

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CORE SURVIVAL, INC.,
Petitioner,

v.

S & S PRECISION, LLC,
Patent Owner.

Case PGR2015-00022
Patent 8,882,292 B2

Before BEVERLY M. BUNTING, KEVIN W. CHERRY, and
CHARLES J. BOUDREAU, *Administrative Patent Judges*.

CHERRY, *Administrative Patent Judge*.

DECISION
Institution of Post-Grant Review
37 C.F.R. § 42.208

I. INTRODUCTION

CORE Survival, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting post-grant review of claims 1–20 of U.S. Patent No. 8,882,292 B2 (“the ’292 patent”). S & S Precision, LLC (“Patent Owner”) filed a Preliminary Response (Paper 7, “Prelim. Resp.”) to the Petition.

Under 35 U.S.C. § 324(a), a post-grant review may be instituted only if “the information presented in the petition . . . demonstrate[s] that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” For the reasons explained below, upon consideration of the Petition and the Preliminary Response, we conclude that the information presented in the Petition demonstrates that it is more likely than not that at least one of the challenged claims is unpatentable. Accordingly, we institute a post-grant review of claims 1–9 and 16–20 of the ’292 patent.

A. Related Matters

The parties do not identify any related matters. *See* Pet. 1; Paper 5, 1.

B. The ’292 Patent

The ’292 patent is titled “Multi-Spectrum Lighting Device with Plurality of Switches.” Ex. 1001, at [54]. The ’292 patent issued November 11, 2014 from U.S. Application No. 13/927,288 (“the ’288 application”), which was filed on June 26, 2013. *Id.* at [21], [22], [45]. The ’288 application is a continuation-in-part of U.S. Application No. 13/018,030 (“the ’030 application”), which was filed on January 31, 2011. *Id.* at [63]. The ’030 application is a continuation-in-part of U.S. Application 12/592,327 (“the ’327 application”), which was filed on November 23, 2009. *Id.* The ’292 patent also claims priority to a provisional application, U.S. Application No. 61/199,959 (“the Provisional Application”), which was filed on November 21, 2008. *Id.* at [60].

The ’292 patent generally describes a multi-spectrum emitting device. *Id.* at Abstract. The device is capable of emitting a first spectrum and a second spectrum and includes switching elements configured to change the emitted light from the first spectrum to the second spectrum. *Id.* One

possible use for the device is for signaling during military or law enforcement operations or to mark friendly vehicles with non-visible light spectrums. *Id.* at 2:38–62; 7:9–65.

Figure 4 of the '292 patent illustrates an exemplary embodiment of the device and is reproduced below.

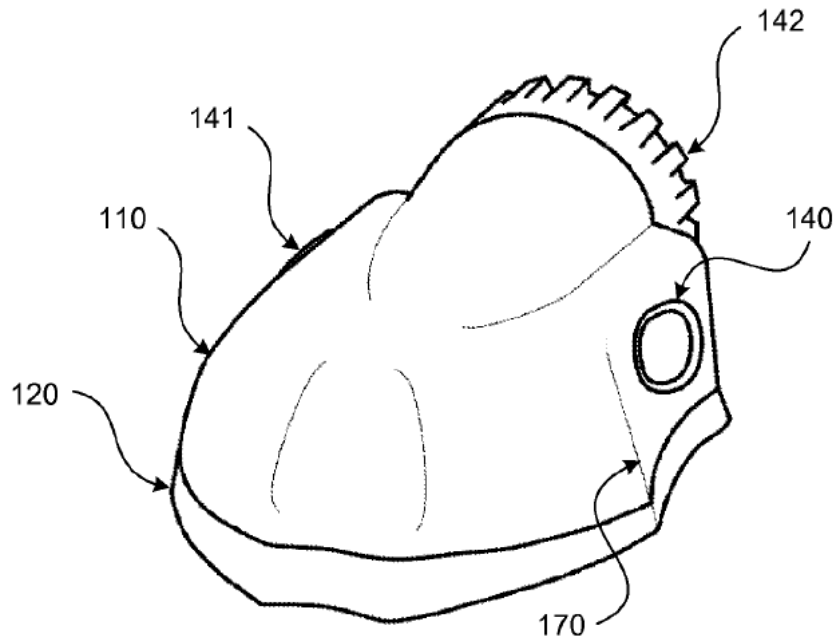


Figure 4 is an isometric view, including exterior details, of an exemplary embodiment of the strobe lighting device.

The device includes housing 110, which may be formed of or attached to, base 120. *Id.* at 6:64–7:1. Housing 110 may be substantially curved or sloped away from the outer perimeter of base 120 throughout the majority of the outer surface or emitting surface. *Id.* at 7:36–39. For example, the device may be generally convex with respect to the base. *Id.* at 7:39–40. The device may also have concavities, such as concavity 170 and include places for switches 140 and 141. *Id.* at 7:40–46. Housing 110 also can be substantially or completely translucent. *Id.* at 10:56–64. Housing 110 contains a power source, which is accessible through removable cap/switch

142, as well as a circuit board with one or more light-emitting diodes (LEDs) of various types connected to the circuit board. *Id.* at 11:9–49.

C. Illustrative Claim

Claims 1 and 16 are independent. Claim 1 is reproduced below:

1. A multi-spectrum lighting device comprising:
 - a base;
 - a housing extending substantially upwards and inwards from the base;
 - a switching mechanism including a plurality of switching elements disposed about the housing;
 - a first emitter configured to emit light in a first spectrum; and
 - a second emitter configured to emit light in a second spectrum;wherein, the housing includes a substantially curved emitting surface, and substantially all of the emitting surface above the base is configured to allow light emitted from the first emitter and the second emitter to pass there-through.

Ex. 1001, 14:47–61.

D. References Relied Upon

The Petition relies on the following references:

Ford	US 7,023,004 B2	Apr. 4, 2006	Ex. 1002
Hamilton	WO 2009/101391 A2	Aug. 20, 2009	Ex. 1004
Mish	US 6,077,106	June 20, 2000	Ex. 1005
Dubord	US 2006/0087851 A1	Apr. 27, 2006	Ex. 1006
U.S. Trademark Application Serial No. 85014106, including Neptune™ product brochure (“Neptune”), filed Apr. 14, 2010			Ex. 1003

E. Alleged Grounds of Unpatentability

Petitioner contends that claims 1–20 of the '292 patent are unpatentable on the following grounds:

References	Basis	Claim(s) Challenged
Ford, Neptune, and Hamilton	§ 103	1–9 and 16–19
Ford, Neptune, Hamilton, and Mish	§ 103	10–15
Ford, Neptune, Hamilton, and Dubord ¹	§ 103	20

II. ANALYSIS

A. Post-Grant Review Eligibility

The post-grant review provisions set forth in Section 6(d) of the AIA² apply only to patents subject to the first-inventor-to-file provisions of the AIA. *See* AIA § 6(f)(2)(A) (“The amendments made by subsection (d) . . . shall apply only to patents described in section 3(n)(1).”). The first-inventor-to-file provisions apply to any application for patent, and to any patent issuing thereon, that contains or contained at any time a claim to a claimed invention that has an effective filing date on or after March 16, 2013. *See* AIA § 3(n)(1).

Petitioner contends that the application from which the '292 patent issued contained new matter and was properly examined under the first-

¹ Although in heading and introduction for this ground, Petitioner includes Mish (*see* Pet. 63–64), Petitioner does not rely on Mish in its analysis or mention Mish in the listing of the ground (*id.* at 9). Thus, we consider the inclusion of Mish to be a clerical error and analyze the ground as not including the Mish reference.

² Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”).

inventor-to-file provisions. Pet. 7. Specifically, Petitioner asserts that original claim 22 of the '288 application, which was cancelled to maintain priority, related to new matter that was added to the '288 application. *Id.* at 10. Thus, at the very least, Petitioner asserts that claim 22 of the originally filed '288 application had an effective filing date after the effective date of the AIA first-inventor-to-file provisions. *Id.* Patent Owner does not dispute that the '292 patent is eligible for post-grant review, and concedes that original claim 22 was based on new matter added to the '288 application. Prelim. Resp. 13. Accordingly, because the application that the '292 patent issued from contained a claim (application claim 22) that had an effective filing date after March 16, 2013, the '292 patent is subject to the first-inventor-to-file provisions.

Separate from the requirement that a patent be subject to the AIA's first-inventor-to-file provisions, an additional requirement for post-grant review eligibility is that "[a] petition for a post-grant review may only be filed not later than the date that is 9 months after the date of the grant of the patent." 35 U.S.C. § 321(c); *see* 37 C.F.R. § 42.202(a). Here, Patent Owner does not dispute that the Petition was filed on August 3, 2015, which is within nine months of the November 11, 2014 issue date of the '292 patent. *See* Pet. 7. Nor does Patent Owner dispute Petitioner's representation that it is not barred or estopped from requesting post-grant review of the '292 patent. *See id.* Accordingly, we determine that the '292 patent meets the eligibility requirements for post-grant review.

B. Alleged Procedural Defects in the Petition

Patent Owner raises three alleged defects in the Petition. *See* Prelim. Resp. 8–30. First, Patent Owner contends that Petitioner has not adequately

contested the priority of the claims of the '292 patent. Prelim. Resp. 8–17. Second, Patent Owner contends that Petitioner’s obviousness analysis is inadequate for failing to explain the differences between the references and for failing to provide an adequate rationale for the obviousness combination. *Id.* at 17–24. Finally, Patent Owner argues that Petitioner misconstrues one term and fails to provide claim constructions for six other, allegedly “material,” claim terms. *Id.* at 25–30. We consider each of these contentions below.

1. Priority Date

At this time, Patent Owner does not dispute that Ford, Mish, and Dubord are properly shown to be prior art. Patent Owner also does not dispute currently that Hamilton and Neptune were published and available publicly at least by the time of the filing of the parent application of the '292 patent, i.e., the '030 application. Patent Owner also does not present any evidence or endeavor otherwise to show that the claims meet the requirements of 35 U.S.C. § 120 or 35 U.S.C. § 119 to entitle them to the earlier filing dates of the '327 application or the Provisional Application.

Instead, Patent Owner argues that the Petition fails to meet “its initial burden of demonstrating that the '292 patent is not entitled to the November 23, 2009 or November 21, 2008 priority date.” Prelim. Resp. 15. Patent Owner contends that Petitioner had to “identify, specifically, the features, claims, and ancestral applications allegedly lacking written description and enabling disclosure.” *Id.* at 14. Thus, Patent Owner argues that the Petition should be denied because the Petition does not establish that Neptune or Hamilton are prior art. *Id.* at 17.

We do not agree with Patent Owner that Petitioner has the initial burden of showing that the '292 patent is not entitled to an earlier priority date for unpatentability purposes. As explained in a number of cases, although the patent challenger has the ultimate burden of persuasion, a patentee must demonstrate entitlement to a priority date when the patentee relies on that priority date to overcome an anticipation or obviousness argument. See *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1379–80 (Fed. Cir. 2015) (discussing burdens in *inter partes* review to show entitlement to provisional filing dates and relying on infringement cases involving continuation-in-part applications); *In re NTP, Inc.*, 654 F.3d 1268, 1276 (Fed. Cir. 2011) (noting “a patent’s claims are not entitled to an earlier priority date because the patentee claims priority . . . [r]ather, for a patent’s claims to be entitled to an earlier priority date, the patentee must demonstrate that the claims meet the requirements of 35 U.S.C. § 120”); *Research Corp. Techs., Inc. v. Microsoft Corp.*, 627 F.3d 859, 870–71 (Fed. Cir. 2010); *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327–29 (Fed. Cir. 2008); *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305–06 (Fed. Cir. 2008). As the Federal Circuit explained most recently in *Dynamic Drinkware*, a patent challenger has the burden of going forward to show that there is invalidating prior art. *Dynamic Drinkware*, 800 F.3d at 1379. Contrary to Patent Owner’s position, the only showing Petitioner needed to make is that “the art must have existed as of the date of invention, presumed to be the filing date of the application until an earlier date is proved.” *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 449 (Fed. Cir. 1986); *In re Fong*, 378 F.2d 977, 980 (CCPA 1967)

(“Appellants’ filing date, no earlier date having been proved, is their date of invention.”).

Patent Owner’s reliance on *Polaris Wireless, Inc. v. TruePosition, Inc.*, Case IPR2013-00323, slip op. at 29 (PTAB Nov. 15, 2013) (Paper 9), is misplaced. As an initial matter, Patent Owner fails to direct us to, and we do not discern independently, any support in *Polaris Wireless* for the proposition that a Petitioner has any initial burden to contest entitlement to a provisional filing date. In contrast, the law is clear that there is no initial burden on Petitioner to rebut a provisional date. See *Dynamic Drinkware*, 800 F.3d at 1379–80. Thus, Patent Owner’s contention that Petitioner has failed to establish Hamilton is prior art by failing to show the ’292 patent is not entitled to the date of the Provisional Application is not persuasive.

Moreover, to the extent that dicta in *Polaris Wireless* suggest that the petitioner in an *inter partes* review has a specific pleading burden of identifying specific features of claims that allegedly are not supported by ancestral applications, those dicta do not provide a basis for denying the present Petition. As *Dynamic Drinkware* makes clear, the initial burden of production for showing an earlier priority date rests with the patent owner, not the petitioner. See *Dynamic Drinkware*, 800 F.3d at 1379–80.³

³ To be sure, the suggestions in *Polaris Wireless* about what the Petition should contain in this regard represent the best practice for a petitioner. Although the patent owner initially bears the burden of production on the issue of priority, there is generally no opportunity for a petitioner to submit additional evidence or argument at the institution stage. Thus, if the patent owner meets its burden and the petition contains nothing to rebut preemptively patent owner’s evidence supporting a priority claim, the petitioner’s case is in peril. However, we are not confronted by that situation here because Patent Owner in this case has produced no evidence or argument to support any claim to the earlier priority dates. Also, we note

Accordingly, we find that Petitioner's showing is sufficient, at this stage, to establish that Neptune is also prior art. Thus, on this record, we are not persuaded by Patent Owner's contentions that the Petition should be denied on this basis.

2. *Inadequate Graham Analysis*

Patent Owner also contends that the Petition should be denied because the Petitioner did not perform an adequate analysis under *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Prelim. Resp. 17–20. We disagree. Here, Petitioner has explained what it sees as the difference between the prior art and the claimed invention—whether they disclose a substantially curved emitting surface. The Petition adequately lays out where the elements are found in the prior art and clearly explains what it is doing and why. We decline to prescribe, beyond the requirements of our rules and statute, how the Petitioner must present its case. As for Patent Owner's contention that Petitioner should have presented its case as three anticipation grounds, anticipation and obviousness are related but distinct concepts relying on different tests. *See Jones v. Hardy*, 727 F.2d 1524, 1529 (Fed. Cir. 1984) (“[T]hough anticipation is the epitome of obviousness, [they] are separate and distinct concepts.”). We note that part of Petitioner's contention is that the specific shape claimed by Patent Owner is obvious given the variety of shapes available to a skilled artisan. Pet. 13–16. Petitioner bases this, in part, on a showing of the variations in curvature known to a skilled artisan, which requires illustrating similar devices that

that the initial burden on a petitioner may be different in situations where the ancestral applications are continuation applications or cases where the Examiner made priority determinations during the prosecution. Again, those situations are not presented here, so we decline to address them.

differ based on their shape. Thus, on this record, we cannot say that Petitioner's approach to the case was improper as Patent Owner contends.

3. Inadequate "Design Choice" Rationale

Patent Owner also contends that Petitioner improperly uses "design choice" as a rationale for obviousness of the claimed subject matter. Prelim. Resp. 20–24. However, we do not agree that Petitioner's rationale rests on "design choice" alone. Petitioner has also articulated other reasons for combining the references. Petitioner notes that Hamilton discloses that the emitting surface can include any shape "[i]n order to provide aesthetics and to enhance functionality of the components." Pet. 27 (quoting Ex. 1004, 10:18–19). Petitioner also explains that a skilled artisan would have been motivated to modify any of the emitting surfaces based on this suggestion in Hamilton, and because the components of the references are interchangeable. *Id.* Petitioner concludes that in light of this explicit suggestion in Hamilton, any modification would be the result of merely combining known prior art elements according to known methods to yield predictable results. *Id.* (citing *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007)). This rationale is independent of any "design choice" rationale. Thus, the alleged inadequacy of Petitioner's "design choice" rationale is not a basis for denying the Petition.

4. Failure to Provide the Broadest Reasonable Interpretation

Patent Owner also contends that the Petition should be denied because Petitioner failed to provide constructions for terms "material to determining whether trial should be instituted." Prelim. Resp. 25. We do not agree that the Petition is flawed for failing to construe the terms that Patent Owner believes are "material." A petitioner cannot anticipate every claim

construction argument that a patent owner will raise. This is particularly true when there has been no other litigation between the parties regarding the patent. Moreover, as discussed below with respect to claim construction, we do not agree with Patent Owner that most of its “material” terms need construction. Thus, we do not agree this is a basis for denying the Petition.

C. Claim Construction

In a post-grant review, claims of an unexpired patent are interpreted using the broadest reasonable interpretation in light of the specification in which they appear. 37 C.F.R. § 42.200(b); *see Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1328 (Fed. Cir. 2015) (affirming use of broadest reasonable construction standard in a covered business method patent review⁴). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). Only those terms which are in controversy need be construed, and only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

⁴ Post-grant reviews and covered business method patent reviews are instituted using the threshold enumerated in 35 U.S.C. § 324(a). *See generally Versata*, 793 F.3d at 1310.

1. “*substantially curved emitting surface*”

Petitioner seeks construction of the phrase “substantially curved emitting surface,” which is found in claim 1. Pet. 12. Petitioner argues that the phrase’s broadest reasonable construction is “a majority of the emitting surface is curved away from the outer perimeter of the base.” *Id.* Patent Owner does not offer any alternative construction for this phrase at this time, but instead argues that Petitioner’s construction would “substitute features already recited in claim 1 with less accurate phrasing, and should be denied.” Prelim. Resp. 25. Patent Owner raises two objections. First, Patent Owner argues that the emitting surface is a surface of the housing. *Id.* Second, Patent Owner argues that the claim already requires that the housing extend upwards and inwards, not just “away from,” from the base. *Id.* at 25–26.

We agree with Patent Owner that, on this record, Petitioner’s construction is inappropriate because it appears to include limitations found elsewhere in the claim. In any event, we find that the claim language is sufficiently clear on its face and that this phrase does not require construction for purposes of this Decision. Moreover, we note that the portion of the Specification relied on by Petitioner emphasizes that it is exemplary through its use of “e.g.” and “may be.” Thus, we do not agree that such language represents the type of disclaimer or lexicography necessary to limit the claim language. *See Prolitec, Inc. v. Scentair Techs., Inc.*, 807 F.3d 1353, 1358 (Fed. Cir. 2015) (“[T]he use of ‘may’ signifies that the inventors did not intend to limit [the claim]. . . .”). Although we decline to adopt Petitioner’s construction at this time, we note that we do not agree with Patent Owner’s suggestion that the emitting surface *is* the surface

of the housing. The claim states only that “the housing includes a substantially curved emitting surface.” It does not equate the surface of the housing generally with the emitting surface as Patent Owner appears to contend. Prelim. Resp. 31–39. The claim requires merely that the emitting surface is, at least, a part of the housing. This view is confirmed by the dependent claims that distinguish between the housing generally and the emitting surface. *Compare* claim 8 (“wherein the housing is made substantially of a translucent material”) *with* claim 3 (“wherein the emitting surface is substantially convex”), claim 4 (“wherein the emitting surface extends inward of the base plan view”), and claim 5 (“wherein the emitting surface includes at least one recess”). With this clarification, we determine that no further construction is necessary for this phrase.

2. “*substantially all of the emitting surface above the base*”

Patent Owner contends that the phrase “substantially all of the emitting surface above the base,” which is recited in claim 1, requires construction. Prelim. Resp. 26. Notwithstanding that contention, Patent Owner does not provide a construction. *Id.* Instead, Patent Owner submits “[t]he specification provides guidance by which ‘substantially all of the emitting surface’ could be interpreted.” *Id.* Patent Owner appears to seek to read in the requirements that “approximately 75%, or more, of the housing may be configured as an emitting surface,” (*id.* (citing Ex. 1001, 4:57–63 (emphasis omitted))), and that the housing “allow[s] maximum illumination in a relatively low profile shape” (*id.* (citing Ex. 1001, 10:56–64)). However, all of the passages cited by Patent Owner repeatedly make clear that they apply only to certain preferred embodiments and not all embodiments of the invention. *See* Ex. 1001, 4:61–63 (“In embodiments, approximately 75% or

more of the housing surface may be configured as an emitting surface.”); 10:56–64 (“In embodiments, the housing 110 may be configured to be . . .”; “Therefore, in embodiments, where, for example . . .”; and “Such features may be advantageous, for example, to allow a maximum illumination in a relatively low profile shape.”). Such tentative statements consistently labeled as referring only to certain embodiments do not rise to the level of definition or disclaimer necessary to limit claim scope. *See GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309–10 (Fed. Cir. 2014). Moreover, the portions cited by Patent Owner deal with attributes of the housing surface, not the claimed “emitting surface above the base.” *See* Ex. 1001, 4:61–63 (“approximately 75%, or more, of the housing may be configured as an emitting surface”); 10:59–62 (“in embodiments where, for example, substantially all of the housing is configured to be translucent, the device may provide illumination from the majority of the housing surface”). The claims do not recite “housing surface.” Instead, claim 1 recites that the housing includes “an emitting surface,” and then goes on to discuss the attributes of that emitting surface. *See id.* at 14:47–61. Patent Owner appears to be seeking to have us read limitations into claim 1 regarding the relationship between the surface of the housing generally and the emitting surface that are not recited in the claim. We decline to do so. Because we find the claim language sufficiently clear, we determine that no construction is necessary at this time.

3. “*extending substantially upward and inward from the base*”

Patent Owner contends that, based on the Specification, we should construe “extending substantially upward and inward from the base” as “defining a generally convex shape with respect to the base.” Prelim.

Resp. 27 (citing Ex. 1001, 7:36–40). However, the Specification says that this is only an example (“e.g., the device may be generally convex with respect to the base”). Thus, we do not agree that the Specification supports limiting the claims to require a convex shape. *See Ancora Techs., Inc. v. Apple, Inc.*, 744 F.3d 732, 735 (Fed. Cir. 2014) (noting that non-limiting examples are not sufficient to redefine a term). In addition, claim 3 recites that the “emitting surface is substantially convex.” Ex. 1001, 14:66–67. A construction that would render that dependent claim superfluous is disfavored. *See Mformation Techs., Inc. v. Research In Motion Ltd.*, 764 F.3d 1392, 1399 (Fed. Cir. 2014) (favoring a construction that does not render another limitation “superfluous”). With this discussion in mind, we find that the claim language is sufficiently clear on its face and that no construction is necessary for this phrase.

4. “unitary housing”

Patent Owner argues that the term “unitary housing,” which is recited in claim 16, should be construed as “an indivisible unit formed from a single piece of material, e.g., wherein the housing is injection molded of a translucent material.” Prelim. Resp. 28. As an initial matter, we are not certain what, if anything, the clause “e.g., wherein the housing is injection molded of a translucent material” is meant to add to the construction. There is no support for limiting claim 16 only to injection molding or a translucent material. Indeed, the cited portions of column 10 of the Specification state that “housing 110 may be configured to be partially, substantially, or completely translucent.” Ex. 1001, 10:56–58. Moreover, although the cited portions of column 11 explain that certain electrical connections are injection molded into the housing, there is no discussion of the entire

housing being injection molded or of it being a single piece or “unitary.”
See id. at 11:14–32. Thus, we decline Patent Owner’s efforts to include the
“e.g.” clause in the construction.

As for Patent Owner’s efforts to limit “unitary” to “an indivisible unit
formed from a single piece of material,” we are not persuaded that the
claims should be so limited. Patent Owner directs us to the same portions of
column 10 and 11 discussed above, but neither of those portions of the
Specification mentions “unitary,” nor do the cited portions discuss the
housing being made of a single indivisible piece of material. Indeed, the
parties do not direct us to where the term “unitary” appears in the
Specification, besides the Abstract and claim 16.

Patent Owner cites dictionary definitions for “unitary” and “unit”
from *The Random House Dictionary of the English Language*. Prelim.
Resp. 28 (citing Ex. 2002). This dictionary defines “unitary” as “of or
pertaining to a unit or units” and “the nature of a unit; having the indivisible
character of a unit; whole.” Ex. 2002, 4. This dictionary also defines “unit”
as “a single thing or person” and “any group of things or persons regarded as
an entity.” *Id.* We determine that there is nothing in these definitions that
would require that the housing be made of “a single indivisible piece of
material.” In this regard, we note that the second definition of unit is “any
group of things or persons regarded as an entity.” Although we agree with
Patent Owner that these definitions, taken together, suggest that the ordinary
meaning of “unitary housing” would be a single-piece housing, there is
nothing in these definitions that limit how this single piece is constructed.
Patent Owner has identified nothing in the definitions or Specification that
prevents the housing from being a single thing assembled from multiple

pieces joined together. Thus, we do not believe that it is necessary to construe the phrase “unitary housing,” at this time.

5. “*at least partially surrounding the circuit board*”

Patent Owner contends that the phrase “at least partially surrounding the circuit board,” as recited in claim 16, should be construed as requiring that the unitary housing “at least partially [form] an enclosure round or encircles” the circuit board. Prelim. Resp. 28. Although Patent Owner requests a construction of this term, it does not raise any arguments about whether the prior art does not teach or suggest this limitation. Thus, we do not see any need for a construction of this term at this time.

6. “*at least partially surround the power source for the device*”

Patent Owner suggests that we construe the phrase “‘at least partially surround’ a power source for the device,” as recited in claim 10. Prelim. Resp. 29. Relying on a dictionary definition for the word “surround,” Patent Owner submits that the phrase should be construed as “[at least partially] ‘form an enclosure round; encircle’” the power source. *Id.* (citing Ex. 2002). On this record, we find that the claim phrase is clear and does not require construction at this time.

7. “*injection molded at least partially in the housing*”

Patent Owner argues that the phrase “injection molded at least partially in the housing,” as recited in claim 20, should be construed as “injection molded at least partially inside the material of the housing.” Prelim. Resp. 29–30 (emphasis omitted). We do not see how this clarifies the claim language. Accordingly, we determine that no construction is necessary for this term.

D. Asserted Grounds of Unpatentability

1. Obviousness over Ford, Neptune, and Hamilton

Petitioner contends that claims 1–9 and 16–19 are unpatentable under 35 U.S.C. § 103 as obvious over Ford, Neptune, and Hamilton. To support its contention, Petitioner provides a detailed showing mapping limitations of claims 1–9 and 16–19 to structures described by Ford, Neptune, and Hamilton. Pet. 16–56.

Ford (Ex. 1002)

Ford is titled “Multi-Mode Electromagnetic Radiation Emitting Device,” and describes a device that includes a source of electromagnetic radiation that emits radiation in the visible or infrared range according to predefined or programmable user selectable instruction sets. Ex. 1002, at [54], Abstract, 1:5–10. Figure 1 of Ford is reproduced below:

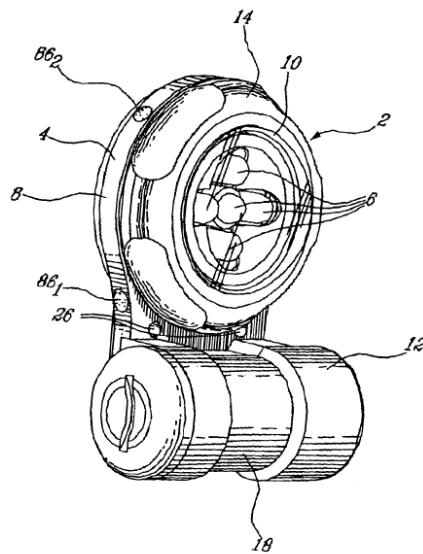


FIG-1

Figure 1 illustrates an embodiment of the multi-mode electromagnetic radiation device.

Device 2 is comprised of rugged housing 4 fabricated from plastic. *Id.* at 6:34–39. LEDs 6 are mounted on front face 8 of housing 4 and protected by dome-shaped lens cap 10 fabricated from a transparent or translucent material. *Id.* at 6:39–44. Lens cap 10 is preferably bonded to front face 8 of housing 4 with a suitable adhesive or weld. *Id.* at 6:44–48. Housing 4 includes compartment 12 that houses a battery for supplying power to the electronics and LEDs. *Id.* at 6:48–51. Rotary switch 14 is mounted around lens cap 10. *Id.* at 6:52–55. The LEDs can emit various wavelengths of light, including visible and infrared. *Id.* at 6:59–7:23. The electronics include a circuit board. *Id.* at 8:14–36. The LEDs may emit different patterns of light based on control signals received from the microprocessor that is part of the electronics. *Id.* at 9:60–10:2.

*Neptune (Ex. 1003)*⁵

Neptune is a product brochure for the Neptune beacon included as a specimen with a trademark application submitted to the Office on April 14, 2010. Pet. 8. The brochure explains that the Neptune beacon is “a multi purpose, multi function signal light developed to provide soldiers and officers several [identification] and illumination tools in one package.” Ex. 1003, 11. Neptune describes a device that produces light flashing or constant on, with an infrared, blue, or white signal. *Id.* The device has a high impact plastic housing and sealed electronics. *Id.* The device is controlled by rotating the battery cap. *Id.* A picture of the Neptune device with labeling by Petitioner is reproduced below.

⁵ The product brochure relied upon begins on page 11 of Exhibit 1003.



A picture of the Neptune device, battery, and clip with annotations by Petitioner.

The Neptune beacon includes base (1), housing (2), plurality of switching elements (4), first emitter (5), second emitter (6), curved emitting surface (7). Pet. 22.

Hamilton (Ex. 1004)

Hamilton is titled “Improvements in Light Emitting Device,” and describes a rechargeable device comprising a processor and LEDs, which can be used to signal information. Ex. 1004, [54], 1:5–8. The LEDs may include different colors of visible light and also an LED that emits infrared light. *Id.* at 7:4–17. The device allows for user input in the form of a mechanical switch, resistance-based touch contacts, pressure contacts, a magnetic switch, or an infrared emitter/receiver pair. *Id.* at 8:15–18. In order to avoid the risk of accidentally turning the device on, or off, or changing its mode, the device may require two independent actions that are done simultaneously or sequentially to change mode. *Id.* at 8:18–21. The components of the device are retained in an appropriately shaped casing that

provides aesthetics and enhances functionality. *Id.* at 10:18–19. The case of the device can be shaped, such as to have a curved face for fitting against a helmet. *Id.* at 10:21–23. The case may be made of injection molded plastic. *Id.* at 13:12–23. Figure 1 of Hamilton is reproduced below:

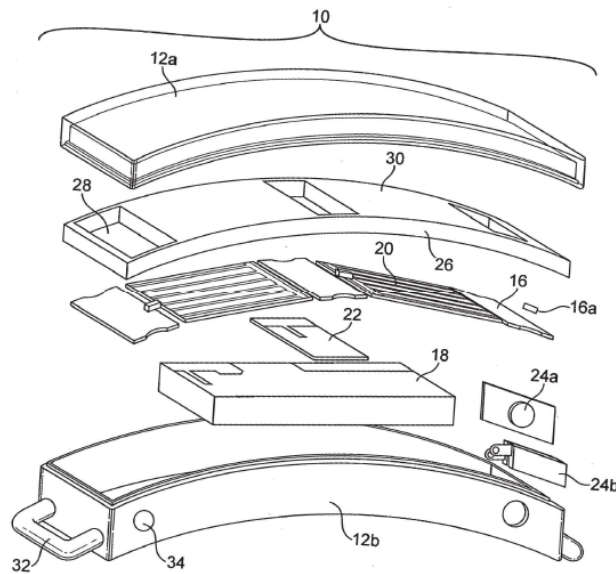


FIG. 1

Figure 1 depicts an exploded perspective view of the personnel identifier of Hamilton.

Figure 1 shows personal identifier light emitting device 10 that includes shaped casing 12 with clear front housing 12a and opaque back housing 12b; LEDs 16a in light assembly 16; rechargeable battery 18; solar cell or panel 20; control processor 22; and switching means 24a, 24b. *Id.* at 12:21–30, 13:13–14.

Analysis

i. Claim 1

With respect to independent claim 1, the present record supports Petitioner’s contention that Ford, Neptune, and Hamilton all disclose “[a] multi-spectrum lighting device comprising: a base...” Pet. 16–17 (citing

Ex. 1002, 1:5–11 (multi-spectrum emitting device), 7:48–54 (device includes a base), Fig. 3); *id.* at 22 (citing Ex. 1003, 11); *id.* at 23–24 (citing Ex. 1004, 1:5–6 (light emitting device), 7:4–17 (LEDs with multiple spectra including infrared), 13:12–14 (base), Fig. 1). Petitioner also has shown sufficiently that the combination of Ford, Neptune, and Hamilton accounts for the “housing extending substantially upwards and inwards from the base,” as recited in claim 1. *Id.* at 17–18 (citing Ex. 1002, 2:36–39 (housing), Fig. 1 (showing housing)); *id.* at 22 (citing Ex. 1003, 11 (showing housing)); *id.* at 24–25 (citing Ex. 1004, 13:12–14 (showing housing 12a)). Petitioner has shown sufficiently that the combination of Ford, Neptune, and Hamilton accounts for “a switching mechanism including a plurality of switching elements disposed about the housing,” “a first emitter configured to emit light in a first spectrum,” and “a second emitter configured to emit light in a second spectrum,” as recited in claim 1. Pet. 18–20 (citing Ex. 1002, 16:3–6 (switching mechanism), 6:53–55 (same), 7:13–16 (first emitter), 6:59–7:23, Figs. 1, 2); *id.* at 22–23 (citing Ex. 1003, 11); *id.* at 25–26 (citing Ex. 1004, 8:15–21, 12:4–6, 12:21–26). Finally, Petitioner has shown how the combination of Ford, Neptune, and Hamilton discloses the requirement of claim 1 that “the housing includes a substantially curved emitting surface, and substantially all of the emitting surface above the base is configured to allow light emitted from the first emitter and the second emitter to pass therethrough.” Pet. 21 (citing Ex. 1002, 6:39–44, Fig. 9); *id.* at 22 (citing Ex. 1003, 11); *id.* at 26 (citing Ex. 1004, 13:12–23).

Petitioner also provides articulated reasons with rational underpinning that explain why one of ordinary skill in the art would have combined the multi-spectrum emitting devices of Ford, Neptune, and Hamilton. Pet. 27.

Petitioner notes that Hamilton expressly suggests that the casing, which includes the emitting surface, can include any shape “[i]n order to provide aesthetics and to enhance functionality of the components.” *Id.* (citing Ex. 1004, 10:18–19). Based on this suggestion, Petitioner states that the person of ordinary skill in the art would have been motivated to modify any of the emitting surfaces of the references to provide aesthetics and to enhance functionality. *Id.* Moreover, Petitioner contends that the components of the references are interchangeable, and any modification is merely the result of combining prior art elements according to known methods to yield predictable results. *Id.* (citing *KSR*, 550 U.S. at 416). We agree with Petitioner that the combination of these references would have been obvious. As the Supreme Court explained, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 550 U.S. at 417. Such a situation exists here, and at this stage of the proceedings, Patent Owner does not persuade us that the combination of Ford, Neptune, and Hamilton would have been beyond the skill of a person of ordinary skill in the art. Thus, we find that, on this record, Petitioner has shown sufficiently that a skilled artisan would have been motivated to combine these references in the manner described.

Patent Owner argues that the combination of Ford, Hamilton, and Neptune fails to teach or suggest a “substantially curved, substantially all-emitting housing.” Prelim. Resp. 31–39. However, Patent Owner’s arguments are based on Patent Owner’s overly narrow constructions of “substantially curved emitting surface,” “substantially all of the emitting

surface above the base,” and “extending substantially upward and inward from the base.” We rejected those constructions. Also, we disagree with Patent Owner’s efforts to argue that a person of ordinary skill would draw the lines that Patent Owner seeks to draw based on terminology used in the references. Prelim. Resp. 33–39. The fact that Ford refers to the emitting surface of its housing as a “lens,” Hamilton refers to the emitting surface as a “clear front face,” and Hamilton terms its base a “back housing” does not detract from the teachings of those references of particular structures. *See Belden, Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1076 (Fed. Cir. 2015) (“[A] reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect.”). For example, Hamilton merely refers to what Patent Owner terms a “housing” as a “casing.” *See* Ex. 1004, 10:18–23. As for Hamilton’s terming the “base” as a “back housing,” is consistent with the ’292 patent’s disclosure that the housing “may be formed of, or attached to a base.” Ex. 1001, 6:66–67. Thus, Patent Owner’s efforts to distinguish its housing and base from the “ housings” disclosed in the cited references is not supported when the references are viewed as a whole.

As for Patent Owner’s suggestion that expert testimony is necessary to understand, for example, that the “back housing” of Hamilton is the base (Prelim. Resp. 37–38), we do not believe that this simple technology requires expert testimony, at this stage of the proceeding and on the current record, to understand the references.

Patent Owner also raises specific arguments about whether Hamilton or Neptune has a housing that extends “upward and inward from the base.” Prelim. Resp. 35–38. However, the ground relies on the combination of the

references with Ford. We find that Ford unambiguously teaches a housing that extends upward and inward from the base. Thus, Patent Owner's arguments that Hamilton and Neptune fail to disclose this limitation are unpersuasive. *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981) (“[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.”).

Accordingly, based on the present record, we find that Petitioner has shown sufficiently that the combination of Ford, Hamilton, and Neptune more likely than not renders claim 1 obvious.

ii. Claim 2

Claim 2 depends from claim 1 and recites that “the device is configured to change an emitted light from a first spectrum to the second spectrum, and to change a blink pattern of emitted light.” Ex. 1001, 14:62–65. Petitioner contends this limitation is taught by each of Ford, Neptune, and Hamilton. *See* Pet. 27–29. Patent Owner contends that the cited references do not disclose “changing a blink pattern of the emitted light.” Prelim. Resp. 39–40. However, as Patent Owner admits (*id.* at 40), Hamilton and Neptune disclose changing from a constant beam to a flashing beam. We find that this would, at the very least, amount to changing the blink pattern of the emitted light. Moreover, the cited portion of Ford (Pet. 28), column 9, line 60, to column 10, line 2, discusses a wide variety of blink patterns termed “instruction sets.” Ford further discloses that “[d]epending on the instruction set selected, the LEDs 6, and therefore the light emitted by the LEDs 6 can be controlled in a number of ways.” Ex. 1002, 9:58–60. Ford further discloses that different instruction sets are available for different positions of the rotary switch. Ex. 1002, 10:3–25.

Thus, we agree with Petitioner that on the current record, the combination of Ford, Neptune, and Hamilton accounts for this limitation.

iii. Claim 8

Claim 8 depends from claim 1 and additionally recites that the housing is made “substantially of translucent material.” Petitioner relies on Hamilton’s teaching that the emitting surface can be made of a “clear” material to account for this limitation. Pet. 41. Patent Owner argues that Petitioner fails to demonstrate that this limitation is disclosed in the cited references. Prelim. Resp. 40–41. Although the Petition discusses Hamilton’s disclosure of a “clear” material and there may be some ambiguity whether it includes “translucent” materials, Ford unambiguously discloses the use of “translucent” materials in the housing. *See* Ex. 1002, 6:39–45 (“dome shaped lens cap 10 fabricated from a transparent or translucent material such as clear or opaque plastic, or clear plastic with a diffusing pattern etched in a surface thereof”). Thus, on this record, we are not persuaded that such a modification would not have been obvious to a person of ordinary skill at the time of the invention of the ’292 patent.

iv. Claim 16

With respect to independent claim 16, the present record supports Petitioner’s contention that Ford, Neptune, and Hamilton account for the limitations of this claim. *See* Pet. 43–52. Petitioner has provided a rationale for combining the references similar to that discussed above. Pet. 51–52. We agree that, on this record, a person of ordinary skill would be motivated to combine the teachings of these references. Patent Owner argues that the combination fails to disclose a “unitary housing.” Prelim. Resp. 41–44. Patent Owner’s argument, however, is based on its overly narrow

construction of “unitary housing” that required that it be “an indivisible unit formed from a single piece of material.” Here, Petitioner has demonstrated adequately, on this record, that Ford discloses a housing comprising a single piece formed from two components bonded together, which meets our understanding of the term. Thus, we find that Petitioner has shown sufficiently that claim 16 more likely than not would have been obvious over Ford, Neptune, and Hamilton.

v. Claims 3–7, 9, and 17–19

Petitioner also accounts sufficiently for the limitations of claims 3–7 and 9, which depend from claim 1, and claims 17–19, which depend from claim 16. Pet. 27–55. We agree with this analysis and adopt it for purposes of this decision. Thus, we find that Petitioner has demonstrated adequately that claims 3–7, 9, and 17–19 more likely than not would have been obvious over Ford, Neptune, and Hamilton.

2. Obviousness over Ford, Neptune, Hamilton, and Mish

Petitioner contends that claims 10–15 are unpatentable under 35 U.S.C. § 103 as obvious over Ford, Neptune, Hamilton, and Mish. To support its contention, Petitioner provides a detailed showing mapping limitations of claims 10–15 to structures described by Ford, Neptune, Hamilton, and Mish. Pet. 56–63.

Mish (Ex. 1005)

Mish is titled “Thin Profile Battery Mounting Contact for Printed Circuit Boards,” and describes thin profile battery contacts for active tags used in active radio frequency identification. Ex. 1005, [54], 1:1–9. Mish teaches that, by mounting a battery such that the battery is at least partially contained in a cavity in the tag’s substrate, e.g., a printed glass-filled epoxy

circuitry board or card, the thickness of the substrate no longer contributes to the overall height of the assembly because the thickness of the substrate can generally be reduced below the thickness of the battery. *Id.* at 2:63–67, 3:52–61.

Analysis

Claims 10–15 all depend, directly or indirectly, from claim 1 and recite the additional limitation that “the circuit board is configured to at least partially surround a power source for the device.” Ex. 1001, 15:14–15. Petitioner points to two references as teaching this limitation. Pet. 56–57.

First, Petitioner points to Figure 4a of Ford, as showing a configuration where the circuit board “partially surround[s]” the power source. Figure 4a of Ford is reproduced below:

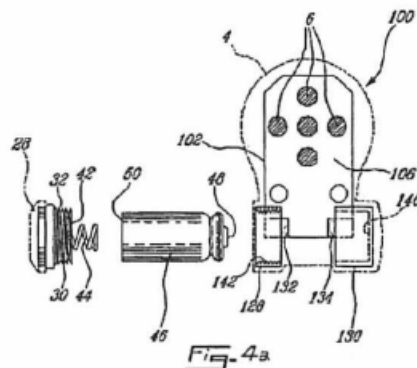


Figure 4a of Ford shows a front plan view of the electronics of one embodiment of the multi-spectrum emitting device of Ford.

We agree with Patent Owner that this disclosure, where the circuit board is in a completely separate housing in a different plane than the power source, cannot reasonably be said to disclose a circuit board that “partially surrounds” the power source. Prelim. Resp. 44–45.

Second, Petitioner relies on Mish, which describes a low-profile battery mounting for a wireless tags. Pet. 57–58. Here, we agree with

Patent Owner that Petitioner has failed to provide adequate rationale for combining the teachings of a wireless tag reference with device such as Ford, Neptune, or Hamilton. Prelim. Resp. 46. Although we agree with Petitioner that Hamilton suggests that reducing the size and weight of a device is beneficial (Pet. 58), it is not clear why a person of ordinary skill would have been motivated to look to the teachings of Mish, which deals with very thin profile active tags and credit and debit cards, to solve that problem. Without such reasoning, we cannot find that Petitioner has met its burden of showing that claims 10–15 more likely than not would have been obvious over Ford, Neptune, Hamilton, and Mish. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)

3. Obviousness over Ford, Neptune, Hamilton, and Dubord

Petitioner contends that claim 20 is unpatentable under 35 U.S.C. § 103 as obvious over the combination of Ford, Neptune, Hamilton, and Dubord. To support its contention, Petitioner provides a detailed showing mapping limitations of claim 20 to structures described by Ford, Neptune, Hamilton, and Dubord. *See* Pet. 63–66.

Dubord (Ex. 1006)

Dubord is titled “Encasing for Light Circuit,” and describes a protective encasing for LED components and associated circuitry that is preferably injection molded. Ex. 1006, [54], Abstract, ¶ 21. Dubord discloses that the encasing “holds one or more LEDs lights . . . and associated circuitry (e.g., a printed circuit board) therein.” *Id.* ¶ 37.

Analysis

In support of this asserted ground of unpatentability, Petitioner provides explanations as to how the subject matter of claim 20 is disclosed

by Ford, Neptune, Hamilton, and Dubord. Pet. 63–66. In particular, Petitioner contends the injection molded limitations of claim 20 are product-by-process limitations that are not entitled to patentable weight. *Id.* at 64. Petitioner asserts that even if those limitations are entitled to patentable weight, Ford teaches the use of encapsulating electronics in plastics to protect them (*id.* (citing Ex. 1002, 8:14–19)), Neptune discloses a waterproof device (*id.* (citing Ex. 1003, 11)), and Hamilton teaches an injection molded casing (*id.* at 64–65 (citing Ex. 1004, 9:9–10, 13:12–23)). Petitioner contends that Dubord discloses a self-contained protective casing that is preferably injection molded for protecting LED circuits. *Id.* at 65. Petitioner further contends that the combination of Ford, Hamilton, and Neptune teaches the limitations of claim 16 from which claim 20 depends, as we determined above. *Id.* at 43–52. Petitioner further identifies where Ford, Hamilton, Neptune, and Dubord disclose the remaining limitations of claim 20. *Id.* at 64–66. Petitioner argues that a person of ordinary skill would have been motivated to modify the injection molded devices of the combination of Ford, Hamilton, and Neptune to encase the LED circuitry used in Ford in an injection molded plastic case, as taught by Dubord, to prevent moisture from contacting the circuitry, and that this modification would be nothing more than the use of known techniques to improve a similar device in a similar way. *Id.* at 65–66 (citing *KSR*, 550 U.S. at 418).

Patent Owner argues that Dubord does not teach or suggest the electrical connections between a circuit board and switching elements or a power source of the device being partially injection molded in a housing because they do not disclose electrical contacts that are injection molded at least partially inside the material of a housing. Prelim. Resp. 49–51. Patent

Owner also contends that the motivation to combine is deficient because claim 20 does not claim injection molding a case, but requires that the electrical connections be injection molded into the housing. *Id.*

Assuming that this claim limitation is entitled to patentable weight, we agree with Petitioner that the combination of Ford, Neptune, Hamilton, and Dubord accounts for the limitations of claim 20. As Petitioner explains, Ford and Hamilton explicitly discuss the use of injection molding in forming the housing. Pet. 64–65. We also agree with Petitioner that Dubord suggests that LED circuitry can be encased in injection molded housing to protect the circuitry. *Id.* at 65–66. We do not agree with Patent Owner that the combination would not suggest to a person of ordinary skill that electrical connections between the circuit board and components such as the switches or power source could not be injection molded into housing. Not only does Dubord teach that it is beneficial to protect injection molded circuitry in a housing, it also discloses that materials can be injected to surround the electronics completely and to protect them. Ex. 1006 ¶¶ 28–31. Dubord further discloses that the material can be made of any suitable material. *Id.* ¶ 31. Thus, given the combined teachings of Ford, Neptune, Hamilton, and Dubord, on this record, we find that Petitioner has shown sufficiently that such a configuration as claimed in claim 20 more likely than not would have been obvious to a person of ordinary skill in the art.

III. CONCLUSION

For the foregoing reasons, we determine that the information in the Petition establishes that it is more likely than not that claims 1–9 and 16–20 of the '292 patent are unpatentable. We note that at this stage of the

proceeding, we have not made a final determination with respect to the patentability of the challenged claims or with respect to claim construction.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 324(a), a post-grant review is hereby instituted as to claims 1–9 and 16–20 of the '292 patent on the following grounds of unpatentability:

1. Claims 1–9 and 16–19 under 35 U.S.C. § 103 as obvious over Ford, Neptune, and Hamilton; and
2. Claim 20 under 35 U.S.C. § 103 as obvious over Ford, Neptune, Hamilton, and Dubord;

FURTHER ORDERED that no other grounds of unpatentability asserted in the Petition are authorized for post-grant review; and

FURTHER ORDERED that post-grant review of the '292 patent is hereby instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 324(d) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

PGR2015-00022
Patent 8,882,292 B2

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