was cited as part of the knowledge of a person of ordinary skill in the art. Pet., ii; Ex. 1008 ¶ 15 (reproducing Figure 1 of Barth); *see also Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013) (non-applied art should be considered as background information that could explain why an ordinarily skilled artisan would have been motivated to combine or modify the cited references to arrive at the claimed invention). The Petition asserts that use of Prohaska's spoiler on either Appel's or Hoyler's beam wiper was the predictable use of prior art elements performing the function it was known to perform. *See* Pet. 23–24; Ex. 1008 ¶¶ 37–40; *see also* Dec. 11–12, 17 (summarizing Petitioner's contentions for

each ground). Petitioner's expert, Dr. Davis, specifically stated that wind lift is a problem in both conventional and beam blades. Ex. 1008 ¶ 29.

In light of this, Patent Owner was on notice that Petitioner contended that wind lift was a known problem in beam blades. The Response was Patent Owner's opportunity to present argument and evidence to the contrary. Indeed, Patent Owner actually availed themselves of that opportunity by presenting argument and evidence that lift off was not a known problem for beam blades. See PO Resp. 5–6. Petitioner's argument in the Reply that wind lift was a known problem for both beam and conventional blades is properly in response to Patent Owner's argument to the contrary. See Pet. Reply 3, 5–8; Paper 58, 1; 37 C.F.R. § 42.23(b). Consequently, Patent Owner has not persuaded us that Petitioner's argument is improper.²⁹

During prosecution of the application that became the '974 patent, the Examiner rejected all of the claims as anticipated by, or obvious over, Ludwig (Ex. 1009). Pet. 6–8 (citing prosecution history at Ex. 1002, 97, 112). In response, Patent Owner amended the claims so that there was a single independent claim (now claim 1), and added language to that independent claim to distinguish over Ludwig. *Id.* Following this, the Examiner allowed the claims.

²⁹ Patent Owner's argument is unpersuasive for a second reason. In our order authorizing submittals on this issue, Patent Owner cited this example and we determined that Petitioner's argument is not improper. Paper 43, 3–6. Accordingly, we agree with Petitioner, that Patent Owner's submittal of that argument in Paper 55 was an untimely reconsideration request. See Paper 58, 1; 37 C.F.R. § 42.71(d).

As background, the '974 patent describes that the support element of a beam blade replaces the complicated support structure of a conventional blade, and is intended to assure that wiper blade contact pressure on the window is as even as possible over the entire swept field. Ex. 1001 at 1:7–23.

Also as background, the '974 patent describes “liftoff tendency” (forces that tend to lift the wiper blade off the window) as caused by oncoming wind creating overpressure on the front side of the wiper and underpressure on the back side (the lateral side opposite the front).³⁰ Ex. 1001, 1:25–40. It was known that at relatively high vehicle speeds, these forces may reduce contact pressure to the point that proper wiping is no longer possible. *Id.* at 1:40–45. It was also known that increasing wiper blade contact pressure can counter this problem, but the attending drawback is that at lower vehicle speeds the increased contact pressure increases friction, leading to undesirable noise buildup and high stress on the wiper and drive components. *Id.* at 1:45–51.

2. *The '974 Patent*

An object of the '974 patent was to avoid these disadvantages by providing a wiper blade with a leading-edge face which extends longitudinally over the wiper blade, substantially parallel to the window, facing into the wind and forming an acute angle with the window. *Id.* at 1:55–63. The wiper blade causes a force component that counters the liftoff

³⁰ This is true even though the pendulum motion of a wiper changes its position relative to the oncoming wind to some degree. This description of wind lift is consistent with the argument and evidence presented by Petitioner.

tendency and assures better cleaning quality, at least in the region most important to the vehicle's driver. *Id.* at 1:64–2:3. The wiper blade can be embodied in a separate, elongated component, with a cross section approximating a triangle that is solidly joined to the support element. *Id.* at 2:16–22. Alternatively, the leading edge face may have a hollow curvature facing into the wind. *Id.* at 2:25–27. The length, width, and height of the leading-edge face may be varied to suit requirements. *Id.* at 2:38–40.

As a solution to the shortcomings identified, the '974 patent describes that the wiper blade may be embodied as wiper blade 10 comprised of: support element 12, elongated rubber-elastic wiper strip 14, connection device 16, and single- or multiple-part component 32. *Id.* at 2:62–66, 3:22–37. Figures 1 and 3 of the '974 patent follow.

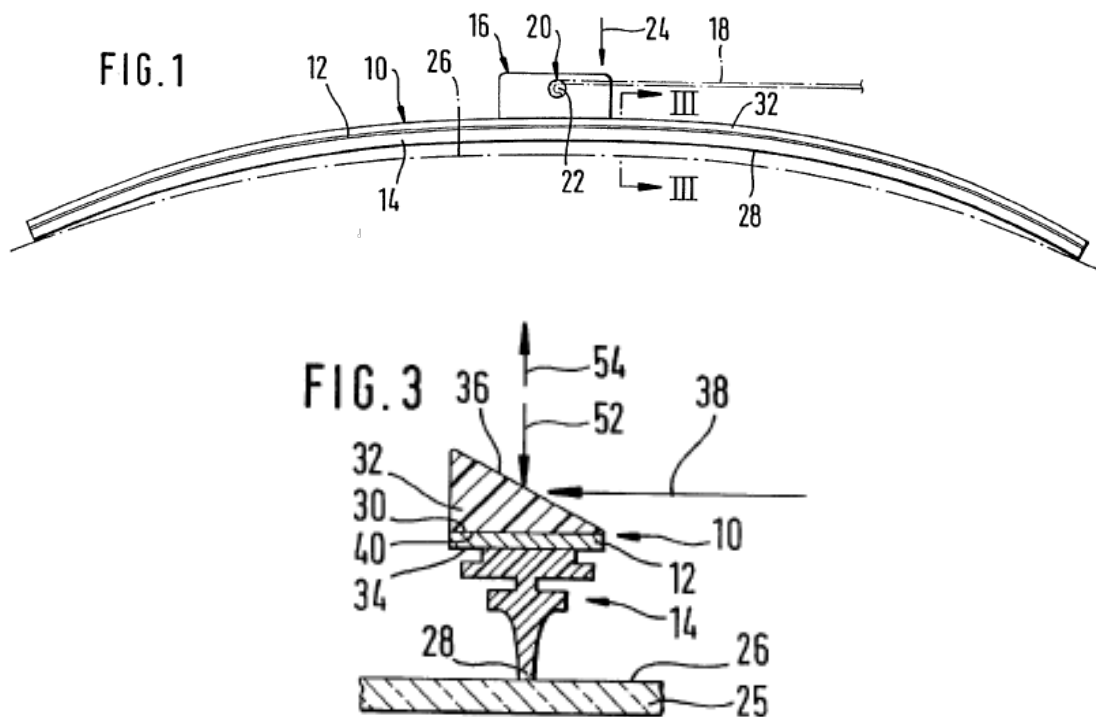


Figure 1 is a side view of wiper blade 10, and Figure 3 is a cross sectional view of wiper blade 10 along line III–III shown in Figure 1. *Id.* at

2:50–51, 53–55. Component 32 extends longitudinally along wiper blade 10, and has a triangle or wedge shaped cross section with the longest side of the triangle forming a leading edge face for relative wind 38 caused by the motor vehicle. *Id.* at 3:32–38.

3. *Patent Owner's Mischaracterizations of What was Known*

Patent Owner contends that the '974 patent recognized the previously unknown beam blade wind lift problem. PO Resp. 7. We disagree with this characterization. The '974 patent does not expressly disclose discovering that beam wipers are subject to wind lift at high vehicle velocities; rather, liftoff tendency is disclosed in the background portion of the Specification as something known in the art. Further, as detailed above, evidence outside of the '974 patent also demonstrates that wind lift was a known problem in both conventional and beam wipers.

Patent Owner contends that prior to the '974 patent, adding components to a beam wiper was unconventional. PO Resp. 7. We agree with Petitioner that it was not unconventional. *See* Pet. Reply 9. For example, Ludwig discloses an embodiment (28) that includes central longitudinal spine 15 above wiping edge 14. Pet. Reply 9; Ex. 1009, 3:24–67, Figs. 5, 7. Figure 7 of Ludwig follows:

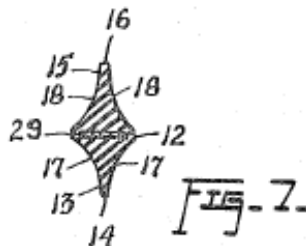


Figure 7 is a cross-sectional view of Ludwig's wiper. *Id.* at 1:70–71. Spine 15 facilitates balanced distribution of load applied by the wiper arm. Ex.

1009, 3:64–67. Consequently, Ludwig demonstrates that it was known prior to the '974 patent that beam blades may include additional components that increase blade profile while still accounting for the desired pressure distribution.

Patent Owner argues that Petitioner's reliance on Ludwig is improper. Paper 55, 2 (referring to Pet. Reply 3:6–9 and Section II.B. (pp 9–10)). Petitioner does not rely on Ludwig to alter the ground of unpatentability; rather, Petitioner relies on Ludwig to demonstrate that Patent Owner's contention that the '974 patent's approach was unconventional is incorrect. Paper 58, 2 (referring to PO Resp. 5). Petitioner's argument was properly in response to Patent Owner's argument regarding conventional thinking at the time. *See* 37 C.F.R. § 42.23(b). Nor was Petitioner's argument required to be in the Petition. Given that Ludwig contradicts Patent Owner's assertion on conventional thinking, and that Ludwig was part of the prosecution history, cited in the Petition, and filed in this proceeding, Petitioner could not have reasonably anticipated that Patent Owner would make such argument.

In association with the argument that the '974 patent took an unconventional approach, Patent Owner characterizes the '974 patent as meeting a long-felt but unresolved need, producing unexpected results, and being met with skepticism. PO Resp. 8–9, 11 (citing Ex. 2005, 260:23–263:8; Ex. 2003 ¶¶ 22–25, 58–60, 65, 73, 77, 79).³¹ The '974 patent does not support this characterization. Specifically, the '974 patent does not explicitly disclose or fairly imply that providing a beam wiper with a

³¹ We note that paragraphs 65, 73, 77, and 79 do not relate to the patent at issue in this case. This argument and evidence is also dealt with in Sections IV.B.2 and IV.C.2.a.

leading-edge face met a long-felt but unresolved need, produced unexpected results, or was counter to any known teaching.

In the testimony cited, Mr. Merkel describes that during a meeting where he proposed adding a spoiler to a beam wiper, Mr. Fehrsen was concerned that the spoiler would alter the pressure distribution of the wiper. Ex. 2005, 260:23–263:8. Given that Mr. Merkel describes Mr. Fehrsen as a person having “beginning experience” in wiper design, this observation is entitled to little weight. Ex. 2005, 237:10. Even if we accept this testimony as correct, at most it demonstrates that addition of a spoiler to a wiper impacts the stiffness and pressure distribution of the wiper so that it is a design concern. Such evidence falls short of demonstrating that the results were unexpected or counter to any conventional thinking.

4. *Summary of What was Known*

Before the critical date of the '974 patent both conventional and beam wipers were known. Wind lift was a known concern for both types of wipers having a wiper strip with an inverted isosceles triangle cross sectional profile. In conventional wipers, it was known to counter wind lift and maintain contact pressure on the windscreen with a spoiler formed on or attached to the flexible strip.

E. OBVIOUSNESS OVER PROHASKA AND EITHER APPEL OR HOYLER

1. *Uncontested Aspects*

Petitioner contends that claims 1, 2, and 8 would have been obvious over Prohaska and either Appel or Hoyler. Pet. 18–27; *see also* 9–14 (overview of the prior art).

Regarding independent claim 1, Petitioner contends that Appel discloses a wiper blade for windows of motor vehicles comprising a curved, band-shaped, spring-elastic support element that includes a concave and a convex surface that defines corresponding planes. Pet. 12–14, 18–19, 23; Ex. 1005, 1:11–15, 1:23–28, 3:9–16; Ex. 1014. Petitioner contends that Appel discloses an elongated rubber-elastic wiper strip and a connection device. Pet. 19; Ex. 1005, 4:18–22, Figs. 5, 7; Ex. 1014 (depicting arm attachment clip 41 of Appel, a connection device, as included in the proposed combination); Ex. 1005, 3:69–73.

Regarding claim 1, Petitioner contends that Hoyler is directed to a wiper bar for windshield wipers that includes an elongated band-shaped spring elastic support element (longitudinal spring 5) that distributes pressure and includes concave and convex surfaces. Pet. 14–15, 20–21, 23; Ex. 1006, 1:1, 2:15–19, 2:24–3:4, 3:8–9; Ex. 1015. Petitioner contends that Hoyler discloses an elongated rubber-elastic wiper strip (rubber blade 1) and a connection device (central clamp 9, eyelet-like opening 10, and hump 7). Pet. 14–15, 20–21, 23; Ex. 1006, 1:1, 2:15–19, 2:24–3:4, 3:8–9, Fig. 1; Ex. 1015.

Petitioner contends that Prohaska discloses a component (spoiler) as claimed. Pet. 10–12, 19–20, 22–23; Ex. 1004, 1:8–16, 25–52, 1:68–70, 2:56–58, 2:71–75, 3:16–21, Figs 3, 6; Ex. 1008 ¶¶ 37–40; Ex. 1014. Petitioner contends that Prohaska’s spoiler: can be retrofitted to a wiper blade, diminishes liftoff tendency, and provides reliable contact between the wiper and the windscreen. Pet. 10–12, 19–20, 22–23; Ex. 1004, 1:8–16, 25–

52, 1:68–70, 2:56–58, 2:71–75, 3:16–21, Figs 3, 6; Ex. 1008 ¶¶ 37–40; Ex. 1014; *see also* Ex. 1016, 1–10.³²

Claim 2 depends from independent claim 1 and recites, “wherein said leading-edge face is disposed on a face of said support element which faces away from the window.” Petitioner contends that Prohaska’s leading-edge face 21 of the spoiler faces away from the window when combined with either Appel or Hoyler’s wiper.³³ Pet. 24–25; Ex. 1004, Figs. 3, 5; Ex. 1008 ¶¶ 52–53; Ex. 1017, 1–3 (illustrations explained in Ex. 1013).

Claim 8 depends from independent claim 1 and recites, “wherein said leading-edge face extends at least nearly over an entire length of the wiper blade.” Petitioner contends that the leading edge of Prohaska’s spoiler extends at least nearly over an entire length of the wiper blade. Pet. 25–27; Ex. 1008 ¶¶ 58–62; Ex. 1018, 1–2 (illustrations).

Petitioner’s contentions regarding the claimed limitations are supported by a preponderance of the evidence and we adopt them here. Patent Owner does not dispute that the features of the challenged claims are found in the prior art. *See* Paper 17 ¶ 3 (instructing Patent Owner that “any arguments for patentability not raised in the [Patent Owner Response] will be deemed waived”); Pet. Reply 5 (asserting the Patent Owner does not contest that all claim limitations were shown); Office Patent Trial Practice

³² The illustrations in Ex. 1016–1018 are explained in Ex. 1013. We reviewed the supporting animations of the grounds of unpatentability at Exhibits 1014, 1015.

³³ Petitioner’s ground of unpatentability for claims 2 and 8 incorporates the discussion of the ground with respect to claim 1. *See* Pet. 24, 26. The ground of unpatentability asserted against claim 1 covers the limitations of claims 2 and 8. *See* Pet. 18–24.

Guide, 77 Fed. Reg. at 48,766 (stating that the Patent Owner Response “should identify all the involved claims that are believed to be patentable and state the basis for that belief”).

Patent Owner contests the obviousness of the combination by attacking Petitioner’s rationale and by submitting secondary indicia of nonobviousness.

2. *Contested Aspects*

Petitioner contends that it would have been obvious to combine Prohaska’s spoiler with either Appel’s or Hoyler’s wiper blade. Pet. 18, 22–23. Petitioner reasons that Prohaska’s spoiler would have provided the benefit of countering wind lift, and further contends that such a combination would have been the predictable use of prior art elements according to the functions disclosed in the references. *Id.* at 22–24; Ex. 1008 ¶ 48.

a) *Alleged Hindsight*

Patent Owner contends that Petitioner’s reasoning for adding Prohaska’s spoiler for a conventional wiper to a beam blade such as Appel or Hoyer improperly invokes hindsight. PO Resp. 2–3. In particular, Patent Owner emphasizes: (1) fundamental differences between conventional and beam blades, (2) the beam blade wind lift problem the ’974 patent sought to solve was previously unknown, and (3) the ’974 patent’s solution of adding a component that increased beam blade profile ran counter to the conventional wisdom at the time. *Id.* at 3. We analyze these contentions in turn.

(1) *Fundamental Differences*

According to Patent Owner, conventional and beam blades are so fundamentally different that a person of ordinary skill would not have combined conventional and beam blade teachings. PO Resp. 3–5 (citing Ex.

2003 ¶¶ 21–25, 58–61). This statement is contradicted by the evidence of record, in that conventional and beam wipers have commonalities. For example, beam and conventional wipers can use the same wiper strip, and can be attached to an actuating arm. *See, e.g.*, Ex. 1004, Fig. 1 (conventional strip); Ex. 1005, 1:16–17 (referring to an actuating arm), Fig. 7 (beam strip); Ex. 1007, Fig. 1 (Conventional attachment of arm).

Patent Owner contends that conventional blades have several disadvantages, and that beam blades solved these problems by utilizing a low profile design that evenly distributed pressure along the wiping element. PO Resp. 4 (citing Ex. 2003 ¶¶ 21–23, 58). In support, Dr. Dubowski opines that because beam blades avoid the high superstructure of a conventional wiper, beam blades “were hoped to perform better in extreme weather conditions” such as ice and snow. Ex. 2003 ¶ 23. Dr. Dubowski opines that beam blades are greatly affected by small changes in beam shape and by attaching additional components. Ex. 2003 ¶ 58. According to Dr. Dubowski, this is caused by the difference in pressure distribution in each wiper type, namely, that conventional wipers have a series of yokes to distribute pressure, while beam wipers distribute pressure through a spring-elastic support element that runs the entire length of the wiper strip. *Id.* Dr. Dubowski concludes that conventional thinking at the time of ’974 patent was to avoid additional components on a beam blade and to keep the profile very low. *Id.* (citing three patents submitted in these proceedings)³⁴

³⁴ Appel (Ex. 1005); Appel ’770 (Ex. 1006 of IPR2016-00034); Swanepoel ’564 (Ex. 1009 of IPR2016-00034).

An assertion that conventional wipers were “hoped” to perform better in ice and snow falls short of establishing that beam wipers performed better in ice and snow. See Ex. 2003 ¶ 23. More importantly, Patent Owner has not explained cogently how the superior ice and snow performance of a beam wiper relates to the modification proposed by Petitioner.

Although the three patents cited by Dr. Dubowski do not have additional components attached, Patent Owner does not identify, nor do we discern, any disclosure in these patents that is critical of increasing wiper profile or adding additional components. At most, these patents illustrate one approach and are silent regarding other approaches. Consequently, to the extent that Patent Owner’s argument suggests that these patents teach away from the proposed modification, such is not the case.

Further, as explained above, Patent Owner’s assertion that adding components to a beam wiper was unconventional is contradicted by the evidence of record.

(2) Beam wiper wind lift problem

As mentioned above, Patent Owner contends wind lift was known in conventional wipers, but not in beam wipers, and contends that a person of ordinary skill would have thought that wind lift was caused by having too high a profile. PO Resp. 5 (citing Ex. 2003 ¶¶ 59–60; Ex. 1004, 1:8–11). These arguments are unpersuasive for the reasons given above.

Patent Owner contends that even if a person of ordinary skill identified a wind lift problem in beam blades, there would not have been a desire to raise the profile by adding a spoiler top. PO Resp. 5. In support, Dr. Dubowsky essentially echoes the Response. Ex. 2003 ¶ 60. This contention is unpersuasive because Patent Owner simply concludes, without

a supporting explanation, that a person of ordinary skill would not have desired to increase the profile.

Patent Owner contends that Petitioner relies exclusively on Prohaska and offers no evidences that the wind lift problem was known in beam wipers. *Id.* at 5–6 (citing Pet. 22–23; Ex. 1008 ¶¶ 37–40). Such is not the case. As discussed above, Petitioner provides evidence that wind lift was a known problem in both beam and conventional wipers that include a wiper strip having an inverted triangle cross-sectional profile.

(3) '974 solution

Patent Owner contends that the '974 patent, contrary to conventional thinking, recognized the beam wiper wind lift problem and solved it with a spoiler that increased the blade profile. PO Resp. 7; *see also* PO Resp. 11 (making similar argument). According to Patent Owner, in cases such as this, recognition of the problem itself was invention. *Id.* (citing *Leo Pharm. Prods., Ltd. v. Rea*, 726 F.3d 1346, 1353 (Fed. Cir. 2013); *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 381 F.3d 1371, 1377 (Fed. Cir. 2004) (“There can of course arise situations wherein identification of the problem is itself the invention.”)).

Contrary to this assertion, Patent Owner did not discover the previously unrecognized problem of wind lift in beam wipers. Rather, as detailed above, it was known many years prior to the critical date of the '974 patent that the inverted isosceles triangle cross sectional profile of a wiper strip (common to beam and conventional wipers) causes wind lift.

(4) Rationale Summary

As stated above, Petitioner reasons that Prohaska's spoiler would have provided the benefit of countering wind lift, and further contends that such a combination would have been the predictable use of prior art elements according to the functions disclosed in the references. *Id.* at 22–24; Ex. 1008 ¶ 48. In light of the evidence analyzed here, this reasoning has a rational underpinning. Patent Owner's arguments discussed above are not persuasive and do address cogently the rationale provided by Petitioner.

b) Secondary Considerations

We consider Patent Owner's contention that this case involves the secondary considerations of: long-felt but unresolved need, industry praise and awards, failure of others, commercial success, licensing, unexpected results, and copying. PO Resp. 8; *WBIP, LLC v. Kohler Co.* 829 F.3d 1317, 1328 (Fed. Cir. 2016) (when present, secondary indicia of nonobviousness must be considered).

“For objective evidence of secondary considerations to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention.” *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011) (emphasis and internal quotation marks omitted) (cited with approval in *ClassCo, Inc. v. Appel, Inc.*, 838 F.3d 1214 (Fed. Cir. 2016)). There is a presumption of nexus for objective considerations when the Patent Owner demonstrates that the asserted objective evidence is tied to a specific product and that product is the invention disclosed and claimed in the patent. *WBIP*, 829 F.3d at 1329.

Before addressing the specifics of Patent Owner's secondary considerations, we emphasize that, as discussed above, most of Patent

Owner's secondary considerations arguments are based upon mischaracterizations of the scope and content of the prior art.

(1) Lack of Connection between the Products and Challenged Claims

Patent Owner contends that the Aerotwin and Icon blades each “practice the challenged claims.” *Id.* at 11 (citing Ex. 2014, 3; Ex. 2015, 33–57, 59–62; Ex. 2016, 30–43, 45–48; Ex. 2007 ¶ 6; Ex. 2005, 234:25–235:4, 249:25–250:5, 252:17–254:21, 225:22–226:1, 231:12–232:4; Ex. 2006, 698:19–699:22). Patent Owner describes the Aerotwin and ICON wipers as having a flexible spoiler with diverging legs mounted on the top of the blade as well as plastic end caps.³⁵ *Id.*

Most of the cited evidence deals with patents other than the '974 patent, and does not evidence any connection between the challenged claims and the Aerotwin and ICON wipers. *See* Ex. 2015, 33–57 (relating to the '905 patent), 59–62 (relating to the '698 patent); Ex. 2016, 30–43 (relating to the '905 patent), 45–48 (relating to the '698 patent); Ex. 2005, 234:25–235:4 (relating to the '434 patent), 249:25–250:5 (discussing attachment of the spoiler, relevance unclear), 252:17–254:21 (discussing the meaning of “secured,” relevance unclear), 231:12–232:4 (relating to the '905 patent); Ex. 2006, 698:19–699:22 (relating to the '905 patent).

³⁵ As mentioned above, at times the same paper is submitted in each of these proceedings without tailoring that paper to the particular case involved. This is perhaps most significant here. Further, we agree with Petitioner, that submitting the same evidence of secondary considerations in each of these proceedings undermines the evidence because the patents involved are directed to different inventions. *See* Pet. Reply 12.

Two citations relate to the '974 patent. First, in response to interrogatories in the related litigation, Patent Owner asserted that the Aerotwin, ICON Generation 1, and ICON Generation 2 practice at least one claim of a list of patents that includes the '974 patent. Ex. 2014, 3. This assertion is conclusory and not supported by a cogent explanation. Further, Patent Owner does not explain effectively how the ICON Generation 1 and 2 correspond to an ICON wiper. See Pet. Reply 14.

Second, Mr. Merkel testified that the spoiler described in the '974 patent is utilized in, for example, the "ICON Evolution." Ex. 2005, 225:22–226:1. This information does not demonstrate that the Aerotwin or Icon blades practice one of the challenged claims. Mr. Merkel provides no information regarding the relationship between the scope of the Aerotwin wiper and the challenged claims. Regarding the ICON Evolution, Mr. Merkel presents the unsupported conclusion that the spoiler of the ICON Evolution is that of the challenged claims. For example, Mr. Merkel does not explain if the spoiler is separate from the wiper strip and mounted directly on the convex surface of the support element as claimed. Nor does Patent Owner explain how the ICON Evolution corresponds to the ICON wiper.³⁶ Additionally, Patent Owner contradicts Mr. Merkel by asserting that the ICON wiper has a flexible spoiler with diverging legs mounted on the top of the blade as well as plastic end caps, features not found in the challenged claims. See PO Resp. 11. The absence of cross-examination of Mr. Merkel in this proceeding and the determination in the Pylon litigation

³⁶ Perhaps Patent Owner's use of the term ICON refers to the ICON Generation 1, ICON Generation 2, and ICON Evolution. If so Patent Owner should have explained the relationship.

that Mr. Merkel committed a material omission further reduce the value of this evidence.

Patent Owner's proffered evidence may be applicable to IPR2016-00036 because the features enumerated by Patent Owner are found in claim 13 of the '905 patent. None of the challenged claims of this proceeding include diverging legs mounted on the top of the blade or plastic end caps. Further, the challenged claims do not recite that the spoiler ("component") is flexible. This information has little or no relevance to our inquiry here.

Consequently, Patent Owner is not entitled to a presumption of nexus, because Patent Owner has not demonstrated that the products (the Aerotwin and ICON wipers) are the invention disclosed and claimed in the patent. Indeed, Patent Owner has not demonstrated effectively any connection between those products and the claims of the '974 patent.

(2) Commercial Success and Industry Praise

Patent Owner contends that the Aerotwin wiper won the Pace, Automechanika, and Frost & Sullivan awards. PO Resp. 10, 13 (citing Ex. 2007 ¶¶ 3, 8; Ex. 2005, 239:6–16, 209:10–23). In support, Mr. Kashnowski states that the Pace award mentioned the use of a flexible spoiler on the Aerotwin blade and that Frost & Sullivan was "one of the more prominent automotive research organizations." Ex. 2007 ¶¶ 3, 8. The cited testimony of Mr. Merkel does not appear to relate to the '974 patent. See Ex. 2005, 239:6–16, 209:10–23.

Patent Owner does not provide a copy of any award or an explanation of the award criteria. Regarding the Pace award in particular, this evidence may apply to IPR2016-00036 because the spoiler (wind deflection strip 42) of the '905 patent is flexible (made of an elastic material), while none of the

challenged claims recite that the component (spoiler) is flexible. *See* Ex. 1001, 4:16–32, 36–38, 53–55; IPR2016-00036, Ex. 1001, 7:60–8:21. The observation that Frost & Sullivan was a prominent research organization does little to put the award in context. Without context, these awards have little meaning.

As mentioned above, Patent Owner contends that although beam blades were known, Patent Owner’s Aerotwin wiper blade was the first commercially successful beam blade in the United States aftermarket. PO Resp. 9–10 (citing Ex. 2007 ¶ 3, Ex. 2005, 239:6–16 218:16–220:2).³⁷ Patent Owner contends that the ICON blade had commercial success and praise as evidenced by: (1) the demand from Bosch customers for the Icon blade was considerably high, even though it was more expensive than conventional blades; and (2) customers expressed a great deal of excitement for the Icon blade. *Id.* at 10 (citing Ex. 2007 at ¶ 5; Ex. 2005, 270:14–271:3³⁸).

The evidence cited by Patent Owner has numerous shortcomings.

Although Patent Owner contends that the Aerotwin was the first commercially successful beam wiper in the United States, the sales figures and awards cited are for the ICON wiper.

Mr. Kashnowski, Director of Product Management for Wiping systems for Patent Owner has more than 20 years of working with wipers. Ex. 2007 ¶ 1. Mr. Kashnowski testified in the Pylon litigation that Patent

³⁷ The relevance of the citations to Exhibit 2005 to Patent Owner’s contention is unclear.

³⁸ This testimony relates to a wiper with ends caps, not the ’974 patent.

Owner's wipers having spoilers and end caps had the most success, growth, and value to customers of any product line he could recall. Ex. 2005, 270:14–271:3. Mr. Kashnowski does not explain how the success is tied to features of he challenged claims and appears to relate to the claims at issue in IPR2016-00036.

Mr. Kashnowski states that demand for the ICON blade was “considerably high” despite being more expensive than conventional blades. Ex. 2007 at ¶ 5. *Id.* Here we seek objective indicia of nonobviousness, yet, that demand was “considerably high” is a subjective opinion. Mr. Kashnowski does not provide gross sales figures in dollars or units sold, market share, growth in market share, or any objective indication of commercial success.

Similarly, Mr. Kashnowski states that customers were “more excited” for the ICON product than any other automotive product he has been involved with. Ex. 2007 ¶ 5. Presumably, with 20 years of experience in the automotive field, Mr. Kashnowski has been involved with numerous products; however, customer excitement is a subjective observation and not an objective indication of industry praise or commercial success. Even if customer excitement to some extent indicates industry praise or commercial success, Mr. Kashnowski does not provide any explanation that ties customer excitement to claimed features.

Patent Owner presents three years of “sales of the ICON product” (2006 - \$17,000,000; 2007 - \$24,000,000; 2008 - \$28,000,000).³⁹ PO Resp. 13; Ex. 2007 ¶ 8. This testimony is not relevant because it relates to a wiper

³⁹ Presumably, these figures represent annual gross sales revenue.

with ends caps, not the claims of the '974 patent. Even if the ICON wiper corresponds to the challenged claims, this evidence has little probative value. Patent Owner provides no argument or evidence that attributes this success to claimed features. Patent Owner presents no evidence regarding market share. This information, without market share information, is only weak evidence, if any, of commercial success. *See In re Applied Materials*, 692 F.3d 1289, 1299 (Fed. Cir. 2012). Although we note that sales grew in the period presented, Patent Owner does not address that growth, nor does Patent Owner explain how such growth is tied to claimed features.

Patent Owner argues that products having a flexible spoiler, plastic end caps, and diverging legs mounted on the top of the blade were tested extensively to reduce noise, and this reduced noise was part of the reason for great customer demand. PO Resp. 11–12. This description again applies to the '905 patent at issue in IPR2016-00036 and is not relevant to our inquiry here.

(3) Skepticism

Although Patent Owner does not list skepticism as one of the objective indicia raised, Patent Owner does make such an argument. PO Resp. 8 (not listing skepticism), 11, n. 6 (mentioning skepticism). Specifically, Patent Owner argues that the solution of the '974 patent of adding a top mounted spoiler ran against the grain of conventional wiper understanding. *Id.* at 11 (citing Ex. 2003 at ¶¶ 22–25, 58–60, 65, 73, 77,

79⁴⁰; Ex. 2005 at 260:23–263:8). This argument and evidence are addressed above.

(4) Long-felt but unresolved need and Unexpected Results

Patent Owner contrasts the success of ICON wipers to the failure of a competitor's beam-blade product, the Trico Innovision wiper blade that was introduced in 2004 and "failed." PO Resp. 12–13 (Ex. 2007 ¶ 7; Ex. 2005, 250:6–251:7).⁴¹

To the extent that Patent Owner contends that Trico's failure is evidence of satisfying a long-felt, but unmet need, such argument and evidence is unpersuasive. The Trico product's introduction in 2004 was after the critical date of the '974 patent. *See* Pet. Reply 17; *see also Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1332 (Fed. Cir. 2009) (the unmet need must exist on the patent's filing date).

To the extent that Patent Owner is suggesting Trico's lack of commercial success demonstrates the commercial success of ICON wiper, such contention is also unpersuasive. As detailed above, Patent Owner has not demonstrated effectively a connection between the ICON wiper and the challenged claims. Further, Mr. Kashnowski simply presents the subjective conclusion that the Trico wiper "failed in the market place." Ex. 2007 ¶ 7. Mr. Kashnowski does not reveal any factual data underlying that opinion, nor does Patent Owner explain what constitutes failure. The value of Patent

⁴⁰ We note that paragraphs 65, 73, 77, and 79 do not relate to the patent at issue in this case. The other paragraphs are addressed in previous analysis.

⁴¹ The cited portion of Exhibit 2005 is testimony discussing a memo that addresses the attachment of a spoiler to the blade that does not appear to support Patent Owner's assertion that the Trico product failed.

Owner's evidence is further reduced by Petitioner's evidence that the Trico wiper achieved enough sales that manufacturing capacity had to be increased. Pet. Reply 18 (Ex. 1100 ¶ 15).

Patent Owner contends that the prior art asserted in the ground of unpatentability is more than 14 years prior to the filing of the application that became the '974 patent, evidencing a long-felt but unresolved need. PO Resp. 15 (citing *Leo Pharm. Prods., Ltd. v. Rea*, 726 F.3d 1346, 1356–57 (Fed. Cir. 2013) (“The record also shows evidence of *long* felt but unsolved need . . . The length of the intervening time between the publication dates of the prior art and the claimed invention can also qualify as an objective indicator of nonobviousness.”)). We agree with Petitioner that the age of the references, without more, is not evidence of long-felt, but unresolved need. Pet. Reply, 18 (citing *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1337–1338 (Fed. Cir. 2016) (distinguishing *Leo Pharm.*, 726 F.3d at 1356–57)).⁴²

(5) Other Alleged Indicia

Patent Owner contends that within a year of introduction of the Aerotwin and Icon products knockoff products appeared having spoilers with diverging legs similar to those shown in the '905 patent, as well as end caps. PO Resp. 13–14 (Ex. 2007 ¶ 9). This evidence may relate to the '905 patent at issue in IPR2016-00036, but it does not pertain to the patent at issue here.

⁴² *Leo Pharm* is distinguishable from the case at hand in that in there the inventor recognized and solved a problem, while here, as discussed above, wind lift was a known problem in both beam and conventional wipers having an inverted isosceles triangle cross sectional profile. *Leo Pharm.*, 726 F.3d at 1353.

Patent Owner contends that the industry is now largely respectful of Patent Owner's beam blade patent rights, and that all of Patent Owner's major competitors have entered licensing agreements for those rights. PO Resp. 14–15 (citing Ex. 2007 11). Patent Owner asserts that most of these agreements include the '974 patent. *Id.* (citing Ex. 2007, 11).

This evidence does not present a clear picture. Patent Owner does not provide a copy of the agreements, nor otherwise identify which claims of the '974 patent were licensed. Patent Owner does not identify the number of major competitors, nor provide any criteria for what makes a competitor a major competitor. Further, Patent Owner overstates Mr. Kashnowski's supporting evidence. Specifically, Patent Owner states that most of the agreements with Patent Owner's competitors include the '974 patent, but Mr. Kashnowski states that, "[t]he patents specifically licensed in most of these agreements include" the '974, '905, and '698 patents. Ex. 2007 ¶ 11. Mr. Kashnowski's statement means that most of the agreements include one of the three enumerated patents, not that most of the agreements include the '974 patent. Mr. Kashnowski's statement is true even if only one agreement includes the '974 patent provided that most of the agreement include one of the three listed patents.

Beyond the lack of any objective indicia, Patent Owner does not explain or provide evidence that ties the merits of claims to the licenses. Thus, this evidence is entitled to little weight because Patent Owner has not demonstrated a connection between the licenses and the merits of the claimed subject matter. *See* Pet. Reply 20.

3. *Conclusions*

Prior to the critical date of the '974 patent, both conventional and beam wipers were known. Wind lift was a known concern for both types of wipers having a wiper strip with an inverted isosceles triangle cross-sectional profile, and in conventional wipers this problem had been solved with a spoiler formed on or attached to the flexible strip. Petitioner has shown by a preponderance of the evidence that the elements of the challenged claims were known. Patent Owner does not challenge these assertions.

Petitioner explains that adding Prohaska's spoiler to either Appel or Hoyler's beam blade would have provided the benefit of countering wind lift. This contention is well supported by the evidence of record. Patent Owner's arguments regarding rationale are unpersuasive and do not address effectively the reasons provided by Petitioner.

Patent Owner's evidence of secondary considerations may relate to the '905 patent at issue in IPR2016-00036, not it does not pertain to the patent at issue here. Even if this evidence was tied to claimed features, it suffers from additional shortcomings. For example, Patent Owner's evidence of skepticism, unexpected results, and long-felt but unresolved need is contradicted by the evidence of record. The ICON wiper had some success in terms of three industry awards and gross revenue figures; however, Patent Owner did not provide sufficient information to put this success in perspective and the evidence relates to the '905 patent, not the '974 patent.

The '974 patent applied the known technique of adding a spoiler to counter wind lift on a conventional wiper to a beam wiper, when it was

known that the cause of wind lift was the inverted triangle profile of the wiper strip common to both types of wipers. The predictable result was that the spoiler performed as it was known to perform.

In light of this, Petitioner has demonstrated by a preponderance of the evidence that claims 1, 2, and 8 would have been obvious over Prohaska and either Appel or Hoyler.

V. ORDER

For the reasons given, it is:

ORDERED that claims 1, 2, and 8 have been shown by a preponderance of the evidence to be unpatentable as obvious over Prohaska and Appel;

FURTHER ORDERED that claims 1, 2, and 8 have been shown by a preponderance of the evidence to be unpatentable as obvious over Prohaska and Hoyler;

FURTHER ORDERED that Petitioner's Motion to Exclude is denied;

FURTHER ORDERED that Petitioner's Motion to Strike is denied;

FURTHER ORDERED that Patent Owner's Motion to Exclude is denied;

FURTHER ORDERED that Paper 32 is expunged; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements.

IPR2016-00038
Patent 6,292,974 B1

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