

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LKQ CORPORATION and
KEYSTONE AUTOMOTIVE INDUSTRIES, INC.,
Petitioner,

v.

GM GLOBAL TECHNOLOGY OPERATIONS LLC,
Patent Owner.

PGR2020-00054
Patent D864,065 S

Before KEN B. BARRETT, SCOTT A. DANIELS, and
ROBERT L. KINDER, *Administrative Patent Judges*.

KINDER, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claim Unpatentable
35 U.S.C. § 328(a)

I. INTRODUCTION

A. Procedural Background and Summary

LKQ Corporation and Keystone Automotive Industries, Inc. (collectively, “LKQ” or “Petitioner”)¹ filed a Petition requesting post-grant review of U.S. Patent No. D864,065 S (“the ’065 patent,” Ex. 1001). Paper 2 (“Pet.”). The Petition challenges the patentability of the sole design claim of the ’065 patent. GM Global Technology Operations LLC (“GM” or “Patent Owner”)² filed a Preliminary Response to the Petition. Paper 7. On October 13, 2020, we determined that the ’065 patent was eligible for post-grant review and that Petitioner demonstrated that it is more likely than not that the challenged claim was unpatentable. Accordingly, we entered a Decision instituting trial. Paper 10 (“Inst. Dec.”).

Following our Institution Decision, GM timely filed a Response. Paper 20 (“PO Resp.”). LKQ filed a Reply. Paper 24 (“Pet. Reply”). GM subsequently filed a Sur-Reply. Paper 28 (“PO Sur-Reply”). We heard oral argument on June 29, 2021. A transcript of the argument has been entered into the record. Paper 32 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(b). This Final Written Decision is issued pursuant to 35 U.S.C. § 328(a). Having reviewed the arguments of the parties and the supporting evidence, we find that LKQ has not demonstrated by a preponderance of the evidence that the sole claim of the ’065 patent is invalid or would have been unpatentable. *See* 35 U.S.C. § 326(e).

¹ Petitioner identifies LKQ Corporation and Keystone Automotive Industries, Inc. as real parties-in-interest. Pet. 5.

² Patent Owner identifies General Motors LLC and GM Global Technology Operations LLC as real parties-in-interest. Paper 6, 2.

B. Related Proceedings

LKQ lists twenty-three allegedly “related matters.” Pet. 5. GM lists twenty-five distinct proceedings as related (Paper 6, 2–3), but then qualifies the list by making the statement that: “Patent Owner does not concede that any of the above-identified proceedings would affect, or be affected by, this proceeding.” *Id.* at 3.

C. The '065 Patent and the Claim

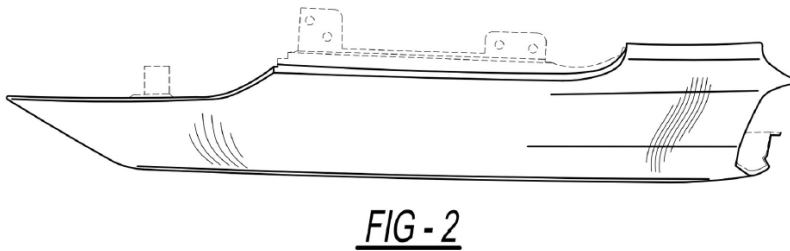
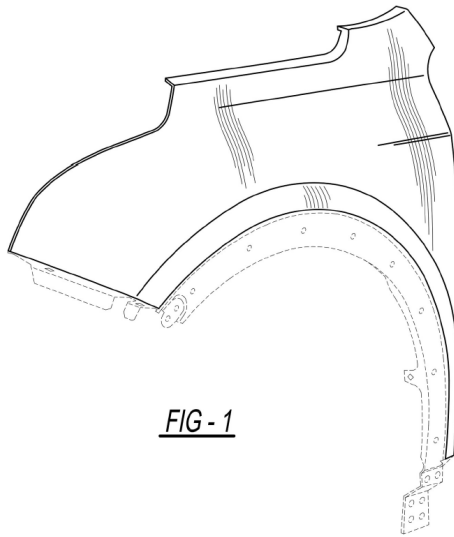
In a post-grant review requested in a petition filed on or after November 13, 2018, we apply the same claim construction standard used in district courts, namely that articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.200(b) (2019). With regard to design patents, it is well-settled that a design is represented better by an illustration than a description. *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 679 (Fed. Cir. 2008) (en banc) (citing *Dobson v. Dornan*, 118 U.S. 10, 14 (1886)). Although preferably a design patent claim is not construed by providing a detailed verbal description, it may be “helpful to point out . . . various features of the claimed design as they relate to the . . . prior art.” *Id.* at 679–80; *cf. High Point Design LLC v. Buyers Direct, Inc.*, 730 F.3d 1301, 1314–15 (Fed. Cir. 2013) (remanding to the district court, in part, for a “verbal description of the claimed design to evoke a visual image consonant with that design”).

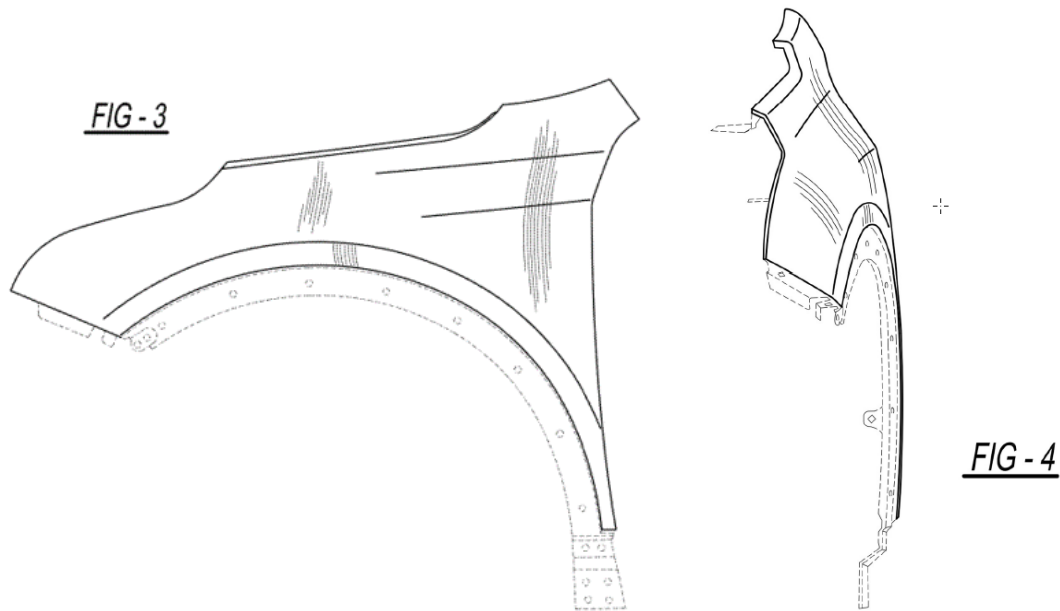
The '065 patent is titled “Vehicle Fender,” and issued October 22, 2019, from U.S. Application No. 29/606,680, filed June 7, 2017. Ex. 1001, codes (21), (22), (45). Because the earliest possible effective filing date for the '065 patent is after March 16, 2013 (the effective date for the first inventor to file provisions of the America Invents Act) and this

Petition was filed within nine months of its issue date, the '065 patent is eligible for post-grant review. *See* 35 U.S.C. § 321(c).

The claim recites “[t]he ornamental design for a vehicle fender, as shown and described.” Ex. 1001, code (57). The '065 patent covers a single claim as set forth in four figures. The Description specifies that “[t]he broken lines shown in the drawings depict portions of the vehicle fender that form no part of the claimed design.”

Figures 1–4 of the '065 patent are depicted below.





Figures 1–4 of Exhibit 1001 above depict, respectively, the following views of the claimed vehicle rear bumper design: a front and left perspective view of the vehicle fender, a top plan view, a left end elevation view, and front elevation view. *Id.* at code (57).

D. Claim Construction

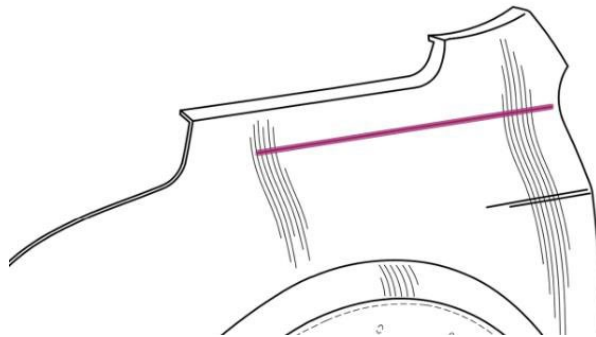
We determine that the following verbal descriptions will be helpful by pointing out “various features of the claimed design as they relate to the . . . prior art.” *Egyptian Goddess*, 543 F.3d at 679–80. LKQ offers a detailed claim construction position, identifying almost every feature that contributes to the overall appearance of the claimed design. *See* Pet. 11–20; *see also* Ex. 1004 ¶¶ 32–37 (Petitioner’s expert testifying that “images rather than words best represent the design” and “it is impractical to verbally characterize every element of the claimed design”).

We discuss here the features identified by Petitioner and Patent Owner that contribute to the ornamental design of the ’065 patent.

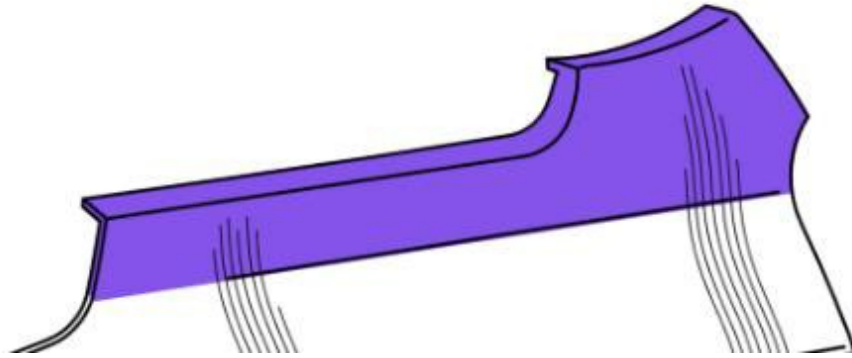
1. Petitioner's Proposed Claim Construction

LKQ relies on the Declarations of Jason M. Gandy (Ex. 1003) and Jason C. Hill (Exs. 1004, 1052) in support of its claim construction and arguments. LKQ contends that the claim of the '625 patent, as shown by the solid lines in the drawings, can be textually described in detail according to certain prominent features.

LKQ first describes the design as encompassing “an inflection line (coral) demarcating a concave contour and extending forwards and downwards at approximately a 15° angle from the longitudinal axis of the fender . . . and extending for a distance of at least 40% of the length of the fender.” Pet. 13 (Petitioner's emphasis omitted throughout interpretations). LKQ's annotated Figure 1 is reproduced below.

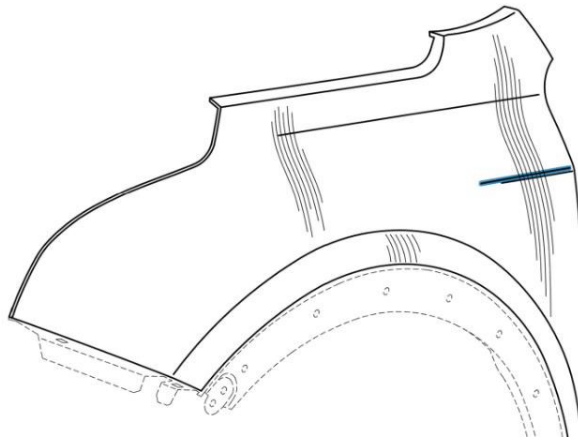


LKQ's annotated and cropped Figure 1 above shows an “inflection line” highlighted in color. *Id.* LKQ identifies an upper portion (shaded purple, below) comprising the portion of the fender located above the inflection line depicted above. *Id.* at 13–14.



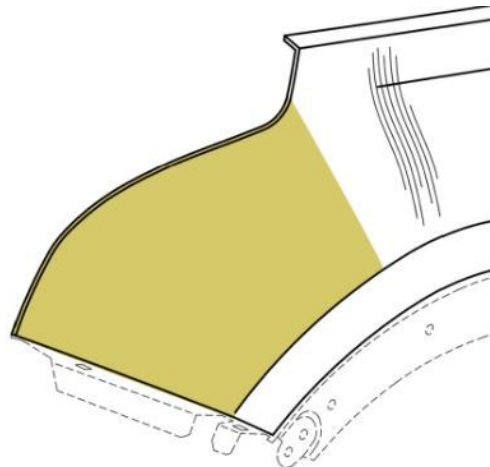
LKQ’s annotated and cropped Figure 1 shows the entire shaded top portion in purple. Pet. 14. According to LKQ, “an upper portion . . . comprising the portion of the fender located above the inflection line,” comprises “a protrusion extending rearwardly and upwardly said protrusion having a rearwardly curved rear edge, a linear upper rear diagonal edge, and an upwardly curved top edge, and a convex contour.” *Id.* LKQ further contends that “the upper portion further compris[es] a top edge that slopes slightly downwardly and forwards from the protrusion for approximately 20% of its length, then drops briefly for approximately 30% of its height and rounding to run substantially parallel to the inflection line for approximately 70% of its length, and then deflecting 45° downwards and forwards for the remaining 10% of its length.” *Id.*

LKQ next alleges that the design has “a convex crease (blue) extending from a rear edge of the fender forwards in a direction substantially parallel to the inflection line for approximately 30% of the length of the fender, the fender having a convex contour above and below the convex crease,” as depicted below. Pet. 15.



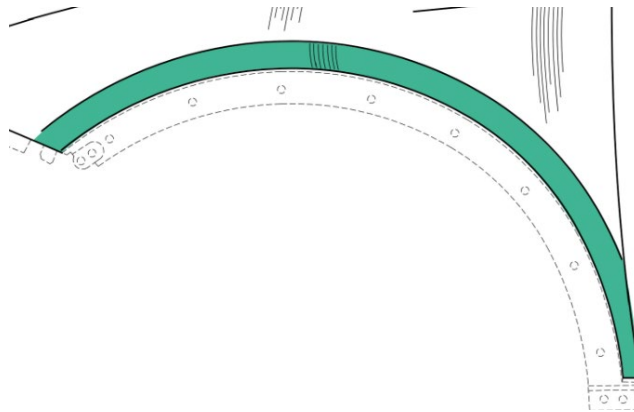
LKQ's annotated Figure 1 depicts an added blue line on a convex crease.
Pet. 15.

Toward the front end of the fender design, LKQ contends the claim encompasses “a front portion (gold) further comprising a front upper edge approximately 25% of which is downwardly sloped and upwardly curved, and approximately 75% of which is downwardly sloped and downwardly curved, and that intersects a front slanted edge at approximately a 90° angle, the front portion further having a surface that is convexly contoured,” as depicted below. Pet. 16.



LKQ's annotated and cropped Figure 1 adds a shaded gold area to the front portion of the fender. Pet. 16.

Next, LKQ examines the portion of the design immediately above the wheel well, and contends the design claims “an arcuate wheel arch flat (green) having a width spanning approximately 20% of the length of the front slanted edge of the front portion, the wheel arch flat describing an arc of approximately 120°, and tapering to approximately 60% of its maximum width as it intersects with the rear edge of the fender towards the lower rear terminus of the fender.” Pet. 17.



LKQ’s annotated and cropped Figure 1 adds a green shading to the arcuate wheel arch flat. *Id.*

Finally, LKQ points out that the design claim has

a rear edge having a convex contour and comprising a substantially vertical segment extending from where the wheel arch flat intersects the rear edge of the fender at approximately 20% of the height of the fender panel and extends upwards substantially vertically for approximately 50% of the height of the fender, then deflects rearwardly by approximately 30° versus the vertical for 20% of the height of the fender spanning from the crease to the inflection line and merges into the rearwardly curved rear edge of the upper portion.

Pet. 18.

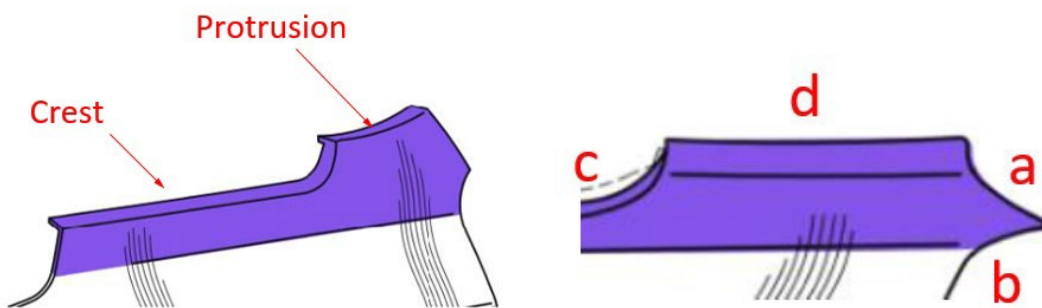
2. The Board’s Claim Construction in the Decision to Institute

In our Decision to Institute, we noted that

the verbal descriptions set forth above better define the ornamental design for purposes of the issues presented in this proceeding. Petitioner's descriptions highlighted above, with certain modifications as noted, including our analysis of indefiniteness set forth below, provide a sufficient understanding of the scope of the design claim.

Inst. Dec. 10.

One such modification to Petitioner's proposed interpretation was a recognition of the complex curvature and shape of the upper and upper right portions of the fender design. Relying on the annotated figures below, we noted, and agreed with, Patent Owner's arguments that "the protrusion is a short segment, while the crest makes up the majority of the upper portion's length," and "the claimed design has distinctive 'edge shapes of the protrusion, which include: (a) a right upper edge, (b) a right lower edge, (c) a left edge, and (d) an elongate upper left edge, as shown below.'" *Id.* at 7 (footnote omitted). We clarified that the upper left edge (d) "appears to be a concavely curved upper edge." *Id.* at 7 n.7.



GM's annotated enlargements of the upper portion of fender from Figure 1 and Figure 2. *Id.* at 8. Based on the final record before us, we again recognize these additional features as impacting the scope of the design claim.

3. *Patent Owner's Proposed Claim Construction*

GM contends that “[t]he nuances of the ’065 Patent are significant in distinguishing that design from the prior art,” and that

[d]etails are particularly important in this case because (1) the art is crowded; (2) the fender at issue must interface with other aspects of a vehicle, which puts increased focus on incongruities; and (3) fender replacement part marketing materials tout the importance of details and parts being ‘identical’ in this field.

PO Resp. 7 (citing Ex. 2004 ¶ 42). Although GM’s arguments perhaps go more toward perception of the claimed design and how much attention to detail should be afforded, we treat these arguments as going to the scope of the claim and address each of GM’s contentions below.

(a) Whether Vehicle Fender Design is a Crowded Art

GM argues that vehicle fenders are in a crowded field. PO Resp. 7–10. GM argues that during prosecution of the application that became the ’625 patent, the Examiner cited and considered “dozens” of vehicle front fenders. *Id.* GM cites several cases, including *In re Harvey*, 12 F.3d 1061, 1064 (Fed. Cir. 1993), where the Federal Circuit discusses crowded art. In *Harvey*, the Federal Circuit distinguished the facts from a prior case, *In re Hopkins*, explaining that the loud speaker designs at issue in *Hopkins* were in a field “much less crowded than that of ornamental vase design,” which was the focus of *Harvey*. *Harvey*, 12 F.3d at 1064.

We appreciate that a recognition that the vehicle fender field is considered to be in a “crowded art” would be helpful for GM insofar as small or “nuanced” differences between the claimed design and the prior art will then become even more important. However, the “crowded art” concept is highly fact dependent. GM has presented evidence of other design patents for vehicle fenders. *See* PO Resp. 8; *see also* Ex. 1001, code (56) (listing

dozens of references). GM's declarant, Mr. Peters, points out several design patents relating to vehicle fender design and, contends that from these designs on the face of the '065 patent, one should see "that the existing front fender designs were vast and numerous at the time of filing." Ex. 2004 ¶ 44. Mr. Peters explains that, due to the necessity to interface with other vehicle components and body parts, a designer of ordinary skill would have an "increased focus on incongruities," and the cited prior art "show[s] similar features that are common in the field of vehicle fender designs include an upper portion of the fender, a crease line extending perpendicular from the rear edge below the upper portion, a rear lateral edge, and a similarly shaped wheel arch." *Id.* ¶¶ 42, 45, 47 ("Such interfacing features include the perimeter shape, dimensions, and relative proportions of the design, as well as the shape of the protrusion interfacing between the hood, A-Pillar, side mirror, and/or door."). Mr. Peters testifies that "[a] designer would be aware of the types of specific design differences that distinguish between different fenders," and "would have been attuned to subtle differences between fender designs, and these subtle differences would have had a substantial impact on the overall appearance of fender designs to the ordinary designer." *Id.* ¶ 46.

We are not persuaded that the field is crowded based merely on the evidence of other vehicle models that include front fenders. GM has not defined clearly the field of art that is allegedly crowded. For example, it is unclear whether the field of art should include all vehicles as recited in the title of the patent, or be limited to sedans,³ as opposed to trucks or sports cars which could arguably be significantly different in appearance. GM's

³ The claim of '065 patent is purportedly "embodied by General Motors' 2020 Cadillac XT4." Pet. 1; PO Resp. 16.

analysis of twelve other fender designs, advanced to show that the field of fender design is crowded, is helpful to show certain commonalities among related fender designs, but it is not as persuasive that fender design is specifically a crowded art. Moreover, to the extent *In re Harvey* is applicable here, we find that vehicle fenders are more fairly akin to loud speakers, as compared to vases, which have been made for thousands of years.

We acknowledge that there are many different front fender designs, and we find that this fact helps illustrate both commonalities and differences among the designs. *See, e.g.*, PO Resp. 8–9 (GM providing a collage of fender designs to illustrate common features); Ex. 1042. We are not persuaded, on the record before us, that GM has provided sufficient facts or evidence for the Board to determine that vehicle fender design is a crowded art.

*(b) Interfacing with Other Vehicle Components and the
Similar Appearance of Replacement Parts*

GM argues that “the ordinary observer or a skilled designer would have been especially attuned to interfacing aspects of the design because they directly impact the match/fit with other parts of the vehicle.” PO Resp. 10 (citing Ex. 2004 ¶ 47; *Auto. Body Parts Ass’n v. Ford Glob. Techs., LLC*, 930 F.3d 1314, 1319 (Fed. Cir. 2019)). In this case, extending our claim construction inquiry beyond the metes and bounds of the claim to address “fit with other vehicle components” is not necessary. *Id.* at 10–11 (citing Ex. 2004 ¶ 47). For one thing, the claim in the ’625 patent does not include any other body parts or vehicle components. Ex. 1001, code (57), Figs. 1–4; *see also OddzOn Prod., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1405 (Fed.

Cir. 1997) (“A design patent only protects the novel, ornamental features of the patented design.”).

However, we do find persuasive GM’s evidence that, when repairing a vehicle, consumer preference is to choose identical replacement parts, for the reason that identical parts best return the vehicle to its original appearance. PO Resp. 11 (citing Ex. 2003, 10, 14; Ex. 2004 ¶¶ 48, 49; Ex. 2005, 3–4). This evidence also helps support GM’s position that “details are readily noticed by the skilled designer,” who would take into consideration consumers’ desires. *See id.* at 11–12.

4. Claim Construction Analysis

While we recognize that the illustration, rather than a verbal description, is the better representation of the claimed design, *Egyptian Goddess, Inc.*, 543 F.3d at 679, the verbal descriptions set forth above better define the ornamental design for purposes of the issues presented in this proceeding. The parties’ positions as to claim scope are not divergent, but instead vary as to the level of detail that should be included, or readily observable, in the analysis. LKQ’s descriptions highlighted above, with certain modifications as also noted above, provide a sufficient understanding of the scope of the design claim.

Claim scope is also examined below in our analysis of indefiniteness. Notably, the level of detail and in-depth descriptions provided by LKQ (Pet. 7–20) and its experts in the claim construction analysis also persuade us that one skilled in the art, viewing the design as would an ordinary observer, would understand the scope of the design with reasonable certainty based on the claim and visual disclosure.

E. Evidence

Petitioner relies on the following references⁴:

Reference	Exhibit
<i>Fiat Toro: Design Story</i> , Car Body Design, April 14, 2016, https://www.carbodydesign.com/2016/04/fiat-toro-design-story/ .	1006
<i>Fiat Toro</i> , Car Body Design, April 14, 2016, https://www.carbodydesign.com/gallery/2016/04/fiat-toro-design-story/51/ .	1007
<i>Kia Horki Concept: Shanghai Motor Show in Pics</i> , April 21, 2013, http://chinaautoweb.com/2013/04/kia-horki-concept-shanghai-motor-show-in-pics/ , archived on April 24, 2013 by Internet Archive organization's "Wayback Machine" at https://web.archive.org/web/20130424015924/http://chinaautoweb.com/2013/04/kia-horki-concept-shanghai-motor-show-in-pics/ .	1008
Brian Waring, <i>2017 Cadillac XT5 North American Debut — 2015 L.A. Auto Show [Video]</i> , TFL Car, November 19, 2015, http://www.tflcar.com/2015/11/2017-cadillac-l-a-auto-show/ , archived on November 21, 2015 by Internet Archive organization's "Wayback Machine" at https://web.archive.org/web/20151121012637/http://www.tflcar.com/2015/11/2017-cadillac-l-a-auto-show/ .	1009
Compilation of screen captures from car video available on TFL Car as posted on YouTube on November 19, 2015, available at https://www.youtube.com/watch?v=YYILCPtiQHs&feature=emb_title .	1010
U.S. Design Patent No. D800,605, filed on Jan. 6, 2016, claiming a priority date of July 17, 2015, issued on Oct. 24, 2017 ("Lan").	1011
TFL Car, <i>2017 Cadillac XT5: Everything You Ever Wanted to Know</i> , YouTube (Nov. 19, 2015), https://www.youtube.com/watch?v=YYILCPtiQHs&feature=emb_title , MPG file. Parts 1–4.	1015– 1018

⁴ We adopt Petitioner's descriptions of the references. *See* Pet. viii–iv (Table of Exhibits), 21–22 (identification of evidence relied upon).

Petitioner also relies on the Declarations of James M. Gandy (Ex. 1003) and Jason C. Hill (Exs. 1004, 1052) in support of its arguments.⁵ Patent Owner relies on the Declaration of Thomas V. Peters (Ex. 2004) in support of its arguments. The parties rely on other evidence and argument as examined below.

F. Asserted Grounds of Unpatentability

Petitioner asserts that the sole design claim of the '065 patent is invalid or unpatentable based on the following grounds (Pet. 20–21):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1	112	Indefiniteness
1	103	2016 Fiat Toro vehicle ⁶ (Exs. 1006, 1007), the Horki 2013 Shanghai-DYK Concept vehicle ⁷ (Ex. 1008)
1	103	2016 Fiat Toro vehicle, 2017 Cadillac XT5 vehicle ⁸ (Exs. 1009, 1010, 1015–1018), and Lan (Ex. 1011)

⁵ We have considered Patent Owner’s contentions that we should give no weight to LKQ’s declarants because the declarations of both experts “are word-for-word the same as each other and the Petition.” PO Resp. 12 (emphasis omitted). Although two identical expert reports without collaboration evinces attorney driven expert reports, we decline to reach GM’s specific arguments because the Panel agrees that even with full consideration of the opinions expressed in the declarations of LKQ’s experts, the totality of the evidence supports our findings and conclusions in favor of GM.

⁶ Petitioner identifies two exhibits as the “Primary” reference (2016 Fiat Toro vehicle) for both grounds, including the vehicle itself, and a Car Body Design publication (Exs. 1006, 1007). *See* Pet. 20–28.

⁷ Petitioner relies on a representation of the 2013 Horki Concept vehicle published through a China Auto Web publication (Ex. 1008). *See* Pet. 20.

⁸ Petitioner identifies multiple exhibits as the 2017 Cadillac XT5 vehicle, including the vehicle itself, a publication depicting the vehicle (Ex. 1009),

II. ANALYSIS

A. Principles of Law

1. Indefiniteness

Pursuant to 35 U.S.C. § 321(b), “[a] petitioner in a post-grant review may request to cancel as unpatentable 1 or more claims of a patent on any ground that could be raised under paragraph (2) or (3) of section 282(b),” which includes any requirement of section 112. One such § 112 requirement is that “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. § 112(b). The Federal Circuit has long held that this § 112 requirement applies to design patents. *In re Maatita*, 900 F.3d 1369, 1375 (Fed. Cir. 2018) (“As with utility patents, the written description of a design patent must meet certain statutory requirements regarding enablement and definiteness.”). *See also Ex Parte Asano*, 201 USPQ 315, 317 (BPAI 1978).

“[A] design patent is indefinite under § 112 if one skilled in the art, viewing the design as would an ordinary observer, would not understand the scope of the design with reasonable certainty based on the claim and visual disclosure.” *Maatita*, 900 F.3d at 1377 (clarifying the standard for design patent indefiniteness in view of *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898 (2014), and the revision of the standard for design patent infringement in *Egyptian Goddess, Inc.*, 543 F.3d 665).

The Federal Circuit has explained that “[a] visual disclosure may be inadequate — and its associated [design] claim indefinite — if it includes

screen captures of a video depicting the vehicle (Ex. 1010) and a video (four mpegs) depicting the vehicle (Exs. 1015–1018). *See* Pet. 20–22, 31–34.

multiple, internally inconsistent drawings” that “preclude the overall understanding of the drawing as a whole.” *Maatita*, 900 F.3d at 1375–76. Likewise, a design patent may be “indefinite for §112 purposes whenever its claim, read in light of the visual disclosure (whether it be a single drawing or multiple drawings), ‘fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.’” *Id.* at 1376 (quoting *Nautilus, Inc.*, 134 S. Ct. at 2124) (alteration in original). Errors and inconsistencies between drawings do not merit finding a claim invalid pursuant to § 112 if they do not preclude the overall understanding of the drawing as a whole.

2. *Obviousness*

“In addressing a claim of obviousness in a design patent, the ultimate inquiry [] is whether the claimed design would have been obvious to a designer of ordinary skill who designs articles of the type involved.” *Apple, Inc. v. Samsung Elec. Co.*, 678 F.3d 1314, 1329 (Fed. Cir. 2012) (internal quotation omitted) (alteration in original); *see also High Point Design LLC*, 730 F.3d at 1313. *See also* MPEP § 1504.03 (II) (“the proper standard is whether the design would have been obvious to a designer of ordinary skill with the claimed type of article”).

The obviousness analysis generally involves two steps: first, “one must find a single reference, a something in existence, the design characteristics of which are basically the same as the claimed design”; second, “once this primary reference is found, other references may be used to modify it to create a design that has the same overall visual appearance as the claimed design.” *High Point Design*, 730 F.3d at 1311 (internal quotation omitted). In performing the first step, we must “(1) discern the correct visual impression created by the patented design as a whole; and

(2) determine whether there is a single reference that creates basically the same visual impression.” *Id.* at 1312 (internal quotation and citations omitted).

In the second step, the primary reference may be modified by secondary references “to create a design that has the same overall visual appearance as the claimed design.” *Id.* at 1311 (internal quotation and citations omitted). However, the “secondary references may only be used to modify the primary reference if they are ‘so related [to the primary reference] that the appearance of certain ornamental features in one would suggest the application of those features to the other.’” *Durling v. Spectrum Furniture Co.*, 101 F.3d 100, 103 (Fed. Cir. 1996) (quoting *In re Borden*, 90 F.3d 1570, 1575 (Fed. Cir. 1996)).

When evaluating prior art references for purposes of determining patentability of ornamental designs, the focus must be on actual appearances and specific design characteristics rather than design concepts. *Harvey*, 12 F.3d at 1064; *see also Apple*, 678 F.3d at 1332 (“Rather than looking to the ‘general concept’ of a tablet, the district court should have focused on the distinctive ‘visual appearances’ of the reference and the claimed design.”).

B. The Designer of Ordinary Skill in the Art (“DOSA”)

LKQ contends that:

a designer of ordinary skill would be an individual who has at least an undergraduate degree in transportation or automotive design experience in the field of transportation design, or someone who has several years’ work experience in transportation or automotive design.

Pet. 51 (citing Ex. 1003 ¶ 42; Ex. 1004 ¶ 41). Based on the final record, which includes testimony by LKQ’s witnesses, we adopt LKQ’s proposed definition of the ordinary designer.

C. Indefiniteness

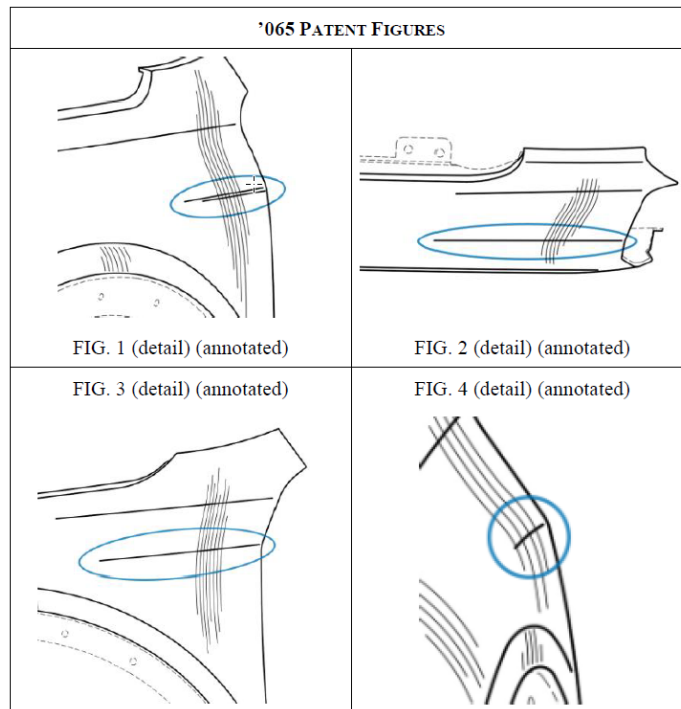
LKQ alleges that the '065 patent claim is invalid as indefinite. *See* Pet. 58–73. Specifically, LKQ argues, “[w]hile the quantity of individual inconsistencies is not determinative in an indefiniteness analysis, many individual inconsistencies render the drawings irreconcilably inconsistent and thus make it unclear for an ordinary observer to ascertain the scope of the claimed design.” *Id.* at 58. More specifically, LKQ identifies at least eight purported inconsistencies or vague representations within the drawings of the '065 patent. Pet. 58–73. LKQ argues that these issues make the design claim indefinite as to scope.

GM contends that a skilled designer, viewing the design as would an ordinary observer, would be able to determine the scope of the claimed design, and would have understood the coordinated set of features that contribute to a unique overall appearance of the claimed design. PO Resp. 18–19 (citing Ex. 2004 ¶¶ 50–54). GM argues that the particular view presented in each figure dictates what portions of the claimed design are visible and how those portions appear from the particular perspective. *Id.* at 19 (citing Ex. 2004 ¶¶ 50–76). Further, GM argues that “[t]he majority of LKQ’s alleged ‘inconsistencies’ are not errors resulting in indefiniteness, but differences associated with two-dimensional illustrations depicting a three-dimensional design at different views.” *Id.* at 20.

For the reasons set forth below, and based on the final record before us, LKQ has not established by a preponderance of the evidence that the claim of the '065 patent is indefinite. Below, we provide LKQ’s contentions related to specific design features and Patent Owner’s response. We then provide our analysis of each feature. Finally, we consider the parties’ contentions in the aggregate and consider the claim as a whole.

1. Double Line on the Convex Crease

LKQ first argues that Figure 1 of the '065 patent has a double line on the convex crease visible that is not visible in Figures 2–4. Pet. 60–61 (citing Ex. 1003 ¶ 56; Ex. 1004 ¶ 55). LKQ notes that this bottom line also further varies in length as depicted in the annotated figures below. *Id.*



Annotated Figures 1–4 shows a double line or line circled in blue. Pet. 60–61 (citing Ex. 1003 ¶ 56; Ex. 1004 ¶ 55). LKQ’s expert, Mr. Hill, explains that in Figure 1 “there is a double line at the convex crease,” which “would conventionally indicate to a designer of ordinary skill in the art some form of scalloping or undercut to the convex crease on the fender.” Ex. 1004 ¶ 56. According to Mr. Hill, “neither the double line, nor any such contour lines are depicted in the other figures,” and this would render the claim scope indefinite. *Id.*

Patent Owner, relying on the testimony of Mr. Peters, contends “[e]ach of Figures 1–4 depicts a convex band of the claimed design

consistently.” PO Resp. 21 (citing Ex. 2004 ¶¶ 55–59). Mr. Peters testifies that the convex band is a three-dimensional feature that can be described as a feature defined by a narrow width and a convexly shaped surface that extends along the surface of the fender. Ex. 2004 ¶ 55. Mr. Peters attributes the apparent altered length of the convex band to the view because “a two-dimensional drawing provides an approximate representation of an image in the form of a linear perspective.” *Id.* ¶ 56. “Thus,” according to Mr. Peters, “the image provides a representation of how the object would be perceived when seen by the eye of a viewer,” as when “an object will appear smaller as its distance from the hypothetical viewer increases,” for example. *Id.* (describing the effect as “foreshortening,” when an object’s dimensions along the line of sight appear shorter than its dimensions across the line of sight). GM points out that “objects will recede to points in the distance—a principle LKQ’s expert agrees with.” PO Resp. 23 (citing Ex. 2006, 143:11–16 (Hill deposition); *see also* Ex. 2006, 144:4–7 (“Q. The length of the line, a viewer’s perception of the length of a line may change depending on viewpoint? A. As asked, generally it could.”))).

Mr. Peters attributes the length of the convex band appearing “‘shorter’ in length in the perspective views, as shown in Figures 1 and 4, because the convex band extends along the line-of-sight in these figures.” Ex. 2004 ¶ 56. “In contrast, one can see that the convex band appears longer in direct views, as shown in Figures 2 and 3, because the convex band extends across the line-of-sight views in these figures.” *Id.*

Based on this testimony, GM contends the claim depicting the convex band with both a single line (Figure 1, 2, and 4) and a double line (Figure 3) is consistent with how a skilled designer, viewing the design as would an

ordinary observer, would have understood that this feature may be depicted. PO Resp. 23 (citing Ex. 2004 ¶ 57). Mr. Peters testifies that “the claimed design describes the convex band consistently because each of the figures presents at least one of the ways that a convex band can be represented. . . . Figure 1 illustrates the two intersecting lines of the convex band, while Figures 2-4 illustrate the single max height line of the convex band.” Ex. 2004 ¶ 58. GM contends “[t]hese are not inconsistent, but rather are complementary: both connecting lines (as shown in Figure 1) and the max height line (as shown in Figure 2) are accurate depictions of the convex band of the claimed design.” PO Resp. 24 (citing Ex. 2004 ¶ 58). Further, GM alleges that “[t]he convex band might appear as two lines or as one line because light can reflect from an object in different ways depending on the viewpoint of the viewer—a concepts both experts agree on.” *Id.* at 25 (citing Ex. 2004 ¶ 58; Ex. 2006, 139:21–25).

GM also notes that the prosecution history supports its position whereas an Appendix⁹ in the file history contains line drawings that illustrate that the convex band may be depicted with two intersecting lines. *Id.* at 25–26 (citing Ex. 1002, 29–30). GM, and Mr. Peters, contend that “[t]o the extent there is any ambiguity in the figures, which there is not, it could be resolved by reference to the figures in the Appendix.” *Id.* at 26; Ex. 2004 ¶ 59.

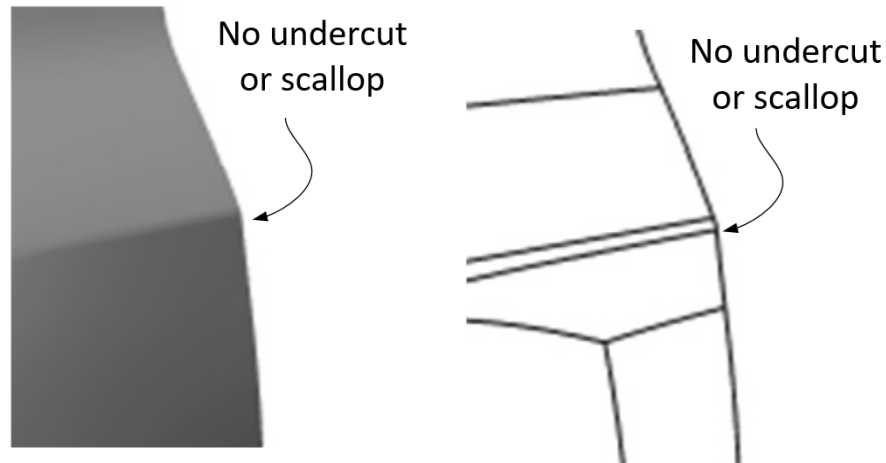
In Reply, LKQ reasserts that the claim requires the convex crease to have a single inflection in some views, but an undercut in others, making the

⁹ Patent Owner noted that it reserved “the right to claim any part, portion, element and/or combination thereof of the disclosed design” set forth in the “Appendix to the Specification.” Ex. 1002, 27.

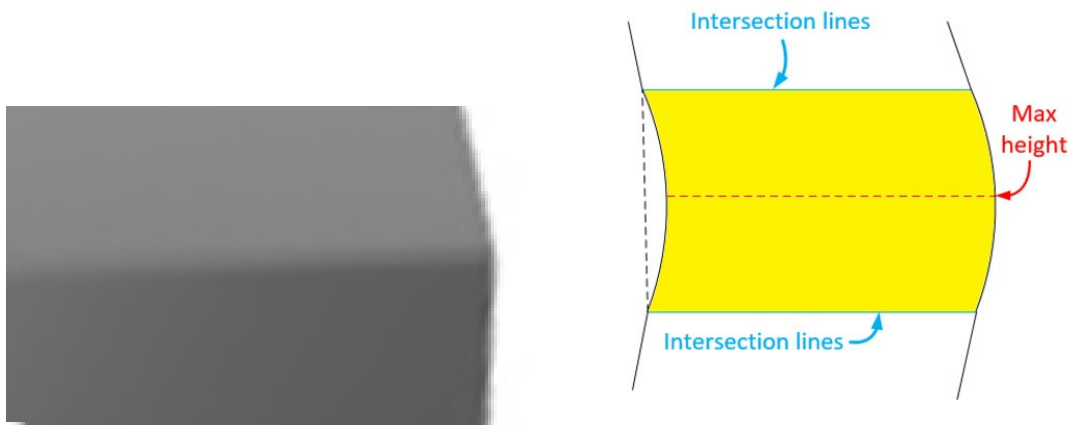
figures inconsistent. Pet. Reply 8–14 (citing Ex. 1052 ¶ 21–33). LKQ contends “[a] DOSA would have understood the double-line evident on Figure 1 to denote an undercut or scallop beneath the crease. Hill ¶24. However, the inflection is denoted by a single line in all three other views.” *Id.* at 9. LKQ alleges that depicting “the same feature using two different drawing conventions is inconsistent with standard practice,^[10] inconsistent with GM’s practice, and contradicted by the fact that the drawing convention that GM claims was used in Fig. 1 was not used in connection with other features in that same figure that share the characteristic GM asserts exists for the convex crease.” *Id.* at 9–10. LKQ also asserts that reliance on the Appendix to the file history is improper and only further confuses the issue because “the appendix figures disclose an undercut beneath a sharply expressed crease, not the rounded inflection line GM claims defines the feature.” *Id.* at 10. LKQ presents overlays of the patent figures over the file histories wireframe drawings, which purportedly show further inconsistencies in GM’s position. *Id.* at 12–13.

GM responds to these contentions by first arguing that “[t]he ’065 Patent consistently depicts a convex band with a narrow width and convex surface.” PO Sur-Reply 7 (citing Ex. 2004 ¶¶ 55–59). GM contends that LKQ’s argument that a “double-line . . . denote[s] an undercut or scallop,” is controverted because “neither the figures of the claimed design nor its prosecution history support this.” *Id.* (alterations in original). According to GM, “magnified images of the appendix drawings do not show an undercut or scallop feature along the rear edge,” as reproduced below. *Id.*

¹⁰ It is unclear what “standard practice” Petitioner is referring in this argument.



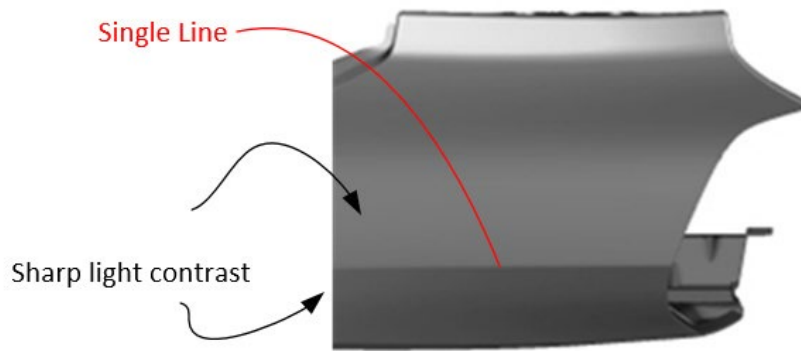
GM's magnified images of the Appendix drawing purportedly not showing an undercut or scallop feature, found at Exhibit 1048, Figure A (select, annotated) and Figure B (select, annotated). PO Sur-Reply 7–8. GM argues that “[i]nstead, they show a surface protrusion consistent with the convex band described by either two intersection lines or a single line, as Mr. Peters explained.” *Id.* at 8 (citing Ex. 2004 ¶ 57).



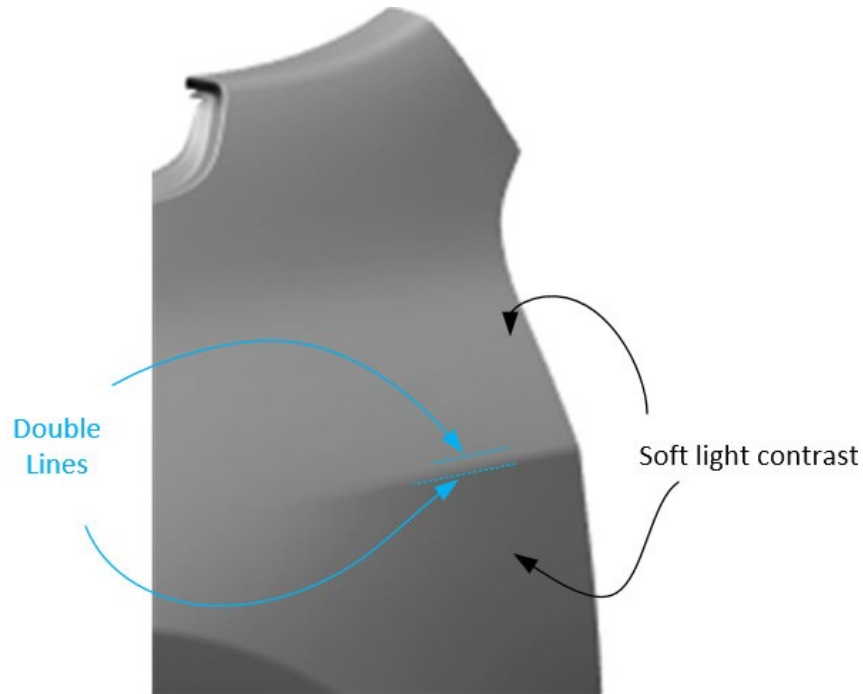
GM's comparison of Exhibit 1048, Figure A (select), with Mr. Peter's illustrative figure showing intersection lines (in blue) and a max height line (in red) at Exhibit 2004 ¶ 57 (showing figure of convex band). PO Sur-Reply 8.

GM further argues that LKQ's contention that GM uses a different drawing convention because it uses a double line to indicate a single

inflection ignores that the band may be depicted using either a double line or a single line, depending on the angle at which the feature is viewed and how light reflects from its surface. PO Sur-Reply 9. GM again relies on the file history and notes that the “3D model drawings also undercut LKQ’s position,” because “the convex band (below) is depicted as a single line in Figure G of the 3D model due to sharp light contrast provided by this view.” *Id.*



GM’s annotated version of Exhibit 1048, Figure G (partial) depicting an area of sharp light contrast with a single line. *Id.* According to GM, “[t]he convex band in Figure A (below), however, looks more like a convex protrusion because the light contrast in this view is softer and the interaction lines are more visible at this particular angle.” *Id.*



GM’s annotated version of Exhibit 1048, Fig. A (partial) depicting an area of soft light contrast with double lines. *Id.* at 10. GM relies on Mr. Peter’s testimony that the prosecution history confirms that the convex band may appear as two intersecting lines or as one line, depending on the manner in which the light is reflecting from the object and the particular viewpoint. *Id.* (citing Ex. 2004 ¶ 58).

Based on the final record, the purported issues related to a double line on the convex crease and the length of the single line do not create internally inconsistent drawings that would preclude the overall understanding of the drawing as a whole. We have considered the testimony of each witness and we find Mr. Peters’ explanation most convincing that “the claimed design describes the convex band consistently because each of the figures presents at least one of the ways that a convex band can be represented. . . . Figure 1 illustrates the two intersecting lines of the convex band, while Figures 2-4 illustrate the single max height line of the convex band.” Ex. 2004 ¶ 58.

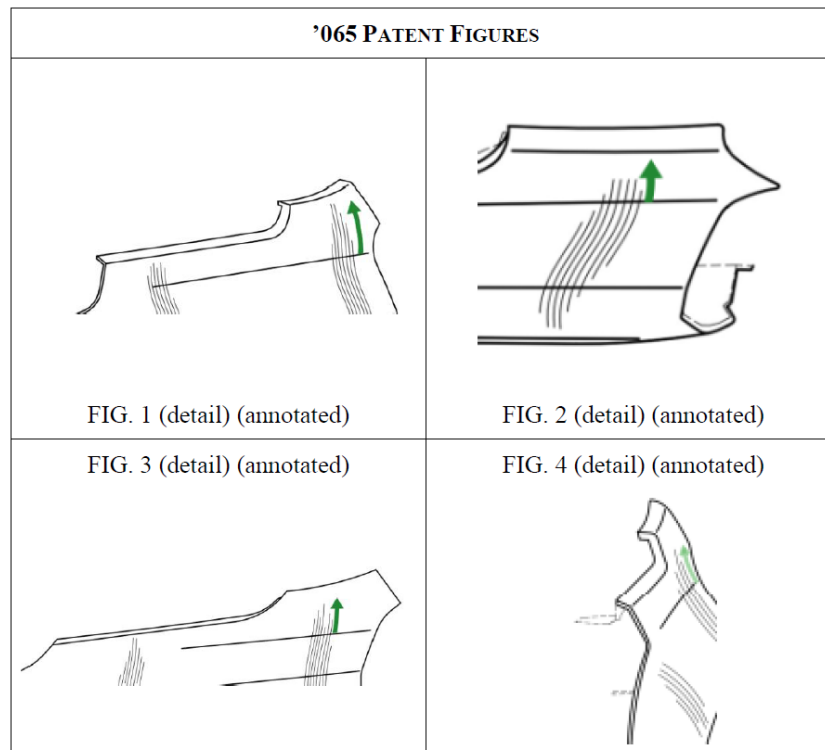
Thus, we agree with GM that these figures are not inconsistent, but rather complementary because both connecting lines (as shown in Figure 1) and the max height line (as shown in Figure 2) are accurate depictions of the convex band of the claimed design. Further, GM has presented persuasive evidence that the varied length of the line between figures is also understandable depending on the point of reference of a particular figure. Ex. 2004 ¶¶ 55, 56; Ex. 2006, 143:11–16, 144:4–7.

We also determine that it is proper to rely on materials found in the '065 patent's prosecution history for guidance as to claim scope, whereas the designer of ordinary skill would consider information contained in a file history in determining whether a claim is indefinite. *See Nautilus, Inc.*, 572 U.S. at 910 (“Cognizant of the competing concerns, we read § 112, ¶ 2 to require that a patent's claims, viewed in light of the specification *and prosecution history*, inform those skilled in the art about the scope of the invention with reasonable certainty.”) (emphasis added); *see also* Tr. 18:16–19:6. In this instance, the materials cited above by GM found in the file history provide additional clarity as to claim scope as testified by Mr. Peters.

Further, we disagree with LKQ that “depictions in the file history of 3D models” “irreconcilably conflict” with the claimed design. Pet. Reply 8. Instead, GM has shown consistency between the 3D model drawings and the claimed design's figures. *See* PO Sur-Reply 4–7. Specifically, as seen in pages 5 and 6 of GM's Sur-Reply, the '065 patent's features appear to match the surface contours of the 3D models drawings in the '065 patent's file history. *Id.* The consistency between the file history's 3D model drawings and the claimed design's figures further illustrates that LKQ's purported discrepancies are not errors. *Id.* at 7.

2. Contour of the Upper Portion

LKQ next argues that “the contour of the upper portion, where it meets the protrusion, appears as flat in some views, and alternatively concave or convex in other views.” Pet. 62. LKQ provides the following annotated figures of Figures 1–4 of the ’065 patent.



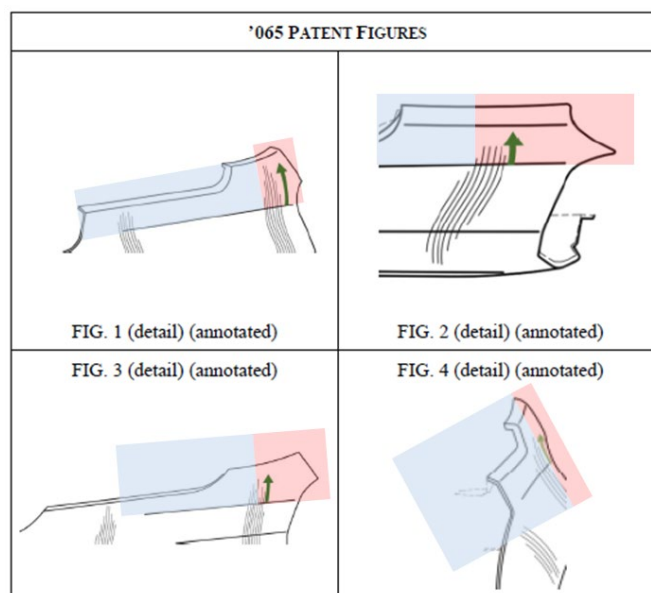
Annotated Figures 1–4 show a green arrow rising from the drawings top contour line. Pet. 62 (citing Ex. 1003 ¶ 58; Ex. 1004 ¶ 57). According to LKQ, “Figure 1 indicates with contour lines some form of convexity where the upper portion transitions from plane to protrusion,” but “Figures 2 and 3, however, indicate the top protrusion angles inwardly without indicating convexity and instead indicate flatness.” *Id.* LKQ then notes “Figure 4 indicates concavity with the contour lines and simultaneously indicates convexity by angling the top protrusion inwardly.” *Id.* at 63.

LKQ further points out in reply that “in Figure 3, the contour lines cross from the purportedly convex zone to the purportedly concave zone without any change in contour,” while “in Figure 4 the bottom right section of the fender’s top is clearly depicted as concave; not convex.” Pet. Reply 15–16 (citing Ex. 1052 ¶ 36).

GM responds that the “contour of the upper portion” of the claimed design is also depicted consistently. PO Resp. 27. GM relies on the testimony of Mr. Peters who explains, the figures of the ’065 Patent collectively illustrate that the upper portion contour includes both concave and convex surfaces. *Id.* (citing Ex. 2004 ¶ 60). GM contends that

[t]he surface of the claimed design includes an upper portion with both concavity and convexity, transitioning from a generally concave curvature at the front portion of the fender (depicted in blue), as shown in Figure 4, to a generally convex curvature at the rear portion of the fender (depicted in red), as shown in Figure 1.

Id.



GM creates annotated Figures 1–4 that show a left area depicted in blue and a right area depicted in red, and with a green arrow. PO Resp. 28 (citing Ex. 1003 ¶ 58; Ex. 1004 ¶ 57). GM contends that each of figures consistently depicts the “contour of the upper portion” because the shape of the surface depends on its location along the fender. *Id.* (citing Ex. 2004 ¶ 62).

Mr. Peters provides examples and testifies that “in the top plan view (shown in Figure 2), the convexity of the surface is not readily visible because the direction of the curves are directly aligned with the viewer’s eye,” thus, “the curves of the upper portion are depicted with straight lines because its surface directly aligns with the person viewing the claimed design (Figure 2).” Ex. 2004 ¶ 62. Mr. Peters contrasts Figure 1, which “shows the convexly curved surface with curved lines, as annotated above, because the curves would be visible to a viewer in a perspective view.” *Id.* Thus, according to Mr. Peters, “[t]his perceived difference in curvature in Figures 1 and 2 can be explained by the perception of features visible at a particular angle.” *Id.* Further, GM contends that Figure 3 shows a side view that does not show the surface curvature because the direction of the curvature is orthogonal to the plane of view, and as such, due to foreshortening effects, the curves in Figure 3 are depicted with generally straight lines. PO Sur-Reply 11–12 (citing Ex. 2004 ¶¶ 60–62).

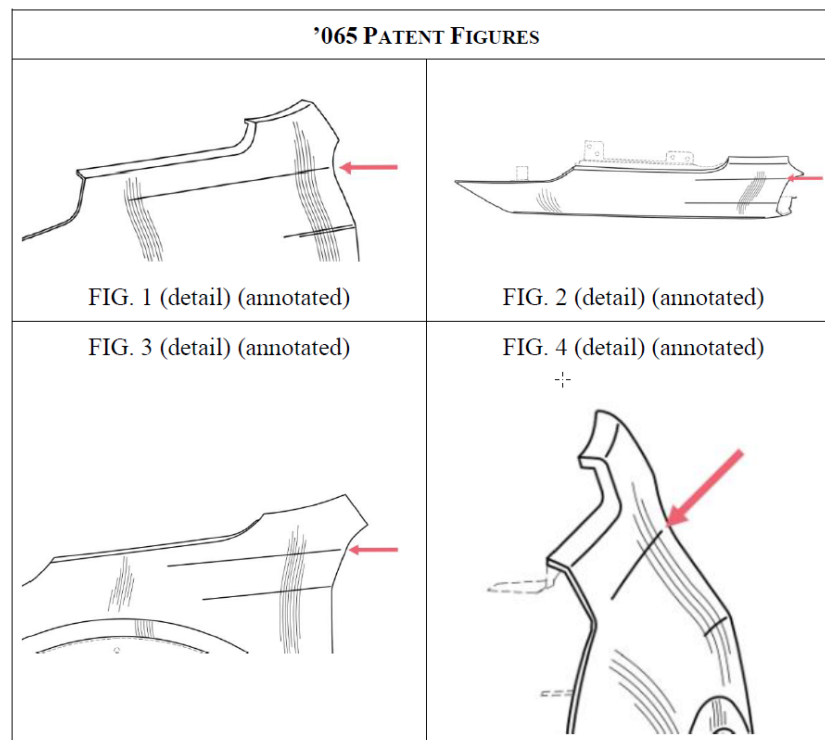
GM has persuasively shown that the surface of the claimed design includes an upper portion that transitions from a generally concave curvature at the front portion of the fender (depicted in blue in Figure 4 above) to a generally convex curvature at the rear portion of the fender (depicted in red in Figure 1 above). *See* PO Resp. 27; PO Sur-Reply 12; Ex. 2004 ¶¶ 60–61.

We also find persuasive Mr. Peters’ testimony that the concave curvature of the front portion (blue, above) is more visible in Figure 4 than in Figure 1 due to foreshortening effects, and the contour lines extend higher (nearly to the top edge) to a more convexly contoured portion of the fender body in Figure 1. *See* Ex. 2004 ¶¶ 56, 60–62. We also find persuasive GM’s arguments related to the wireframe figure (Fig. D) found in the appendix of the prosecution history, which further shows concavity at the front portion of the fender and convexity at the rear portion of the fender. PO Sur-Reply 13–14 (depicting Ex. 1048, 3 (Fig. D) with annotations)); *see also id.* at 15 (noting the limitations of wireframe drawings that lack surfaces).

We have considered LKQ’s argument that “Mr. Peters admitted that he could not discern the contours of the ’065 Patent’s design based on the figures alone; he relied not only upon the drawings, but also photographs.” Pet. Reply 16 (citing Ex. 1051, 524). We understand Mr. Peters to have primarily relied on the “section lines” of the patent figures in ascertaining claim scope in this line of questioning. *See* Ex. 1051, 523:24–524:3 (“Q. Okay. Why do you say ‘It’s got to be complex surface’? A. Based on the section lines and all the elements that are representing two dimension, and then when I looked at other images provided.”). GM contends that “what he actually said was, ‘when I looked at other images provided . . . I just know that it’s . . . a complex surface,’” which “only confirms that Mr. Peters examined all relevant materials, not that he was unable to discern the contours based on the claimed figures alone.” PO Sur-Reply 13 (quoting Ex. 1051, 524:1–5) (alterations in original). We agree with this assessment of Mr. Peters’ testimony and determine he properly relied on the patent figures in his analysis.

3. Length of the Concave Inflection Line

LKQ also argues that the length of the concave inflection line across the length of the fender is inconsistent and unclear between figures. Pet. 64 (depicting varied length of inflection line between figures). Relying on the testimony of its experts, LKQ reasons that “[e]ach view depicts an inconsistent view from the others, and these inconsistencies would prevent a DOSA, viewing the claimed design as an ordinary observer would, from understanding the design claimed with reasonable certainty.” *Id.* at 63 (citing Ex. 1003 ¶ 58; Ex. 1004 ¶ 57). LKQ includes the following annotated figures showing the apparent varied length of the concave inflection line.



LKQ’s annotated Figures 1–4 of the ’065 patent add a red arrow pointed at the upper concave inflection line. Pet. 64.

LKQ contends that Figures 1 and 4 indicate that the concave inflection line extends across a majority of the length of the fender, but

Figure 3 shows the inflection line only extending approximately 40% of length of the fender. Pet. 64–65. LKQ also points to purported inconsistencies in concavity along this line whereas Figure 3 depicts a concave contour at approximately 75% of the fender from the rear edge, Figure 1 similarly shows a concave contour near that point, but Figure 4 shows no concavity and further shows the concave inflection line curving downwards near the curved upper edge. Pet. 65.

LKQ surmises that “artifacts of light and reflection have no place in or bearing on a line drawing,” and “the length difference has nothing to do with perspective or any ‘foreshortening’ effect.” Pet. Reply 17 (citing Ex. 1052 ¶ 38). LKQ further provides a graphical display “overlaying the patent figures on the appendix line drawings and using red Xs to denote the end point,” arguing from this display that “it is clear the inflection line terminates at (at least) three different locations.” *Id.* at 17–18.

GM responds that “[t]he ’065 Patent consistently depicts the concave inflection line.” PO Sur-Reply 14 (citing Ex. 2004 ¶¶ 63–65). GM again notes that “[t]he angle at which a part is viewed can affect how light reflects from a surface, which, in turn, can change the appearance of a curved surface.” PO Resp. 29 (citing Ex. 2004 ¶ 63; Ex. 2006, 139:21–25). Relying on Mr. Peters’ testimony, GM contends that “while the inflection line appears longer when viewed at an angle (as shown in Figures 1 and 4) as compared to an orthogonal view (as shown in Figures 2 and 3), this is entirely consistent with what a skilled designer, viewing the design as would an ordinary observer, would expect.” *Id.* at 30 (citing Ex. 2004 ¶ 63). Mr. Peters explains that Figures 1 and 4 show a longer inflection line extending across the majority of the fender body because its concavity is readily visible

over a longer distance in these views. Ex. 2004 ¶ 63. He contrasts Figures 2 and 3 that show a shorter length of the inflection line because the degree of concavity is less visible in those views because the direction of the curvature is orthogonal to the plane of view. *Id.* We find Mr. Peters' testimony more persuasive.

Although we recognize the perceived disparity between the length of the inflection between Figures 1 and 2, for example, we also recognize the challenges of depicting three-dimensional contours in two dimensions. Mr. Peters explains that foreshortening causes an inflection line to change in length in certain views because the visibility of degree of concavity changes depending on the viewpoint and light and reflection may impact perspective. Ex. 2004 ¶¶ 58, 63; *see also* Ex. 2006, 139:21–25. Further, we are persuaded by Mr. Peters' testimony that

the concavity line is used to signify the general direction of the transitioning surface and to indicate significant, not minor, changes in curvature in the vehicle surface. The claimed design includes an inflection line depicting a varied degree of concavity along the fender surface. The reason for this is because the depiction of inflection line in the figures of the '065 Patent shows that the front portion of the fender has a lesser degree of concavity and the rear portion of the fender has a greater degree of concavity. That is why the inflection line is always visible toward the rear of the fender, regardless of the figure, but in certain views only sometimes visible toward the front of the fender.

Ex. 2004 ¶ 64. Based on Mr. Peters' explanation, it is understandable that the softer curves at the front of the fender would not be as detectable as a significant change in curvature to a viewer looking directly at the fender, for example, in the top and side views (Figures 2 and 3). *Id.*; *see also id.* ¶ 65 (examining shaded drawings from prosecution history and determining

“shaded drawings show that the front portion of the fender has a lesser degree of concavity due to the presence of an increased sloped surface located above the wheel arch”) (citing Ex. 1002, 28, 30). Based on the evidence and arguments before us, we find GM’s contentions as to this design element more persuasive.

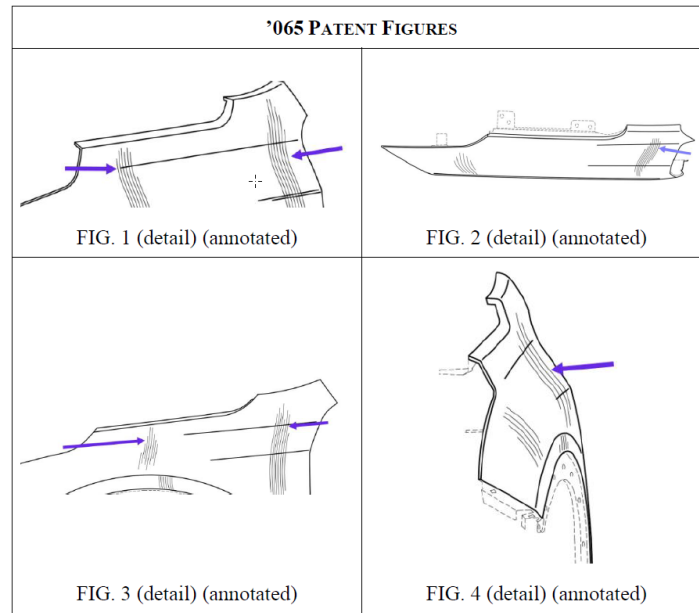
4. Point of Maximum Concavity of the Fender

LKQ contends that “[t]he point of maximum concavity of the fender should be the concave inflection line, however the views do not reflect this consistently nor does it reflect the same concavity across the fender.”

Pet. 66. Relying on the annotated figures below, LKQ argues:

In particular, the Figure 1, which shows concave contours near the front of the fender for the concave inflection line, indicates that the maximum concavity at the concave inflection line should be at the line near the front portion of the fender yet in that same figure, the contours indicate the maximum concavity below the concave inflection line near the rear edge of the fender. Figures 2 and 4 also indicate that the maximum concavity would be below the concave inflection line, yet in different locations. Meanwhile, Figure 3, the most direct view of the fender from the side, indicates that the maximum concavity should be at the concave inflection line. The maximum concavity cannot be in each of these multiple locations.

Pet. 66–67 (internal citations omitted).



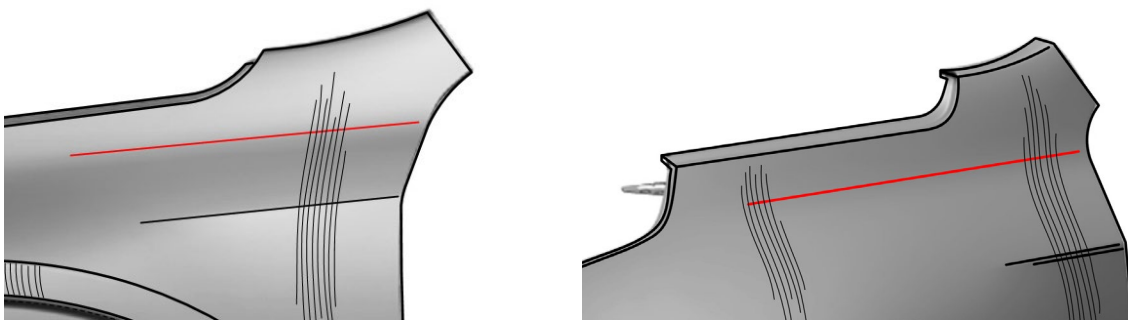
LKQ's annotated Figures 1–4 of the '065 patent add purple arrows at different locations conveying the concave inflection line. Pet. 66.

LKQ contends that “where an inflection line is used to describe a contoured surface, it should be drawn along the peak or trough of that surface.” Pet. Reply 19 (citing Ex. 1052 ¶ 40). Mr. Hill contends that “[p]lacing it in any other location would mislead a DOSA.” Ex. 1052 ¶ 40.

Relying on the testimony of Mr. Peters, GM responds that the maximum concavity along the fender body does not need to be at the same location as the concave inflection line. PO Resp. 32 (citing Ex. 2004 ¶ 67). Mr. Peters explains that the inflection line need not be positioned at the same location as the maximum concavity because the purpose of the inflection line is to provide the general direction of the transitioning surface. Ex. 2004 ¶ 67. Mr. Peters testifies that the inflection line is dependent on how light reflects from the vehicle surface to define a transitioning surface—not a geometric metric, such as the maximum concavity. *Id.*; *see also* PO Sur-Reply 16 (“light reflects from the vehicle surface to define a transitioning

surface, such as the inflection line”). GM further argues that “the maximum concavity of the claimed design can be identified based its shading lines,” and “[u]nlike the inflection line, which indicates major changes in curvature, the shading lines can be used to describe the full nuanced, contoured shape of the vehicle surface.” PO Resp. 32. Thus, according to GM, “[t]his is why the shading lines are used to understand the curved profile of a vehicle surface, including locations of the maximum concavity.” *Id.* (citing Ex. 2004 ¶ 68). Mr. Peters testifies that the location of maximum concavity can deviate from the location of the inflection line, but the inflection line provides a general direction of the transitioning surface. Ex. 2004 ¶¶ 66–68.

GM further argues that “the claimed design’s inflection line (shown in red) tracks along the location where light reflects surface transitions on the 3D model drawings,” as depicted below. PO Sur-Reply 16–17. GM creates the following figures by combining shaded drawings from the Appendix (file history) overlaid with figures from the ’065 patent.



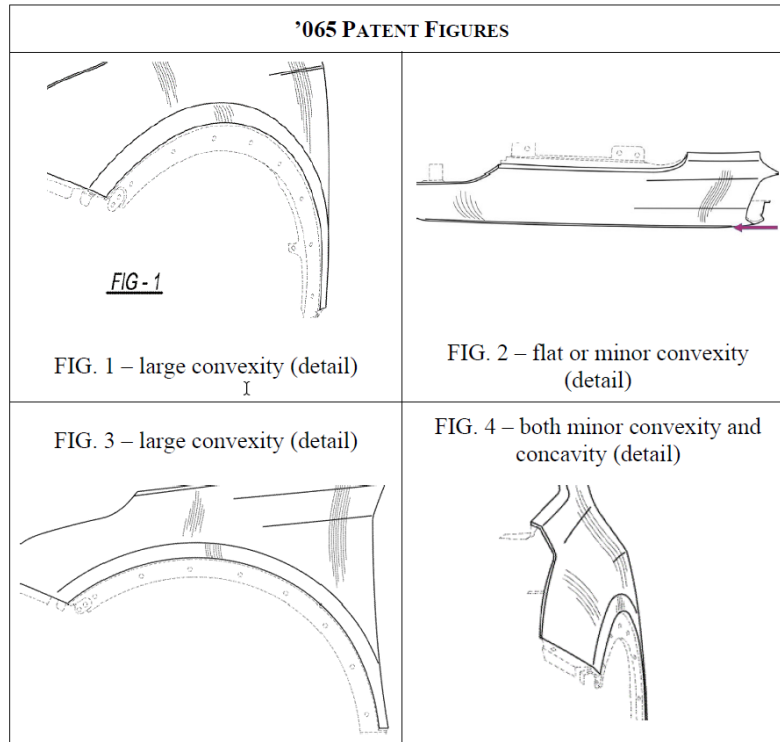
GM’s representation of Exhibit 1048, Figures E and A overlaid on the ’065 patent, Figures 3 and 1, respectively. GM, relying on the testimony of LKQ’s expert that the 3D models in the appendix “show . . . the correct path of the inflection line,” argues that the inflection line is correctly depicted on the 3D models, and thus, the claimed design’s inflection line is also correct. PO Sur-Reply 17 (quoting Ex. 1052 ¶ 41).

Neither party has cited to any authority that provides guidance as to proper drawing convention for depicting the point of maximum concavity. Potential guidance, which neither party has discussed in depth, is 37 C.F.R. § 1.152, which states that: “[a]ppropriate and adequate surface shading should be used to show the character or contour of the surfaces represented.” Here, GM has elected to portray the claimed design’s inflection line tracking along the location where light reflects surface transitions. We recognize that Mr. Hill’s testimony makes sense, whereas an inflection line that is used to describe a contoured surface could be drawn along the peak or trough of that surface. Ex. 1052 ¶ 40. However, in the absence of any authority mandating this drawing convention, we cannot say that using other techniques, such as GM has done here, would create undo confusion for a designer of ordinary skill in the art.

We are persuaded that GM has shown a relationship between the inflection line and light reflecting from the vehicle surface to define a transitioning surface. Further, we find persuasive Mr. Peters’ testimony that the inflection line may be depicted in a manner dependent on how light reflects from the vehicle surface to define a transitioning surface. Ex. 2004 ¶¶ 66–68. Based on the record before us, LKQ has not persuasively shown that GM’s choice of drawing convention for depicting the concavity of the fender makes the scope of claim unclear to a designer of ordinary skill in the art.

5. Shape of the Wheel Arch

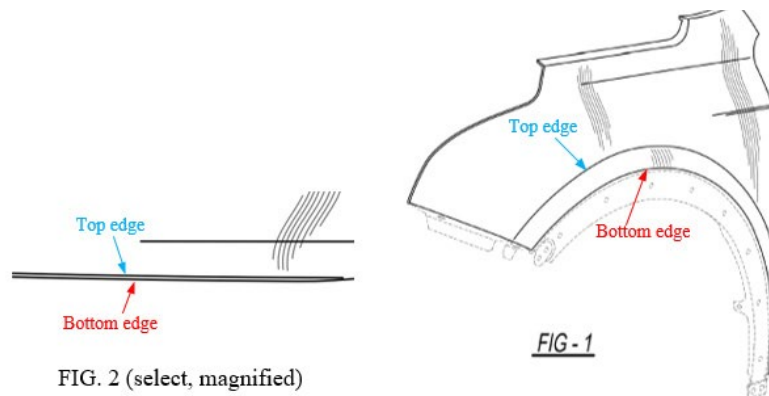
LKQ next focuses on the claimed wheel arch. According to LKQ, the Figures of the ’065 patent are inconsistent and show that “the shape of the wheel arch may be flat or concave or convex.” Pet. 68. LKQ relies on the following annotated Figures 1–4 from the ’065 patent.



Annotated Figures 1–4 of the '065 patent with LKQ's descriptions related to shape of the wheel arch, which contrasts Figures 1 and 3 (large convexity) with Figure 2 and 4 (minor convexity). *Id.* (citing Ex. 1003 ¶ 61; Ex. 1004 ¶ 60). Again, relying on its experts, LKQ contends the Figures are inconsistent because “[t]he contour lines of Figures 1 and 3 suggest that the wheel arch flat . . . is substantially convex, while the contour lines of Figure 4 appears to have vertical contour lines which would suggest both a flat or only minorly convex wheel arch and a concave wheel arch at the same time, based upon the front elevation view perspective.” Pet. 68–69. In contrast, “Figure 2 may suggest that the wheel arch has some minor convexity due to the sliver of space between the two bottom-most lines.” *Id.* at 69.

GM argues that “[t]he figures of the '065 Patent provide a clear description of the surface of the wheel arch,” and “[t]here is no dispute that Figures 1 and 3 show a wheel arch having a consistent degree of convexity.”

PO Resp. 33. GM contends “a top view (Figure 2) does not generally show the degree of convexity of a wheel arch,” and here the top view shows feature lines of the wheel arch that define its top and bottom edges, but does not show its convex curvature. *Id.* (citing Ex. 2004 ¶ 70). GM provides the following annotated figures from the ’065 patent to show how the two feature lines of the wheel arch are visible in Figure 2.



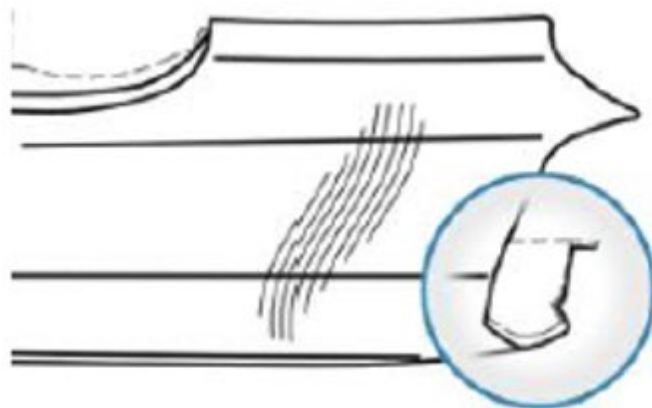
GM’s Figure 2 (on left, select, magnified) and Figure 1 (annotated) of the ’065 patent, both with added annotations showing a top edge (blue arrow) and bottom edge (red arrow). *Id.* at 33–34. GM contends that “[i]nstead of looking at the top view to determine convexity, a skilled designer, viewing as would an ordinary observer would rely on other views, such as perspective or side views (Figures 1 and 3) of the vehicle design.” *Id.* at 34 (citing Ex. 2004 ¶ 70).

As for conveying convexity in Figure 4, GM argues “the degree of convexity in the wheel arch surface would be expected to be less apparent in Figure 4 because of the foreshortening effects with the highly angled viewpoint.” *Id.* (citing Ex. 2004 ¶ 71). GM, and its expert, also rely on additional evidence including the Appendix drawings to show how the figures convey a degree of convexity to the wheel arch. *Id.* at 34–36.

We are more persuaded by GM's arguments and evidence that although the degree of convexity in the wheel arch surface is more apparent in certain views, such as Figures 1 and 3, the figures combined still portray a surface that is generally sheer with a degree of convexity. *See* Ex. 2004 ¶ 73. Further, a designer of ordinary skill would not rely on the top view to determine convexity, instead, other views, such as perspective or side views (Figures 1 and 3) of the vehicle design provide the best understanding of curvature within the wheel arch. *See id.* ¶ 70. We are persuaded by GM that the minor differences do not preclude the overall understanding of the drawings as a whole.

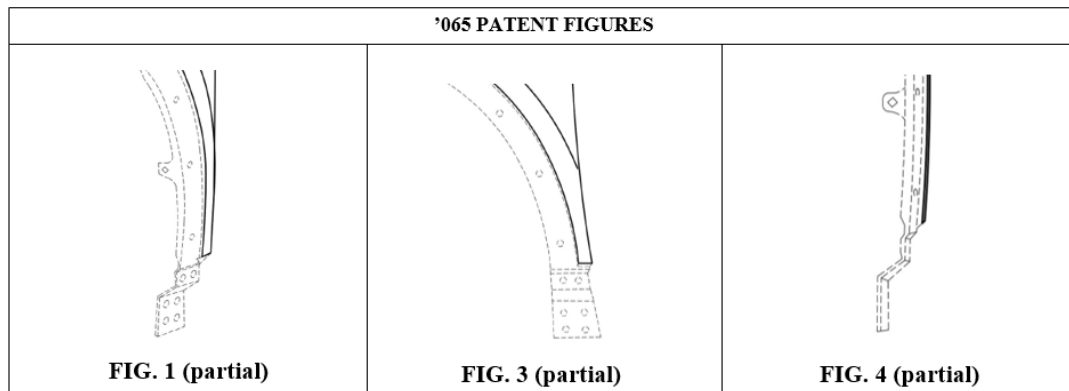
6. Portion of the Mounting Plate Claimed in Figure 2

LKQ contends that a small portion of Figure 2 depicts a portion of the mounting plate in solid (thus claimed) lines. *See* Pet. 70. A blowup of Figure 2, relied on by both parties, is provided below.



Magnified partial Figure 2 with a blue circle around a disputed portion referred to by LKQ as a mounting plate. Pet. 70; PO Resp. 36. LKQ argues that Figure 2 of the '065 patent appears to claim a portion of the mounting plate and that Figures 1, 3, and 4 do not claim this same area, thus the drawings are inconsistent.

GM argues that “[t]he scope of the claimed design does not include the alleged ‘mounting plate,’” based on a review of the other three figures and the prosecution history. PO Resp. 36. GM notes that “[t]he only figures that clearly depict the mounting plate are Figures 1, 3, and 4, which all unambiguously show that the mounting plate is not part of the claimed design,” as depicted below. *Id.* at 37.



Partial views of Figures 1 (left), 3 (middle), and 4 (right) of the '065 patent depict the mounting plate in dashed (thus unclaimed) lines. PO Resp. 37.

GM also relies on the prosecution history, and argues that the lower “attachment tab” was specifically said to be disclaimed. Ex. 1002, 83–84 (“the disclaimed, lower ‘attachment tab’ extends rearwardly from the claimed surface”).

GM also points out that

Mr. Hill conceded in his deposition that he took no issue with the clarity of that disclaimer. Ex. 2006 (Hill Tr.) at 158:7-14 (“Q. And you don’t take any issue with the clarity of the statement that the applicant made when saying that the mounting plate is not part of the design, do you? A. I don’t take issue with that.”) (objection omitted.); *id.* at 161:2-6 (“Q. So can you point me to anything suggesting that we shouldn’t take the applicant’s statement at face value? A. As it relates to the mounting tab on page 53, no.”).

PO Resp. 38. GM also argues that Mr. Hill also agreed that based on this disclaimer and figures of the patent there is at least reasonable evidence to conclude the mounting plate, or attachment tab, is not part of the claimed design:

Q. Would you agree that given everything that we've talked about today, while there may not be absolute certainty that the mounting plate is part of the claimed design, there is at least reasonable evidence to conclude it is not part of the claimed design?

A. Okay. Again, as – if taken alone, through the – through the process, I know that it's – ***it was there, but it's not to be considered, and I agree with your – your statement as stated.***

PO Resp. 38 (quoting Ex. 2006, 164:25–165:10).

Even if we agree with LKQ that Figure 2 of the '065 patent claims a portion of the mounting plate, and thus conflicts with the scope of the claim set forth in Figures 1, 3, and 4, the record as a whole must be considered. Based on the complete record before us, we believe a designer of ordinary skill in the art would have realized that Figure 2's depiction of a small portion of the mounting plate in solid line was a minor drafting error. *See, e.g.,* Ex. 1003 ¶ 35 (Mr. Gandy recognizing that “the Examiner initially made an indefiniteness rejection to the '065 Patent for claiming the mirror embodiment and for claiming a portion of the mounting tab when in other views it was unclaimed,” but “the Examiner allowed the mounting tab drawing after Patent Owner Response.”); Ex. 1004 ¶ 34 (same for Mr. Hill); *see also* Tr. 10:21–11:7. Figures 1, 3 and 4 clearly depict the mounting plate as unclaimed. Further, the prosecution history provided reasonable evidence that the mounting plate is not part of the claimed design. Ex. 1002, 83–84; *see also* Ex. 2006, 164:25–165:10, 175:19–176:22 (Mr. Hill admitting that

the solid line of the mounting plate was not considered part of the claim for purposes of his invalidity analysis); Ex. 1003 ¶ 35.

Based on the totality of the evidence, including explanation in the prosecution history, we determine that the portion of the mounting plate in Figure 2 does not hinder a designer of ordinary skill from understanding the scope of the design with reasonable certainty.

7. Overall Indefiniteness Analysis

The figures of the '065 patent are not perfect and the issues discussed above demonstrate that attention to detail matters when conveying the scope of a three-dimensional object in two dimensions. The proper standard for indefiniteness does not, however, require perfection, but instead requires that an invention is shown with “reasonable certainty.” *Nautilus, Inc.*, 572 U.S. at 910. The purpose of the definiteness standard is “to ensure that the disclosure is clear enough to give potential competitors (who are skilled in the art) notice of what design is claimed – and therefore what would be infringed.” *Maatita*, 900 F.3d at 1376. Based on the totality of the evidence before us, we determine that the claimed design of the '065 patent is reasonably understandable and gives potential competitors, and the public, notice of the scope of the claim. As analyzed above, LKQ has not shown that most of the alleged inconsistencies are, in fact, inconsistent features within the claim. Further, we determine that the inconsistencies argued by LKQ do not in the aggregate “preclude the overall understanding of the drawing as a whole.” *Id.* at 1375–76.

Both of LKQ’s experts were able to offer a detailed claim interpretation without noting any potential inconsistency or ambiguity in their interpretation. *See* Ex. 1003 ¶¶ 32–38; Ex. 1004 ¶¶ 31–37. Mr. Gandy provides an eleven page explanation of claim scope arguing at the end that

“the above claim construction attempts to identify all of the features of the claimed design, regardless of the materiality of that feature or whether it contributes to the overall visual impression of the design.” Ex. 1003 ¶ 38. As one example, despite alleging that the “the shape of the wheel arch may be flat or concave or convex,” for purposes of indefiniteness (Pet. 68), LKQ’s experts earlier construe the scope of the claim to include:

an arcuate wheel arch flat [] having a width spanning approximately 20% of the length of the front slanted edge of the front portion, the wheel arch flat describing an arc of approximately 120°, and tapering to approximately 60% of its maximum width as it intersects with the rear edge of the fender towards the lower rear terminus of the fender.

Ex. 1003 ¶ 36; Ex. 1004 ¶ 35. LKQ’s experts do not allege that any particular claim feature is ambiguous or inconsistent in their detailed claim interpretation. *See* Ex. 2006, 138:15–23, 139:6–19. Thus, we are further persuaded that the alleged inconsistencies noted above do not impact the understanding of the claim scope to a designer of ordinary skill in the art.

We also recognize GM’s argument that “the fact that LKQ’s expert . . . was readily able to discern the boundaries of design, significantly undercuts LKQ’s argument.” PO Sur-Reply 3. We agree that both of LKQ’s experts were able to offer an informed opinion about which GM vehicle embodied the ’065 patent and which prior art design purportedly met its limitations. *See* Ex. 2006, 127:5–14, 129:14–130:3, 130:5–135:6; Ex. 1004 ¶¶ 68–69. GM provides an example that “while LKQ claims that the depictions of the concave portion on ’065 Patent render it indefinite, Mr. Hill was able to determine the scope of that feature with sufficient clarity to opine that it matched the Fiat Toro.” PO Resp. 17–18 (citing Ex. 2006, 167:23–168:1). “Similarly, Mr. Hill had no problem determining that the

purportedly indefinite convex crease in the '065 Patent matched that of the Fiat Toro.” *Id.* (citing Ex. 2006, 172:20–173:1); *see also* Ex. 2006, 166:22–24 (opining that the wheel arch on the Horki vehicle was “substantially similar” to the '065 Patent). The disclosure being clear enough to give LKQ’s experts notice of the design sufficient to compare prior art designs is not conclusive as to indefiniteness, and at most provides minor support for our ultimate determination. We recognize that the experts were opining on the understanding of one skilled in the art, viewing the design as would an ordinary observer.

We are aware that Mr. Hill contends in his Reply Declaration that “he was able to do a reasonable comparison *only by* resolving the inconsistencies that he pointed to by observing that the patent looked like the XT4.”¹¹ Tr. 27:24–28:4 (emphasis added); Ex. 1052 ¶ 21. We find that this *post hoc* argument, not addressed in the opening expert declaration, is unpersuasive. Mr. Hill did not mention having to resolve inconsistencies by looking to the XT4 in his original declaration, thus these later concerns are impliedly inconsistent with his earlier opinion. If true that Mr. Hill conducted a “comparison only by resolving the inconsistencies” through examination of the design of the XT4, this methodology should have been explained in his opening declaration, especially considering the sheer amount of alleged inconsistencies.

The totality of the evidence before us supports our ultimate determination. During prosecution of the '065 patent, indefiniteness was a basis for rejection and it was overcome by GM after explanation to the

¹¹ Both parties seem to agree that the 2019 Cadillac XT4 vehicle embodies the claim of the '065 patent. *See* Pet. 1, 9; PO Resp. 16–17.

Office. *See* Ex. 1002, 83–84 (“the disclaimed, lower ‘attachment tab’ extends rearwardly from the claimed surface”); *see also* 37 C.F.R. § 1.152 (An Examiner is required to reject a design claim “[w]hen the inconsistencies are of such magnitude that the overall appearance of the design is unclear.”). Mr. Peters’ testimony that the alleged discrepancies were primarily due to differences in viewpoint that change the perception of the claimed features is sufficiently persuasive. LKQ has not persuasively proven by a preponderance of the evidence that the alleged inconsistencies considered above should be deemed errors resulting in indefiniteness. Further, as explained above GM has offered sufficient explanation that the differences are a result of using two-dimensional illustrations to depict different views of a three-dimensional design.

GM has shown that the record contains sufficient information for a skilled designer, viewing the design as would an ordinary observer, to understand the scope of the claim. Based on the final record before us, LKQ has not established by a preponderance of the evidence that the claim of the ’065 patent is indefinite.

D. The Alleged Obviousness of the Claim over the 2016 Fiat Toro Vehicle and the Horki Concept Vehicle

LKQ contends that the single claim of the ’065 patent is unpatentable as obvious over the Fiat Toro in view of the Horki Concept Vehicle.

Pet. 73–91. GM contends that LKQ has failed to identify a proper primary,

or *Rosen*¹², reference, and has failed to identify a combination that a skilled designer would make or that results in the claimed design. PO Resp. 39 (citing Ex. 2004 ¶¶ 77–86).

For the reasons set forth below, and based on the final record before us, LKQ has not established by a preponderance of the evidence that the claim of the '065 patent would have been obvious based on this ground. Below, we provide LKQ's contentions and Patent Owner's response. Finally, we provide our analysis and explanation as to why we determine that the Fiat Toro is not a proper *Rosen* reference and why the design claim would not have been obvious to a designer of ordinary skill in the art.

1. Fiat Toro

LKQ articulates the primary reference for this ground in the alternative – stating either the “2016 Fiat Toro vehicle,” or “the Car Body Design Article prior art publication depicting the 2016 Fiat Toro vehicle.” Pet. 20; *see also* Pet. 28 (“For the purposes of this Petition, ‘2016 Toro’ or ‘Fiat Toro’ will be used to refer to the vehicle itself and/or the prior art Car Body Design Article.”). LKQ provides two documents, Exhibits 1006 and 1007, as the “Primary” reference. Pet. 21. In arguing that the primary reference is prior art to the challenged patent, LKQ refers to: the “2016 Fiat Toro Vehicle” as “prior art,” the two exhibits as plural depictions of the Fiat Toro Vehicle, and a singular “Publication / Issue Date” of April 14, 2016. Pet. 21.

¹² *In re Rosen*, 673 F.2d 388, 391 (CCPA 1982) (A proper primary reference for the obviousness analysis is “a reference, a something in existence, the design characteristics of which are basically the same as the claimed design.”).

Thus, LKQ is utilizing as the primary reference a combination of two purported printed publications and, alternatively, the physical Fiat Toro itself. We treat both of the exhibits identified by LKQ as constituting the primary reference, the 2016 Fiat Toro. *See, e.g.*, Pet. 21 (labeling both Exhibit 1006 and Exhibit 1007 as “Primary”).

As can be seen better below, the overall quality and detail of the images provided by LKQ comprising the 2016 Fiat Toro are lacking. Reproduced below are images of the 2016 Fiat Toro from Exhibits 1006 and 1007. These images do not specifically focus on the fender area of the vehicle, but instead provide oblique or perspective views of the entire vehicle.



LKQ relies on images of the 2016 Fiat Toro including Exhibit 1006, at 1 (upper left), 2 (upper right), and 5 (bottom left), as well as Exhibit 1007, at 1 (lower right).

According to LKQ, Exhibits 1006 and 1007 constitute a single printed publication because “the Fiat Toro article with the accompanying image

gallery constitutes a single printed publication as they were made publicly available on the same date and on the same website, and each webpage linked to the other.”¹³ Pet. 24–25. LKQ argues that “[t]he design disclosed in the Fiat Toro is an appropriate primary reference, as it constitutes a single reference, a something in existence, the design characteristics of which are basically the same as the claimed design.” Pet. 73 (internal quotations and emphasis omitted).

2. *Horki Concept*

LKQ relies on the Horki Concept as a secondary reference. According to LKQ, the Horki Concept is prior art because it was publicly available as of April 2013, making the vehicle prior art under 35 U.S.C. § 102(a)(1). Pet. 28. LKQ notes that Exhibit 1008 is an accurate representation of the 2013 Horki Concept vehicle published through a China Auto Web publication. *Id.* This publication depicts the Horki Concept through a number of photographic images, some of which are depicted below.

¹³ Because we do not find that even the combination of these references constitutes a proper *Rosen* reference, we decline to address the propriety of using these specific exhibits as a single printed publication.

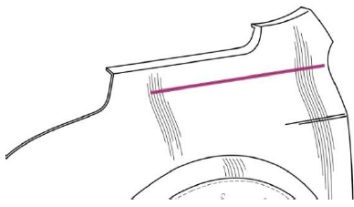


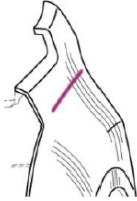
LKQ’s images of the Horki Concept as found on pages 6 and 7 of Exhibit 1008, including a front view (top), left front plan view (middle) and right side view (bottom). LKQ notes that in “this Petition, ‘2013 Horki Concept’ or ‘Horki Concept’ will be used to refer to the vehicle itself and/or the prior art China Auto Web Article.” Pet. 31.

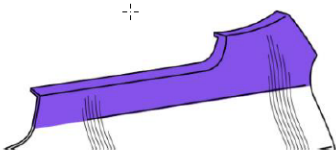
3. Petitioner Contentions

LKQ alleges that the claimed design of the ’065 patent would have been obvious over the Fiat Toro (Exs. 1006, 1007) and the Horki Concept

(Ex. 1008). *See* Pet. 73–91. Specifically, LKQ focuses on the design features that it identified in its proposed claim construction and argues “[t]he design disclosed in the Fiat Toro is an appropriate primary reference, as it constitutes a single reference, a something in existence, the design characteristics of which are basically the same as the claimed design.” Pet. 73 (quoting *Durling*, 101 F.3d at 103; citing *In re Rosen*, 673 F.2d 388, 391 (CCPA 1982)) (emphasis and internal quotation marks omitted). LKQ first argues that “[a] simple visual comparison demonstrates that the two designs have an overall visual appearance and design elements that are basically the same.” Pet. 74–75. LKQ then provides an element-by-element analysis of the claimed design compared to the Fiat Toro. Pet. 76–82. LKQ provides the following annotated comparisons with the column on the left showing figures of the ’065 patent and the column on the right depicting images of the Fiat Toro.

'065 PATENT	FIAT TORO (PRIMARY)
 Ex. 1001, FIG. 1 (annotated)	 Ex. 1006, at 7 (cropped, annotated)

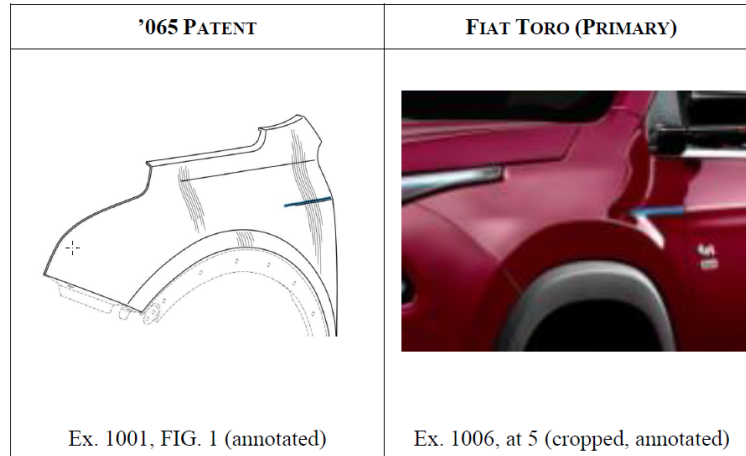
'065 PATENT	FIAT TORO (PRIMARY)
 Ex. 1001, FIG. 4	 Ex. 1007, at 1 (cropped, flipped, annotated)

'065 PATENT	FIAT TORO (PRIMARY)
 Ex. 1001, FIG. 1 (annotated)	 Ex. 1006, at 5 (cropped, annotated)

LKQ’s comparisons including, Figure 1 with a highlighted upper inflection line compared to Exhibit 1006, page 7 (top), Figure 4 compared to Exhibit 1007, page 1 (middle), and Figure 1 with upper portion highlighted in purple compared to Exhibit 1006, page 5 also with an upper portion highlighted in purple (bottom). Pet. 76–77. Relying on the above comparisons, LKQ alleges that “both the Fiat Toro design and the claimed design of the ’065 Patent comprise: 1) an inflection line demarcating a concave contour extending forwards and downwards from a rear edge of the fender towards a corner of a headlight aperture,” as well as “an upper portion above the

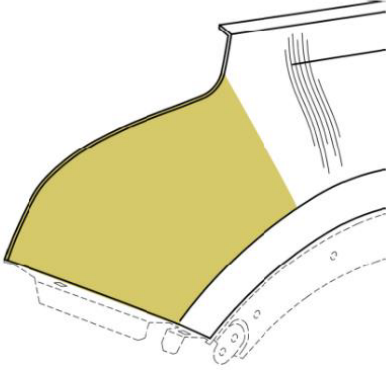
inflection line having a similarly shaped protrusion and having an inwardly folded top edge.” *Id.*

LKQ argues that the following comparison demonstrates “a convex crease extending approximately 30% of the length of the fender forwards from a rear edge and substantially parallel to the inflection line.” Pet. 78.



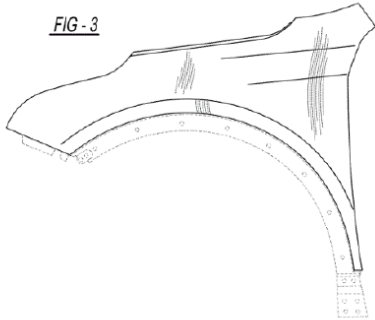
LKQ produces Figure 1 with a highlighted inflection line compared to Exhibit 1006, page 5. *Id.*

LKQ next compares the front portions of the two designs and alleges both have “a front portion having a front upper edge with 25% being downwardly sloped and upwardly curved and a remainder that is downwardly sloped and downwardly curved intersecting a front slanted edge and the front portion further being convexly contoured.” Pet. 78–79.

'065 PATENT	FIAT TORO (PRIMARY)
 Ex. 1001, FIG. 1 (annotated)	 Ex. 1006, at 5 (cropped, annotated)

LKQ produces Figure 1 with front portion highlighted in gold compared to Exhibit 1006, page 5 with front fender area also highlighted in gold. *Id.*

LKQ further contends that both designs have “a similar rear edge having a substantially vertical segment extending from where the wheel arch flat intersects the rear edge of the fender at approximately 20% of the height of the fender panel,” as depicted below. Pet. 79–80.

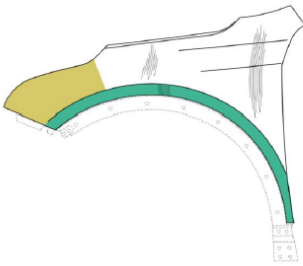
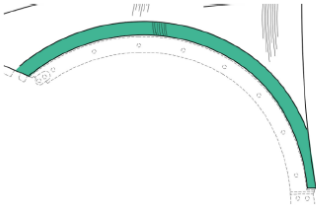
'065 PATENT	FIAT TORO (PRIMARY)
<u>FIG-3</u>  Ex. 1001, FIG. 3	 Ex. 1006, at 1 (cropped)

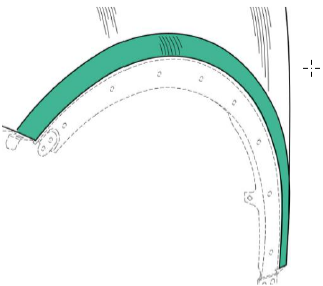
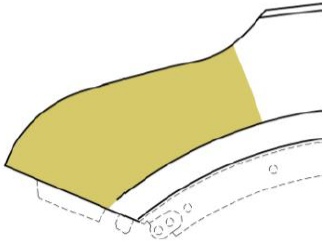
LKQ’s comparison of Figure 3 with Exhibit 1006, page 1 showing the left end side elevation view comparison. Pet. 80.

LKQ notes that “[a]lthough the Fiat Toro design’s front edge portion does not curve as far downward as the front portion of the claim design, this does not take away from the basic similarity of the overall visual impressions created by the two designs.” Pet. 81. “Thus,” according to LKQ, “the Fiat Toro discloses a fender that creates an overall visual impression that is basically the same as that claimed in the ’065 Patent.” *Id.*

LKQ contends that “[t]here are three minor differences between the Fiat Toro design and the claimed design of the ’065 patent, none of which change the overall visual similarities between the Fiat Toro and the design of the ’065, but all of which are nonetheless taught by the fender design disclosed by the Horki Article.” Pet. 81. These purported differences include (i) “the Fiat Toro design’s front portion has a bone line, or light crease, located on its front portion forwards of its wheel arch,” (ii) “the curved edge along the top of the Fiat Toro design’s front portion does not curve as far downward as the claimed design and the slanted edge is more vertical than the slanted edge of the ’065 Patent,” and (iii) “the wheel arch of the claimed design is more arcuate.” Pet. 81–82. LKQ then relies on the 2013 Horki Concept for each of those design features. *Id.*

LKQ argues that the Horki Concept is an appropriate secondary reference because the visual appearance and features of the fender disclosed in the design of the Horki Concept are so related to the Fiat Toro design that the appearance of certain ornamental features in the Horki Concept design would suggest the application of those features to the Fiat Toro design. Pet. 82. LKQ contends that the design disclosed in the Horki Concept comprises the same wheel arch shape and as the design of the ’065, and the same front edge portion as both depicted in the annotated comparison below.

'065 PATENT	HORKI CONCEPT (SECONDARY)
 Ex. 1001, FIG. 3 (annotated)	 Ex. 1008, at 7 (cropped, flipped, annotated)
 Ex. 1001, FIG. 3 (annotated)	 Ex. 1008, at 7 (cropped, flipped, annotated)

'065 PATENT	HORKI CONCEPT (SECONDARY)
 Ex. 1001, FIG. 1 (annotated)	 Ex. 1008, at 6 (cropped, flipped, annotated)
 Ex. 1001, FIG. 3 (annotated)	 Ex. 1008, at 7 (cropped, flipped, annotated)

LKQ's comparison of each annotated figure of the design claim with annotated figures from Exhibit 1007 showing a gold shaded area over the front portion and a green shade along the wheel arch. Pet. 85–87.

LKQ contends that a designer of ordinary skill in the art “would have been motivated to modify the Fiat Toro design’s front portion by removing the bone-line,” and “to adapt the angle and location of the Fiat Toro design’s leading slanted edge to accord with that of the Horki Concept’s fender and, further, to adopt the Horki Concept’s arcuate wheel arch and narrower wheel arch flat and incorporate those design elements into the fender design of the Fiat Toro.” Pet. 87 (citing Ex. 1003 ¶ 74; Ex. 1004 ¶ 73). LKQ argues that is would have would have been obvious to also remove the Fiat Toro fender design’s bone line to integrate with Horki Concept which does not have a bone line. Pet. 88.

Further, LKQ contends that a designer of ordinary skill “would have been further motivated to combine the curved front edge with the Fiat Toro, which already suggests a curved front edge shape for a headlamp aperture to accommodate a headlamp such as the headlamp shown in the Horki Concept,” “because the Toro’s headlamps feature an unconventional design: they are unusually wide in relation to their height.” *Id.* LKQ argues the headlight aperture modification is appropriate to achieve “a more conventionally proportioned, taller headlamp design would appeal to a broader audience than the unusual headlamp and corresponding aperture shape featured on the Fiat Toro’s fender.” Pet. 88–80 (citing Ex. 1003 ¶¶ 76, 77; Ex. 1004 ¶¶ 75, 76).

LKQ, and its experts, contend that “an ordinary observer would have found the overall visual impression of the claimed design of the ’065 Patent

to be substantially the same regardless of the existence of minor differences, if any, as that created by the Fiat Toro, so modified.” Pet. 91 (citing Ex. 1003 ¶¶ 79; Ex. 1004 ¶¶ 78).

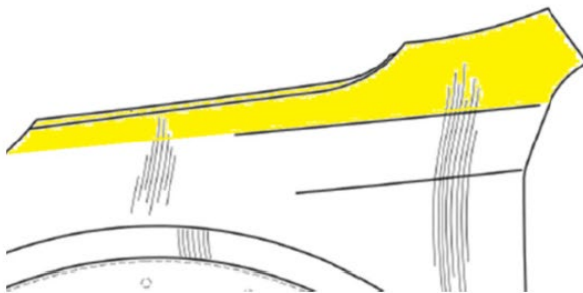
4. *Patent Owner Contentions*

GM disagrees that the Fiat Toro is a proper primary, or *Rosen*, reference and also contends that LKQ’s analysis is inadequate. PO Resp. 39. GM argues that the claim is a “smooth, elegant, and athletic,” design distinct from the Fiat Toro, which portrays a “bold, rugged, and muscular,” design that also lacks “numerous aspects of the claimed design, including the unique upper portion shape and profile, inwardly folded top edge, ‘protrusion’ having a distinct three-dimensional shape, and specific shape of the rear lateral edge.” *Id.* (citing Ex. 2004 ¶¶ 78–79). GM notes that LKQ failed to “account[] for these difference—and particularly, the significance of these differences to the skilled designer,” thus, “the Petition failed to demonstrate that the Fiat Toro creates basically the same overall visual impression as the claimed design.” *Id.* at 39–40.

GM first alleges that “[t]he Fiat Toro does not disclose the claimed design’s overall profile and shape of the ‘upper portion.’” *Id.* at 40. GM notes that this “upper portion” “of the claimed design has distinct features that include: (1) an overall shape of the ‘upper portion’ that includes an elongate crest connecting to a protrusion feature, and (2) the unique shapes, proportions, and edges of the crest and the protrusion features.” *Id.* at 40 (citing Ex. 2004 ¶¶ 80–81). GM’s expert, Mr. Peters, testifies that the skilled designer would have been closely attuned to even slight differences in the shape of the upper portion and its specific components as well as the rear lateral edge, because minor differences impact the match with a vehicle that has even a slightly different door shape. Ex. 2004 ¶¶ 80–81. Further,

he opines that the differences are impactful to the claimed design’s smooth, elegant, and athletic overall appearance, whether the fender is viewed alone or installed on a vehicle, because these differences directly affect the match and compatibility of the fender. *Id.*

Relying on the comparison below, GM shows how “the Fiat Toro’s upper portion is defined by a more angular, prominent protrusion, occupying a majority of the upper portion’s length (> 63%), and a barely visible crest located above an inflection line.” PO Resp. 40–41 (citing Ex. 2004 ¶ 81). GM contends that the Fiat Toro’s inflection line extends in close proximity to the upper edge of the fender and also forms a crest that is hardly noticeable, and thus results in drawing a viewer’s eye to the prominent protrusion. *Id.* at 41.



'065 Patent

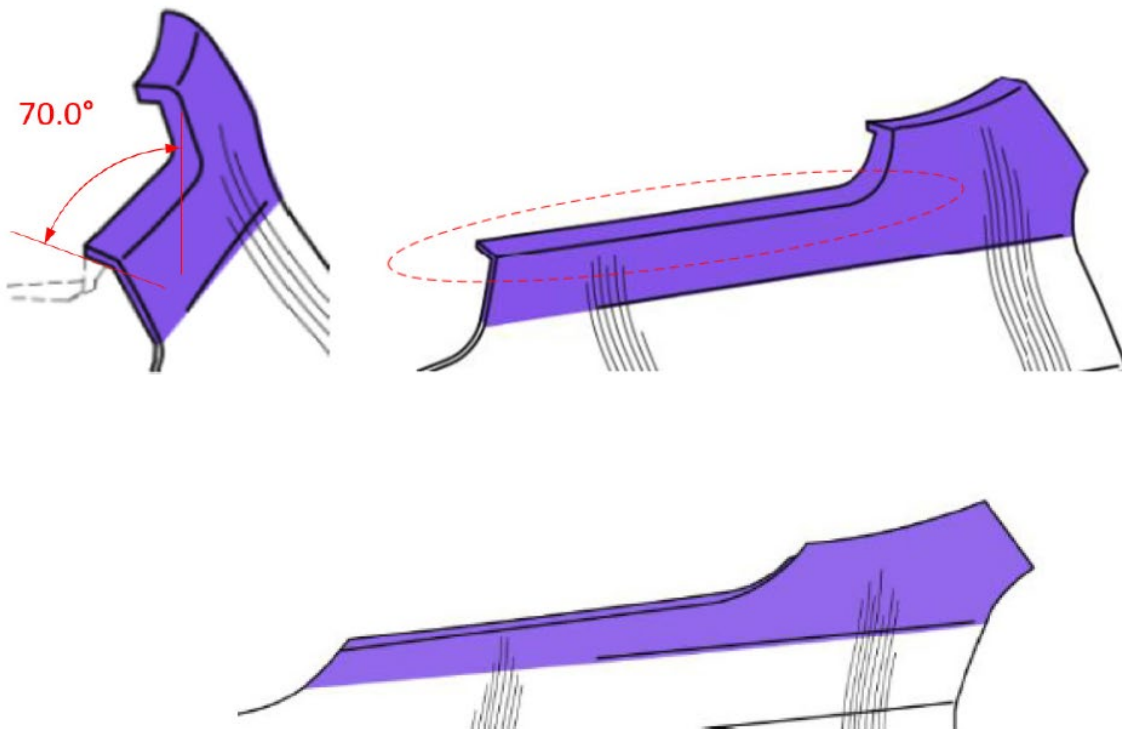


Fiat Toro

GM’s comparison of the “upper portion” of Exhibit 1001 at Figure 3 (partial, annotated) to Exhibit 1006, at 1 (partial, annotated). GM contends that “[i]n contrast, the crest of the claimed design is clearly visible, occupying a significant portion of the upper portion’s length, and has a substantial thickness that gently slopes forward from the protrusion.” PO Resp. 41 (citing Ex. 2004 ¶ 81). GM contends that these differences, not addressed by LKQ in the Petition, are enough to render the Fiat Toro an improper

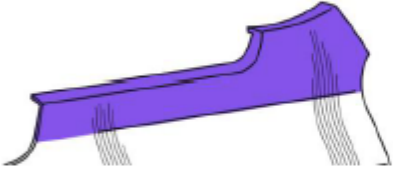
Rosen reference, particularly given the significance of the interfacing features. *Id.*

GM next argues that LKQ fails to properly address its own claim construction that the upper surface further comprises an inwardly folded top edge that is folded approximately 70° relative to the vertical axis of the fender. PO Resp. 42. According to GM and Mr. Peters, the Fiat Toro also does not disclose the claimed design’s inwardly folded top edge, as shown below. *Id.*; Ex. 2004 ¶¶ 82–83.



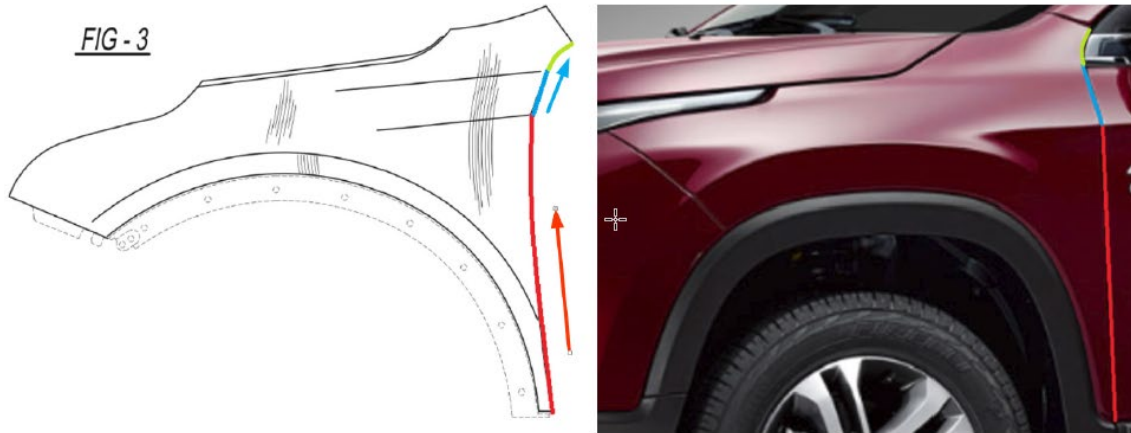
GM’s depiction of Figures 1, 3, and 4 with purple annotations added in the Petition (page 14) and red annotations added by GM to show the inwardly folded top edge. PO Resp. 42. GM argues that “[a]s shown, the L-shaped inwardly folded top extends along the entire length of the upper portion of the claimed design,” but LKQ presents no evidence showing that the Fiat Toro’s upper portion above the inflection line also has an inwardly folded

top edge. *Id.* In particular, the image of the Fiat Toro that LKQ provides does not have a view from which one can determine whether the “inwardly folded top edge” is in fact “folded approximately 70° relative to the vertical axis of the fender,” as in the claimed design, and as depicted in LKQ’s comparison below. *Id.* at 43 (citing Pet. 14; Ex. 2004 ¶ 83).

'065 PATENT	FIAT TORO (PRIMARY)
	
Ex. 1001, FIG. 1 (annotated)	Ex. 1006, at 5 (cropped, annotated)

GM includes LKQ’s annotated comparison (Pet. 77) of Figure 1 (annotated in Petition) and Exhibit 1006 at page 5 (annotated in Petition) both with purple added to the upper portion. P0 Resp. 43.

GM next contends that the rear lateral edge is distinct between the two designs. *Id.* According to GM, the Fiat Toro also does not disclose the claimed design’s “rear lateral edge,” because “the claimed design has a lower rear lateral edge (highlighted below in red) extending vertically, but with a slight frontward bow and an upper rear lateral edge (highlighted below in blue) that extends rearwardly and connects to the protrusion edge (highlighted below in green).” *Id.* (citing Ex. 2004 ¶¶ 84–86).



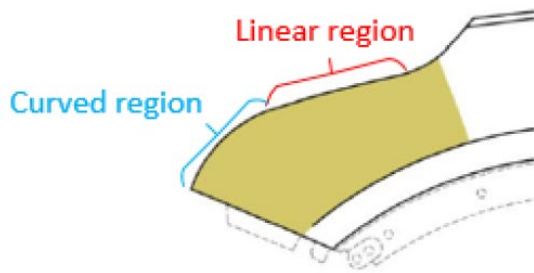
GM's comparison of Figure 3 of the claimed design with Exhibit 1006, at 1 (partial, annotated) adding red, blue, and green lines along the rear lateral edge of both designs to emphasis the varied directions of that rear lateral edge. PO Resp. 43–44. GM argues that “[i]n contrast, the Fiat Toro’s upper rear lateral edge (highlighted in blue) extends in an opposite direction—forward rather than rearward,” and “the Fiat Toro’s upper rear lateral edge (highlighted in red) extends substantially vertical, and does not bow forward like the claimed design.” *Id.* at 44 (citing Ex. 2004 ¶¶ 84–85). GM contends again that the rear lateral edge is a critical interfacing feature, and as such, any deviation would be significant to a skilled designer.

GM concludes that the Fiat Toro does not teach the claimed design’s configuration, which again renders that vehicle an improper *Rosen* reference. *Id.* (citing Ex. 2004 ¶ 86).

GM also argues that a skilled designer would not combine the Horki Concept with the design of the Fiat Toro for various reasons. *Id.* at 45–49.

GM then argues even if the Fiat Toro were a proper *Rosen* reference, and even if the two references were combinable, the Horki Concept does not teach the claimed design’s front portion as LKQ contends. *Id.* at 49.

According to GM and Mr. Peters, the Horki Concept does not teach a front portion having a bulbous shape. *Id.* at 50 (citing Ex. 2004 ¶ 95). GM notes that “the front portion of the claimed design has a distinct, asymmetric shape formed by a linear region, followed by a convexly curved edge at the front end,” and that this “asymmetric design forms the bulbous tip, which contributes to the claimed design’s overall appearance,” as depicted in the graphics provided by GM below. *Id.*



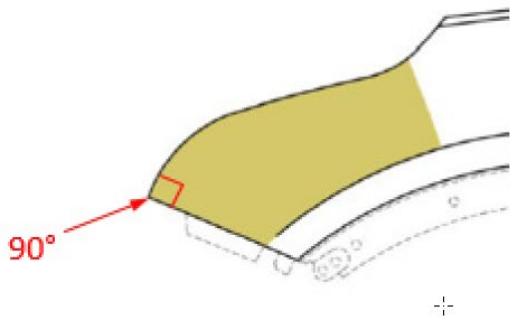
'065 Patent



Horki Concept

GM’s comparison of the front portion of the fender of the ’065 patent using LKQ’s gold annotated Figure 3 to the front portion of the Horki Concept found at Exhibit 1008, at 6 (reversed, partial). PO Resp. 50. GM adds a blue “Curved region” and red “Linear region” annotation to Figure 3 in order to depict the curvature of the top edge – flowing frontward in a linear region downward into a curved region at the front portion. As depicted, the Horki Concept’s front portion and tip are formed by a continuous upper arc extending to and the front portion has no linear region. *Id.* Mr. Peters testifies that this difference is not only evident to an ordinary designer, but demonstrates stark stylistic distinctions between the Horki Concept and the claimed design. Ex. 2004 ¶ 95.

GM next argues that the tips of the front portion are distinct and the Horki Concept does not teach a 90-degree angled tip, as found in the design claim. PO Resp. 51 (citing Ex. 2004 ¶ 96). GM alleges that “[t]he claimed design’s short, blunt tip is formed by the upper and front edges of the fender intersecting at a right angle,” and “the Horki Concept’s tip has a more sharply angled front tip as compared to the claimed design,” as depicted below.



'065 Patent



Horki Concept

GM’s comparison of the front tip of the fender of the ’065 patent using LKQ’s gold annotated Figure 3 adding a red 90 degree angle, to the front portion of the Horki Concept found at Exhibit 1008, at 6 (reversed, partial). PO Resp. 51.

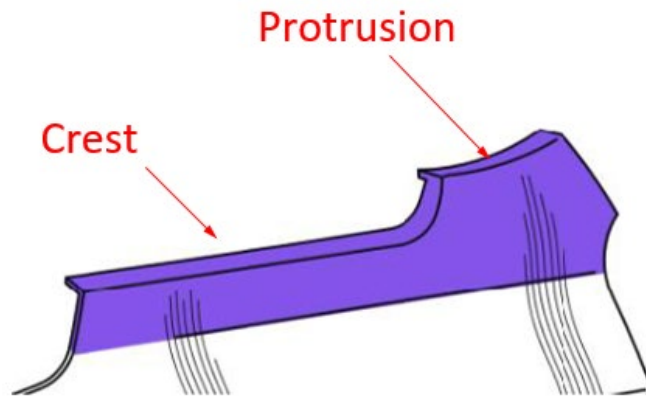
5. Analysis

Based on the final record before us, LKQ has not persuasively shown that the designer of ordinary skill in the art would find that the Fiat Toro is a proper primary, or *Rosen*, reference. Further, to the extent that Fiat Toro were a proper *Rosen* reference, LKQ fails to demonstrate that the ’065 patent is unpatentable based on the combination of the Fiat Toro and the Horki Concept because the Horki Concept does not teach the front portion relied upon by LKQ for the combination. We undertake our analysis with the

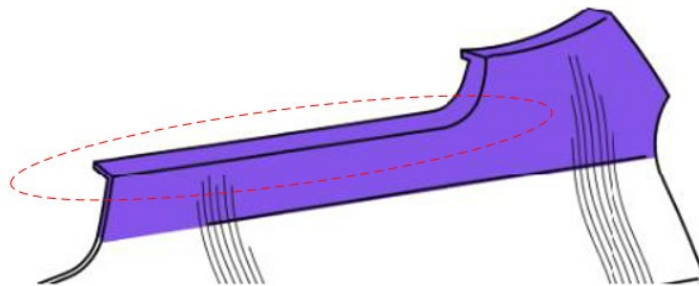
skilled designer in mind. The designer of ordinary skill is an individual who has at least an undergraduate degree in transportation or automotive design experience in the field of transportation design, or someone who has several years' work experience in transportation or automotive design. *See* Pet. 51. We also determine, based on the final record, that seemingly subtle details are readily noticed by the skilled designer for vehicle front fender design. Ex. 2004 ¶¶ 48, 49 (discussing evidence of “importance that replacement parts be identical to the original part”); Ex. 2003, 10, 14 (LKQ Petition Letter stating that if the look of the part is different “consumers would simply not purchase the replacement.”); Ex. 2005, 3–4.

The Petition fails to adequately address the differences between the claimed ornamental fender design and the Fiat Toro in several important areas, including: the distinct upper portions of each design, the claimed design's inwardly folded (L-shaped) top edge, and the rear lateral edge. Based on the final record, these differences combined with the other differences noted by LKQ (Pet. 81) are substantial and prevent the Fiat Toro from having design characteristics that are basically the same as that claimed in the '065 patent – as required for a *Rosen* reference.

The shape of the upper portion of the fender contributes to the claimed design's smooth and athletic overall appearance, and it includes two major components: a protrusion and a crest. *See* Ex. 2004 ¶ 38.



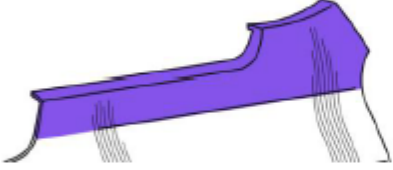
Mr. Peters' annotated version of Figure 1 taken from the Petition (at 14) with purple shading along the top portion and the words "Crest" and "Protrusion" added in red with areas pointing to those respective regions. Ex. 2004 ¶ 38. The "L-shaped" inwardly folded top edge is prominent in the figure above running along the top of the crest and up into the protrusion portion.



An annotated portion of Figure 1 with purple shading (Pet. 14) but also adding a red circle around the inwardly folded top edge that is folded approximately 70° relative to a vertical axis. See Ex. 2004 ¶ 40.

The Fiat Toro's top edge has a different appearance than the '065 patent in part because the Fiat Tori does not depict the claimed design's inwardly folded (L-shaped) top edge. The top edge is shown in solid lines in the '065 patent, and prominently visible in the views shown in the '065

patent, whereas the quality of the Fiat Toro exhibits do not persuasively show such an edge as seen below.

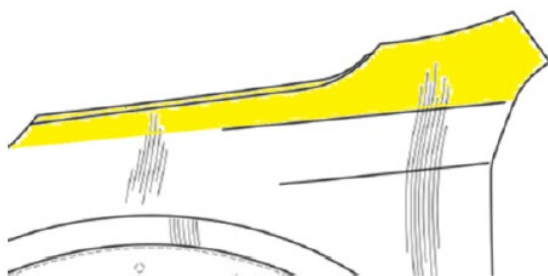
'065 PATENT	FIAT TORO (PRIMARY)
	
Ex. 1001, FIG. 1 (annotated)	Ex. 1006, at 5 (cropped, annotated)

LKQ's comparison of annotated Figure 1 with Exhibit 1006 at 5 both cropped and annotated in purple shading. Pet. 77. The record does not support LKQ's contention that the Fiat Toro has an L-shaped inwardly folded top edge.

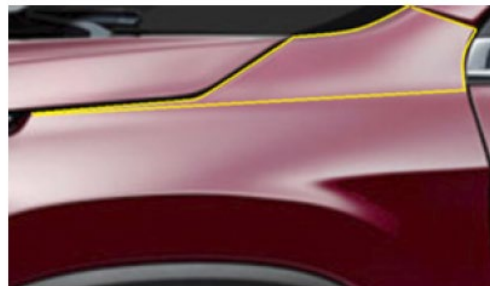
LKQ argues that a designer of ordinary skill in the art would have understood the Toro's fender to have or suggest a folded top edge (Pet. Reply 30), but there is no persuasive evidence of such a fold before us. *See* Pet. 77; Pet. Reply 21–30, 33 (pointing to a portion below the top edge but not along the edge), 34 (same); *see also* Tr. 12:18–13:26 (discussing differences in top portion). LKQ annotates two obscured images of the Fiat Toro (Pet. Reply 33–34), but there is simply no evidence of an L-shaped inwardly folded top edge along the crest of the top portion. Neither of LKQ's images show an inwardly folded top edge that is folded approximately 70° relative to the vertical axis of the fender. *See* PO Sur-Reply 30 (including both annotated images). LKQ's exhibits of the Fiat Toro are obscured along this edge, which prevents visibility of the internal

components of the top edge of the fender. When evaluating prior art references for purposes of determining patentability of ornamental designs, the focus must be on actual appearances and specific design characteristics rather than design concepts. *Harvey*, 12 F.3d at 1064. LKQ has not produced any persuasive evidence showing the actual appearance of the Fiat Toro top edge or even how it interacts directly with the creases of the hood and the vehicle A-pillar. *See* Ex. 2004 ¶¶ 40, 83. We also disagree that “the presence or absence of an inwardly folded edge has no bearing on the basic similarity of the designs.” Pet. Reply 34 (citing Ex. 1052 ¶ 55). The edge is prominently shown in each of the ’065 patent’s four figures. *See* Ex. 1001, Figs. 1–4.

As shown from the below comparison, the Fiat Toro’s upper portion is defined by a more angular, prominent protrusion, occupying a majority of the upper portion’s length (> 63%), and a less prominent crest located above an inflection line. *See* Ex. 2004 ¶ 81.



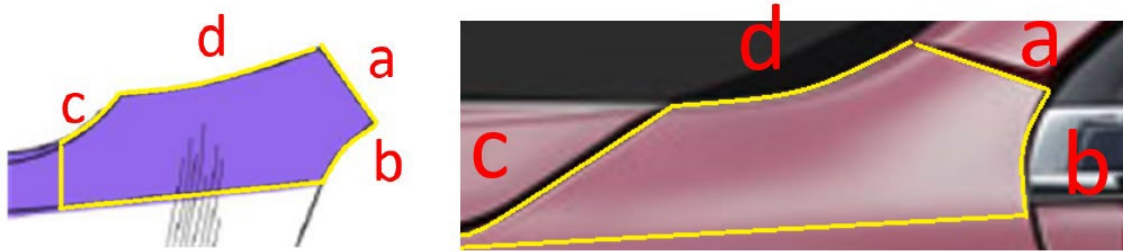
'065 Patent



Fiat Toro

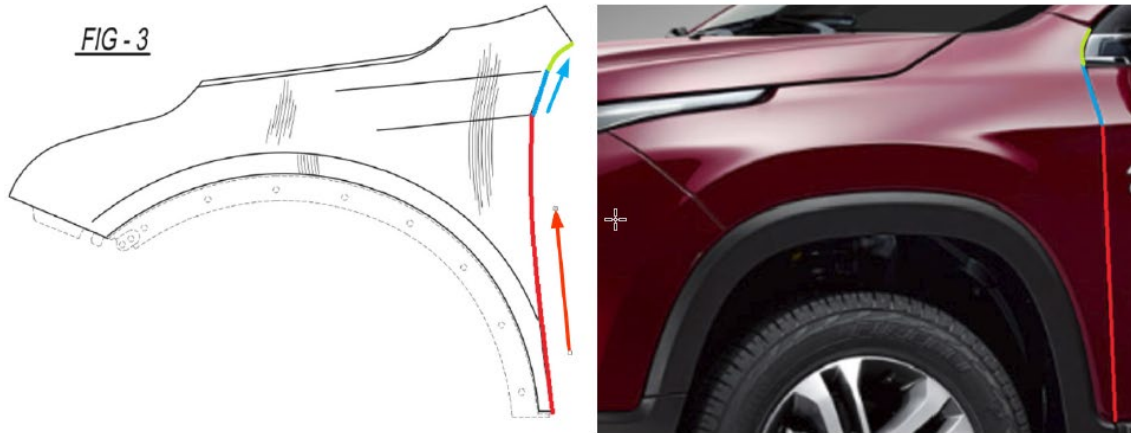
GM’s comparison of the “upper portion” of Exhibit 1001 at Figure 3 (partial, annotated) to Exhibit 1006 at 1 (partial, annotated). We agree partially with GM that the Fiat Toro’s inflection line extends in close proximity to the upper edge of the fender forms a crest that is not as noticeable as that claimed in the ’065 patent, but perhaps not to the extent pictured by GM

above. *Compare* Pet. Reply 31–32 *with* the above shading. Further, examining just the upper right portion, the claim design requires: (a) a right upper edge, (b) a right lower edge, (c) a left edge, and (d) an elongate upper left edge, as shown below, but the Fiat Toro has distinct slopes and curvature that would be noticeable to the designer of ordinary skill.



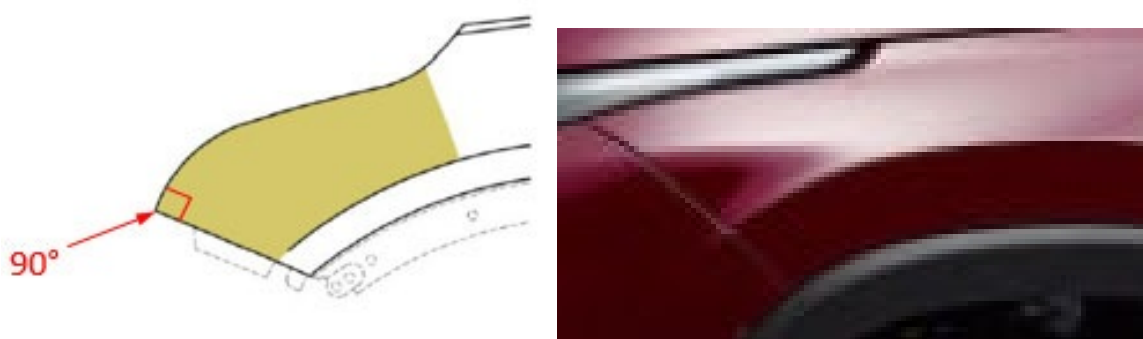
Enlargement of the upper portion of fender from Figure 1 (left) compared to the Fiat Toro's upper right portion found in Exhibit 1006, page 1, with yellow highlighting around the perimeter with letters "a–d" added on each perimeter line. Inst. Dec. 36. Examining all the comparison of all the figures above, the claimed design has a steep right upper edge (a), which is closer to vertical, while the Fiat Toro has a much different right upper edge that is nearer to horizontal. The elongate upper left edges (d) are similar for both designs, but both the right lower edges (b), and the left edges (c) have small but noticeable distinctions in slope angle and curvature.

As further seen below, the Fiat Toro does not disclose the claimed design's rear lateral edge, which for large part is dictated by the matching shape of the door and A-pillar.



GM's comparison of Figure 3 of the claimed design with Exhibit 1006, at 1 (partial, annotated) adding red, blue, and green lines along the rear lateral edge of both designs to emphasis the varied directions of that rear lateral edge. PO Resp. 43–44. The claimed design has a lower rear lateral edge (in red above) extending vertically, but with a slight frontward bow and an upper rear lateral edge (blue) that extends rearwardly and connects to the protrusion edge (green). *Id.* (citing Ex. 2004 ¶¶ 84–86).

Another significant distinction between the two designs, and as recognized by LKQ (Pet. 81–82), is the front portion of the fender.



A comparison of annotated Figure 3 (left) (as found at PO Resp. 51) with a partial portion of Exhibit 1006 at 1 (right) shows that the claimed design's front portion has a distinct, asymmetric shape formed by a linear region,

followed by a convexly curved tip at the front end. The claimed asymmetric design forms a bulbous tip with a defined right angle. Contrastingly, the Fiat Toro has about a 45 degree angle, creating a sharp front angle. The claimed design's short, blunt tip that is formed by the upper and front edges of the fender intersecting at a right angle is very distinct from the Fiat Toro's sharply angled front tip that is more elongated and almost flat (slightly convex) along the upper edge. As also recognized by LKQ, the wheel arch of the claimed design is more arcuate than that of the Fiat Toro. Pet. 82.

LKQ argues that GM did not consider every similarity and compare the designs as a whole. *See* Pet. Reply 25–30 (listing about twenty-eight similarities). We have considered these arguments, including each of the alleged similarities asserted by LKQ. GM and Mr. Peters did in fact compare the designs as a whole, including multiple side-by-side comparisons of the '065 patent design and the Fiat Toro. *See* PO Resp. 39–44; Ex. 2004 ¶¶ 78–86, 80 (“Fiat Toro’s design has a different overall appearance than the '065 Patent in part because the Fiat Toro does not depict the claimed design’s overall profile and shape of the upper portion. The shape of the upper portion has multiple distinct features that contribute to the overall appearance of the '065 Patent’s design.”); PO Sur-Reply 22–30. We agree with GM, however, that it was the unmistakable differences, not the mundane similarities, between these designs that dominated the analysis. *See* PO Sur-Reply 22–24. The differences in the upper portion of the claimed design, and the front portions, as compared to the Fiat Toro, substantially affect its overall appearance, as further depicted below.

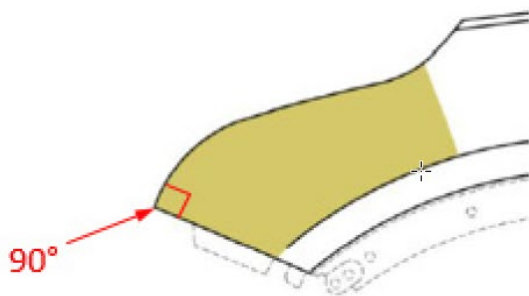


GM's use of Exhibit 1006 at 1 (partial), overlaid with a yellow outline of Figure 3 of the '065 patent. PO Sur-Reply 24. Even if we discount GM's sizing of these two designs on top of one another as potentially being off, the overall differences in the angles, slopes, proportions, and edge shapes of the claimed design's upper and front portions are numerous and distinguish the two designs. *Id.* at 25. For example, the Toro's upper portion drops at a different location and has a different height and angles. These differences, combined with the distinct front portions and rear lateral edge angles, are significant and disqualify the Toro as a primary reference.

Even presuming that the Fiat Toro qualifies as a proper *Rosen* reference, which we determine it does not, in the second step of our analysis we consider whether LKQ has shown that the Fiat Toro may be modified by the Horki Concept to create a design that has the same overall visual

appearance as the claimed design. LKQ’s proposal of incorporating a purported “bone line,” the front portion’s “curve,” and “slanted edge,” and an arcuate wheel arch (Pet. 81–82) fails to account for the multiple other differences between Fiat Toro and the claimed design that are significant to the designer’s impression of the overall visual appearances of the design. Even after the Horki Concept’s front portion is used to modify the Fiat Toro design, LKQ still has not persuasively shown that the modification of the Fiat Toro with the Horki Concept would create a design that has the same overall visual appearance as the claimed design to the designer of ordinary skill.

As noted above, the claimed design has a distinct, asymmetric shape formed by a linear region, followed by a convexly curved tip at the front end, and asymmetric design forms a bulbous tip with a defined right angle. In contrast, the Horki Concept has a generally symmetrical curved tip formed by one continuous arc, and the front portion has no linear region, as depicted in the comparison below.



'065 Patent



Horki Concept

GM’s comparison of Figure 3 (Pet. 16) (partial, annotated) to Exhibit 1008, page 7 (reversed, partial) adding a 90 degree right angle annotated in red on the claimed design’s front angle in Figure 3. PO Resp. 51. As also depicted

above, the Horki Concept does not teach a 90-degree angled tip, whereas the claimed design's short, blunt tip is formed by the upper and front edges of the fender intersecting at a right angle. *See* Ex. 2004 ¶¶ 95, 96. The Horki Concept's tip has a more sharply angled front tip and also appears more elongated as compared to the claimed design's short tip. We find Mr. Peter's testimony that these differences would create a hypothetical combination having a "front portion" with a different shape, which, in turn, would contribute to an overall appearance that is distinct from that of the claimed design. *See id.* ¶ 96.

Based on the distinctions noted above, LKQ has not persuasively shown on the final record that a designer of ordinary skill would find that LKQ's proposed combination of prior art designs has the same overall visual appearance as the claimed design. Because we determine that LKQ has not persuasively shown that the Horki Concept teaches the ornamental design of the front portion, we decline to reach GM's remaining arguments about the why it would have been improper to combine the designs of the two references.

E. The Alleged Obviousness of the Claim Over the 2016 Fiat Toro Vehicle, 2017 Cadillac XT5 Vehicle, and Lan

LKQ contends that "the single claim of the '065 patent is unpatentable as obvious over the Fiat Toro in view of the 2017 Cadillac XT5 as depicted in Exhibits 1009–10 in further view of Lan (Ex. 1011)." Pet. 91. LKQ relies on the 2017 Cadillac XT5 for its "same front upper edge and convex front portion as the design of the '065" patent, and also for teaching to "modify[] the Fiat Toro design to remove the bone line to create a smoother, more refined and fluid appearance." Pet. 95, 98. LKQ relies on Lan for "the

same wheel arch shape and bevel as the design of the '065" patent."

Pet. 100–101.

For the reasons set forth above, we determine that the Fiat Toro is not a proper *Rosen* reference. For this reason, and based on the final record before us, LKQ has not established by a preponderance of the evidence that the claim of the '065 patent would have been obvious based on this ground.

Below, we also determine that even if the Fiat Toro qualifies as a proper *Rosen* reference, in the second step of our analysis we determine that the designer of ordinary skill in the art would not find that the Fiat Toro modified by the 2017 Cadillac XT5 and Lan creates a design that has the same overall visual appearance as the claimed design. We provide LKQ's contentions and GM's response as to these contentions. Finally, we provide our analysis and explanation as to why we determine that the proposed combination would not create a design that has the same overall visual appearance as the claimed design.

1. 2017 Cadillac XT5 Vehicle

According to LKQ, Exhibits 1009 and 1010 constitute "[a] true and accurate representation of the Cadillac XT5 vehicle," which was "published through a TFL Car publication that announced the unveiling of the 2017 Cadillac XT5." Pet. 31. LKQ asserts that "this article and accompanying video qualify as prior art under 35 U.S.C. § 102(a)(1)." *Id.* An image of the Cadillac XT5, as depicted in the TFL Car publication and video relied upon by LKQ are shown below:



LKQ produces an image of Cadillac XT5 left front view from Exhibit 1009, page 1. Pet. 33.

2. Lan

LKQ also relies on Lan as a secondary reference. Ex. 1011. LKQ contends that Lan is prior art under 35 U.S.C. § 102(a)(1) because “Lan was filed on January 6, 2016, claimed a priority date of July 17, 2015 and issued on October 24, 2017.” Pet. 34 (citing Ex. 1011, 1). Figure 1 of Lan is reproduced below.



FIG. 1

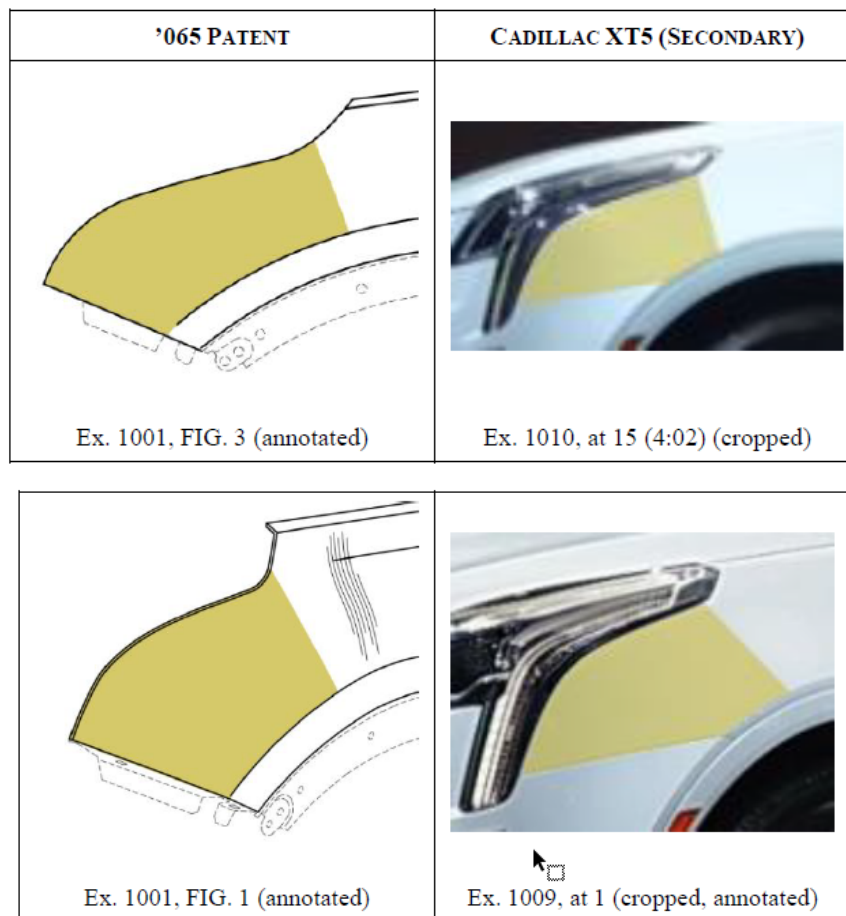
Figure 1 of Lan shows a right front perspective view of the Lan automobile. Ex. 1011.

3. Petitioner Contentions

LKQ relies on the same analysis discussed above to show that the Fiat Toro is a proper primary reference. *See* Pet. 91–92. For the reasons set

forth above, we disagree and determine that the Fiat Toro is not a proper *Rosen* reference.

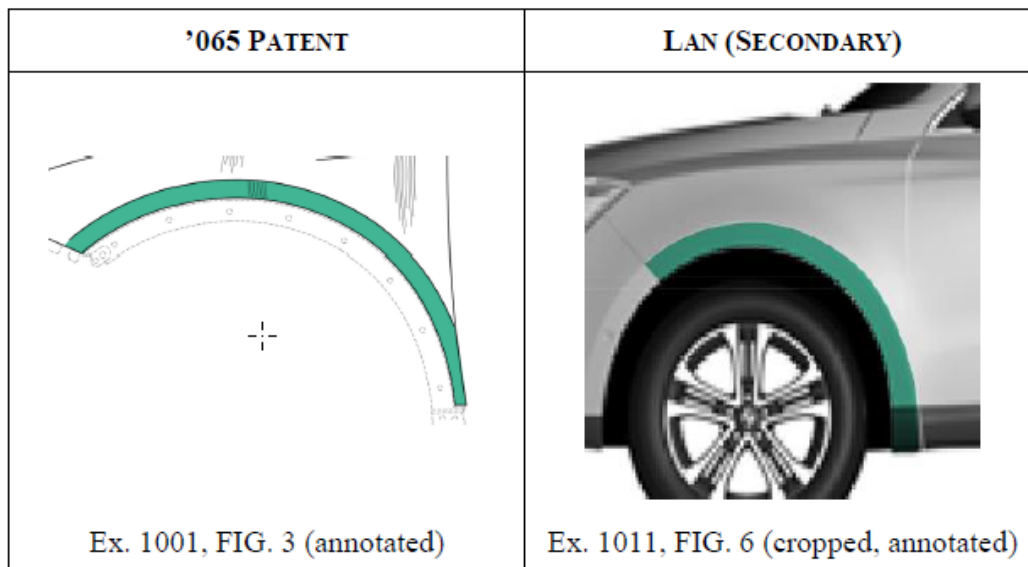
LKQ relies on the Cadillac XT5 as a secondary reference alleging that it has “similar proportions as the 2016 Fiat Toro,” and the vehicles “are similarly classified and share a similar design theme of bold lines and flowing contours,” such that “the appearance of design elements on the XT5 Article design would suggest their application to the Fiat Toro Design.” Pet. 93–94. LKQ then uses the following figures to show the front portion of the claimed design compared to the same area of the Cadillac XT5:



LKQ relies on Figure 3 of the '065 patent compared to Exhibit 1010, page 15 (top), and Figure 1 compared to Exhibit 1009, page 1 (bottom) with both sets of drawings annotated with gold highlighting. Pet. 95–96. LKQ

contends that these comparisons show that “the upper edge of the front portion of the Cadillac XT5 fender design portion teaches a curvature precisely matching that claimed in the ’065 patent, and thus would have suggested to a DOSA modifying the front upper edge of the similar front portion of the Fiat Toro fender design,” for reasons further explained. Pet. 96–97.

LKQ next argues “Lan comprises the same wheel arch shape and bevel as the design of the ’065,” as depicted below:

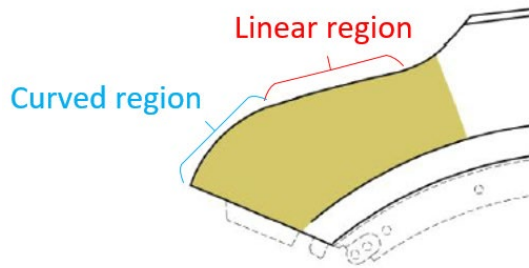


LKQ’s comparison of Figure 3 of the ’065 patent with Lan (Ex. 1011) Figure 6, both annotated with a green highlight along the wheel arch. Pet. 100. LKQ contends “the wheel arch flat disclosed by Lan tapers as it approaches the rear edge, has an arcuate shape of approximately the same dimensions as that of the ’065 Patent.” Pet. 102.

4. Patent Owner Contentions

GM argues that the teachings of the teachings of the Fiat Toro are too different to be combined with the Cadillac and Lan references. PO Resp. 52–56.

Relying on the testimony of Mr. Peters, GM next argues that even if the Fiat Toro were combined with the Cadillac and Lan, the combination does not teach the overall ornamental appearance as “basically the same” as the claimed design of the ’065 patent. *Id.* at 56 (citing Ex. 2004 ¶¶ 106–109). According to GM, the Cadillac and Lan fail to teach other differences between the Fiat Toro and the claimed design, namely, the “front portion” of the claimed design. *Id.* at 56–59. GM relies on the following figures showing a comparison of the front portion of the claimed design with that of the Cadillac XT5.

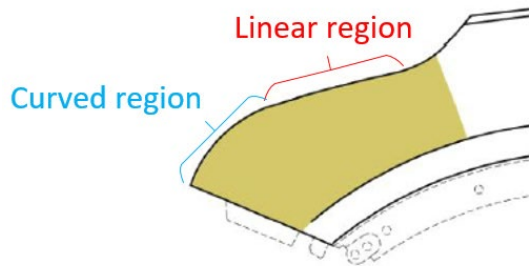


A comparison of Figure 3 with gold shading at the front and blue annotations showing a curved region and red annotations showing a linear region with the Cadillac Exhibit 1009 at 1 (partial, annotated with a blue trace of the front portion). PO Sur-Reply 33 (citing Ex. 2004 ¶¶ 107–109). The claimed design’s front portion has a “bulbous” shape formed by an upper edge with a long linear region and a short curved region, and a downward sloping lower edge. Ex. 2004 ¶¶ 107–109. In contrast, the Cadillac’s front portion (shown in blue) includes a symmetrical, curved upper edge and a lower edge extending in an upward and rearward direction pointing to the top of the wheel arch. *Id.*

5. Analysis

Our views of the Fiat Toro as a primary, or *Rosen*, reference are addressed above.

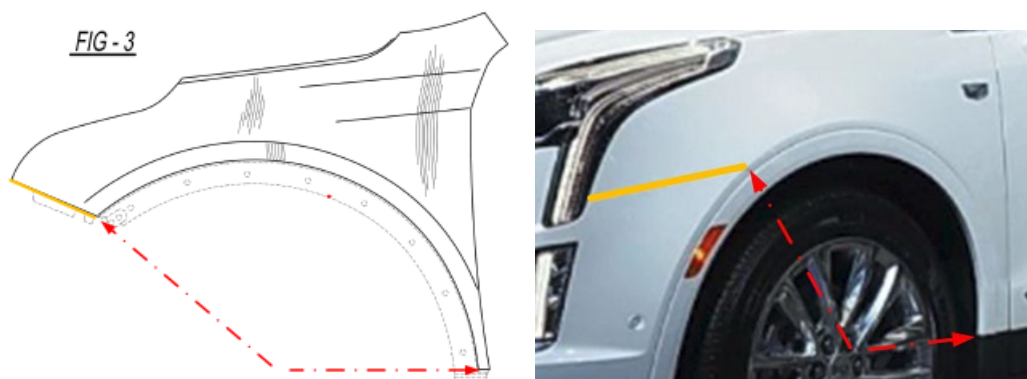
We determine that the combination of the Fiat Toro with the Cadillac XT5 and Lan does not result an overall appearance that is “basically the same” as the claimed design. LKQ has not persuasively proven that a designer of ordinary skill in the art would view the Cadillac XT5 fender design as teaching “a curvature precisely matching that claimed in the ’065 Patent,” as argued by LKQ. As seen below in the comparison of the front portion of the claimed design with that of the Cadillac XT5, claimed design has a front portion having linear region transitioning into a curved region that forms a bulbous shape, while the Cadillac XT5’s upper edge has a symmetrically positioned curved region that forms a narrowed tip shape.



A comparison of Figure 3 with gold shading at the front and blue annotations showing a curved region and red annotations showing a linear region with the Cadillac Exhibit 1009 at 1 (partial, annotated with a blue trace of the front portion). PO Sur-Reply 33 (citing Ex. 2004 ¶¶ 107–109). Mr. Peters testifies that the claimed design’s front portion has a “bulbous” shape formed by an upper edge with a long linear region and a short curved region, and a downward sloping lower edge, but the Cadillac’s front portion (shown in blue) includes a symmetrical, curved upper edge and a lower edge

extending in an upward and rearward direction pointing to the top of the wheel arch. Ex. 2004 ¶¶ 107–109. We find this testimony more persuasive than LKQ’s declarants.

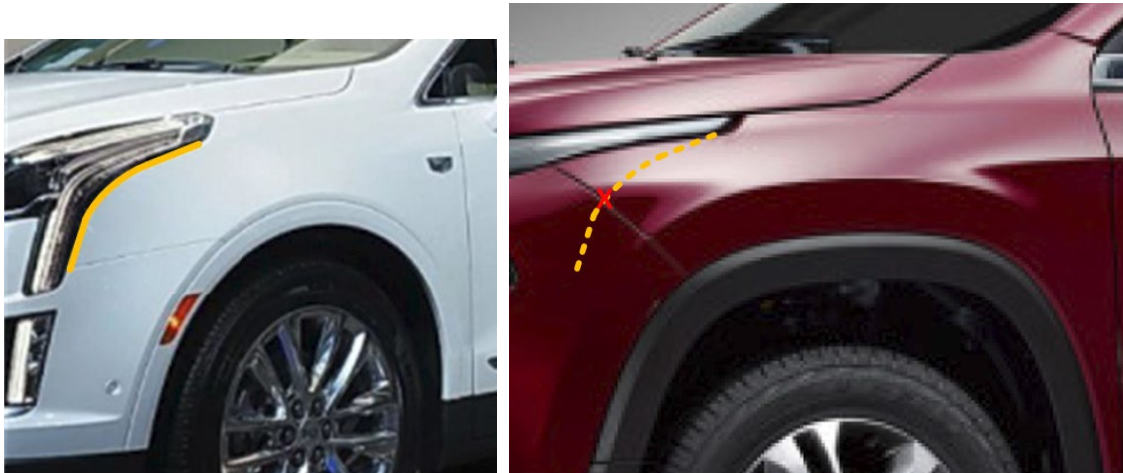
GM provides the following persuasive comparison showing the remarkably distinct downwardly sloped lower edge (in yellow) of the claimed design compared to a slope in an upward and rearward direction of the Cadillac XT5.



GM’s annotated Figure 3 of the ’065 patent compared to with Exhibit 1009 at 1 (partial, annotated). As seen above, the Cadillac XT5 has a convexly curved area that is similar, but the front angles are not. The Cadillac XT5 has a noticeably acute angle where the ’065 patented design has a near right angle at the lower front left corner. Further, the front bottom surface from this right angle is slope downward, while the Cadillac XT5 has a bottom surface sloping upward toward to a top portion of the wheel arch. Ex. 2004 ¶ 107. As Mr. Peters explains, these difference would be evident to an ordinary designer as distinct stylistic differences between the Cadillac XT5 and the claimed design. *Id.*

LKQ contends that it would only adopt the Cadillac XT5’s upper curvature – the headlamp aperture shape that progresses forwards – but keep “the Toro’s original slanted cut.” Pet. Reply 45 (citing Ex. 1052 ¶ 77). We

have considered LKQ's arguments that Cadillac's "headlamp aperture shape that progresses forwards, then arcs downwards" would "create the same bulbous front portion shape as claimed," but we determine that this argument is unpersuasive. *Id.* Because the Cadillac's front edge curves symmetrically downward and lacks a linear region, the lower edge of the front portion would also need to extend downward in a similar fashion in order to maintain its specific shape. *See* PO Sur-Reply 34. Thus, even if the Cadillac's front edge were to accommodate the Fiat Toro's original slant, as suggested by LKQ, this would result in a premature termination of the upper edge of the Cadillac's front portion as depicted in the annotated figures provided by GM below.



GM's depiction of the upper edge of the Cadillac's front portion (left) as that edge would be overlaid onto the front portion of the Fiat Toro (right). PO Sur-Reply 35. We do not find persuasive LKQ's argument that seeks to adopt the headlamp aperture shape of the Cadillac XT5 (upper edge of the front portion) while ignoring other design elements in the front portion of the XT5, such as: slope of the bottom edge, front angle, and proportionality. Finally, even with the proposed modifications suggested by LKQ (Pet. Reply 44–45), the combination would still fail to create the distinctive

bulbous front portion that significantly contributes to the claimed design's smooth overall appearance.

Because we determine LKQ has not persuasively proven that the combination of references creates basically the same ornamental appearance as the claimed design, we decline to address GM's alternative arguments that the teachings of the Fiat Toro are too different to be combined with the Cadillac and Lan references.

III. CONCLUSION

LKQ has not proven by a preponderance of the evidence that the '065 patent design claim is indefinite. For the reasons expressed above, we determine that LKQ has not proven by a preponderance of the evidence that the '065 patent design claim would have been obvious over the Fiat Toro in combination with the Horki Concept. Likewise, LKQ has not proven by a preponderance of the evidence that the '065 patent design claim would have been obvious over the Fiat Toro in combination with the Cadillac XT5 and Lan.

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1	112	Indefiniteness		1
1	103	Fiat Toro and Horki Concept		1
1	103	Fiat Toro, Cadillac XT5, and Lan		1
Overall Outcome				1

IV. ORDER

For the reasons given, it is

ORDERED that, based on a preponderance of the evidence, the claim of the '065 patent has not been shown to be unpatentable; and

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

PGR2020-00054
Patent D864,065 S

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