

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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NORTHERN STAMPING CO.,  
Petitioner,

v.

HORIZON GLOBAL AMERICAS INC.,  
Patent Owner.

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IPR2021-01411  
Patent 10,589,585 B2

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Before WILLIAM V. SAINDON, SCOTT B. HOWARD, and  
MATTHEW S. MEYERS, *Administrative Patent Judges*.

SAINDON, *Administrative Patent Judge*.

JUDGMENT  
Final Written Decision  
Determining All Challenged Claims Unpatentable  
Dismissing Petitioner's Motion to Exclude  
Denying Patent Owner's Motion to Amend

*35 U.S.C. § 318(a)*

## I. INTRODUCTION

### A. Background and Summary

Northern Stamping Co. (“Petitioner”) filed a Petition (Paper 4, “Pet.”) requesting *inter partes* review of claims 16–20 (“the challenged claims”) of U.S. Patent 10,589,585 B2 (Ex. 1001, “the ’585 patent”). Horizon Global Americas Inc. (“Patent Owner”) filed a preliminary response (Paper 9). Upon consideration of the arguments and evidence set forth and discussed in those papers, we instituted an *inter partes* review under 35 U.S.C. § 314(b) and 37 C.F.R. § 42.4(a) (2020). Paper 10 (“Decision on Institution” or “Dec. Inst.”).

During the trial phase of the proceeding, Patent Owner filed a Response (Paper 20, “PO Resp.”), Petitioner filed a (corrected) Reply (Paper 31, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 34, “PO Sur-reply”).

Patent Owner also filed a Contingent Motion to Amend (Paper 21, “Mot. Amend”), to which Petitioner filed an (corrected) Opposition (Paper 32, “Opp. Mot. Amend”), Patent Owner filed a Reply (Paper 35, “Reply Mot. Amend”), and Petitioner filed a Sur-reply (Paper 40, “Sur-reply Mot. Amend”).

In addition, Petitioner filed a Motion to Exclude Evidence (Paper 39, “Mot. Excl.”), to which Patent Owner filed an Opposition (Paper 41, “Opp. Mot. Excl.”) and Petitioner filed a Reply (Paper 42, “Reply Mot. Excl.”).

We held an oral hearing on November 22, 2022, a transcript of which is available in Paper 44 (“Tr.”).

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

claims 16–20 of the ’585 patent. For the reasons discussed below, Petitioner has demonstrated by a preponderance of the evidence that claims 16–20 of the ’585 patent are unpatentable. Further, Petitioner has demonstrated by a preponderance of the evidence that proposed substitute claim 21 is unpatentable, and proposed substitute claim 22, which depends therefrom. We dismiss Petitioner’s Motion to Exclude as moot.

*B. Real Parties in Interest*

The parties each identify themselves as the only real parties in interest. Pet. 75; Paper 7, 2 (Patent Owner’s Mandatory Notice).

*C. Related Matters*

The parties both identify *Horizon Global Americas Inc. v. Northern Stamping, Inc.*, Case No. 1:20-cv00310 (N.D. Ohio) as a related matter, where Patent Owner asserts that Petitioner infringes the ’585 patent. Pet. 75–76; Paper 7, 2.

*D. Technology Background and the ’585 Patent*

The ’585 patent generally relates to a trailer hitch mounting system that is located under a bed of a vehicle (e.g., a pickup truck). *See* Ex. 1001, code (57). Mounting a hitch in front of or over the axle of the vehicle allows for improved weight distribution relative to the front and rear axles of the vehicle (versus hitches on or under the rear bumper), allowing the vehicle to tow more weight. Ex. 1009, 1:6–34. In general, there are two main types of in-bed hitch mounting systems.

The first type is a “gooseneck” hitch, where the towing vehicle offers a ball and the trailer has a hitch that couples with the ball. Figure 4 of Withers,<sup>1</sup> reproduced below, shows a gooseneck hitch.

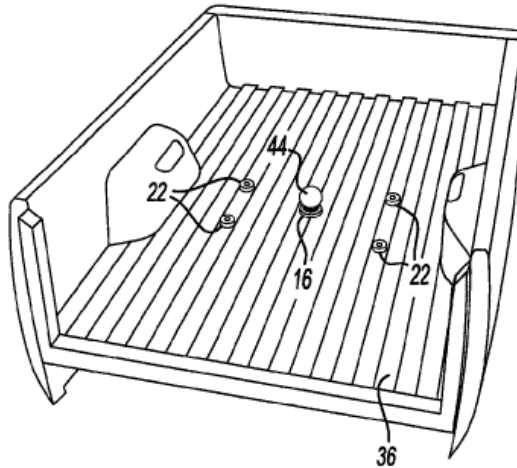


**Fig-4**

Figure 4 of Withers depicts gooseneck receiver ball 44 in the middle of pickup truck bed 36 approximately over the rear axle. Ex. 1012, 2:35–36.

The second type is a “fifth wheel” hitch, where the towing vehicle offers a receiver plate and the trailer has a kingpin that is captured by the plate. Figure 6 of Withers, reproduced below, shows a fifth wheel hitch.

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<sup>1</sup> US 7,793,968 B1, iss. Sept. 14, 2010 (Ex. 1012).

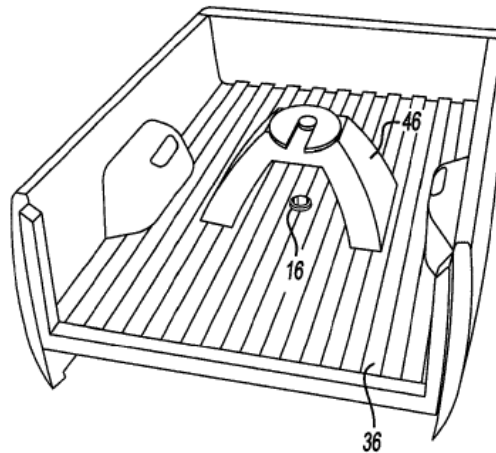


**Fig-6**

Figure 6 of Withers depicts fifth wheel pedestal 46 in the middle of pickup truck bed 36 approximately over the rear axle. Ex. 1012, 2:40–42. The key distinction between the two is the type of connection, with a gooseneck style of hitch having a ball and coupler, and the fifth wheel style of hitch having a kingpin and receiver.<sup>2</sup> See Ex. 1001, 2:16–17; Prelim. Resp. 7.

The '585 patent states that both gooseneck and fifth wheel hitches were known, but alleges that vehicles were generally configured to accommodate one or the other, not both. Ex. 1001, 2:30–31. Conversion between hitch types was known, but was allegedly time and labor intensive and inefficient. *Id.* at 2:32–34. Thus, the '585 patent proposes a structure that can accommodate both types of hitches. *Id.* at 2:39–42. Figure 4 is exemplary and reproduced below:

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<sup>2</sup> Caution is advised when relying on the terms “gooseneck” and “fifth wheel” alone to imply a given connection structure, however, because there is indication in the record (discussed below) that “fifth wheel” may generically refer to any type of hitch in which the trailer connects to a structure inside the bed of the vehicle. To the extent further clarity is required, we will specifically refer to the physical structures involved (i.e., ball/coupler vs. kingpin/receiver).

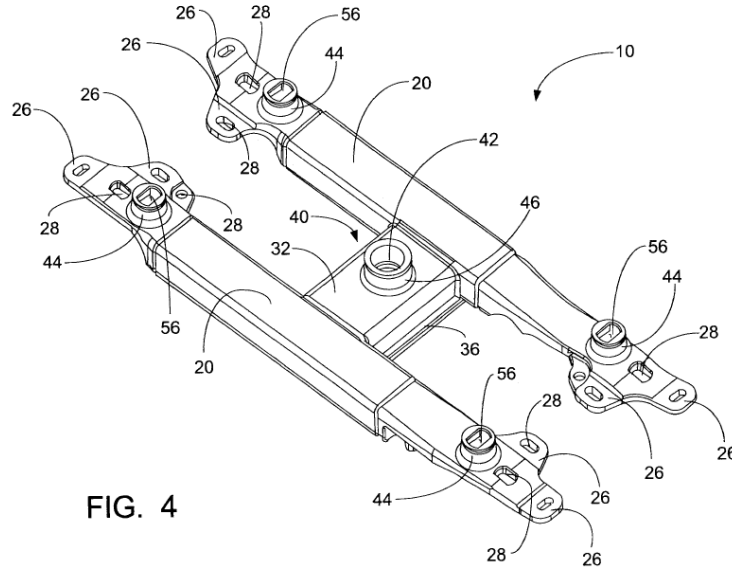


FIG. 4

Figure 4 of the '585 patent is a perspective view of an underbed hitch mounting system. Ex. 1001, 3:2–3. The system is made of two rails 20 connected by mid rail 40 to form an H-shape. *Id.* at 6:10–18. The ends of each rail 20 are connected to the underbed of the vehicle with mounting flanges 26 and mounting apertures 28. *Id.* at 6:19–29. Mid rail 40 includes socket 42 for receiving hitch ball 18. *Id.* at 5:50–52. Rails 20 include sockets 30 to hold receiving members 44 (also called “pucks”), which secure legs of fifth wheel hitches (not shown). *Id.* at 5:27–45. Because the hitch mounting system is under the bed, and any hitch ball as well as any fifth wheel hitch are removable, if none are installed then the truck bed can be used without obstruction. *See, e.g., id.* at 3:26–31, 5:27–39.

#### *E. Illustrative Claims*

Claim 16, reproduced below, is the sole independent claim challenged.

16. A hitch mounting system comprising:

a pair of tubular members each having a cross-sectional shape a substantial portion of which is defined by an enclosed peripheral wall with a generally hollow section;

a mid rail attached to each of and between said pair of tubular members, spacing said pair of tubular members apart, said mid rail having a socket capable of accepting a gooseneck hitch ball; and

a pair of receiving members attached with each of said pair of tubular members; said receiving members configured to engage a leg of a fifth wheel hitch.

*F. Prior Art and Asserted Grounds*

Petitioner asserts that claims 16–20 would have been unpatentable on the following grounds:

| <b>Claim(s) Challenged</b> | <b>35 U.S.C. §<sup>3</sup></b> | <b>Reference(s)/Basis</b>                                           |
|----------------------------|--------------------------------|---------------------------------------------------------------------|
| 16–20                      | 103(a)                         | Works <sup>4</sup> , Fandrich <sup>5</sup> , Lindenman <sup>6</sup> |
| 16–20                      | 103(a)                         | Lindenman, Fandrich, Works                                          |
| 16, 17, 19                 | 102(e)                         | Withers <sup>7</sup>                                                |

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<sup>3</sup> The '585 patent was filed on Dec. 4, 2017, and claims priority back to Oct. 30, 2008. Ex. 1001, codes (22), (60), (63). Petitioner disputes the effective priority date, asserting it “cannot be . . . before October 30, 2009 (the filing date of the earliest non-provisional application in the . . . family).” *See, e.g.*, Pet. 12. Regardless of the outcome of that dispute, it appears that Patent Owner is entitled to a filing date prior to March 16, 2013, and we apply the versions of 35 U.S.C. §§ 102 and 103 that were in force before they were amended by the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (2011).

<sup>4</sup> US 6,969,090 B1, iss. Nov. 29, 2005 (Ex. 1009).

<sup>5</sup> US 6,467,791 B1, iss. Oct. 22, 2002 (Ex. 1011).

<sup>6</sup> US 7,121,573 B2, iss. Oct. 17, 2006 (Ex. 1010).

<sup>7</sup> US 7,793,968 B1, filed June 23, 2009, iss. Sept. 14, 2010 (Ex. 1012).

## II. PATENTABILITY ANALYSIS

### A. Legal Standards Used in the Merits Analysis

“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to Patent Owner. See *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

“A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. Inc., v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987); see also *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir. 2008) (to anticipate a patent claim under 35 U.S.C. § 102, “a single prior art reference must expressly or inherently disclose each claim limitation”). Anticipation is a question of fact, as is the question of what a prior art reference teaches. *In re NTP, Inc.*, 654 F.3d 1279, 1297 (Fed. Cir. 2011). Moreover, “[b]ecause the hallmark of anticipation is prior invention, the prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

A claim is unpatentable under 35 U.S.C. § 103 if “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 . . . 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 skill in the art; and (4) when in evidence, objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

#### *B. Level of Ordinary Skill in the Art*

Petitioner asserts the following level of ordinary skill in the art:

a bachelor’s degree in mechanical engineering or a related discipline, and at least one to two years of industry experience in the design, development or manufacture of mechanical devices, including, for example, automotive or mounting systems, or equivalent experience, education or both.

Pet. 25 (citing Ex. 1007 ¶¶ 1–19).

Patent Owner “does not challenge this definition,” which is the same one we used in our Decision on Institution. PO Resp. 11; Dec. Inst. 19–20. Reviewing the ’585 patent and the cited prior art, and in the absence of dispute, we maintain Petitioner’s definition in this decision.

#### *C. Claim Construction*

Petitioner offers a construction of the term “tubular members each having a cross-sectional shape a substantial portion of which is defined by an enclosed peripheral wall with a generally hollow section,” as recited in

independent claim 16. Pet. 25–26. However, reviewing the parties’ briefs, we see no utility in construing the term (or any other) because claim construction does not appear to be in dispute. PO Resp. 11–12 (stating that Patent Owner “contends that the issues to be resolved . . . can be done so without any express constructions”); see *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (holding that “only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”).

*D. Obviousness over Works, Fandrich, and Lindenman  
(Claims 16–20)*

Claim 16 is directed to a trailer hitch that combines a socket for a ball/coupler-type of hitch with sockets for a kingpin/receiver type of hitch. The socket for the ball/coupler type of hitch is located on a mid rail, which connects two tubular cross members in an “H” configuration. The sockets for the kingpin/receiver type of hitch, called “receiving members,” are located on the cross members. The other challenged claims, which are not argued separately, depend therefrom.

*1. Petitioner’s Ground*

Petitioner asserts that claims 16–20 would have been obvious in view of Works, Fandrich, and Lindenman. Pet. 26–48. As will be explained in more detail below, Petitioner asserts that Works discloses each of the limitations except for the receiving members, which it asserts are disclosed in Lindenman. See *id.* Fandrich is provided merely to show in more detail something already described in Works (tubularly-shaped cross members). *Id.* at 35–36; see also *id.* at 27 (stating that “*Works* only describes its tubular members textually” and “for the avoidance of doubt” also cites Fandrich).

Patent Owner does not dispute that Petitioner's proposed combination is missing any limitations, but does dispute Petitioner's rationale for the proposed combination. *See generally* PO Resp. To provide context for the rationale discussion, we walk through the various limitations and how the prior art shows them.

As to claim 16, Petitioner asserts that Works discloses a hitch mounting system having a pair of tubular members (cross members 18, 19) (Pet. 34–37), and a mid rail (base member 17) attached to the tubular members having a socket 24 capable of accepting a gooseneck hitch ball 10 (*id.* at 37–39). Petitioner offers a colorized version of Figure 2 of Works, reproduced below:

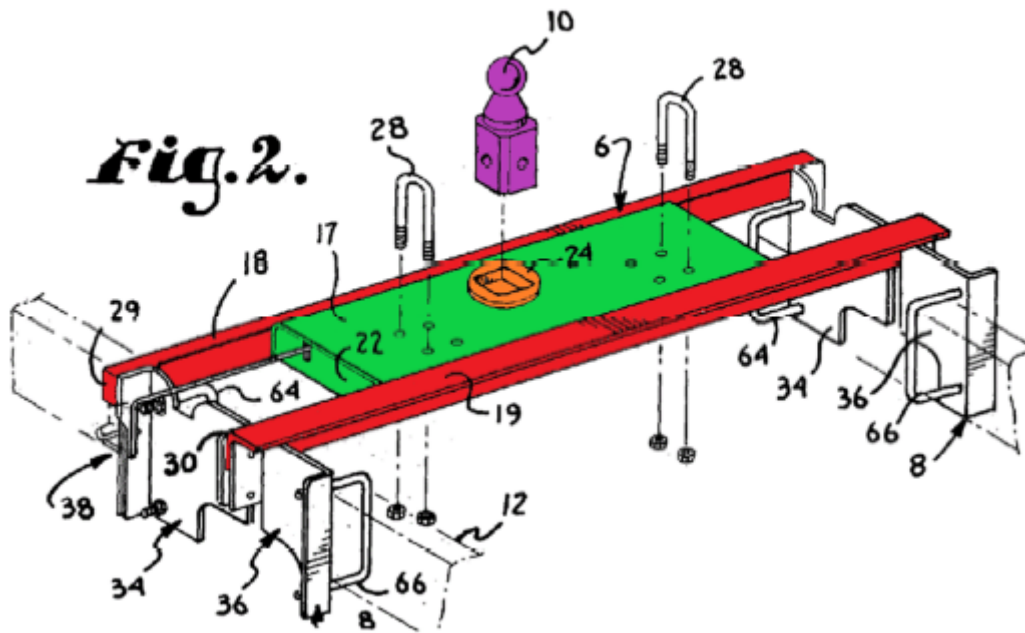


Figure 2 of Works, as annotated by Petitioner, depicts a partially exploded perspective view of a hitch mounting system with cross members 18, 19 (red), base member 17 (green), socket 24 (orange) attached between the cross members, and gooseneck hitch ball 10 (purple) in the base member. Ex. 1009, 4:20–31.

Petitioner acknowledges that Figure 2 of Works depicts cross members 18, 19 as angle bars rather than tubes, but directs our attention to a passage in Works that explains that “cross members 18 and 19 could be . . . I-shaped members, channels, *round or square tubes*, or the like.” Pet. 35 (quoting Ex. 1009, 4:60–62) (emphasis added). Notwithstanding the fact that Works explicitly teaches tubular cross members, Petitioner also directs our attention to Fandrich, which shows a hitch mounting system having “generally hollow tube[s]” for the cross members. *Id.* at 35–36 (quoting Ex. 1011, 3:64–66).

Petitioner then states that neither Works nor Fandrich discloses the claimed receiving members, but asserts that receptacles 14 in Lindenman are receiving members. Pet. 39–40. In particular, Petitioner directs our attention to Figure 1 of Lindenman, a version colorized by Petitioner is reproduced below:

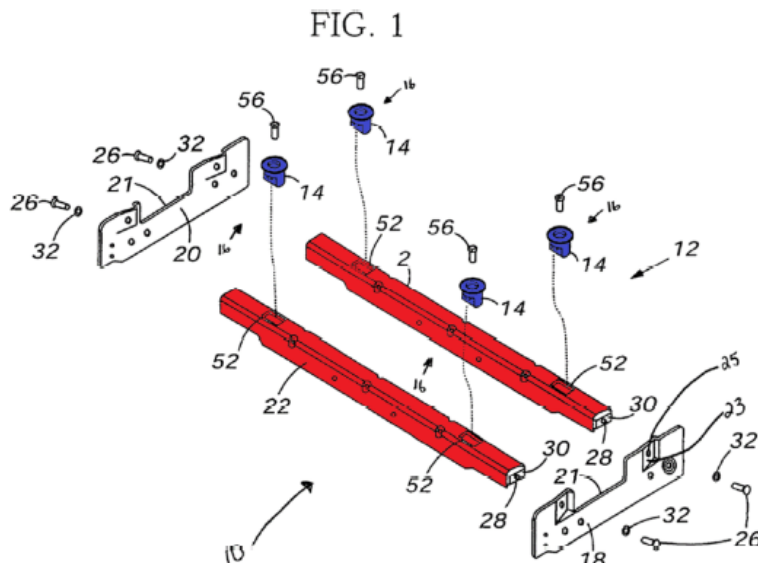


Figure 1 of Lindenman, as annotated by Petitioner, depicts an exploded perspective view of a vehicle accessory mounting system. Ex. 1010, 2:44–45. Two receptacles 14 (purple) are provided in each of two cross members

(red); the receptacles are for attaching “a number of different vehicle accessories” such as a fifth wheel hitch or “article anchor.” *Id.* at 1:49–52, 4:23–25, 5:10–11, Fig. 5. Petitioner asserts it would have been obvious to add the receptacles of Lindenman to the support members of Works-Fandrich. Pet. 31–32, 39.

Accordingly, Petitioner has shown how Works, Fandrich, and Lindenman disclose each element as arranged in claim 16, and Patent Owner has not contested that the references teach each element as asserted by Petitioner. For the same reasons set forth in the Petition, we find that Works, Fandrich, and Lindenman disclose each element as arranged in claim 16. The disputed issue is the reason for combining the references.

On that issue, Petitioner asserts that it would have been obvious to take a hitch system using one known connection method (a centrally-located socket, e.g., Works) and add a second known connection method (cross member-mounted sockets, e.g., Lindenman, Fandrich), which would predictably provide the functions of both connection methods. Pet. 29 (asserting that a person of ordinary skill in the art would have reason to “enhance *Works/Fandrich* . . . to provide a hitch mounting system capable of accommodating a variety of accessories, including fifth-wheel or gooseneck-style hitches”). Petitioner notes that the prior art demonstrates a desire for versatility in the art—“mounting systems capable of accepting a variety of accessories.” *Id.* (citing Ex. 1007 ¶ 84, quoting Ex. 1010, 1:46–52).

## *2. Argument that Works Already Teaches a Kingpin/Receiver Hitch*

Patent Owner’s chief argument is that Works can already accommodate both gooseneck and fifth-wheel hitches, such that there is no reason to add structures in order to accommodate both. PO Resp. 37–43; PO

Sur-reply 3–5, 8. *But see* Pet. Reply 17–19 (arguing against). In effect, Patent Owner is arguing that Petitioner’s proposed modification adds a redundant feature for no reason beyond hindsight. *See, e.g.*, PO Sur-reply 8 (“because . . . Works . . . already accomplishes that objective without modification, that evidence cannot establish the motivation to modify”). We are not persuaded by Patent Owner’s argument for the reasons described below.

Patent Owner is incorrect to assert that Works teaches receiving a kingpin/receiver hitch. As we explained in our Decision on Institution, although Works uses the term “fifth wheel,” it does so not to describe a kingpin/receiver hitch, but to describe its towing connector *generically*. Dec. Inst. 26–27. In particular, reading Works in context, it describes the “fifth wheel” as requiring a “hitch ball” where it explains that “[i]n order to allow the trailing vehicle to be connected to a fifth wheel type hitch, a ‘gooseneck’ type extension is utilized.” Ex. 1009, 1:26–41 (*italics added*). Thus, Works defines its “fifth wheel” as the *gooseneck* type of hitch. When Works says “fifth wheel” it is describing a ball/coupler hitch, not a kingpin/receiver hitch.

Notwithstanding the express disclosure of Works, Patent Owner asserts that both experts “agree” that Works teaches a kingpin/receiver hitch. *See, e.g.*, PO Resp. 37 (“Both experts now agree that a POSITA would readily have understood that the hitch[] of Works . . . had the capability of accommodating fifth wheel hitches.”); PO Sur-reply 4 (describing “Petitioner’s expert’s own concession about what Works teaches”). But Patent Owner’s arguments here are at best a mischaracterization of the testimony, based on Patent Owner’s tendency to use the word “Works” to refer to things that are not Works. These arguments rely on a catalog

depicting a commercial product allegedly made by the assignee of the Works patent. *See, e.g.*, PO Resp. 38 (asserting that “the underbed hitch system described in Works is still being sold”); Ex. 2012 (B&W company product catalog, allegedly published in 2021, and allegedly showing products covered by the Works patent); Ex. 2014 (same, but colorized).<sup>8</sup> Petitioner’s ground is premised on the Works *patent*, not on a commercial product allegedly stemming from that patent. Patent Owner’s catalog evidence does change what Works itself says.

Further, Patent Owner’s catalog evidence is not persuasive in showing the knowledge of a person of ordinary skill in the art *at the time of invention* because the catalogs were allegedly published in 2021, well past the time of invention. *See, e.g.*, PO Resp. 37 (asserting “the hitch[] of Works . . . had the capability of accommodating fifth wheel hitches” and citing Ex. 2011, 64:18–65, 68:9–12); PO Sur-reply 3–4 (citing Ex. 2011, 64:18–65:19).<sup>9</sup> Patent Owner’s characterization of the testimony of Petitioner’s expert is unpersuasive because the expert was asked about his present abilities to obtain a product to adapt what is disclosed in Works; the relied-upon testimony is not about what Works teaches or how a person of ordinary skill in the art would have understood the prior art at the time of invention. For example, Petitioner’s expert is asked if he could “get” or “connect” an accessory that would adapt Works’ hitch into a kingpin/receiver type of hitch. Ex. 2011, 65:10–19 (emphasis added). The question was directed to

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<sup>8</sup> For simplicity, we will refer only to Exhibit 2012 catalog.

<sup>9</sup> We assume only for the sake of argument that Patent Owner has established sufficient public availability of the catalog as of 2021. *Cf.* Ex. 2004 ¶ 100, n.1 (the expert merely asserting he found the catalog on a B&W website in 2022).

whether a company *sells* (present tense) a product that allows converting a center socket (i.e., for a ball/coupler hitch, as in Works) into a kingpin/receiver hitch. *Id.* at 64:18–65:2. Patent Owner also cites testimony where Petitioner’s expert is discussing the “Companion” product from Exhibit 2012, but again, this testimony is not what Works discloses or what the person of ordinary skill in the art knew at the time of invention. *Id.* at 68:9–12. In sum, we find that Petitioner’s expert has not conceded that a person of ordinary skill in the art would have understood Works to be describing a kingpin/receiver hitch, or that a person of ordinary skill in the art was aware of a product that converted Works’s hitch into a kingpin/receiver hitch.

Similarly, Patent Owner’s reliance on the testimony of its own expert is unpersuasive because it is conclusory or based on the product catalog in Exhibit 2012 instead of Works. *See, e.g.*, PO Resp. 37 (citing Ex. 2004 ¶¶ 67, 97–102, 109–111). Patent Owner’s expert first testifies that B&W Hitches, assignee of Works, “solve[d] the problem of utilizing a gooseneck hitch platform for 5<sup>th</sup> wheel attachment” with the “Companion” product. Ex. 2004 ¶ 67. We do not credit this testimony because we are not given competent supporting evidence, nor a timeframe or context, so it is not clear how the testimony is material to the inquiry of how a person of ordinary skill in the art would have understood the prior art at the time of invention. *See* 37 C.F.R. §§ 42.63(a) (evidence must be submitted in the form of an exhibit), 42.65(a) (expert testimony must disclose underlying facts). Patent Owner’s expert then testifies that “Works already can . . . accommodate both a fifth wheel and goose style hitch.” Ex. 2004 ¶ 97. This testimony cites to the language in Works we have addressed above, but fails to provide any explanation in support of the expert’s assertion, or that offers a persuasive

alternative to the plain reading—that Works does not disclose a kingpin/receiver hitch. *Id.* ¶ 99 (citing Ex. 1009, 1:26–41, 2:33–43). The testimony also relies on the Exhibit 2012 catalog, which is not Works and is too far removed from the date of invention to tend to show the level of ordinary skill in the art *at the time of invention*.<sup>10</sup> *Id.* ¶¶ 97–102. Lastly, the testimony in paragraphs 109–111 are premised on the same faulty reading of Works, and are without supporting evidence.<sup>11</sup> *See* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

In summary of the above, Patent Owner’s arguments and evidence that a person of ordinary skill in the art would have been aware of the products allegedly currently made by the assignee of the Works patent is immaterial as to what Works teaches. Patent Owner’s arguments that Works already discloses a kingpin/receiver hitch or that a person of ordinary skill would have understood that a commercial adapter for Works was on the market at the time of invention is not supported by credible evidence. And even if it were, Works still teaches what it teaches (i.e., no kingpin/receiver hitch). Accordingly, we find that Works does not teach a kingpin/receiver hitch.

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<sup>10</sup> For this reason, Patent Owner’s and its expert’s related arguments that a person of ordinary skill in the art would have been aware of Works’s ability to be converted to receive a kingpin/receiver type of hitch (*e.g.*, PO Resp. 38–40; PO Sur-reply 3–5) is unpersuasive because it is not supported by evidence. 37 C.F.R. § 42.65(a).

<sup>11</sup> The testimony has placeholders for where supporting evidence could have been placed, but were not filled in. Ex. 2004 ¶ 111 (“In addition to this there were already solutions in the aftermarket to accommodate a 5th wheel in a gooseneck hitch (EXAMPLES) and a gooseneck in a 5th wheel hitch (EXAMPLES).”).

3. *Argument About the Rationale for Incorporating  
Features from Lindenman*

Patent Owner’s chief argument about rationale is premised on its unpersuasive allegation that Works already teaches a kingpin/receiver hitch, which we found unpersuasive above. To the degree Patent Owner is arguing a lack of rationale for the combination separate from that, we address Petitioner’s rationale for incorporating the receiving members of Lindenman to the hitch of Works. *See, e.g.*, PO Sur-reply 2–3, 5–8.

Initially, we find that combining the ability to attach a ball/coupler hitch provided by Works (via its central-mounted socket 24) with the ability to attach a kingpin/receiver hitch provided by Lindenman (via its cross member-mounted receptacles 14) “‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement.” *KSR*, 550 U.S. at 417, *citing Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976). Having both types of attachment types in one device “unites old elements with no change in their respective functions.” *Id.* at 415–416 (*quoting Great Atlantic & Pacific Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 152–153 (1950)). We find the combination of the features is not adding redundancy because each type of attachment mechanism provides a native connection for a different type of hitch. That adapters are available does not subtract from this. We credit Petitioner’s expert testimony that a person of ordinary skill in the art would have had a reason to have both attachment mechanisms in order to “accommodat[e] a variety of accessories.” Pet. 29 (citing Ex. 1007 ¶ 84). This testimony is supported by Lindenman, who advocates for its socket design to provide “unparalleled versatility since one may mount a number of different vehicle accessories to the vehicle through the

mounting system,” not limited to hitches but also “an article anchor or carrier such as a bike rack, a motorcycle stand or other useful device.” Ex. 1010, 1:46–52. Indeed, even if we set aside the addition for native ability to mount a kingpin/receiver hitch, the four attachment points of Lindenman would add to Works by providing an ability to removably mount these other accessories.<sup>12</sup> *See also* Ex. 1022, 3:26–31 (stating that the sockets mounted on cross-members can be used to connect chains when the central socket is used to tow a gooseneck trailer).<sup>13</sup>

Further, as explained in the next few pages, we find that a person of ordinary skill in the art would have understood it would have been a benefit to natively mount both types of hitches (as opposed to using an adapter, as Patent Owner argues). The record supports Petitioner’s combination because the record espouses a desire for flexibility and versatility—which is why having both types of hitches is better than one alone.

First, it is plain that not having to purchase an adapter is a readily apparent advantage to the proposed combination. *Perfect Web Tech., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1329 (Fed. Cir. 2009) (holding that “while an analysis of obviousness always depends on evidence . . . it also may include recourse to logic, judgment, and common sense available to the person of ordinary skill that do not necessarily require explication in any reference”). *But cf.*, e.g., PO Resp. 40 (arguing that “Works could accommodate a variety of accessories [using aftermarket adapters].”); PO Sur-reply 2 (“Works[’s] . .

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<sup>12</sup> Patent Owner characterizes Petitioner’s “variety of accessories” argument as new (PO Sur-reply 5) but we find that it was argued in the Petition. Pet. 29 (citing Ex. 1007 ¶ 84 and Ex. 1010, 1:46–52).

<sup>13</sup> Withers et al., U.S. Pat. No. 7,828, 317 B2, iss. Nov. 9, 2010, *prov app.* filed May 30, 2018 (Ex. 1022, “Withers ’317”).

. commercial systems are still available to this day”), 4 (“Works already teaches that very solution in its existing system [(if one considers the aftermarket adapters)].”). From a logical standpoint, the elimination of adapters critically undermines Patent Owner’s theme, throughout its arguments, that the combination is of redundant features or otherwise superfluous. *See, e.g.*, PO Resp. 37 (arguing that “Works . . . had the capability of accommodating [both types of] hitches”), 38 (similar); PO Sur-reply 3 (arguing no motivation where the prior art “already solves the issue”); *see also* Ex. 1022, 1:31–38 (expressing a dislike in the art for adapters).

Second, we find that Lindenman suggests the benefits of versatility. Ex. 1010, 1:46–52. Although Lindenman itself does not suggest using both types of sockets, it does support our finding of a general desire in the art for versatility in accommodating many different types of attachments.

Third, we find patents filed at or near the time of invention directly suggest a hitch that has both types of sockets to eliminate the need for adapters. Withers describes the disadvantage of having to use adapters (it raises the attachment point), and then describes a hitch system that includes both types of sockets. Ex. 1012, 1:28–31 (“A gooseneck adapter on a fifth wheel mount raises the height of the gooseneck ball, and usually obstructs more of the pick-up bed.”), 1:32–35 (“There is a need for an integrated support structure . . . to which either [hitch type] can be easily assembled.”). Withers ’317 espouses the same concern and solution. Ex. 1022, 1:31–38.<sup>14</sup>

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<sup>14</sup> Facially, Withers is prior art because it was filed on June 23, 2009, whereas the ’585 patent was filed on December 4, 2017. We acknowledge that Patent Owner challenges whether Withers is prior art to the ’585 patent. *See, e.g.*, PO Resp. 13–32. We do not reach the Withers anticipation ground

Fourth, Patent Owner’s experts and declarants explain that the notion of combining the two types of sockets into one hitch comes from market forces at the time of invention. For example, Patent Owner’s expert witness testified that “Ford and its customers” “desired” a hitch with both types of sockets, and sought out Patent Owner to supply a product meeting that design criteria. Ex. 2004 ¶ 50; *see also id.* ¶ 47 (“an OEM like Ford would want any factory installed system to accommodate as many different hitches as possible”); Ex. 1026, 77:17–80:25, 82:17–83:3 (further explaining the background of why Ford would want the ability to have one hitch system accommodate both hitch types—to sell a single product without having to build a vehicle dedicated to a particular end market, e.g., RV towing (fifth wheel) vs. agricultural towing (gooseneck)). That expert also implies that it was Ford’s willingness to put to market a hitch system that led a product *being sold* that has both socket types (rather than any lack of awareness of the notion of combining the sockets or technical know-how). *Id.* ¶ 111. Similarly, an inventor of the ’585 patent admits that it was Ford’s idea to have a hitch that combined both types of sockets:

Q: And do you know what the specific request from Ford to [Patent Owner] was?

A: For us to develop an underbed mounting kit . . . for both fifth wheel and gooseneck.

Q: Was Ford looking for . . . a hitch that would accommodate both a fifth wheel hitch and a gooseneck hitch?

A: Yes, they were.

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and therefore do not decide whether Withers is prior art. Patent Owner is not prejudiced here by us not reaching the issue because Withers ’317 has the same relevant disclosure as Withers, and there is no issue raised about the prior art status of Withers ’317.

Ex. 1024, 25:7–20; *see also id.* at 30, 2–3 (“Ford asked us to develop this product”); 51:21–23 (“[Ford] wanted to have a combination fifth-wheel and gooseneck system.”); Ex. 1026, 93:16–94:18 (Patent Owner’s expert testifying that Ford “asked for a solution” for “accommodating both types of hitches”), 166:13–14 (“Ford Motor Company came to us and said, we want to combine these [hitch types]”), 167:2–11.<sup>15</sup> Thus, we find that market forces at the time of the invention demonstrate a desire to have an integrated device for natively receiving both ball/coupler and kingpin/receiver hitches.

Patent Owner also argues that Works and Lindenman are compatible with aftermarket adapters that allow them to be converted to accept the other hitch of type, and the fact that they still sell these single-hitch-type products along with adapters is evidence that it would not be obvious to introduce a hitch that natively accepts both hitch types. *See, e.g.*, PO Resp. 38–39; PO Sur-reply 2. We do not find this (even assuming it is true) to be evidence of non-obviousness. For one, Patent Owner asserts that other companies have

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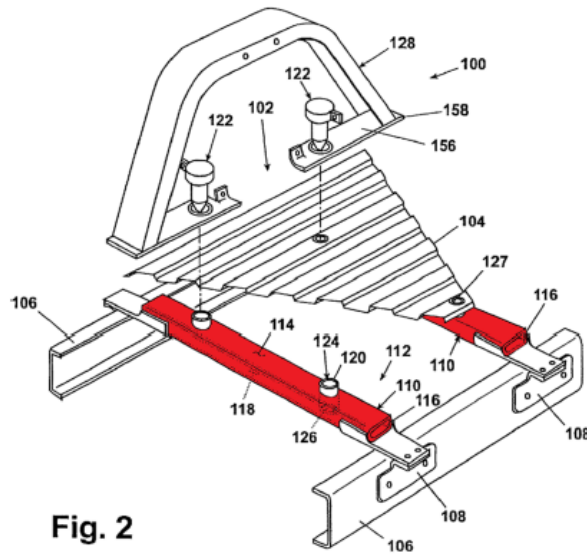
<sup>15</sup> We cite this testimony for the purposes of demonstrating that the evidence of record supports a finding that there was a desire in the art to provide a hitch that had native connections for both ball/socket and kingpin/receiver hitches. A “motivation to combine may be found explicitly or implicitly in market forces; design incentives; the ‘interrelated teachings of multiple patents’; ‘any need or problem known in the field of endeavor at the time of invention and addressed by the patent’; and the background knowledge, creativity, and common sense of the person of ordinary skill.” *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) (citing *Perfect Web*, 587 F.3d at 1328 (quoting *KSR*, 550 U.S. at 418–21)). We do not reach the issue of whether the Withers patent (assigned to Ford) is prior art. We do not imply any notion of derivation nor are we discussing inventorship. Our discussion in these passages is limited to the *notion of combining the two socket types in one hitch*, not to any particular configuration of hitch that had such a combination.

copied its design. PO Resp. 50–51 (citing Ex. 2004 ¶ 127). Thus, Patent Owner cannot also assert that no one else has thought to combine socket types into one hitch. In addition, we have already discussed how the testimony (regarding Ford) and relevant art from the time of invention (Lindenman, Withers, Withers '317) offer evidence on market forces and knowledge in the art regarding the desirability of the combination. Lastly, even assuming that the company owning the Works patent has not offered a hitch with both socket types, any such product would have to contend with the '585 patent as well as both Withers patents (as well as any other patents claiming a hitch with both types of sockets), such that it may be a business decision not to offer those features and risk a lawsuit or pay licensing fees. These types of business decisions do not change our view of the facts tending to show that both types of sockets were known and that there was reason in the art to combine them into one unit. In sum, we do not find that no one else wanted to offer a hitch that natively accommodated both socket types at the time of invention, that no one else thought of doing it, or that no one else could figure out a way to do so. *See KSR*, 550 U.S. at 418 (instructing factfinders to consider “demands known to the design community or present in the marketplace”).

Based on the foregoing, we find a general desire in the art for versatility, and in particular a desire to have a hitch that provides for both types of sockets (i.e., for ball/socket and kingpin/receiver connection types). Accordingly, we find that Petitioner’s reasons for combination are based on rational underpinnings and that Petitioner has established a reason for combining the hitch connectors of Works and Lindenman in the manner proposed.

#### 4. *Argument About Fandrich and Cross-Members*

Petitioner takes a backup position that Fandrich (in addition to Works) teaches tubular cross-members. Pet. 27. For reference, we have reproduced Petitioner's annotated copy of Figure 2 of Fandrich below.



Pet. 36 (annotated version of Ex. 1011, Fig. 2). Figure 2 of Fandrich depicts an under-bed mounting system for connecting a hitch. Ex. 1011, 1:12–14. Hollow tubes 110 are “designed to withstand substantial tensile and compressive loading.” *Id.* at 3:67–4:2.

Patent Owner argues that Petitioner has not provided sufficient rationale for taking the tube-shaped cross member of Fandrich and applying that shape to the cross members of Works. PO Resp. 43–44; PO Sur-reply 9–10; *see also* Pet. Reply 24–25. We have considered these arguments and the evidence cited therein, and find Patent Owner's argument unpersuasive for the reasons described below.

Initially, Works already teaches tubular cross members, so Petitioner has no need to include those of Fandrich. Pet. 35 (citing Ex. 1009, 4:60–62); Ex. 1009, 4:60–62 (“Alternatively, the cross members 18 and 19 could be

other types of members, such as I-shaped members, channels, round or square tubes, or the like.”). This alone can dispose of this aspect of the case.

But even if Fandrich were needed, Patent Owner’s argument is unpersuasive because it reads too much into the word “motivation.” *See* PO Sur-reply 9 (arguing that “Petitioner[’s] argu[ment] that there was nothing inventive about using tubular members . . . is not the issue,” but rather “[t]he issue is whether a [person of ordinary skill in the art] would be *motivated* to pick and choose all the various features in the prior art . . .”). As the Supreme Court said in *KSR*: “[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation.” *KSR*, 550 U.S. at 419. Here, we have evidence from both Works and Fandrich that tubular members were known in underbed hitch systems. Ex. 1009, 4:60–62; Ex. 1011, 4:6–8. To the extent it is not already disclosed sufficiently in Works, Fandrich teaches tubular members to provide a “rigid support structure.” Ex. 1011, 4:6–8. Using tubular members to provide a similar rigid support structure in Works is therefore merely the use of established elements working according to their established function. *See KSR*, 550 U.S. at 415–16 (A “patent for a combination which only unites old elements with no change in their respective functions ... obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful [persons].” (*quoting Great Atlantic & Pacific Tea*, 340 U.S. at 152–153)). The casual manner in which Works lists the various potential cross-member construction options further indicates that Works is speaking to a person of ordinary skill in the art that would be aware that these are known options to choose from, none of which are characterized as particularly noteworthy or troublesome to implement. Ex. 1009, 4:60–62 (“Alternatively . . . could be

other types of members, such as [list of types], or the like.”); *see also* *KSR*, 550 U.S. 421 (“[A] person of ordinary skill has good reason to pursue the known options within his or her technical grasp.”). Patent Owner’s implication that a petitioner must show that their combination is more obvious or a better combination is not supported by case law. *See, e.g., PAR Pharm., Inc., v. TWI Pharm., Inc.*, 773 F.3d 1186, 1197–98 (Fed. Circ. 2014) (summarizing the state of the law on this topic, which “does not require that the motivation be the best option, only that it be a suitable option from which the prior art did not teach away”); *In re Mouttet*, 686 F.3d 1322, 1334 (Fed. Cir. 2012) (explaining that *even if* “better alternatives exist in the prior art does not mean that an inferior combination is inapt for obviousness purposes”). We find that Patent Owner’s arguments and evidence about the pros and cons of different cross-member constructions do not teach away from the proposed combination or otherwise take away from the fundamental fact that tubes were known to be a suitable choice for cross members in a device like Works.

Accordingly, we find the tubular member limitation taught in Works, and to address Petitioner’s fallback position, we also find Petitioner has established that a person of ordinary skill the art would have had known that tubular members are a suitable option to provide structural support, as taught in Works and Fandrich.

#### 5. *Arguments About “Other Considerations”*

Patent Owner next argues that there are several “other considerations” that a person of ordinary skill in the art would have considered but that Petitioner has failed to analyze. PO Resp. 44–47; *see also* PO Sur-reply 7 (similar arguments). These considerations include additional holes,

additional weight, cost/benefits, other alternatives, performance, and cost/complexity. PO Resp. 44–47. We have considered the arguments and evidence regarding these types of “other considerations,” and find Patent Owner’s arguments unpersuasive for the reasons described below.

We acknowledge that any proposed physical modification of something involves changes in configuration, and potentially weight, cost, performance, etc. What is unpersuasive about Patent Owner’s analysis is that it fails to show that any of these particular potential practical effects of the modification would prevent or lead a person away from considering the proposed modification (or show any other tendency to non-obviousness). Patent Owner admits that a petitioner does not have an affirmative burden *ab initio* to address weight, cost, performance, etc. Tr. 47:16–48:7. Instead, Patent Owner’s argument is that it has raised a concern over the obviousness of the proposed combination in view of these considerations, and Petitioner has not sufficiently addressed them. *Id.*; *see also id.* at 48:20–51:12 (further questioning seeking to clarify Patent Owner’s argument). But we find insufficient evidence or reason to conclude that any of the alleged concerns tend to show non-obviousness in the first place.

As to the argument that the modification would require additional holes, Patent Owner merely cites its expert, who states that cutting holes in the bed of the truck “is an obvious disadvantage.” Ex. 2004 ¶ 117. It is not clear how additional holes is an “obvious disadvantage,” especially given that Petitioner’s proposed modification provides the benefit of allowing different types of hitches to be attached through those holes. In other words, we find the holes provide the noted benefit of allowing removable

attachment points, and we do not find sufficient evidence that adding holes would detract from this desire.<sup>16</sup>

As to the argument that the modification adds weight, Patent Owner seems to rest on the fact that Petitioner has not discussed weight. *See* PO Resp. 45; Ex. 2004 ¶ 118. But Patent Owner has not offered evidence that any weight change implied by the proposed modification was a concern (to the extent it is even relevant), or would otherwise tend to show non-obviousness. To be clear, for all of these “other considerations,” we are not espousing a requirement for Patent Owner to prove non-obviousness. Instead, to the extent Patent Owner (or its expert) argues that a person of ordinary skill in the art would not have considered the proposed combination obvious on account of weight (or cost, adding holes, etc.), we have insufficient evidence in support of that argument. It is merely attorney argument that does not stand on its own. We find insufficient evidence that these other considerations teach away from the combination.

Our analysis is the same with respect to Patent Owner’s arguments about cost and performance. Patent Owner’s arguments and evidence do not meaningfully tend to show that a person of ordinary skill in the art would not have considered the proposed combination. Cost is a practical concern for bringing any product to market, but merely stating that Petitioner has not done a cost or performance analysis for selling a product embodying the proposed combination fails to apprise us of a teaching away from the combination, or of any reason that cost or performance was a concern that

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<sup>16</sup> We also note that the arguments regarding a consumer not wanting to cut holes in a truck bed are largely irrelevant. *See, e.g.*, Ex. 2004 ¶ 119. The claims are not limited to an aftermarket hitch.

would lead a person of ordinary skill in the art not to consider the proposed combination.<sup>17</sup>

In sum, we find no requirement here for Petitioner to have done a cost, weight, performance, etc. analysis because we do not find evidence or technical reasoning that tends to explain why such considerations teach away from whether a person of ordinary skill in the art would have considered the particular combination of known features that Petitioner has proposed.

*6. Evidence Offered as Objective Indicia of Non-Obviousness*

Patent Owner asserts objective indicia of non-obviousness in the forms of commercial success, recognition/praise, and copying. PO Resp. 48–51; PO Sur-reply 10–11. *But see* Pet. Reply 25–27 (arguing against). Patent Owner appears to address nexus when it states that “the claimed features . . . were featured prominently in the design that made its way into Ford pickup trucks beginning in Model Year 2011.” PO Resp. 49. To show praise, Patent Owner points to an image in its brief purported to be a Ford

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<sup>17</sup> Even if Patent Owner had established that these other factors were material, they do not appear to be important to the technological aspects of the invention, and we find no evidence that they teach away from it. *See Orthopedic Equip. Co. v. United States*, 702 F.2d 1005, 1013 (Fed. Cir. 1983) (“[T]he fact that the two disclosed apparatus would not be combined by businessmen for economic reasons is not the same as saying that it could not be done because skilled persons in the art felt that there was some technological incompatibility that prevented their combination. Only the latter fact is telling on the issue of nonobviousness.”); *Joy Tech., Inc. v. Manbeck*, 751 F.Supp. 225, 232 (D.D.C. 1990), *aff’d*, 959 F.2d 226 (Fed. Cir. 1992) (finding the expert’s expressed skepticism was entitled to little weight as evidence of nonobviousness because it “was directed to economic and commercial factors, not the technical merit of [the claimed invention]”).

advertisement mentioning Patent Owner’s product. *Id.* at 48–49 (citing Ex. 2004 ¶ 125). To show commercial success, Patent Owner asserts it “has sold hundreds of thousands [of] units . . . (millions in revenue) . . . to Ford from launch to present” and “has also sold thousands of additional units after-market.” *Id.* at 49–50 (citing Ex. 2009 ¶ 25; Ex. 2062-10). As to copying, Patent Owner asserts that Petitioner manufactures a similar hitch for General Motors. *Id.* at 50–51 (citing Ex. 2004 ¶ 127).

We address nexus, then the individual assertions made by Patent Owner.

*a) Nexus*

For objective indicia of nonobviousness to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention. *ClassCo, Inc., v. Apple, Inc.*, 838 F.3d 1214, 1220 (Fed. Cir. 2016). “[T]here is no nexus unless the evidence presented is ‘reasonably commensurate with the scope of the claims.’” *Id.* (quoting *Rambus Inc. v. Rea*, 731 F.3d 1248, 1257 (Fed. Cir. 2013)). A patentee is entitled to a presumption of nexus “when the patentee shows that the asserted objective evidence is tied to a specific product and that product ‘embodies the claimed features, and is coextensive with them.’” *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019) (quoting *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018)). “[T]he purpose of the coextensiveness requirement is to ensure that nexus is only presumed when the product tied to the evidence of secondary considerations ‘is the invention disclosed and claimed.’” *Id.* at 1374 (quoting *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988)). “[T]he degree of correspondence between a product

and the patent claim falls along a spectrum. At one end of the spectrum lies perfect or near perfect correspondence. At the other end lies no or very little correspondence.” *Id.* “A patent claim is not coextensive with a product that includes a ‘critical’ unclaimed feature that is claimed by a different patent and that materially impacts the product’s functionality.” *Id.* at 1375.

We find that Patent Owner has not established nexus and has not made a meaningful attempt to do so. *See* Pet. Reply 25–27. Patent Owner directs our attention to its evidence on conception and diligence to establish the correlation between the claimed features and what is allegedly depicted in a Ford advertisement on page 49 of its Response. Initially, we note that the advertisement has not been entered as evidence, which immediately disposes of this issue in this case because Patent Owner offers no credible evidence of the advertisement. 37 C.F.R. § 42.63(a) (evidence must be in the form of an exhibit); *see also* Inst. Dec. 27 (warning Patent Owner to submit evidence under our Rules).<sup>18</sup> To the extent Patent Owner believes the evidence offered for diligence and conception show what is in the Ford products, we are not persuaded. All that those documents would tend to show is what plans Patent Owner was offering to Ford. There is no evidence showing what was sold to customers in Ford products. It is possible that Ford never included the products (or included a modified version, or

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<sup>18</sup> The requirement to file evidence as an exhibit is not a formality. Properly-filed evidence facilitates the process of vetting that evidence through the Federal Rules of Evidence and our procedures for questioning and confirming the evidence. 37 C.F.R. §§ 42.62(a) (stating the “Federal Rules of Evidence shall apply to a proceeding”); 42.64 (setting out the procedure for objecting to evidence).

included its own Withers-based solution); we do not have credible evidence to know.

Accordingly, we find that Patent Owner has not established a nexus between the claimed invention and what Ford sold. This rests on the fact that Patent Owner has not directed us to credible evidence or analysis comparing the two. Notwithstanding, we proceed to address the objective evidence offered by Patent Owner, with the fact in mind that the nexus to the claimed invention is at or near zero.

*b) Praise*

To show praise, Patent Owner offers the image on page 49 of its Response, which states:

A[.] FACTORY-INSTALLED 5<sup>TH</sup>-WHEEL/GOOSENECK TRAILER TOW PREP PACKAGE offers you the strength of an under-the-bed frame crossmember and maintains a flat cargo bed floor. This patent-pending system is fully covered by a Ford Warranty,<sup>□</sup> and is compatible with the Ford Custom Accessory 5<sup>th</sup>-Wheel and Gooseneck Hitch Kits by Reese®.

PO Resp. 49; *see also id.* at 48 (asserting that Patent Owner uses the brand name “Reese”).

This passage states that the “patent-pending system . . . is *compatible with* . . . Kits by Reese.” (emphasis added). Notably, the patent-pending system is also compatible with Ford’s “Custom Accessory” kits. Thus, we find that the advertisement states that one can have the advertised features by purchasing Ford’s kit, without purchasing anything from Reese.

In addition, the “patent-pending system” is not described as Reese’s—it is merely described as “patent-pending.” *Cf.* Ex. 1012, code (73) (noting the Withers patent, which depicts a fifth-wheel/gooseneck hitch system, is

assigned to Ford); Ex. 1022 (same). We find that this passage is not calling Reese's products patent-pending.

We also agree with Petitioner, who argues that we do not know how the claimed invention maps to what is being described in this passage (Pet. Reply 27), which is especially persuasive given that the very language of the passage indicates that one can obtain the features of the prep package without purchasing anything from Reese. In sum, the evidence offered for praise is not proper evidence, and even if we considered it, it has no nexus and does not tend to show praise of Patent Owner's claimed invention.

*c) Commercial Success*

Patent Owner's claim of commercial success merely notes that units allegedly covered by the claims of the '585 patent were sold. PO Resp. 49–50. Even assuming this were true, mere sale of products does not persuade us of non-obviousness. Beyond attorney argument, Patent Owner offers the testimony of one of its employees, but that testimony is offered with insufficient supporting evidence. Ex. 2009 ¶¶ 25 (declarant's allegation of success without citation of supporting evidence), 26 (declarant citing Ex. 2062 without explanation). The 2021 Annual Report cited by Patent Owner and its declarant provides information at a very high level and nothing specific to the product claimed in the '585 patent. Ex. 2062-10. In sum, we do not find evidence of commercial success.

*d) Copying*

In Patent Owner's copying argument, Patent Owner again improperly offers an image not entered as evidence, which depicts a schematic drawing purportedly of a 2016 Chevrolet Silverado with a hitch system having both types of sockets. PO Resp. 50. Again, we do not consider improperly filed

evidence. Even if we did, we have no evidence before us of copying, as opposed to merely offering a competing product. *See Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1028 (Fed. Cir. 1985) (“[M]ore than the mere fact of copying . . . is needed to make that action significant to a determination of the obviousness issue,”), overruled on other grounds by *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1358-61 (Fed. Cir. 1999) (en banc)); *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.”). Indeed, as we explained above, we have found that market forces desired a combined hitch system, independent of Patent Owner’s efforts on the device claimed in the ’585 patent. Accordingly, we do not find evidence of copying.

#### 7. *Alleged Obviousness Over Works-Fandrich-Lindenman*

Having reviewed and analyzed the evidence offered to show obviousness and non-obviousness, we now turn to our determination as to the obviousness of the claims of the ’585 patent. *Apple Inc. v. Samsung Electronics Co., Ltd.*, 839 F.3d 1034, 1048 (Fed. Cir. 2017) (“A determination of whether a patent claim is invalid as obvious under § 103 requires consideration of all four *Graham* factors, and it is error to reach a conclusion of obviousness until all those factors are considered.”). In review of the facts, it is undisputed that Works, Fandrich, and Lindenman show each feature of claim 16. Works shows a hitch with a center socket for ball/socket hitches; Lindenman shows a hitch with cross member-mounted sockets for kingpin/receiver hitches; Fandrich shows a hitch using tubular

supports. We find that Petitioner has rational underpinnings in support of its combination—to provide versatility and additional attachment points for other accessories. The rational underpinnings are based on the facts that Works does not describe receiving kingpin/receiver hitches (despite its awkward wording), that versatility was a known motivation in the art, that the combination eliminates the need to purchase adapters, and that market forces were demanding a combined hitch (as evidenced by the two Withers patents and the testimony about Ford). We find that the record shows that Patent Owner did not come up with the notion of combining the hitch types, and instead it was known market forces that led to Ford asking them to design a product with that feature. We did not find evidence of praise, copying, or commercial success, or of any other objective indicia of non-obviousness.

Having reviewed all of the evidence, we now turn to our determination on obviousness. The only difference between the prior art and claims is that the two different types of prior art sockets are combined into one hitch device in the claims. However, this is not a case where all of the known elements were available but no one had thought to combine them except for the inventors. The notion of combining the two types of sockets did not originate from Patent Owner and instead comes from market forces and desires existing in the art. Thus, even the “missing” feature (the combination) is something taught in the art, and nothing in the art teaches away from the combination. We conclude that Petitioner has shown by a preponderance of the evidence that the subject matter of claim 16 would have been obvious in view of Works, Fandrich, and Lindenman.

Patent Owner does not separately argue dependent claims 17–20, and for the same reasons set forth in the Petition, we determine those claims also would have been obvious. *See* Pet. 42–48.

*E. Obviousness over Lindenman, Fandrich, and Works  
(Claims 16–20)*

Our analysis for the Works-Fandrich-Lindenman combination applies to the Lindenman-Fandrich-Works combination, with the caveat that because Lindenman teaches sockets on the cross members for a kingpin/receiver hitch, the issue of whether Works teaches a kingpin/receiver hitch is not pertinent. The discussion about the remaining aspects of the obviousness inquiry remains the same, especially the desire in the art for a combined hitch, as does the ultimate conclusion of obviousness.

*F. Anticipation by Withers  
(Claims 16, 17, 19)*

Because we have found each claim unpatentable, we do not reach the issue of anticipation by Withers, which involves fewer than all claims and which involves the issues of conception and diligence in Patent Owner’s arguments of prior conception to Withers. *See Boston Scientific Scimed, Inc. v. Cook Gp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020) (“We agree that the Board need not address issues that are not necessary to the resolution of the proceeding.”).

*G. Conclusion as to Petitioner’s Unpatentability Grounds*

Petitioner has shown, by a preponderance of the evidence, that claims 16–20 of the ’585 patent are unpatentable over the Works, Fandrich, and Lindenman references. This represents a final determination as to each challenged claim. We do not reach the Withers anticipation ground.

### III. PETITIONER'S MOTION TO EXCLUDE

Petitioner moves to exclude Exhibit 2004 ¶¶ 92–94, 123–128 (Walstrom Declaration); Exhibits 2007 (Stanifer Declaration) and 2008 (Morrison Declaration); Exhibits 2011 (Becker Deposition) and 2013 (Cequent Towing Products CAD Drawing); Exhibits 2012 and 2014 (B&W Trailer Hitches Catalog); and Exhibit 2064 (Table of Files).

As an initial matter, we dismiss as moot Petitioner's motion as to Exhibit 2004 ¶¶ 92–94 as well as to Exhibits 2007, 2008, 2011, 2013, and 2064. These are related to the Withers ground, which we did not reach. The remaining exhibits relate to Mr. Walstrom's declaration as to objective indicia (Ex. 2004 ¶¶ 123–128) and the B&W Trailer Hitches Catalog (Exs. 2012, 2014).

#### *A. Walstrom Declaration*

Petitioner argues that Mr. Walstrom offers non-expert fact testimony and that his testimony is influenced by impermissible bias and unreliable. Mot. Excl. 3–8. Petitioner asserts that Mr. Walstrom's testimony regarding various aspects of his objective evidence discussion (Ex. 2004 ¶¶ 123–128) are without evidentiary support. Mot. Excl. 4.

Patent Owner argues that, if anything, we should address Petitioner's concerns by our weighing of the evidence. Opp. Mot. Excl. 10–11.

As we mentioned in our analysis above, Mr. Walstrom's testimony regarding praise and copying rely on drawings that have not been submitted as evidence and which we do not consider as evidence. Ex. 2004 ¶¶ 125–127; 37 C.F.R. §§ 42.63(a) (“All evidence must be filed in the form of an exhibit.”), 42.6(c) (“Each exhibit must be filed with the first document in which it is cited.”), 42.6(a)(3) (“combined documents are not permitted”).

Mr. Walstrom’s testimony regarding commercial success lacks sufficient supporting evidence. Ex. 2004 ¶ 128. We agree with Petitioner that Mr. Walstrom’s testimony is without evidentiary support, yet we agree with Patent Owner with how to handle the testimony—we afford it no weight. We see little added value in Petitioner’s requested remedy of expunging the paragraphs, when the document will remain in the record anyway, and our Rules provide a sufficient remedy by discounting the testimony. 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

*B. B&W Product Catalogs*

Petitioner moves to exclude Exhibits 2012 and 2014, which Patent Owner asserts to be copies of a B&W Product Catalog from 2021. Mot. Excl. 13–14; *see also* PO Resp. vi, 36. Petitioner asserts that these exhibits are from 2021 and are not prior art to the ’585 patent (filed in 2009), that Patent Owner has failed to establish the exhibits reflect commercial embodiments of the Works patents, and even if it did, that the prior art asserted is Works, not the catalogs. Mot. Excl. 13–14. Petitioner asserts that the catalogs are therefore irrelevant and prejudicial by confusing Works with the products in the catalog. *Id.* at 14 (asserting Fed. R. Evid. 401, 403).

Patent Owner argues that we should consider Mr. Walstrom’s testimony relating to the catalogs, but does not address the evidentiary issues Petitioner raised in its Motion. *See* Opp. Mot. Excl. 9–13.

We agree with Petitioner that Patent Owner’s “references to Exhibits 2012 and 2014 instead of *Works* are irrelevant.” Even if we assume the

exhibits are what Patent Owner says they are,<sup>19</sup> they do not tend to show what is taught in the Works reference, nor do they tend to show the level of ordinary skill in the art in the relevant timeframe. We also agree with Petitioner that Patent Owner's repeated references to the catalogs as if they were Works is confusing.

Given the context of *inter partes* review, we see little value in excluding the catalogs at this phase of the proceeding. We are the factfinders, and as we discussed in our merits analysis above, we gave Exhibits 2012 and 2014, and the testimony relying thereon, little to no weight or persuasive value. In effect, Petitioner has the remedy it seeks through the typical mechanisms in the obviousness analysis requiring art to be prior art.

In sum, we dismiss Petitioner's Motion to Exclude as moot.

#### IV. MOTION TO AMEND

Patent Owner's contingent Motion to Amend proposes substitute claim 21 for original independent claim 16. Mot. Amend 2–3. At a high level, the added limitations are directed to (1) the mid rail being “permanently attached” to the tubular members “as a one piece assembly” and (2) each rail end having a flange with an aperture configured to attach directly to the vehicle frame. *Id.* at 5–6. Patent Owner's motion also proposes to substitute claim 22 for original claim 17 (which just updates dependency). *Id.* at 2–3.<sup>20</sup>

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<sup>19</sup> We do not reach the issues of authentication or public availability of the catalogs, nor whether they have any connection to the Works patent.

<sup>20</sup> Patent Owner also states that we should “[c]ancel claims 18–20 if they are found unpatentable.” Mot. Amend 3. However, our precedent does not

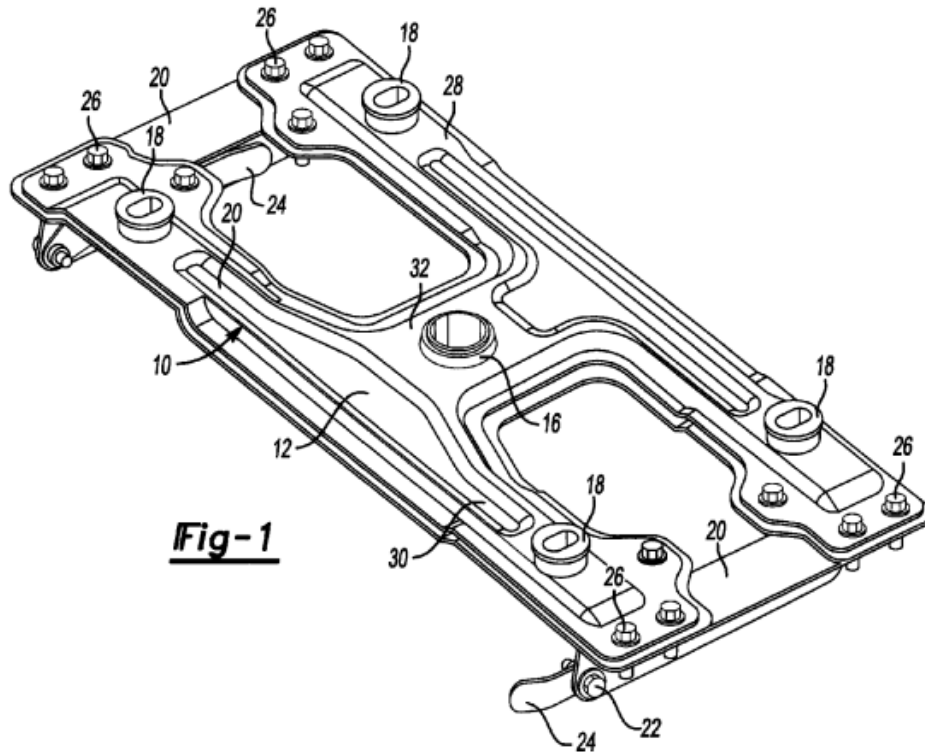
Petitioner asserts that proposed substitute claim 21 is not responsive to a ground of unpatentability involved in the trial. Opp. Mot. Amend 1–2. Petitioner asserts that proposed substitute claim 21 is unpatentable over Withers ’317 and Fandrich. *Id.* at 8–19. Petitioner also asserts that the claim lacks written description and is indefinite. *Id.* at 19–25.

We analyze the Motion to Amend using the guidance and burdens set forth in *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 (PTAB 2019) (precedential). Because the issue is dispositive, we only discuss in detail Petitioner’s arguments that the subject matter of proposed substitute claim 21 would have been obvious. *Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that the “Board need not address issues that are not necessary to the resolution of the proceeding”).

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permit a contingent motion to cancel claims. *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 at 3 (PTAB 2019) (precedential) (“A request to cancel claims will not be regarded as contingent.”). Given the “if” language in the Motion to Amend, as well as statements in its briefing such as “the Board should find that claim 16–20 are patentable” (PO Resp. 52), we do not understand Patent Owner to be requesting a non-contingent motion to cancel the claims. Because Patent Owner may not make a contingent motion to cancel a claim under *Lectrosonics*, and because it is clear Patent Owner does not intend a non-contingent motion, we do not further consider Patent Owner’s motion to cancel claims 18–20. In addition, granting cancelation here appears to be moot because the Director will cancel any unpatentable claims. *See* 35 U.S.C. 318(b) (“[T]he Director shall issue and publish a certificate canceling any claim of the patent finally determined to be unpatentable. . . .”).

Petitioner asserts that the proposed substitute claim is obvious in view of Withers '317 and Fandrich. Figure 1 of Withers '317 is reproduced below.



Ex. 1022, Fig. 1. Figure 1 of Withers '317 depicts a hitch mounting system having an H-shaped body including a pair of transverse members 28, 30 each having a pair of receiving members 18 for connecting a fifth wheel hitch. *Id.*; *see id.* at 3:3–5 (referencing “fifth wheel pucks 18”). Transverse members 28, 30 are fabricated as one piece with central bridging portion 32, to which is assembled a gooseneck ball receiver 16. *Id.* at 2:64–3:2. The ends of transverse members 28, 30 are flattened and shown to be connected to the vehicle. *Id.* at Figs. 1, 3, 5, 7–9, 3:50–52 (“support structure assembly . . . is attached to the frame”).

Petitioner has shown, and Patent Owner does not dispute, how Withers '317 describes each limitation as arranged in the claim (including

the newly-added “one piece” and “flange” limitations), with the exception of the transverse members being tubes. Opp. Mot. Amend 10–19.

Accordingly, for the reasons set forth in the Opposition to the Motion to Amend, we find that Withers ’317 teaches all of the undisputed limitations of the proposed substitute claim. This leaves us with the tubes, and Petitioner’s reasons for modifying the cross members of Withers ’317 to include that shape.

Petitioner asserts that it would have been obvious to modify the transverse members of Withers ’317 to be tubular, as taught in Fandrich. *Id.* at 10–13. As we discussed before, Fandrich teaches a hitch that uses tubular support members “as a rigid support structure providing a secure foundation for vehicle hitch components.” *Id.* at 11 (quoting Ex. 1011, 4:6–8).

Petitioner asserts it would have been obvious to substitute the tubular members of Fandrich for the stamped members in Withers ’317, because it was a known option in the art to use tubular cross members, such that their incorporation would have been a simple substitution and obvious to try. *Id.* at 10–11 (citing, *inter alia*, Ex. 1028 ¶¶ 22–28); *see also* Ex. 1028 ¶ 14 (citing Ex. 1012, 2:63–65) (explaining that Withers ’317 may have stamped cross members).

Patent Owner argues that Petitioner’s theory is not supported by evidence, and that Petitioner never stated why a person of ordinary skill in the art would be motivated to use the tubes (rather than the mere fact that they *could* use them). Reply Mot. Amend 4–7 (citing *Adidas AG v. Nike, Inc.*, 963 F.3d 1355, 1359 (Fed. Cir. 2020) (“The obviousness inquiry does not merely ask whether a skilled artisan could combine the references, but instead asks whether ‘they would have been motivated to do so.’”)).

As with their arguments for the Works-Fandrich-Lindenman grounds of unpatentability, we consider Patent Owner’s arguments here to be impermissibly “confined by a formalistic conception of the words teaching, suggestion, and motivation.” *KSR*, 550 U.S. at 419. We acknowledge that we are not looking merely for whether the combination was possible, but Patent Owner reads too much into isolated statements made in the case law. The *Adidas* case cited by Patent Owner does not stand for the premise that “motivation” requires a showing that combination is *specifically desired*. See *Adidas*, 963 F.3d at 1359 (“The obviousness inquiry does not *merely* ask whether a skilled artisan could combine the references.” (emphasis added) (citing *InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014)<sup>21</sup>)). Instead, the quoted portion of *Adidas* stands for the premise that the obviousness inquiry cannot rest *merely* at the possibility of the combination. *KSR*, 550 U.S. at 418 (“[The obviousness] analysis should be made explicit.”).

Here, Petitioner has gone further than merely suggesting the possibility of the combination. Petitioner has provided evidence that tubes were a known shape in the specific context at issue, truck-bed-mounted trailer hitches, and that such a shape is described as providing “a rigid support structure,” which is the same purpose as in the proposed

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<sup>21</sup> *InTouch*, which is the origin of the quote that includes the word “motivation” that Patent Owner repeats, discusses in great detail the obviousness analysis in light of *KSR* and does not stand for Patent Owner’s reading-into of the word “motivation.” See, e.g., *InTouch* at 1347 (citing *KSR* and stating that “[w]hile an analysis of . . . motivation . . . is useful . . . the overall inquiry must be expansive and flexible”), 1351 (finding “insufficient evidence on this record of a *reason or motivation* . . . to combine [the references].”) (emphasis added).

combination. Ex. 1011, 4:6–8; *see also* Ex. 1022, 2:64–65 (describing a “support structure assembly 10 [that] includes a H-shaped body portion 12”). *But see* Reply Mot. Amend 6 (arguing that Petitioner “presents no evidence to support [the assertion to use Fandrich’s tubes for their strength]”). As such, this is not the case where a person of ordinary skill in the art merely knew about tubular-shaped structures, but rather one where Petitioner has shown that a person of ordinary skill in the art had a reason to select tubular-shaped structures—they were a known, suitable structure for hitch devices like Withers ’317. *KSR*, 550 U.S. 421 (holding that “a person of ordinary skill *has good reason* to pursue the known options within his or her technical grasp” (emphasis added)).

Further, Patent Owner has not shown that, despite tubular-shaped members being known, a person of ordinary skill in the art would not select tube shapes for Withers ’317 due to the specific nature of the alteration. *See* Reply Mot. Amend 4–7. To the extent Patent Owner argues that Petitioner has not shown tubes to be better than what is already shown in Withers ’317, we again note that Petitioner must show a reason to combine supported by rational underpinnings; Petitioner need not rule out other potential combinations. *PAR Pharm.*, 773 F.3d at 1197–98. As to the argument regarding fabrication and engineering considerations in changing from the stamped-layer construction of Withers ’317 to accommodate tubes, we find that these are at best business or manufacturing considerations that bear little, if any, on whether a person of ordinary skill in the art would consider it obvious to use tube shapes on Withers ’317. In particular, we find no reason to require the obviousness analysis to ask a person of ordinary skill in the art to consider a scenario in which they were already producing a given product and then deciding whether it was worth the cost to modify it in the

manner proposed. *Cf.* Ex. 2065, 30:15–31:4 (Petitioner’s expert being cross-examined as to how to modify the production process making the product shown in Withers ’317), 27:6–8 (cross examination as to strength), 29:10–17 (as to cost).<sup>22</sup> It is certainly possible that a proposed modification would be sufficiently difficult to achieve that a person of ordinary skill in the art would be taught away from considering that combination. *See, e.g., In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) (stating, “a reference will teach away if it suggests that the line of development flowing from the reference’s disclosure is unlikely to be productive of the result”). But we find no persuasive evidence of that here. Accordingly, we find that Petitioner’s assertions that the proposed combination is an option known in the art, a simple substitution, and obvious to try is supported by sufficient evidence.

Given that a person of ordinary skill in the art already knew it was an option to use tubular-shaped support members for an underbed trailer hitch system, we see no room for granting Patent Owner a claim whose sole argument to innovation over the prior art is the use of that known structure already used in the art for the same purpose. *KSR*, 550 U.S. at 415–16 (A

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<sup>22</sup> Patent Owner’s assertion that Petitioner’s expert “contradicts Petitioner’s argument, testifying that this change would be superfluous and ‘wouldn’t make sense’” is a mischaracterization. Reply Mot. Amend 5 (citing and quoting Ex. 2065, 31:5–32:2). At the cited portion of his testimony, Mr. Becker was asked “[i]f Withers 317 already had tubular members, would adding those by Fandrich give it two additional tubular members?” To which Mr. Becker answered, “Yeah, that wouldn’t make sense.” Contrary to Patent Owner’s strawman argument, Petitioner’s combination results in “a pair of tubular members (i.e., the front and rear transverse bar portions 28, 30 of *Withers* ’317 as modified by *Fandrich* to be tubular).” Opp. Mot. Amend 12–13 (emphasis added); *see also id.* at 11 (“simple substitution of one known element . . . for another.” (emphasis added)).

“patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful [persons].” (*quoting Great Atlantic & Pacific Tea*, 340 U.S. at 152–153)). Accordingly, reviewing all of the evidence of obviousness and non-obviousness,<sup>23</sup> we determine that Petitioner has shown proposed substitute claim 21 to be unpatentable and do not enter it. Additionally, for similar reasons discussed above for claim 17, we determine that Petitioner has shown proposed substitute claim 22 to be unpatentable and do not enter it.

## V. CONCLUSION

As explained above, we find that Petitioner has established, by a preponderance of the evidence, that claims 16–20 are unpatentable over the references of Works, Fandrich, and Lindenman. Petitioner has also established, by a preponderance of the evidence, that proposed substitute claim 21 would have been obvious over the references of Withers ’317 and Fandrich. Thus, we deny Patent Owner’s Motion to Amend to enter proposed substitute claims 21 and 22. We have considered Petitioner’s Motion to Exclude but deny as moot because we have sufficiently addressed the valid concerns Petitioner has raised by discounting the evidence using other mechanisms.

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<sup>23</sup> Although the parties do not address it in their motion to amend briefing, we have considered again the evidence of non-obviousness offered by Patent Owner in the case-in-chief and again note the paucity and lack of persuasive value of such evidence.

In summary:

| Claims                 | 35 U.S.C. § | Reference(s)/Basis         | Claims Shown Unpatentable | Claims Not Shown Patentable |
|------------------------|-------------|----------------------------|---------------------------|-----------------------------|
| 16–20                  | 103(a)      | Works, Fandrich, Lindenman | 16–20                     |                             |
| 16–20                  | 103(a)      | Lindenman, Fandrich, Works | 16–20                     |                             |
| 16, 17, 19             | 102(e)      | Withers <sup>24</sup>      |                           |                             |
| <b>Overall Outcome</b> |             |                            | 16–20                     |                             |

For the Motion to Amend:

| Motion to Amend Outcome                     | Claim(s) |
|---------------------------------------------|----------|
| Original Claims Cancelled by Amendment      |          |
| Substitute Claims Proposed in the Amendment | 21, 22   |
| Substitute Claims: Motion to Amend Granted  |          |
| Substitute Claims: Motion to Amend Denied   | 21, 22   |
| Substitute Claims: Not Reached              |          |

## VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 16–20 of the '585 patent are unpatentable; and

FURTHER ORDERED that Petitioner's Motion to Exclude is dismissed as moot;

FURTHER ORDERED that Patent Owner's Motion to Amend is denied as to proposed substitute claims 21 and 22; and

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<sup>24</sup> As noted above, we do not reach this ground because we have determined each challenged claim unpatentable in the other grounds.

FURTHER ORDERED that, because this is a Final Written Decision, any party to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2021-01411  
Patent 10,589,585 B2

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