

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KUBOTA NORTH AMERICA CORPORATION,
Petitioner,

v.

VERMEER MANUFACTURING COMPANY,
Patent Owner.

IPR2025-00171
Patent 10,202,266 B2

Before MEREDITH C. PETRAVICK, ANNETTE R. REIMERS, and
ERIC C. JESCHKE, *Administrative Patent Judges*.

JESCHKE, *Administrative Patent Judge*.

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

I. BACKGROUND

Petitioner, Kubota North America Corporation, filed a Petition to institute *inter partes* review of claims 1–16 and 19–28 of U.S. Patent No. 10,202,266 B2 (Ex. 1001, “the challenged patent”). Paper 2 (“Pet.”). Patent Owner, Vermeer Manufacturing Company, timely filed a Preliminary Response. Paper 5 (“Prelim. Resp.”). With authorization (Ex. 3001), Petitioner filed a Preliminary Reply addressing discretionary denial. Paper 8 (“Prelim. Reply”).

We have authority to determine whether to institute *inter partes* review. *See* 35 U.S.C. § 314 (2024); 37 C.F.R. § 42.4(a) (2024) (“The Board institutes the trial on behalf of the Director.”). *Inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314. Upon consideration of the evidence and arguments in the record, for the reasons below, we determine that the information presented shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. We thus institute *inter partes* review on all challenged claims on all asserted grounds. *See SAS Inst. Inc. v. Iancu*, 584 U.S. 357, 362–63, 369–70 (2018); 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”).

A. Related Proceedings

The parties identify one proceeding in the U.S. District Court for the Northern District of Texas (the “Texas District Court”) involving the

challenged patent: *Vermeer Manufacturing Co. v. Kubota North America Corp.*, No. 4:24-cv-00799-P (N.D. Tex.), filed August 20, 2024 (the “Texas Litigation”). Pet. 107; Paper 3 (Patent Owner Mandatory Notices) at 2. The Texas District Court stayed the Texas Litigation on March 19, 2025, pending resolution of certain proceedings before the Board. *See* Ex. 1037; Paper 7 (Petitioner’s Updated Mandatory Notices) at 2.

Petitioner identifies one terminated proceeding in the U.S. District Court for the Southern District of Iowa (the “Iowa District Court”) involving the challenged patent: *Vermeer Manufacturing Co. v. The Toro Co.*, No. 4-17-cv-00076 (S.D. Iowa) (filed Feb. 28, 2017; terminated May 17, 2021) (the “Iowa Litigation”).¹ Pet. 107; Paper 7 at 2.

The parties identify other proceedings at the Board involving patents allegedly related to the challenged patent. This table identifies the related patents and their respective case numbers:

Case No.	U.S. Patent No.
IPR2025-00167	9,321,386 B1
IPR2025-00168	9,321,386 B1
IPR2025-00169	9,321,386 B1
IPR2025-00170	9,975,750 B2
IPR2025-00381	11,465,891 B2
PGR2025-00016	12,098,063 B2

Pet. 108; Paper 3 at 2; Paper 7 at 2–3; Paper 14 (Patent Owner’s Updated Mandatory Notices) at 2.

¹ Although some filings in the Iowa Litigation include “Vermeer Corporation” in the caption, “Vermeer Manufacturing Company” (i.e., Patent Owner here) was formally substituted into the caption and pleadings in the Iowa Litigation. *See* ECF No. 129 (Dec. 21, 2018) (Text Order).

B. The Challenged Patent

The challenged patent “relates to compact tool carriers having a loader mounted to a low-profile mainframe.” Ex. 1001, 1:16–17. According to the challenged patent, “[c]ompact tool carriers are tool-mounted machines that are capable of working in tight spaces for utility or do-it-yourself home projects.” *Id.* at 1:21–23. Figure 1 is reproduced below:

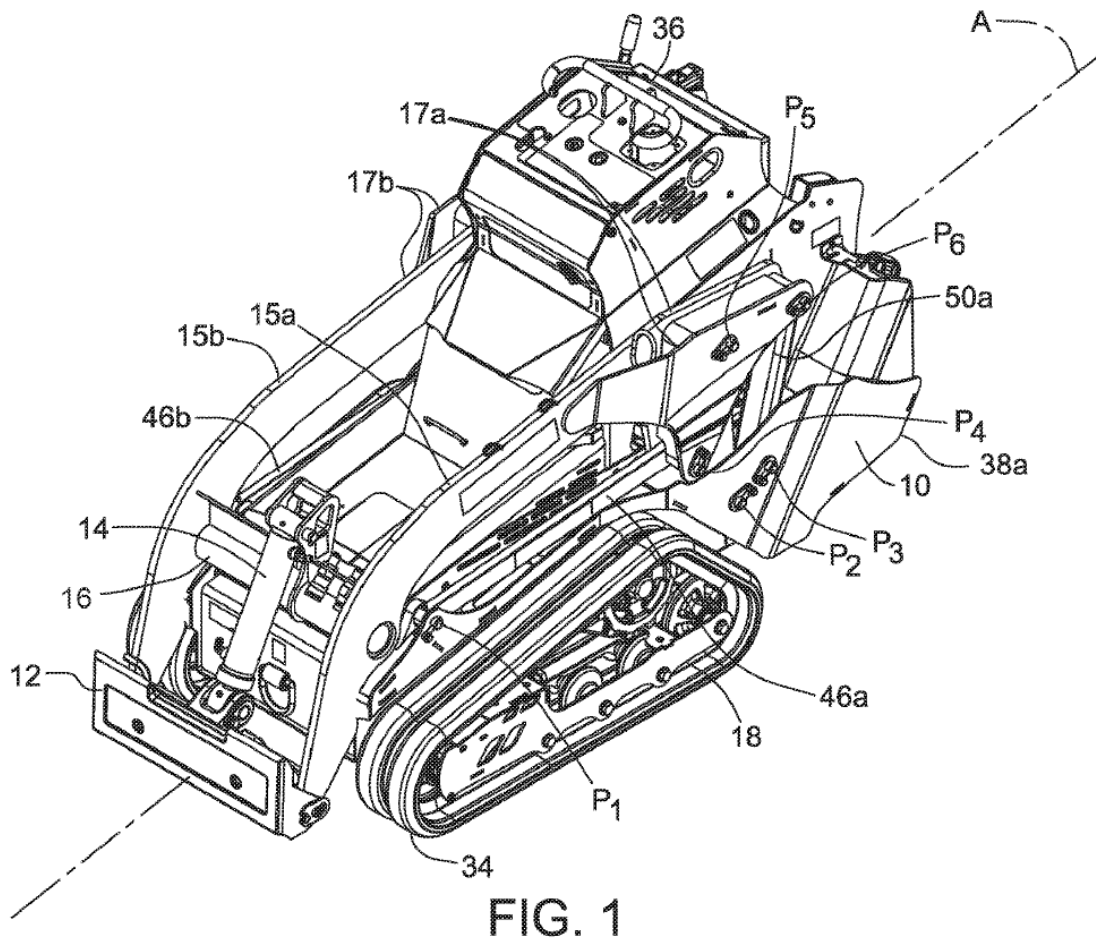


Figure 1 is a perspective view of a compact tool carrier with the loader in the down position. Ex. 1001, 2:28–29. Figures 2 and 3 are below:

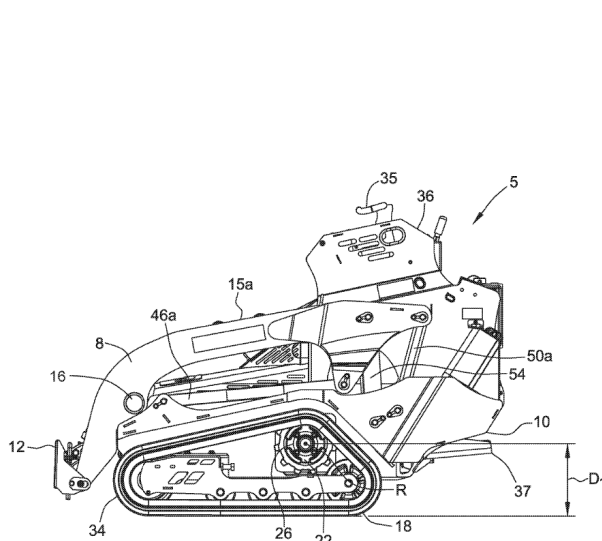


FIG. 2

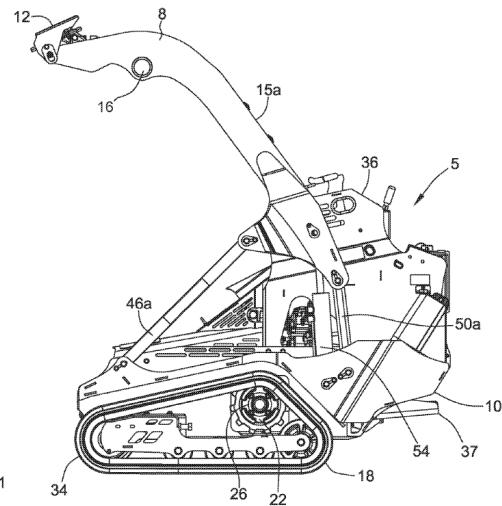


FIG. 3

Figure 2 is a side view of a compact tool carrier with the loader in the lowered position, and Figure 3 is a side view of a compact tool carrier with the loader in the raised position. Ex. 1001, 2:30–33. The compact tool carrier 5 shown above includes “a loader 8 supported by a mainframe 10” and “an attachment plate 12 for interchangeably attaching any one of a number of tools (not shown).” *Id.* at 2:47–50.² In addition, compact tool carrier 5 includes (1) loader arms 15a and 15b, (2) a drive mechanism 18 attached to mainframe 10, (3) a control station 36 with controls for moving compact tool carrier 5 and raising and lowering loader 8, (4) an operator platform 37 for standing operation, and (5) linkages 46a, 46b, 50a, and 50b attached to mainframe 10. *Id.* at 2:54–56, 3:21–22, 3:32–35, 3:46–47, 4:34–40, 4:55–58. Actuator 54 “is powered to raise the loader 8 and, in some

² In this Decision, we omit emphasis on reference numerals in quotations from the challenged patent and prior art references.

embodiments, is also powered to lower the loader 8 (as opposed to a one-way actuator lowered by gravity alone).” *Id.* at 4:51–54.

Figure 4 is reproduced below:

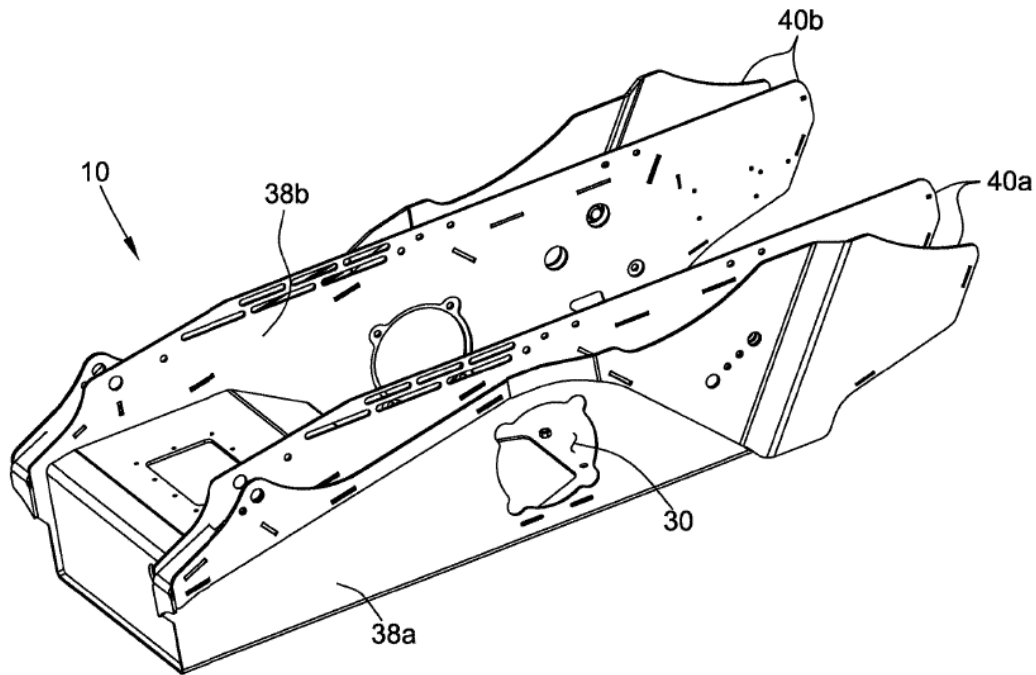


FIG. 4

Figure 4 is a perspective view of a mainframe of a compact tool carrier. Ex. 1001, 2:34–35. The challenged patent states, “As used herein, the term ‘mainframe’ generally refers to a single weldment to which the loader 8 is attached, optionally through one or more pivotal linkages.” *Id.* at 4:13–16.

C. The Challenged Claims

Petitioner challenges claims 1–16 and 19–28, of which claims 1, 7, 14, 19, and 25 are independent.³ Claims 2–6 depend from claim 1; claims

³ The challenged patent is amended by an *ex parte* reexamination certificate. Ex. 1001 at 15–17 (“Reexam Cert.”). Independent claims 7, 14,

8–13 depend from claim 7; claims 15 and 16 depend from claim 14; claims 20–24 depend from claim 19; and 26–28 depend from claim 15.

Independent claim 1 is reproduced below, reformatted from the version provided in the challenged patent and with bracketed alphanumeric designations added to identify each clause:

1. [1.0] A loader apparatus configured for standing operator control and comprising:

[1.1] a loader adapted to carry a tool, the loader being moveable between a down position and a vertically raised position;

[1.2] a loader support for supporting the loader, the loader support having a first side and a second side, the loader being free from direct attachment to the loader support;

[1.3] a first linkage pivotally attached to the first side of the loader support at a first linkage pivot point;

[1.4] a second linkage pivotally attached to the first side of the loader support at a second linkage pivot point;

[1.5] an actuator pivotally attached to the first side of the loader support at an actuator pivot point;

[1.6] a control station having operator controls for propelling the loader apparatus forward and for raising and lowering the loader; and

[1.7] an operator platform for standing operation of the operator controls of the control station, the operator platform being located toward a rear of the loader apparatus such that the first linkage pivot point, second linkage pivot point, and the actuator pivot point are disposed forward of the operator platform, the first linkage pivot point, second linkage pivot point,

19, and 25 are recited in the Certificate. *See* Reexam Cert. Claims 17 and 18 were cancelled in reexamination. *See* Ex. 1001 at 16.

and the actuator pivot point being disposed below the operator controls of the control station.

Ex. 1001, 6:47–7:5.⁴

D. Asserted Grounds of Unpatentability

Petitioner challenges claims 1–16 and 19–28 on the following grounds:

Claim(s) Challenged	35 U.S.C. § ⁵	Reference(s)/Basis
1–7, 10–13, 28	102(a)(1)	KR996 ⁶
1–7, 10–13, 28	103	KR996
8, 9	103	KR996, Bares ⁷
14–16, 19–27	103	KR996, Bares, Beltrami ⁸

Petitioner supports its challenges with a declaration from Dr. Steven Alan Velinsky, Ph.D., P.E. Ex. 1003 (“Velinsky Decl.”).

⁴ We adopt and apply below Petitioner’s designations for the elements of the challenged claims. *See, e.g.*, Pet. 24–37 (showing alphanumeric designations for the language in claim 1).

⁵ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102, 103 that became effective on March 16, 2013. Pub. L. No. 112-29, §§ 3(b)–3(c), 3(n)(1), 125 Stat. 284, 285–87, 293 (2011). Because there is no dispute that the challenged claims have effective filing dates after March 16, 2013, we apply the AIA versions of the statutes. We would reach the same outcome, however, under the pre-AIA versions.

⁶ Korean Intellectual Property Office Patent KR 10-1041996, published June 16, 2011 (Ex. 1005 (Korean version and certified translation), “KR996”).

⁷ United States Patent US 6,832,659 B1, issued December 21, 2004 (Ex. 1010, “Bares”).

⁸ United States Patent US 3,586,195, issued June 22, 1971 (Ex. 1008, “Beltrami”).

II. DISCUSSION

A. The Level of Ordinary Skill in the Art

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The person of ordinary skill in the art is a hypothetical person presumed to have known the relevant prior art. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In determining the level of ordinary skill in the art, we may consider certain factors, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *Id.* (internal quotation marks and citation omitted).

Petitioner contends, citing declaration testimony, that a person having ordinary skill in the art at the time of the alleged invention “would have had at least a Bachelor of Science degree in Mechanical or Agricultural Engineering and two years of experience in the design of vehicles, or have had equivalent knowledge and experience.” Pet. 18. Petitioner adds that “[l]ack of professional experience can be remedied by additional education, and vice versa.” *Id.* (citing Velinsky Decl. ¶¶ 17–20, 52).

Patent Owner states that it “does not dispute” the definition of one of ordinary skill in the art proposed by Petitioner and “notes that it substantially tracks” Patent Owner’s definition. Prelim. Resp. 21–22; *see also id.* at 22 n.7 (defining one of ordinary skill in the art as having “at least a Bachelor of Science degree in Mechanical or Agricultural Engineering and two years of experience in the design of machines, or have had equivalent knowledge and experience”).

Petitioner’s proposed definition of the level of ordinary skill in the art appears consistent with the record at this stage of the proceeding, including the prior art. *See GPAC Inc.*, 57 F.3d at 1579. Patent Owner’s proposal is the same, except for use of the term “machines” instead of “vehicles.” Furthermore, Patent Owner does not argue at this stage of the proceeding that Petitioner’s proposal for the level of ordinary skill leads to an improper understanding of how a skilled artisan would understand either the challenged patent or the prior art. For purposes of this Decision, we adopt the definition of the level of ordinary skill in the art proposed by Petitioner.

B. Discretionary Denial Under 35 U.S.C. § 314

Patent Owner requests that we discretionarily deny the Petition in light of the Texas Litigation. Prelim. Resp. 29–30 (citing *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”)).

In *Fintiv*, the Board discussed potential applications of *NHK Spring Co. v. Intri-Plex Techs. Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential), as well as a number of other cases dealing with discretionary denial under § 314(a). *Fintiv* identifies a non-exclusive list of factors parties may consider addressing, particularly where there is a related, parallel district court action and whether such action provides any basis for discretionary denial. *Fintiv*, Paper 11 at 5–16. Those factors include:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;

5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Fintiv, Paper 11 at 5–6. In evaluating the *Fintiv* factors, we take a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review. *Id.* at 6. We are also guided by the Chief Administrative Patent Judge’s March 24, 2025, memorandum titled “Guidance on USPTO’s rescission of ‘Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation’” (“CAPJ Memo”).⁹

1. *Factor 1 – whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

Patent Owner argues that it is unlikely that the Texas District Court would grant Petitioner’s February 11, 2025 motion to stay in the Texas Litigation. Prelim. Resp. 30–31.

On March 19, 2025, however, the Texas District Court stayed the Texas Litigation pending the resolution of this *inter partes* review and the related *inter partes* reviews. *See* Ex. 1037 at 6; Prelim. Reply 1.

“A district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts.” *Fintiv*, Paper 11 at 6. Factor 1 strongly weighs against discretionarily denying the Petition.

⁹ Available at https://www.uspto.gov/sites/default/files/documents/guidance_memo_on_interim_procedure_rescission_20250324.pdf.

2. Factor 2 – proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision

Patent Owner argues that trial in the Texas Litigation is scheduled for May 11, 2026, one month before the June 2026 projected statutory deadline for a final written decision. Prelim. Resp. 31–32.

As the Texas District Court has stayed and administratively closed the Texas Litigation, no trial date is currently scheduled. Ex. 1037 at 7; Prelim. Reply 2.

Factor 2 weighs against discretionarily denying the Petition.

3. Factor 3 – investment in the parallel proceedings by the court and the parties

Patent Owner argues that the parties and the Texas District Court have made a significant investment in the Texas Litigation because the parties have exchanged all preliminary contentions and claim construction briefing would have been complete by May 19, 2025. Prelim. Resp. 32.

Petitioner argues that significant work remains in the Texas Litigation because only preliminary invalidity contention had been filed and claim construction had just been initiated before the Texas Litigation was stayed. Prelim. Reply 2. When staying the Texas Litigation, the Texas District Court likewise indicated that the Texas Litigation “is still in its early stage” and “while some discovery may have been exchanged, the ‘most significant and time-consuming tasks in patent infringement litigation have not begun.’” Ex. 1037 at 6. According to the Texas District Court, “no claim construction hearing has been conducted, no depositions have been taken, and the majority of discovery lays ahead.” *Id.* at 6–7. Petitioner also expeditiously filed the Petition less than three months from the filing of the complaint in the Texas Litigation. Prelim. Reply 2.

“If, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs again exercising discretion to deny” and “[i]f the evidence shows that the petitioner filed the petition expeditiously, . . . this fact has weighed against exercising the authority to deny institution.” *Fintiv*, Paper 11 at 10–11.

Factor 3 weighs against discretionarily denying the Petition.

4. *Factor 4 – overlap between the issues raised in the petition and the parallel proceeding*

Patent Owner alleges that Petitioner raises substantially the same grounds, as well as additional grounds, in the Texas Litigation. Prelim. Resp. 32–33 (citing Ex. 2014 at 6).

“[I]f the petition includes the same or substantially the same claims, grounds, arguments, and evidence presented in the parallel proceeding, this factor has favored denial.” *Fintiv*, Paper 11 at 12. Petitioner, however,

stipulates that if the PTAB institutes the IPR based on the grounds identified in the Petition . . . , then it (i) will not pursue the grounds identified in the Petition in the [Texas] Litigation and (ii) will not pursue any other ground that could have reasonably been raised during the IPR (should it be instituted) in the [Texas] Litigation (*i.e.*, any ground that could have been raised under §§102 or 103 on the basis of prior art patents or printed publications).

Prelim. Reply 3. Petitioner’s stipulation is a *Sotera*-type stipulation. See *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (PTAB Dec. 1, 2020) (precedential as to § II.A) (“*Sotera*”). Petitioner’s stipulation may “mitigate[] any concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decision” and “ensures that an *inter partes* review is a ‘true alternative’ to the district court proceeding.” *Sotera*, Paper 12 at 19.

Petitioner's *Sotera* stipulation "is highly relevant, but [is] not . . . dispositive by itself." CAPJ Memo 2–3. We consider Petitioner's *Sotera* stipulation as part of our holistic analysis under *Fintiv*. *Id.*

Patent Owner also argues that

Petitioner has filed infringement counterclaims in the [Texas] Litigation based on patents that relate to the same subject matter as Vermeer's but were filed many years later. Petitioner's obviousness arguments here are inconsistent with the assertion of its own derivative patents in the [Texas] Litigation: if Vermeer's patents are invalid on the grounds raised in the Petition, then so are Petitioner's. Permitting Petitioner to simultaneously assert contradictory positions between proceedings is all but certain to result in conflicting decisions.

Prelim. Resp. 33–34.

Patent Owner's argument is unpersuasive because Patent Owner does not sufficiently support its assertion that Petitioner's patents are derivative and would also be invalidated by the grounds raised in the Petition. Patent Owner does not provide sufficient information about Petitioner's patents asserted in the counterclaims in the Texas Litigation to determine the overlap of issues.

We note that the Texas District Court has indicated that even if the Board cannot resolve Petitioner's counterclaims, the issues in the Texas Litigation would be simplified if the Texas Litigation was stayed until the final disposition in this proceeding. Ex. 1037 at 5–7. The Texas District Court states:

Simplification of the issues is highly likely [in the Texas Litigation]. . . . [T]his case is more complex than the average patent case. Kubota has filed for IPR on eighty different claims for the five patents at issue in Vermeer's Complaint. . . . And if the Patent Board invalidates one or more of the asserted claims on IPR, the case will be simplified. But even if the Patent Board

denies institution on all of Kubota's petitions, "the Court would still receive the benefit of the [Patent Board's] opinion, including its initial claim construction and invalidity analysis."

Id. at 5–6 (last alteration in original); *see also id.* at 4 ("This case . . . is much larger than most patent cases that this Court sees on its docket.").

Factor 4 weighs against discretionarily denying the Petition.

5. Factor 5 – whether the petitioner and the defendant in the parallel proceeding are the same party

Petitioner is the defendant in the Texas Litigation. Prelim. Resp. 34; Prelim. Reply 3. Factor 5 weighs slightly for discretionarily denying the Petition.

6. Factor 6 – other circumstances that impact the Board's exercise of discretion, including the merits

Under factor 6, we consider "other circumstances that impact the Board's exercise of discretion, including the merits." *Fintiv*, Paper 11 at 6.

Patent Owner argues that the Petition's merits are "weak" because "Petitioner's challenge falls well short of the 'reasonable likelihood' standard." Prelim. Resp. 35 & n.10.

As discussed in our analysis below, on this preliminary record, we determine that Petitioner has met its burden of demonstrating a reasonable likelihood that it would prevail in showing that at least one claim of the challenged patent is unpatentable.

Patent Owner also asserts that the challenged patent was extensively challenged in previous litigation. Prelim. Resp. 34; *see* Pet. 107 (identifying the Iowa Litigation). As Petitioner points out, however, the Iowa Litigation was terminated without a validity determination. Prelim. Reply 4.

Factor 6 does not weigh for or against discretionary denial.

7. Conclusion

Factors 1, 2, 3, and 4 weigh against discretionary denial, and factor 1 weighs strongly against discretionary denial. Factor 5 weighs slightly in favor of discretionary denial. Factor 6 is neutral. Considering the six *Fintiv* factors together and taking “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review” (*Fintiv*, Paper 11 at 6), we decline to discretionarily deny the Petition under 35 U.S.C. § 314(a).

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

In its arguments for *Fintiv* factor 6, Patent Owner argues that the [challenged] Patent and other patents in the Vermeer patent family were extensively challenged in previous litigation and reexaminations but survived. *See* Petition at 14–16. As here, the party that requested those reexaminations was an accused infringer attempting to invalidate the [challenged p]atent on obviousness grounds. [Patent Owner] and the Patent Office have already expended significant resources confirming the [challenged p]atent’s validity; therefore, the relatively weak arguments set forth by Petitioner here are insufficient to justify yet another proceeding.

Prelim. Resp. 34–35; *see* Ex. 1001 at 15 (identifying Reexamination No. 90/014,269). We construe this argument as a request for discretionary denial under 35 U.S.C. § 325(d).

In determining whether to deny institution under § 325(d) we use a two-part framework:

- (1) 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, whether the petitioner has demonstrated that the Office

erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential) (“*Advanced Bionics*”). If part one of *Advanced Bionics* is unsatisfied, discretionary denial is unwarranted, and we need not proceed to part two of *Advanced Bionics*. *Id.*

For part one of the *Advanced Bionics* framework, we evaluate the following factors:

- (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; and
- (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.

Id. at 9.

Petitioner explains that “the *ex parte* reexaminations relied upon different prior art presented in an entirely different invalidity theory” because the *ex parte* reexaminations “relied on an obviousness framework that replaced a radial lift of a compact tools carrier with a vertical lift [from a larger skid-steer equipment having an operator cabin].” Prelim. Reply 4 (emphasis omitted); *see also* Pet. 16 (explaining that the Examiner withdrew a rejection replacing a radial lift of a compact loader with a vertical lift of a larger skid steer). Petitioner further explains:

In contrast, challenges here rely upon previously uncited KR996 – a compact tool carrier having a vertical lift – that teaches the vast majority of the claim elements. The obviousness framework here is to minor conventional features such as an engine bracket. That the PTO had not previously been made aware of KR996,

which is substantially different than the art that was before [the PTO], led to clear error in confirming and allowing claims in the previous proceedings correctable by these IPRs.

Prelim. Reply 4.

All of Petitioner's grounds and arguments rely primarily upon KR996. *See* Prelim. Reply 4. As Petitioner explains, KR996 was not previously presented to the Office, is not cumulative to the prior art relied upon during the reexamination, and the obvious analysis based on KR996 is not the same or substantially the same as that made during the reexamination. *Id.* We, thus, determine that part one of the *Advanced Bionics* framework is not satisfied, and we need not turn to part two. We decline to discretionarily deny the Petition under 35 U.S.C. § 325(d).

D. Claim Construction

1. The Applicable Standard

In *inter partes* reviews, the Board interprets claim language using the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b), as described in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b). Under that standard, we generally give claim terms their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1313–14. Although extrinsic evidence, when available, may also be useful when construing claim terms under this standard, extrinsic evidence should be considered in the context of the intrinsic evidence. *See id.* at 1317–19.

2. *Procedural History*

In its initial filing, Petitioner proposed a construction for “barrier guard” in claims 19 and 25, but Petitioner stated that “no other claim term requires express construction.” Pet. 18–19. Petitioner noted, however, that the Iowa District Court discussed constructions of certain claim terms (*id.* at 19 n.4). In the Preliminary Response, Patent Owner proposed a construction for the term “mainframe” in claims 19 and 25. *See* Prelim. Resp. 23–29.

Following a *sua sponte* request by the Board (Paper 6), Petitioner filed an initial claim construction brief (Paper 9 (“Pet. Init. CC Br.”)) and a reply claim construction brief (Paper 12 (“Pet. Reply CC Br.”)) addressing the term “mainframe,” and Patent Owner did the same (Paper 11 (“PO Init. CC Br.”); Paper 13 (“PO Reply CC Br.”)).

In the Preliminary Response, Patent Owner asserts that (1) “loader support” (in independent claims 1 and 14) and (2) “rigid frame” (in independent claim 7) should be construed the same as “mainframe” in independent claims 19 and 25. Specifically, Patent Owner states, in a footnote, that “[t]he distinctions between these claim terms are not pertinent for purposes of assessing the prior art or anticipation/obviousness challenges in deciding whether to institute trial on this Petition.” Prelim. Resp. 23 n.8. Based on the current record, we disagree. *See Bd. of Regents of the Univ. of Texas Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008) (“Different claim terms are presumed to have different meanings.”) (citing *CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co.*, 224 F.3d 1308, 1317 (Fed. Cir. 2000) (“In the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connotes different meanings.”)). In the additional briefing requested by the Board, the

parties did not provide a claim construction analysis of “loader support” and “rigid frame,” with Patent Owner’s briefing failing to mention either term. *See generally* PO Init. CC. Br.; PO Reply CC Br.

Based on the current record and for purposes of this Decision, we construe the term “mainframe,” as discussed below. We need not construe explicitly any of the other claim language discussed in this section or any other claim terms because doing so would not change the outcome of the analysis below. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

3. “*mainframe*” (claims 19 and 25)

Limitation 19.1a in independent claim 19 and limitation 25.1 in independent claim 25 both recite “a machine structure comprising a mainframe and an upper frame,” with other limitations (including limitations 19.3–19.5 and 19.7 as well as limitations 25.3–25.5 and 25.6b) referring back to the “mainframe.” *See* Ex. 1001, 8:59–9:12 (claim 19), 10:3–21 (claim 25). Petitioner proposes that “mainframe” should be construed “according to its plain and ordinary meaning, and not require a ‘single weldment,’” with Petitioner adding that, “[t]o the extent the PTAB wants a specific construction, a ‘mainframe’ is a supporting structure of a vehicle.” Pet. Init. CC Br. 5. Patent Owner proposes that “mainframe” be “given its plain and ordinary meaning: the body of the compact tool carrier that supports the loader.” PO Init. CC Br. 1; *see also* Prelim. Resp. 29 (same proposed construction). For the reasons below, we preliminarily construe

“mainframe” under its plain and ordinary meaning as *a primary supporting structure*. See *Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1556 (Fed. Cir. 1995) (“[T]he judge’s task is not to decide which of the adversaries[’ constructions] is correct. Instead the judge must independently assess the claims, the specification, . . . and declare the meaning of the claims.”).

We begin the analysis with the language of the claims. *TQ Delta, LLC v. DISH Network LLC*, 929 F.3d 1350, 1357 (Fed. Cir. 2019). After presenting its proposed construction of “mainframe”—“the body of the compact tool carrier that supports the loader”—Patent Owner adds that “this body is the *primary frame* of the machine (*i.e.*, the core structure of the machine that is always present and not selectively removeable) to which the other components attach.” PO Init. CC. Br. 1. The current record supports Patent Owner’s argument for “primary” in that the claim language at issue recites a “*mainframe*” rather than merely a “frame.” See Prelim. Resp. 25 (“And the addition of ‘main’ to ‘frame’ simply indicates that this frame is the primary—or most important—frame of the vehicle.” (citing Ex. 2007 at 4 (defining “main” as “chief in size or importance”))); see also Ex. 1006 (prior art reference JP2004017705A) ¶ 2 (“Conventionally, there have been various structures for *main frames which constitute a main part of a chassis* in various types of work vehicles for construction and civil engineering work, such as bulldozers, hydraulic excavators, and the like.” (emphasis added)), cited at PO Init. CC Br. 2.

But Patent Owner has not adequately explained why the “mainframe” must be “always present and not selectively removeable,” as asserted. See PO Init. CC. Br. 1. In proposing this *additional* requirement for the

“mainframe,” Patent Owner cites its own briefing (in IPR2025-00167) and cites claims 1 and 5 of the challenged patent. *See id.* at 1–2. As acknowledged by Patent Owner, the briefing provides argument attempting to distinguish structures in KR996 from a “mainframe,” but the briefing does not explain the basis for the additional requirement of “always present and not selectively removeable” because Patent Owner did not present that position until *after* its Preliminary Response. *See id.* at 1; *compare* Prelim. Resp. 25 (“As the *primary* frame of the compact utility loader, the “mainframe” is the core structure of the machine to which the other components attach.”), *with* PO Init. CC. Br. 1 (“As Vermeer explained in its Patent Owner Preliminary Response (‘POPR’), this body is the *primary frame* of the machine (*i.e.*, the core structure of the machine that is always present and not selectively removeable) to which the other components attach.”). Patent Owner then (inaccurately) summarizes the added limitations of claim 5, but Patent Owner fails to explain how they support this additional requirement. *See* PO Init. CC. Br. 1–2. Thus, we do not adopt Patent Owner’s proposal that the “mainframe” must be “always present and not selectively removeable.”

We turn now to the three phrases making up Patent Owner’s proposed construction—(1) “the body” (2) “of the compact tool carrier” (3) “that supports the loader.” Because several issues relating to these phrases turn on the claim language itself, we discuss them here. Patent Owner first includes “the body,” allegedly because the Specification uses the terms “mainframe” and “body” “interchangeably.” Prelim. Resp. 24 (citing Ex. 1001, 4:7). We disagree. The relied-upon sentence from the Specification provides: “In other embodiments, rather than being integrated as one unit in the compact

tool carrier 5, the control station 36 is separate from the body (e.g., mainframe) of the carrier and is operated remotely.” Ex. 1001, 4:4–8. The term “body” is nowhere else in the Specification. We do not view this sentence as supporting the interchangeability of “body” and “mainframe” for at least two reasons. First, the sentence expressly describes “other embodiments,” which Patent Owner has not shown are claimed. *See* Pet. Reply CC Br. 2 (discussing this issue). Second, the sentence uses “e.g.”—indicating that a mainframe is merely *an example* of a body—rather than “i.e.,” which would potentially *define* body as mainframe. *See Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009) (“[U]se of ‘i.e.’ signals an intent to define the word to which it refers.”); Pet. Reply CC Br. 2 (“And in its use, ‘body’ includes, but does not define, ‘mainframe.’”). Thus, we do not adopt Patent Owner’s proposal to use “body” in the construction of “mainframe.”

In contrast, we view the record at this stage as supporting an understanding of the “frame” in “mainframe” as a supporting structure. Patent Owner provides a dictionary defining “frame” as a “rigid supporting structure” (Prelim. Resp. 25 (citing Ex. 2007 at 3)), and Petitioner proposes “a supporting structure” based on that definition (*see* Pet. Reply CC Br. 3). Further, this dictionary definition does not contradict the “mainframe” described in the Specification or any other intrinsic evidence. *See, e.g.*, Ex. 1001, Fig. 4, 2:34–35 (“FIG. 4 is a perspective view of a mainframe of a compact tool carrier.”); *see also Phillips*, 415 F.3d at 1322–23 (stating that judges may “rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents”).

Turning to the second phrase in Patent Owner’s proposed construction—“of the compact tool carrier”—we do not see its presence as aiding in understanding the scope of the term “mainframe.” Indeed, the phrase “compact tool carrier” is not recited in any of the claims in the challenged patent. *See* Ex. 1001, 6:47–10:25.

We turn now to the third phrase in Patent Owner’s proposed construction—“that supports the loader.” In the challenged patent, each of the independent claims except for claims 19 and 25 (which recite the “mainframe” at issue) *expressly* identify structure that supports the loader. *See* Ex. 1001, 6:52 (claim 1, limitation 1.2, reciting “a loader support for supporting the loader”), 7:28–29 (claim 7, limitation 7.32, reciting “a rigid frame for supporting . . . the loader”), 8:4 (claim 14, limitation 14.2, reciting “a loader support for supporting the loader”). In contrast, independent claims 19 and 25 do not expressly recite a similar requirement. We will not import such a requirement into the construction of “mainframe” (in claims 19 and 25) when a similar requirement is expressly recited in the *other* independent claims. *See Caterpillar Tractor Co. v. Berco, S.p.A.*, 714 F.2d 1110, 1115–16 (Fed. Cir. 1983) (rejecting an argument that a structural relationship recited in two independent claims should limit another independent claim that did not recite the same relationship, stating: “Courts may not introduce into a claim limitations which are explicitly contained in other claims.”).

Having addressed the claim language at issue, we turn now to the Specification. We first address the sentence highlighted in the Board’s request for additional briefing on claim construction: “As used herein, the term ‘mainframe’ generally refers to a single weldment to which the loader 8

is attached, optionally through one or more pivotal linkages.” Ex. 1001, 4:13–16, *quoted at* Paper 6 at 3. In the request, the Board sought briefing on whether this sentence is (1) a lexicographical definition of “mainframe” or, in the alternative, (2) merely a description of an embodiment. Paper 6 at 3. The parties both responded that this sentence is *not* lexicographical, but rather, merely describes an embodiment. *See* PO Init. CC Br. 1–5; Pet. Init. CC Br. 1–4; PO Reply CC Br. 1 (noting agreement); Pet. Reply CC Br. 1 (same). For the reasons below, we agree with the parties.

“To act as a lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term’ and ‘clearly express an intent to redefine the term.’” *Luminara Worldwide, LLC v. Liown Elecs. Co.*, 814 F.3d 1343, 1353 (Fed. Cir. 2016) (quoting *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)). As argued by both parties, the presence of “generally” in the sentence at issue shows a lack of clear intent to redefine “mainframe.” PO Init. CC. Br. 3; Pet. Init. CC Br. 2; *cf. ParkerVision, Inc. v. Vidal*, 88 F.4th 969, 976–77 (Fed. Cir. 2023) (finding definitional the sentence “[s]torage modules and storage capacitances, on the other hand, refer to systems that store non-negligible amounts of energy from an input EM signal” (emphasis added)); *Sinorgchem Co., Shandong v. Int’l Trade Comm’n*, 511 F.3d 1132, 1136 (Fed. Cir. 2007) (finding definitional the sentence “[a] ‘controlled amount’ of protic material is an amount up to that which inhibits the reaction of aniline with nitrobenzene, e.g., up to about 4% H₂O based on the volume of the reaction mixture when aniline is utilized as the solvent” (emphasis added)).

Because the sentence at issue is not lexicographical, we also agree with the parties that “mainframe” is not limited to a single weldment. Pet. Init. CC Br. 1; PO Init. CC Br. 1–2. Instead, a single-weldment “mainframe” is merely one disclosed embodiment. *See* Pet. Init. CC Br. 3 (stating that “by including the term ‘generally’ in a statement, the feature (*i.e.*, single weldment) is expressly identified as merely included in some, but not all embodiments”); PO Init. CC Br. 3 (“This language is merely exemplary, using reference numerals to refer to the embodiment’s features and qualifying ‘single weldment’ as referring ‘generally’ to specific embodiments.”). The Iowa District Court reached the same conclusion. *See* Ex. 1020 at 4 (holding that “‘mainframe’ will be given its plain and ordinary meaning and *does not require a single weldment*” (emphasis added)), *cited at* Pet. Init. CC Br. 2; *see also* 37 C.F.R. § 42.100(b) (“Any prior claim construction determination concerning a term of the claim in a civil action, or a proceeding before the International Trade Commission, that is timely made of record in the *inter partes* review proceeding will be considered.”).

As asserted by the parties, claim differentiation further supports the determination that “mainframe” is not limited to a single weldment. *See* Pet. Init. CC Br. 3–4; PO Init. CC Br. 4–5. “Claim differentiation . . . is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the only meaningful difference between the two claims.” *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001); *Phillips*, 415 F.3d at 1315 (“[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”). Here,

independent claims 19 and 25 both recite a “mainframe,” and dependent claims 24 and 26—which depend directly from claims 19 and 25, respectively—both recite *only one* additional limitation: “wherein the mainframe incorporates a single weldment.” Ex. 1001, 10:1–2, 10:22–23. These dependent claims support that “mainframe” in claims 19 and 25 is not limited to a single weldment.

Patent Owner argues that the prosecution history supports its position because Patent Owner’s proposed construction of “mainframe” was allegedly “uniformly applied by the Patent Office when evaluating the patentability of the claims.” Prelim. Resp. 25; *see also id.* at 25–28. We disagree. In its analysis, Patent Owner does not highlight, for example, any specific statements by the applicant or Office as to the scope of the term “mainframe” to show or suggest that Patent Owner’s proposed construction was applied. *See id.* at 25–28; *see also Phillips*, 415 F.3d at 1317 (generally discussing the use of prosecution histories in claim construction). Instead, Patent Owner merely summarizes certain prior art structures identified by the examiner as a “mainframe” during prosecution, implying that those structures fall within the scope of Patent Owner’s proposed construction. *See* Prelim. Resp. 25–28.

For the reasons above and for purposes of this Decision only, we preliminarily construe “mainframe” in independent claims 19 and 25 its plain and ordinary meaning as *a primary supporting structure*.

E. Asserted Anticipation and Obviousness of Claims 1–7, 10–13, and 28 Based on KR996

Petitioner asserts that claims 1–7, 10–13, and 28 of the challenged patent are anticipated and would have been obvious based on KR996. Pet. 21, 22–59. Patent Owner provides arguments specifically addressing

this asserted ground. Prelim. Resp. 35–42. We first summarize aspects of the relied-upon prior art.

1. Overview of KR996

KR996 “relates to construction equipment for green building deconstruction work,” and, more particularly, to equipment “that can enter narrow buildings and carry out dismantling work inside the building, and can easily attach and detach various dismantling equipment to the vehicle according to the form of the deconstruction work.” Ex. 1005 ¶ 1.

Figure 1 of KR996 is reproduced below:

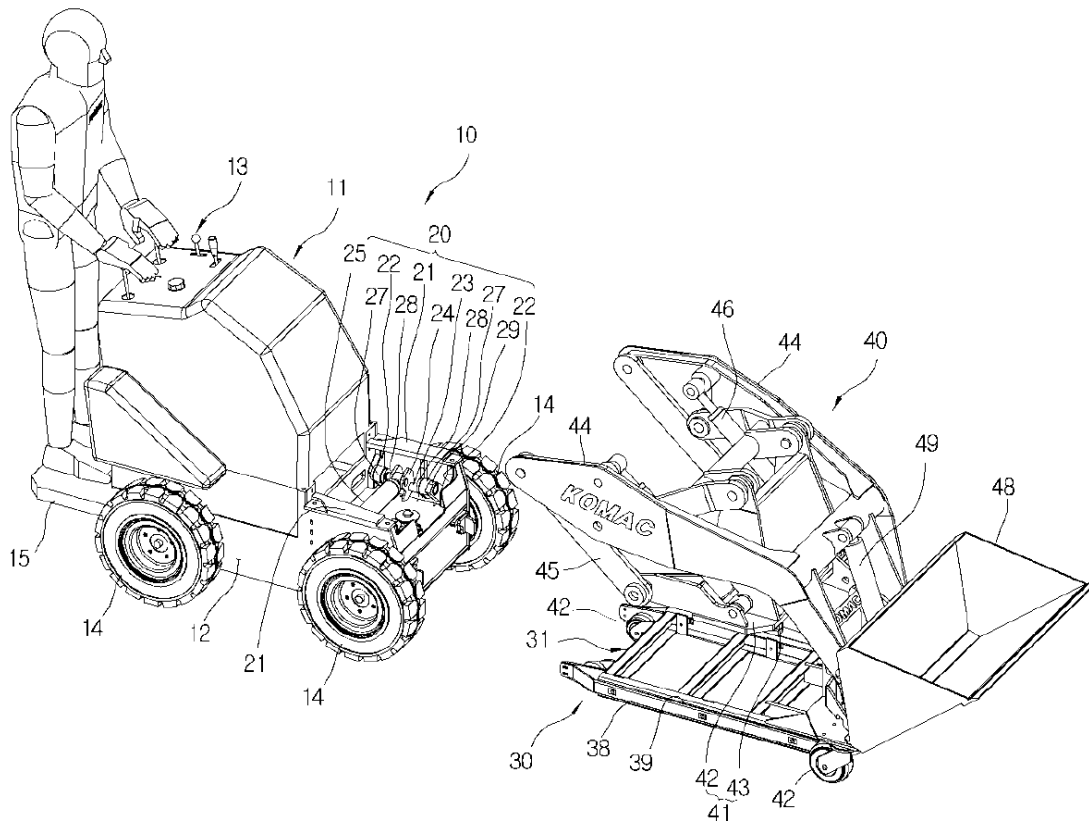


Figure 1 is a perspective view showing before loader unit 40 and bogie 30 are attached to vehicle 10. Ex. 1005 ¶¶ 40, 93. To attach bogie 30/loader unit 40 to vehicle 10, the operator shown on board at the

rear uses control unit 13 to move vehicle 10 forward to engage detachable part 20 with fixture 41. *Id.* ¶¶ 42, 43, 54.

Figure 7 is reproduced below:

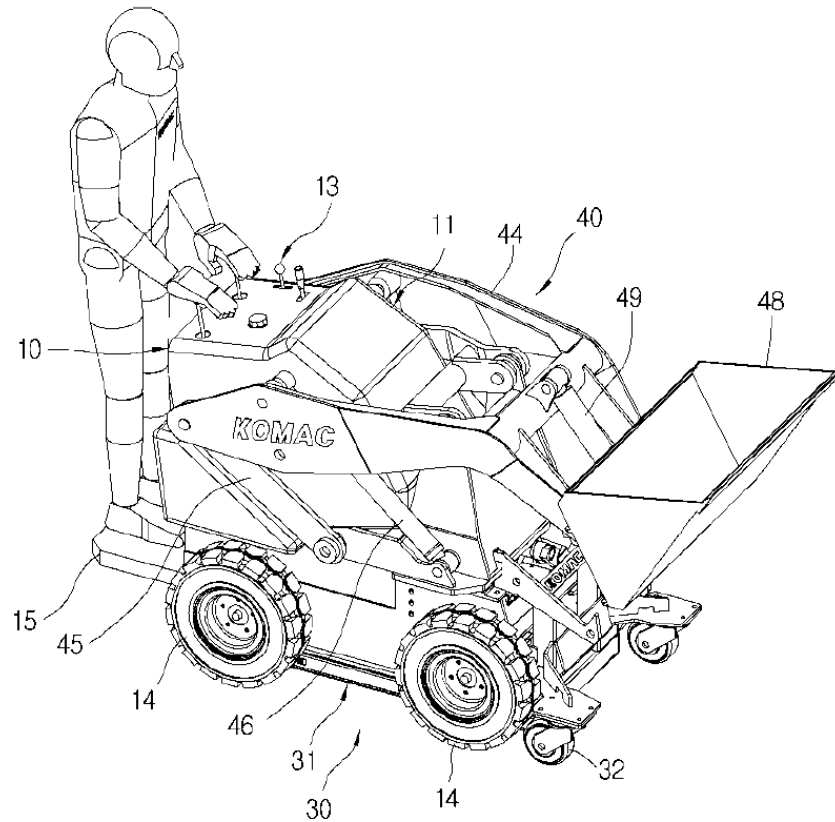


Figure 7 is a perspective view showing bogie 30 and loader unit 40 coupled to the detachable part of the vehicle. Ex. 1005 ¶¶ 40, 99. As shown in this Figure, vehicle 10 also includes (1) wheels 14 for moving vehicle 10, (2) linkage 45 to support boom 44, (3) actuator 46 to drive boom 44 upwards and downwards, and (4) bucket 48 to carry material. *Id.* ¶¶ 52, 54, 74.

2. Independent Claims 1 and 7

Petitioner contends that KR996 both anticipates and renders obvious independent claims 1 and 7. Pet. 24–37, 46–55. To support its arguments, Petitioner identifies certain passages in the cited references and explains the significance of each passage with respect to the corresponding claim

limitation. *Id.* Patent Owner argues that KR996 does not disclose a “loader support” (claim 1) or “rigid frame” and thus fails to disclose limitations requiring “linkage[s]” and an “actuator” attached to the “loader support” or “rigid frame.” *See* Prelim. Resp. 35–42.

We have reviewed Petitioner’s contentions with respect to claims 1 and 7, and for the reasons below, we determine that the Petition shows a reasonable likelihood that Petitioner would prevail in demonstrating that claims 1 and 7 are both anticipated and would have been obvious based on KR996.

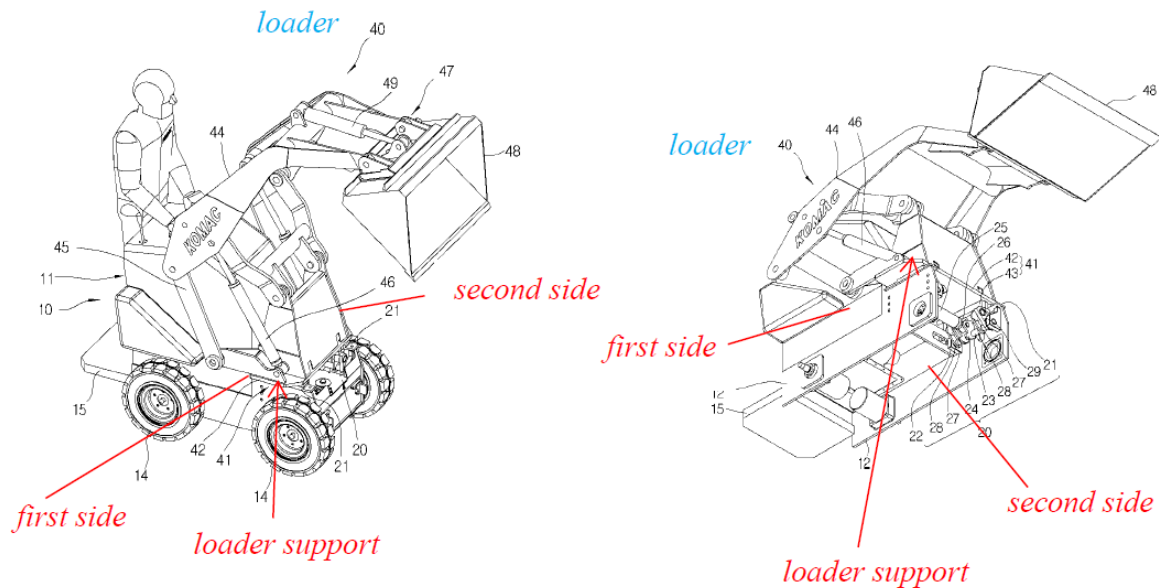
a. The Loader Support Limitations (Claim 1) and the Rigid Frame Limitations (Claim 7)

Claim 1 recites, in relevant part, “[1.2] a loader support for supporting the loader, the loader support having a first side and a second side . . . ; [1.3] a first linkage pivotally attached to the first side of the loader support . . . ; [1.4] a second linkage pivotally attached to the first side of the loader support . . . ; [1.5] an actuator pivotally attached to the first side of the loader support.” Ex. 1001, 6:52–60 (collectively, the “loader support limitations”).¹⁰ Claim 7 recites, in relevant part, “[7.3] a rigid frame for supporting . . . the loader, the rigid frame having a first side, a second side, a top, and a bottom; [7.4] a first linkage pivotally attached to the first side of the rigid frame . . . ; [7.5] an actuator pivotally attached to the first side of the rigid frame; [7.6a] a second linkage pivotally attached to the first side of

¹⁰ Independent claim 14, challenged in the asserted ground of KR996, Bares, and Beltrami, recites substantially the same requirements in limitations 14.2 through 14.5. We refer to these limitations in claim 14 as the “loader support limitations” as well.

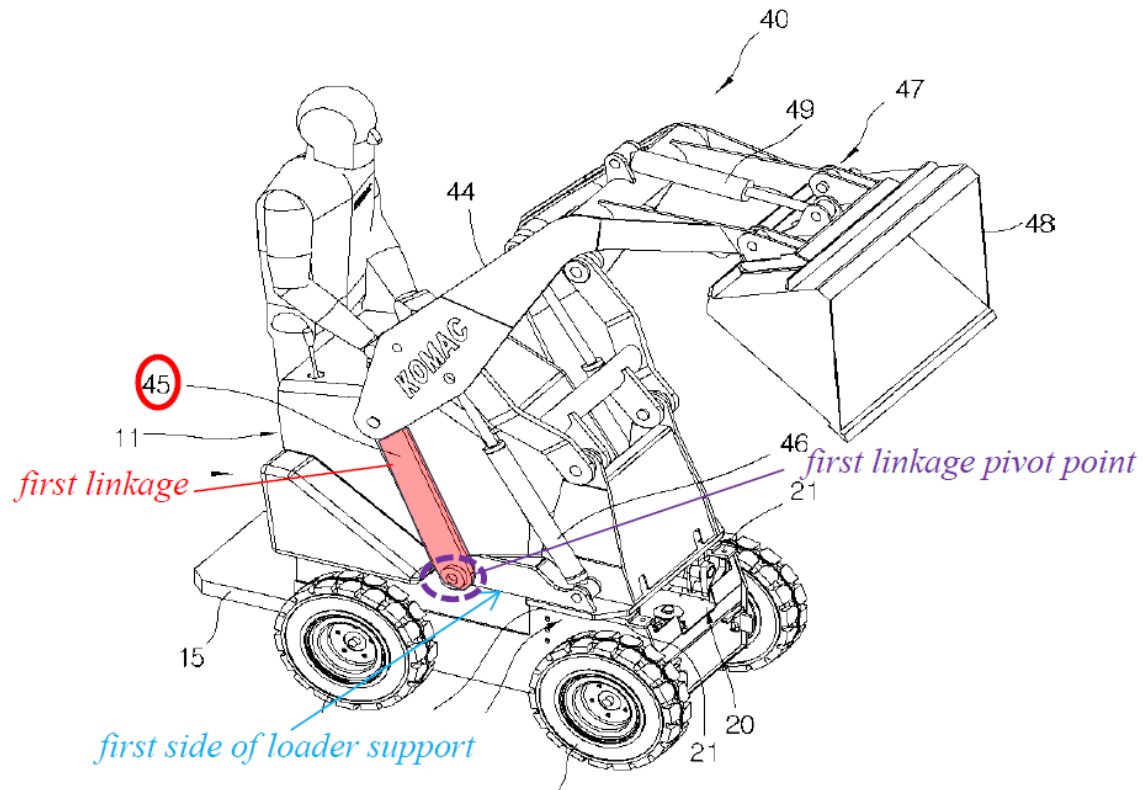
the rigid frame.” Reexam Cert., 1:34–44 (collectively, the “rigid frame limitations”).

As to the recitation of “a loader support for supporting the loader, the loader support having a first side and a second side,” Petitioner provides the following annotated versions of Figures 9 and 10 of KR996:



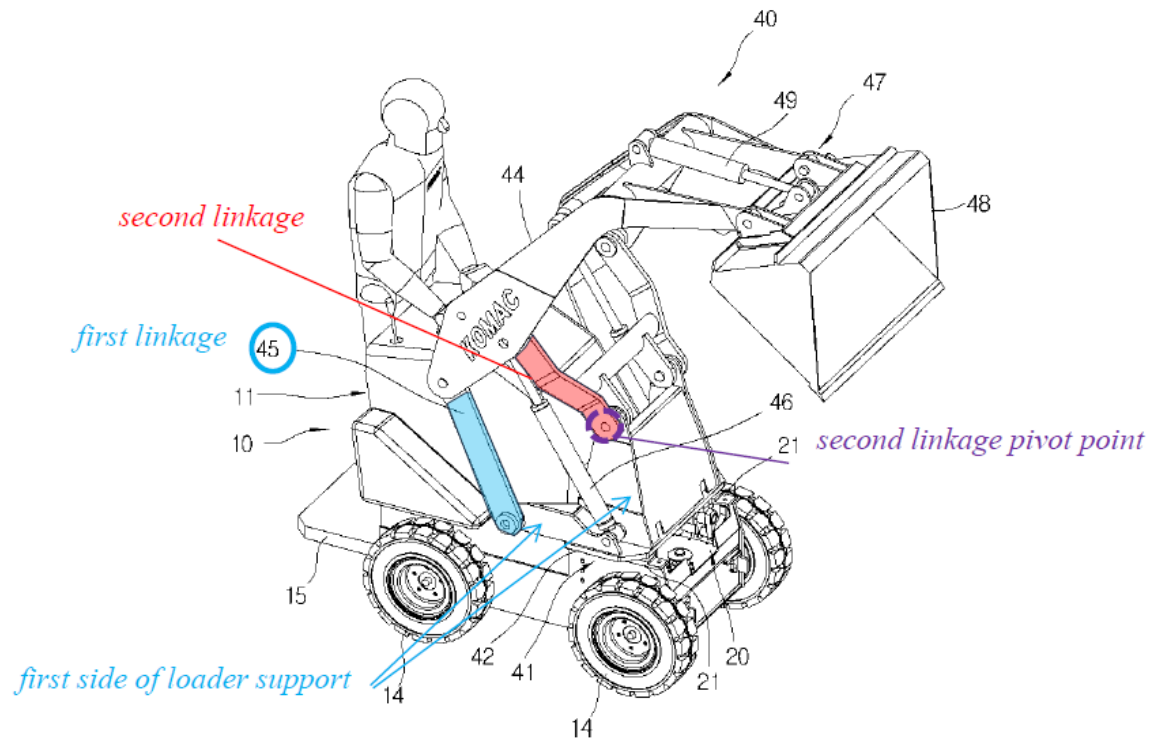
Pet. 27. In the annotated versions of Figures 9 and 10 of KR996 above, Petitioner added (1) red text and arrows identifying a “loader support,” (2) red text and lines identifying a “first side” and a “second side,” and (3) blue text identifying a “loader.” *Id.* Petitioner adds that “KR996’s loader support includes portions (brackets) to which the boom cylinder 48, link 45 attach to, portion of the lower frame where the forward link attaches, and/or other components that form a weight-bearing structure to support the loader and other features such as control station, drive mechanism.” *Id.* (citing Velinsky Decl. ¶¶ 64–68).

As to the recitation of “a first linkage pivotally attached to the first side of the loader support,” Petitioner provides the following annotated version of Figure 9 of KR996:



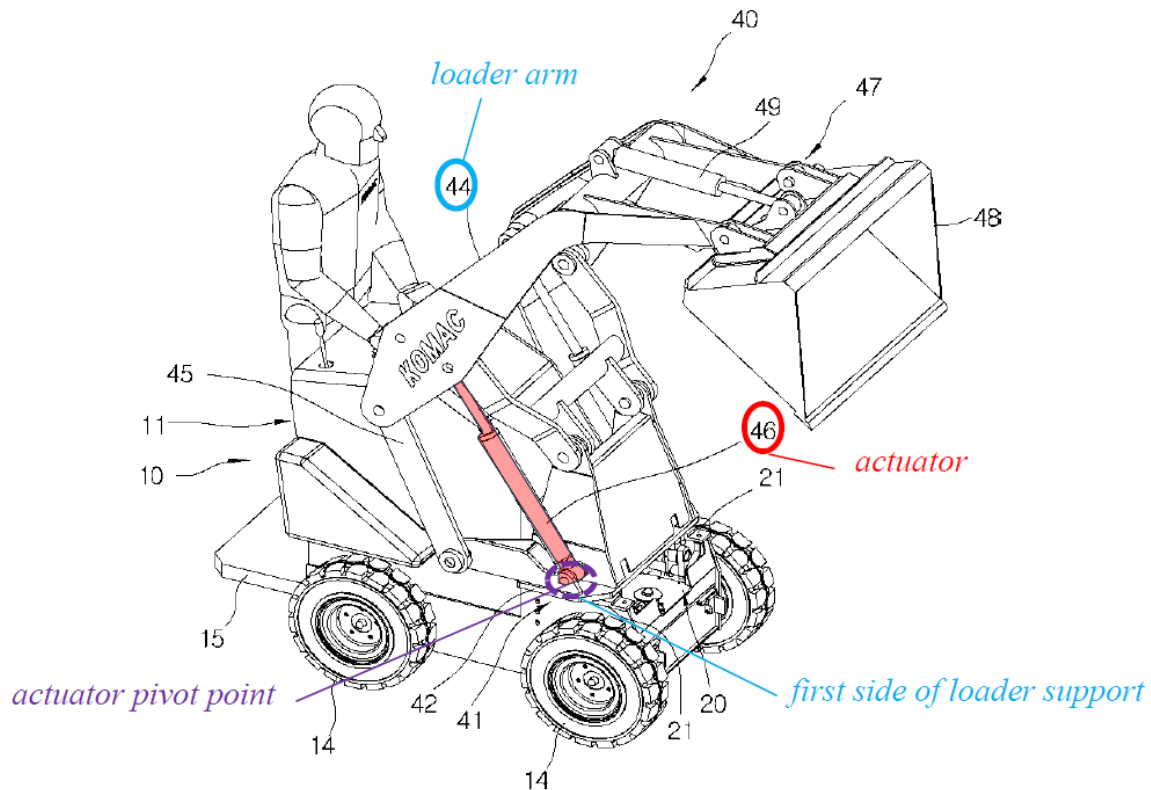
Pet. 29. In the annotated version of Figure 9 of KR996 above, Petitioner added (1) purple text and lines identifying a “first linkage pivot point,” (2) red text and a line identifying a “first linkage,” and (3) blue text and a line identifying a “first side of loader support.” *Id.* Petitioner states that the “portion of the vehicle to which the link 45 is directly attached is part of the *loader support* as it supports (e.g., provides weight-bearing frame for) the loader unit 40.” Pet. 29–30 (citing Velinsky Decl. ¶¶ 69–74).

As to the recitation of “a second linkage pivotally attached to the first side of the loader support,” Petitioner provides the following annotated version of Figure 9 of KR996:



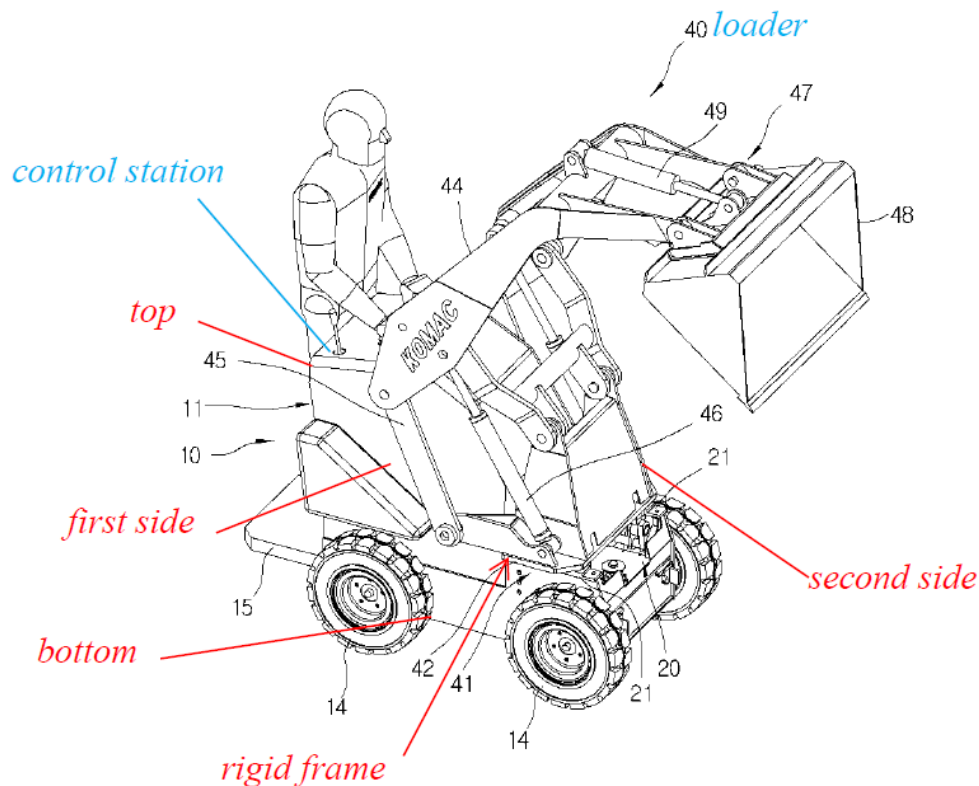
Pet. 30 (citing Velinsky Decl. ¶¶ 75–79). In the annotated version of Figure 9 of KR996 above, Petitioner added (1) purple text and lines identifying a “second linkage pivot point,” (2) red text and a line identifying a “second linkage,” (3) blue text and a line identifying a “first linkage,” and (4) blue text and arrows identifying a “first side of loader support.” *Id.*

Finally, as to the recitation of “an actuator pivotally attached to the first side of the loader support,” Petitioner provides the following annotated version of Figure 9 of KR996:



Pet. 32 (citing Velinsky Decl. ¶¶ 80–84). In the annotated version of Figure 9 of KR996 above, Petitioner added (1) purple text and a line identifying an “actuator pivot point,” (2) red text and a line identifying an “actuator,” (3) blue text and a line identifying a “loader arm,” and (4) blue text and an arrow identifying a “first side of loader support.” *Id.*

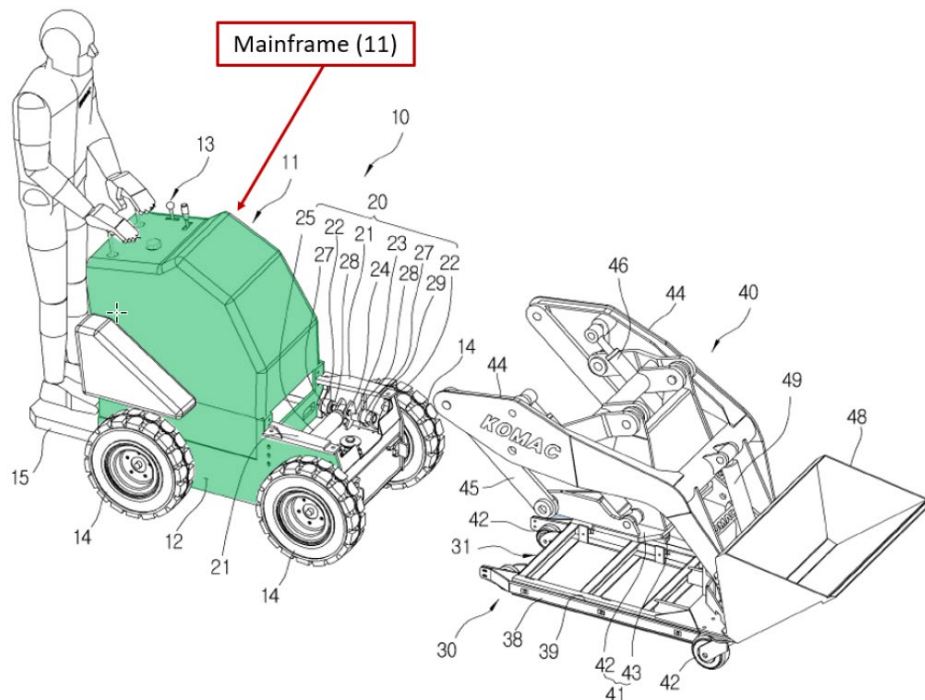
Turning to claim 7, for the recitation of “a rigid frame for supporting . . . the loader, the rigid frame having a first side, a second side, a top, and a bottom,” Petitioner provides the following annotated version of Figure 9 of KR996:



Pet. 48. In the annotated version of Figure 9 of KR996 above, Petitioner added (1) red text and lines identifying a “top,” “first side,” “bottom,” and “second side,” (2) red text and an arrow identifying a “rigid frame,” (3) blue text and a line identifying a “control station,” and (4) blue text identifying a “loader.” *Id.* Petitioner adds that “KR996’s *rigid frame* includes that supporting the loader unit 40 (e.g., attachment with links/boom cylinder) and the portion supporting the control station 13 (e.g., main body 11).” Pet. 47 (citing Velinsky Decl. ¶¶ 123–124). For the other recitations in the rigid frame limitations (in limitations 7.4, 7.5, and 7.6a), Petitioner relies substantially on the discussions of limitations 1.3–1.5 (summarized above). *See* Pet. 49–51 (citing Velinsky Decl. ¶¶ 125–129).

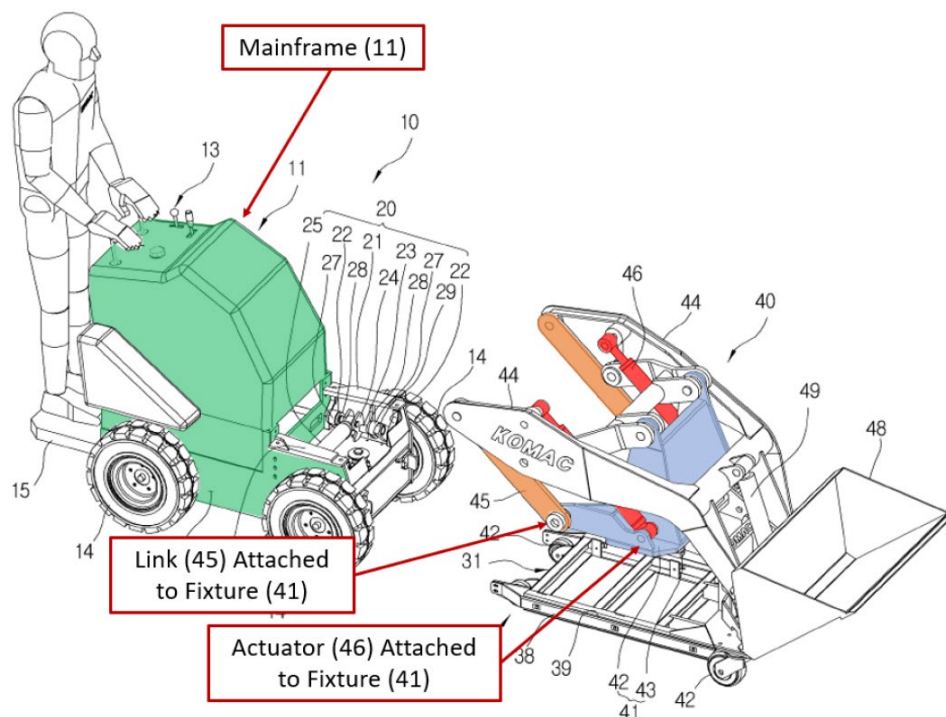
Patent Owner argues that KR996 fails to disclose or suggest the loader support limitations in claim 1 and the rigid frame limitations in claim 7. *See* Prelim. Resp. 35–42. Specifically, Patent Owner contends that, in KR996,

“the linkages and actuators of th[e] machine are pivotally attached to a ‘fixture’ that is part of a removable loader attachment—not to the mainframe of the machine.” *Id.* at 36. In support, Patent Owner provides this annotated version of Figure 1 of KR996:



Prelim. Resp. 37. In the annotated version of Figure 1 of KR996 here, Patent Owner added (1) green shading on certain structures and (2) a text box and arrow identifying “Mainframe (11).” *Id.* Applying its proposed construction of “loader support” in claim 1 and “rigid frame” in claim 7, Patent Owner adds, “[b]ecause it is the ‘**body**’ of the compact tool carrier,” the mainframe is properly understood to be an inherent part of the core machine’s structure. It is the core component to which the other components of the machine (*e.g.*, the drive mechanism, control station, operator platform, engine, *etc.*) are connected.” *Id.* at 36 (citing Ex. 1001, 2:1–5, 4:11–20, Fig. 3). Patent Owner contends that Petitioner’s identified “first linkage,” “second linkage,” and “actuator” in KR996 are *not* “attached to the first

side” of either the “loader support” (claim 1) or “rigid frame” (claim 7) as required; instead, they are attached to *another structure* on the *right side* of the annotated version of Figure 1 of KR996 above (and shown shaded in blue in the annotated version of Figure 1 of KR996 below), which, according to Patent Owner, is *not* part of the “loader support” or “rigid frame.” *Id.* at 37–40. In support, Patent Owner provides the annotated version of Figure 1 of KR996 reproduced below:



Prelim. Resp. 40. In the annotated version of Figure 1 of KR996 here, Patent Owner added (1) green shading on certain structures, (2) a text box and arrow identifying “Mainframe (11),” (3) a text box and arrow identifying “Link (45) Attached to Fixture (41),” (4) a text box and arrow identifying “Actuator (46) Attached to Fixture (41),” (5) orange shading identifying two links 45, (6) red shading identifying two actuators (i.e., boom cylinders) 46, and (7) blue shading identifying fixture 41. *Id.*

The current dispute between the parties as to this asserted ground hinges on one factual determination: whether one of ordinary skill in the art at the time of the invention would have understood fixture 41 in KR996 (shaded in blue in the annotated Figure 1 immediately above) to be a “loader support” and to be *part of* a “rigid frame,” along with main body 11 in KR996 (shaded in green above). The record at this stage of the proceeding supports Petitioner’s position that one of ordinary skill in the art would have understood fixture 41 as a “loader support” and also as *part of* a “rigid frame.”

In its argument seeking to identify fixture 41 in KR996 as something other than a “loader support” or “rigid frame,” Patent Owner highlights the term “body” in its proposed construction, asserting that “the mainframe is properly understood to be an inherent part of the core machine’s structure.” Prelim. Resp. 36. Under that reasoning, the structures on the right side of the annotated version of Figure 1 of KR996 above—including fixture 41—are not part of the “core machine’s structure,” and thus, not part of a “loader support” or “rigid frame.” *Id.* at 36–40.

Patent Owner’s argument does not identify a deficiency in the Petition, however, because we did not adopt *any part* of Patent Owner’s proposed construction of “loader support” and “rigid frame,” including the phrase “the body,” which serves as the starting point of Patent Owner’s argument here. *See* § II.D.3. Instead, we preliminarily construe “mainframe” under its plain and ordinary meaning as *a primary supporting structure* and we do not expressly construe “loader support” or “rigid frame” at all. *Id.*

We apply the plain and ordinary meaning of “loader support” or “rigid frame.” *See* Ex. 1020 at 5 (the Iowa District Court stating that these terms “will be given their plain and ordinary meaning”). Limitations 1.2 and 7.3 make clear that the “loader support” and “rigid frame” support the “loader.” The current record supports that at least the structures identified by Petitioner as the “loader support” (Pet. 26–28) and the “rigid frame” (Pet. 47–49) perform that function—i.e., when in operation, those structures “form a weight-bearing structure to support the loader” in KR996. Pet. 27 (also stating that “KR996’s loader support is *for supporting the loader* as the loader unit 40 and its boom 44 are attached to the support by linkages and an actuator as discussed below”); *see also* Pet. 47 (“KR996’s *rigid frame* includes that supporting the loader unit 40 (e.g., attachment with links/boom cylinder) and the portion supporting the control station 13 (e.g., main body 11).”); *see, e.g.*, Ex. 1005, Figs. 7–9 (showing the vehicle of KR996 in operation).

The testimony of Dr. Velinsky supports these positions, explaining that one of ordinary skill in the art would have understood fixture 41 in KR996 to be a “loader support” and to be *part of* a “rigid frame.” *See* Velinsky Decl. ¶¶ 65–66, *cited at* Pet. 26–28; Velinsky Decl. ¶¶ 123–124, *cited at* Pet. 47–49. At this stage of the proceeding, Patent Owner has not presented declaration testimony—but rather only attorney argument—supporting that one of ordinary skill in the art would have identified fixture 41 in KR996 as something other than a “loader support” or part of a “rigid frame.” *See Elbit Sys. of Am., LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1359 (Fed. Cir. 2018) (“‘[A]ttorney argument is not evidence’ and cannot rebut other admitted evidence.” (quoting *Icon Health & Fitness, Inc. v.*

Strava, Inc., 849 F.3d 1034, 1043 (Fed. Cir. 2017))). On the current record, we determine that Petitioner has made a sufficient showing that KR996 discloses the loader support limitations and rigid frame limitations.

b. Conclusion as to Independent Claims 1 and 7

Patent Owner does not offer any arguments specifically addressing the remaining limitations of claim 1. *See* Prelim. Resp. 35–42. We have reviewed Petitioner’s contentions with respect to the remaining limitations, and we determine that the Petition provides a sufficient showing, at this stage of the proceeding, that KR996 teaches or suggests each limitation and that one of ordinary skill in the art would have had reason to modify KR996 as proposed.

For the reasons above, we determine, based on the current record, that the Petition shows a reasonable likelihood that Petitioner would prevail in demonstrating that KR996 anticipates and renders obvious claims 1 and 7.

3. Claims 2–6, 10–13, and 28

Petitioner contends that KR996 anticipates and renders obvious dependent claims 2–6 and 28 (which depend from claim 1) and claims 10–13 (which depend from claim 7). Pet. 37–46, 55–60. Patent Owner does not present any arguments specifically addressing claims 2–6, 10–13, and 28. *See* Prelim. Resp. 35–42. We include claims 2–6, 10–13, and 28 in the context of this asserted ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

F. Asserted Obviousness of Claims 8 and 9 Based on KR996 and Bares

Petitioner asserts that claims 8 and 9 of the challenged patent would have been obvious based on KR996 and Bares. Pet. 21, 59–64. Patent Owner does not present any arguments specifically addressing claims 8 and

9 in the context of this asserted ground, but rather, relies on the same arguments presented as to the prior ground. *See* Prelim. Resp. 42. We include claims 8 and 9 in the context of this asserted ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

G. Asserted Obviousness of Claims 14–16 and 19–27 Based on KR996, Bares, and Beltrami

Petitioner asserts that claims 14–16 and 19–27 of the challenged patent would have been obvious based on KR996, Bares, and Beltrami. Pet. 21, 64–103. Patent Owner provides arguments specifically addressing this asserted ground. Prelim. Resp. 41–48. We first summarize aspects of the relied-upon prior art.

1. Overview of Bares

In this asserted ground, Petitioner relies on Bares, in addition to KR996 (summarized above (*see* § II.E.1)). Bares discloses a small loader. Ex. 1010, 1:9–11. Figures 6 and 8 Bares are reproduced below:

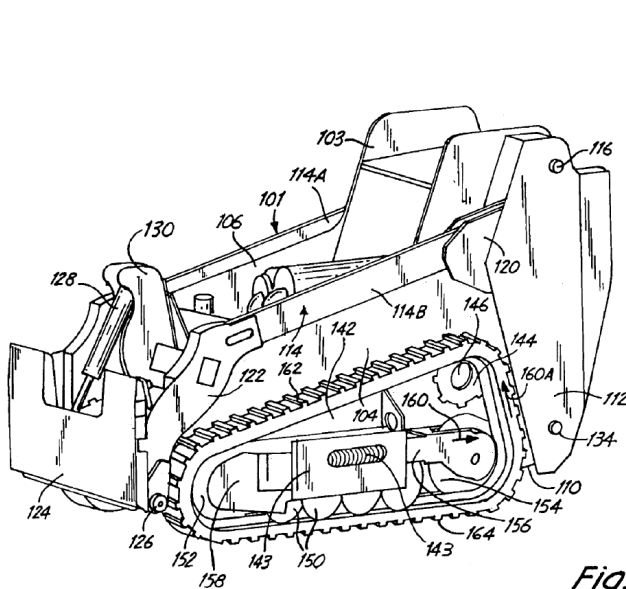


Fig. 6

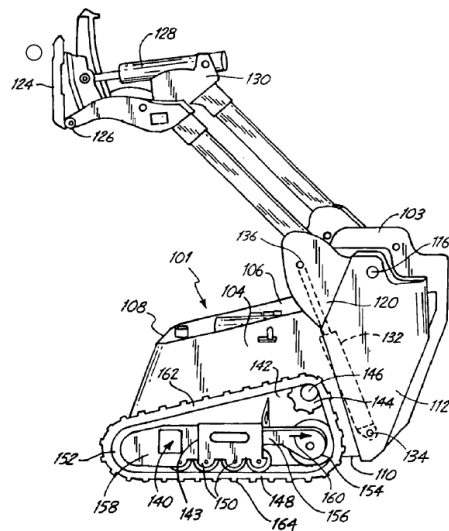


Fig. 8

Figure 6 is a side perspective view of “a modified form of the invention schematically showing an alternate form of track drive and modified loader arms,” and Figure 8 is a perspective view showing the lift arms of the Figure 6 embodiment in a raised position. *See* Ex. 1010, 2:24–27, 2:30–31. In the depicted embodiment, track 148 can be placed over drive sprocket 144, and wheels 150/152/154 “so there is a full drive assembly made apart from the loader body.” *Id.* at 6:12–17.

2. Overview of Beltrami

Beltrami discloses “a digging and lifting device of the type comprising a grabbing and excavating bucket.” Ex. 1008, 1:6–8.

Figure 3 of Beltrami is reproduced below:

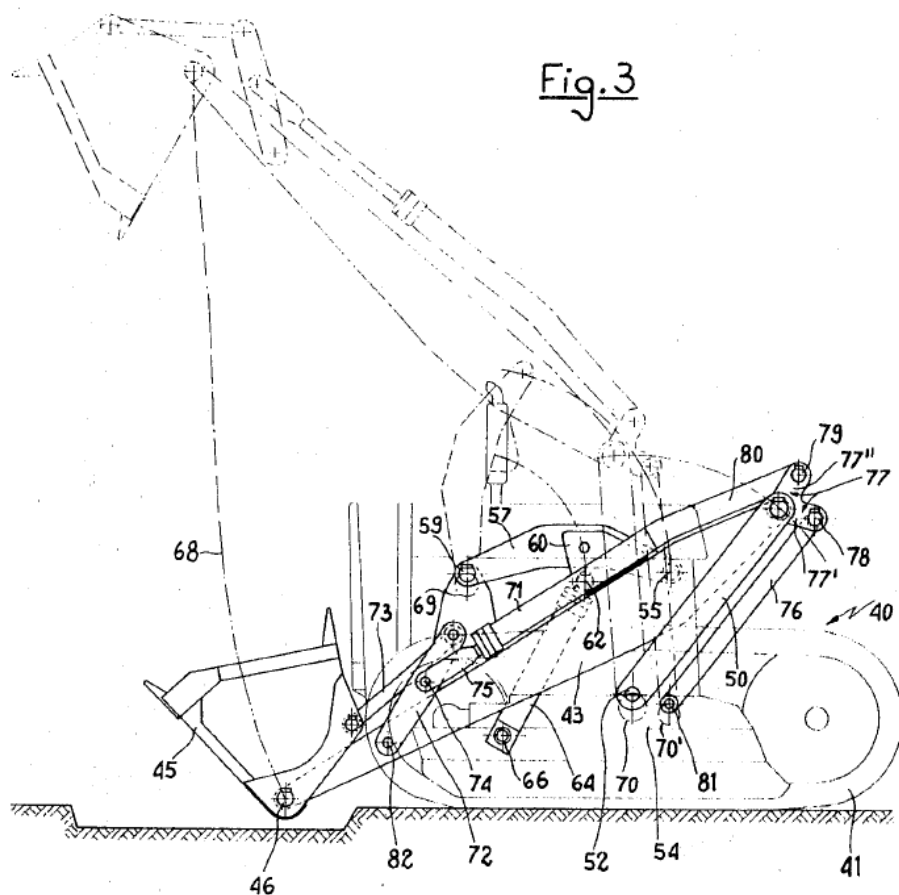


Figure 3 is a side view of a tracked power shovel fitted with a standard bucket. Ex. 1008, 2:28–30. Depicted tractor 40 includes movable tracks 41/42, as well as arms 43/44, which perform digging and lifting motions and are connected to bucket 45 at pivot points 46/47. *Id.* at 4:8–11. Beltrami discloses that the pivot point configuration shown allows the bucket to travel in a substantially vertical path (reference number 68) from the starting position (shown in dark lines) to the final position (shown in dashed-dotted lines). *Id.* at 4:25–34. Bucket 45 can be tilted through operation of hydraulic jack 71. *See id.* at 4:59–63. According to Beltrami, the invention benefits from the pivot points being “kept in such a low position on the vehicle that no supporting frame is needed . . . and finally a lifting can be performed without having the equipment gravity center to undergo an unnecessarily large shifting.” *Id.* at 3:35–41.

3. Independent Claims 14, 19, and 25

For independent claims 14, 19, and 25, Petitioner contends that the proposed combination of KR996, Bares, and Beltrami discloses each limitation. Pet. 66–87, 88–95, 98–103. Patent Owner (1) challenges the articulated reasons to combine KR996/Bares with Beltrami as proposed and (2) repeats its argument that KR996 does not disclose the loader support/rigid frame/mainframe limitations. *See* Prelim. Resp. 43–49. We address each of Patent Owner’s arguments.

a. The Motivation to Combine KR996/Bares with Beltrami

For this asserted ground, Petitioner proposes to combine KR996 and Bares. *See* Pet. 66–67 (citing Velinsky Decl. ¶¶ 160–165). Patent Owner does not challenge the reasons to combine KR996 with Bares. *See* Prelim. Resp. 43–49. Instead, Patent Owner challenges the reasons to combine

KR996/Bares with Beltrami provided by Petitioner, which we first summarize below.

Petitioner first explains why KR996/Bares and Beltrami are analogous art to the challenged patent. *See* Pet. 68. According to Petitioner, one of ordinary skill in the art “would have been motivated to combine the teachings of Beltrami including locating the pivot point attachment of intermediary parts **low** on the mainframe [of KR996-Bares] to produce a predictable and beneficial loader configuration.” *Id.* (citing Velinsky Decl. ¶¶ 167–170). Petitioner adds that KR996 and Beltrami describe similar loader arm configurations and “Beltrami explains the well-known knowledge in vehicle designs and four-bar mechanisms: the locations of the pivot point connections between the linkages and the mainframe are result-affecting variables that can be selected based on desired performance.” Pet. 68–69 (citing Ex. 1005, Figs. 8, 9; Ex. 1008, Figs. 2, 3, 6, 4:35–50, 5:61–67). Petitioner contends, therefore, that one of ordinary skill in the art “would have recognized that a design of a vehicle such as KR996’s includes determining pivot point locations, because it was well-known that pivot point locations are result-affecting design variables for desired performance, as explained by Beltrami.” Pet. 69 (citing Velinsky Decl. ¶ 167).

Petitioner asserts that,

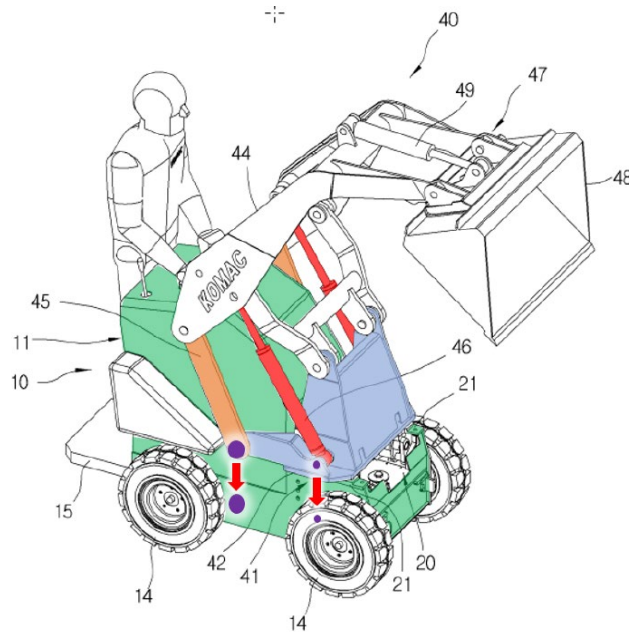
In considering the pivot point locations, [one of ordinary skill in the art] would have had reason to further apply Beltrami’s teachings of locating the pivot point attachments between the intermediate parts (linkage(s)/actuator) and the mainframe **low** on the mainframe, near the rotational axis such that the distance between the pivot points and the axis is, for example, less than the distance between the axis and the ground/bottom of the mainframe.

Pet. 69 (citing Velinsky Decl. ¶¶ 168–170). According to Petitioner, (1) Beltrami describes the benefit of this modification as “decreasing the frame requirements and maintaining a low center of gravity” and (2) one of ordinary skill in the art “would recognize that these benefits stem from basic engineering principles.” *Id.* (citing Ex. 1008, 3:35–41; Velinsky Decl. ¶¶ 168–169). Petitioner adds that the proposed combination is:

merely applying a known technique to a known device (*e.g.*, Beltrami’s technique of providing low pivot points in a vehicle using intermediate parts for connecting a loader arm, with KR996’s using pivotally attached connections between the loader arm and intermediate parts) ready for improvement (*e.g.*, decreasing the frame requirements and/or lowering the center of gravity) to yield predictable results.

Pet. 70 (citing Velinsky Decl. ¶ 170). Petitioner also discusses why the proposed combination would have had a reasonable expectation of success. *See id.* (citing Velinsky Decl. ¶¶ 171, 195–214).

Patent Owner presents three arguments challenging the articulated reasons to combine KR996/Bares with Beltrami. *See* Prelim. Resp. 43–48. First, Patent Owner argues that “[m]odifying KR996 as asserted by Petitioner would render the construction vehicle not suitable for its intended purpose” because, “[a]s shown below, lowering the pivot points would move the pivot points off the supporting bracket (‘fixture (41)’) and onto the main body of the machine.” *Id.* at 44. In support, Patent Owner provides the following annotated version of Figure 9 of KR996:

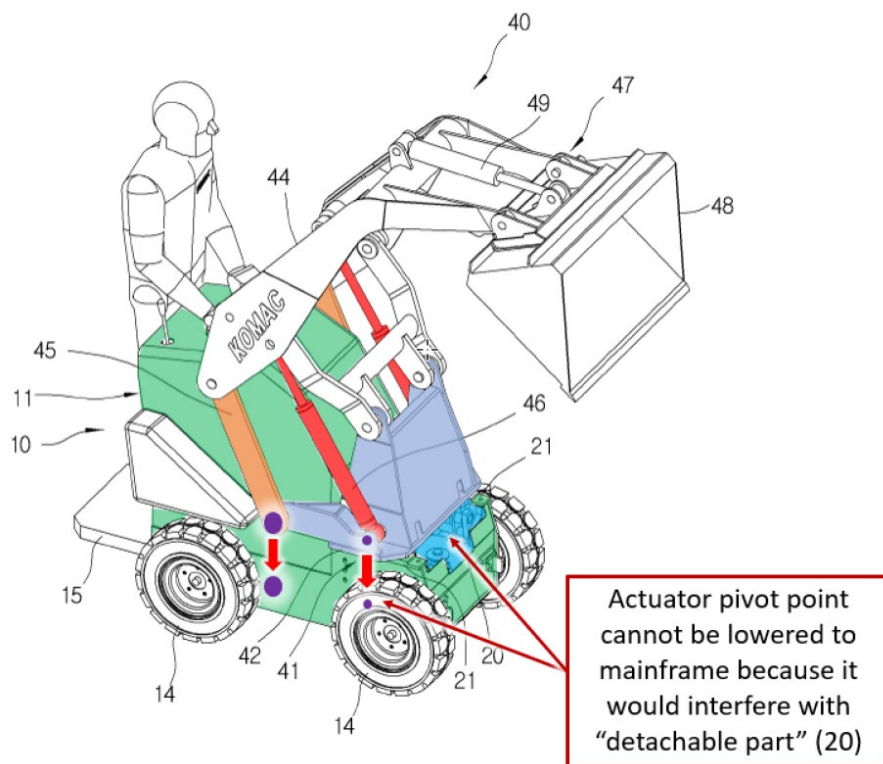


Prelim. Resp. 45. In the annotated version of Figure 9 of KR996 here, Patent Owner added (1) green shading on certain structures, (2) red shading identifying two actuators (i.e., boom cylinders) 46, (3) blue shading identifying fixture 41, (4) orange shading identifying two links 45, and (5) two pairs of two dots and red arrows showing the purported relocated pivots points of the modified device. *Id.* According to Patent Owner, the allegedly proposed modification “would preclude the loader unit (40) from being detachable from the main body of the machine, which is the entire point of the design disclosed in KR996,” and thus, the “proposed modification would render the vehicle unsatisfactory for its intended purpose by destroying the detachability feature that lies at the heart of KR996’s disclosure.” *Id.* at 44–46 (citing *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984); *Chemours Co. FC, LLC v. Daikin Indus., Ltd.*, 4 F.4th 1370, 1376 (Fed. Cir. 2021)).

On the current record, this argument does not identify a deficiency in Petitioner’s position. In framing the argument, Patent Owner posits that one of ordinary skill in the art would have moved the original pivots points in

KR996 (i.e., the two upper purple dots above) *off of* lower plate 42 down to the lower two purple dots on main body 11 (in green). As an initial matter, Patent Owner has not presented declaration testimony—but rather only attorney argument—supporting that one of ordinary skill in the art would have modified KR996/Bares in that way based on the teachings of Beltrami. *See Elbit Sys.*, 881 F.3d at 1359.

Second, Patent Owner provides the following annotated version of Figure 9 of KR996 to argue that “the actuator pivot point *cannot* be lowered because it would interfere with the ‘detachable part 20[,]’ which is used to removably connect the loader assembly . . . with the connection of the front wheel to the machine”:



Prelim. Resp. 46. In the annotated version of Figure 9 of KR996 here, Patent Owner added (1) green shading on certain structures, (2) red shading identifying two actuators (i.e., boom cylinders) 46, (3) blue shading

identifying fixture 41, (4) orange shading identifying two links 45, (5) two pairs of two dots and red arrows showing the purported relocated pivots points of the modified device, (6) dark blue shading on detachable part 20, and (7) a text box and arrows stating, “Actuator pivot point cannot be lowered to mainframe because it would interfere with ‘detachable part’ 20.” *Id.*

On the current record, Patent Owner’s second argument does not identify a deficiency in Petitioner’s position because Patent Owner does not present the modification as proposed by Petitioner. In the modified device as proposed by Petitioner, the wheels of KR996 are replaced with the tracks of Bares and thus the interference issue posited by Patent Owner would not be present. *See* Pet. 66 (discussing “[t]he simple substitution of Bares’ track assembly for the wheels in the KR996 vehicle”), 75 (bottom figure) (showing a version of the proposed modification of KR996 with Bares); *see also* Ex. 1005, Fig. 10 (showing how detachable interfaces with side plates 12 of main body 11).

Third, Patent Owner posits that one of ordinary skill in the art would not have modified KR996/Bares based on Beltrami because “Beltrami and KR996 teach significantly different loader-arm configurations.” Prelim. Resp. 47–48. Specifically, Patent Owner states that “KR996 attaches the actuator (cylinder) to the loader arm (boom),” whereas “Beltrami, by contrast, teaches that the actuator should be pivotally attached to the *linkage*, not the loader arm.” *Id.* at 47 (citing Ex. 1008, Fig. 2).

On the current record, this argument does not identify a deficiency in Petitioner’s position as to modifying KR996/Bares with Beltrami. In this asserted ground, Petitioner does not rely on Beltrami for its loader-arm

configuration, but rather, for example, for its description of the “benefits of positioning the location of these pivot points low on the equipment[,], includ[ing] decreasing the frame requirements and maintaining a low center of gravity.” Pet. 69 (citing Ex. 1008, 3:35–41). At this stage of the proceeding, and without declaration testimony, Patent Owner has not adequately explained how the alleged differences in the loader-arm configurations between KR996 and Beltrami would have undermined the relied-upon teachings from Beltrami or the articulated reasoning.

On the current record and in view of our decision to institute based on another ground (*see* § II.E.2.b), we reach no conclusion as to whether Petitioner has made a sufficient showing that one of ordinary skill in the art would have combined KR996/Bares with Beltrami as proposed.

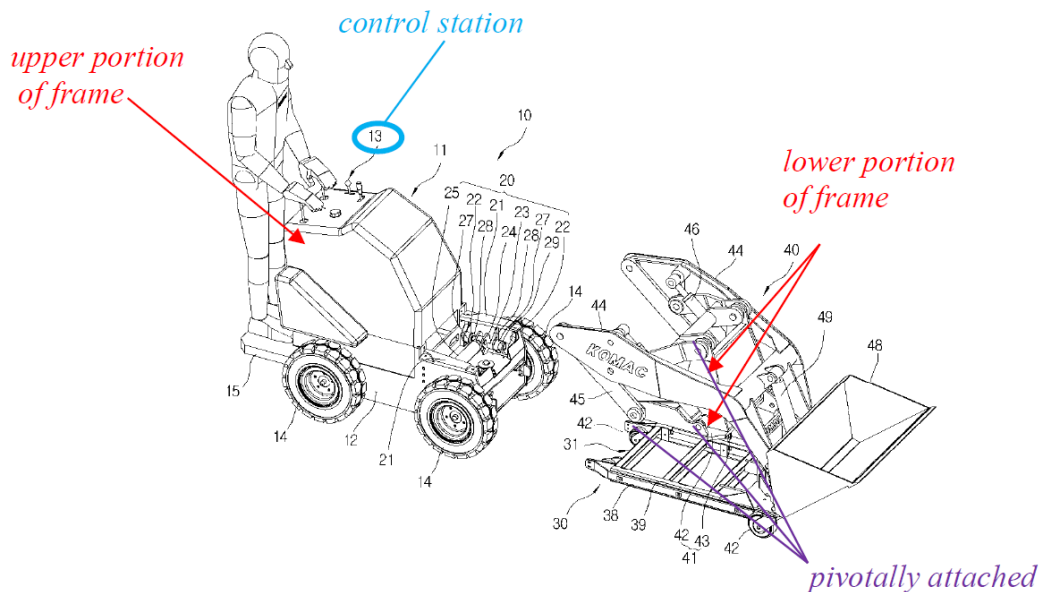
b. The Loader Support Limitations (Claim 14) and the Mainframe Limitations (Claims 19 and 25)

As mentioned above, claim 14 recites the loader support limitations in substantially the same manner as claim 1. *See supra* note 10. In addition, claim 19 recites, in relevant part, “[19.1a] a machine structure comprising a mainframe and an upper frame . . . ; [19.3] an actuator pivotally attached to the mainframe; [19.4] a front linkage pivotally attached to the mainframe; [19.5] a rear linkage pivotally attached to the mainframe.” Reexam Cert, 2:26–36. Claim 25 recites requirements substantially similar in relevant respects. *Id.* at 3:3–9.¹¹

For this asserted ground, Petitioner relies on KR996 as disclosing the loader support limitations in claim 14 for the same reasons presented as to

¹¹ We refer to the limitations at issue in claims 19 and 25, collectively, as the “mainframe limitations.”

the asserted ground based on KR996 alone (summarized above in § II.E.2.a). *See* Pet. 71 (presenting a chart as to limitations 14.0–14.6). As to the mainframe limitations, Petitioner refers back to prior discussions, with the “mainframe” of claims 19 and 25 identified as the same structures in KR996 as the “lower frame” in claim 12. *See* Pet. 89 (claim 19), 98 (claim 25), 58 (claim 12). In the discussion of claim 12, Petitioner refers back to the analysis of the “lower portion” of the “rigid frame” in claim 11, which provides the following annotated version of Figure 1 of KR996:



Pet. 58. In the annotated version of Figure 1 of KR996 above, Petitioner added (1) red text and lines identifying an “upper portion of frame” and “lower portion of frame,” (2) blue text and a line identifying a “control station,” and (3) purple text and lines identifying certain structure as “pivotally attached.” *Id.* From these discussions, we understand Petitioner to identify fixture 41 in KR996 as the “loader support” in claim 14 and as the “mainframe” in claims 19 and 25.

Patent Owner relies on the same arguments presented for the asserted ground based on KR996 alone as to why KR996 allegedly does *not* disclose

or suggest the loader support limitations in claim 14 and the mainframe limitations in claims 19 and 25. *See* Prelim. Resp. 48–49. For substantially the same reasons discussed above, we determine that Petitioner has made a sufficient showing that KR996 discloses the loader support limitations in claim 14 and the mainframe limitations in claims 19 and 25. *See* § II.E.2.a.

c. Conclusion as to Independent Claims 14, 19, and 25

Because the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims based on at least one of the asserted grounds (*see* § II.E.2.b), we include this asserted ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

4. Claims 15, 16, 20–26, and 27

For dependent claims 15 and 16 (which depend from claim 14), claims 20–24 (which depend from claim 19), and claims 26 and 27 (which depend from claim 25), Petitioner contends that the proposed combination of KR996, Bares, and Beltrami satisfies each limitation. Pet. 88–98, 103. Patent Owner does not present any arguments specifically addressing claims 15, 16, 20–26, and 27. *See* Prelim. Resp. 43–49. We include claims 15, 16, 20–26, and 27 in the context of this asserted ground in the instituted *inter partes* review. *See SAS*, 584 U.S. at 362–63, 369–70; 37 C.F.R. § 42.108(a).

III. CONCLUSION

For the reasons above, we determine that the Petition shows a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims of the challenged patent. At this stage of the proceeding, no final determination has yet been made with regard to the patentability of any of the challenged claims or any underlying factual or

legal issues, including the construction of claim terms. The final determination will be based on the record as developed during the *inter partes* review.

IV. ORDER

Accordingly, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review is hereby instituted as to claims 1–16 and 19–28 of the challenged patent on all asserted grounds and

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

IPR2025-00171
Patent 10,202,266 B2

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