

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THERMALTAKE TECHNOLOGY CO., LTD. and

THERMALTAKE INC.,

Petitioner,

v.

CHEN, CHIEN-HAO,

Patent Owner.

Case No. IPR2024-01230

U.S. Patent No. 10,690,336 B1

**PATENT OWNER'S REPLY TO PETITIONER'S OPPOSITION TO
PATENT OWNER'S REVISED CONTINGENT MOTION TO AMEND**

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I. Introduction

Under the Revised Scheduling Order (Paper 33) and Preliminary Guidance (Paper 25, hereinafter “Guidance”), Patent Owner files its Reply (hereinafter the “Reply”) to Petitioner’s Opposition to Patent Owner’s Revised Contingent Motion to Amend (Paper 36, hereinafter the “Opp.”).

II. Substitute Claims 6 and 7 Are Supported Under § 112

A. All Claimed Features in Substitute Claims 6 and 7 Are Supported

The Opp. does not, nor can it, argue that any *claimed* features in the substitute claims 6 and 7 in the Revised Contingent Motion to Amend (Paper 28, hereinafter “RMTA”) are unsupported by the specification. (*See generally* Opp. at 1-4.) Specifically, the Opp. no longer argues that the claimed system, which includes only “a first [and] a second illumination fan[s],” cannot operate as directed by both limitations (B) and (C) simultaneously. Unable to find any flaw in the *claimed* features, the Opp. instead complains that an *unclaimed* “power supply” connected to an *unclaimed* “preceding illumination fan,” which is a *third* illumination fan *never* recited by substitute claim 6 or 7, is somehow unsupported. (*See* Ex-2054, ¶¶ 26-28.) Petitioner’s arguments are wrong for at least two reasons. *First*, the *unclaimed* “power supply” is not a required limitation. “[A]n applicant ... is generally allowed claims, when the art permits, which cover more than the specific embodiment shown.” *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*,

93 F.3d 1572, 1582 n.7 (Fed. Cir. 1996); *accord. Ventana Med. Sys. v. Biogenex Labs. Inc.*, 473 F. 3d 1173, 1181-82 (Fed. Cir. 2006); *SRI Int’l v. Matsushita Elec. Corp. of America*, 775 F.2d 1107, 1121 (Fed. Cir. 1985).

Second, written description support under §112 is *not* required for *unclaimed* features. *Novartis Pharms. Corp. v. Torrent Pharma Inc. (In re Entresto (Sacubitril/Valsartan))*, 125 F.4th 1090, 1097 (Fed. Cir. 2025) (“Because the ’659 patent does not claim valsartan-sacubitril complexes, those complexes need not have been described.”); *see also id.* (“[t]he invention is, for purposes of the “written description” inquiry, *whatever is now claimed.*”) (emphasis original) (citing *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1564 (Fed. Cir. 1991); *see also Amgen Inc. v. Hoechst Marion Roussel*, 314 F.3d 1313, 1333 (Fed. Cir. 2003) (“the patentee need only describe the invention as claimed, and *need not describe an unclaimed method of making the claimed product*”) (emphasis added);¹ *see also Lochner Techs., LLC v. Vizio, Inc.*, 567 F. App’x 931, 939 (Fed. Cir. 2014) (“According to *Lochner* ... there is no precedent requiring a patentee to disclose or enable *unclaimed* elements We agree.”) (citing *Amgen*, 314 F.3d at 1331-32). Here, nowhere in claims 6 and 7 is a “power supply” connected to a “preceding illumination fan” recited or otherwise claimed, as admitted by Petitioner’s expert Dr. Wolfe. (*See Ex-*

¹ All emphasis is added in this paper unless otherwise noted.

2053 (Wolfe Tr.), at 293:19-21 (“Q. Dr. Wolfe, does substitute claim 6 or 7 claim a *third* illumination fan? A. I don’t see that in the claim.”).) Thus, such unclaimed features do not need express written description support under § 112.²

B. “Illumination Area” Is Supported

The Opp. baselessly argues that the ’336 patent does not disclose that the claimed “illumination area” illuminates, *i.e.*, generates light. (Opp. at 4.) To the contrary, the ’336 patent discloses that “[t]he power socket is electrically connected with ... the illumination area” and that “[w]hen the power socket is supplied with power, ... the illumination area of the body is ... *driven into ... illumination.*” (Ex-1001 (’336 patent), Abstract; *accord. id.* at 1:60-65; *see also* Ex-2054, ¶¶ 29-30.) A POSITA would have understood that these disclosures mean the claimed

² The cases cited by Petitioner concern *claimed* features and thus are inapplicable to the *unclaimed* power supply connected to the *unclaimed* preceding illumination fan with respect to claims 6 and 7. *See, e.g., Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997) (“One shows that one is ‘in possession’ of the invention by describing the invention, with all its *claimed limitations*, ...”); *see also Anascape, Ltd. v. Nintendo of Am., Inc.*, 601 F.3d 1333, 1337 (Fed. Cir. 2010) (“the description in the parent must meet the requirements of 35 U.S.C.S. § 112, first paragraph, as to that *claimed subject matter.*”)

“illumination area” receives power and in turn actively illuminates, as admitted by Dr. Wolfe. (Ex-2051 (Wolfe Tr.) at 233:24-25 (“Q. Does the illumination area illuminate? A. *Yes*, which means *it gives off light*.”).) Thus, the specification supports that the “illumination area” illuminates under § 112, as a POSITA would have understood. (Ex-2006, ¶ 51.)

C. “Flat Surface” Is Supported

The Opp. (at 4-5) rehashes prior arguments (Paper 24, at 9-10) already rejected by the Guidance (at, *e.g.*, 11, 14-15). For example, the Opp. (at 5) again complains that “[i]t is unclear from the specification how to implement or select flat surface connectors.” (*Compare* Opp. at 5 with Paper 24 at 9 (“the specification provides no disclosure on how to implement or select flat surface connectors”).) But “Patent Owner’s [prior] Motion [Paper 19] has set forth adequate written description support for [the claimed flat surfaces].” (Guidance at 11.) The RMTA (at 15-17) provides the same support for the “flat surface” as before. (*Compare* RMTA at 15-17 with Paper 19 at 13-15; *see also* Ex-2054, ¶ 31.).) Petitioner’s argument that “connector 5 as depicted in Figure 1 is disposed in an opening in the lateral face of the body as required by claim 7, not on the lateral face of the body” is thus both incorrect and irrelevant. (Opp. at 5 (emphasis omitted).)

Petitioner alleges “Dr. Tuckerman testified that he did not see anything that looked flat” in some photographs of a product purportedly practicing claim 4 of the

'336 patent. (Opp. at 5-6.) But Dr. Tuckerman testified to the exact opposite, that he “do[es]n’t see anything there that *doesn’t* look flat” in the photographs. (Ex-1045 (Tuckerman Tr.) at 196:9-12.) Thus, Petitioner’s argument is wrong, and is also irrelevant because the cited photographs concern a product purportedly practicing claim 4, which does not even have the limitation “flat surface.” (Ex-2054, ¶ 32.)

III. Substitute Claims 6 and 7 Are Not Indefinite Under § 112

A. Limitations (B) and (C) Can Operate Simultaneously

As discussed above in Section II.A, the Opp. does not dispute that all *claimed* features in the revised substitute claims 6 and 7, including limitations (B) and (C), are supported by the specification. Indeed, the RMTA (at 9-10) explains that the claimed “first illumination fan” can receive power via its “second connector” as supported by the specification, which the Opp. (at 1-4) does not dispute. In turn, the “power socket” of the claimed “first illumination fan” in limitation (B) can be supplied with power via the “power socket’s electrical connection with the second connector” of the claimed “first illumination fan” (*see* RMTA at 8), which is also undisputed (*see* Opp. at 1-4). Nothing in limitation (B) prevents the “first connector” of the claimed “first illumination fan” from connecting with a “second connector” of the claimed “second illumination fan” in limitation (C) (*see* RMTA at 10-11), which again is undisputed (*see* Opp. at 1-4). Accordingly, it is undisputed that the claimed system in claim 6 or 7 comprising the claimed “first illumination fan”

connected with the claimed “second illumination fan” can operate as directed by limitations (B) and (C) simultaneously. (*See* Ex-2054, ¶ 33.)

The Opp.’s contention that the alleged inability of a POSITA to “understand how power is supplied to the second connector of the [unclaimed] preceding illumination fan” would cause indefiniteness is meritless. (Opp. at 7.) The Opp. relies on Dr. Wolfe’s *prior* declaration (Ex-1031, ¶ 90), which did not consider the new limitation that the power socket is supplied with power “via the power socket’s electrical connection to the second connector” of the claimed “first illumination fan.” That is, the Opp. merely makes a conclusory statement citing no support concerning the *revised* substitution claims 6 and 7. (Ex-2054, ¶ 34.) Even assuming *arguendo* a POSITA somehow lacked such understanding of the *unclaimed* “power supply,” the Opp. (at 7) does not explain why it would cause indefiniteness of any *claimed* features. Moreover, the specification makes clear that the second connector of the unclaimed preceding illumination can receive power. (*See, e.g.*, Ex-1001 at 3:7-16.) A POSITA would have readily understood that the source of such power can be yet another illumination fan or a power supply. (Ex-2054, ¶ 35).

B. “Flat Surface” Limitation Is Not Indefinite

The Opp. (at 8) offers *the same* prior arguments *almost verbatim* that the Guidance (at 14) already rejected. For example, citing to the same paragraph of Dr. Wolfe’s *prior* declaration (Ex-1031, ¶ 91), the Opp. (at 8) again argues that “the

term ‘flat surface’” is indefinite. (*Compare* Opp.at 8 with Paper 24 at 10-11.) Yet, the Guidance already correctly found that “the scope of the subject matter embraced by the claimed ‘a first connector comprising a first flat surface disposed on the first side of the body’ and ‘second connector comprising a second flat surface disposed on the second side of the body’ in proposed substitute claim 7 is *clear*, as one having ordinary skill in the art would, in light of the Specification, have understood such connectors to include a flat surface.” (Guidance, at 14.) Indeed, a POSITA would have understood the scope for the “flat surface” of the connectors as shown in FIGS. 1 and 2 to allow the connection between each two adjacent illumination fans as shown in FIG. 3. (Ex-2054, ¶¶ 31-32, 36.)

IV. Substitute Claims 6 and 7 Are Not Obvious

A. Petitioner Fails to Show Prior Art Teaches All Limitations

By rule, a Petitioner bears “the burden of persuasion to show, by a preponderance of the evidence, that any proposed substitute claims are unpatentable” under 37 C.F.R. § 41.121(d)(1). Indeed, it is Petitioner’s burden to “specify where each element of the claim is found in the prior art patents or printed publications relied upon.” 37 C.F.R. § 42.104(b)(4). Critically, Petitioner failed to show how the prior art teaches claims 6 and 7 ***limitation-by-limitation***. (*See generally* Opp. 8-25.) Thus, Petitioner cannot carry its burden to show claims 6 and 7 are obvious. *Aqua Products Inc. v. Matal*, 872 F.3d 1290, 1307 (Fed. Cir. 2017).

B. Prior Art Fails To Teach Distinct and Separable First Connector

The Opp. also fails because it rehashes the same rejected argument that a first connector structurally distinct and separable from the power socket both on the same side of the body of the first illumination fan is merely a “design choice.” (Opp. at 10.) But “[t]his contention ... lacks an underlying factual basis, as it merely relies on Dr. Wolfe’s unsupported declaration testimony—which asserts the same without any supporting evidence.” (Guidance at 21.) Critically, the Opp. fails to explain *why* and *how* a POSITA would have modified the prior art to have a first connector structurally distinct and separable from the power socket both on the same side of the first illumination fan’s body merely as an “obvious design choice” (Opp. 8-25; *see also* Ex-2054, ¶ 38). *See In re Chaganti*, 554 F. App’x 917, 922 (Fed. Cir. 2014) (“It is not enough to say that ... to do so would ‘have been obvious to one of ordinary skill.’ ... Such circular reasoning is not sufficient—more is needed to sustain an obviousness rejection.”); *see also Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”) (emphasis original).

As explained by Dr. Tuckerman, the “power socket” of the first “illumination fan” in substitute claims 6 and 7 has different functions than the mapped structure(s) in the prior art: the claimed “power socket” receives power from the “second

connector” and distributes power to the “center fan,” the “illumination area,” and the “first connector.” (Ex-2054, ¶¶ 39-40.) In contrast, for example in Tsuji, the purported power socket CNA/CNB does not function to receive power from the purported second connector CND of the same fan body 10. (*Id.*) Similarly, in Lai, the purported power socket, single input 111, also does not function to receive power from the purported second connector, single output 112, of the same fan body 10. (*Id.*) Thus, the “power socket” being structurally distinct and separable from the “first connector” both on the same side of the body of the “first illumination fan” is not just a design choice. *In re Gal*, 980 F.2d 717, 719-720 (Fed. Cir. 1992) (finding of “obvious design choice” precluded where the claimed structure and the function it performs are different from the prior art).

With respect to Tsuji-Huang, as the Board has pointed out, “Tsuji ... specifically requires power connectors CNA and CNB [the purported ‘power socket’] to have *openings disposed on different faces (front and rear faces) of the fan than the faces (end sides) where inter-fan connectors CNC and CND are disposed*, in order to selectively provide power at connectors CNA/CNB to each of multiple interlocked fans, hot-swap individual fans, and associate each fan’s address with the fan’s individual power connection position in the daisy chain.” (Guidance at 19-20 (emphasis original).) To the extent it relies on Ground 1 in the Petition (at 34), the Opp. does not explain why or how a POSITA **would have** modified Tsuji to

place CNA/CNB (the purported “power socket”) and CNC (the purported “first connector”) on the same side of the first fan body. The Opp., instead, provides merely a conclusory statement, that “[a]lternatively, a POSITA would have been motivated to combine Tsuji and Huang with the teaching of one or more of the references discussed below [e.g., ‘SATA,’ ‘Thermaltake rgb fan manual 2017,’ and ‘NZXT AER RGB120 manual’] in order to use two connector housings for the connector pins disclosed for CNC.” (Opp. at 10-17.) But the Opp. never explains why or how these references **would have** been combined with Tsuji and Huang by a POSITA to teach a first connector structurally distinct and separable from the power socket both on the same side of the first illumination fan’s body, as required by claims 6 and 7. Dr. Wolfe also admittedly had not combined these references with the cited art. (*See, e.g.*, Ex-2053 at 303:17-24, 358:20-22, 344:10-13.) The Opp. (at 10) also never explains why or how a POSITA **would have** “use[d] two connector housings for the connector pins disclosed for CNC” in Tsuji. (Ex-2054, ¶¶ 41-46.)

As to Lai-Hasegawa, the Opp. (23-24) again fails to explain why or how a POSITA **would have** modified the combination to reach a first connector structurally distinct and separable from the power socket both on the same side of the first illumination fan body. (Ex-2054, ¶ 47.) The Board, however, has found that “[a]s both Lai and Hasegawa show power connectors and inter-fan connectors disposed in a single physical connector at the surface of the fan (*see* connector 111 in Lai’s

Fig. 2, connections 12 or 13 in Lai’s Fig. 3, and connector 25 in Hasegawa’s Figs. 29–32), Petitioner’s argument regarding the Lai-Hasegawa combination does not explain why the combination would have prompted an ordinarily skilled artisan to modify the unitary connectors of these references to present a first connector ‘structurally distinct and separable’ from a power socket (as required by the proposed substitute claims).” (Guidance at 28; *see also id.* at 26 (“Lai ... specifically seeks an arrangement of fans 10 that improves ‘the entire appearance’ by providing each ‘LED fan 10 ... *only ... with windows of a single input 111* and a single output 112 [so] that all the addressable RGB LEDs 16 can be controlled’ and linking ‘LED fans 10 ... together *using a single transmission line 12.*’”) (emphasis original); *accord. id.* at 24-25.)

C. Prior Art Fails To Teach Power Socket Powered by Second Connector

In response to the Guidance, the RMTA added a new limitation to require that the power socket be supplied with power “via the power socket’s electrical connection with the second connector” of the first illumination fan. (*See, e.g.,* RMTA at 19.) The cited prior art does not teach this new limitation. In Tsuji, the purported power socket CNA/CNB **cannot** meet this limitation because it **cannot** receive power from the purported second connector CND of the same fan body 10 due to a pair of diodes. (Ex-2054, ¶¶ 48-49.) Similarly, in Lai, the purported power socket, single input 111, also **cannot** receive power from the purported second

connector, single output 112, of the same fan body 10 because the direction of the power flow is backward. (*Id.*, ¶¶ 50-51.) Thus, the prior art fails to teach substitute claim 6 or 7’s *new* requirement that the power socket be supplied with power “via the power socket’s electrical connection with the second connector.” (*Id.*, ¶ 52.)

D. Prior Art Fails To Teach Flat Surface with Round Electrical Terminal

In response to the Guidance, the RMTA added a new limitation to require that the flat surface of the first connector comprise a **round** electrical terminal. (*See, e.g.*, RMTA at 14-15.) The Opp. does not challenge that this new limitation is supported by the specification and fails to show that it is obvious. Indeed, this round electrical terminal is “configured to electrically connect with a second electrical terminal of the second illumination fan.” A round shape provides better contact with the second electrical terminal of the second illumination fan, which may be a flat contact surface. (Ex-2054, ¶ 53.) Thus, this limitation is not just a matter of a design choice. The Opp. (at 18-22, 24-25) fails to show why or how a POSITA ***would have*** been motivated to modify either Tsuji-Huang or Lai-Hasegawa to reach this limitation in view of the cited prior art purportedly disclosing round electrical terminals.

For at least the above reasons, substitute claims 6 and 7 patentably define over the prior art of Lai, Hasegawa, Tsuji, and Huang. (Ex-2054, ¶ 54.)

V. Conclusion

In view of the foregoing, the RMTA should be granted.

Respectfully submitted,

GREENBERG TRAURIG, LLP

Date: November 17, 2025

By: /s/ Kyle Chen

Kyle Chen (PHV)

Heath J. Briggs (Reg. No. 54,919)

1144 15th St. Suite 3300

Denver, CO 80202

Telephone: 303-685-7418

Facsimile: 720-904-6118

BriggsH@gtlaw.com

Counsel for Patent Owner

CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of November 2025, a copy of this Patent Owner's Reply to Petitioner's Opposition to Patent Owner's Revised Contingent Motion to Amend pursuant to 37 C.F.R. § 42.121 including all attachments and exhibits has been served in its entirety via electronic mail by emailing Petitioner's below counsel as per Petitioner's Mandatory Notices.

- Case-ThermaltakeIPRMembers@Pillsburylaw.com
- robert.perez@pillsburylaw.com
- christopher.kao@pillsburylaw.com
- david.tsai@pillsburylaw.com
- brock.weber@pillsburylaw.com
- surui.qu@pillsburylaw.com
- jaclyn.schade@pillsburylaw.com

GREENBERG TRAURIG, LLP

Date: November 17, 2025

By: /s/ Kyle D. Chen
Kyle Chen (PHV)
Heath J. Briggs (Reg. No. 54,919)
1144 15th St. Suite 3300
Denver, CO 80202
Telephone: 303-685-7418
Facsimile: 720-904-6118
BriggsH@gtlaw.com

Counsel for Patent Owner