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Paper 14
Date: December 19, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CAMBRIDGE INDUSTRIES USA, INC.,
Petitioner,

v.

APPLIED OPTOELECTRONICS, INC.,
Patent Owner.

IPR2025-00434
Patent 10,379,301 B2

Before MITCHELL G. WEATHERLY, MONICA S. ULLAGADDI, and IFTIKHAR AHMED, *Administrative Patent Judges.*

WEATHERLY, *Administrative Patent Judge*.

DECISION
Denying Petitioner's Request on Rehearing of
Decision Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.71(d)

I. INTRODUCTION

A. Background

Cambridge Industries USA, Inc. ("Petitioner") filed a petition (Paper 2, "Pet.") to institute an *inter partes* review of claims 1–7 (the "challenged claims") of U.S. Patent No. 10,379,301 B2 (Ex. 1001, "the

'301 patent"). 35 U.S.C. § 311. Applied Optoelectronics, Inc. ("Patent Owner") timely filed a Preliminary Response. Paper 10 ("Prelim. Resp."). We entered a Decision Denying Institution of *Inter Partes* Review (Paper 12, "Decision" or "Dec.").

Patent Owner filed a timely Request for Rehearing of the Decision Denying Institution of *Inter Partes* Review. Paper 13 ("Reh'g Req." or "Request for Rehearing"). For the reasons expressed below, we deny the Request for Rehearing.

B. Standard for Reconsideration

When rehearing a decision on petition, the Board will review the decision for an abuse of discretion. *See* 37 C.F.R. § 42.71(c). An abuse of discretion may be determined if a decision is based on an erroneous interpretation of law, if a factual finding is not supported by substantial evidence, or if the decision represents an unreasonable judgment in weighing relevant factors. *See Arnold P'ship v. Dudas*, 362 F.3d 1338, 1340 (Fed. Cir. 2004). The party challenging the decision has the burden of showing the decision should be modified, and the request for rehearing "must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed" in its papers. 37 C.F.R. § 42.71(d).

II. ANALYSIS

In our Decision, we concluded that Petitioner had failed to carry its burden of demonstrating a reasonable likelihood of prevailing that either Shen or Soldano anticipated claims 1–7. Dec. 18, 26. Petitioner argues that we should institute review for three reasons. First, Petitioner argues that we abused our discretion by (a) "refusing" to interpret the scope of the claimed

"carrier" and (b) misstating Petitioner's interpretation of the claimed "carrier." Reh'g Req. 11–12. Second, Petitioner argues that our analysis of its challenge based on Shen was "fatally flawed." *Id.* at 12–13. Third, Petitioner argues that our analysis of its challenge based on Soldano was "fatally flawed." *Id.* at 13–15. None of Petitioner's arguments is persuasive.

A. Claim Interpretation

Petitioner argues that we abused our discretion in two ways while considering claim interpretation issues.

First, we abused our discretion by "refusing" to interpret the meaning of "carrier" as used in the claims when concluding that Petitioner had failed to demonstrate a reasonable likelihood that Shen and Soldano taught the "carrier." *Id.* at 11.

In our Decision, we noted that Petitioner had "adopted" Patent Owner's interpretation of "carrier" as meaning "one or more components for supporting ROSA components such as an AWG." Dec. 9 (quoting Pet. 11). For our analysis of Petitioner's challenges, we referred to this interpretation of "carrier" as Petitioner's second alternative construction. *Id.* We also noted that Petitioner appeared to dispute Patent Owner's interpretation when it argued that "carrier" should mean "a ceramic or silicon substrate." *Id.* (quoting Pet. 10). We referred to this interpretation of "carrier" as the first alternative construction. *Id.* Rather than resolve this apparent dispute about the meaning of "carrier," we found that both of Petitioner's anticipation challenges failed under both interpretations of "carrier." *Id.* at 10–26. Because we found that Petitioner had failed to carry its burden regardless of

which interpretation of "carrier" applied, we found it unnecessary to resolve the dispute over that interpretation. *Id*. at 9–10.

For the reasons expressed in Parts II.B–C below, we maintain our conclusion that Petitioner has failed to demonstrate a reasonable likelihood of proving that either Shen or Soldano anticipates any claim under either interpretation of "carrier." Accordingly, Petitioner fails to demonstrate an abuse of discretion in our alleged "refusal" to interpret "carrier."

Second, Petitioner argues that we abused our discretion when we "misstated" Petitioner's interpretation of carrier by inferring that Petitioner was disputing Patent Owner's interpretation. Reh'g Req. 11. As we have explained immediately above, we analyzed both of Petitioner's challenges under Petitioner's interpretations of "carrier" and found those challenges to be insufficiently persuasive to warrant a trial. *See* Dec. 10–26 (analyzing Shen and Soldano challenges under the first and second alternative constructions of carrier). Accordingly, we find no "misstatement" of Petitioner's contentions about the meaning of "carrier" that justifies disturbing our Decision.

B. Our Analysis of the Shen Challenge

Petitioner first argues that we failed to understand that "'driver 700' of Shen is *identical*[1] to the 'light receiving circuit' of the '301 patent." Reh'g Req. 12. Petitioner does not cite a specific portion of our Decision as Rule 42.71(d) requires. Moreover, Petitioner does not explain why our alleged failure, assuming one exists, is material. Regardless, we discern no

[1] Petitioner surely cannot mean to be contending that Shen's driver 700 is literally identical to the light receiving circuit of the '301 patent. Nevertheless, we interpret Petitioner's argument as best as we can.

such failure in our Decision. We found that, under Petitioner's adopted interpretation of "carrier" and Petitioner's mapping of the carrier to the combination of Shen's substrate 100 and circuit board 600, Petitioner's challenge failed. Dec. 16. Specifically, we found that Petitioner had failed to demonstrate that both Shen's driver 700 (i.e., the claimed light receiving circuit) and Shen's optical detector 300 were mounted "on the same top surface of the end of the carrier." *Id.* Although Shen's driver can be considered to be on "the end of the carrier," Shen's optical detector 300 cannot. *Id.* Patent Owner made precisely this argument, Prelim. Resp. 25–26, and we agreed with it, Dec. 16. We discern no error in our Decision on this point.

Petitioner also argues that we "erroneously credit[ed] Patent Owner's unsubstantiated speculation that locating the light receiving circuit and photodiodes on a Silicon Optical Bench ('SiOB') somehow eliminates the need to electrically connect those components." Reh'g Req. 12. Petitioner's argument implicitly and impermissibly shifts the burden to Patent Owner. We did not "credit" Patent Owner's "speculation" in our Decision. Rather, we found that, if Petitioner were relying on its implied interpretation of carrier as referring only to "a ceramic or silicon substrate"[2] like Shen's SiOB, then Petitioner failed carry its burden to make an affirmative case that Shen described connecting its components with a bonding wire when the components were both mounted on Shen's SiOB. Dec. 17. We discern no reason to modify our Decision on Petitioner's challenge that Shen anticipated any claim. Any ambiguity in the Petitioner's presentation of

[2] Our Decision referred to this claim interpretation theory as Petitioner's second alternative. Dec. 17.

alternative claim interpretations was addressed by our analysis of both possible interpretations and thus was immaterial to the outcome.

C. Our Analysis of the Soldano Challenge

Petitioner argues that our analysis of whether Petitioner had met its burden of demonstrating a reasonable likelihood that Soldano anticipated any claim was flawed. In the process, Petitioner strings together a series of unsupported contentions including that our Decision:

> "displays a lack of even a rudimentary understanding," Reh'g Req. 13;
>
> "culminat[es] in a non-sensical 'dispositve inquiry,'" *id.*;
>
> "provides no logical rationale," *id.*;
>
> draws conclusions that either misinterpret or find no support in "caselaw," *id.* at 14; and
>
> contains "mere *ipse dixit*" *id.* at 15.

Rule 42.71(d) requires that a "request [for rehearing] must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed" in a paper. Petitioner fails to cite any location in the Decision, cite a single case to support its contentions about "caselaw," or cite a single location in the Petition supporting any of its contentions. *Id.* at 13–15. For these reasons alone, Petitioner's Request for Rehearing fails as it relates to our conclusion in the Decision that Petitioner failed to demonstrate that Soldano anticipates any claim.

Petitioner's argument relating to our "non-sensical 'dispositive inquiry'" appears to refer to our statement that: "the dispositive inquiry is whether the reference, Soldano, discloses that the connection method between grating couplers 505 and light receiving chip is employs a bonding

wire. Petitioner does not contend that Soldano inherently discloses limitation [1d]. Pet. 25." Dec. 23.

Petitioner presents legal principles, asserted to be supported by "caselaw," as follows:

> "The caselaw is plain that a patent specification need not describe components that are basic to a disclosed invention"; and
>
> "[T]he caselaw imposes no requirement on a patentee[3] to describe or illustrate a well-known and well-understood component that is basic to the functionality of an invention."

Reh'g Req. 14. We cannot weigh Petitioner's arguments based on its assertions about "caselaw" because Petitioner cited no cases to support its arguments. *See id*. Nevertheless, we infer that Petitioner intends its statements of "caselaw" to refer to the requirements to make out a case for anticipation. If so, Petitioner demonstrably miscasts what appear to be the legal principles for proving anticipation. As stated in our Decision: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987)." Dec. 7. Making a showing that a prior art reference anticipates a patent claim thus necessarily requires proof that a single reference "expressly or inherently" describes every element of that claim and with all elements being arranged in the reference as they are in the

[3] We find it difficult to understand Petitioner's apparent complaint about our allegedly improper imposition of a requirement "on a patentee" as we sought to determine whether Petitioner, not Patent Owner, had made a case that Soldano anticipated any claim. Reh'g Req. 14.

claim. Petitioner's assertions that uncited "caselaw" demands a different type of inquiry are unpersuasive.

Petitioner's original showing that Soldano described limitation 1d fatally failed to demonstrate that Soldano "expressly or inherently" described an optical diode being electrically connected to a light receiving chip "via wire bonding." Dec. 23. "A reference may anticipate inherently if a claim limitation that is not expressly disclosed 'is necessarily present, or inherent, in the single anticipating reference.'. . . The inherent result must inevitably result from the disclosed steps; '[i]nherency . . . may not be established by probabilities or possibilities.'" *In re Montgomery*, 677 F.3d 1375, 1379–80 (Fed. Cir. 2012) (citations omitted, alterations to second quote in original). Dr. Kirk's opinion that an ordinarily skilled artisan "would have understood" that such a connection "could be accomplished via wire bonds" is insufficient to establish that Soldano expressly or inherently discloses such a connection. *Id*. (citing Ex. 1003 ¶ 111). The cited portion of Soldano, Ex. 1009, 10:10–19, merely states that a "photodetector would be then electrically connected to the transimpedance amplifier" without describing or even suggesting that such connection would be made "via wire bonding" as recited in limitation 1d. Ex. 1009, 10:10–19. We discern no error in our conclusion that Petitioner failed to demonstrate that Soldano described limitation 1d and thus failed to anticipate claim 1.

Petitioner's argument that our Decision "is mere *ipse dixit*" and "lacks any rational basis" appears to refer to our conclusion that Petitioner failed to show that Soldano described limitation 1f because Petitioner's argument relies upon an allegedly improper evaluation in our Decision of "midpoint," which is recited in limitation 1f. Reh'g Req. 15. Petitioner cites no specific

portion of our Decision where we went astray and no specific portion of its Petition identifying where Petitioner originally made its case. Rule 42.71(d) requires Petitioner to have done both. Accordingly, this portion of the Request for Rehearing is fatally non-compliant with the procedure set forth in the Rule. Additionally, we need not untangle Petitioner's argument on the merits, however, because our conclusion that Petitioner's showing that Soldano expressly or inherently describes limitation 1d as set forth above renders the merits of Petitioner's showing on limitation 1f moot.

D. Summary of Alleged Errors

Although Petitioner spends almost ten pages summarizing alleged errors in the Decision, it ties none of these alleged errors to the "arguments" it presents for reconsidering our Decision. Reh'g Req. 2–11. Nor does Petitioner point out how any particular "error" is material to our ultimate conclusion that Petitioner failed to demonstrate a reasonable likelihood of proving that any challenged claim was unpatentable.

III. ORDER

For the reasons given, it is:

ORDERED that Patent Owner's Request for Rehearing of the Decision Denying Institution of *Inter Partes* Review (Paper 13) is *denied*.

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