

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COOLER MASTER CO., LTD.,
Petitioner,

v.

AAVID THERMALLOY LLC,
Patent Owner.

IPR2019-00338
Patent 7,100,680 B2

Before LINDA E. HORNER, KEN B. BARRETT, and
ROBERT A. POLLOCK, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION

Denying Petitioner's Request for Rehearing of the Final Written Decision
37 C.F.R. § 42.71(d)

I. INTRODUCTION

Cooler Master Co., Ltd. (“Petitioner”) filed a Request for Rehearing, Paper 55 (“Request” or “Req. Reh’g”), of the Final Written Decision determining some challenged claims of U.S. Patent No. 7,100,680 B2 (“the ’680 patent,” Ex. 1101) to be unpatentable, Paper 54 (“Final Decision” or “Final Dec.”). Pertinent to this Request, we determined that Petitioner had not demonstrated that claim 8 of the ’680 patent would have been obvious over Morikawa and Takahashi. Final Dec. 43–46. Petitioner requests rehearing of that determination. Req. Reh’g 11. For the reasons provided below, Petitioner’s Request for Rehearing is *denied*.

II. ANALYSIS

A party requesting rehearing bears the burden of showing that the decision should be modified. 37 C.F.R. § 42.71(d). “The request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, an opposition, or a reply.” *Id.*

Claim 8 depends directly from independent claim 5, which recites a hollow column sealed to a top plate. Dependent claim 8 further limits the hollow column recited in the underlying independent claim. Specifically, dependent claim 8 recites: “each of said at least one hollow column each has a top shoulder disposed near a top end and bonded to a bottom surface of said top plate around one opening.” Ex. 1101, 7:8–11.

Petitioner’s general assertion of error is that “the Board found that the prior art did not disclose the shoulder limitation of claim 8.” Req. Reh’g 1 (citing Final Dec. 43–46). To be precise, rather than making an affirmative finding as to the prior art’s disclosure, as Petitioner asserts, we determined

that “Petitioner has not demonstrated that Morikawa discloses the recited [top shoulder limitation].” Final Dec. 45. In other words, our determination was that Petitioner had not met its burden of proving that a limitation was taught by the prior art, and therefore had not met its burden of proving that the challenged claim is unpatentable.

In its Request, Petitioner makes two specific arguments. First, Petitioner argues that we misapprehended Petitioner’s arguments associated with figures in the Petition and, in doing so, we incorrectly inferred Petitioner’s construction for the term “shoulder.” Req. Reh’g 1, 5–8. Second, Petitioner argues that a figure in the Petition explains how the top shoulder limitation is met. *Id.* at 2, 9–11.

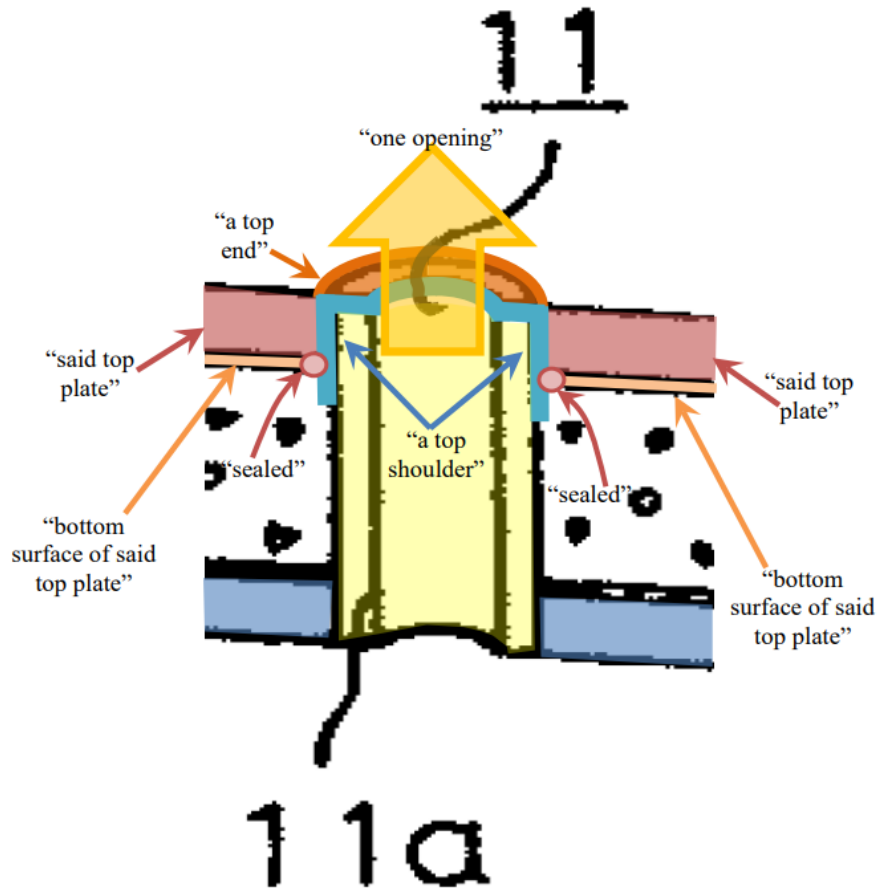
A. The Alleged Errors Regarding Petitioner’s Arguments

Petitioner first argues that “[t]he Board misapprehended what Petitioner points to as ‘a top shoulder,’ which is actually the corner portions located around the top outer rim of the hollow column.” Req. Reh’g 5 (heading to Section II(B); bolding omitted).

The Petition sets forth two theories as to how Morikawa allegedly discloses a hollow column having a top shoulder disposed near the top end and bonded to the bottom of the top plate. Pet. 54–58. One theory utilizes an “excerpted and annotated Figure 2” of Morikawa. *Id.* at 54–56. The second theory utilizes a demonstrative figure not found in Morikawa to visually explain Petitioner’s arguments regarding “Morikawa’s alternative embodiment discussed . . . in Section IX.B.6 [of the Petition].” *Id.* at 57–58; *see also id.* at 46 (the cross-referenced section explaining how Petitioner arrived at the demonstrative figure); Req. Reh’g 9 (identifying the figure on page 57 of the Petition as merely “based on an embodiment in Morikawa”);

but see id. at 2 (referring to the figure from page 57 of the Petition as “the annotated figure above from Morikawa”).

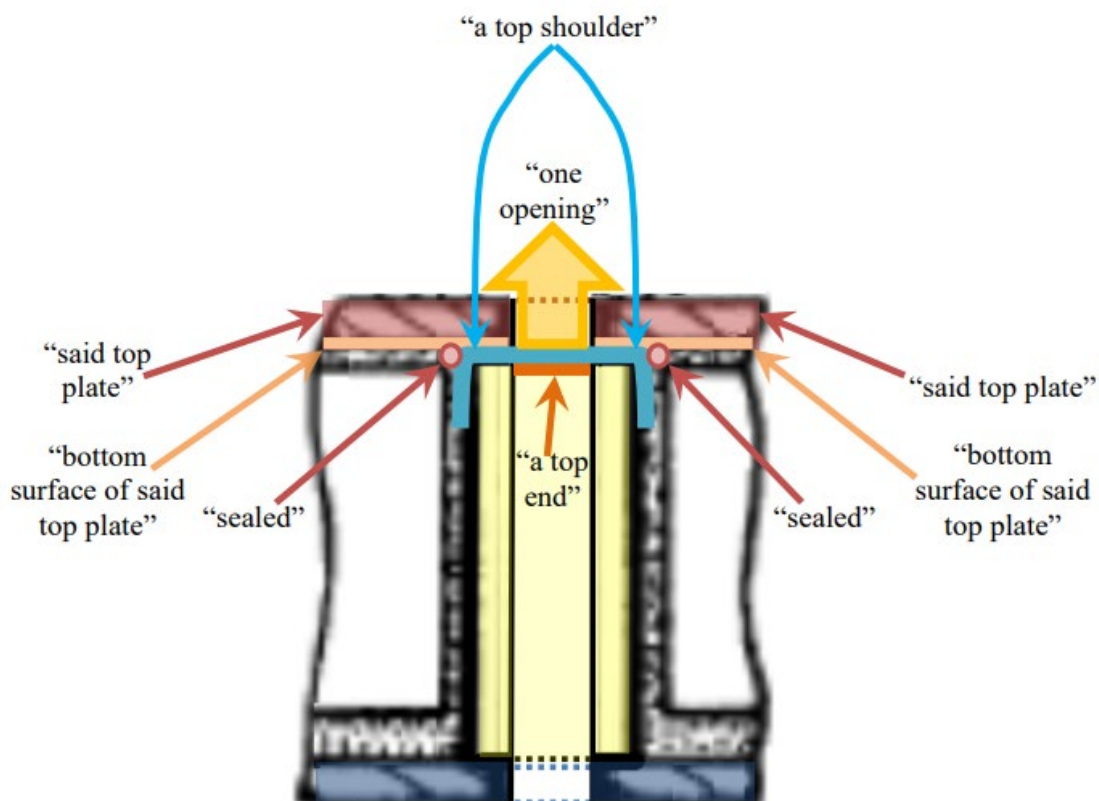
Reproduced below is the “excerpted and annotated Figure 2” of Morikawa utilized for Petitioner’s first theory.¹



¹ In the Request, Petitioner argues that it is identifying the “top shoulder” by “point[ing] to the corner portions located around the top outer rim of the hollow column.” Req. Reh’g 5. Petitioner’s annotations, however, have the “sealed” areas distanced from the top corners and the arrows from the “a top shoulder” label pointing to locations other than at the top corner. Presumably, Petitioner’s “sealed” areas are positioned in this figure so as to address the claim’s additional recitation of “bonded to a bottom surface of said top plate.” It is not clear how this annotated figure shows top corner portions bonded to the underside of the top plate.

Pet. 54, 56. Shown above is an excerpt of Morikawa's Figure 2(B), which is "a cross-sectional perspective view illustrating a structure of a main portion of the heat pipe [of Morikawa]," with Petitioner's annotations. Ex. 1103, 4:52–53. Petitioner argues that, "[a]s can be seen [above] in excerpted and annotated Figure 2, Morikawa's 'metal pipe 11a' (indicated in light yellow) corresponds to '680's 'said at least one hollow column' and has a 'top shoulder' (indicated in cyan)." Pet. 54–56 (emphasis added) (citing Ex. 1102 ¶ 71). Thus, Petitioner contends that the recited "top shoulder" is that "indicated in cyan" in the annotated figure reproduced above.

Reproduced below is the demonstrative figure "based" on Morikawa and utilized for Petitioner's second theory.



Id. at 57. Shown above is a figure utilized by Petitioner to demonstrate its contentions as to how a person of ordinary skill in the art would have

understood “Morikawa’s alternative embodiment” to be configured. Pet. 46–49 (Section IX.B.6), 57; *see* Req. Reh’g 9 (“The figure on page 57 of the Petition, which is based on an embodiment in Morikawa, explains how the limitation of ‘a top shoulder’ is met under the correct understanding of the entirety of the hollow column shown in the figure.”). Petitioner argues that, “as can be seen [above], Morikawa’s alternative ‘metal pipe’ (indicated in light yellow) corresponds to ’680’s ‘said at least one hollow column’ and has a ‘*top shoulder*’ (*indicated in cyan*).” Pet. 57 (emphasis added) (citing Ex. 1102 ¶ 72). Thus, Petitioner, similar to and consistent with the first theory, contends that the recited “top shoulder” is that “indicated in cyan” in the demonstrative figure reproduced above.

In its Reply Brief, Petitioner provides an annotated version of Figure 2 of the challenged '680 patent. That annotated Figure 2 is shown below.

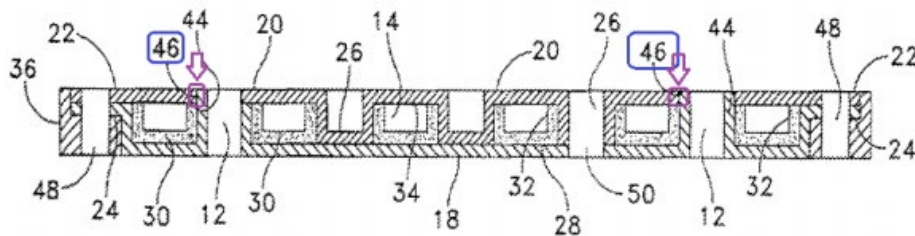
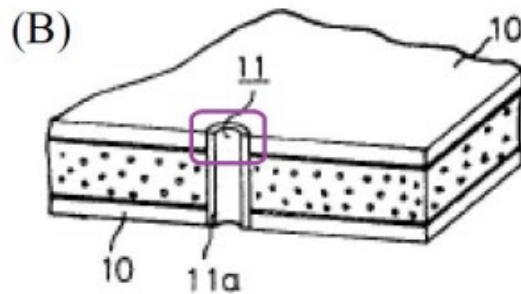


FIG. 2

Pet. Reply 29. The figure above is a cross section view of an alternative embodiment of a heat pipe of the '680 patent, with Petitioner's annotations including purple rectangles and arrows. Ex. 1101, 3:17–19. Petitioner's annotations indicate where "[solid] columns 44 are bonded to cover plate 20 at locations 46." *Id.* at 4:26–29. Petitioner argues that this annotated figure shows how a person of ordinary skill in the art "would understand the 'shoulder' arrangement" of dependent claim 8, and asserts that "[a]s shown,

the purple region is where the solid column's shoulder is bonded to the plate."² Pet. Reply 28-29.

Also in its Reply Brief, Petitioner provides an annotated version of Morikawa's Figure 2(B), which is reproduced below.



Paper 33 ("Pet. Reply") 29. Shown above is the entirety of Morikawa's Figure 2(B), which, as mentioned above, is "a cross-sectional perspective view illustrating a structure of a main portion of the heat pipe [of Morikawa]," with Petitioner's annotation in the form of a purple rectangle around the entire upper portion of metal pipe 11a. Ex. 1103, 4:52-53, 5:3. Petitioner argues that this Morikawa figure, in the annotated purple region, discloses the same arrangement "where the solid column's shoulder is bonded to the plate" as in the figure from the Specification discussed above. Pet. Reply 29 (citing Ex. 1102 ¶¶ 71-72; Ex. 1132 ¶¶ 76-77; Pet. 56.). Petitioner argues that this Figure 2 of Morikawa thus "discloses the shoulder requirement of claim 8." *Id.*

² Petitioner argues that it is "entitled" to rely on the plate-to-column arrangement shown in this figure from the '680 patent for claim construction purposes because neither party's expert offered a plain and ordinary meaning for "shoulder" and because that claim term "does not appear in the text of the subject patent's specification." Req. Reh'g 7-8. We decline to conclude that the lack of evidence in the record of a plain and ordinary meaning of "shoulder" indicates that there is no such meaning in the art.

In the Final Decision, we stated:

Petitioner’s implied construction is that the claimed “shoulder” is the top end of a column. This is inconsistent with the claim language which recites that the “hollow column . . . has a top shoulder disposed near a top end” thus indicating that the top shoulder is not merely the top end of the column but a structure “near” and discernable from the top end of the hollow column.

Final Dec. 45.

Petitioner argues in its Request that “[t]he Board’s findings . . . were based on a misapprehension of the arguments associated with a figure . . . [from page 57] in the Petition,” and that “the Board incorrectly inferred Petitioner’s ‘implied construction’ for the term, ‘[a top] shoulder,’ in claim 8 of the ’680 patent as ‘the top end of a column.’” Req. Reh’g 1 (citing Final Dec. 45). Petitioner further argues that it “has always and consistently pointed to the corner portions located around the top outer rim of the hollow column as meeting the limitation of ‘a top shoulder,’ as shown [in the two figures from pages 56 and 57 of Petition and reproduced above].” *Id.* at 5–6.

We are not persuaded by Petitioner’s argument that we misapprehended its implied construction of the recited “top shoulder disposed near a top end” of the column. Petitioner, prior to the Final Decision and as detailed above, consistently identified the top end of Morikawa’s metal pipe (mapped by Petitioner to the recited “hollow column”) as a top shoulder disposed near a top end of the column. Petitioner articulated this position via the use of the cyan line in the Petition and the purple rectangle in its Reply. Petitioner’s assertion in the Request that the top shoulder in Morikawa is the “corner portions located around the top outer rim of the hollow column” is a new argument. As such, it is not something that we could have misapprehended or overlooked.

Even if this was not an untimely argument, we do not find it persuasive. Petitioner’s articulation of its proposed construction in the Request, like the applied construction in the Petition, reads out limitations imposed by the claim language itself. As mentioned, dependent claim 8 further limits the hollow column of the underlying independent claim 5, adding, in part, a requirement that the hollow column have a “top shoulder disposed near a top end.” Petitioner fails to explain how an article, under its current construction—where a “top shoulder” merely is “the corner portions located around the top outer rim of the hollow column,” Req. Reh’g 11—is structurally different than every other column that would have a corner at the top, namely the intersection of the vertical side and the top surface. Thus, Petitioner’s construction fails to give meaning to, at least, the dependent claim’s addition of structure in the form of a shoulder disposed near the top end of the column.

B. Petitioner’s Argument that a Figure in the Petition Discloses the “Top Shoulder”

Petitioner next argues that “[t]he figure on page 57 of the Petition, which is based on an embodiment in Morikawa, explains how the limitation of ‘a top shoulder’ is met under the correct understanding of the entirety of the hollow column shown in the figure.” Req. Reh’g 9; *see also id.* (section heading asserting that a demonstrative figure in the Petition “disclosed the ‘top shoulder’”). This section of the Request primarily is an argument as to how Petitioner purportedly satisfied its burden, which is, in effect, merely an assertion of disagreement with our determination that the Petition was not persuasive, rather than identification of anything we misunderstood or overlooked. To the extent that these arguments were

raised in substantive briefs, we considered those arguments in reaching the Final Decision. *See* Final Dec. 43–46.

Petitioner asserts that it previously identified the “top end” as only the “top inner rim” (i.e., the inner diameter or inner circumference of the hollow column) as shown in the demonstrative figure on page 57 of the Petition. Req. Reh’g 9, 11. Thus, argues Petitioner, the “corner portions located around the top outer rim” “is a structure that is different from but is located ‘near’ the indicated ‘top end,’ *i.e.*, the top inner rim (orange) of the hollow column.” *Id.* at 11. This is a new argument and is inconsistent with the visual argument on page 56 of the Petition where the actual figure from Morikawa is annotated to identify either the outer circumference or the entire top of the hollow column as “a top end,” not merely the “top inner rim.”

We stated in the Institution Decision and reiterated in the Final Decision:

We fail to discern, in the relied upon figures, any structure in the form of a shoulder, notwithstanding Petitioner’s addition of cyan lines. We also note that the second annotated figure (on Pet. 57) identifies, via red circles at added cyan lines, “sealed” areas that appear to be some distance from the purported metal pipe (light yellow); this suggests that Petitioner is relying on its own added cyan line as disclosure of a shoulder on a hollow column. *See id.* at 57.

Final Dec. 44 (quoting Paper 7 (Dec. to Inst.), 20). In the Request, Petitioner provides a further annotated version of the demonstrative figure, this time adding a dashed white rectangle, and argues that the “black contour of the hollow column” should be understood as part of the hollow column. Req. Reh’g 9–10. The newly added white rectangle is tangent to the

“sealed” circle annotations, and Petitioner argues that the sealed area is “no longer” located some distance away. *See id.* at 11.

Even if we incorrectly interpreted Petitioner’s demonstrative figure and that figure shows that the top corner of the pipe is sealed to the underside of the top plate, the result does not change. The pertinent issue is not whether Petitioner created a figure where a hollow column is bonded to the underside of the top plate. Rather, the critical issue is whether Petitioner has shown how Morikawa discloses that “each of said at least one hollow column each has a top shoulder disposed near a top end and bonded to a bottom surface of said top plate around one opening,” as recited in dependent claim 8. Ex. 1101, 7:8–11. Petitioner’s argument, via the demonstrative figure, may show “each of said at least one hollow column . . . bonded to a bottom surface of said top plate around one opening,” but reads out the portion of the limitation regarding a top shoulder.

III. CONCLUSION

For the above reasons, Petitioner has not persuaded us that we misapprehended or overlooked any fact or argument that demonstrates we should modify our Final Written Decision. Therefore, we deny Petitioner’s Request for Rehearing of the Final Written Decision.

IV. ORDER

For the foregoing reasons, it is

ORDERED that Petitioner’s Request for Rehearing is *denied*.

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Patent 7,100,680 B2

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