

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,
Petitioner,

v.

NIKOLA CORPORATION,
Patent Owner.

IPR2019-01646
Patent 10,077,084 B2

Before LINDA E. HORNER, PATRICK R. SCANLON, and
FRANCES L. IPPOLITO, *Administrative Patent Judges*.

IPPOLITO, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

Petitioner Tesla, Inc. filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–26 of U.S. Patent No. 10,077,084 B2 (Ex. 1001, “the ’084 patent”). Patent Owner Nikola Corporation filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition and any response thereto shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Taking into account the arguments presented in Patent Owner’s Preliminary Response, we conclude that the information presented in the Petition does not establish that there is a reasonable likelihood that Petitioner would prevail in challenging at least one of claims 1–26 of the ’084 patent as unpatentable under the grounds presented in the Petition. Pursuant to § 314, we hereby do not institute an *inter partes* review as to these claims of the ’084 patent.

A. Related Matters

According to Petitioner, the ’084 patent is the subject of *Nikola Corporation v. Tesla, Inc.* Case No. 3:18-cv-7460 in the U.S. District Court for the Northern District of California. Pet. 81; *see also* Paper 4.

B. The ’084 Patent

The ’084 patent relates to a door on a semi-truck vehicle. Ex. 1001, 1:29–30. Generally, vehicle doors provide ingress into and egress from a vehicle, particularly a semi-truck vehicle, and provide access to a seat in the vehicle. *See* Ex. 1001, 1:34–38. The doors often entail ingress or egress at

an angle that may be uncomfortable or even dangerous, and because the doors are a significant distance above the ground, a user must use caution when entering and getting seated in the vehicle. *See id.* at 1:38–45.

The '084 patent purports to address this problem by providing “at least one door that provides ingress and egress to the interior of the cabin of the vehicle, and the door opens into the cabin from a backside of the seat.” *Id.* at 2:28–31. The '084 patent does so by using an electric motor and eliminating the standard combustion engine so that layout of the semi-truck can be reconfigured such that the seat can “be located at a position nearer the front of the vehicle body 102 than in a conventional semi-truck.” *Id.* at 4:23–32. Eliminating the combustion engine enables a location of the door to improve access and safety when entering or exiting the vehicle. *Id.* at 4:50–51. Exemplary door 110 is depicted in Figure 1, reproduced below.

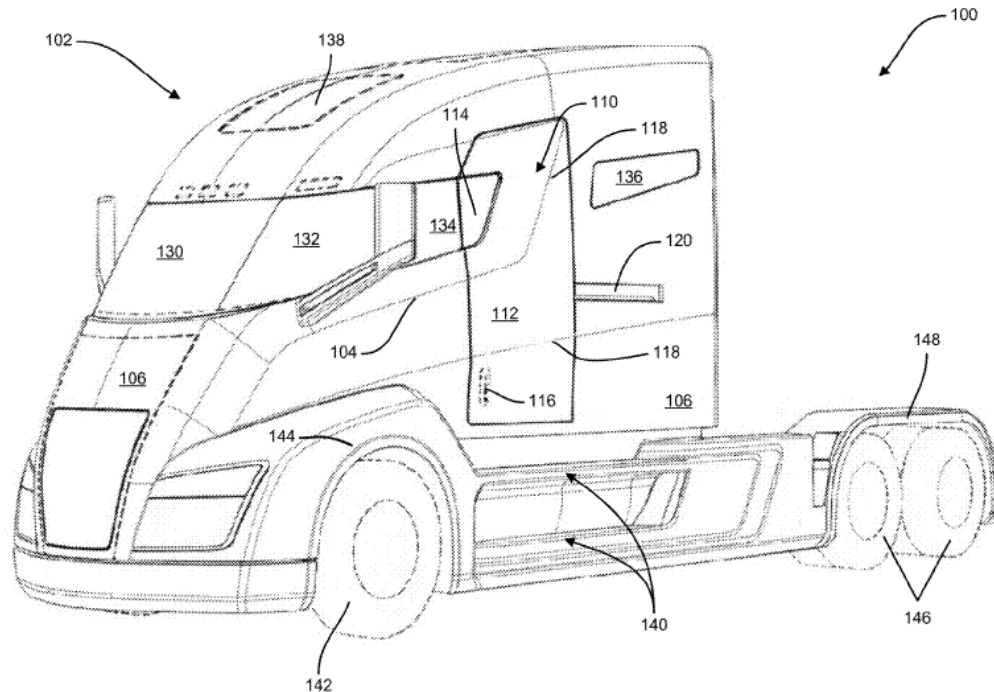


FIG. 1

Figure 1 is a front perspective view of an embodiment of a vehicle. Ex. 1001, 1:56–57. In the Figure 1 embodiment, door 110 is above step 140 so that a user may comfortably ascend or descend the step when entering or exiting the vehicle through the door. *Id.* at 4:54–57. The door 110 is at a backside of front wheel 142 and wheel well 144 and opens to a backside of at least one seat 510 in cabin 550, as seen in Figure 5, reproduced below. *Id.* at 4:59–66.

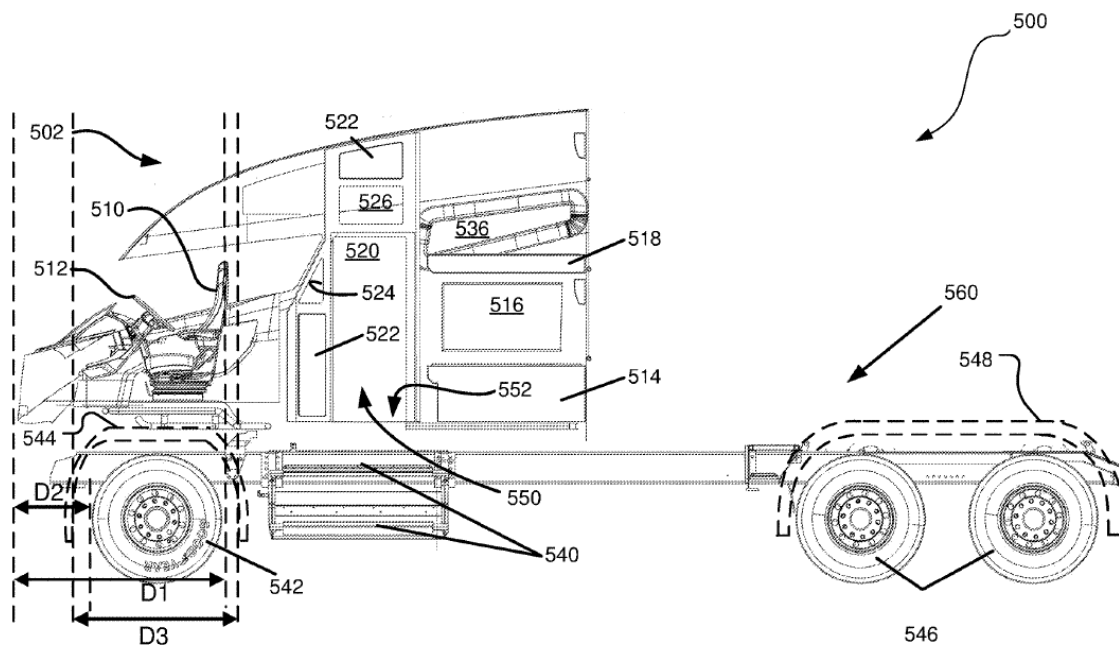


FIG. 5

Figure 5 is a side view of an embodiment of a vehicle showing interior components of the vehicle. Ex. 1001, 2:1–2. In Figure 5, D1 illustrates a distance from a front end of the vehicle body 502 to a rear most location on the front wheels 542. *Id.* at 9:1–3. D3 illustrates a distance between a front most portion and a rear most portion of the front wheel well 544, and the seat is located within the horizontal distance D3. *Id.* at 9:6–10. Returning to Figure 1, a foremost portion of the door is behind the first distance D1. *Id.*

at 11:32–33. “For example, all portions of an opening revealed by a door may be greater than the first distance D1 from the front of the vehicle. Thus, the door may provide access to a cabin behind a seat, such as a driver’s seat or driver compartment.” *Id.* at 11:32–37.

C. Challenged Claims

Petitioner challenges claims 1–26. Claims 1 and 26 are independent claims. Claim 1 is reproduced below:

1. A semi-truck vehicle comprising:
 - an electric drive train;
 - a body;
 - a cabin located within the body of the semi-truck vehicle, wherein the cabin comprises an interior that is configured to accommodate at least one person;
 - a seat located in the interior of the cabin that is configured for seating a user; and
 - a door comprising a width extending a horizontal length of the door, wherein the door provides ingress and egress to the interior of the cabin of the semi-truck vehicle;
 - wherein the door is located on the body such that a frontmost side of the door is adjacent to a rearmost portion of a front wheel well and the width of the door is disposed between the frontmost side of the door and a rearmost side of the door, at least a portion of the door being positioned behind the seat and at least a portion of the seat is disposed to be forward of a line defining the rearmost portion of the front wheel well such that the door opens to provide ingress and egress into the cabin from a backside of the seat; and
 - wherein the door is the foremost door providing ingress or egress into the interior of the cabin.

Ex. 1001, 15:65–16:21.

D. Alleged Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

References	35 U.S.C. §	Claims Challenged
Modec ¹ and Messano ²	§ 103	1–5, 15, 16, 25
Modec, Messano, and Future Truck Report ³	§ 103	6
Modec, Messano, and Marlowe ⁴	§ 103	7, 8, 21, 26
Modec, Messano, and Eltra ⁵	§ 103	9–11
Modec, Messano, and Racz ⁶	§ 103	12
Modec, Messano, and Kia ⁷	§ 103	13
Modec, Messano, and Marlowe	§ 103	14
Modec, Messano, and Plummer ⁸	§ 103	17, 19
Modec, Messano, Marlowe	§ 103	18, 20

¹ WO 2009/001086 A2 to Cunningham et al., applicant, Modec Limited, published Dec. 31, 2008 (Exhibit 1004) (“Modec”).

² U.S. Patent No. 7,338,335 B1, issued Mar. 4, 2008 (Exhibit 1005) (“Messano”).

³ *Future Truck Committee Information Report: 2001-2*, The Maintenance Council, published Mar. 2001 (Exhibit 1007) (“Future Truck Report”).

⁴ U.S. Patent No. 4,932,716, issued June 12, 1990 (Ex. 1008) (“Marlowe”).

⁵ WIPO Publication No. WO 81/01587 A1 to Kern et al., applicant, Eltra Corporation, published June 11, 1981 (Exhibit 1009) (“Eltra”).

⁶ U.S. Patent App. Pub. No. US 2003/0006628 A1, published Jan. 9, 2003 (Exhibit 1010) (“Racz”).

⁷ Kia Motors Owner’s Manual, published 2011 (Exhibit 1011) (“Kia”).

⁸ U.S. Patent No. 7,145,788 B2, issued Dec. 5, 2006 (Exhibit 1012) (“Plummer”).

Modec, Messano, and MAN Annual Report ⁹	§ 103	22
Modec, Messano, and Freightliner ¹⁰	§ 103	23, 24

Pet. 3–8. In addition to the references listed above, Petitioner relies on the Declaration of Brian C. Baker. Ex. 1002.

II. ANALYSIS

A. Claim Construction

For petitions such as this one, filed after November 13, 2018, we apply the same claim construction standard “used in the federal courts, in other words, the claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b),” which is articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b) (2019). Under the *Phillips* standard, the “words of a claim are generally given their ordinary and customary meaning,” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1312–13.

Petitioner proposes constructions for the terms “adjacent to” and “electric drive train.” See Pet. 8–13. In its Preliminary Response, Patent Owner asserts that no claim construction is necessary, but if construction of

⁹ *The Partner of Choice*, MAN SE 2012 Annual Report (Exhibit 1013) (“MAN Annual Report”).

¹⁰ Josef Loczi, *Ergonomics Program at Freightliner*, Society of Automotive Engineers, Inc., Journal of Commercial Vehicles, Section 2 – Volume 109, SAE 2000, pp. 462–69 (Exhibit 1014) (“Freightliner”).

“adjacent to” is necessary, Petitioner’s construction should not be used because it is too narrow. Prelim. Resp. 8–17. We determine that for the purposes of this Decision, it is unnecessary to expressly construe any claim term. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (Only terms in controversy must be construed and only to the extent necessary to resolve the controversy); *see also Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs* in the context of an *inter partes* review).

B. Alleged Obviousness

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under § 103 that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) “secondary considerations” of non-obviousness such as “commercial success, long-felt but unsolved needs, failure of others, etc.” *Id.* at 17–18. “While the sequence of these questions might be reordered in any particular case,” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the Federal Circuit has “repeatedly emphasized that an obviousness inquiry requires examination of all four *Graham* factors and that an obviousness determination can be made only after consideration of each factor.” *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1335 (Fed. Cir. 2016).

We note that, with respect to the fourth *Graham* factor, the current record in this proceeding does not include any argument or evidence directed

to secondary considerations of nonobviousness. The analysis below addresses the first three *Graham* factors.

C. Level of Ordinary Skill in the Art

In determining the level of skill in the art, we consider the type of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus. Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986); *Orthopedic Equip. Co. v. U.S.*, 702 F.2d 1005, 1011 (Fed. Cir. 1983).

Petitioner contends that an ordinarily skilled artisan at the time of the invention of the '084 patent would have had the following education and experience, a “Bachelor of Science degree in an industrial design field and two years of experience in automotive design.” Pet. 13 (citing, Ex. 1002 ¶ 17). Patent Owner does not dispute this level of skill. Prelim. Resp. 17. For purposes of this Decision, we adopt Petitioner’s proposal.

D. Obviousness Based on Modec and Messano

Petitioner asserts that claims 1–5, 15, 16, and 25 of the '084 patent would have been obvious over the combination of Modec and Messano. Pet. 27–48. For the reasons discussed below, we are not persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing on this challenge.

1. Summary of Modec (Ex. 1004)

Modec describes an electric vehicle. Ex. 1004, 14:30. An example of electric vehicle 100 is shown in Figure 1, reproduced below.

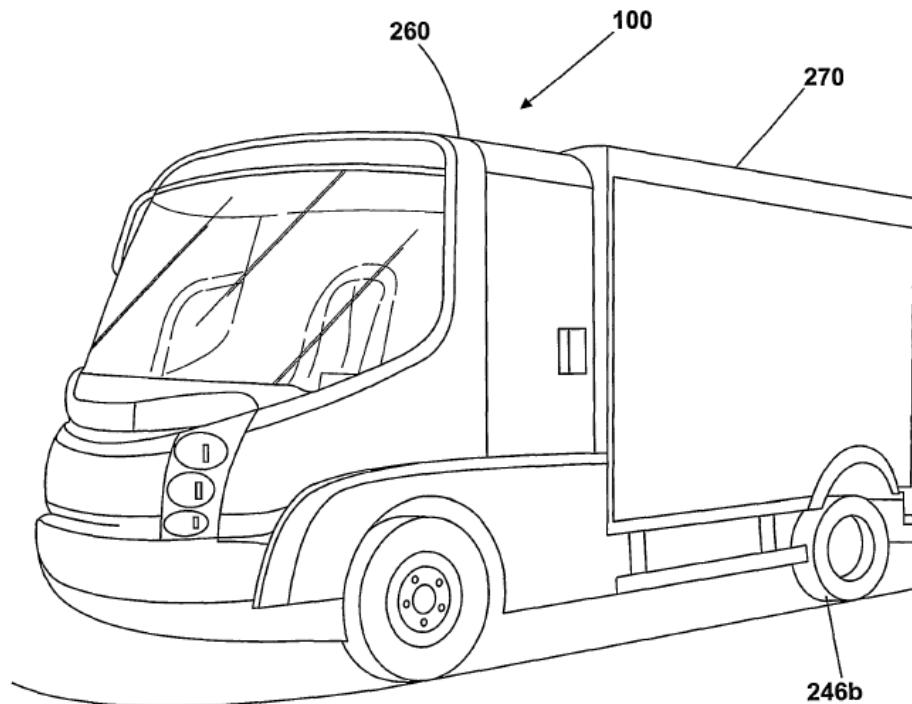


Fig. 1

Figure 1 is a general illustration of an electric vehicle. Ex. 1004, 13:29.

Modex teaches that although vehicle 100 depicted in Figure 1 is a specialist delivery vehicle, the vehicle could be a box van, minibus or any other commercial or domestic use vehicle. Ex. 1004, 14:30–15:2. Vehicle 100 has an electric drive train including an electric motor 200 that is powered by a battery assembly. *Id.* at 15:2–4; Fig. 2. At the front of vehicle 100 is cab 260 where the driver sits, which is protected by a lockable door. *Id.* at 15:29–30. The cab has a driver seat and a passenger seat (not shown) as well as standard manual controls including a steering wheel, brakes, and accelerator. *Id.* at 15:30–16:1. At the rear of the vehicle is body 270 such as a closed van body as shown in Figure 1 (although other bodies can be provided). Ex. 1004, 16:4–6.

2. *Summary of Messano (Ex. 1005)*

Messano relates to a heavy-duty vehicle hybrid drive and suspension system. Ex. 1005, 1:33–34. Hybrid vehicle drive systems employ an internal combustion engine and electric motors to drive the wheels. *Id.* at 1:45–46. Messano discloses that “Road-Wheel Modules provide the motive system for the vehicle and vehicle trailers. A Road-Wheel Module consists of an electric drive motor (which also provides the secondary braking for slowing and stopping the vehicle when acting as generators), a separate conventional brake, and suitable suspension.” *Id.* at 4:26–31. A tractor truck 1 and semi-trailer 2 incorporating Variable-Height Suspension Modules, as a suitable suspension, is seen in Figure 27, reproduced below.

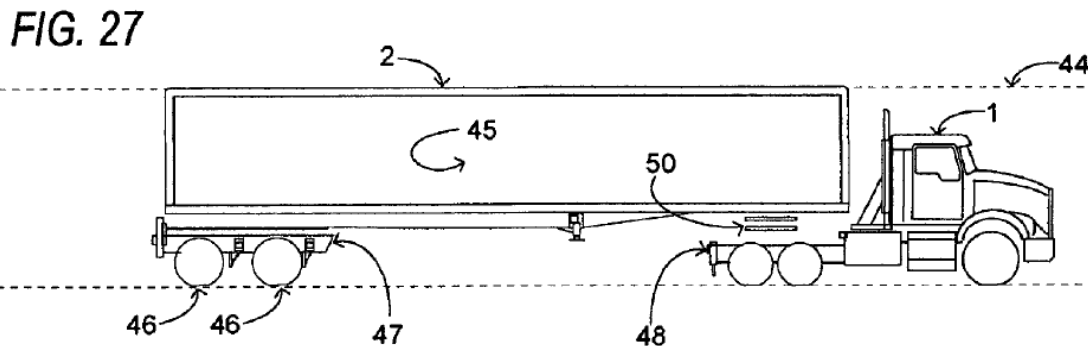


Figure 27 shows a schematic longitudinal side view of a tractor truck and semi-trailer. *Id.* at 7:18–19.

Messano discloses that “the trailer chassis 47 incorporates the Variable-Height Suspension Modules . . . , so that the trailer height can be automatically lowered from the cab of the truck.” *Id.* at 16:31–35.

3. *Independent Claim 1*

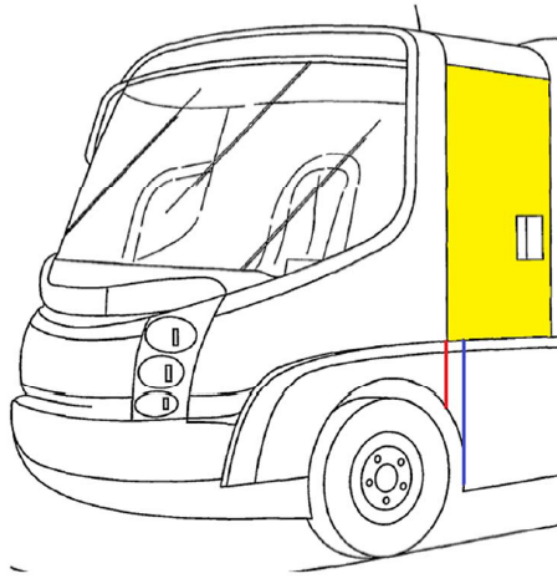
Claim 1 is directed to a semi-truck vehicle that includes a door:

wherein the door is located on the body such that a frontmost side of the door is adjacent to a rearmost portion of a front wheel well and the width of the door is disposed between the frontmost side of the door and a rearmost side of the door, at least a portion of the door being positioned behind the seat and at least a portion of the seat is disposed to be forward of a line defining the rearmost portion of the front wheel well such that the door opens to provide ingress and egress into the cabin from a backside of the seat.

Ex. 1001, 16:10–19.

a. Petitioner's Contentions

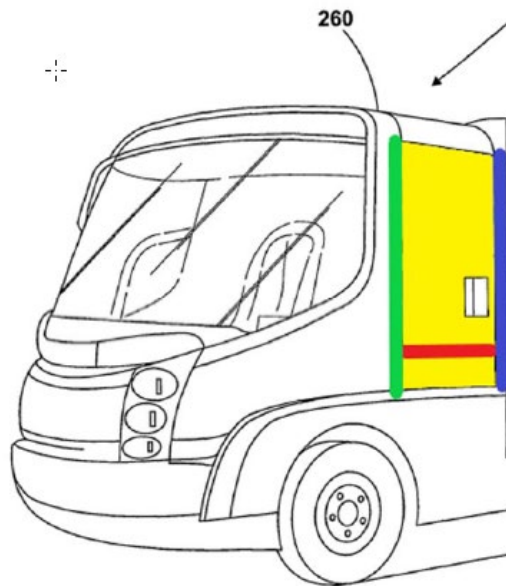
Petitioner parses this limitation into three portions, the “adjacent to” portion, the “between” portion, and the “behind” portion, and for each portion includes an annotated version of Modec’s Figure 1, reproduced below. Pet. 35.



Petitioner’s “adjacent to” annotated version of Figure 1 of Modec includes a red line and a blue line that, according to Petitioner, “shows that ‘the door [yellow] is located on the body such that the frontmost side of the door [red line extended from frontmost edge] is adjacent to a rearmost

portion of a front wheel well [blue line extended from rearmost edge].” Pet. 34 (quoting Ex. 1002 ¶ 78) (brackets in original). Petitioner asserts that the “adjacent to” limitation is satisfied by the components being “nearby but not touching,” and does not require that “the frontmost side of the door or the rearmost portion of the wheel well is in the forward-most horizontal position.” Pet. 36.

Petitioner’s “between” annotated version of Figure 1 of Modec is shown below. Pet. 38.



Petitioner’s “between” annotated version of Figure 1 of Modec includes a red, blue, and green lines that, according to Petitioner, “shows that ‘the width [red] of the door [yellow] is disposed between the frontmost side [green] of the door and the rearmost side [blue] of the door.’” Pet. 38 (quoting Ex. 1002 ¶ 81).

Petitioner’s “behind” annotated version of Figure 1 of Modec is shown below. Pet. 39.

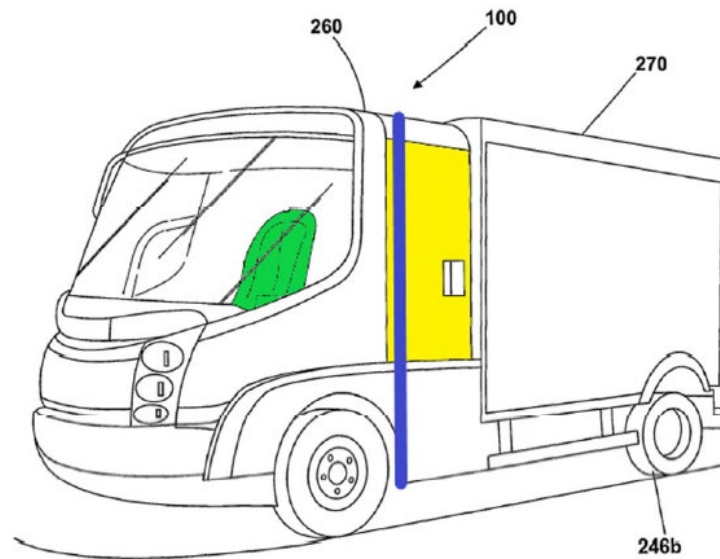


Fig. 1

Petitioner’s “behind” annotated version of Figure 1 of Modec includes a blue line that, according to Petitioner, “shows that ‘at least a portion of the door [yellow]’ is ‘positioned behind the seat [green] and at least a portion of the seat [green] is disposed to be forward of a line defining the rearmost portion of the wheel well [blue line extended from rearmost edge].” Pet. 39 (quoting Ex. 1002 ¶ 82). Petitioner adds that Modec’s disclosure that the door can be unlocked “to allow the driver to access the vehicle through the door” establishes that “the door opens to provide ingress and egress into the cabin.” Pet. 40 (quoting Ex. 1004, 22:18–20). Petitioner reasons that because the door is behind the seat, ingress and egress into the cabin “can only be ‘from a backside of the seat.’” *Id.* (quoting Ex. 1002 ¶ 83).

b. Patent Owner’s Contentions

Patent Owner does not dispute that, under the ordinary and customary meaning of “adjacent to,” Modec discloses a door that is “adjacent to” a rearmost portion of a front wheel well. Prelim. Resp. 11. However, with regard to the remaining limitations, Patent Owner responds that

the entire Petition rests on a single rough figure, FIG. 1 of Modec, to satisfy what the Petition alleges are the key limitations of the two independent claims. That figure is not marked with dimensions and Modec does not assert that the figure is drawn to scale. Although Patent Owner does not dispute that Modec FIG. 1 discloses a wheel well, a door, and a seat, neither FIG. 1 nor any other disclosure in Modec teaches or suggests “*at least a portion of the door being positioned behind the seat,*” “*at least a portion of the seat is disposed to be forward of a line defining the rearmost portion of the front wheel well,*” or “*such that the door opens to provide ingress and egress into the cabin from a backside of the seat.*”

Prelim. Resp. 3 (emphasis added).

Patent Owner adds that there is no evidence that would allow a person of ordinary skill in the art to conclude that Figure 1 of Modec shows at least a portion of the door is behind the seat. Prelim Resp. 21. Patent Owner further asserts that although Modec is silent as to the viewing angle or perspective of Figure 1, from the relative sizing of the front and rear wheels, Figure 1 “is drawn from the perspective of a person standing some distance away from a front corner of the vehicle, and not directly from the side of the vehicle.” *Id.* Thus, according to Patent Owner, Figure 1 of Modec only shows that the seat is to the left of the door, but “provides no information as to whether any portion of the door is positioned **behind** the seat, i.e., between the seat and a rear face of the cabin.” *Id.* Patent Owner also argues that Figure 1 “provides no information regarding whether ‘the door opens to provide ingress and egress into the cabin **from a backside of the seat,**’ as recited in claim 1.” *Id.*

Patent Owner further contends that Petitioner’s expert declaration is a verbatim copy of the Petition that “does not provide any explanation of how the expert was able to conclude from FIG. 1 that the three relative

positioning limitations are taught or suggested by Modec.” Prelim Resp. 26. According to Patent Owner, Petitioner’s expert “is merely offering an unsupported and conclusory interpretation of a roughly drawn figure.” *Id.*

Additionally, Patent Owner contends that because Figure 1 of Modec shows only one side of the cabin, “Modec provides no information that would allow one skilled in the art to conclude that the door shown in FIG. 1 is the ‘foremost door into the interior of the cabin,’ as required by claim 1.” *Id.* at 27. Patent Owner contends that Messano does not cure the deficiencies of Modec. *Id.* at 28.

c. Discussion

Having considered the parties’ submissions, we determine that Patent Owner has the better position. To Patent Owner’s point, we agree that the written description in Modec does not describe the angle or perspective that Figure 1 is intended to represent. Furthermore, we observe that Modec’s Figure 1 does not contain any of the added annotations provided in the Petition and Mr. Baker’s declaration. *See* Pet. 33, 35, 36, 39. Instead, Modec states that “**Figure 1** is a general illustration of an electric vehicle to which the invention relates.” Ex. 1004, 13:29–30. Additionally, Modec teaches that

Figure 1 shows an electric vehicle 100. The vehicle in this example is a specialist delivery vehicle, but through a simple change to the vehicle body it could be a box van or minibus or any other commercial or domestic use vehicle. At its heart, it is an electric drive train including an electric motor 200 which is supplied with power from a battery assembly 210.

Ex. 1004, 14:30–15:4. However, in this disclosure and in the entirety of Modec otherwise, Modec does not expressly describe the positioning of any of the door or seat relative to the rear wheel well of the vehicle shown in

Figure 1. *See id.* Indeed, from the view shown in Figure 1, reproduced below, it is unclear whether “at least a portion of the seat is disposed to be forward of a line defining the rearmost portion of the front wheel well,” which is required in claim 1.

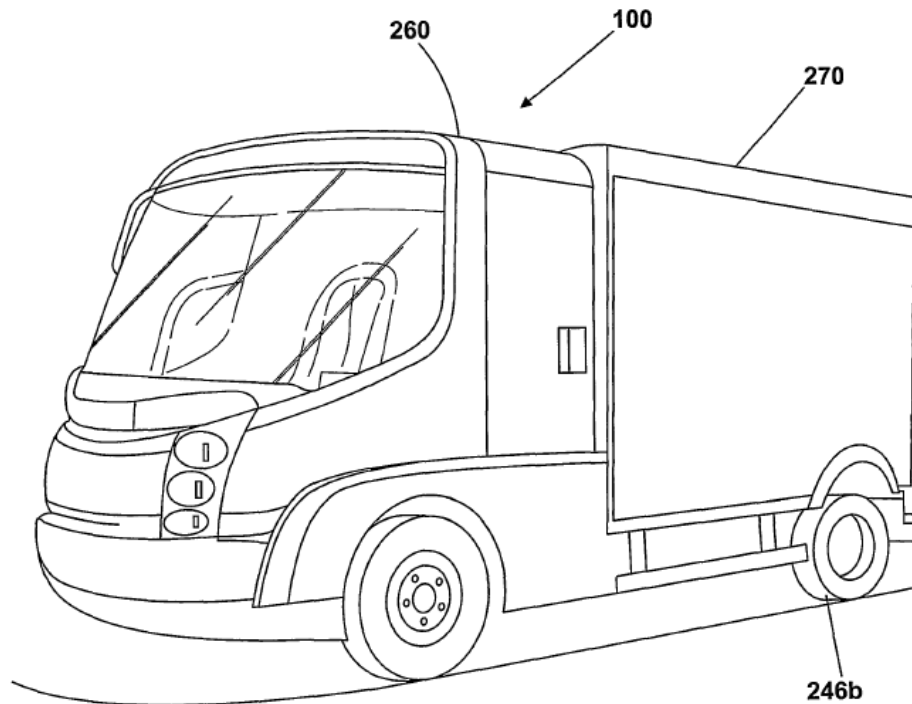


Fig. 1

Figure 1 is a general illustration of an electric vehicle. Ex. 1004, 13:29.

Further, we do not find Petitioner’s annotations to Figure 1 helpful in this regard. For example, Petitioner provides annotated Figure 1, reproduced below:

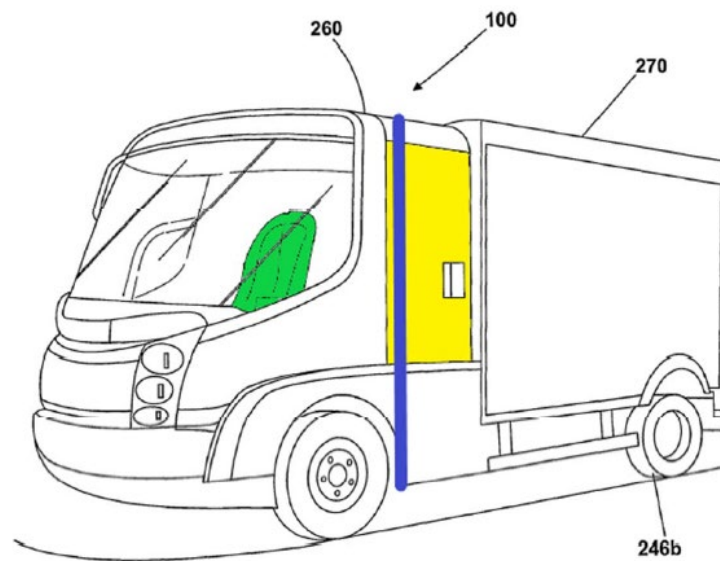


Fig. 1

In the annotated Figure 1, Petitioner adds a blue line that, according to Petitioner, “shows that ‘at least a portion of the door [yellow]’ is ‘positioned behind the seat [green] and at least a portion of the seat [green] is disposed to be forward of a line defining the rearmost portion of the wheel well [blue line extended from rearmost edge].” Pet. 39 (quoting Ex. 1002 ¶ 82). Even assuming that the blue line correctly denotes the rearmost portion of the wheel well, it is still impossible to confirm Petitioner’s assertion that the seat is positioned forward of the blue line. *See id.*

This is because Modec does not expressly describe the relative position of the seat, and, more particularly, does not provide any guidance as to the scale, perspective, or angle from which to view the drawing. Ex. 1004, *generally*. At best, we discern that the green seat is positioned to the left of the wheel well, but without a more detailed explanation from Petitioner, we are unable to discern from the annotated drawing how the seat is positioned relative to the added blue line.

Moreover, Petitioner's reliance on Mr. Baker's testimony is not persuasive. In cited paragraph 82, Mr. Baker testifies that

[t]he following annotated Figure 1 of Modec shows that "at least a portion of the door [yellow]" is "positioned behind the seat [green] and at least a portion of the seat [green] is disposed to be forward of a line defining the rearmost portion of the wheel well [blue line extended from rearmost edge]."

Ex. 1002 ¶ 82. Mr. Baker's testimony simply repeats the conclusions articulated in the Petition with no further explanation or support. Compare *id.* with Pet. 39. "Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight." See 37 C.F.R. § 42.65(a). Thus, neither Petitioner nor its declarant supports its conclusion with sufficient rationale, explanation, or evidence. Consequently, Petitioner has not sufficiently shown that a person of skill in the art would have understood Modec's Figure 1 to disclose "at least a portion of the seat is disposed to be forward of a line defining the rearmost portion of the front wheel well" recited in claim 1.

In reviewing the record, we are mindful of the principle that patent drawings are not working drawings and we must not disregard things clearly shown in patent drawings. See *In re Mraz*, 455 F.2d 1069, 1072 (CCPA 1972). However, our reviewing court "has repeatedly cautioned against overreliance on drawings that are neither expressly to scale nor linked to quantitative values in the specification." *Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1268 (Fed. Cir. 2012). Here, even with Petitioner's annotations, it is not clear whether Modec's Figure 1 shows a portion of the green seat in front of Petitioner's blue line. Thus, we are not persuaded by Petitioner's unsupported arguments, which would require us to speculate on the contents of a patent drawing.

Additionally, Petitioner does not rely on Messano for these limitations. *See* Pet. 41–44. Petitioner relies on Messano primarily for its disclosure of a semi-truck vehicle. *See id.*

Based on the record before us and the analysis above, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that independent claim 1 would have been obvious over the combination of Modec and Messano.

4. Claims 2, 3, 4, 5, 15, 16, and 25

Dependent claims 2, 3, 4, 5, 15, 16, and 25 each depend, directly, or indirectly, from independent claim 1. Ex. 1001, 16:22–33, 16:66–67, 17:1–2, 18:1–3. Petitioner asserts that the combination of Modec and Messano disclose each of the additional limitations of these dependent claims. Pet. 44–48. Petitioner relies on the arguments addressed above for the same limitations recited in claim 1 that are required in these dependent claims. *See id.*

Each of claims 2, 3, 4, 5, 15, 16, and 25 depends from independent claim 1 and includes all the limitations required in claim 1. Thus, for the reasons discussed with respect to claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that claims 2, 3, 4, 5, 15, 16, and 25 would have been obvious over the combination of Modec and Messano.

5. Conclusion

Accordingly, on this record, we determine that Petitioner has not shown sufficient basis for instituting trial on the ground that claim 1 would have been obvious based on Modec and Messano. Similarly, for the same

reasons, we are not persuaded that Petitioner has shown sufficient basis for instituting trial on this same ground for claims 2–5, 15, 16, and 25.

*E. Obviousness based on Modec, Messano, and Future Truck Report –
Claim 6*

1. Summary of Future Truck Report

Future Truck Report discloses that drivers need to climb into the trucks, which lead to slips and falls. Ex 1007, 2. Future Truck report suggests alternative door positions, namely, a door at the right rear of the passenger side, or at the rear of the cab while eliminating the door on the driver’s side in order to eliminate the need for retractable steps/stairs and for doors opening into traffic. Ex 1007, 3.

2. Discussion

Claim 6 depends from claims 1 and 4, and further recites “wherein the single door is located on a right side when the user is seated in the seat of the semi-truck vehicle.” Ex. 1001, 16:33–35.

Petitioner contends that it would have been obvious to use a single door located on the right side, as taught by Future Truck Report, to “eliminate the need for retractable steps/stairs and for doors opening into traffic.” Pet. 48–49 (citing Ex. 1007, 3). Petitioner relies on the arguments addressed above for the same limitations recited in claim 1 that are required in dependent claim 6. *See id.*

Patent Owner asserts that this ground fails for the same reasons discussed above with respect to Petitioner’s challenge based on Modec and Messano. Prelim. Resp. 33¹¹.

¹¹ The Preliminary Response refers to claim 13 instead of claim 6 for this challenge. Prelim. Resp. 33. Nonetheless, we understand Patent Owner’s

We agree with Patent Owner. For the reasons discussed above for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that claim 6 would have been obvious over the combination of Modec, Messano, and Future Truck Report. *See* Pet. 48–49 (citing Ex. 1007, 1, 3; Ex 1002 ¶¶ 101–102).

F. Obviousness based on Modec, Messano, and Marlowe – Claims 7, 8, 21, and 26

1. Summary of Marlowe

Marlowe relates to an aerodynamically enhanced truck having its cab located behind the truck engine, and mid-position driver and passenger doors. Ex. 1008, 1:5–10. In Marlowe, the driver and passenger doors 24, 26 are located rearwardly of driver and passenger seats 28, 30 to allow the trucker or a passenger to easily enter cab 12 behind the seats. *Id.* at 5:35–39, Fig. 6.

2. Independent Claim 26

a. Petitioner’s Contentions

In this challenge, Petitioner asserts that Modec and Messano disclose “a semi-truck vehicle,” “an electric drive train,” “a body,” and “a cabin ... configured to accommodate at least one person,” as recited in independent claim 26 for the same reasons discussed above for claim 1. *See* Pet. 54 (“This limitation is identical to the limitation of claim 1.”). Claim 26 also recites, “a first seat and a second seat located in the interior of the cabin” (Ex. 1001, 18:10–11), and Petitioner asserts that this is met by Modec’s disclosure of “a driver and a passenger seat (not shown).” Pet. 55 (citing Ex.

statements to be directed to the challenge based on Modec, Messano, and Future Truck Report against claim 6.

1004, 15:30–31). Claim 26 further recites “a door that provides ingress and egress to the interior of the cabin” (Ex. 1001, 18:12–13), and Petitioner contends that “[t]his limitation is identical in scope or nominally broader than the limitation of claim 1,” and that “Modec discloses this limitation for the same reasons set forth above.” *Id.* (citing Ex. 1002 ¶ 115).

Claim 26 further recites, “the door being located on the body such that a frontmost side of the door is adjacent to a rearmost portion of a front wheel well.” Ex. 1001, 18:13–15. Petitioner asserts that “[t]his limitation is identical to the limitation of claim 1,” and that “Modec discloses or renders obvious this limitation for the same reasons set forth above.” Pet. 56 (citing Ex. 1002 ¶ 116).

Claim 26 further recites, “and at least a portion of the door being positioned behind the first seat, at least a portion of the first seat is disposed to be forward of a line defining the rearmost portion of the front wheel well.” Ex. 1001, 18:15–19. Petitioner asserts that “[t]his limitation is essentially identical to the limitation of claim 1,” and that for the reasons discussed above, “Modec discloses this similar limitation of claim 26.” Pet. 56 (citing Ex. 1002 ¶ 117).

Claim 26 also recites, “an entryway provided between the first seat and the second seat, wherein the entryway comprises a vertical height extending from a floor of the cabin to at least a top of the first seat or the second seat.” Ex. 1001, 18:20–23. In support of this contention, Petitioner provides an annotated version of Modec’s Figure 1, reproduced below. Pet. 57.

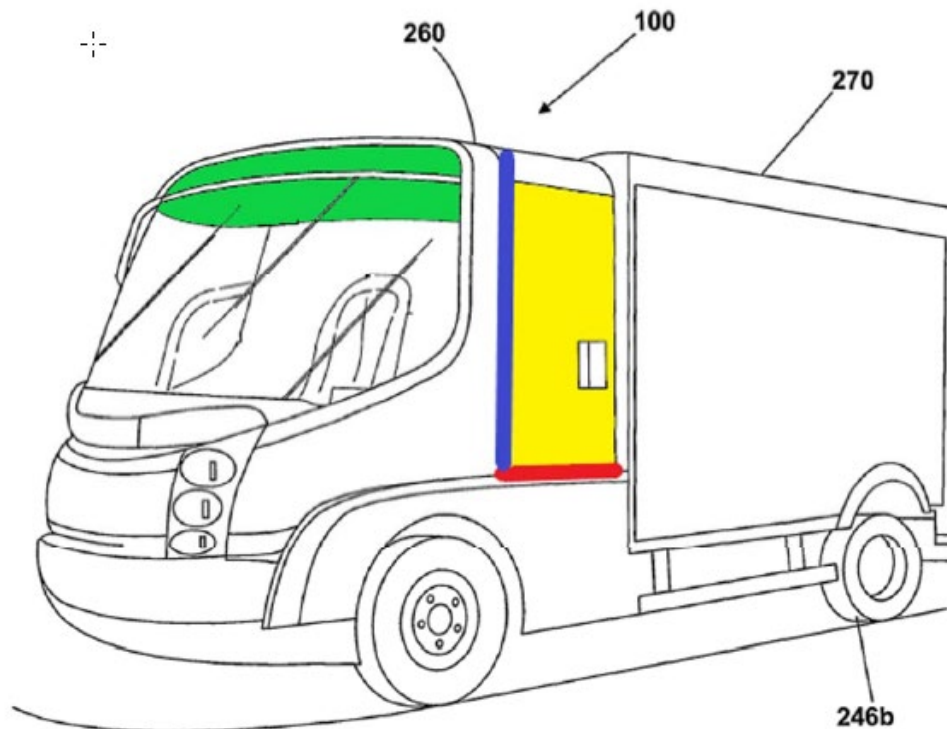


Fig. 1

Petitioner's annotated version of Figure 1 of Modec includes a red line that, according to Petitioner, depicts a floor to support the driver. Pet. 57. Petitioner contends that because the door (yellow) "is at least partially behind the seat, a POSITA would also understand that there is an entryway behind and between the two seats that extends vertically from the floor (red) to the ceiling (green) of the cabin, which, as shown, is above the seat." Pet. 57–58.

Claim 26 further recites, "wherein the entryway provides access to either of the first seat or the second seat." Ex. 1001, 18:24–25. Petitioner argues that to the extent this limitation is not explicit in Modec, Marlowe shows this limitation. Pet. 58–59 (citing Ex. 1008, Fig. 6). More specifically, Petitioner argues Modec implicitly discloses an entryway because the door is at least partially behind the seat. Pet. 57 (citing Ex. 1002

¶ 118). Alternatively, Petitioner asserts that “[e]ven if Modec does not implicitly disclose that limitation, it would have been obvious, in view of Modec’s disclosure of a door located behind the driver seat, to provide the claimed entryway as the most convenient and easiest pathway for the driver to get from the door to the driver seat upon entering the cabin.” *Id.* at 58 (citing Ex. 1002 ¶ 119). Additionally, Petitioner argues that a “POSITA would be motivated to incorporate Marlowe’s design into Modec because providing a single, central aisle for accessing both seats is more space efficient than providing two separate pathways.” *Id.* at 59 (citing Ex. 1002 ¶ 120); Ex. 1008, Fig. 6.

b. Patent Owner’s Contentions

Patent Owner makes several arguments. First, Patent Owner relies on arguments similar to those discussed above with regard to Petitioner’s challenge of claim 1. *See* Prelim. Resp. 33. In this regard, Patent Owner asserts that Marlowe does not remedy the deficiencies of Modec and Messano discussed above. *Id.*

Second, Patent Owner argues that “the combination of Modec, Messano, and Marlowe fails to disclose or suggest ‘an entryway provided between the first seat and the second seat,’” as recited in claim 26 because Petitioner has not shown that this feature is inherent in Modec or supported this argument otherwise. *See* Prelim. Resp. 34 (“Mr. Baker’s expert analysis is, again, an exact verbatim copy of the Petition, and adds no more rationale or explanation for why a person skilled in the art would ‘understand that there is an entryway **between** the two seats.’”).

c. Discussion

Like claim 1, claim 26 also recites, “at least a portion of the first seat is disposed to be forward of a line defining the rearmost portion of the front wheel well.” Ex. 1001, 18:17–20. Petitioner asserts that “[t]his limitation is essentially identical to the limitation of claim 1,” and that for the reasons discussed above, “Modec discloses this similar limitation of claim 26.” Pet. 56 (citing Ex. 1002 ¶ 117). Thus, we understand Petitioner to rely on the same arguments presented for similar limitations recited in claim 1. Namely, that Modec’s Figure 1 discloses the relative positioning of a portion of the seat forward of a rearmost portion of the front wheel well. *See* Pet. 39.

As discussed in detail above, we are not persuaded that the Petition contains sufficient explanation, rationale, and evidence for this position. Petitioner essentially relies on its own annotated Figure 1 that does not clearly show the relative position of the seat. *See* Pet. 39. Furthermore, Mr. Baker’s testimony mirrors that in the Petition and fails to provide any citation to the record or other underlying basis to support the testimony. *See* Ex. 1002 ¶ 82. Also, paragraph 117 of Mr. Baker’s declaration, which is cited on page 56 of the Petition, does not provide any additional evidence beyond that presented for claim 1. Specifically, Mr. Baker testifies that

[t]his limitation is essentially identical to the limitation of claim 1 discussed above in Section VII(B)(1)(h), except the limitation of claim 1 recites “the seat” instead of “the first seat” and includes the additional language “such that the door opens to provide ingress and egress into the cabin from the backside of the seat.” Modec discloses this limitation for the same reasons set forth above in Section VII(B)(1)(h), with Modec’s driver seat being the “first seat” required by claim 26.

Ex. 1002 ¶ 117.

Accordingly, we determine that Petitioner has not shown a sufficient basis for instituting trial on the ground that independent claim 26 would have been obvious based on the combination of Modec, Messano, and Marlowe.

3. Claims 7, 8, and 21

Petitioner asserts that claims 7, 8, and 21 of the '084 patent would have been obvious over the combination of Modec, Messano, and Marlowe. Pet. 49–54. Dependent claims 7, 8, and 21 each depend, directly, or indirectly, from independent claim 1. Ex. 1001, 16:36–43, 17:12–15. Petitioner does not rely on Marlowe to correct the deficiencies we have identified with respect to Petitioner's arguments based on Modec for claim 1. Pet. 49–54.

Based on the record before us and the reasons discussed for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that claims 7, 8, and 21 would have been obvious over the combination of Modec, Messano, and Marlowe. *See* Pet. 49–54.

G. Obviousness based on Modec, Messano, and Eltra – Claims 9–11

Petitioner asserts that claims 9–11 of the '084 patent would have been obvious over the combination of Modec, Messano, and Eltra. Pet. 59–63. Dependent claims 9–11 each depend, directly, or indirectly, from independent claim 1. Ex. 1001, 17:44–53. Petitioner does not rely on Messano or Eltra to address the deficiencies we have identified with respect to Petitioner's arguments based on Modec for claim 1. *See* Pet. 59–62 (citing Ex. 1009, 1:4–5, 1:8–15, 1:21–26, 4:12–25; Ex. 1002 ¶¶ 122–127) (relying on Eltra for sliding door features).

Based on the record before us and the reasons discussed for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that claims 9–11 would have been obvious over the combination of Modec, Messano, and Eltra. *See id.*

H. Obviousness based on Modec, Messano, and Racz – Claim 12

Dependent claim 12 depends directly from independent claim 1. Ex. 1001, 17:54–56. Petitioner relies on its arguments based on Modec for the limitations recited in claim 1 and required in dependent claim 12. *See* Pet. 63–64; Ex. 1010 ¶ 14, Fig. 1; Ex. 1002 ¶ 128 (relying on Racz for a hinged door).

Based on the record before us and the reasons discussed for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that dependent claim 12 would have been obvious over the combination of Modec, Messano, and Racz.

I. Obviousness based on Modec, Messano, and Kia – Claim 13

Dependent claim 13 depends directly from independent claim 1. Ex. 1001, 16:57–61. Petitioner asserts that claim 13 of the '084 patent would have been obvious over the combination of Modec, Messano, and Kia. Petitioner relies on its arguments based on Modec for the limitations recited in claim 1 and required in dependent claim 13. Pet. 64–66; Ex. 1011, 35; Ex. 1002 ¶¶ 130–133 (relying on Kia for a peak load sensor).

Based on the record before us and the reasons discussed for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that claim 12 would have been obvious over the combination of Modec, Messano, and Kia.

J. Obviousness based on Modec, Messano, and Marlowe – Claim 14

Claim 14 depends from claim 1 and further recites “wherein the door is located approximately at a midpoint of the body of the semi-truck vehicle to provide ingress and egress into the cabin.” Ex. 1001, 16:62–65.

Petitioner asserts that claim 14 of the ’084 patent would have been obvious over the combination of Modec, Messano, and Marlowe because Marlowe discloses a door at located approximately at a midpoint of the body. Pet. 67 (citing Ex. 1008, Fig. 1). Petitioner adds that a “POSITA would have been motivated to modify the combination of Modec and Messano with this obvious design choice in order to provide additional space behind the seat.” *Id.* (citing Ex. 1002 ¶¶ 135–136).

Patent Owner asserts that Petitioner fails to establish that claim 14 would have been obvious “[a]t least because claim 14 depends from and includes all limitations of claim 1.” Prelim. Resp. 36. Patent Owner also asserts that moving the door of Modec to the midpoint of the body would result in the door being near the front of the wheel well as opposed to “adjacent to a rearmost portion of the wheel well,” as required by claim 1. Therefore, if the door of Modec were moved as proposed by Petitioner, the relative positioning limitations would not be met, and Marlowe therefore actually teaches away from the features of claim 7. Prelim. Resp. 36–37.

Petitioner does not rely on Marlowe to correct the deficiencies we have identified with respect to Petitioner’s arguments based on Modec for claim 1. Pet. 66–67 (citing Ex. 1008, Fig. 1). Thus, based on the record before us and the reasons discussed for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention

that claim 14 would have been obvious over the combination of Modec, Messano, and Marlowe.

K. Obviousness based on Modec, Messano, and Plummer – Claims 17 and 19

Petitioner asserts that claims 17 and 19 of the '084 patent would have been obvious over the combination of Modec, Messano, and Plummer. Pet. 68 (“Plummer discloses, ‘As is indicated in FIG. 5, the interior region of a long-haul truck typically includes a sleeper unit 142 and a driving compartment 144.’”) (citing Ex. 1012, 15:38–40), 69 (“A POSITA would have been motivated to include a ‘bunk bed, a cooling appliance having a volume that is at least 15 cubic feet, and a microwave oven’ with the combination of Modec and Messano for the conventional reasons of providing a place for the driver to sleep and providing appliances for the driver to refrigerate and cook or warm food during long-haul trips.”) (citing Ex. 1002 ¶¶ 142–144); Ex. 1012, 1:15–21.

Patent Owner does not address this argument, except to say that Petitioner fails to establish that claims 17 and 19 would have been obvious “[a]t least because claims 17 and 19 depend from and include all limitations of claim 1.” Prelim. Resp. 38.

Dependent claims 17 and 19 depend directly, or indirectly, from claim 1. Ex. 1001, 17:3–4, 17:7–9. Petitioner does not rely on Plummer to correct the deficiencies we have identified with respect to Petitioner’s arguments based on Modec for claim 1. Pet. 67–69. Thus, based on the record before us and the reasons discussed for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that

claims 17 and 19 would have been obvious over the combination of Modec, Messano, and Plummer.

L. Obviousness based on Modec, Messano, and Marlowe – Claims 18 and 20

Petitioner asserts that claims 18 and 20 of the '084 patent would have been obvious over the combination of Modec, Messano, and Marlowe. Pet. 69–72 (citing Ex. 1008, 2:41–44, 5:35–36, 5:40–45, Fig. 6; Ex. 1002 ¶¶ 146–147, 149–152).

Dependent claims 18 and 20 depend directly, or indirectly, from claim 1. Ex. 1001, 17:5–6, 17:10–12. Petitioner does not rely on Marlowe to correct the deficiencies we have identified with respect to Petitioner's arguments based on Modec for claim 1. *See* Pet. 69–72. Thus, for the reasons discussed for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that claims 18 and 20 would have been obvious over the combination of Modec, Messano, and Marlowe.

M. Obviousness based on Modec, Messano, and Man Annual Report – Claim 22

Petitioner asserts that claim 22 of the '084 patent would have been obvious over the combination of Modec, Messano, and Man Annual Report. Pet. 73–75 (citing Ex. 1013, 9 as showing a full-size door that extends almost the entire height of the cabin); Ex. 1002 ¶¶ 154–158.

Patent Owner does not address this argument, except to say that Petitioner fails to establish that claim 22 would have been obvious “[a]t least because claim 22 depends from and includes all limitations of claim 1.” Prelim. Resp. 38.

Petitioner does not rely on Man Annual Report to correct the deficiencies we have identified with respect to Petitioner's arguments based on Modec for claim 1. *See* Pet. 73–75. Thus, based on the record before us and the reasons discussed for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that claims 22 would have been obvious over the combination of Modec, Messano, and Man Annual Report.

N. Obviousness based on Modec, Messano, and Freightliner – Claims 23 and 24

Petitioner asserts that claims 23 and 24 of the '084 patent would have been obvious over the combination of Modec, Messano, and Freightliner. Pet. 76–80; Ex. 1014, 14; Ex. 1019, 5, Ex. 1002 ¶¶ 160–162, 164, 165.

Patent Owner does not address this argument, except to say that Petitioner fails to establish that claims 23 and 24 would have been obvious “[a]t least because claims 23–24 depend from and include all limitations of claim 1.” Prelim. Resp. 38.

Petitioner does not rely on Freightliner to correct the deficiencies we have identified with respect to Petitioner's arguments based on Modec for claim 1. *See* Pet. 76–80. Thus, for the reasons discussed for claim 1, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that claims 23 and 24 would have been obvious over the combination of Modec, Messano, and Freightliner.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition, we determine that Petitioner has not demonstrated a reasonable

likelihood of success in proving that at least one claim of the '084 patent is unpatentable.

Therefore, we do not institute an *inter partes* review on the asserted grounds as to any of the challenged claims.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied* as to all challenged claims of the '084 patent and no *inter partes* review is instituted.

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