

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ARCTIC CAT, INC.,  
Petitioner,

v.

POLARIS INDUSTRIES, INC.,  
Patent Owner.

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Case IPR2014-01427  
Patent 8,596,405 B2

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Before MICHAEL W. KIM, WILLIAM V. SAINDON, and  
RICHARD E. RICE, *Administrative Patent Judges*.

KIM, *Administrative Patent Judge*.

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

## I. INTRODUCTION

### A. *Background*

Arctic Cat, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) for *inter partes* review of claims 1–38 of U.S. Patent No. 8,596,405 B2 (“the ’405 patent,” Ex. 1002) pursuant to 35 U.S.C. §§ 311–319. Polaris Industries, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 6. On February 13, 2015, we instituted an *inter partes* review of claims 1–38 on certain grounds of unpatentability alleged in the Petition. Paper 7 (“Dec.”). After institution of trial, Patent Owner filed a Patent Owner Response (Paper 23, “PO Resp.”)<sup>1</sup> and Petitioner filed a Reply (Paper 36, “Pet. Reply”).<sup>2</sup> Patent Owner filed a Motion to Exclude (Paper 42, “PO Mot.”), to which Petitioner filed a Response (Paper 49, “Pet. Resp.”) and Patent Owner filed a Reply (Paper 50, “PO Reply”). An oral hearing was held on September 24, 2015. Paper 54 (“Tr.”).

The Board has jurisdiction under 35 U.S.C. § 6(c). In this Final Written Decision, issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, we determine that Petitioner has shown by a preponderance of the evidence that all claims for which trial is instituted, claims 1–38, are unpatentable. Patent Owner’s Motion to Exclude is *dismissed* as moot.

### B. *The ’405 patent*

The ’405 patent relates generally to side-by-side all-terrain vehicles (“ATV”) having at least a pair of laterally spaced apart seating surfaces. Ex. 1002,

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<sup>1</sup> A Protective Order concerning these papers was entered in this proceeding on June 29, 2015. Paper 29. Patent Owner filed a redacted version of the Patent Owner Response (Paper 22) concurrently with the unredacted version (Paper 23).

<sup>2</sup> A Protective Order concerning these papers was entered in this proceeding on November 18, 2015. Paper 55. Petitioner filed a redacted version of the Reply (Paper 35) concurrently with the unredacted version (Paper 36).

1:10–14. Figures 1 and 9 illustrate an exemplary embodiment of ATV 10 of the '405 patent, and are set forth below.

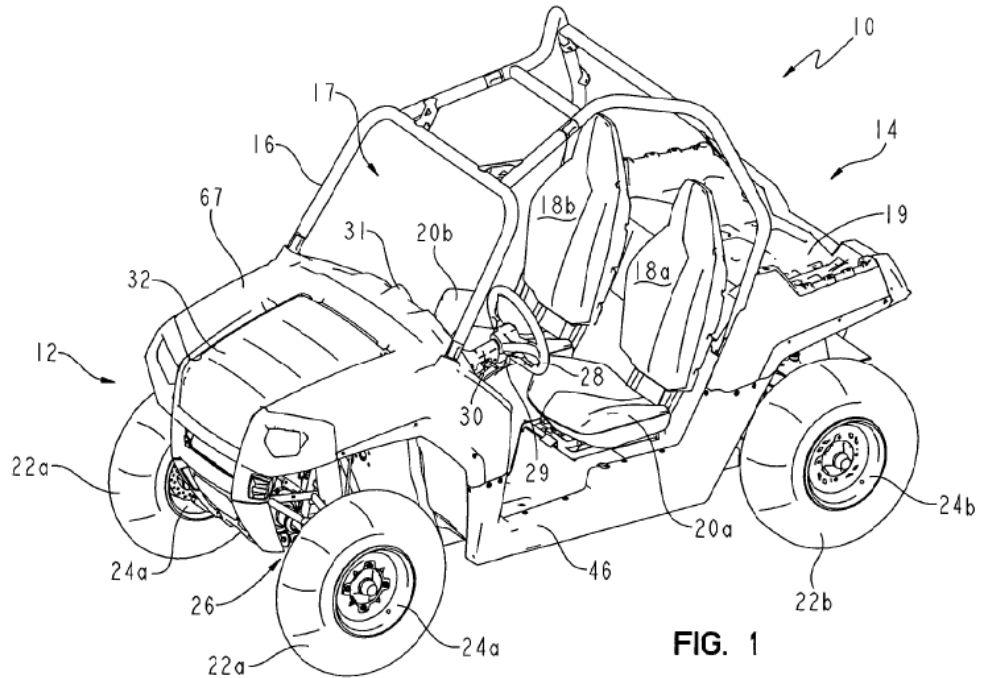


Figure 1 is a perspective view of the side-by-side ATV.

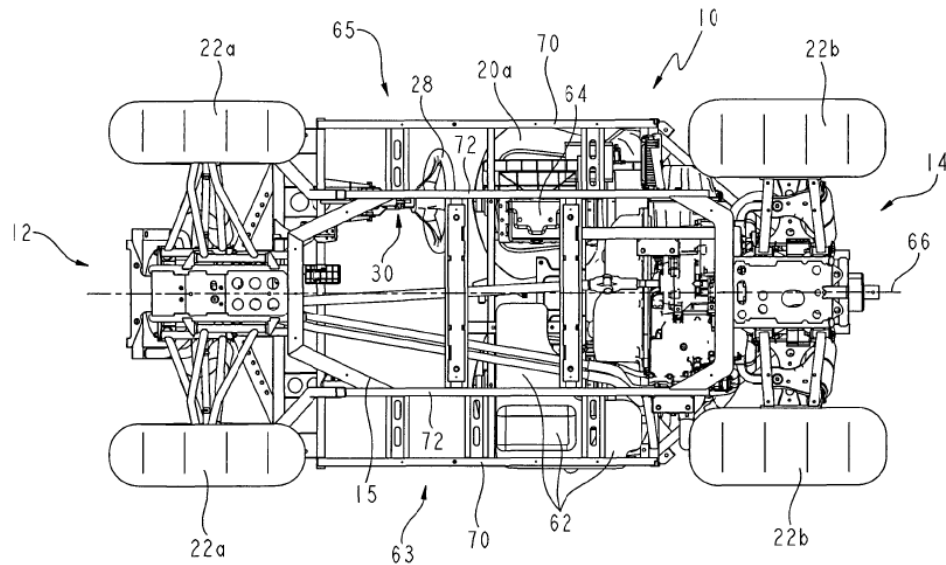


Figure 9 is a bottom plan view of the side-by-side ATV.

ATV 10 includes front end 12, rear end 14, and frame 15 supported by front tires 22a, rear tires 22b, front wheels 24a, and rear wheels 24b. Ex. 1002, 3:42–45.

Passenger's side 63 and driver's side 65 are delineated by longitudinal axis 66. Ex. 1002, 5:18–23. Front suspension assembly 26 pivotally couples front wheels 24a, 24b to ATV 10. Ex. 1002, 4:2–4. Rear end 14 of ATV 10 includes engine cover 19, which extends over a modular engine assembly positioned completely behind upper and lower seating surfaces 18a, 18b, 20a, 20b. Ex. 1002, 4:4–8.

### *C. Related Matters*

Petitioner and Patent Owner identify the following related district court proceeding between Petitioner and Patent Owner that involves the '405 patent: *Arctic Cat, Inc. v. Polaris Industries, Inc.*, Nos. 0:13-cv-03579, 0:13-cv-3595 (D. Minn). Pet. 1; Paper 5, 2. Petitioner and Patent Owner also identify the following related petition for *inter partes* review that involves the same parties and the '405 patent: IPR2014-01428. Pet. 1; Paper 5, 2.

### *D. Illustrative Claim*

Independent claim 1 is reproduced below:

1. An all-terrain vehicle including:
  - a frame, comprising a front frame portion, a mid frame portion and a rear frame portion;
  - a front suspension supported by the front frame portion;
  - at least two front wheels coupled to the front suspension;
  - a front axle assembly supported by the front frame portion and drivingly coupled to the front wheels;
  - a seating area supported by the mid frame portion, comprising side by side seats;
  - an engine supported by the rear frame portion, the engine positioned rearwardly of the seating area;
  - a transmission coupled to and extending rearwardly of the engine;
  - a rear suspension supported by the rear frame portion;
  - at least two rear wheels coupled to the rear suspension;
  - a rear axle assembly supported by the rear frame portion and drivingly coupled to the rear wheels;

a front drive shaft extending between the transmission and the front axle assembly for coupling the transmission to the front wheels;  
and

a rear drive shaft extending between the transmission and the rear axle assembly for coupling the transmission to the rear wheels.

*E. Prior Art References Applied by Petitioner and Instituted Grounds of Unpatentability*

Petitioner challenges the patentability of claims 1–38 on the basis of the following grounds and prior art (Pet. 8–51):

<b>Reference(s)</b>	<b>Basis</b>	<b>Challenged Claims</b>
Denney <sup>3</sup> and Furuhashi <sup>4</sup>	§ 103(a)	1–13, 15–34, and 36–38
Denney, Furuhashi, and Enokimoto <sup>5</sup>	§ 103(a)	14
Denney, Furuhashi, and Johnson <sup>6</sup>	§ 103(a)	35

Petitioner also cites two Declarations of Dr. Gregory W. Davis (Exs. 1001, 1069) and a Declaration of W. Christopher Bakewell (Ex. 1070).<sup>7</sup> Patent Owner cites the Declaration of Dr. John J. Moskwa (Ex. 2029) and the Declaration of John C. Jarosz (Ex. 2030).<sup>8</sup>

<sup>3</sup> US 7,658,258 B2 (“Denney”) issued Feb. 9, 2010 (Ex. 1003).

<sup>4</sup> US 5,327,989 (“Furuhashi”) issued July 12, 1994 (Ex. 1004).

<sup>5</sup> US 5,251,713 (“Enokimoto”) issued Oct. 12, 1993 (Ex. 1007).

<sup>6</sup> US 6,149,540 (“Johnson”) issued Nov. 21, 2000 (Ex. 1008).

<sup>7</sup> A Protective Order concerning these papers was entered in this proceeding on November 18, 2015. Paper 55. Petitioner filed a redacted version of the Declaration of W. Christopher Bakewell (Ex. 1071) concurrently with the unredacted version (Ex. 1070).

<sup>8</sup> A Protective Order concerning this paper was entered in this proceeding on June 29, 2015. Paper 29.

## II. ANALYSIS

### A. *Claim Construction*

In an *inter partes* review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1277–78 (Fed. Cir. 2015) (“We conclude that Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA.”), *cert. granted sub nom. Cuozzo Speed Techs. LLC v. Lee*, 72016 WL 205946 (U.S. Jan. 15, 2016) (No. 15-446). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). We must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

#### 1. “coupled” or “coupling”

Each of claims 1, 8, 9, 11, 18, and 19 recite one of “coupled” or “coupling.” In the Decision on Institution, based on Petitioner’s position and evidence (Pet. 4–5), we construed “coupled” or “coupling” as “connected or connecting directly or indirectly.” Dec. 6–7. After the Decision on Institution, neither Patent Owner nor Petitioner has expressed disagreement with this construction. After considering anew the basis for our previous construction, we see no need for modification.

2. “*supported by*”

Each of claims 1, 11, 12, 28, and 34 recite “supported by.” In the Decision on Institution, based on Petitioner’s position and evidence (Pet. 5–6), we construed “supported by” as “all or part of the weight being carried by.” Dec. 7. After the Decision on Institution, neither Patent Owner nor Petitioner has expressed disagreement with this construction. After considering anew the basis for our previous construction, we see no need for modification.

3. “*a transmission coupled to and extending rearwardly of the engine*”

Independent claim 1 recites “a transmission coupled to and extending rearwardly of the engine.” In their assertions concerning the prior art, the parties disagree as to whether the aforementioned claim limitation requires the entirety of the transmission to be completely rearward of the engine, or whether the aforementioned claim limitation is met if any part of the transmission extends rearward from any portion of the engine. PO Resp. 36–39; Pet. Reply 10–16; Tr. 18:3–19:19; 88:4–90:11. We determine that the latter construction is correct for several reasons.

In similar contexts, other claims recite explicitly when an object must be completely rearward of every portion of another object. *See, e.g.*, claim 26 (“wherein the rear frame portion is *completely* rearward of the seats”) (emphasis added); claim 29 (*all portions* of the engine are located rearwardly of at least a portion of a seat in the seating area) (emphasis added); claim 30 (“wherein *every part* of the rear frame portion is disposed rearwardly of the mid frame portion”) (emphasis added); claim 34 (“a transmission coupled to the engine, the transmission being *completely* rearward of the seating area”) (emphasis added). While the doctrine of claim differentiation does not mandate a particular construction, nevertheless, the presence of some claim language requiring that an

object must be *completely* rearward of every portion of another object does weigh in favor of a determination that an object not having such language *need not be completely* rearward of every portion of another object.

Furthermore, the only disclosure in the specification where we are able to identify a positioning of a transmission relative to an engine is Figure 19, which is set forth below.

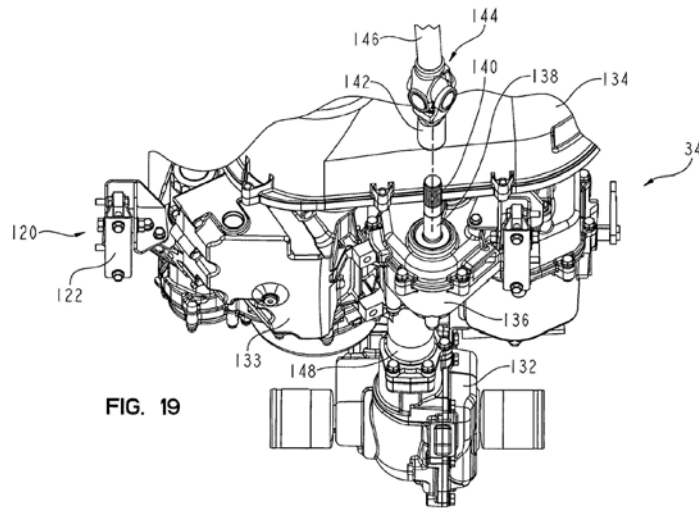


Figure 19 is a partial front perspective view of a bottom vehicle side of drive train components of a side-by-side ATV.

The dotted axis line that connects output shaft 138 and coupler 142 indicates a longitudinal axis of the ATV, where coupler 142 is in front of output shaft 138. Although the view is a front perspective view, where discerning the longitudinal positioning of one part in relation to another part is not a straightforward matter, it is beyond dispute, and, thus, we find, that transmission 136 extends rearwardly of some portion of engine 133, and is also not completely rearward of every portion of engine 133. Indeed, if anything, transmission 136 appears to be coextensive, in a longitudinal direction, with the rearmost portion of engine 133. “[A] claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely, if ever, correct.’” *On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer*



*GmbH*, 386 F.3d 1133, 1138 (Fed. Cir. 2004). Here, not only would construing “a transmission coupled to and extending rearwardly of the engine,” to require the entirety of the transmission to be completely rearward of every portion of the engine, exclude the preferred embodiment, it would exclude the *only* embodiment which provides guidance as to the relative positioning of the transmission and engine.

We construe “a transmission coupled to and extending rearwardly of the engine” as being met if any part of the transmission extends rearward from any portion of the engine.

*B. Claims 1–13, 15–34, and 36–38 as Obvious over Denney and Furuhashi*

Petitioner contends that claims 1–13, 15–34, and 36–38 are obvious in view of Denney and Furuhashi. Pet. 8–47 (citing Exs. 1001, 1003, 1004). Claims 1 and 34 are independent. Patent Owner responds to Petitioner’s contentions. PO Resp. 1–59 (citing Exs. 1001–1004, 1007, 2008, 2014, 2029, 2030, 2032, 2041, 2066, 2080). Petitioner replies. Pet. Reply 1–25 (citing Exs. 1001–1004, 1031, 1033, 1034, 1035, 1066, 1067, 1069, 1070, 2029, 2030, 2035).

*1. Denney (Ex. 1003)*

Denney relates to ATVs. Ex. 1003, 1:14–15. Figures 1 and 3 of Denney are set forth as follows:

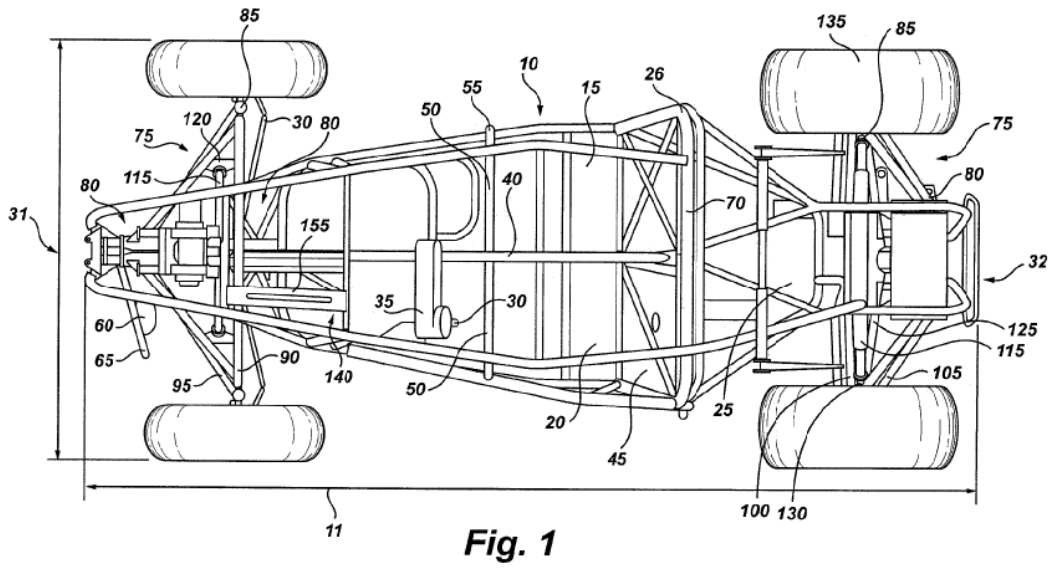


Figure 1 discloses a top view of frame 10 of the ATV.

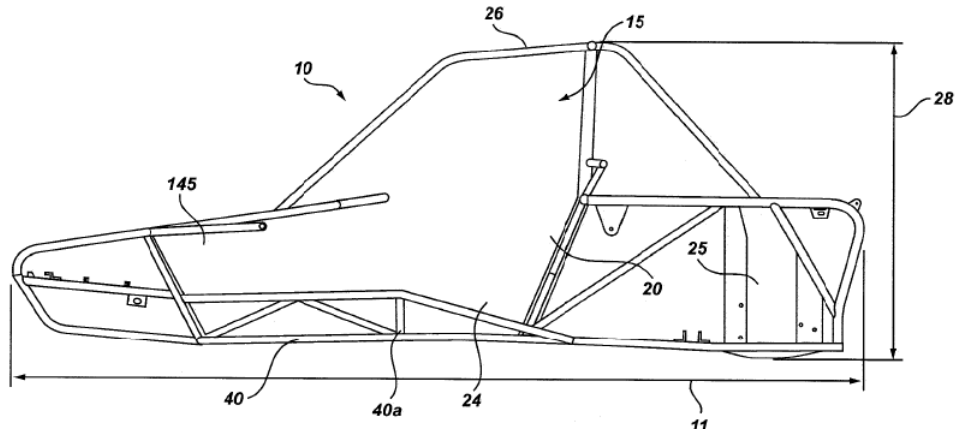


Figure 3 discloses a side schematic view of frame 10 of the ATV. As shown in Figures 1 and 3, Denney discloses vehicle frame 10 including passenger compartment 15, rearward engine compartment 25, and roll-bar construction 26. Ex. 1003, 2:49–58. Rearward engine compartment 25 may be equipped with a top plate mounted to a top of rearward engine compartment 25 for storage. Ex. 1003, 2:64–66. The storage space provided above rearward engine compartment 25 is generally about 10 cubic feet, which is described in Denny as unusually large for ATVs. Ex. 1003, 2:66–3:3.

2. *Furuhashi (Ex. 1004)*

Furuhashi relates to a power-driven four-wheeled buggy provided with pairs of front and rear wheels. Ex. 1004, 1:6–9. Figure 2 of Furuhashi is set forth below:

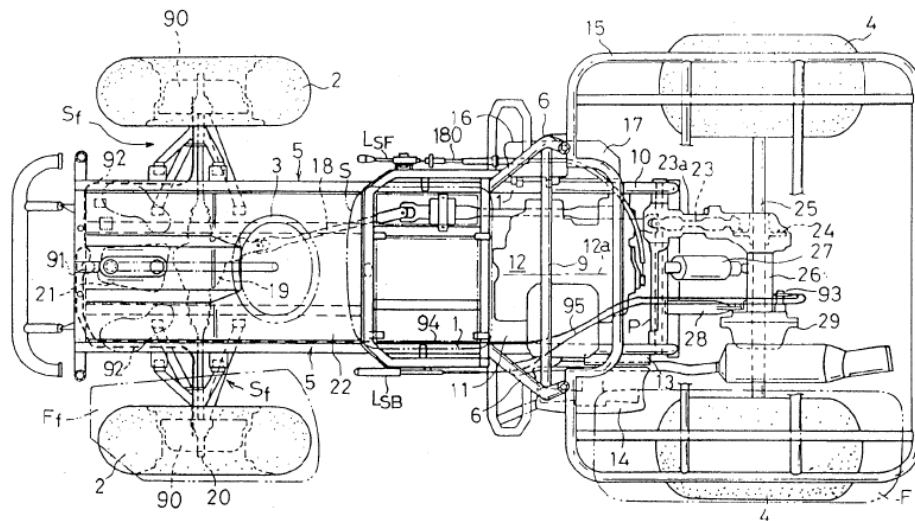


Figure 2 is a partially schematic top plan view of the four-wheeled buggy.

Figure 2 discloses the buggy including frame 1, front wheels 2, rear wheels 4, and steering handle 3. Ex. 1004, 4:39–54. Engine 12 drives front wheels 2 via front propeller shaft 18, front differential 19, and front wheel axle 20. Ex. 1004, 5:43–46. Engine 12 drives rear wheels 4 via rear propeller shaft 23, transmission gear 24, and rear wheel axle 25. Ex. 1004, 5:52–54.

3. *Claims 1–13, 15–34, and 36–38 as Obvious in View of Denney and Furuhashi*

Based on the information presented in the Petition, Patent Owner Response, and Reply, as well as all supporting evidence, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that claims 1–13, 15–34, and 36–38 are obvious in view of Denney and Furuhashi. Pet. 8–47; PO Resp. 1–59; Pet. Reply 2–25. For example, independent 1 recites “a frame, comprising a front

frame portion, a mid frame portion and a rear frame portion.” Petitioner identifies frame 10 of Denney as corresponding to the recited frame. Independent claim 1 recites further “an engine supported by the rear frame portion, the engine positioned rearwardly of the seating area.” Petitioner identifies rearward engine compartment 25 of Denney positioned behind passenger compartment 15. Independent claim 1 recites additionally “a front suspension supported by the front frame portion; at least two front wheels coupled to the front suspension; [and] a front axle assembly supported by the front frame portion and drivingly coupled to the front wheels.” Independent claim 1 recites also a similar arrangement for the rear of the claimed ATV. Petitioner identifies Figures 1 and 2 of Denney as disclosing front and rear wheel assemblies. Indeed, Petitioner relies on Denney for disclosing every limitation of independent claim 1, except for (1) “a transmission coupled to and extending rearwardly of the engine,” and (2) limitations related to four-wheel drive. For those limitations, Petitioner relies on Furuhashi, and then provides three separate rationales for combining Denney and Furuhashi to arrive at the subject matter of independent claim 1. Pet. 11–14 (citing Ex. 1001 ¶¶ 77–82). Petitioner makes a similar showing for claims 2–13, 22–34, and 36–38.

*a. Independent Claim 1*

Patent Owner asserts that Petitioner’s selection of Denney as a lead reference is an exercise in impermissible hindsight, because one of ordinary skill would have looked to existing four-wheel drive recreational ATV and utility vehicles (“UV”) as a lead reference, and not a two-wheel drive dune-buggy style vehicle such as Denney. For support for its assertions concerning the importance of lead references, Patent Owner cites *Daiichi Sankyo Co., Ltd. v. Matrix Labs., Ltd.*, 619 F.3d 1346, 1354 (Fed. Cir. 2010) and *Otsuka Pharm. Co., Ltd. v. Sandoz, Inc.*, 678 F.3d 1280, 1291 (Fed. Cir. 2012). We are unpersuaded that Petitioner’s

selection of Denney as a lead reference is an exercise in impermissible hindsight. As an initial matter, Patent Owner only cites cases involving the unpredictable arts, where identification of lead compounds is more critical, whereas the invention at issue here is in the predictable arts. *In re Fisher*, 427 F.2d 833, 839 (CCPA 1970) (indicating patents in the mechanical or electrical arts involve predictable factors compared to the more unpredictable chemical and biological arts). At the oral hearing, Patent Owner was unable to identify a case addressing lead references in the context of the predictable arts. Tr. 62:6–64:3.

Moreover, we determine that Patent Owner is being too narrow in attempting to delineate between four-wheel drive recreational ATVs and UVs and two-wheel drive dune-buggy style vehicles. As noted by Petitioner, the '405 patent is directed to side-by-side ATVs, and Denney is directed to ATVs with “a pair of seats for the side-by-side passengers.” Pet. Reply 6 (citing Ex. 1002, 1:10–12, 1:43–50; Ex. 1003, Abstract, 1:51–56). Patent Owner does cite the Declaration of Dr. Moskwa as supporting their assertion (PO Resp. 27 (citing Ex. 2029 ¶¶ 35, 117–118)), however, paragraph 118 is the only paragraph that directly supports Patent Owner’s position, and it is a conclusory statement with minimal analysis that we determine is unpersuasive.<sup>9</sup>

Indeed, Patent Owner appears to be asserting that Denney and the claimed invention are non-analogous art. A reference is analogous art to the claimed

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<sup>9</sup> Exhibit 2029, paragraph 35, refers to Petitioner’s side-by-side ATVs and UVs, which undercuts Patent Owner’s position by insinuating that the proper lead reference is a side-by-side ATV such as Denney; and paragraph 117 asserts that one of ordinary skill would have been familiar with four wheel drive ATVs and UVs, and we are unpersuaded by the implication that one of ordinary skill familiar with four wheel drive ATVs and UVs would have been unfamiliar with other ATVs.

invention if: (1) the reference is from the same field of endeavor as the claimed invention (even if it addresses a different problem); or (2) the reference is reasonably pertinent to the problem faced by the inventor (even if it is not in the same field of endeavor as the claimed invention). *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). To that end, we disagree with Patent Owner because, as set forth above, we find that the '405 patent and Denney are both directed to solving problems associated with side-by-side ATVs, which meets either prong of the analogous art test.

Patent Owner asserts additionally that a ten-year gap between Denney and Furuhashi shows that the inventor in Denney knew and expressly rejected the teachings of Furuhashi. We are unpersuaded. We are unaware of any case law that supports Patent Owner's position, and, indeed, we are unpersuaded that Patent Owner's position is correct. No reference can opine concerning every previous permutation in the art, and to hold that a choice of one permutation is an implicit rejection of all other permutations would eviscerate the doctrine of obviousness. To be sure, if one reference discloses expressly that a particular permutation is unworkable, that disclosure weighs against making the permutation. Patent Owner, however, does not assert, and we are unpersuaded, that is the case here.

Patent Owner asserts further that modifying Denney in view of Furuhashi is improper, because Denney discloses that it is attempting to overcome a deficiency of Furuhashi, namely, a high occupancy area. Patent Owner asserts that this is relevant, because Petitioner's proposed modification to Denney in view of Furuhashi is implementing four-wheel drive by placing the front drive shaft of

Furuhashi underneath the seating area of Denney,<sup>10</sup> and because Denney discloses a desire for a low center of gravity, it would teach away from including anything under the seating area, such as the front drive shaft of Furuhashi. We disagree on several levels.

Fundamentally, Patent Owner conflates known modifications having known benefits with subjective preferences. It is beyond dispute that something can be known, but not preferred, because preferences are innately subjective, and something subjective is infinitely variable. To say, however, that these infinitely variable preferences can override known modifications having known benefits would effectively eviscerate obviousness law, as any known modification has both benefits and disadvantages, and someone, somewhere, would say that under their subjective preferences, the disadvantages outweigh the benefits. We opine that such a view cannot be correct, and instead discern that an obviousness analysis should focus on whether a modification is known to implement and has known benefits, and recognize further that one of ordinary skill has the ability to weigh the various benefits and disadvantages based on subjective preferences in an analysis largely unrelated to obviousness. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”); *Winner v. Wang*, 202 F.3d 1340, 1349 (Fed. Cir. 2000) (“the district court did not clearly err in finding that one of ordinary skill in the art would not have reasonably elected trading the benefit of security for that of convenience.

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<sup>10</sup> Petitioner’s proffered rationale for modifying Denney to include the known four-wheel drive of Furuhashi is so that Denney can reap the known benefits of four-wheel drive, such as “increased traction and better acceleration in off-road conditions.” Pet. 12 (citing Ex. 1001 ¶¶ 79-80). Patent Owner admits that both the four-wheel drive of Furuhashi and the above referenced benefits were known to one of ordinary skill at the time of the invention. PO Resp. 30-31.

Trade-offs often concern what is feasible, not what is, on balance, desirable. Motivation to combine requires the latter.”).

We opine that our approach is correct, because *KSR* deals almost exclusively with the objective knowledge of one of ordinary skill in the art, i.e., “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person’s skill.” *Id.* at 401; *see also id.* at 427 (“We build and create by bringing to the tangible and palpable reality around us new works based on instinct, simple logic, ordinary inferences, extraordinary ideas, and sometimes even genius. These advances, once part of our shared knowledge, define a new threshold from which innovation starts once more. . . . *KSR* provided convincing evidence that mounting a modular sensor on a fixed pivot point of the Asano pedal was a design step well within the grasp of a person of ordinary skill in the relevant art. Its arguments, and the record, demonstrate that claim 4 of the Engelgau patent is obvious.”). By contrast, *KSR* is silent regarding the relevance of subjective preference with respect to obviousness, which, again, we discern is logical. As an example, assume a first reference discloses that vehicles with two wheels have increased maneuverability, and a second reference discloses that vehicles with three wheels can increase stability. Let’s assume also that the first reference discloses a preference for maneuverability. According to Patent Owner’s logic, it would not have been obvious to modify the vehicle in the first reference to have anything other than two wheels, even with the disclosures of the second reference. We disagree. When taking the two references collectively, one of ordinary skill would have known, objectively, that a vehicle can have two or three wheels, hence making obvious the addition of the third wheel of the second reference to the two wheels of the first.



One of ordinary skill would not unlearn that a vehicle can have two or three wheels simply because one of ordinary skill preferred maneuverability. Similarly, in the instant proceeding, the relative lack of relevance of subjective preference in comparison to known modifications with known benefits in an obviousness context can be best exemplified by an analysis of Denney's purported preference for a low center of gravity.

As an initial matter, we are unclear as to what Patent Owner means when it asserts that Denney discloses a low center of gravity. Low is a relative term, in that it is a measure of height in relation to something else. In the absence of that something else, however, it does not convey much meaning. Instead, we take Patent Owner's position to be that Denney teaches that making a modification that would raise a center of gravity of a vehicle relative to an unmodified vehicle would decrease vehicle stability and increase risk of rollovers. Ex. 1003, 1:25–28. We agree. Patent Owner also admits, however, that both the four-wheel drive of Furuhashi, and its benefits of increased traction and better acceleration in off-road conditions, was known to one of ordinary skill at the time of the invention. PO Resp. 30–31. Thus, by Patent Owner's own admissions, objectively, one of ordinary skill, in viewing Denney and Furuhashi, would have known that (1) raising the center of gravity of a vehicle relative to that of an unmodified vehicle would decrease vehicle stability and increase risk of rollovers and (2) four-wheel drive would increase traction and offer better acceleration in off-road conditions. Given that both were known modifications having known results, making either modification would have been obvious under *KSR*. Hence, we are persuaded by Petitioner's assertion that one of ordinary skill would have known to modify Denney to include four-wheel drive to increase traction and offer better

acceleration in off-road conditions, and are unpersuaded that anything more is required to show obviousness.

Into this objective analysis, however, Patent Owner attempts to inject Denney's purported preference, which we take to be that Denney teaches against making any modification that would raise a center of gravity of a vehicle relative to an unmodified vehicle. If that is the case, as a general principle, we are unpersuaded by Patent Owner's position. When any mass is added above a center of gravity of a vehicle, its center of gravity is raised. We are unpersuaded that anyone with even a rudimentary understanding of physics would not be intimately familiar with this principle, and we do not understand Patent Owner as disputing this principle.

So, given this, what Patent Owner must be asserting is that even if raising a center of gravity of a vehicle by adding mass was known, because Denney teaches that such a modification is not preferred, no such modification would have been made. We disagree, because taking this assertion to its logical extension, the vehicle of Denney would essentially be a flat plane, as such a flat plane would exemplify the lowest center of gravity for a particular mass. Yet, Denney does not disclose a flat plane, as a flat plane could not include the components necessary for an ATV. So, given that Denney desires an ATV, Denney relents to the objective realities that things like the engine, wheels, transmission, drive train, and frame require raising the center of mass from a flat plane, even though these additions go against the preference for a low center of gravity. When these objective realities are acknowledged, we see that one of ordinary skill in the art, in viewing Denney, would have known that certain subjective tradeoffs must have been made between raising a center of gravity, and having features desirable for an ATV, such as four-wheel drive.

Accordingly, in view of the above, perhaps Patent Owner is asserting that Denney has made the optimal determination between having the features of an ATV and having a low center of gravity, and that having a low center of gravity is such an overriding determination, that one of ordinary skill would never have thought to make any modification that would raise the center of gravity of Denney's ATV, even for the known modification of four-wheel drive for the known benefits of increased traction and better acceleration in off-road conditions. In essence, Patent Owner would be asserting that Denney is incapable of any improvement, no matter how desirable, that would raise the center of gravity of Denney's ATV. We are unpersuaded that such a determination is credible, as it exalts the literal disclosures of Denney over the logical substance of the abilities of one of ordinary skill. "Rigid preventative rules that deny recourse to common sense are neither necessary under, nor consistent with, this Court's case law." *KSR*, 550 U.S. at 403. To that end, a more credible determination is that while Denney certainly exudes a preference for not raising the center of gravity of an ATV for stability purposes, that subjective preference does not override the knowledge of one of ordinary skill concerning known modifications having known benefits. To that end, we confirm that subjective preference is a tool of limited value in evaluating obviousness, except for acknowledging that, for the most part, one of ordinary skill is capable of balancing multiple subjective preferences in making known modifications having known benefits.

To be sure, subjective preferences disclosed in references should be taken into account, and at the margins, may weigh heavily against making a proffered modification. For example, one could envision adding so much mass and raising a center of gravity so much as to make the ATV functionally inoperable. In another example, if there is no known benefit to a proffered modification, and the proffered

modification would raise a center of gravity of the ATV, Denney's subjective preferences could be determinative in weighing against making the proffered modification. To take Patent Owner's assertion at face value, however, that Denney teaches against making any modification that would raise a center of gravity of a vehicle, no matter what the benefits of that modification would be, does not comport with common sense, especially where Patent Owner does not assert, and we do not discern, that the consequences of raising a center of gravity of a vehicle would not have been well-understood by one of ordinary skill. To that end, we have considered, but deem unpersuasive, Dr. Moskwa's assertions concerning whether or not the subjective preferences of Denney teach away from Petitioner's known modifications having known benefits. Ex. 2029 ¶¶ 28–37, 80–82, 122–141.

Accordingly, the fundamental consideration underlying Petitioner's proffered modification of Denney to include the four wheel drive of Furuhashi for known benefits, all of which both parties agree were undisputedly known, is whether one of ordinary skill would have been able balance the subjective preference of Denney to not raise the center of gravity, which provides the known benefit of increased stability, against the equally subjective preference of having a four wheel drive, which provides the known benefit of "increased traction and better acceleration in off-road conditions." Pet. 12 (citing Ex. 1001 ¶¶ 79–80). We are persuaded that one of ordinary skill at the time of the invention would have had the ability to balance those preferences, and thus Denney's purported preferences do not outweigh the known benefits of modifying Denney to include the four wheel drive of Furuhashi. More specifically, Patent Owner asserts that one of ordinary skill would not have included the front drive shaft of Furuhashi in the ATV of Denney, as such a modification would have required the raising of seats,

and raising the seats would undesirably have raised the center of gravity of the ATV of Denney. That assertion is not persuasive for the reasons set forth above.

Furthermore, the test for obviousness does not require bodily incorporation. *See In re Sneed*, 710 F.2d 1544, 1550 (Fed. Cir. 1983) (“[I]t is not necessary that the inventions of the references be physically combinable to render obvious the invention under review.”); *In re Nievelt*, 482 F.2d 965, 968 (CCPA 1973) (“Combining the teachings of references does not involve an ability to combine their specific structures.”). Patent Owner does not dispute that either (1) ways for lowering the center of mass of an ATV or (2) front drive shafts for implementing four-wheel drive, for the known benefit of “increased traction and better acceleration in off-road conditions,” were known at the time of the invention. PO Resp. 30–32 (citing Ex. 2029 ¶¶ 123–125). In view of that undisputed knowledge, we are unpersuaded that those two options are so lacking in physical combinability as to be non-obvious, especially where physical combinability is not necessary.

Finally, Patent Owner’s assertions concerning preference are moot, as Petitioner notes that Denney’s existing structure could support a front drive shaft alongside or in place of support truss 40, which would not raise the center of gravity of Denney’s ATV. Pet. Reply 9–10 (citing Exs. 1001, 1003, 1033, 1069). We agree. In particular, we credit the testimony of Dr. Davis that the structure of Denney discloses adequate space to place a front drive shaft with minimal other modifications. Ex. 1069 ¶¶ 16–18. We do not credit Dr. Moskwa’s Declaration testimony in opposition. Dr. Moskwa’s statements (Ex. 2029) in paragraphs 130–133 concern raising the seats, which we do not find would be necessary to implement the proffered modification; and Dr. Moskwa’s statements in paragraphs 134–137, that there is no room for a front drive shaft in Denney, are undercut by

his statements in paragraphs 138–141 that widening the vehicle or running the front drive shaft under or alongside the vehicle would have been possible. To be sure, Dr. Moskwa also opines that such options would have disadvantages. However, as set forth above, preference is not to be conflated with known modifications having known benefits, and we are persuaded that the aforementioned evidence shows that Petitioner’s proffered modification, and their attendant benefits/disadvantages, were known, and hence obvious.

Relatedly, Patent Owner asserts that modifying Denney to accommodate the four wheel drive of Furuhashi would render Denney unsatisfactory for its intended purpose. We disagree. Even assuming that Denney was modified to include higher seats and/or no central truss to accommodate the four wheel drive of Furuhashi, we are unpersuaded that Denney would not be able to fulfill its intended purpose of being a side-by-side ATV. Insofar as Patent Owner is asserting that the intended purpose of Denney is more specific, e.g., an ATV having a low center of gravity, our analysis is the same as set forth above concerning preferences and tradeoffs, and need not be repeated here.

Patent Owner asserts additionally that Petitioner has not accounted for the myriad of non-routine interrelated design changes that must be overcome in order to implement the four-wheel drive of Furuhashi in the ATV of Denney. Patent Owner’s assertions are misplaced, as Petitioner is not required to account for every technical challenge in order to show obviousness, and we are unpersuaded that the design changes identified by Dr. Moskwa (Ex. 2029 ¶¶ 142–146) are either non-routine or would not have been within the abilities of one of ordinary skill. Specifically, we discern that most of the design changes identified by Dr. Moskwa involve problems involving space and weight distribution, and we are unpersuaded

that such problems are either non-routine or so complex, that one of ordinary skill in ATV design in 2006 would have been unable to address such problems.

Patent Owner asserts also that Petitioner's proffered combination of Denney and Furuhashi does not disclose or suggest "a transmission coupled to and extending rearwardly of the engine," as recited in independent claim 1. As set forth above, we construe the aforementioned claim limitation as being met if any part of the transmission extends rearward from any portion of the engine. To that end, Patent Owner's and Petitioner's dispute as to the exact disclosures of Furuhashi concerning relative positioning of engine parts and transmission parts is unpersuasive, because even Patent Owner admits that, like Figure 19 of the specification, Furuhashi discloses, at a minimum, an engine and a transmission in a roughly coextensive configuration. PO Resp. 38. Given this, we find that at least in some coextensive engine and transmission configurations, some part of the transmission would extend rearwardly from at least some portion of the engine, and indeed even from the entirety of the engine, for logically, there are only three possible options: (1) the engine and the transmission are coextensive; (2) a portion of the engine extends rearward of some portion of the transmission, and (3) a portion of the transmission extends rearward of some portion of the engine.

When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

*KSR*, 550 U.S. at 402–403. Here, by default, placement of the engine relative to the transmission must meet one of those three finite options, leading us to determine that implementing any of those three options, including that which meets the aforementioned claim limitation, would have been obvious. The

determination is supported further by Petitioner's expert, Dr. Davis, who identifies several known benefits of the claimed configuration. Ex. 1001 ¶ 81. Although Patent Owner disputes several of these known benefits, with support from the Declaration of Dr. Moskwa (Ex. 2029 ¶¶ 147–152), we determine that Patent Owner's positions do not outweigh the above determination.

*b. Independent Claim 34 and Dependent Claims 20 and 25*

Patent Owner asserts additionally that Petitioner did not set forth explicitly in its Petition that a combination of Denney and Furuhashi discloses or suggests a “rear axle assembly supported by the rear frame portion rearward of the engine,” as recited in independent claim 34. Specifically, Patent Owner asserts that Petitioner only addressed independent claim 34 in relation to differences between independent claim 34 and independent claim 1, and that in addressing such differences, did not address expressly this limitation of independent claim 34. Accordingly, Patent Owner asserts that omission indicates, at best, that Petitioner is relying on Denney alone for the aforementioned claim limitation, and that Denney discloses only that any rear axle assembly is disposed under the engine, and not rearward of the engine, as claimed. Also, to the extent that Petitioner attempts to remedy this deficiency in its Reply, Patent Owner asserts that it is too late, as it was not afforded either adequate notice of Petitioner's position or a chance to respond. PO Mot. 2. Although we agree with Patent Owner that Petitioner's treatment of the aforementioned claim limitation in the Petition was less than a model of clarity, on considering the totality of the evidence, we are persuaded that Petitioner has shown sufficiently that a combination of Denney and Furuhashi discloses or suggests a “rear axle assembly supported by the rear frame portion rearward of the engine.”



Specifically, on pages 45–46 of the Petition, Petitioner cites Furuhashi as disclosing “a rear drive shaft *extending rearward* of the transmission for coupling the transmission to the rear wheels via a rear axle assembly.” As admitted by Patent Owner, Furuhashi discloses, at a minimum, an engine and a transmission in a side-by-side configuration. PO Resp. 38. Given this, identification of a disclosure of a rear drive shaft extending rearward of the transmission would also place the rear drive shaft, which is undisputedly a portion of the rear axle assembly, rearward of an engine that is co-extensive with the transmission. Furthermore, page 46 of the Petition also refers to paragraph 81 of Dr. Davis’s Declaration, which asserts the following:

Second, a person of ordinary skill before July 2006 and earlier would have been prompted to equip Denney’s engine compartment 25 and power train according to Furuhashi’s suggestions (described above) so as to provide the enhanced vehicle balance and drivability achieved from a transmission extending rearward of the engine (e.g., an engine placement further from the rear of the vehicle and closer to the middle). In particular, the Furuhashi ’989 Patent’s engine and transmission configuration allows for an engine mounted rearward of the seating area (refer to ¶¶ 58-64 above), while at the same time providing the advantages of a mid-mounted engine, such as vehicle stability, avoidance of engine overhang, and enhanced maneuverability.

Ex. 1001 ¶ 81. A placement of the engine further from the rear and closer to the middle of a vehicle would, at some point, be forward of any rear axle assembly. Finally, pages 37–38 of the Petition cites Furuhashi for disclosing the aforementioned claim limitation, albeit in the context of a slightly differently worded dependent claim 25. While we acknowledge that Petitioner did not address the aforementioned claim limitation of independent claim 34 in the Petition with absolute clarity, given the above assertions in the Petition that the Furuhashi does disclose the aforementioned claim limitation (albeit in the context of a different

claim), we are persuaded that Patent Owner was on notice, and Petitioner has shown sufficiently, that a combination of Denney and Furuhashi discloses or suggests a “rear axle assembly supported by the rear frame portion rearward of the engine.”

Concerning the limitation “wherein the rear axle assembly is positioned rearwardly of the engine,” as recited in dependent claim 25, and by implication, the similar limitation recited in independent claim 34, Patent Owner asserts that Petitioner has not shown that it would have been obvious to modify Denney to include the rearwardly placed rear axle assembly of Furuhashi, because (1) Petitioner does not identify explicit disclosures to support the purported rationale for modifying Furuhashi, namely, “maintaining a desirable center of gravity, increasing maneuverability, and decreasing engine overhang,” and (2) implementing this modification would undo several aspects of Denney, specifically, shortening the wheelbase and increasing comfort. We disagree.

For assertion (1) above, Petitioner cites paragraphs 138–140 of the Declaration of Dr. Davis, which provides a reasoned analysis, particularly in paragraph 139, as to the known benefits of the proffered modification disclosed in Furuhashi, for example, reducing a risk of tipping backward and reducing engine overhang. In response, Patent Owner does cite paragraphs 153–166 of the Declaration of Dr. Moskwa, however, only paragraphs 161–166 address Furuhashi in a relevant manner, and even these paragraphs only address assertion (2) above. Accordingly, when analyzing all relevant factors concerning assertion (1), we determine that Dr. Davis’s above analysis is logical, credible, and persuasive.

For assertion (2), Patent Owner is arguing essentially that the subjective preferences in Denney of shortening the wheelbase and increasing comfort outweigh the known modification, placing the rear axle assembly rearward of the

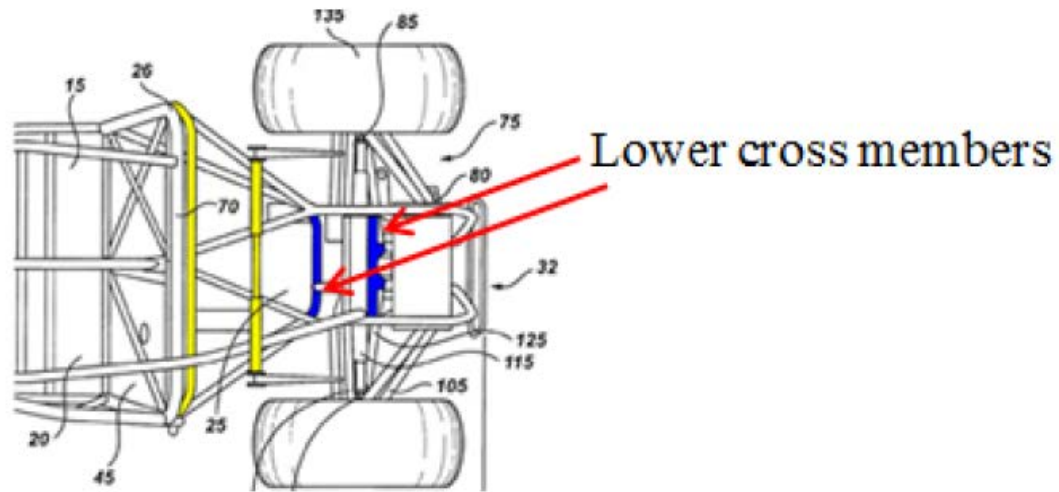
engine as shown in Furuhashi, for the known benefits of reducing a risk of tipping backward and reducing engine overhang. Our analysis here is the same as that set forth above with respect to why similar assertions set forth for independent claim 1 were unpersuasive, and need not be repeated.

For dependent claim 20, Patent Owner repeats the same assertions as set forth above for independent claim 34 and dependent claim 25 (PO Resp. 58 (citing Ex. 2029 ¶ 200)), which are unpersuasive for the reasons set forth above.

In all other respects, Patent Owner repeats the same assertions as were set forth for independent claim 1, which we determined already as unpersuasive for the reasons set forth above.

*c. Dependent Claims 6, 8, and 9*

Patent Owner asserts that a combination of Denney and Furuhashi does not disclose or suggest “wherein the lower rear frame portion is comprised of lower cross members,” as recited in dependent claim 6. PO Resp. 47–50 (citing Ex. 2029 ¶¶ 168–172). Specifically, Patent Owner asserts that the portion of Denney, that Petitioner has identified below, as corresponding to the lower cross members are above the driving axles, and, thus, are not lower cross members.



Annotated plan view of a rear portion of the ATV shown in Figure 1 of Denney.

Pet. 23. Patent Owner's assertions are misplaced, as we are unclear as to why lower cross members must be below the driving axles. We are persuaded that the portions of the frame identified by Petitioner, even if they are above the driving axles, correspond properly to the recited "lower cross members" because, at a minimum, they are lower than other cross members, such as those highlighted above in yellow. Also, as paragraphs 169–171 of Dr. Moskwa's Declaration (Ex. 2029) make assertions using the same faulty underpinnings, they are unpersuasive for the same reason.

Patent Owner asserts additionally that a combination of Denney and Furuhashi does not disclose or suggest "wherein the upper rear frame portion at least partially extends over at least one of the engine or transmission," as recited in dependent claim 8, and "wherein the upper rear frame portion further comprises a rear brace positioned over the engine and transmission," as recited in dependent claim 9. Specifically, Patent Owner asserts that the portion of Denney cited by Petitioner corresponding to the upper rear frame portion only extends beside, and not over, the engine and the transmission. Patent Owner's assertions are

misplaced, as Petitioner also cites Furuhashi for disclosing or suggesting the aforementioned claim limitations.

To that end, Patent Owner asserts that the Petition is deficient because (1) the known modification, adding a frame element, for a known benefit, strengthening a portion of the frame, is outweighed by the subjective preference for decreased cost and weight (Ex. 2029 ¶ 172), and (2) even given generally that adding frame elements for strength was known, Petitioner has not shown that the exact claimed placement of the frame would have been obvious. For assertion (1), our analysis is the same as that set forth above with respect to why similar assertions set forth for independent claim 1 were unpersuasive, and need not be repeated. For assertion (2), Patent Owner's assertions are misplaced, as even Patent Owner concedes that "[o]ne of ordinary skill would know that there are many potential brace locations," and agrees also that adding a frame element to a particular frame location would strengthen that portion of the frame. PO Resp. 50; *see also* Ex. 1035, 104:9–108:19, 179:10–180:8, 183:17–23. We are persuaded that such assertions and evidence proffered by Petitioner and Patent Owner are sufficient to show that Petitioner's assertion concerning the obviousness of dependent claims 8 and 9 is correct, especially absent any analysis as to why adding a certain frame portion would not provide the known strengthening benefit.<sup>11</sup> Pet. 23–25 (citing Ex. 1001 ¶¶ 109–111; Ex. 1003, Figs. 1, 3).

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<sup>11</sup> We acknowledge that Petitioner did not cite Furuhashi in its ground concerning the unpatentability of dependent claim 8. Pet. 23–24. We determine, however, that given that Furuhashi was cited for adjacent dependent claim 9 concerning a similar limitation (Pet. 24–25), and the strength of the determination that such a modification would have been obvious, that to determine that dependent claim 8 was patentable on such a technicality would exalt form over substance. Moreover, Patent Owner is not prejudiced because we applied expressly Patent Owner's assertions concerning dependent claim 9 to dependent claim 8 as well.

*d. Dependent Claim 15*

Patent Owner asserts that a combination of Denney and Furuhashi does not disclose or suggest a “protective panel positioned between a pair of laterally spaced apart seating surfaces and the engine,” as recited in dependent claim 15. PO Resp. 50–52 (citing Ex. 2029 ¶¶ 173–178). Specifically, Patent Owner asserts that mounting plate 45 of Denney cannot correspond to the recited protective panel, because Denney only discloses that mounting plate 45 performs a “separating” function, and not any “protective” function. We disagree, as we are unclear as to the difference between “separating” and “protective” functions. Paragraphs 173–174 of Dr. Moskwa’s Declaration (Ex. 2029) assert that there is a distinction, however, this assertion is stated in a conclusory manner with no factual underpinnings, and, thus, is accorded little weight. We find that mounting plate 45 is disposed between engine compartment 25 and passenger compartment 15 of Denney. Ex. 1003, 3:29–32; *see also* Ex. 1001 ¶ 120. By virtue of its placement and existence alone, mounting plate 45 would provide *some* protection, presumably protecting passenger compartment 15 from engine compartment 25. Insofar as Patent Owner may be asserting that mounting plate 45 does not provide *sufficient* protection from a particular hazard, such an identification of those hazards or the sufficiency of protection required is not set forth in the claims.

*e. Dependent Claim 16*

Patent Owner asserts that a combination of Denney and Furuhashi does not disclose or suggest “the front driveshaft extends under the protective panel,” as recited in dependent claim 16. PO Resp. 52–53 (citing Ex. 2029 ¶¶ 175–177, 180–181). In making such assertions, however, Patent Owner only addresses the purported protective panel of Furuhashi, when in fact Petitioner also cited mounting plate 45 of Denney as corresponding to the recited protective panel. As

we determine above, in our analysis of independent claim 1, that it would have been known to include a front driveshaft of Furuhashi underneath the ATV of Denney to incur the known benefits of four wheel drive, we are persuaded that the combination of Denney and Furuhashi at least suggests that a front driveshaft would extend under mounting plate 45 of Denney.

*f. Dependent Claims 17–19*

Patent Owner asserts that a combination of Denney and Furuhashi does not disclose or suggest a “fuel tank positioned below one of the seating surfaces,” as recited in dependent claim 17. PO Resp. 53–55 (citing Ex. 2029 ¶¶ 80–82, 183–186). Specifically, Patent Owner asserts that (1) Petitioner’s proffered rationales for modifying Denney to incorporate Furuhashi’s under-seat fuel tank are not disclosed explicitly in Furuhashi, and (2) Petitioner has not shown that the exact claimed placement of the fuel tank would have been obvious, even in view of the explicit disclosure of the exact claimed placement in Furuhashi, because Denney’s low seats teach away from such a placement.

Concerning assertion (1), Patent Owner’s assertions are misplaced, most prominently because, as Patent Owner admits, “[t]here are many other potential locations for a gas tank in an ATV.” PO Resp. 52 (citing Ex. 2029 ¶ 183). Furthermore, proffered rationales do not need to have an explicit basis in the prior art; reasoned analyses of experts can be sufficient, especially where, as here, Dr. Davis provides a persuasive explanation, most prominently at paragraph 126 of his Declaration. For assertion (2), our analysis is the same as that set forth above with respect to why similar assertions set forth for independent claim 1 were unpersuasive, and need not be repeated.

Patent Owner asserts also that a combination of Denney and Furuhashi does not disclose or suggest a “battery positioned below the other of the seating

surfaces,” as recited in dependent claim 18. PO Resp. 55–57 (citing Ex. 2029 ¶¶ 189–194). Patent Owner’s assertions and our analysis are similar to those as set forth above for dependent claim 17, with “battery” replacing “fuel tank,” and, thus, need not be repeated here.

Patent Owner asserts also that a combination of Denney and Furuhashi does not disclose or suggest “the [front] drive shaft extends laterally between the fuel tank and the battery,” as recited in dependent claim 19. PO Resp. 57 (citing Ex. 2029 ¶¶ 197–198). We determined above that it would have been obvious to have each of a fuel tank, battery, and drive shaft underneath the seat of Denney, and are unpersuaded by Patent Owner’s assertions concerning these modifications, individually or collectively, as fundamentally the modification concerns placement of certain objects relative to each other, which we are persuaded would have been within the abilities of one of ordinary skill.

*g. Dependent Claim 21*

Patent Owner asserts that a combination of Denney and Furuhashi does not disclose or suggest a configuration of the wheels and seats such that a line drawn between the points of highest elevation on the front and rear left side wheels passes either through or over a seat portion, and the same for the right side, as recited in dependent claim 21. PO Resp. 58–59 (citing Ex. 2029 ¶¶ 201–202). Specifically, Patent Owner asserts that Denney teaches away from Petitioner’s proffered modification of widening the seats of Denney to meet this claim limitation, for the known benefit of increasing occupant space and comfort, because widening the seats would expose the occupants to a greater risk of injury. Our analysis is the same as that set forth above with respect to why similar assertions set forth for independent claim 1 were unpersuasive, and need not be repeated.



*h. Dependent Claims 2–5, 7, 10–13, 22–24, 26–33, and 36–38*

Patent Owner does not set forth any assertions concerning the separate patentability of any of dependent claims 2–5, 7, 10–13, 22–24, 26–33, and 36–38, for this ground of unpatentability, not already set forth above.

*4. Secondary Considerations*

Patent Owner asserts that even if claims at issue were otherwise obvious, that Petitioner’s analysis is outweighed by objective indicia of non-obviousness, i.e., secondary considerations. PO Resp. 1–25 (citing Exs. 2014, 2029, 2030, 2032, 2041, 2066). Petitioner disagrees. Pet. Reply 21–25 (citing Exs. 1026, 1034, 1035, 1070, 2023, 2029, 2030). We agree with Petitioner.

*a. Patent Owner’s RZR Vehicles*

Patent Owner asserts that its RZR vehicles are covered by claims 34 and 36–38 of the ’405 patent, and cites evidence for supporting the assertion that the commercial success of the RZR vehicles weighs in favor of the non-obviousness of claims 34 and 36–38 of the ’405 patent. We disagree for several reasons.

First and fundamentally, we are unpersuaded that Patent Owner has shown that their RZR vehicles are covered by claims 34 and 36–38 of the ’405 patent. The following constitutes the entirety of Patent Owner’s analysis in its Patent Owner Response concerning whether the RZR vehicles are covered by claims 34 and 36–38 of the ’405 patent: “These RZR vehicles are covered by claims 34 and 36–38 of the ’405 patent. (PO2029 at ¶ 61.)” PO Resp. 21 n.4. This portion of the Patent Owner Response does cite paragraph 61 of Dr. Moskwa’s Declaration, which discloses the following:

I have compared the RZR®/Ranger RZR® vehicles to the claims and determined, based on my inspection, analysis, and study, that each of the following RZR®/Ranger RZR® vehicles is an embodiment of each element recited in claims 34 and 36–38 of the

'405 patent: Ranger RZR®, Ranger RZR® S, Ranger RZR® 4, Ranger RZR® 800, Ranger RZR® S 800, Ranger RZR® 4 800, Military Ranger RZR® 800, and Military Ranger RZR® S 800.

Ex. 2029 ¶ 61. Based on the above, Patent Owner asks us to find that their RZR vehicles are covered by claims 34 and 36–38 of the '405 patent.<sup>12</sup> We decline to do so. The above assertions are conclusory statements devoid of any analysis as to how the RZR vehicles are covered by the claims 34 and 36–38 of the '405 patent. Accordingly, we decline to accord them substantive weight, and absent any link between claims 34 and 36–38 and the evidence of the purported commercial success of the RZR vehicles, we see no need to delve further into that evidence, for example, the Declaration of Ms. Beadle (Ex. 2014), the Declaration of Mr. Jarosz (Ex. 2030), and related exhibits.<sup>13</sup>

Even if we were delve further into some of that evidence, however, we see many deficiencies that weigh against a determination that the commercial success of the RZR vehicles has a nexus with claims 34 and 36–38 of the '405 patent. For example, Patent Owner asserts that its commercial literature touts that the RZR vehicles have a low center of gravity, which results in greater stability, increased agility and maneuverability, higher performance, and a better safety profile. We are unclear as to how any of these features are related to claims 34 and 36–38 of the '405 patent.

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<sup>12</sup> Patent Owner does additionally cite paragraphs 58–60 and 62 of Dr. Moskwa's Declaration, however, those paragraphs do not overcome the substantive deficiency of paragraph 61.

<sup>13</sup> Patent Owner filed Observations Regarding Cross-Examination of Christopher Bakewell. Paper 44. Mr. Bakewell's Declaration (Ex. 1070) was submitted in response to Mr. Jarosz's testimony. As we have not considered, in any significant manner, the testimony of Mr. Jarosz, it also is not necessary to assess, in a significant manner, either the Declaration of Mr. Bakewell or the attendant Observations Regarding Cross-Examination of Christopher Bakewell.

Our analysis below of low center of gravity is emblematic of the deficiencies associated with all the purported advantages of the RZR vehicle set forth above. None of claims 34 and 36–38 recite a low center of gravity. At the oral hearing, Patent Owner appeared to be advancing the notion that practicing claims 34 and 36–38 would result in a vehicle having a low center of gravity. Tr. 45:10–49:9. This is problematic on several levels. First, as set forth above in our analysis of independent claim 1, something having a low center of gravity only makes sense when compared to something else. None of claims 34 and 36–38, however, recite any point of comparison. Patent Owner asserts that perhaps an appropriate comparison is to extrinsic evidence, such as competing commercial products, however, we are unpersuaded that such extrinsic evidence of commercial success has a proper place in determining what a claim intrinsically means, e.g., whether or not a vehicle has a low center of gravity. Second, it is unclear how the limitations of claims 34 and 36–38 result in a vehicle having a low center of gravity. Indeed, independent claim 34 recites various features positioned relative to other features, but we are unable to discern, and Patent Owner has not explained sufficiently, how these features result in a vehicle having a low center of gravity.

While acknowledging that their RZR vehicles are not covered by independent claim 1 and the claims that depend therefrom, Patent Owner asserts that the commercial success of the RZR vehicles are nevertheless relevant to the obviousness analysis of independent claim 1 and its dependents. We disagree at least for the reasons set forth above concerning claims 34 and 36–38, and, indeed, because the RZR vehicles are admittedly not covered by independent claim 1 and its dependents, and thus the purported commercial success of the RZR vehicles is even less applicable to the obviousness analysis of independent claim 1 and its dependents than claims 34 and 36–38.

*b. Petitioner's Wildcat Vehicles*

Patent Owner asserts that Petitioner's Wildcat vehicles are covered by claims 1–13, 15, 16, 20, 22–34, and 36–38 of the '405 patent, and cites evidence for supporting the assertion that the copying that resulted in, and the commercial success of, the Wildcat vehicles weigh in favor of the non-obviousness of claims 1–13, 15, 16, 20, 22–34, and 36–38 of the '405 patent. We disagree for several reasons.

First and fundamentally, we are unpersuaded that Patent Owner has shown that Petitioner's Wildcat vehicles are covered by claims 1–13, 15, 16, 20, 22–34, and 36–38 of the '405 patent. The following constitutes the entirety of Patent Owner's analysis in its Patent Owner Response concerning whether the RZR vehicles are covered by claims 1–13, 15, 16, 20, 22–34, and 36–38 of the '405 patent, in a footnote, no less: "Petitioner's originally-released Wildcat and most of its subsequently released Wildcat vehicles infringe claims 1-13, 15, 16, 20, 22-34 and 36-38 of the '405 patent. (PO2029 at ¶¶ 72-74.)"<sup>14</sup> PO Resp. 23 n.6. Based solely on the above, Patent Owner asks us to find that Petitioner's Wildcat vehicles are covered by claims 1–13, 15, 16, 20, 22–34, and 36–38 of the '405 patent. We decline to do so. The above assertion set forth in the Patent Owner Response is a conclusory statement devoid of any analysis as to how Petitioner's Wildcat vehicles are covered by claims 1–13, 15, 16, 20, 22–34, and 36–38 of the '405 patent. The above cited portions of Dr. Moskwa's Declaration are similarly devoid of any analysis, entitling them to almost no substantive weight. Patent Owner also

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<sup>14</sup> It should be noted that Petitioner disputes this assertion vigorously, and neither party asserts that any definitive finding has been made, in any forum, concerning whether or not Petitioner's Wildcat vehicles are covered by claims 1–13, 15, 16, 20, 22–34, and 36–38 of the '405 patent. Pet. Reply 25; Tr. 100:18–24.

cites portions of the Declaration of Mr. Jarosz (Ex. 2030 ¶¶ 77–79) and an article (Ex. 2066) in the vicinity of these assertions, however, after considering this evidence, we determine that they have almost no relevance as to whether Petitioner’s Wildcat vehicles are covered by claims 1–13, 15, 16, 20, 22–34, and 36–38 of the ’405 patent. Accordingly, absent any link between claims 1–13, 15, 16, 20, 22–34, and 36–38 and the evidence of the purported copying that resulted in, commercial success of, the Petitioner’s Wildcat vehicles, we see no need to delve further into that evidence, such as the Declaration of Ms. Beadle (Ex. 2014), the Declaration of Mr. Jarosz (Ex. 2030), and related exhibits. Moreover, even if we were to do so, Patent Owner’s additional evidence suffers from the same deficiencies as set forth above with respect similar evidence presented concerning the commercial success of the RZR vehicles and its relevance to claims 34 and 36–38 of the ’405 patent.

*c. Conclusions Concerning Secondary Considerations*

We conclude that Patent Owner’s assertions and evidence of secondary considerations do not weigh against a determination that claims 1–13, 15–34, and 36–38 are obvious in view of Denney and Furuhashi.

*5. Conclusion*

For the foregoing reasons, on this record, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that claims 1–13, 15–34, and 36–38 are obvious in view of Denney and Furuhashi.

*C. Dependent Claim 14 as Unpatentable Over Denney, Furuhashi, and Enokimoto, and Dependent Claim 35 as Unpatentable Over Denney, Furuhashi, and Johnson*

Petitioner contends that dependent claim 14 is obvious in view of Denney, Furuhashi, and Enokimoto, and that dependent claim 35 is obvious in view of Denney, Furuhashi, and Johnson. Pet. 47–51 (citing Exs. 1001, 1003, 1004, 1007,

1008). Claims 14 and 35 depend ultimately from independent claim 1. Patent Owner does not set forth any assertions concerning the separate patentability of any of dependent claims 14 and 35 for these grounds of unpatentability. Based on the information presented in the Petition, as well as all supporting evidence, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that dependent claim 14 is unpatentable as obvious over Denney, Furuhashi, and Enokimoto, and that dependent claim 35 is unpatentable as obvious over Denney, Furuhashi, and Johnson. Specifically, we agree explicitly with Petitioner's analysis as set forth on pages 47–51 of the Petition, which need not be repeated here.

*D. Patent Owner's Motion to Exclude*

Patent Owner seeks to exclude paragraph 10 of Exhibit 1069, Dr. Davis' Reply Declaration, on the basis that his testimony in that paragraph lacks a factual foundation. PO Mot. 2–4. Although we do note that whether or not particular expert testimony has a factual foundation goes to weight and not admissibility of the evidence, in this instance, we did not rely on paragraph 10 of Exhibit 1069 in rendering our Decision. Accordingly, Patent Owner's Motion to Exclude is *dismissed* as moot.

III. CONCLUSION

Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–38 of the '405 patent are unpatentable. Patent Owner's Motion to Exclude is *dismissed* as moot.

#### IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–38 of the '405 patent are held unpatentable<sup>15</sup>;

FURTHER ORDERED that Patent Owner's Motion to Exclude is *dismissed* as moot; and

FURTHER ORDERED that because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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<sup>15</sup> Claims 1–20, 22–33, and 35 were determined to be patentable on different grounds in a Final Written Decision issued concurrently in IPR2014-01428.

IPR2014-01427  
Patent 8,596,405 B2

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