

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COSTCO WHOLESALE CORPORATION
Petitioner,

v.

ROBERT BOSCH LLC,
Patent Owner.

Case IPR2016-00036
Patent 6,944,905

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

GROSSMAN, *Administrative Patent Judge*.

FINAL WRITTEN DECISION

Incorporating Decisions on
Petitioner's Motion to Exclude Evidence
Petitioner's Motion to Strike
Patent Owner's Motion to Exclude Evidence
35 U.S.C. § 318(a); 37 C.F.R. § 42.73

I. INTRODUCTION

Costco Wholesale Corporation (“Petitioner”) filed a Petition requesting inter partes review of claims 13, 17, and 18 of U.S. Patent No. 6,944,905 (Ex. 1001, “the ’905 patent”). Paper 1 (“Pet.”). Robert Bosch LLC (“Patent Owner”) filed a Preliminary Response to the Petition. Paper 15 (“Prelim. Resp.”). We instituted review on the sole asserted ground of whether claims 13, 17, and 18 would have been obvious in view of Prohaska¹, and Hoyler². Paper 16 (“Dec. Inst.”). After our Decision on Institution, Patent Owner filed a Response (Paper 28, “PO Resp.”), and Petitioner filed its Reply (Paper 34, “Pet. Reply”). An oral hearing was held January 18, 2017. Paper 67 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. We enter this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

We also address herein the parties’ Motions to Strike or Exclude Evidence.

As described below, we determine that a preponderance of the evidence establishes that claims 13, 17, and 18 are unpatentable.

A. Related Matters

The parties represent that the ’905 Patent is asserted in *Robert Bosch LLC v. Alberee Products Inc. et al.*, cv-12-574-LPS (D. Del) (consolidated with cv-14-142-LPS). Pet. 1; Paper 5, 1.

¹ U.K. Patent App. GB 2 106 775 A, published April 20, 1983 (Ex. 1003).

² German Patent No. 1,028,896, published April 24, 1958 (Ex. 1004). The English translation begins at page 5.

In addition, Petitioner has filed petitions against several of Patent Owner's other patents related to windshield wiper technology, including: U.S. Patent Nos. 6,973,698 (IPR2016-00034), 6,836,926 (IPR2016-00035), 6,292,974 (IPR2016-00038), 7,228,588 (IPR2016-00039), 7,484,264 (IPR2016-00040), 8,099,823 (IPR2016-00041), and 8,544,136 (IPR2016-00042). Pet. 1-2; Paper 5, 1-2. The petition in IPR2016-00035 was denied. Trial was instituted in the other listed cases. A single, consolidated hearing was held for this case and the other listed cases.

B. Wiper Blade Background

There are two main types of windshield wiper structures: beam blades, and yoke, or conventional, blades. The conventional or yoke-style structure includes a series of flexible rails that distribute force along the wiper blade. Ex. 1007 ¶ 19. Figure 1 of U.S. Patent 3,418,679 (Ex. 1016) is reproduced below:

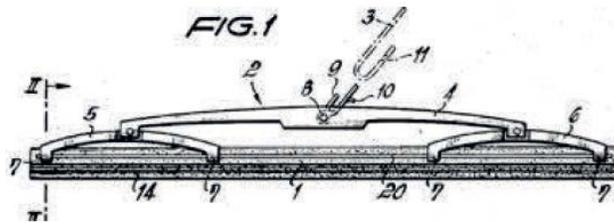


Figure 1 depicts a yoke-style wiper structure, having a large main rail 4 connected to two smaller rails 5 and 6, which in turn are connected to the wiper blade.

In contrast to the conventional or yoke style wiper is the beam-style of wiper. This type of wiper uses metal strips adjacent the wiper blade to distribute the load along the length of the wiper blade rather than the yokes.

Ex. 1007 ¶ 22. The '905 patent discloses a beam wiper. Figure 1 of the '905 patent illustrating a beam wiper, is reproduced below:

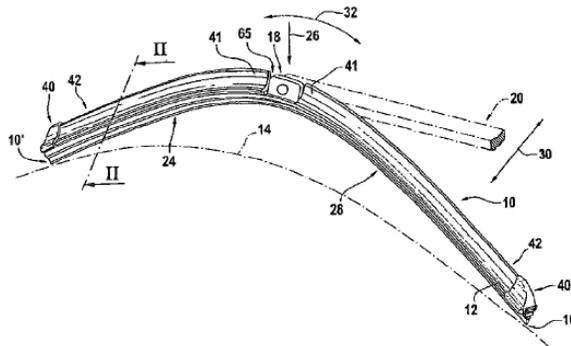


Figure 1 of the '905 patent depicts a beam-style wiper structure, in which the beam is attached along the entire length of the wiper.

C. The '905 Patent

When driving at high speeds, the windshield wipers on a vehicle tend to lift off the windshield. The '905 patent addresses this problem by providing a “wind-deflection strip” on the windshield wiper to create a force directed towards the windshield. Wind-deflection strips on windshield wipers are, admittedly, well-known. *E.g.* Ex. 1001, 1:26–32.³ The wiper blade disclosed and claimed in the '905 patent, however, is hollow, which reduces its weight and rigidly. This creates savings in material, reduces the mass that the drive unit must reciprocate, and reduces bending on the wiper blade support element. *Id.* at 1:55–64.

The disclosed wiper blade is made of three main components: elastic rubber wiper strip 14, resilient support element 12, and wind deflection strip 42. *Id.*, Abstract. These three components are illustrated in Figure 2 of the '905 patent, reproduced below:

³ Citations to the '905 patent are in the format of “column:line[s].”

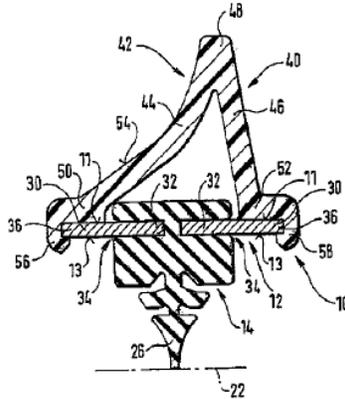


Figure 2 of the '905 patent depicts a cross-sectional view of a windshield wiper blade embodiment. As shown in Figure 2 and also in Figure 3, of the '905 patent, wind deflection strip 42 has two diverging legs (44, 46) that diverge from common point 48. Free ends 50 and 52 of legs 44 and 46 are oriented toward window 22 and are supported against wiper blade 10 or its support element 12, so that deflection strip 42 is generally triangular in cross section and has a hollow interior. *Id.* at 2:54–62.

End caps 38 (*see* Fig. 1) are at each end of the blade. *Id.*4:34. Attack surface 54, which is fluted in the exemplary embodiment, is on the outside of leg 44. *Id.* at 4:48–49. The relative wind flows against this attack surface to provide a force directed towards the windshield. *Id.* at 4:50–51.

D. Challenged Claims

Petitioner challenges claims 13, 17, and 18, each of which is written as an independent claim. Claim 13 is reproduced below.⁴

13. A wiper blade for cleaning windows, comprising:
a band-like, elongated, spring-elastic support element
(12),

⁴ Line breaks have been added to claim 13 to assist in identifying the elements recited in claim 1. Reference numerals appear in the issued claim.

wherein a lower band surface (13) oriented toward the window (22) has an elongated, rubber-elastic wiper strip (14), which can be placed against the window, disposed on it so that the longitudinal axes of these two parts are parallel and

wherein an upper band surface (11) of the support element has a wind deflection strip (42) disposed on it,

wherein the wind deflection strip extends in a longitudinal direction of the support element (12), is provided with an attack surface (54) oriented toward the main flow of the relative wind, and is made of an elastic material,

wherein the wind deflection strip (42, 142, 242) has two diverging legs (44, 46), viewed in transverse cross section, wherein the two diverging legs are connected to each other at a common base (48) and

wherein free ends of the two diverging legs oriented toward the window (22) are supported on the support element, and the attack surface (54) is embodied on the outside of the one leg (44),

wherein the upper band surface (11) of the support element (12), in its middle section, includes a wiper blade part (15) for connecting the wiper blade (10) to a reciprocally driven wiper arm (16) and is supported,

wherein an end cap (38) is respectively disposed at both ends of the support element (12), and

wherein a section (40) of the wind deflection strip (42) is disposed between and in contact with each respective end cap (38) and the device piece (15).

Claims 17 and 18 are substantially similar to claim 13.

Claim 17 adds a limitation, not in claims 13 or 18, stating that the end caps are provided with a “flute (68), which extends in a projection of the

flute of the attack surface (54)⁵ of the wind deflection strip.” Ex. 1001, 10:2–4.

Claim 18 adds a limitation, not in claims 13 or 17, stating that “the wiper blade part (15) of the connecting device is provided with a flute (70), which extends in a projection of the flute of the attack surface (54)⁶ of the wind deflection strip (42).” *Id.* at 10:32–34.

II. EVIDENTIARY MOTIONS

Before addressing the merits, we first decide several evidentiary motions filed by the parties.

A. Patent Owner’s Motion to Exclude

Patent Owner moves to exclude Paragraphs 7, 9–11, 15, 18, 19, 21, and 23–26 of the Declaration testimony of Mr. David Peck (Ex. 1100). Paper 49. Petitioner offers in opposition (Paper 58), to which Patent Owner offers its reply (Paper 64). The Motion to Exclude and associated papers have no meaningful distinction from the similar Motion to Exclude Mr. Peck’s testimony in IPR2016-00038, slip op. at 19–22, Paper 68 (PTAB Mar. 30, 2017). We adopt the findings, analysis, and conclusions from that case on this issue. Consequently, Patent Owner’s Motion to Exclude portions of Mr. Peck’s Declaration (Ex. 1100) is *denied*.

⁵ We note that claim 17 does not have an antecedent basis for the reference to “the flute of the attack surface (54) of the wind deflection strip.”

⁶ We note that claim 18 does not have an antecedent basis for the reference to “the flute of the attack surface (54) of the wind deflection strip.”

B. Petitioner's Motion to Exclude

Petitioner moves to exclude the testimony of Wilfried Merkel offered by Patent Owner in Exhibit 2005, 210–264. Paper 50, 1–11. This testimony is from a 2010 district court trial transcript in *Robert Bosch LLC v. Pylon Manufacturing Corp.*, No. 08-542 (D. Del. Apr. 15, 2010), in which Mr. Merkel testified on behalf of Patent Owner. Paper 50, 4.

Petitioner also moves to exclude portions of the Declaration testimony of Martin Kashnowski offered by Patent Owner in Exhibit 2007. *Id.* at 11–15.

Patent Owner offers its opposition (Paper 61), to which Petitioner offers its reply (Paper 65).

With respect to the testimony of Mr. Merkel, our analysis in IPR2016-00038, slip op. at 10–16, Paper 68 (PTAB Mar. 30, 2017) is applicable here. We adopt the findings, analysis, and conclusions from that case on this issue. Consequently, Petitioner's Motion to Exclude portions of Mr. Merkel's prior trial testimony (Ex. 2005) is *denied*.

With respect to the testimony of Mr. Kashnowski, our analysis in IPR2016-00038, slip op. 16–19, Paper 68 is applicable here. We adopt the findings, analysis, and conclusions from that case on this issue. Consequently, Petitioner has not demonstrated effectively that the testimony at issue is inadmissible hearsay, and with respect to this evidence, the Motion to Exclude is *denied*.

C. Petitioner's Motion to Strike

Petitioner moves to strike the testimony of Mr. Merkel in Exhibit 2005, 210–264. Paper 33. This testimony is from a 2010 district court trial transcript in *Robert Bosch LLC v. Pylon Manufacturing Corp.*, No. 08-542

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(D. Del. Apr. 15, 2010), in which Mr. Merkel testified on behalf of Patent Owner. Paper 33, 1. Patent Owner filed an opposition. Paper 36.

Petitioner's Motion to Strike and associated papers do not differ from the similar Motion to Strike in IPR2016-00038, slip op. at 4–10, Paper 68 (PTAB Mar. 30, 2017). We adopt the findings, analysis, and conclusions from that case on this issue. Consequently Patent Owner's Motion to Strike portions of Mr. Merkel's prior trial testimony (Ex. 2005) is *denied*.

III. ANALYSIS

A. *Claim Construction*

We interpret the claims of an unexpired patent using the broadest reasonable interpretation in light of the specification of the patent. 37 C.F.R. § 42.100(b). Petitioner asserts that none of the claim terms in the '905 patent needs to be construed for purposes of this Petition. Pet. 19. Patent Owner does not address claim construction.

We determine that the challenged claims do not require specific construction.

B. *Petitioner's Asserted Ground of Unpatentability*

Petitioner asserts that claims 13, 17, and 18 would have been obvious under 35 U.S.C. § 103 based on Prohaska in view of Hoyler. Petitioner also relies on the declaration of Gregory W. Davis, Ph.D. (Ex. 1007).

Section 103(a) forbids issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007). 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) when available, secondary considerations, such as commercial success, long felt but unsolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *see KSR*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”).

The Supreme Court made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR*, 550 U.S. at 415. Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. To reach this conclusion, however, it is not enough to show merely that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness additionally requires that a person of ordinary skill at the time of the invention “would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Id.*

Moreover, in determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Litton Indus. Prods., Inc. v. Solid State*

Sys. Corp., 755 F. 2d 158, 164 (Fed. Cir. 1985) (“It is elementary that the claimed invention must be considered as a *whole* in deciding the question of obviousness.”) (citation omitted); *see also Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537 (Fed. Cir. 1983) (“[T]he question under 35 U.S.C. § 103 is not whether the differences *themselves* would have been obvious. Consideration of differences, like each of the findings set forth in *Graham*, is but an aid in reaching the ultimate determination of whether the claimed invention *as a whole* would have been obvious.”) (citation omitted).

“A reference must be considered for everything it *teaches* by way of technology and is not limited to the particular *invention* it is describing and attempting to protect.” *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907 (Fed. Cir. 1985).

As a factfinder, we also must be aware “of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR*, 550 U.S. at 421. This does not deny us, however, “recourse to common sense” or to that which the prior art teaches. *Id.*

Against this general background, we consider the references, other evidence, and arguments on which the parties rely.

1. Scope and Content of the Prior Art

The first step in our analysis is to review the scope and content of the prior art.

a. Prohaska

Prohaska is directed to an automobile windshield wiper blade. Ex. 1003, 4:5–7.⁷ Prohaska describes the known problem of an air stream

⁷ Citations are to exhibit page number, in the form “page:line[s].”

striking the wiper blade, which diminishes the contact pressure of the wiper, causing lifting and deterioration of the wiper blade, especially at high vehicle speeds. *Id.* at 4:8–16. Prohaska explains that spoilers are known, but prior spoilers were attached to the yoke or were unduly complicated and unattractive. *Id.* at 4:25–29. Prohaska proposes a spoiler formed on, or attached to, a flexible strip, which in turn is attached to a wiper blade. *Id.* at 4:48–52, 68–77. Prohaska explains that its spoiler makes it “easily possible to retrofit a wiper blade.” *Id.* at 4:68–69. One embodiment is shown in Figure 3, reproduced below with added coloring:

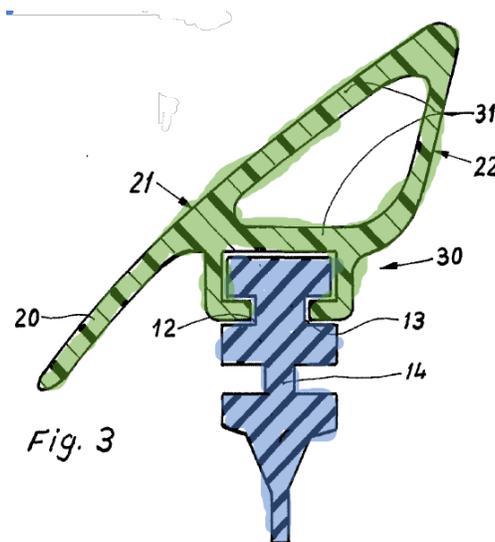


Figure 3 of Prohaska depicts spoiler 20 (in green) integral with flexible strip 30 (also green) and attached to wiper 10 (in blue). *Id.* at 2:71–75. In the embodiment shown in Figure 3, spoiler 20 clearly is hollow.

b. Hoyler

Hoyler discloses a windshield wiper shown generally in the several images that make up Figure 1, which is reproduced below.

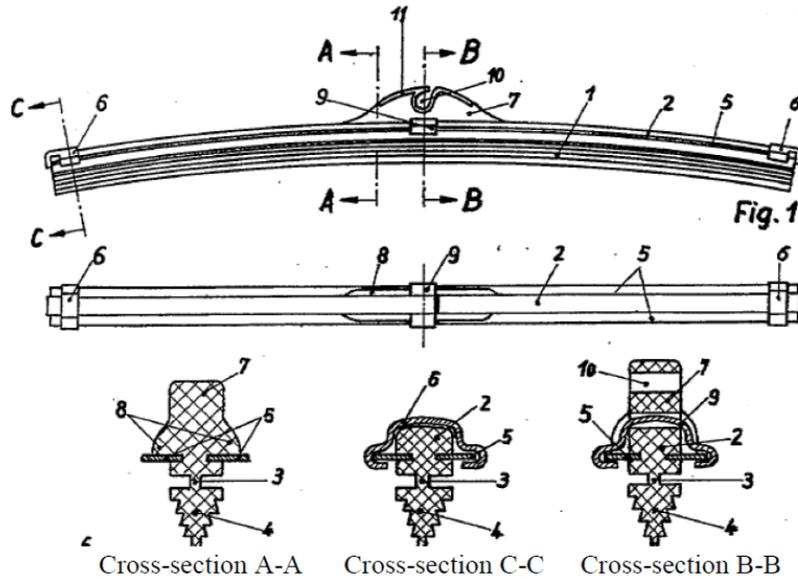


Figure 1 of Hoyer depicts side, top, and cross-section views of a beam-style wiper blade.

As shown in Figure 1, rubber wiper blade 1 with a back part 2 is connected via a strip 3 with wiper lip 4. Ex. 1004, 5.⁸ Longitudinal springs 5 are inserted in lateral slots in back part 4, held together at the ends by clamps 6. *Id.* Rubber blade 1 may be adhered or vulcanized to longitudinal spring 5 to reduce weight. *Id.* at 6 (“the rubber blade is adhered or vulcanized to the longitudinal spring 5, allowing a particularly light and narrow embodiment of the wiper bar.”).

Hoyer also describes the importance of having light-weight wipers. *Id.* at 5 (“The weight of the moving parts can be largely reduced thereby so that the stress upon the drive elements is low.”).

2. Level of Ordinary Skill

Petitioner asserts that the references cited or discussed in the Petition reflect the level of ordinary skill in the relevant technology. Pet 30–31.

⁸ Citations are to the exhibit page number.

Petitioner also asserts a person of ordinary skill would have had “education and experience in mechanical engineering to have knowledge of the information deployed in these patents and printed publications.” *Id.* at 31. Petitioner does not cite any evidence or authority to support its asserted level of ordinary skill. We note, however, that Dr. Davis states a slightly different view. Dr. Davis opines that a person of ordinary skill “would have the education and experience in automotive design, automotive manufacture, or mechanical engineering. Ex. 1007 ¶¶ 15, 16.

Patent Owner asserts a person of ordinary skill in the art at the time of the invention of the '905 patent 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’s proposed level of skill would include anyone with an undergraduate degree in mechanical engineering or similar discipline, regardless of whether they had any actual knowledge or experience in the present field of endeavor, i.e. windshield wiper blades. *See id.* at 1 (proposing “mechanical engineering . . . or . . . experience in the field”). Patent Owner’s proposed level would include virtually anyone with a mechanical engineering degree. We cannot accept Patent Owner’s proposed level of skill because it reads out at least “in the art” in “a person of ordinary skill in the art.”

Neither party presents a detailed evidentiary showing under the factors typically considered in determining the level of ordinary skill in the art. Factors pertinent to this determination include: (1) educational level of the inventor; (2) type of problems encountered in the art; (3) prior art

solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology, and (6) educational level of workers active in the field. Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case. *Id.* These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art. *Daiichi Sankyo Co. Ltd, Inc. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007).

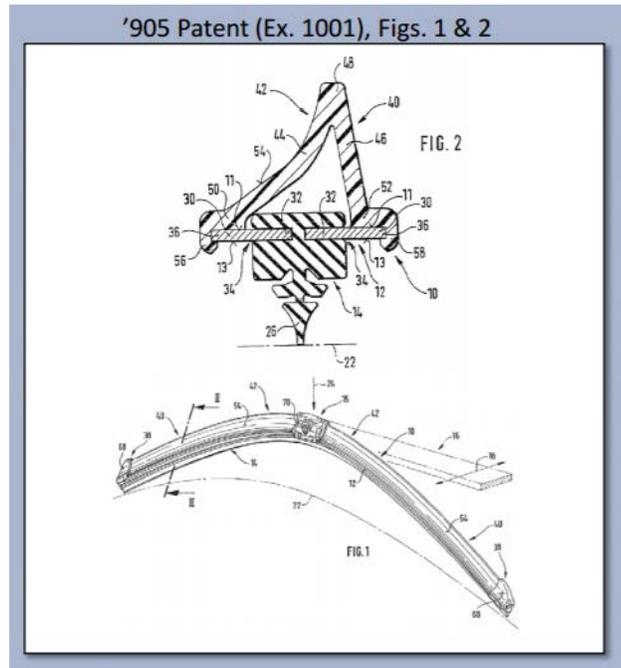
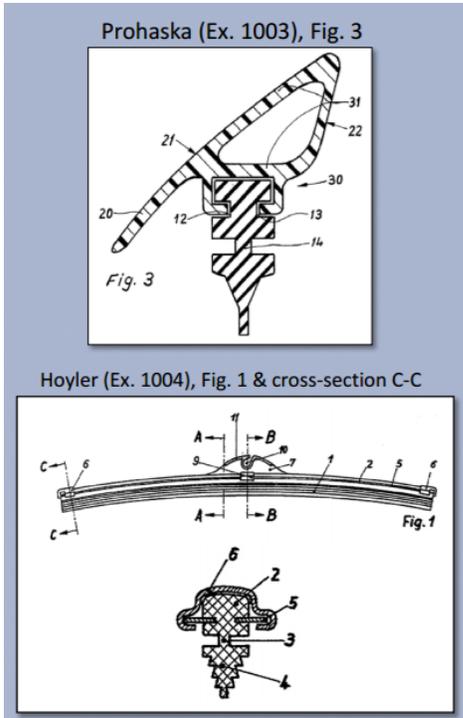
We adopt the level of skill proposed by Petitioner, as explained by Dr. Davis. A person of ordinary skill would have sufficient education and experience in mechanical engineering to have knowledge of and understand the information disclosed in the prior art discussed in the Petition. This includes experience in automotive design and manufacture. *See also Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“the prior art itself reflects an appropriate level [of skill]”).

3. *Obviousness in View of Prohaska and Hoyler*

In general, Petitioner asserts that it would have been obvious to clip the spoiler of Prohaska on the beam-style wiper of Hoyler. Pet. 36, 41–42, 46–47.

The figures below are excerpts from Petitioner’s Exhibit 1202, page 2, comparing the proposed combination of prior elements, shown on the left, to the disclosed structure in the ’905 patent on the right.⁹

⁹ We recognize that we compare the prior art to the *claimed* invention, not the *illustrated* invention. These illustrations, however, provide a useful aid to our analysis of the claimed invention.



Excerpt from Ex. 1202, 2 comparing Prohaska and Hoyler figures to '905 patent figures.

Petitioner identifies where Prohaska and Hoyler disclose each limitation of the challenged claims. Pet. 31–34, 37–41, 42–46. Petitioner asserts that Prohaska “teaches that existing wiper blades may be retrofitted by clipping wind deflector strips on a flexible strip, and that a flexible wind deflector strip may be inserted onto the head of the wiper strip.” *Id.* at 6 (citing Ex. 1003, 4:68–70) (“It is easily possible to retrofit a wiper blade by squeezing a spoiler against its flexible strip or clipping it on this flexible strip.”). Prohaska states that “conventional rubber wiper elements and supporting structure can be used.” Ex. 1003, 4:13–15. Moreover, Prohaska discloses that the:

embodiments shown illustrate a flexible strip which laps over the head of at least one wiper element. However it would also be possible to insert individual flexible strips in the head of the wiper element, which flexible strips either consist of steel as

usual or of plastics material, and to equip one of them with a spoiler.

Id. at 4:1–7.

Petitioner asserts, therefore, that the proposed combination is “nothing more than a simple arrangement of old elements with each performing the same function it had been known to perform yielding predictable results.”

Id. at 37; Ex. 1007 ¶ 50; *see also* Ex. 1007 ¶ 46 (“In my view it would have been well within the skill of a person of ordinary skill in the art to modify the elongations 32, 33 of Prohaska to clip to the springs 5 of Hoyler in order to implement this teaching.”).

a. Conventional vs. Beam Blades

Patent Owner’s basic argument against combining the disclosures of Prohaska and Hoyler is that a conventional blade, like Prohaska, is “fundamentally different” from a beam blade. PO Resp. 8–9. According to Patent Owner, they are not “interchangeable.” *Id.* at 8. We disagree.

The level of skill in the art is education and experience in mechanical engineering, with experience in automotive design and manufacture. This level of skill is not limited to the nuances or limitations of yoke or beam windshield wipers. A person with this level of skill and experience would be readily capable of adapting features from one type of windshield wiper to another.

Moreover, we have not been directed to any persuasive evidence that the disclosure of Prohaska is limited to any specific type of windshield wiper. Prohaska discloses, in general, the problem of the air stream of a moving vehicle causing the windshield wipers to lift from the windshield. Ex. 1003, 4:8–15. To solve this problem, Prohaska explains, “[i]t is easily possible to retrofit a wiper blade by squeezing a spoiler against its flexible

strip or clipping it on this flexible strip.” *Id.* at 4:68–70. Prohaska does not limit the problem and solution identified to any specific type of windshield wiper.

The specific embodiment in which Prohaska implements his disclosed invention is a yoke-style blade. *Id.* at 4:46. This does not limit the teaching of the disclosure to this specific embodiment. “A reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect.” *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907 (Fed. Cir. 1985).

As explained in *KSR*, “[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one.” 550 U.S. at 417.

Additionally, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve *similar devices* in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* (emphasis added).

Prohaska and Hoyler are “similar devices” and there is no persuasive evidence that the proposed combination is beyond the skill of a person with education and experience in mechanical engineering, and with experience in automotive design and manufacture. Moreover, as the Supreme Court informs us, “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” *Id.* at 421 (2007).

b. The “End Cap” Limitations

Patent Owner also asserts that neither Prohaska nor Hoyler disclose an “end cap,” as recited in the challenged claims.” PO Resp. 3–4. We disagree.

The Specification discloses that spring strips 30 are secured in longitudinal grooves 34 by end caps 38 disposed at each end of the wiper blade. Ex. 1001, 4:31–34. We have not been directed to any persuasive disclosure in the Specification that states a specific shape of the end caps or discloses a specific function other than merely securing the spring strips. *Id.*

As shown in the excerpt from Figure 1 in Hoyler, reproduced below, which shows only the right end of the wiper blade, Hoyler discloses “clamps” 6 at the ends of the wiper bar. Ex. 1004, 5 (The longitudinal springs 5 are inserted in lateral slots, held together *at the ends* of the bar by the clamps 6.” (emphasis added)).



Excerpt of right side of blade from Fig. 1 of Hoyler.

Thus, clamps 6 in Hoyler, like end caps 38 in the '905 patent, are positioned at the ends of the wiper blade and function to secure longitudinal spring strips.

In arguing that Hoyler “does not describe an end cap” (PO Resp. 4), Patent Owner asserts “a clamp [is] not an end cap” (*id.*). Patent Owner asserts “[a] person of ordinary skill in the art at the time of the invention would not have understood these ‘clamps’ to cap the ends of the wiper blade, that is, to cover the sharp corners that could scratch a car or a person.” *Id.* (citing Ex. 2003 at ¶ 69). We disagree.

As shown in the excerpt from Figure 1 of Hoyler, clamp 6 clearly has a flange or component that bends over the end of the blade. Clamp 6 covers the end and sides of the blade. Thus, it caps the end. We have not been directed to any limitations in the challenged claims that require the end cap to have a specific structure, to cover the *entirety* of the end of the blade, or to perform a specific function, such as to prevent scratching. Thus, the evidence does not support Patent Owner's argument.

Petitioner also asserts that because Prohaska does not have end caps, the Prohaska spoiler is not "disposed between and in contact with both the end caps and the device (element 15 in the '905 patent) connecting the wiper blade to the wiper arm, as recited in the claims. PO Resp. 7. We disagree.

The asserted basis of unpatentability is based on adding the spoiler of Prohaska to the blade of Hoyler. Pet. 36. Prohaska teaches that it is "reasonable to arrange spoilers in [the working points] of the wiper element." Ex. 1003, 4:107–112. These "working points" extend from end cap to end cap in Hoyler. Thus, when the spoiler of Prohaska is added to Hoyler, it would extend from end cap to end cap.

Hoyler discloses that "hump 7" is fastened in the center of the rubber blade. Ex. 1004, 5. Hump 7 is the "device" that connects the wiper blade to the wiper arm. *Id.* at 6 ("the hump includes an eyelet-like opening 10, which serves for the suspension at the wiper arm not shown."). Hump 7 is fastened to the wiper blade. *Id.* at 5. If the wiper blade of Hoyler is fitted with a spoiler, as suggested by Prohaska, the spoiler will thus contact hump 7 and extend from end cap to cap, contrary to Patent Owner's assertions. *See* Pet. 36–37 (citing Ex. 1007 ¶ 49).

c. A “Wind Deflection Strip” Having “Two Diverging Legs”

Patent Owner asserts that the spoiler disclosed in Prohaska combined with Hoyler do not meet the “wind deflecting strip” limitations in the claims because of “(1) the fundamental differences between conventional and beam blades; (2) the problems of wind lift and spoiler rigidity and mass reduction were not known in beam blades; and (3) the disadvantages mentioned by Prohaska of its hollow-shaped Figure 3 conventional spoiler.” PO Resp. 8–12.

We have addressed above Patent Owner’s reason 1.

As to reason 2, Prohaska addresses the problem of “wind lift” in general. *See* Ex. 1003, 4, ll. 8– (“the air stream striking the wiper blade laterally produces a lifting force at the supporting structure and at the wiper element”). Further, Hoyler teaches that flat-spring wipers should be designed so “[t]he weight of the moving parts can be largely reduced,” by using a “rubber or elastic plastic” component above the metal flat springs. Ex. 1004, 5.

As to reason 3, spoiler 20 of Prohaska, as shown in Figure 3, has two sides that diverge from a common base point, which are then connected by a wall. *Id.*, Fig. 3. It clearly is hollow with diverging legs. We acknowledge that Prohaska cautions that a hollow spoiler, “possibly migh[t] be disadvantageous.” Ex. 1003, 3:2–6. Prohaska indicates that the possible disadvantage stems from the pressure exerted by the airstream, which Prohaska proposes can be eliminated by a “close fit of the parts,” i.e., by filling the void in the hollow of the spoiler. *See id.* at 3:7–21. “The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference

with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.” *Winner Int’l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n. 8 (Fed. Cir. 2000).

The rationale for adding Prohaska’s spoiler to Hoyler’s windshield wiper is suggested by Prohaska – it solves the lift-off problem faced by all windshield wipers.

Petitioner asserts that a person of ordinary skill “would have understood that Prohaska *taught away* from using the Figure 3 hollow spoiler at all.” PO Resp. 12 (emphasis added) (citing Ex. 2003 ¶ 66). We find that Prohaska does not affirmatively teach away from a hollow spoiler; indeed it provides an embodiment specifically directed to a hollow spoiler. In addition, just because a patent teaches that a particular course of action has certain disadvantages does not preclude a person of ordinary skill in the art considering that course of action for what it teaches. *See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (“A reference does not teach away [...] if it merely expresses a general preference for an alternative invention but does not ‘criticize, discredit, or otherwise discourage’ investigation into the invention claimed.”). Prohaska identifies a potential disadvantage and then suggests a solution to overcome the identified disadvantage. This is not a teaching away from using the Prohaska spoiler technology in the Hoyler wiper.

d. Objective Evidence of Non-Obviousness

Objective indicia of non-obviousness play an important role as a guard against the statutorily proscribed hindsight reasoning in the obviousness analysis. *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1328 (Fed. Cir. 2016). “[E]vidence of secondary considerations may often be the most

probative and cogent evidence in the record.” *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). “[E]vidence rising out of the so-called ‘secondary considerations’ must always when present be considered en route to a determination of obviousness.” *Id.* at 1538. “For objective evidence . . . to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention.” *In re Kao*, 639 F.3d 1057, 1068 (Fed.Cir.2011) (quoting *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed.Cir.2010)) (emphasis omitted) (internal quotation marks omitted).

Patent Owner offers evidence it asserts shows objective evidence of non-obviousness (PO Resp. 17–23), in the form of commercial success (*id.* at 18–21), praise and awards (*id.* at 17–18, 21), copying/knockoff products (*id.* at 21), licensing (*id.* at 22–23), and long-felt need and failure of others (*id.* at 20–21, 23). Patent Owner recognizes there must be a nexus between the objective evidence and the merits of the claimed invention. *Id.* at 16. Patent Owner asserts the nexus is presumed because the objective evidence is tied to a specific product and that product is the invention claimed in the ’905 patent. *Id.*

Petitioner provides its arguments in rebuttal, asserting there is no nexus between the ’905 patent and any purported commercial success, and no success is established. Pet. Reply 15–22. Petitioner asserts correctly that Patent Owner submitted the same evidence in this case and in each of the other related *inter partes* reviews identified above – IPR2016-00034, 00038, 00039, 00040, and 00041. Petitioner asserts this “undermines [Patent Owner’s] commercial success arguments” because the ’905 patent and the patents that are the subject of the related IPRs are directed to different

inventions. *Id.* at 15 (citing *GraftTech Int’l Holdings, Inc. v. Laird Techs. Inc.*, No. 2015-1796, 2016 WL 3357427, at *5 (Fed. Cir. June 17, 2016)).¹⁰

We have reviewed the arguments and evidence cited in these papers.

i. Nexus

For objective indicia evidence to be accorded substantial weight, “a nexus must exist ‘between the evidence and the merits of the claimed invention.’” *Novartis Ag V. Torrent Pharmaceuticals*, No. 2016-1352, slip op. at 24, Fed. Cir. April 12, 2017) (citing *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). “[T]here is a presumption of nexus for objective considerations when the patentee shows 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 (citations omitted). The presumption of nexus is rebuttable. A patent challenger may respond by presenting evidence that shows the proffered objective evidence was “due to extraneous factors other than the patented invention.” *Id.* (citing *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1393 (Fed. Cir. 1988)). Such extraneous factors include additional unclaimed features and external factors, such as improvements in marketing. *WBIP*, 829 F.3d at 1329. *See, e.g., Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006) (holding that evidence that commercial success was due to unclaimed or non-novel features of device “clearly rebuts the presumption that [the commercial product's] success was due to the claimed and novel features”). *See also Novartis*, slip op. at 25 (stating that “In evaluating whether the requisite nexus exists, the identified objective indicia

¹⁰ This case was identified as “nonprecedential.” *See* Fed. Cir. R. 32.1 regarding the effect of nonprecedential dispositions.

must be directed to what was not known in the prior art”).

Patent Owner relies on two specific products to establish a presumption of nexus, its “Aerotwin” wiper blade (*e.g.*, PO Resp. 19)¹¹ and its “Icon” wiper blade (*e.g.*, *id.*). We determine that sufficient evidence establishes that Aerotwin and Icon products are embodiments of the claimed invention and that the proffered objective evidence relates to these products. This is sufficient to establish the presumption of nexus for the objective considerations at issue in this case. Thus, Patent Owner was entitled to rely upon the presumption of nexus for the objective considerations at issue, and the burden of production shifted to Petitioner to rebut that presumption with evidence if it sought to challenge nexus. A patent challenger cannot successfully rebut the presumption with argument alone—it must present evidence. *WBIP*, 829 F.3d at 1329. We also determine that Petitioner has not rebutted the presumption.

Patent Owner alleges its commercial Aerotwin and Icon blades “practice the challenged claims.” PO Resp. 19. Patent Owner asserts:

Both the Aerotwin blade and the Icon blade practice the challenged claims. Ex. 2014 at 3 (identifying products and patents); Ex. 2015 at 33–57, 59–62 (Aerotwin claim charts); Ex. 2016 at 30–43, 45–48 (Icon claim charts); Ex. 2007 at ¶ 6; Ex. 2005 at 234:25–235:4, 249:25–250:5, 252:17–254:21, 353:22–354:1, 359:12–360:4; Ex. 2006 at 698:19–699:22.

Id. We discuss below the evidence on which Patent Owner relies.

Exhibit 2014 is Patent Owner’s “Amended Response to Defendant Costco Wholesale Corporation’s First Set of Interrogatories (No. 1), dated

¹¹ The Aerotwin also is referred to as an “OE” wiper blade. PO Resp. 19, fn8.

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June 2, 2015, in *Robert Bosch LLC v. Alberee Products, Inc.*, in the District of Delaware, Case No. 12-574 (LPS).” PO Resp. at v. It lists the Aerotwin wiper as practicing the ’905 patent (along with 15 other patents), and Generation 1, 2, and 3 of the Icon wiper as practicing the ’905 patent (along with nine or more other patents). Ex. 2014, 3–4. This evidence is merely an allegation that Patent Owner’s Aerotwin and Icon wiper blades have incorporated the patented technology of the ’905 patent along with also incorporating the patented technology of numerous other patents. Ex. 2014, 3–5. The ’905 patent includes 19 claims. Only three claims are challenged in this *inter partes* review. The exhibit does not discuss any of the challenged claims, does not provide any analysis, and is not probative evidence establishing that the asserted objective evidence is tied to the invention disclosed and claimed in the challenged claims.

Exhibit 2015 is a series of claim charts mapping claims of various patents, including the ’905 patent, to the Aerotwin wiper. Ex. 2015, 33–57. Patent Owner identifies Exhibit 2015 as “Exhibit 24 to Complaint in *In the Matter of Certain Wiper Blades*, Inv. No. 337-TA-816 before the U.S. International Trade Commission (claim charts).” PO Resp., v. Exhibit 2015 maps claims 13, 16 (not at issue in this proceeding), 17, and 18 to the Aerotwin product. Ex. 2015, 33–57

Patent Owner provides a similar illustration for the Icon blade. Ex. 2016, 30–43. Patent Owner identifies Exhibit 2016 as “Exhibit 25 to Complaint in *In the Matter of Certain Wiper Blades*, Inv. No. 337-TA-816 before the U.S. International Trade Commission (claim charts).” PO Resp. v.

These claim charts map every element of the challenged claims to the Aerotwin and Icon products. We have no evidence or testimony about the source or underlying facts about the preparation of these charts prepared for litigation. Nonetheless, we give this evidence probative weight.

Patent Owner also relies on the declaration testimony of Martin Kashnowski to establish a presumption of nexus with its objective evidence. PO Resp. 19 (citing Exhibit 2007 ¶ 6). Mr. Kashnowski is employed by Patent Owner as Director, Commodities Management. Ex. 2007 ¶ 1. He also served as Director of Product Management for Wiping Systems. *Id.* Mr. Kashnowski refers to general acclaim and commercial success of the Aerotwin and Icon blades. *Id.* at ¶ 3–5. Mr. Kashnowski then testifies:

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.

Id. at ¶ 6 (emphasis added). Mr. Kashnowski further testifies that:

The commercial success of the Icon product was in contrast to the failure of a competitor’s beam-blade product, the Trico Innovision wiper blade. The Trico product was introduced in 2004, before Icon, but it *failed in the marketplace*. The *Trico product included neither a flexible spoiler nor end caps*.

Id. at ¶ 7 (emphasis added).

Mr. Kashnowski refers to “quiet” blades, but the challenged claims do not recite a “quiet” blade. We discount this part of his testimony in evaluating the presumption of nexus.

Mr. Kashnowski's testimony refers generally to spoilers with diverging legs and end caps, as recited in the challenged claims, but the claimed invention in the challenged claims is more than just spoilers and end caps. Nonetheless, this evidence has some probative value in establishing that the asserted objective evidence is tied to the invention disclosed and claimed in the challenged claims.

“Questions of nexus are highly fact-dependent ‘It is within the province of the fact-finder to resolve these factual disputes regarding whether a nexus exists between commercial success of the product and its patented features, and to determine the probative value of evidence of secondary considerations.’” *WBIP*, 829 F.3d at 1331 (citing *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1574 (Fed. Cir. 1996)).

We recognize that it is the claimed combination as a whole that serves as a nexus for the objective evidence. *WBIP*, 829 F.3d at 1330; *see also id.* at 1332 (stating that this is especially true for a combination of elements that were known individually in the prior art, because commercial success may be linked to the inventive combination of known elements).

Proof of nexus is not limited to only when objective evidence is tied to the supposedly new features of a claimed invention. *Id.* at 1331 (“We further reject Kohler's categorical claim that objective evidence must be tied exclusively to claim elements that are not disclosed in a particular prior art reference in order for that evidence to carry substantial weight.”).

Based on the totality of the evidence before us, we determine that Patent Owner has established a presumption of nexus. Thus, the burden of production shifts to Petitioner to rebut that presumption with evidence.

Petitioner provides legal argument, but not evidence. Petitioner asserts:

“there can be no legally significant nexus between the ’905 Patent and any alleged success because Bosch’s evidence is that that features of the purportedly successful Aerotwin and Icon wiper products are either ‘unclaimed’ in the ’905 Patent, *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed Cir. 2006), or were ‘known in the prior art,’ *Ethicon Endo-Surgery, Inc. v. Covidien LP*, 812 F.3d 1023, 1034 (Fed. Cir. 2016).

Pet. Reply 15. Petitioner also criticizes the evidence on which Patent Owner relies (*id.* at 15–17), but offers no persuasive evidence of its own rebutting nexus.

Accordingly, we determine that there is a presumption of nexus. Establishing nexus, however, does not establish commercial success or patentability. We consider below the objective evidence of non-obviousness asserted by Patent Owner. We then consider the totality of the evidence in our conclusion on patentability.

ii. Praise

Evidence that the industry praised a claimed invention or a product which embodies the patent claims weighs against an assertion that the same claim would have been obvious. *WBIP*, 829 F.3d at 1334. Patent Owner states the Aerotwin was “given a number of awards,” but only mentions two awards, the Pace award and the Automechanika award. PO Resp. 17. Patent Owner also asserts that “[t]he Icon blade was subject to praise” (*id.* at 18), but describes it only as “the Frost & Sullivan award for innovation” (*id.* at 21 (citing Ex. 2007 ¶ 8)). There is no description of these awards, copies of them, or persuasive evidence as to what these awards were for and

how specifically they relate to the claimed invention. We determine that this praise for the Aerotwin and Icon products has minimal probative weight.

iii. Long Felt Need

Long-felt need can be shown by evidence that indicates that the prior art had a recognized need for a solution to the problem and that others had tried and failed to find a solution to that problem. *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1325 (Fed. Cir. 1999); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1540 (Fed. Cir. 1983). Notably, the case law characterizes the need in terms of a long-felt but *unresolved* need. *Al-Site*, 174 F.3d at 1325 (discussing “long felt but unresolved needs”).

Accordingly, Patent Owner must show that the need was both known and not resolved.

Patent Owner alleges that the commercial success of the Icon product was in contrast to the failure of a competitor’s beam-blade product, the Trico Innovision wiper blade. PO Resp. 20. This relates only to the Icon blade, not the Aerotwin. But Patent Owner acknowledges that the Trico wiper did not have similar features such as a spoiler or end caps. *Id.* at 21. Further, the prior art already included wipers with spoilers (e.g., Prohaska) and end caps (e.g., Hoyler), such that a long felt need for these features, had there been any, was resolved.

iv. Copying

For copying to be effective in showing non-obviousness, there must be more than simply a competing version of the product. *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) (“Not every competing product that arguably falls within the scope of a patent is evidence of copying. Otherwise every infringement suit would

automatically confirm the nonobviousness of the patent.”). Evidence of copying can be particularly persuasive when a competitor had tried and failed to introduce a competing product until the patented product became available. *Vandenberg v. Dairy Equipment Co., a Div. of DEC Int’l, Inc.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984). We have no such evidence in this case.

Patent Owner alleges that it created a new “market category” with its Aerotwin and Icon blades, and that others sold “knockoff” products” that “looked identical to the Icon.” PO Resp. 21. Thus, this evidence relates only to the Icon. Patent Owner cites a single lawsuit it filed based on these alleged knock-off products. *Id.* at 22. Merely offering competing products or alleging infringement are not signs of non-obviousness. *Wyers v. Master Lock*, 616 F.3d at 1246 (Fed. Cir. 2010). The secondary consideration of copying is very specific—“evidence of efforts to replicate a specific product.” *Id.* This specifically is not *evidence of efforts to provide a competing product* or *evidence of a product having the same features*, or we would be reading out the crux of the basis for the court’s reasoning in *Wyers*, that “[n]ot every competing product that arguably falls within the scope of a patent is evidence of copying.” *Id.* Here, we have no evidence of efforts to replicate a specific product.

Thus, the evidence on which Patent Owner relies has no probative weight of copying.

v. Commercial Success

Patent Owner offers some sales figures that allegedly show commercial success of the Icon. PO Resp. 21. We have no sales data for the Aerotwin. Patent Owner merely lists Icon sales figures for three different

years and touts this as “significant.” *Id.* (citing Ex. 2007 ¶ 8). It is not clear to us where these sales figures come from; Patent Owner offers no discussion of their origin. There also is no evidence explaining the significance of sales in these three years, compared, for example, to prior and subsequent years. Mr. Kashowski, recites these numbers without providing supporting documentation. Ex. 2007 ¶¶ 1, 8. Taking them at face value, these raw sales figures are of little use. Patent Owner alleges the sales numbers are “significant” but provides no explanation or evidence in support, and Mr. Kashowski’s verbatim testimony likewise is not supported by evidence. This characterization is not credible evidence of commercial success, and the numbers by themselves are also not credible evidence of commercial success. This evidence has little or no probative value of commercial success.

Patent Owner also refers to licensing agreements with competitors as objective evidence of patentability. PO Resp. 22–23. Patent Owner states the licensing agreements relate to its family of “beam-blade patents,” and that “most” of these agreements include the ’905 patent. *Id.* We find this generic evidence of little or no probative weight of commercial success.

vi. Conclusion Regarding Objective Evidence

Based on the analysis above, we find a nexus between the asserted objective evidence and the ’905 patent. However, considering the totality of objective evidence before us, we determine that the objective evidence has little if any probative weight in support of patentability of the challenged claims.

C. Conclusion Regarding Patentability

Based on the totality of evidence before us and the analysis above, we

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are persuaded that a preponderance of the evidence establishes that claims 13, 17, and 18 would have been obvious to one of ordinary skill in the art based on Prohaska and Hoyler.

IV. ORDER

In view of the foregoing, it is hereby:

ORDERED that claims 13, 17, and 18 of the '905 patent have been shown by a preponderance of the evidence to be unpatentable;

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

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

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

and

FURTHER ORDERED that this is a Final Written Decision under 35 U.S.C. § 318(a), and that parties to the proceeding seeking judicial review of the decision under 35 U.S.C. § 319 must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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