

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NORTHERN STAMPING CO.,
Petitioner,

v.

HORIZON GLOBAL AMERICAS INC.,
Patent Owner.

IPR2021-01411
Patent 10,589,585 B2

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

SAINDON, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

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, “Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review under 35 U.S.C. § 314(b) and 37 C.F.R. § 42.4(a) (2020). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons provided below, we determine Petitioner has satisfied the threshold requirement set forth in 35 U.S.C. § 314(a). Because Petitioner has demonstrated a reasonable likelihood that at least one claim of the ’585 patent is unpatentable, we institute an *inter partes* review of all challenged claims based on all grounds raised in the Petition. 37 C.F.R. § 42.08(a).

Our findings of fact, conclusions of law, and reasoning discussed below are based on the evidentiary record developed thus far, and made for the sole purpose of determining whether the Petition meets the threshold for initiating review. This decision to institute trial is not a final decision as to the patentability of any challenged claim or the construction of any claim limitation. Any final decision will be based on the full record developed during trial.

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 Withers¹, reproduced below, shows a gooseneck hitch.

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

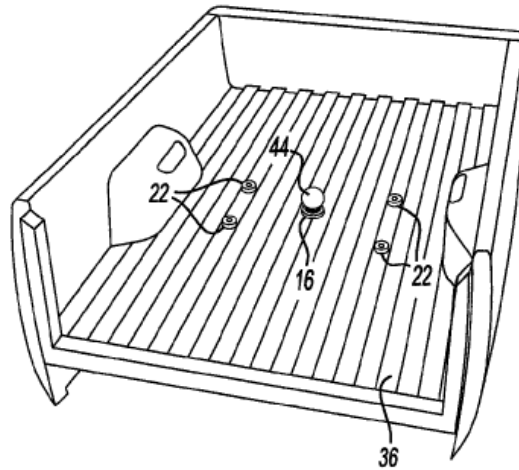


Fig-4

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.

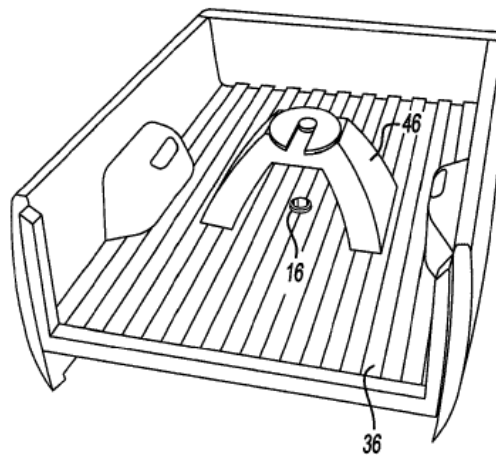


Fig-6

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.² 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 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:

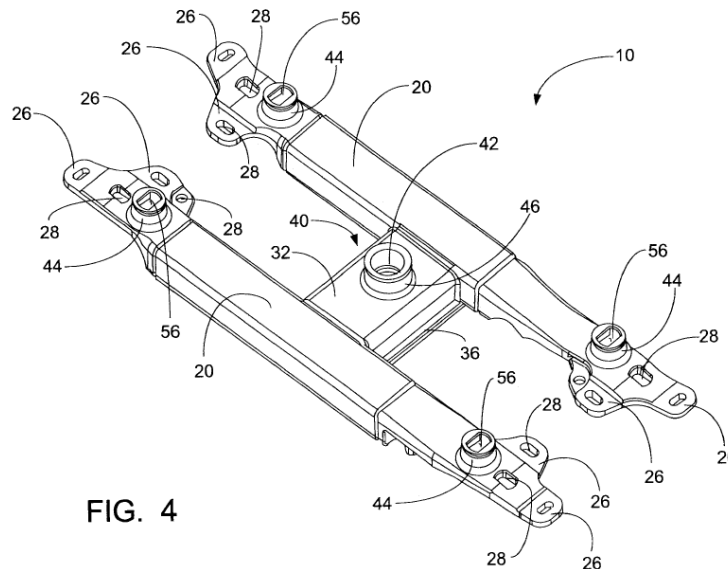


FIG. 4

² Caution is advised when relying on the terms “gooseneck” and “fifth wheel” alone to imply a given connection structure, however, because there is some indication in the record 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. *See infra* Section II.F (discussing the Works reference). To the extent further clarity is required, we will specifically refer to the physical structures involved (i.e., ball/coupler vs. receiver/kingpin).

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, or 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:

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

Petitioner relies on the testimony of Steven Becker, a mechanical engineer. Ex. 1007 ¶¶ 1–2.

II. ANALYSIS

A. Discretionary Denial under 35 U.S.C. § 325(d)

1. Legal Standards

Section 325(d) provides that, in determining whether to institute an *inter partes* review, “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” The Board uses a

³ 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 undisputed that Patent Owner is entitled to a priority 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).

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

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

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

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

two-part framework for evaluating arguments under § 325(d):

(1) determining whether the same or substantially the same art previously was presented to the Office, or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of the first part of the framework is satisfied, determining whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims. *Advanced Bionics, LLC v. MED-El Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). In applying this framework, we consider the *Becton, Dickinson*⁸ factors that address discretion to deny when a petition presents the same or substantially the same prior art or arguments previously presented to the Office, including:

(a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art; (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson, Paper 8 at 17–18. If, after review of factors (a), (b), and (d), we determine that the same or substantially the same art or arguments previously were presented to the Office, then factors (c), (e), and (f) relate to

⁸ *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph).

whether the petitioner demonstrates that the Office erred in a manner material to the patentability of the claims. *Advanced Bionics*, Paper 6 at 10.

2. *Analysis*

As an overview: the '585 patent was allowed without substantive prior art examination upon the filing of a terminal disclaimer. The parent of the '585 patent and the grandparent of the '585 patent were both rejected over some art presented in the Petition, but that art was never distinguished. Instead, Rule 131 declarations were submitted to swear behind key references. We agree with Petitioner, however, that the Office erred in its evaluation of the declarations, especially with respect to the “receiving members” recited in independent claim 16. Accordingly, for the reasons explained in more detail below, we do not deny the Petition under 35 U.S.C. § 325(d).

a) Same or Substantially Same Prior Art or Arguments

Both parties set forth explanations of what happened during the prosecution of the '585 patent and its ancestor applications. Pet. 9–16; Prelim. Resp. 13–15, 20–31. The following sets out the relevant prosecution history:

1. Current Patent. The application that issued as the '585 patent was filed on December 4, 2017 and claimed the benefit of the filing date of application 14/734,076 (among others). Ex. 1001, codes (22), (63). The application for the '585 patent was rejected solely on the basis of non-statutory double patenting over its parent application, and was allowed upon the filing of a terminal disclaimer. Pet. 15–16 (citing Ex. 1006, 512–17, 543–49); *see also* Prelim. Resp. 15.

2. Parent. Application 14/734,076 was filed on June 15, 2015, claimed the benefit of the filing date of application 13/790,134 (among

others), and issued as U.S. Patent 9,834,050. Ex. 1001, code (63) (“the ’050 patent”). The claims in the ’050 patent’s application included a limitation requiring “receiving members” and were rejected as anticipated by Withers (of the current proceeding) and as obvious over U.S. Patent 7,828,317 to Withers (“Withers ’317”). Pet. 15; Ex. 1005, 545 (rejecting claim 1, which recites “receiving members”). These rejections were not overcome by distinguishing the claims over the art. Pet. 15. Instead, the applicant filed a declaration under 37 C.F.R. § 1.131 to antedate the Withers references, and the case was allowed. *Id.*; *see also* Ex. 1005, 581–82 (the declaration).

3. Grandparent. Application 13/790,134 was filed on March 8, 2013, claimed the benefit of the filing date of application 12/609,062 (among others), and issued as U.S. Patent 9,067,468. Ex. 1001, code (63) (“the ’468 patent”). The claims in the ’468 patent’s application included a limitation requiring “receiving members” and were rejected as anticipated by Withers ’317 and as obvious over Works (of the current proceeding) and Withers ’317. Pet. 13; Ex. 1004, 522–23 (rejecting claims 14 and 21, which recite “receiving members”). Like the ’050 patent, the claims in the ’468 patent were not distinguished over the prior art, but rather allowed upon receipt of a declaration under 37 C.F.R. § 1.131 to antedate Withers ’317. *Id.* at 13–14; *see also* Ex. 1004, 548–49 (the declaration).

4. Great Grandparent. Application 12/609,062 was filed on Oct. 30, 2009, claimed the benefit of the filing date of provisional application 61/197,732, and issued as U.S. Patent 8,414,009. Ex. 1001, code (63) (“the ’009 patent”). The claims in the ’009 patent’s application included a limitation requiring “receiving members” and were rejected over Lindenman (of the current proceeding), and that rejection was overcome by distinguishing its claims over Lindenman. Pet. 12. However, Petitioner

asserts, and Patent Owner does not dispute, that the claims at issue in the '009 patent's application were "allowed for reciting elements not recited in [the '585 patent]." *Id.* Furthermore, neither Withers reference appears to have been considered by the Office during prosecution of the '009 patent. *See* U.S. Patent 8,414,009 B2, code (56).

5. Provisional. Provisional application 61/197,732 was filed on October 30, 2008. Ex. 1001, code (60). Petitioner asserts, and Patent Owner does not dispute, that the subject matter disclosed in the provisional application does not show the "receiving members" of independent claim 16. Pet. 11–12.

Reviewing the above prosecution history and the grounds now presented by Petitioner, we make the following findings. First, Withers and Works were never distinguished over the claims of the '585 patent, or any ancestor application. Thus, the Office would not now revisit the Office's determination that the claims of the '585 patent were distinguished over Withers and Works (alone or in combination with another reference), because no such determination was ever made. Second, while examining the '050 and '468 patents, the Office allowed claims over Withers and Works on the basis of accepting Rule 131 declarations to establish that Withers (and Withers '317) was not § 102(e) prior art. Thus, if instituted, the Board could revisit an argument previously presented to the Office: whether Withers is § 102(e) prior art. Therefore, we find that the same or substantially the same art or arguments were previously presented and we now turn to the second part of the test.

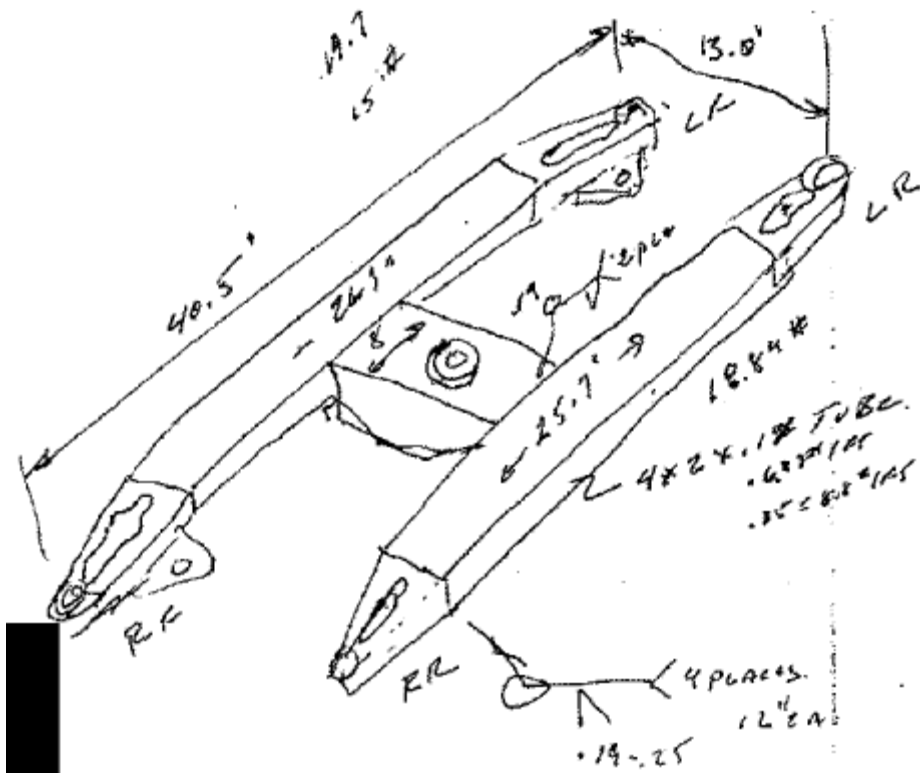
b) Material Error

The second part of the *Advanced Bionics* test looks to whether the Office erred with respect to the item(s) identified in the first part. *Advanced*

Bionics, Paper 6 at 8. Petitioner alleges at least three errors in the Rule 131 declarations used to antedate the Withers references, based on assertions in both declarations of conception prior to the relevant art coupled with diligence to the filing of the provisional application. Pet. 14–15.

Petitioner first alleges that the declarations fail to demonstrate possession of the “receiving member” recited in independent claim 16 as well as in claims in the ’050 and ’468 ancestor patents. *Id.* Under 37 C.F.R. § 1.131(b), a declaration under § 1.131(a) must show facts that “establish . . . conception of the invention.” Those facts must show possession of something on which the claim as a whole reads. *In re Tanczyn*, 347 F.2d 830, 833 (CCPA 1965).

Both declarations are nearly identical. They provide a sketch and assert that the sketch “demonstrate[s] our conception of the claimed subject matter,” but without any further meaningful analysis or explanation. Ex. 1004, 2–3; Ex. 1005, 2–3. Further, both declarations assert, without any further meaningful analysis or explanation, that “we were diligent in working on the invention from [May 30, 2008 and June 23, 2009] until the filing [of] the provisional patent application [on October 30, 2008].” Ex. 1004, 2–3; Ex. 1005, 3. The sketch appearing in the declarations is reproduced below::



Ex. 1004, 550; Ex. 1005, 583. Above is an isometric sketch with dimensions, alleged to depict an underbed hitch mounting system. *Id.* at 549–50. The black rectangle (presumably, a redacted portion) is present in the sketch in both declarations as filed with the Office. The sketch can be contrasted with Figure 4 of the '585 patent:

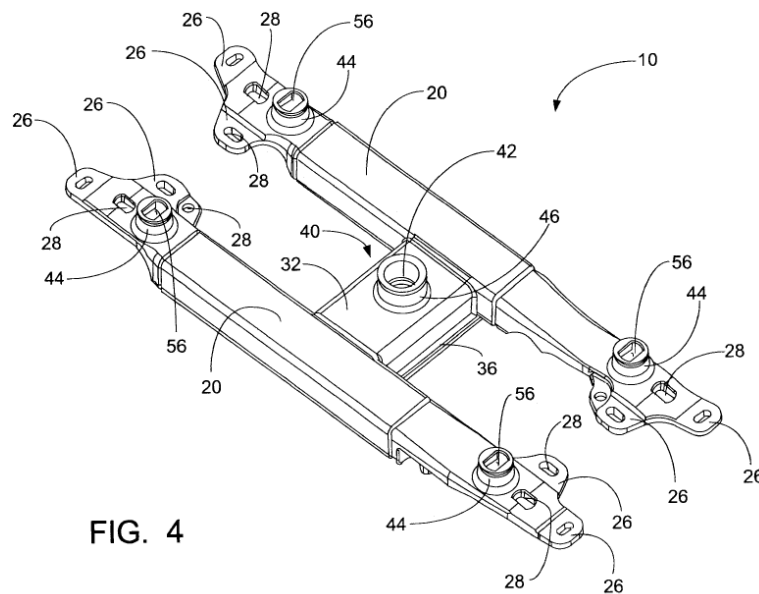


Figure 4 of the '585 patent depicts an underbed hitch mounting system. Ex. 1001, 3:2–3.

Contrasting the sketch and Figure 4, one can note several similarities. Both have two long rails connected in the middle. At the ends of the rails can be found various mounting apertures and mounting flanges. The critical distinction, however, is that while Figure 4 of the '585 patent depicts receiving members 44, extending out above the rails, it appears that the sketch shows no such corresponding features. *See* Pet. 15 (“the sketch . . . does not disclose ‘receiving members;’ it only shows sockets or apertures”).

Patent Owner does not assert that the declarations explain how the sketches show the “receiving members.” Notwithstanding, Patent Owner asserts that the apertures at the extreme ends of the rails in the sketch are the claimed receiving members. Prelim. Resp. 29–30. On this record, however, we are persuaded that the apertures in the sketch appear to be just that—holes—and do not stick out from the rails like the receiving members shown in Figure 4. The specification of the '585 patent states that receiving

members are not merely holes in the rails, but rather pucks or similar structures that are (permanently or removably) secured *to* the rails. Ex. 1001, 5:41–43 (describing “sockets 30 *for attachment with* a puck or receiving member 44” (italics added)), 5:54–56 (“receiving member 44 may be *mounted in* a socket 30” (italics added)), 5:56–58 (“receiving member 44 may be *secured in the socket* 30 by any appropriate means, such as with fasteners, welding or the like” (italics added)). In addition, the apertures Patent Owner identifies in the sketch appear to be in the wrong place compared to the receiving members depicted in the Figures of the ’585 patent—outboard on the more slender tip of the rails, rather than inboard from the apertures. The features Patent Owner identifies instead appear to be the mounting flanges or mounting apertures. Accordingly, on this record we are not persuaded that the declarations or their accompanying sketch sufficiently show “receiving members.”

The applicant bears the burden of establishing prior conception. *In re Steed*, 802 F.3d 1311, 1316 (Fed. Cir. 2015). In the case of both declarations, the applicant does not appear to have provided any material explanation for how the sketches provided the requisite support to show prior conception of claims that recite a “receiving member,” a claim term that is also recited in the challenged claims of the ’585 patent. Perhaps a drawing alone without explanation may be sufficient in specific circumstances where each claimed feature is clearly present,⁹ but that is not the case here, where we have a rudimentary sketch that appears to not show the “receiving members.” *See In re Borkowski*, 505 F.2d 713, 716–717

⁹ *See Vas-Cath Inc. v. Mahurkar*, 93 F.2d 1555 (Fed. Cir. 1991).

(CCPA 1974) (criticizing affidavits that “consist of vague and general statements in the broadest terms as to what the exhibits show” and holding them “mere pleading, unsupported by proof or showing of facts.”); *In re Harry*, 333 F.2d 920, 922 (CCPA 1964) (faulting a Rule 131 affidavit that merely “asserts that facts exist but does not tell what they are or when they occurred.”). Accordingly, we are persuaded on the present record that Petitioner has shown sufficiently that the declarations submitted during prosecution of the ’050 and ’486 patents do not appear to be sufficient to demonstrate conception prior to Withers of an invention requiring “receiving members” and, thus, that the Office erred in concluding that the declarations were sufficient to antedate Withers. *See also* MPEP § 715.07 (9th ed. rev. 10.2019 June 2020) (instructing the Office to follow, *inter alia*, *Steed*, *Borkowski*, and *Harry*).

Second, Petitioner states that the declarations seek to show conception prior to Withers coupled with diligence to the filing of the *provisional* application. Pet. 14. Petitioner argues that because the provisional application does not show the claimed “receiving member,” it cannot serve as a constructive reduction to practice of an invention requiring a “receiving member.” *Id.*; *see also* 37 C.F.R. § 1.131(b) (allowing to antedate by showing “conception of the invention prior to the effective date of the reference coupled with due diligence from prior to said date to a subsequent reduction to practice *or to the filing of the application*” (emphasis added)). Patent Owner responds that this argument is a “red herring” because it “did not argue it was entitled to the priority date of the ’732 provisional application to defeat Withers.” Prelim. Resp. 30–31. Instead, Patent Owner contends that the Rule 131 declaration was “to establish that Withers is not prior art.” *Id.* at 31.

Patent Owner's argument is unavailing. Rule 131(b) in this circumstance requires establishment of (1) conception and (2) diligence to the filing of *the application*. Patent Owner seems to be arguing that the relevant application filing date here is that of the application that matured into the '009 patent (October 30, 2009), not the provisional application (October 30, 2008). But the declarations both allege diligence to the *provisional* application's filing date, not to the '009 patent's filing date. Ex. 1005, 582; Ex. 1004, 548–49. Thus, at this stage of the proceeding, Petitioner has the better argument. Even if the declarations showed conception of the claimed inventions and showed sufficient evidence of diligence up to the filing date of the filing of the provisional application, the declarations are deficient in that they fail to allege diligence continued up until the constructive reduction to practice (i.e., the filing of the application maturing as the '009 patent). 37 C.F.R. § 1.131(b). Accordingly, Petitioner has shown sufficiently that the declarations submitted during prosecution of the '050 and '486 patents do not appear sufficient to demonstrate the requisite diligence required by Rule 131(b), and for this additional reason, it appears the Office erred in concluding that the declarations were sufficient to antedate Withers.

Third, Petitioner alleges that the declarations are insufficiently corroborated. Pet. 14. “An inventor cannot rely on uncorroborated testimony to establish a prior invention date.” *In re NTP, Inc.*, 654 F.3d 1279, 1291 (Fed. Cir. 2011). Instead, the “applicant is required to demonstrate, with sufficient documentation, that the applicant was in possession of the later-claimed invention before the effective date of the reference.” *Steed*, 802 F.3d at 1316; *see generally Curt Manufacturing, LLC v. Horizon Global Americas Inc.*, IPR2019-00625, Paper 31, 13–18 (PTAB

Aug. 11, 2020) (setting out in detail case law relevant to corroboration). Here, we have determined already that Petitioner has shown sufficiently that the Office appears to have erred in concluding that the declarations were sufficient to antedate Withers. We need not evaluate at this time whether those declarations are sufficiently corroborated.

3. Conclusion

Analyzing the facts of this case under 35 U.S.C. § 325(d) and *Advanced Bionics*, we determine that the Office previously relied on several references now offered by Petitioner in its grounds, but those references were overcome by Rule 131 declarations rather than on the merits. Although the Office accepted the declarations to antedate the Withers reference, Petitioner has shown that the Office made material errors in doing so. Accordingly, we do not exercise our discretion to deny under § 325(d).

B. 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).

C. 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 offer a competing definition. Reviewing the '585 patent and the cited prior art, and in the absence of dispute, we find the Petitioner's definition to be reasonable. Accordingly, we use Petitioner's definition for purposes of this Decision.

D. 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 at this time because it does not appear to be a term in dispute. *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”). We expect the parties to brief claim construction in an appropriate paper in the event the meaning of a term becomes a controversy in this proceeding.

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

Petitioner asserts that Withers anticipates claims 16, 17, and 19. Pet. 64–75. Patent Owner does not respond to this ground at this time.

As to claim 16, Petitioner directs our attention to Figure 1 of Withers, reproduced below:

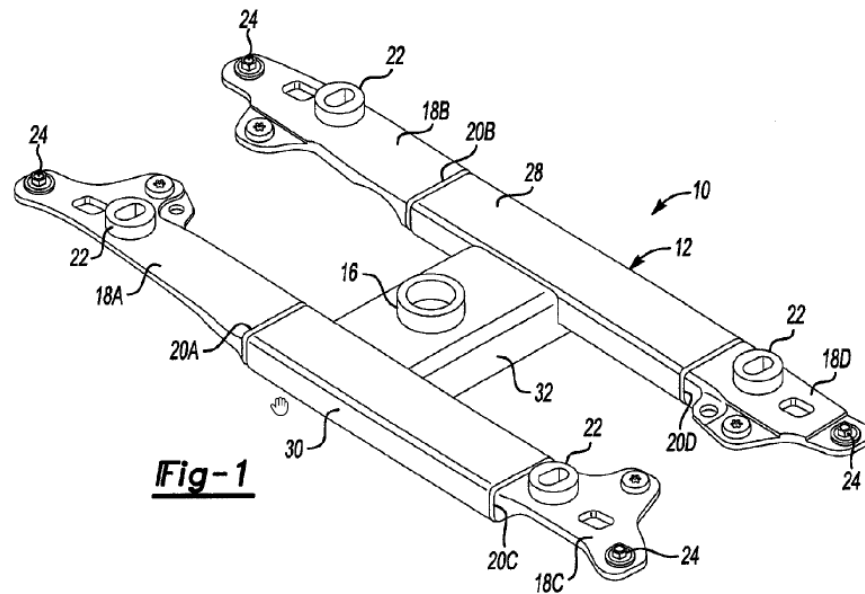


Figure 1 of Withers is a perspective view of an integrated support structure for either a fifth wheel hitch or a gooseneck trailer hitch. Ex. 1012, 2:28–30. The structure includes an H-shaped body with two tubular bars 28, 30 connected by central bridging portion 32. *Id.* at 3:8–11. Central bridging portion 32 includes gooseneck ball receiver 16, whereas tubular bars 28, 30 include fifth wheel mounting pads 22. *Id.* at 2:65–67, 3:20–26.

Petitioner asserts that bars 28, 30 of Withers are the claimed pair of tubular members. Pet. 66–67. Petitioner asserts that central bridging portion 32 with gooseneck ball receiver 16 is the claimed mid rail with a socket. *Id.* at 67–69. Petitioner asserts that fifth wheel mounting pads 22 are the claimed receiving members for engaging legs of a fifth wheel hitch. *Id.* at 69–73. On this preliminary record, each of Petitioner’s assertions is persuasive. The hitch mounting system shown in, e.g., Figure 1 of Withers is nearly identical to that shown in Figures 4–7 of the ’585 patent.

Claim 17 depends from claim 16 and further recites that at least two receiving members are configured to accept a safety chain tie down.

Petitioner points to the disclosure in Withers that “[t]he fifth wheel mounting pads 22 may be used to secure the safety chains of the trailer to the bed of the truck” to show this limitation. Pet. 73–74 (quoting Ex. 1012, 3:27–39). On this preliminary record, we are persuaded that the mounting pads 22 of Withers, which can be used to secure safety chains, meet the requirements of claim 17.

Claim 19 depends from claim 16 and further recites that the pair of tubular members are configured to attach to a frame of a vehicle. Petitioner points to the disclosure in Withers that “[t]he end inserts 18A-D connect the support structure assembly 10 to a vehicle frame,” and, more specifically, that “the support structure assembly 10 is secured to the frame rails 42.” Pet. 74 (quoting from Ex. 1012, 3:2–32). Petitioner further explains that “[t]he end inserts 18A-D are ‘inserted into four tubular ends 20A-D [of the transverse bar portions 28, 30] of the body portion 12.’” *Id.* (quoting Ex. 1012, 3:2–3). On this preliminary record, we are persuaded these disclosures explaining how to connect the Withers device to the frame meet the requirements of claim 19.

Reviewing the Petition, we determine that Petitioner has established a reasonable likelihood of success that claims 16, 17, and 19 are anticipated by Withers.

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

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 are disclosed in Lindenman. *See id.* Fandrich is provided merely to show in more detail

something already described in Works (tubular members). *Id.* at 35–36. Patent Owner does not argue that Petitioner’s proposed combination is missing any limitations and instead argues that Petitioner has not established a sufficient reason for combining the teachings of Works and Lindenman. *See* Prelim. Resp. 36–40.

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:

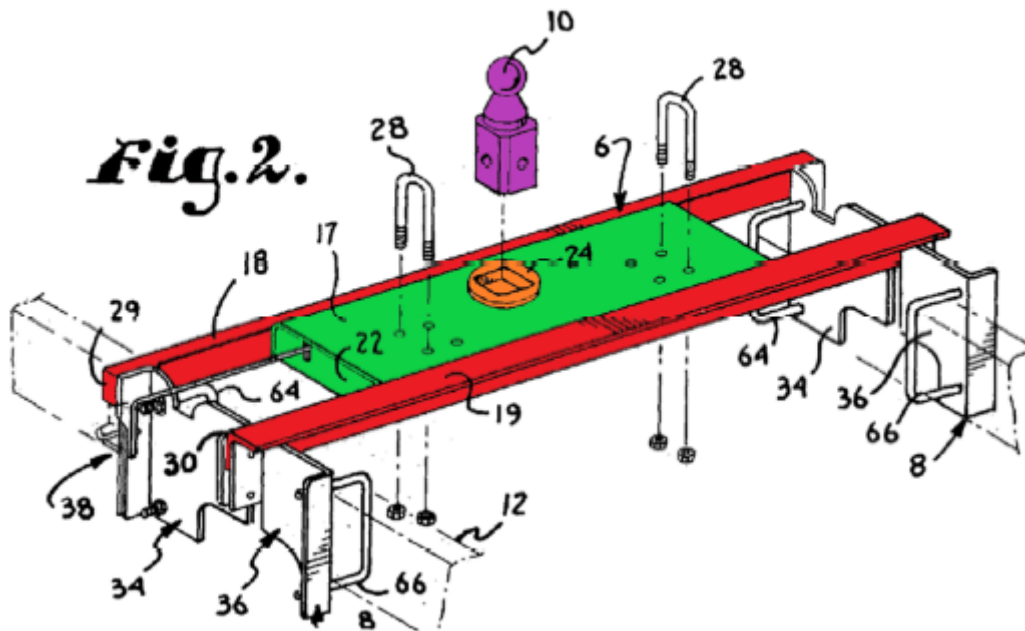


Figure 2 of Works, as annotated by Petitioner, depicts a partially exploded perspective view of a hitch mounting system with cross members 18, 19 (red), base member 17 (green) attached between the cross members, socket 24 (orange) in the base member, and gooseneck hitch ball 10 (purple) in the socket. 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, 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 as claimed. Pet. 39–40. In particular, Petitioner directs our attention to Figure 1 of Lindenman, a version colorized by Petitioner being reproduced below:

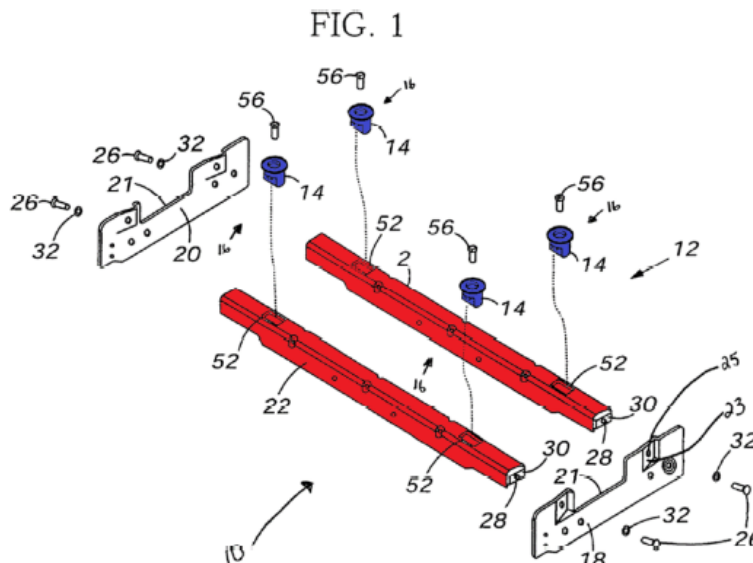


Figure 1 of Lindenman, as annotated by Petitioner, depicts an exploded perspective view of a vehicle accessory mounting system. Ex. 1010, 2:44–45. Two receptacles 14 (purple) are provided in each of two cross members (red); the receptacles are for attaching accessories such as a fifth wheel

hitch. *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 arms 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 does not contest that aspect of the ground at this time.¹⁰ The dispute thus turns on the reason for combining Lindenman with Works-Fandrich.

On that issue, Petitioner asserts that several of the rationales espoused in *KSR* apply: (i) combining the prior art according to known methods to yield predictable results, (ii) simple substitution, (iii) use of a known technique to improve similar devices, (iv) applying a known technique to a device ready for improvement, (v) obvious to try, and (vi) work in one field prompting variations based on design incentives. Pet. 31–32; *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 415–17 (2007). In effect, Petitioner is asserting that it would have been obvious to take a hitch system using one known connection method (centrally-located connector, e.g. Works) and add a second known connection method (arm-mounted connector, e.g., Lindenman, Fandrich), which would predictably provide the functions of both connection methods. Pet. 29 (asserting that a person of ordinary skill in

¹⁰ Patent Owner argues that each of the individual references do not teach each limitation alone (Prelim. Resp. 33–35), but these arguments are unpersuasive because they attack the references in isolation. *Game & Tech Co. v. Wargaming Grp. Ltd.*, 942 F.3d 1343, 1352 (Fed. Cir. 2019) (“The question in an obviousness inquiry is whether it would have been obvious to a person of ordinary skill in the art to combine the relevant disclosures of the two references, not whether each individual reference discloses all of the necessary elements.” (citing *Cohesive Techs., Inc. v. Waters Corp.*, 543 F.3d 1351, 1364 (Fed. Cir. 2008))).

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”). Patent Owner counters that Works-Fandrich is “already capable of mounting either a gooseneck coupler or fifth wheel hitch” such that “there is no reason to modify or enhance Works.” Prelim. Resp. 37. Thus, Patent Owner’s argument is that there would be no reason to add the arm-mounted connectors of Lindenman to Works in order to accommodate both fifth-wheel and gooseneck-style hitches because Works already can accommodate both hitch types using the centrally-located socket connector.

Patent Owner’s argument is predicated on a passage in column 1 lines 26 to 31 of Works that allegedly describes Works’ system as accommodating both hitch types. Prelim. Resp. 17 (citing Ex. 1009, 1:26–31). However, reading this passage *in the context of the text surrounding it*, we are not persuaded by Patent Owner’s argument. The relevant passage in Works is as follows:

In order to overcome the foregoing problem, a system for mounting trailer hitches was developed which has been referred to as a “fifth wheel” type trailer hitch. *The fifth wheel trailer hitch includes a hitch ball* which is mounted over or slightly forward of the rear axle of a flat bed type vehicle and particularly pickup trucks. By positioning the hitch ball above or forward of the rear axle of the vehicle, the weight which the vehicle can tow is significantly increased over vehicles having the rear end type hitch assemblies. *In order to allow the trailing vehicle to be connected to a fifth wheel type hitch, a “gooseneck” type extension is utilized on the towing arm of the trailing vehicle.* The gooseneck is generally somewhat curved with the hitch portion being disposed at its forward end, with a central portion extending upwardly and over the rear of the pulling vehicle.

Ex. 1009, 1:26–41 (italics added).

Accordingly, on this record we understand that Works uses the term “fifth wheel” to refer generically to a trailer that is towed by way of attachment over the truck axle, rather than a specific attachment structure using a kingpin/receiver. The passage consistently refers to the ball type of attachment and characterizes *that* as a “fifth wheel type hitch.” Thus, on the preliminary record before us, we find that a person of ordinary skill in the art would not understand Works to be describing a kingpin/receiver type of attachment structure, but rather only a gooseneck/ball type of attachment structure.

Patent Owner next argues that the company that owns the Works patent allegedly offers a kingpin/receiver type of hitch that adapts to the center-mounted socket (25) of Works. Prelim. Resp. 17. The photographs offered as proof are merely pasted into the Preliminary Response and have not been properly submitted as evidence in this proceeding. *See* 37 C.F.R. § 42.6(a)(3) (“combined documents are not permitted”), (c) (“exhibit[s] must be filed with the first document in which it is cited”). In any event, photographs of commercial products allegedly used in conjunction with a commercial embodiment of Works are not relevant as to what Works itself discloses. *See Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1364 (Fed. Cir. 2001) (“The relevant inquiry is what a hypothetical ordinarily skilled artisan would have gleaned from the cited references.”).¹¹

Returning back to Petitioner’s asserted rationales (Pet. 31–32), we are persuaded that the proposed modification would appear (on this preliminary

¹¹ To be clear, we are not stating that the photographs are irrelevant to the issue of obviousness as a whole, but rather that they are irrelevant to show what Works describes in the document.

record) to provide the benefit of allowing both ball/coupler-style and kingpin/receiver-style of hitches, at least from the perspective of Works alone, which appears directed to ball-style hitches. Notwithstanding, Petitioner still must provide a reason with rational underpinning as to why a person of ordinary skill, without the benefit of hindsight, would have considered the claimed invention obvious. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1575 (Fed. Cir. 1986) (holding that obviousness “requires . . . that it would have been obvious to produce the claimed invention at the time it was made without the benefit of hindsight”) (emphasis omitted). Thus, we evaluate Petitioner’s rationales.

Although Petitioner nominally articulates six different rationales, there is little development of them in the Petition, and each reads nearly identically. *See* Pet. 31–32. A rationale is an *explanation* as to why the claimed invention is obvious, however explained, not a rote recitation of formulaic, canned statements. *See* KSR, 550 U.S. at 415 (“rejecting [a] rigid approach” to the issue of obviousness and instead requiring “an expansive and flexible approach”). Notwithstanding, reading Petitioner’s rationale discussion as a whole, with particular focus on rationales (iv) and (v), we understand that Petitioner is essentially stating that it would have been obvious to add the mounts of Lindenman to Works in order to gain the benefit of having those additional mounts. *See generally* Pet. 31–32. Practically, Works has a single, central attachment point for mounting, whereas Lindenman has four attachment points for mounting. Having both impinges neither, yet adds the benefit of additional compatibility. *Id.* at 32 (asserting the combination allows the “ability . . . to accommodate various different accessories”). Thus, even if Works could attach both types of hitches using its central socket by using a special adapter, adding arm

sockets allows for attachment of both types of hitches without special adapters. Indeed, the prior art of record supports a desire to have both types of mounting styles on one device, without having to use an adapter to convert one to another. Ex. 1012, 1:25–35 (criticizing adapters and emphasizing “a need for an integrated support structure”); *see also Randall Mfg. v. Rea*, 733 F.3d 1355, 1362–63 (Fed. Cir. 2013) (requiring the Board to consider “background references” to help understand the knowledge of one of skill in the art when determining obviousness). Accordingly, on this preliminary record we are persuaded that Petitioner has established sufficient rationale for purposes of institution.

Claim 17 depends from claim 16 and further recites that at least two receiving members are configured to accept a safety chain tie down. Petitioner points to the disclosure in Lindenman that “accessory mounting members” can receive “an article anchor . . . or other useful device.” Pet. 42–43 (emphasis removed) (quoting Ex. 1010, 1:46–52, 2:11–18). Petitioner asserts that a safety chain tie down is a “useful device” as described in Lindenman, and that Patent Owner asserted in related litigation that “accessory members” include a safety chain tie down. *Id.* at 43 (citing Ex. 1007 ¶ 110; Ex. 1019, 20). On this preliminary record, we are persuaded that the accessory mounting members of Lindenman are configured to accept a safety chain tie down, as required by claim 17.

Claim 18 depends from claim 16 and further recites a plurality of fasteners attaching the mid rail between the tubular members. Petitioner directs our attention to the fact that Figure 4 of Works shows fasteners 23 attaching cross members 18, 19 (tubular members) to the hitch base member 17 (mid rail). Pet. 44–45. On this preliminary record, we are sufficiently

persuaded that it would have been obvious to fasten the tubular members to the mid rail using fasteners as required by claim 18.

Claim 19 depends from claim 16 and further recites that the pair of tubular members are configured to attach to a frame of a vehicle. Petitioner points to the disclosure in Works that cross members 18, 19 (tubular members) are attached to the vehicle frame with side plate assemblies 8. Pet. 45–46 (citing Ex. 1009, 4:10–13, 5:65–67, Fig. 2). On this preliminary record, we are sufficiently persuaded that these disclosures explain how to connect the Works device to the frame as required by claim 19.

Claim 20 depends from claim 19 and further recites a bracket to attach the tubular members to the vehicle frame. Petitioner again points to the side plate assemblies 8 in Works. Pet. 46–47. On this preliminary record, we are sufficiently persuaded that the Works device is connected to the frame using brackets (side plates 8) as required by claim 20.

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

This ground asserts the same three references as the prior ground, but starts with the arm-mounted accessory receivers of Lindenman and adds the centrally-mounted accessory socket of Works. *See generally* Pet. 48–64. Lindenman describes “tubular sections” for the arms, but Petitioner provides hollow tubes 110 of Fandrich for additional clarity. *Id.* at 56–57. Patent Owner does not argue that Petitioner’s proposed combination is missing any limitations and instead argues that Petitioner has not established a sufficient reason for combining the teachings of Works and Lindenman. *See* Prelim. Resp. 40–43. The dispute over rationale is largely the same as in the prior ground, with Patent Owner arguing there is no reason to add Works’ hitch where Lindenman is already capable of receiving hitches. *Id.*

Lindenman (unlike Works) explicitly states that its hitch mounting system is for both types of hitches. Ex. 1010, 1:46–52. Lindenman does not appear to go into any further detail regarding how to connect the ball/coupler-style of hitches. In any event, there does not seem to be any dispute that Lindenman does not have the centrally-mounted socket type of connector for a ball/coupler-style trailer hitch. Thus, Petitioner’s rationale to provide for both centrally-mounted and arm-mounted connections is still relevant (i.e., “to accommodate various different accessories,” Pet. 53). Accordingly, although this ground is slightly different, we see this ground as similar enough to the Works-Fandrich-Lindenman ground to have the same impression.

III. CONCLUSION

As explained above, we find that Petitioner has established a reasonable likelihood of success in showing that claims 16, 17, and 19 are anticipated by Withers. Accordingly, we institute *inter partes* review on all challenged claims on all asserted grounds. *See SAS Inst. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that an *inter partes* review of claims 16–20 of the ’585 patent is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of the ’585 patent is hereby instituted commencing on the entry date of this Decision, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

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