

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

JST PERFORMANCE, INC. d/b/a RIGID INDUSTRIES,
Petitioner,

v.

KONINKLIJKE PHILIPS N.V.,
Patent Owner.

Case IPR2014-00874
Patent 6,250,774 B1

Before JUSTIN BUSCH, TRENTON A. WARD, and
BRIAN P. MURPHY, *Administrative Patent Judges*.

MURPHY, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

JST Performance, Inc. d/b/a Rigid Industries (“Petitioner”) filed a corrected Petition requesting *inter partes* review of claims 1–7 and 9–15 of U.S. Patent No. 6,250,774 B1 (“the ’774 patent”). Paper 4 (“Pet.”). Koninklijke Philips N.V. (“Patent Owner”) filed a Preliminary Response to the Petition. Paper 8 (“Prelim. Resp.”). We have statutory authority under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

Petitioner challenges claims 1–5, 7, 9, and 11–15 of the ’774 patent as unpatentable under 35 U.S.C. § 102(e) and claims 1–7 and 9–15 under 35 U.S.C. § 103(a) on multiple grounds. Pet. 13–14. Based on the information presented in the Petition and Preliminary Response, we are not persuaded there is a reasonable likelihood Petitioner would prevail with respect to at least one of the claims challenged in the Petition. Therefore, we decline to institute *inter partes* review based on the Petition.

A. *Related Proceedings*

Patent Owner identifies the following as related proceedings regarding the ’774 patent (Paper 6, 2):

Koninklijke Philips N.V. v. Schreder Lighting LLC, Case No. 1:14-cv-12282-IT (D. Mass.); and

Koninklijke Philips N.V. v. Wangs Alliance Corp., Case No. 1:14-cv-12298-GAO (D. Mass.).

B. *The ’774 Patent*

The '774 patent, titled "Luminaire," issued June 26, 2001, from an application filed January 23, 1998, which claims priority to a foreign application filed January 23, 1997. Ex. 1001. The luminaire described in the '774 patent comprises a housing with a light emission window and at least one lighting module in the housing, the lighting module comprising a set of lighting units. *Id.* at Abstract, Fig. 2. Each lighting unit comprises a Light Emitting Diode ("LED") chip and an optical system coupled to the LED chip. *Id.* at Fig. 3. Figure 3 shows individual lighting unit 20b, which contains LED chip 30 on primary reflector 41 surrounded by synthetic resin envelope 42. *Id.* at 5:58–63. LED chip 30 has an active layer of AlInGaP (aluminum indium gallium phosphide) and supplies a luminous flux of at least 5 lumens ("lm"). *Id.* at 5:56–57, 63–64.

Claim 1 of the '774 patent is illustrative and reproduced below (emphasis added).

1. A luminaire comprising a housing with a light emission window, at least one lighting module in said housing for illuminating an object outside said housing, the lighting module comprising a set of lighting units, each of said lighting units comprising at least one LED chip and an optical system configured to illuminate portions of the object during operation, *each said LED chip supplying a luminous flux of at least 5 lm during operation.*

Id. at 9:30–38 (emphasis added)(as corrected (Cert. of Correction, 1)).

C. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–5, 7, 9, and 11–15 are unpatentable as anticipated by Turnbull¹ or obvious over Turnbull and Kish.² Pet. 13–14. Petitioner asserts that claim 6 is obvious over Turnbull and Sakai,³ and claim 10 is obvious over Turnbull and Ito.⁴ *Id.* at 14. We address Petitioner’s arguments below.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable interpretation in light of the patent specification. 37 C.F.R. § 42.100(b). Under the broadest reasonable interpretation standard, we assign claim terms their ordinary and customary meaning, as understood by one of ordinary skill in the art, in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). All claims of the ’774 patent either recite, or through their dependency require, the limitation of “each said LED chip supplying a luminous flux of at least 5 lm during operation.” Although Petitioner challenges whether functional limitations are entitled to patentable weight (see section C. 2. below), the parties do not dispute the ordinary and

¹ U.S. 5,803,579, issued September 8, 1998 on an application filed June 13, 1996. Ex. 1002 (“Turnbull”).

² F. A. Kish et al., *Very High-efficiency Semiconductor Wafer-Bonded Transparent-Substrate (Al_xGa_{1-x})_{0.5}In_{0.5}P/GaP Light-Emitting Diodes*, 64 Applied Physics Letters 2839 (1994). Ex. 1003 (“Kish”). Petitioner incorrectly refers to Kish throughout the Petition and supporting declaration of Mr. Greg M. Rhoads (Ex.1006) as “the Fish Publication.”

³ US 4,698,730, issued Oct. 6, 1987, Ex. 1005 (“Sakai”).

⁴ US 5,130,531, issued July 14, 1992, Ex. 1004 (“Ito”).

customary meaning of this functional claim limitation. We determine that no express construction of this or any other limitation is necessary for purposes of this Decision.

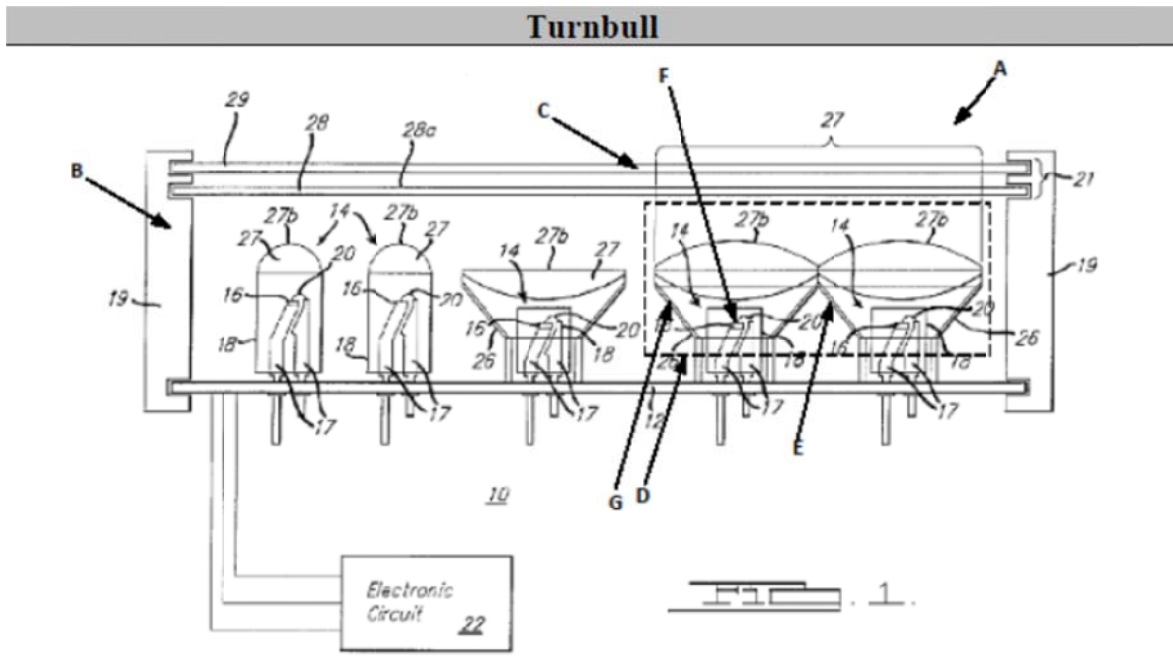
B. Anticipation of Claims 1–5, 7, 9, and 11–15 by Turnbull

Petitioner argues that claims 1–5, 7, 9, and 11–15 are anticipated by Turnbull under 35 U.S.C. § 102(e). Pet. 10–13. Turnbull discloses a luminaire incorporating LEDs of “very high luminous efficacy” that operate at 30-70mA (Ex. 1002, 21:32-37, 32:12–13), but Turnbull does not disclose expressly the luminous flux or power output of the LEDs. *Id.* at 20, 21, 40, 41. Petitioner argues that Turnbull inherently discloses an LED chip supplying “a luminous flux of at least 5 lm during operation.” *Id.* at 11, 13.

“To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference.’” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (quotation omitted). Despite the requirement that the missing descriptive matter must be necessarily present in the thing described in the reference, Petitioner’s anticipation argument at pages 10–13 of the Petition does not include evidentiary citations, explanation, or analysis to support the asserted inherent disclosure of an “LED chip supplying a luminous flux of at least 5 lm during operation.” Pet. 10–13. Petitioner asserts that an element depicted in Figure 1 of Turnbull, annotated by Petitioner as limitation “G” (referring to LED chip “F”), corresponds to the “luminous flux” limitation of independent claims 1 and 14. *Id.* at 10–12. Petitioner, however, fails to cite any particular disclosure in Turnbull and merely uses an arrow to point to

“conventional discrete LEDs 14” in Turnbull (Ex. 1002, 10:59) without further comment. *Id.* Petitioner’s annotated Figure 1 of Turnbull is unclear and insufficient, by itself, to satisfy the requirement of inherency with respect to the “luminous flux” limitation recited in independent claims 1 and 14 of the ’774 patent.

As can be seen from Petitioner’s annotated Figure 1 of Turnbull (Pet. 11), provided below for reference, each letter is asserted to correspond to a particular claim limitation.



Annotated Figure 1 of Turnbull

In annotated Figure 1, above, and the accompanying argument, Petitioner fails to provide a detailed analysis or reasoning to support its contention that Turnbull’s “conventional discrete LEDs 14” (Ex. 1002, 10:59) supply a luminous flux of at least 5 lumens during operation. Pet. 10–13. With regard to independent claim 1, Petitioner makes the conclusory

argument that “Turnbull inherently discloses that each said LED chip supplies a luminous flux of at least 5 lm during operation,” without citing any evidence in support. *Id.* at 11. Petitioner makes the same conclusory argument regarding independent claim 14, again without citing any evidentiary support. *Id.* at 13. Contrary to our rules, Petitioner has not made a sufficient showing to “specify where each element of the claim is found in the prior art,” including “identifying specific portions of the evidence that support the challenge.” 37 C.F.R. § 42.104(b)(5). In the absence of supporting citations and analysis, we conclude Petitioner has not satisfied the standard for proving inherent anticipation by Turnbull.

For the reasons given above, we conclude Petitioner has not shown a reasonable likelihood of prevailing in its challenge that claims 1–5, 7, 9, and 11–15 of the ’774 patent are anticipated by Turnbull under 35 U.S.C. § 102(e).

C. Obviousness of Claims 1–7 and 9–15

Petitioner asserts that claims 1–5, 7, 9, and 11–15 of the ’774 patent would have been obvious to one of ordinary skill in the art over Turnbull and Kish. Pet. 17–26, 29–43. Petitioner further asserts dependent claim 6 would have been obvious over Turnbull and Sakai, and dependent claim 10 would have been obvious over Turnbull and Ito. *Id.* at 27–29, 31, 32.⁵

Petitioner repeatedly describes what Turnbull “teaches” with respect to the limitations of independent claims 1 and 14. Pet. 17–20, 36–39. With respect to the “luminous flux of at least 5 lm” limitation, Petitioner states the “only difference between the teachings of Turnbull and claim 1 of the ’774

⁵ Petitioner states that Kish, Sakai, and Ito all qualify as prior art under 35 U.S.C. § 102(b). Pet. at 14.

patent is that the luminous flux of at least 5 lm is required from the LED of claim 1.” Pet. 21; see *id.* at 40, 41 (same statement regarding claim 14). Petitioner then relies on Kish, which “teaches LEDs that are capable of emitting a luminous flux of up to 11.5 lm, which is a range that includes 5 lm as required by claim 1 of the ’774 patent,” and Petitioner argues that “the combination of Turnbull and the [Kish] Publication would have rendered the subject matter of claim 1 of the ’774 Patent obvious to a person of ordinary skill in the art at the time the invention of the ’774 Patent was made.” Pet. 21 (citing Ex. 1006 ¶ 27); see *id.* at 41 (citing Ex. 1006 ¶ 51). Although Petitioner then argues that the “luminous flux of at least 5 lm” limitation “is an LED characteristic that is inherently anticipated by Turnbull” (Pet. 22 (citing Ex. 1006 ¶ 28), 41 (citing Ex. 1006 ¶ 52)), Petitioner’s argument is presented as one of obviousness, not anticipation. “The inherent teaching of a prior art reference, a question of fact, arises both in the context of anticipation and obviousness.” *In re Napier*, 55 F.3d 610, 613 (Fed. Cir. 1995) (affirmed 35 U.S.C. § 103 rejection based in part on inherent disclosure in one of the references). The question of obviousness is “based on underlying factual determinations including . . . what th[e] prior art teaches explicitly and inherently.” *In re Zurko*, 258 F.3d 1379, 1383 (Fed. Cir. 2001) (citations omitted). Therefore, we interpret Petitioner’s argument as one of obviousness rather than inherent anticipation.

Patent Owner argues that Turnbull does not inherently disclose the “luminous flux” limitation in light of Kish. Prelim. Resp. 13–15, 21–24. For the reasons discussed below, we agree with Patent Owner that the Petition lacks sufficient evidence and reasoning to establish a reasonable

likelihood Petitioner would prevail in establishing the obviousness of claims 1–5, 7, 9, and 11–15 over Turnbull and Kish.

1. *“said LED chips each supplying a luminous flux of at least 5 lm during operation”*

Petitioner asserts that when the LED identified in Turnbull is “illuminated with a 50-70 mA operating current . . . a luminous flux of at least 5 lm is necessarily produced by the LEDs as taught by [Kish].” Pet. 22 (citing Ex. 1006 ¶ 28), 41 (citing Ex. 1006 ¶ 52). With reference to the luminous flux data presented in Figure 2 of Kish (Ex. 1003, 2840), however, Patent Owner persuasively argues that: (i) 11.5 lumens is achieved under a “quasi-dc (10 ms pulse)” operating condition, whereas Turnbull discloses only direct current (“DC”) operation (Ex. 1002, 32:12–13, Fig. 21 (“13.8V DC”)); (ii) the LEDs disclosed in Kish, under a DC operating condition, achieve only a maximum of 4 lumens at 50 mA (Ex. 1003, 2840 Fig. 2b); (iii) the Petition and the declaration of Mr. Greg M. Rhoads, submitted by Petitioner, do not acknowledge or address the differences between DC and quasi-DC pulsed operation; and (iv) the declaration of Mr. Rhoads (Ex. 1006 ¶¶ 26–28, 50–52) is conclusory and duplicates what is in the Petition. Prelim. Resp. 16–18. We agree with Patent Owner’s assertions.

The rationale presented by Petitioner for combining Turnbull and Kish is that “the very LEDs mentioned in the [Kish] Publication, are preferred for their ‘very high luminous efficacy in terms of light emitted compared to electrical power consumed.’” Pet. 21, 40. Petitioner and Mr. Rhoads, however, do not provide a sufficient evidentiary basis for, and analysis of, the reason or reasons why one of ordinary skill in the art would have combined Turnbull and Kish to achieve the claimed invention with a reasonable expectation of success. *See In re Kahn*, 441 F.3d 977, 988 (Fed.

Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”) (*quoted with approval in KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007)). Specifically, Petitioner’s obviousness analysis does not address why one of ordinary skill in the art would have used a quasi-dc pulsed operating condition, as disclosed in Kish Figure 2(b’), to achieve a luminous flux of at least 5 lumens at a drive current between 30–70 mA in Turnbull’s DC-driven LED luminaire. Pet. 20–22, 40–42. Petitioner’s obviousness analysis, therefore, is deficient.

We also agree with Patent Owner that, even if Petitioner has shown all claim limitations to be disclosed in Turnbull and Kish, “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” Prelim. Resp. 24 (quoting *KSR*, 550 U.S. at 418). To establish obviousness, one must provide “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)) (quotation omitted). The Petition is deficient for failing to articulate, in detail with specific citations to the evidence, the reasons why one of ordinary skill in the art having the knowledge, experience, and background described by Mr. Rhoads (Ex. 1006 ¶¶ 7, 8, 15–18) would have been motivated to combine Turnbull and Kish to achieve the invention claimed in the ’774 patent. In short, Petitioner has not explained sufficiently “the relevance of the evidence to the challenge raised.” 37 C.F.R. § 42.104(b)(5).

2. *Functional Claiming*

Petitioner argues that functional limitations of independent claims 1 and 14 of the '774 Patent do not distinguish those claims over Turnbull's luminaire. Pet. 22, 41, 42. "A patent applicant is free to recite features of an apparatus either structurally or functionally." *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997) (citing *In re Swinehart*, 439 F.2d 210, 212 (CCPA 1971) ("[T]here is nothing intrinsically wrong with [defining something by what it does rather than what it is] in drafting patent claims.")). The risk of functional claiming is that a functional limitation critical to establishing novelty may be an inherent characteristic of the prior art. *Id.* Patent Owner has chosen to claim the LED chip in functional terms – capable of supplying a luminous flux of at least 5 lumens – but Petitioner does not explain specifically how or why this functional limitation fails to distinguish the claims from the structure of Turnbull (Pet. 22–23, 41–42), apart from the asserted inherency that we decline to accept on the present record. Petitioner again has not explained sufficiently "the relevance of the evidence to the challenge raised." 37 C.F.R. § 42.104(b)(5).

3. *Dependent Claims 6 and 10*

Petitioner does not rely on Sakai or Ito for teaching an "LED chip supplying a luminous flux of at least 5 lm during operation." Pet. 27-29, 31, 32. In fact, Petitioner does not address the quoted claim limitation in its obviousness analysis of any of the challenged dependent claims. *Id.* at 23–35, 42–43. Therefore, for the same reasons given above, the Petition is deficient in its obviousness analysis of challenged dependent claims 6 and 10.

4. Conclusion

Based on the information presented in the Petition and supporting exhibits, we conclude Petitioner has not shown a reasonable likelihood of prevailing in its challenge that claims 1–7 and 9–15 of the '774 patent would have been obvious to a person of ordinary skill in the art at the time of the invention under 35 U.S.C. § 103(a).

III. CONCLUSION

Petitioner has failed to demonstrate a reasonable likelihood it would prevail with respect to at least one of the claims challenged in this Petition, based on the grounds asserted and information presented therein.

IV. ORDER

For the reasons given, it is

ORDERED that the Petition is *denied*.

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