

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

KOHLER CO.,
Petitioner,
v.
DELTA FAUCET CO.,
Patent Owner.

Case No. IPR2024-00700
U.S. Patent No. 10,393,363

PETITIONER'S REPLY

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LISTING OF EXHIBITS

Exhibit	Description
1001	U.S. Patent No. 10,393,363 B2 to Weaver et al.
1002	File History of 10,393,363 B2 to Weaver et al.
1003	Declaration of J. Chris Cook
1004	U.S. Pub 2015/0354186 A1 to Tseng et al.
1005	WO 2009/000109 A1 to Tse et al.
1006	U.S. Pub. 2010/0046199 A1 to Carter
1007	JP 2003027537A to Mizuno et al.
1008	Translation of JP 2003027537A to Mizuno et al. and associated translator's declaration
1009	U.S. Pub. 2015/0221206 A1 to Schneider, II et al.
1010	U.S. Pub. 2005/0264529 to Morgan et al.
1011	U.S. Pub. 2015/0208897 A1 to Kangas et al.
1012	U.S. Design Patent D540,424 S
1013	U.S. Patent No. 9,199,252 B2 to Schorn et al.
1014	U.S. Pub. 2013/0299608 A1 to Spangler et al.
1015	Transcript from the April 25, 2025 Deposition of Richard W. Klopp, Ph.D.

I. INTRODUCTION

Petitioner submits this reply in support of its Petition for *inter partes* review. Patent Owner's response fails to account for the totality of the prior art's disclosures and is replete with irrelevant, unsupported assertions. When the actual disclosure of the prior art is considered—as it must be—it is plain that the '363 patent's claims are all obvious.

According to Patent Owner, Tseng somehow fails to teach a “translucent” light pipe that “diffuses” light outward. Patent Owner instead posits that Tseng would use a clear material that produces flashlight-like light spots. This simply cannot be squared with Tseng. The only material Tseng references for use with its light conductor is a translucent material. And Tseng repeatedly explains that its conductor functions to guide the light emitted by its LEDs to multiple output faces for purposes of enhancing illumination. Patent Owner ignores this and does little more than propose alternative (and materially worse) ways to implement Tseng. This does not show non-obviousness.

Patent Owner's arguments regarding Tse are similarly unavailing. Per Patent Owner, Tse's cover is not a “light pipe.” But this fails to recognize that the cover is indistinguishable from the “light pipe” shown Figure 11 of the '363 patent. It also ignores that Patent Owner's expert concedes that “translucent” materials (Tse's cover is made from such a material) necessarily diffuse and scatter light and thus act

as a “light pipe” as claimed. Next, Patent Owner wrongly argues that Tse is different from the claims because some—but not all—of its water outlets are surrounded by its light pipe/cover. The ’363 patent’s claims, however, require only that “the water outlet” (*i.e.*, one such outlet) be surrounded. Patent Owner is reading in limits that simply are not there.

The remainder of Patent Owner’s arguments are similarly unavailing. Again and again Patent Owner ignores the teachings of the art and replaces the clear evidence of record with its own, unsupported speculation.

II. ARGUMENT

A. Ground 1: Obviousness over Tseng

Ground 1 explained why Tseng’s kitchen spray-head renders many of the ’363 patent’s claims obvious. Petition (Paper 1), 22-42.

1. “*Translucent light pipe*” (claims 1 and 10)

Patent Owner argues that Tseng fails to disclose a “*translucent light pipe*.” Response, 17-24. Even though Tseng does state that it uses a “translucent” material, Patent Owner posits that this is limited to just Tseng’s first embodiment. A POSITA—per Patent Owner—would for some reason be unable to use (or even consider) this mentioned material with Tseng’s other embodiments. *Id.*

This is ridiculous. “A person of ordinary skill is ... not an automaton.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 421 (2007). Moreover, “the knowledge,

creativity, and common sense” of a POSITA must be considered. *Fleming v. Cirrus Design Corp.*, 28 F.4th 1214, 1222-23 (Fed. Cir. 2022).

A POSITA would not engage in the type of formalistic, nit-picky analysis that Patent Owner does here. Tseng explains that **all** its embodiments employ a “light conductor” with a “light transmission portion for transmitting” light emitted by LEDs from an “input face” to an “output face.” Tseng, [0011]. The **only** material Tseng identifies for use with this “light conductor” is a “translucent material.” *Id.*, [0070]. And in all of Tseng’s embodiments, the “light conductor” performs the same function: it transmits light from the LEDs from the input faces to the output faces to “enhance” “illumination.” *E.g., id.*, [0072], [0079], [0091]. Given this similarity in form and function, along with the reference to only a single material, a POSITA would plainly have understood that all of Tseng’s embodiments are “translucent.” Ex. 1003, ¶¶ 163-164, 167-171 (explaining that Tseng’s light conductors are made from translucent material); Ex. 1015, 16:23-17:12, 20:14-21:4, 23:12-24:19 (Patent Owner’s expert recognizing the similarities between Tseng’s embodiments).

If this were not enough, Tseng specifically identifies the “difference[s]” between its embodiments. Tseng, [0090]-[0094], [0095]-[0101]. While the “light conductor” is **shaped** differently, Tseng **never** says that a different material is used. *Id.*; Ex. 1015, 19:14-19, 22:9-23:8 (no mention of different materials). The plain

implication of this is that the same translucent material is employed in all cases. Indeed, this is the only reasonable conclusion a POSITA would reach.

Patent Owner's expert incorrectly posits that because Tseng's second and third embodiments are meant to "enhance" light transmission and illumination, this would somehow lead one of ordinary skill in the art to use a different, undisclosed transparent material that would cause those embodiments to act like a "flashlight." Ex. 2003, 90-98; Response, 23. Again, Tseng mentions only "translucent" material, not transparent material. Tseng, [0070]. Moreover, all of Tseng's embodiments are designed in a way that is meant to both transmit light and "enhance" "illumination." Tseng, [0079], [0094], [0098]. As Petitioner's expert explained, this obviously refers to a device structured to "uniformly diffuse light from Tseng's four internal LED elements to a different location on the exterior of spray head 30." Ex. 1003, ¶¶ 170-172; Ex. 1015, 30:22-31:4 (POSITA readily able to configure light emission).

Similarly, Tseng's various spray-head embodiments are meant to facilitate light emission out of multiple different faces. *Id.*, [0090], [0094] (emission from output face 313 and circular rib 371); [0097]-[0098] (emission from output face 313 and annular protrusion 383). This necessitates use of translucent material that allows light to be scattered and diffused. *See, e.g.*, Ex. 2003, ¶¶ 41-42 ("translucent" materials "scatter[]" light in multiple directions, while "transparent" materials do not); Ex. 1015, 17:4-12. So, far from showing non-obviousness, Patent Owner and

its expert have done nothing more than confirm why a POSITA would consider Tseng's light conductor to be translucent: forming the conductor of this type of material will disperse light and ensuring that it reaches the conductor's multiple output faces as Tseng says it does.

2. ***“Outer illumination surface” (claim 10)***

Patent Owner next argues that Tseng lacks an ***“outer illumination surface extending perpendicularly to the longitudinal axis of the housing”*** and ***“annular ring configured to transmit light radially outward.”*** Response, 25. According to Patent Owner, the Petition's explanation that Tseng intends light to be emitted not just from the bottom of its spray-head but from the sides is “unsupported.” *Id.*, 26. Patent Owner argues that a POSITA would for some reason interpret Tseng as teaching a spray-head that only emits light downward. *Id.*; see also 31-34.

Nothing could be further from the case. The Petition properly considered—and gave effect to—the **totality** of Tseng's teachings. Patent Owner ignores much of what Tseng says.

In Tseng's third embodiment's (shown in Figures 32-37), the “light conductor” includes not only an “output face 313” facing downward, but also an “annular protrusion 383 extending outwardly adjacent to the bottom end thereof.” Tseng, [0098]. This outwardly extending element “enhance[s] light transmission.” *Id.* This structure feature is analogous to circular rib 31d in Figure 5. The rib—like

the annular protrusion—“exposes outside” the spray-head “to enhance [the] illumination effect.” Tseng, [0079]; [0094].

In arguing that Tseng will only emit light downward—and not radially outward—Patent Owner deprives “annular protrusion 383” of purpose. There would be no reason for “annular protrusion 383” to “extend[] outwardly” if it were not intended to transmit light outwardly. Moreover, protrusion 383 would not meaningfully “enhance” light transmission if it simply outputs light in the exact same way as “output face 313.” While Patent Owner argues that a POSITA would have understood the function of protrusion 383 to be simply providing “a larger bottom output face 313” (Response, 34), this finds no support in Tseng. Tseng separately identifies and explains that element 383 extends outward—and labels this element on the side of its spray-head—because it is plainly intended to allow light to be emitted (and seen) in another direction different from that of output face 313: radially out of the spray-head sides. Ex. 1015, 32:22-36:7 (Patent Owner’s expert admitting that location of labeling in Tseng important).

Nothing in the record says anything to the contrary. Patent Owner argues that Petitioner’s expert Mr. Cook “admitted” that “Tseng describes light transmitted from LED 40 downward, through input face 311, downward through output face 313.” Response, 30 (quoting Ex. 2005, 81:16-20). This is simply one of the paths Tseng’s light follows. Indeed, Mr. Cook included an arrow showing this in his declaration.

E.g., Ex. 1003, ¶ 174 (light emitted downwards, sideways, and upwards). But light **also** proceeds in other directions. *Id.* There are multiple reasons for this. First, Tseng employs the same LEDs 40 in all its embodiments. Tseng, [0068], [0094], [0101]. In some embodiments, the LEDs face down, while in others they face inward. *E.g.*, *id.*, Figs. 5, 12, 13 (facing downward), 35-36 (facing inward). To accommodate this, the LEDs obviously emit light in multiple directions. *E.g.*, Ex. 1003, ¶ 174. Second, Tseng forms its light conductor from translucent material. This type of material diffuses and scatters light. Ex. 2003, ¶¶ 40-42. Thus, regardless of which way the LEDs face, at least some light will reach all of Tseng's various output faces. Ex. 1003, ¶¶ 174-175. Indeed, Patent Owner's expert agreed with this during deposition. Ex. 1015, 36:9-37:15.

Patent Owner also proves Petitioner's point. Patent Owners explains that Tseng's ring 52 and sleeves 33/34 "would block light transmission in the perpendicular direction" out the sides of element 381. Response, 32. This is a *de facto* admission that in the light pipe, some light **is in fact traveling in a perpendicular direction**. Annular protrusion 383 is not so blocked, so light will be perpendicularly emitted from here.

Next, according to Patent Owner, "Tseng does not ... describe ... the side of ... annular protrusion" 383 as "an output face." Response, 31-32. This is simply wrong. Tseng labels 383 in a way that makes clear that it faces perpendicularly

outward from its spray-head. Tseng, Fig. 32 (item number 383 points to a side surface). And it explains that the purpose of this component is to “enhance light transmission.” *Id.*, [0098]. Patent Owner’s position—which again deprives protrusion 383 of its intended function—is directly contrary to the prior art and thus does not (and cannot) show non-obviousness. *Homeland Housewares, LLC v. Whirlpool Corp.*, 865 F.3d 1372, 1378 (Fed. Cir. 2017) (arguments “plainly inconsistent with the record” and cannot show non-obviousness).

Moreover, Patent Owner’s expert testifies that a “POSITA would have reviewed the ’874 patent” (which Tseng references) “to further understand” Tseng. Ex. 2003, ¶ 120. The ’874 patent discloses an illuminated plumbing fixture almost indistinguishable from Tseng. Ex. 2009, 1:6-7. As shown below, the fixture includes a “lightguide” at its end. *Id.*, 3:18-27. Light from LEDs 74 enter the lightguide via “input face 56” and proceeds through “transmission region 52.” *Id.*, 3:51-62. But rather than exiting only via “end face 58,” the ’874 patent explains that “light may ***also be output from ... the exposed outer surface area 72.***” *Id.* (emphasis added). The ’874 patent repeatedly explains that this allows for customizable, improved light emission. *Id.*, 6:27-37.

arguments—is premised on an extremely narrow, pedantic reading of Tseng. This is not how prior art is to be assessed. Instead, the **totality** of a reference’s teachings must be considered. Here, Tseng teaches that its spray-head includes a light conductor that (1) is made from translucent material and (2) transmits light to multiple output faces. This obviously entails and results in light diffusion. *E.g.*, Petition, 29-30, 34-37. Petitioner’s expert also explained at length why a POSITA would have considered more diffuse light—as opposed to light concentrated in a few spots—to be a highly obvious design variation. Ex. 1003, ¶¶ 167-176, 199-202.

Patent Owner responds only with a series of pronouncements regarding Tseng that find no support in the reference itself. For instance, Patent Owner argues that Tseng’s reference to “enhance[d] light transmission and illumination” would for some reason be interpreted to mean that Tseng emits only individual spots of non-diffused light. Response, 40-41. This makes no sense. If singular spots of light somehow “enhance[d]” illumination, Tseng would have included only a single LED, a transparent light conductor, and a single light emission point. But Tseng employs translucent material, multiple evenly distributed LEDs, and a light conductor with a ring-like emission surface that extends around its entire spray-head. Thus, Tseng obviously intends to diffuse—or spread out—light as much as possible. Ex. 1003, ¶ 202.

Next, Patent Owner and its expert also do nothing more than propose another possible way Tseng could be implemented. But the mere fact that one could implement Tseng such that it emits single spots of light does not negate the fact that it is also even more obvious to design Tseng's spray-head such that it emits diffused light. The fact that "better alternatives exist in the prior art does not mean that an inferior combination is inapt for obviousness purposes." *Chemours Co. FC v. Daikin Indus.*, 4 F.4th 1370, 1380 (Fed. Cir. 2021) (*quoting in re Mouttet*, 686 F.3d 1322, 1334 (Fed. Cir. 2012)). Neither Patent Owner nor its expert dispute that a POSITA would have preferred uniformly diffused light. Ex. 1003, ¶¶ 199-202. So, Patent Owner has not even pointed to "better alternatives." Instead, it proposes implementing Tseng in a way that would make it demonstrably worse: rather than enhancing illumination by diffusing light to Tseng's multiple available output surfaces, light would only be sent to a single point. The fact that Tseng could conceivably be implemented in such an odd way is irrelevant.

Likewise, the fact that "Tseng does not say anything about diffusing light" (Response, 39-40) is also irrelevant. Tseng is not required to use the same language as the claims. It simply must render the claims obvious. It does so here by specifying that its spray-head includes a "light conductor" formed from "translucent material" that "enhance[s] light transmission" by "guiding" light from its LEDs to multiple different output faces. Tseng, [0070]-[0072], [0079], [0091]-[0094], [0096]-[0098].

4. *Motivation to combine*

Patent Owner concludes by faulting the Petition because it purportedly “fails to provide the basic requirements of a prima facie case of obviousness.” Response, 44. This is because, according to Patent Owner, the Petition “does not articulate what the references lack.” Response, 1. There is no such requirement. A single reference that teaches everything the claims require can of course render the claims obvious. *Game and Tech. Co. v. Activision Blizzard Inc.*, 926 F.3d 1370, 1381 (Fed. Cir. 2019).

Nor did the Petition improperly combine “different embodiments” without “motivation.” Response, 1, 44-46. The Petition explained why both Tseng’s second and third spray-head embodiments render the claims obvious. The Petition did not combine embodiments. Tseng itself already explains that all its embodiments are to use translucent material to form its light conductor. Tseng also already explains that its various spray-heads operate similarly to generate, transmit, and emit light. This provides a POSITA with all the information needed and itself motivates the use of translucent materials. In contrast, Patent Owner improperly focuses on passages in isolation, fails to account for the totality of the art’s teachings, and seeks to impose requirements on Petitioner that find no basis in the law. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1373 (Fed. Cir. 2019) (“finding regarding a motivation” not required when reference not being modified).

B. Ground 2: Obviousness Over Tseng and Mizuno

Ground 2 in the Petition explained why claims 9 and 11 are obvious over the combination of Tseng and Mizuno (which teaches the claimed hydro-generator). Petition, 43-46.

Patent Owner presents only an array of non-responsive, irrelevant arguments. For example, it posits that Tseng cannot be modified to employ a hydro-generator because it (1) includes a wired power supply and (2) states in its background section that it improves the “conventional illuminated faucet ... disclosed in U.S. Patent No. 7,467,874.” Response, 47. According to Patent Owner, the ’874 patent articulates numerous benefits deriving from a wired power supply that would be “lost” if a hydro-generator is used. *Id.* Patent Owner even goes so far as to argue that this somehow constitutes a “teaching away.” *Id.*, 54.

There is no teaching away here. “A reference that merely expresses a general preference for an alternative invention but does not criticize, discredit, or otherwise discourage investigation into the claimed invention does not teach away.” *Meiresonne v. Google, Inc.*, 849 F.3d 1379, 1382 (Fed. Cir. 2017). While Tseng does note that its spray-head can include an “electric wire” (Tseng, [0009]), it **does not** say that such a wire is a required component. Instead, Tseng explains that its spray-head serves multiple purposes, many of which have nothing to do with the presence

of a wire. This includes quick and easy assembly, decreased production cost, and improved illumination. *Id.*

Next, while Tseng does cite the '874 patent, it does not incorporate it by reference or identify any of the supposed “benefits” deriving from the use of a wired power supply discussed at length by Patent Owner. Instead, Tseng mentions only **downsides** of wired power supplies such as the potential for “damage.” *Id.*, [0009]. This would have led a POSITA to alternatives like Mizuno’s hydro-generator. Ex. 1003, ¶ 260 (replacing the wire with a hydro-generator eliminates a “point of possible failure”). Thus, far from teaching away, Tseng’s discussion of the prior art’s use of a wired power supply **motivates** use of Mizuno.

So, once again, Patent Owner does nothing more than note that there are alternatives in the prior art: both wired and hydroelectric power supplies were known. Moreover, both had well-known benefits and disadvantages. Indeed, Patent Owner does not even address—let alone provide any meaningful response to—the many benefits associated with the use of a hydro-generator (and the specific benefits Mizuno’s generator provides) identified by Petitioner’s expert Mr. Cook and in the prior art. Ex. 1003, ¶¶ 246-256; Mizuno, [0005]-[0006].

Next, Patent Owner argues that a POSITA would not have had a reasonable expectation of success. Its sole basis for this, however, is that Tseng characterizes its spray-head as having a “narrow space.” Response, 53. According to Patent

Owner, because of this, a POSITA would not expect a hydro-generator to fit. *Id.* The art says the opposite. Mizuno’s hydro-generator is meant for use in all “[c]onventional[]” “types of faucets” found in “kitchens and washrooms.” Mizuno, [0002]. This is what Tseng teaches: a “conventional” kitchen faucet. Tseng, [0002]. Moreover, Mizuno explains that its hydro-generator is specifically designed to avoid problems with prior art solutions—like batteries—that caused the faucet “spout” to “become[] large.” Mizuno, [0005]. Thus, a POSITA would have understood that Mizuno’s generator is more than capable of fitting in a spray-head like that taught by Tseng. This is particularly the case because, as Mr. Cook notes, Tseng includes an empty chamber 321 within its housing. Ex. 1003, ¶¶ 265-270. Mizuno’s generator—along with the additional components that improve its operation like cooling mechanisms—is sized to be “fitted” into a similar “fitting recess 30 ... formed inside the body 14” of a spray-head. Mizuno, [0022]; *see also* Ex. 1015, 39:5-40:2 (agreeing that Mizuno intended for use with “conventional” faucets).

Patent Owner’s position is also inconsistent with the ’363 patent. The ’363 patent did not invent hydro-generators, propose particularly small or compact generators, or identify any issues with the use of such a generator in kitchen and bath fixtures. Instead, it simply employs a standard, available component that operates in a “known” way. Ex. 1001, 4:39-52. Given this, Patent Owner’s argument that a

POSITA would have considered there to be some sort of impediment to the use of a hydro-generator with Tseng lacks credibility.

C. Ground 3: Obviousness Over Tseng and Schneider

Ground 3 in the Petition explained why claims 17 and 18 are obvious over the combination of Tseng and Schneider. Petition, 46-52. Schneider teaches the claimed temperature sensor and controller that changes LED light color to match the temperature. *Id.*

Patent Owner begins its response to this Ground by mischaracterizing the Petition. The Petition did not “fail[] to explain ... what the resulting combination” of Tseng/Schneider “would look like.” Response, 57. Instead, it clearly explained that a POSITA would have modified Tseng by including a temperature sensor and controller—as Schneider teaches—allowing Tseng’s existing LEDs to change color. Petition, 48-49. Rather than addressing this straight-forward argument, Patent Owner discusses only another, different “combination” where Schneider’s display is for some reason bodily grafted onto Tseng. Response, 56-62. This is non-responsive: it does not address how the Petition explained the art would be combined. Further, Schneider does not need to be applied to Tseng this way for the claims to be obvious. *Allied Erecting v. Genesis Attachments*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (no requirement for “bodily incorporate[ion]”)

Patent Owner then walks through a series of supposed “problems” that would purportedly arise when applying Schneider to Tseng (such as the “need for electrical power,” potential “risk of damage,” and the “limited space” of Tseng’s spray-head). Response, 60-61. But this is all already addressed by the prior art. Schneider and Tseng already include power supplies. Tseng is already designed to avoid wiring damage. And Schneider’s temperature sensor and controller is designed to fit within—among other things—a kitchen spray-head. Tseng, [0009], [0030]; Schneider, [0003], [0026].

D. Ground 4: Obviousness Over Tse

Ground 4 explained why Tse’s bath shower-head renders other ’363 patent claims obvious. Petition, 52-70.

1. *“Translucent light pipe” (claims 1 and 19)*

Patent Owner argues that the “cover” built into the face of Tse’s shower-head (which both protects its LEDs and disperses light) is not a ***“light pipe.”*** Patent Owner does not dispute, however, that a “light pipe” is “any structure that transmits light along its length.” Petition, 32, 61. Nor does it dispute that “light pipes” were well-known and routinely used in the prior art. *Id.* Instead, it argues only that Tse’s cover—as depicted in its figures—supposedly does not have an “adequate” “thickness-to-width aspect ratio” to qualify. Response, 63.

“[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes....” *Hockerson-Halberstadt, Inc. v. Avia Group Int’l*, 222 F.3d 951, 956 (Fed. Cir. 2000). Instead, a full inquiry into Tse’s teachings—and the understanding of a POSITA—was required. Here, Tse explains that its cover not only serves to cover and protect its LEDs, but also contributes to the “visual enjoyment of” the “user ... while showering.” Tse, 8:20-23; *see also* 4:16-18. Petitioner explained—with supporting expert testimony—why this would have obviously led a POSITA to conclude that Tse’s cover will diffuse and transmit light along its length for purposes of producing a more uniform lighting effect. Petition, 64; *see also* Ex. 1003, ¶¶ 64. Patent Owner offered no response.

Next, Patent Owner entirely ignores the similarities between Tse and the ’363 patent’s own examples. Tse’s cover is both structured and dimensioned in a way that is not meaningfully different from the “light pipe” in the ’363 patent. Petition, 60-61. Patent Owner does not dispute this. It follows that if the ’363 patent’s own examples include a “light pipe,” so does Tse.

Patent Owner also argues that if Tse’s cover is “transparent,” it will not be a “light pipe” and will instead function “more like a window.” Response, 63. But Tse **also** explains that its cover can be formed from “semi-transparent” material. Tse, 6:27-29, 3:3-5. Once again, Patent Owner conceded that use of “translucent”

material like that employed by Tse scatters and diffuses light. Ex. 2003, ¶¶ 40-42. By (1) not disputing Petitioner’s explanation of what constitutes a “light pipe” (structures that diffuse light) and (2) representing that all translucent materials diffuse at least some light, Patent Owner has effectively conceded that Tse satisfies the claims.

Petitioner’s expert Mr. Cook also explained at length why sizing/shaping Tse’s cover in a way that results in more light diffusion along the cover length would have improved Tse. Ex. 1003, ¶¶ 378-380. Again, Patent Owner disputes none of this. Instead, it limits itself to pointing out that the Petition characterizes Tse’s cover as sitting “flush” with the shower-head surface. Response, 64. There is nothing inconsistent with this and Mr. Cook’s testimony. The cover can of course be made thicker and have a curved surface (*i.e.*, its backside) while continuing to be flush with the shower-head surface. Moreover, there is nothing in Tse that requires the cover to be perfectly flush. This, however, appears to be how Patent Owner improperly interprets the reference.

2. “Defining a closed loop surrounding the water outlet” (claim 19)

Next Patent Owner argues that Tse’s cover does not “*surround[] the water outlet.*” In Tse, there are indisputably some water outlets within (and surrounded by) Tse’s cover. There are, however, other water outlets outside of cover. Per Patent

Owner, this distinguishes Tse because the claims somehow require all water outlets to be surrounded. Response, 64.

Neither the claim nor the specification requires this. Claim 19 requires only “a water outlet” and provides only that “the water outlet” be surrounded/enclosed. So long as one such outlet is surrounded, the claim is satisfied. There is no requirement that all (or even most) water outlets be surrounded by the light pipe. Patent Owner points to nothing in the claims requiring this. Indeed, the only thing Patent Owner does to support of its narrow, limiting construction is note that the sole shower-head embodiment in the ’363 patent’s specification includes only three water outlets, all of which are encircled by a light pipe. Response, 65-66. But “[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope...” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004). There is nothing of the sort here.

3. “Laterally Intermediate” (claims 8/22)

Patent Owner argues that a light pipe is “laterally intermediate the water outlet and the housing wall” only if it is “at the outer edge of the sprayface.” Response, 67. This reads in limitations. The claim requires only that the light pipe be between the water outlet and housing. It says nothing about the “sprayface.” And it says nothing about how close to the “housing wall” the pipe needs to be.

E. Ground 5: Obviousness Over Tse and Carter

Ground 5 in the Petition explained why the combination of Tse and Carter also renders the '363 patent claims obvious. Petition, 70-74. Carter teaches a plumbing fixture—with improved durability, manufacturability, and performance—employing the very type of light pipe the '363 patent's claims require. *Id.*

According to Patent Owner, a POSITA would not have applied Carter to Tse because “Carter is not analogous to the challenged claims.” Response, 69. This is wrong. “[C]ourts ... an expansive view of what constitutes analogous art.” *Netflix, Inc. v. Divx, LLC*, 80 F.4th 1352, 1359 (Fed. Cir. 2003) (emphasis added). Art is analogous if it is either “from the same field of endeavor” of the patent-at-issue, or “is reasonably pertinent to the particular problem” addressed by the patent. *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004).

Patent Owner interprets the '363 patent's technical field far too narrowly: it is not limited to just bath and kitchen fixtures. These are—per the patent—just “[i]llustrat[ions]” of the patent's subject matter. Ex. 1001, 1:27-30; 2:39-52. Instead, the patent is more broadly directed to “fluid delivery devices” including an “illumination device.” *Id.*, 1:16-18; *see also* Ex. 1015, 40:16-43:4. Carter is in the very same field: it teaches “illuminated plumbing fixtures.” Carter, [0003]. While Carter does provide examples in the context of pools and spas, it also explains that its teachings have applicability to other “bathing and water related displays” and a

“variety” of other “plumbing fixtures.” *Id.*, [0006]-[0007], [0026]; Ex. 1015, 44:21-45:10. Next, both the ’363 patent and Carter address similar problems. The ’363 patent explains that prior art devices often provide “discrete areas of illumination (i.e., ‘hot spots’).” Ex. 1001, 1:24-26. The ’363 patent thus employs a “light pipe” “diffuse light ... outwardly away from the housing.” *Id.*, 40-43. Among other things, Carter likewise explains that its illumination device employs a “light pipe” to “allow[] an applied light to be dispersed across the part either partially or completely.” Carter, [0007]-[0008]. Because it is in the same general technical field and addresses the same problem as the ’363 patent, Carter is analogous art.

Next, Patent Owner argues that a POSITA would not have been motivated to apply Carter to Tse because doing so would purportedly “block the light from Tse’s LEDs.” Response, 71. Here, Patent Owner appears to take the position that a POSITA would for some reason graft both Carter’s light pipe and the attached substrate onto Tse. *Id.* This is not what the Petition argued: the Petition explained at length why it would have been obvious to replace Tse’s cover with an integrated, molded-in-place light pipe. Petition, 71-72. Patent Owner does not address this. Instead, it improperly focuses on the bodily incorporation of Carter into Tse. *Allied Erecting*, 825 F.3d at 1381.

Patent Owner concludes by arguing that Tse and Carter purportedly do not teach a “translucent” light pipe. This is wrong. Both explicitly reference translucent

material. Tse, 3:3-5 (“semi-transparent material”); Carter, [0007] (“semi-clear plastic”).

F. Ground 6: Obviousness Over Tse, Carter, and Spangler

Ground 6 explained why Tse, Carter, and Spangler renders claim 24 obvious. Petition, 70-74. Here, Patent Owner simply refers back to its prior arguments. Response, 72. These fail for the reasons discussed.

G. Secondary Considerations

Patent Owner’s response also argues that supposed “secondary considerations” purportedly “show the claims would not have been obvious.” *Id.*, 72. There are no pertinent secondary considerations here.

Patent Owner failed to establish the required nexus. Patent Owner alleges that certain Delta “product lines ... embodies the ’363 patent claims.” *Id.*, 73. But—beyond pointing to product pictures—it does not explain why this is the case. No claim charts or any other limitation-by-limitation analyses were provided. Among other things, there is no explanation of how the products include the claimed “waterway,” “light emitters supported by the substrate,” or “translucent light pipe.” *Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1371-72 (Fed. Cir. 2023) (Patent Owner does not satisfy its burden of production by “simply ... throw[ing] ... evidence at the Board without explanation”).

Next, the “secondary considerations” to which Patent Owner points are entirely irrelevant. Patent Owner contends that the ‘363 patent satisfied a “long-felt need.” But it does not say what need the patent fulfilled beyond claiming a “combination... not in the prior art.” Response, 76. Merely getting a patent does not somehow automatically mean that a long-felt need was met. Patent Owner also argues that its products were “prais[ed].” *Id.* But here it points only to a handful of reviews submitted by random individuals on a single retailer website. *Id.* This falls well short of the required showing. *WBIP, LLC v. Kohler, Co.*, 829 F.3d 1317, 1335 (Fed. Cir. 2016) (“industry praise” is what is important)

H. Other Issues

Patent Owner also makes a few other, non-substantive points.

1. *POSITA Definition*

According to Patent Owner, the “Petition proposes an inadequate definition of a POSITA.” Response, 7. Per Patent Owner, a POSITA must have years of experience “designing or analyzing optical apparatus.” *Id.*, 8. This is unnecessary. The ‘363 patent employs standard, off-the-shelf optical components. But even if this extra experience were required, the enhanced abilities of a POSITA simply serve to confirm obviousness.

2. *Petitioner’s Expert Is Qualified and Credible*

Patent Owner also argues Petitioner’s expert Mr. Cook “has limited experience with the claimed subject matter.” Response, 2. But it never explains

why this means Mr. Cook—who indisputably has extensive product design experience—is unable to offer pertinent testimony. Ex. 1015, 10:13-13:25 (Patent Owner’s expert noting that he has experience similar to that of Mr. Cook). The ’363 patent is directed to a plumbing fixture. It requires little expertise to be understood.

Patent Owner next argues that Mr. Cook’s testimony should be ignored because he did not consider unspecified “dictionaries,” “books,” “websites,” and “articles,” along with certain prior art references cited by Tseng. *Id.* There is no such requirement. Nor is it necessary to review the prior art cited by Tseng. It is Tseng’s teachings—not that in other references—that matters.

Next, Patent Owner repeatedly and grossly misrepresents Mr. Cook’s testimony. For instance, Mr. Cook did not testify that counsel “wrote” his declaration. *See* Response, 2. Instead, Mr. Cook testified that he started the drafting process by “prepar[ing] ... an overview of [his] opinions on the patents” that was then converted into the proper “format and language” by counsel. Ex. 2005, 30:19-6. Mr. Cook then “edit[ed]” this now properly formatted draft. *Id.*, 31:22-32:2.

III. CONCLUSION

The ’363 patent’s claims are all unpatentable as obvious.

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Dated: April 30, 2025

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CERTIFICATE OF WORD COUNT

The undersigned certifies that the foregoing reply complies with the type-volume limitation in 37 C.F.R. § 42.24. According to the utilized word-processing system's word count, the reply contains 5,581 words.

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CERTIFICATE OF SERVICE

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