

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAFRAN CABIN INC.,
Petitioner,

v.

B/E AEROSPACE, INC.,
Patent Owner.

IPR2022-00749
U.S. Patent No. 10,625,862 B2

Before SCOTT A. DANIELS, CARL M. DEFRANCO, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

DANIELS, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Safran Cabin Inc. (“Safran” or “Petitioner”), filed a Petition requesting *inter partes* review (“IPR”) of claims 1–19 of U.S. Patent No. 10,625,862 B2 (Ex. 1001, “the ’862 patent”). Paper 1 (“Pet.”). B/E Aerospace, Inc., (“BEA” or “Patent Owner”) filed a Preliminary Response to the Petition. Paper 6 (“Prelim. Resp.”). We also authorized, and Petitioner and Patent Owner filed, a Preliminary Reply and Preliminary Sur-reply narrowly tailored to address Patent Owner’s discretionary denial arguments in the Preliminary Response. Papers 8, 9.

Under 35 U.S.C. § 314(a), 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.” Upon consideration of the arguments and evidence presented by Petitioner and Patent Owner, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the challenged claims. *See* 35 U.S.C. § 314(a). Accordingly, we institute an *inter partes* review of the challenged claims.

A. *Real Parties in Interest*

Petitioner states that Safran Cabin, Inc., is the real party in interest and “[n]o other entity is controlling, directing, or funding the submission of this petition and any proceeding initiated as a result thereof.” Petitioner points out that Safran Cabin, Inc., “is an indirectly-owned subsidiary of Safran S.A.,” and that Safran S.A. is also the parent company of other entities also involved in the underlying district court lawsuit, including: Safran Seats USA LLC; Safran Seats Santa Maria LLC; Zodiac Seats California LLC; MAG Aerospace Industries, LLC; Safran Cabin Bellingham, Inc.; and Northwest Aerospace Technologies, Inc. Pet. 2–3.

Patent Owner states that B/E Aerospace, Inc. is the real party in interest.
Paper 5, 2.

B. Related Matters

The parties indicate that the '862 patent and related U.S. Patent Nos. 8,590,838, 9,073,641, 9,365,292, 9,434,476, 9,440,742 have been asserted against Petitioner in *B/E Aerospace, Inc. v. C&D Zodiac Inc.*, Case No. 2:19-cv-01480 in the U.S. District Court for the Central District of California. Pet. 83; Paper 4, 2.

Petitioner states further that “[o]n March 15, 2022, Petitioner filed requests for *ex parte* reexamination challenging all remaining claims of the other patents asserted in the Underlying Litigation.” Pet. 3. Petitioner indicates that the related reexamination control numbers for these patents are as follows: 8,590,838 (90/014,978); 9,073,641 (90/014,979); 9,365,292 (90/014,981); 9,434,476 (90/014,982); and 9,440,742 (90/014,980). *Id.*

C. The '862 Patent (Ex. 1001)

The '862 patent, titled “Aircraft Interior Lavatory,” describes space-saving aircraft enclosures, including lavatories, closets, and galleys. Ex. 1001, code 54, 1:23–29, 2:24–34. Figure 2 of the '862 patent is reproduced below.

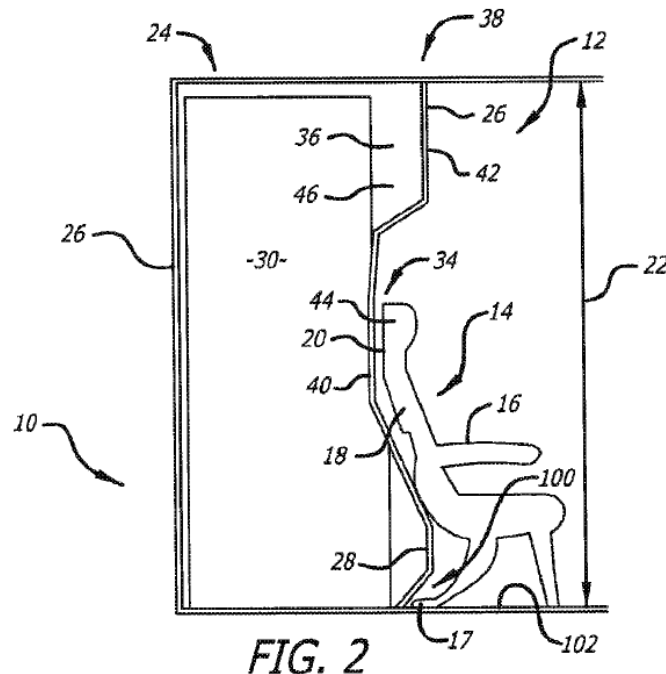


Figure 2, reproduced above, illustrates enclosure 10, for instance a lavatory, positioned aft of aircraft cabin 12. Ex. 1001, 4:29–41. Forward wall 28 of the lavatory is described as “substantially not flat in a vertical plane” and “disposed immediately aft of and adjacent to or abutting the exterior aft surface of” passenger seat 16. *Id.* at 4:38–42. In particular, the forward wall is shaped to provide recess 34, which accommodates the partially-reclined backrest of the passenger seat, as shown in Figure 2. *Id.* at 4:42–45. In addition, the forward wall is shaped to also provide lower recess 100, which accommodates “at least a portion of an aft-extending seat support 17.” *Id.* at 4:48–53.

The ’862 patent contrasts the embodiment of Figure 2 with a prior art lavatory configuration having a flat forward wall shown in Figure 1 reproduced below.

FIG. 1
(Prior Art)

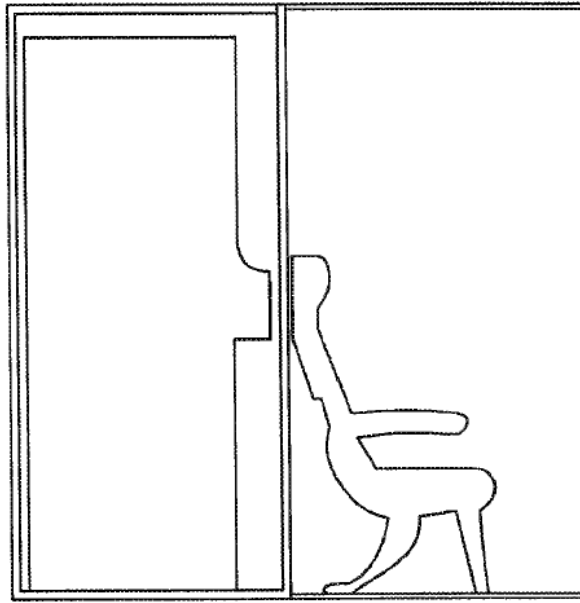


Figure 1, reproduced above, illustrates “a prior art installation of a lavatory immediately aft of an adjacent to an aircraft passenger seat.” Ex. 1001, 4:13–15.

D. Illustrative Claim

Claims 1, 11, 18 and 19 are independent. Each of claims 2–10, and 12–17 ultimately depends from independent claims 1 and 11, respectively. Claim 1 illustrates the claimed subject matter and is reproduced below:

1. [1 Pre]¹ A lavatory for a cabin of an aircraft, comprising:

[1a] a plurality of walls including a first wall and a second wall opposite the first wall, wherein the first wall and the second wall define a lavatory stall unit for the lavatory, the second wall comprising:

[1b] an upper portion;

[1c] a middle portion defining an upper recess below the upper portion, wherein a first distance between the upper portion of the second wall and the first wall along a first line perpendicular to the first wall is greater than a second

¹ The Board added [1 Pre] – [1e] as reference to certain claim limitations.

distance between the upper recess and the first wall along a second line perpendicular to the first wall and parallel to the first line; and

[1d] a lower portion below the middle portion, wherein a third distance between the lower portion and the first wall along a third line perpendicular to the first wall and parallel to the first line is greater than the second distance;

[1e] wherein at least an area of the upper portion, an area of the middle portion, and an area of the lower portion of the second wall are accessible from an interior of the lavatory stall unit.

Ex. 1001, 5:14–35.

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–19 would have been unpatentable based on the following grounds:²

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1	1–9, 11–16, 18–19	103(a) ³	Shibata, ⁴ Betts, ⁵ Bentley ⁶
2	10, 17	103(a)	Shibata, Betts, Bentley, and Rezag ⁷

² Petitioner supports its challenge with a Declaration of Steven J. Meyers, Ph.D. (Ex. 1003). *See infra*.

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the application from which the ’862 patent issued has an effective filing date prior to March 16, 2013, the pre-AIA version of § 103 applies. *See* Ex. 1001, code (63).

⁴ Ex. 1009, U.S. Patent No. 4,884,767 (Dec. 5, 1989).

⁵ Ex. 1008, U.S. Patent No. 3,738,497 (Jun. 12, 1973).

⁶ Ex. 1010, U.S. Patent No. 6,742,840 B2 (Jun. 1, 2004).

⁷ Ex. 1020, U.S. Patent No. 7,318,622 B2 (Jan. 15, 2008).

II. ANALYSIS

A. Discretionary Denial of Institution Under 35 U.S.C. § 325(d)

Patent Owner argues the Board should exercise its discretion to deny institution of *inter partes* review under 35 U.S.C. § 325(d) because the same or substantially the same prior art or arguments were previously presented to the Office, and “because Petitioner failed to meet its burden to show material error with respect to such art or arguments.” Prelim. Resp. 12 (citing *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (precedential) (“*Advanced Bionics*”). Based on the record before us, we decline to deny institution of *inter partes* review under § 325(d), for the reasons discussed below.

Section 325(d) provides that, in determining whether to institute an *inter partes* review, “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d). The Board uses a two-part framework in determining whether to exercise its discretion under § 325(d), specifically:

- (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
- (2) if either condition of [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential).

In applying the two-part framework, we consider the non-exclusive factors set forth in *Becton, Dickinson and Co. v. B. Braun Melsungen AG*,

IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential in relevant part), which “provide useful insight into how to apply the framework” under § 325(d). *Advanced Bionics*, Paper 6 at 9. Those non-exclusive factors include:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
- (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson, Paper 8 at 17–18. “If, after review of factors (a), (b), and (d), it is determined that the same or substantially the same art or arguments previously were presented to the Office, then factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office.”

Advanced Bionics, Paper 6 at 10.

Under the first part of the § 325(d) framework, the evidence demonstrates that Betts, Shibata, and Bentley were previously presented to the Office during prosecution of the ’862 patent. Ex. 1001, code (56). Also, the Examiner applied Betts as an anticipation reference during prosecution. *See* Ex. 1002, 140–143 (“Claim(s) 19, 20 and 22 is/are rejected under pre-AIA 35 U.S.C. 102a1 as being anticipated by Betts et al. (U.S. Patent

3,738,497)”). Because Betts is the basis for each of the unpatentability challenges in this proceeding, we determine that substantially the same art was before the Examiner during examination. Accordingly, we need not consider *Becton, Dickinson* factors (b) and (d), and instead turn to the second prong of the *Advanced Bionics* framework (i.e., *Becton, Dickinson* factors (c), (e), and (f)). See *Ocado Group, PLC v. AutoStore Technology AS*, IPR2021-00398, Paper 10 at 20 (PTAB July 21, 2021).

Becton, Dickinson factor (c) considers “the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection.” *Becton Dickinson*, Paper 8 at 17. *Becton, Dickinson* factor (e) considers “[w]hether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art.” *Id.* at 24.

Patent Owner argues that “[t]he Examiner extensively considered and applied Betts during prosecution. Both Shibata and Bentley were considered by the Examiner and are cumulative of art applied by the Examiner during prosecution.” Prelim. Resp. 14. Pointing to the prosecution history, Patent Owner argues that while rejecting independent claims 1 and 2 as anticipated by Betts, “the Examiner noted that pending claims 2 and 12 (corresponding to independent claims 1 and 11 of the ’862 patent, respectively) were allowable.” *Id.* at 16. Patent Owner also contends that Petitioner failed in its Petition to allege office error as required under *Becton, Dickinson* factor (e). *Id.* at 28.

We agree that the Examiner considered and applied Betts during prosecution—at least with respect to anticipation. Prelim. Resp. 14. On the facts before us in this case however, we are not persuaded to exercise our

discretion under § 325(d). For one thing, Petitioner did allege office error in its Petition, asserting that

despite rejecting certain claims in view of the primary prior art reference relied upon by the Board, *the Examiner ignored* the Board's decisions and instead allowed Patent Owner's follow-on claims directed to the same subject matter already determined to be obvious—lavatories with a contoured forward wall.

Pet. 1–2 (emphasis added). Although the Petition does not specifically use the term “erred,” this paragraph is clear on its face alleging that the prior art and related Board and Federal Circuit decisions were not sufficiently considered during prosecution of the application that became the ’862 patent.

In a statement of reasons for allowability, one Office Action stated that

[w]ith respect to claim 2, the closest prior art fails to teach or make obvious, including all the limitations of claim 2, an upper portion, middle portion and lower portion and the language describing distances between the upper portion and the first wall, the middle portion and the first wall and the lower portion and the first wall distinctly describe a recess projecting formed in the second wall projecting into the lavatory interior.

Ex. 1002, 143. We disagree. This analysis disregards the Board's previous proceedings and analyses and does not consider the related Federal Circuit cases affirming our decisions. *See B/E Aerospace, Inc. v. C & D Zodiac, Inc.*, 709 F. App'x 687, 698 (Fed. Cir. 2017) (The Court explaining that “neither the Board's claim constructions nor its obviousness determination was erroneous.”). Also, the explanation in the Office Action, “teach or make obvious,” is not consistent with evaluation of Betts as an anticipation reference. *Compare* Ex. 1002, 141–142 (assessing Betts as an anticipation reference), *with* Ex. 1002, 143 (indicating claims allowable as unobvious).

We acknowledge Patent Owner's arguments as well as the '862 patent's prosecution history, including the stated reasons for allowability of claim 2 above with respect to anticipation. Prelim. Resp. 14–20. We find, on this record, that Petitioner has explained sufficiently and persuasively shown, considering the decisions in the various related Office and Federal Circuit proceedings, that the Office erred in allowing the current claims of the '862 patent in light of Betts. For example, in IPR2014-00727 the Board determined that claims 1, 3–7, 9, 10, 12–14, 16–19, 21, 22, 24–29, 31, and 33–37 of the '838 Patent, a parent patent to the '862 patent, would have been obvious in view of Betts. Ex. 1005, 3. As discussed above, our determination was affirmed by the Federal Circuit. *B/E Aerospace*, 709 F. App'x 687, 698.

While we appreciate that the follow-on claims of the '862 patent recite different language than those in the '838 patent and that the Examiner evaluated Betts as an anticipation reference, we find persuasive Petitioner's argument that there was not sufficient consideration by the Office of our prior decisions, at least regarding obviousness and Betts. *See id.* at 12 (The Board determining that "Petitioner has shown that it would have been obvious to apply the recessed forward wall design of Betts to other enclosures, including single-spaced lavatories."). The fact that related, and similar claims have been previously cancelled by the Office in view of Betts, and the fact that Betts was not a basis for an obviousness rejection during the relevant prosecution weighs against exercising discretion to deny institution under § 325(d). *See Intel Corp. v. Qualcomm Inc.*, IPR2019-00128, Paper 9, 16 (PTAB May 29, 2019).

Considering Petitioner's arguments, evidence, and our analysis below, we agree with Petitioner that the Office did not recognize the full pertinence

of Betts and did not issue an appropriate obviousness rejection based on Betts' disclosure, teachings and the level of ordinary skill in the art. This constitutes Office material error. Accordingly, *Becton, Dickinson* factor (e) weighs against exercising discretion to deny institution under § 325(d).

Becton Dickinson factor (f) considers “the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.” *Becton, Dickinson*, Paper 8 at 18. As discussed below in Section II, we determine that Petitioner has established a reasonable likelihood that at least one of claims 1–19 of the '862 patent are unpatentable. Also, Petitioner offers the declaration of Dr. Meyers, which was not available to the Examiner during prosecution of the application that became the '862 patent. *See, e.g.*, Pet. 29–30 (citing Ex. 1003 ¶¶ 85–87, 101). Dr. Meyer's declaration in this case contains new, material, non-cumulative evidence that was not before the Examiner. As cited below in our discussion of the prior art, we find Dr. Meyer's testimony probative to issues of patentability and helpful to our consideration of the prior art that was not substantively addressed by the Examiner during prosecution. Accordingly, *Becton, Dickinson* factor (f) weighs against exercising discretion to deny institution under § 325(d).

Upon review of the relevant prosecution history, the prior art referred to by Petitioner and the parties' arguments, we find that Petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims in the '862 patent, and that the second prong of the *Advanced Bionics* framework weighs in favor of institution. Accordingly, we decline to deny institution under § 325(d).

B. Legal Standards

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. 35 U.S.C. § 103; *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). “[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 550 U.S. at 416 (citing *United States v. Adams*, 383 U.S. 39, 50–51 (1966)). The question of obviousness is resolved based on underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

C. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art at the time of the ’862 patent “would have had a bachelor’s degree in mechanical engineering, industrial design, or a similar discipline, or the equivalent experience, with at least two years of experience in the field of aircraft interior design.” Pet. 12 (citing Ex. 1003 ¶¶ 32–34). Patent Owner does not expressly address the level of ordinary skill in the art. *See generally* Prelim. Resp.

On this record, Petitioner’s proposed level of ordinary skill in the art is not disputed and is consistent with our review and understanding of the technology and descriptions in the ’862 patent and the asserted prior art

references. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). For purposes of this Decision, we rely on Petitioner’s proposed level of ordinary skill in the art.

D. Claim Construction

We interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2020). Under this standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.* Furthermore, at this stage in the proceeding, we expressly construe the claims only to the extent necessary to determine whether to institute *inter partes* review. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Petitioner asserts that “no claim term requires construction.” Pet. 13. Patent Owner also does not proffer any claim construction. *See generally* Prelim. Resp.

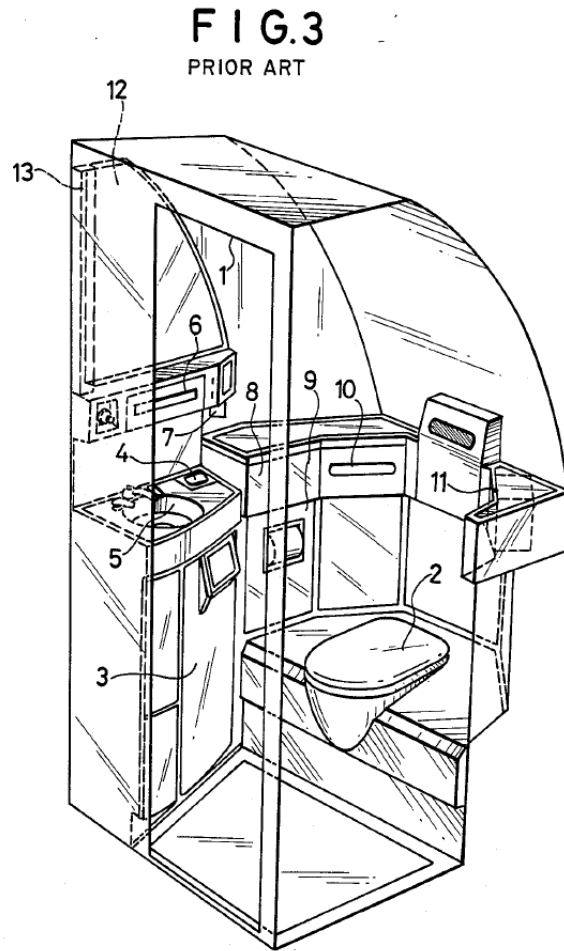
The parties do not dispute the meaning of any particular claim term, and our Decision does not turn on the meaning of any specific claim term. It is unnecessary at this stage to expressly interpret any term beyond any implicit interpretations or clarifications as to the plain and ordinary meaning reflected in our analysis below.

E. Ground 1: Claims 1–9, 11–16, 18–19 – Alleged Obviousness over Shibata (Ex. 1009), Betts (Ex. 1008), and Bentley (Ex. 1010)

On this record, Petitioner has established a reasonable likelihood of prevailing on its assertion that at least one of claims 1–9, 11–16, 18–19, would have been obvious over Shibata, Betts, and Bentley, for the reasons explained below.

1. Shibata (Ex. 1009)

Titled “Lavatory Module for a Passenger Airplane,” Shibata describes “a lavatory module for a passenger airplane, integrally and internally equipped with lavatory equipments, such as a toilet bowl, a washstand and a toilet closet for storing lavatory conveniences and amenities.” Ex. 1009, code 54, 1:7–11. In particular, considering Figure 3 reproduced below, labeled “Prior Art,” Shibata describes a lavatory “having a substantially rectangular front wall having an opening 1 formed on one side of the front wall, and a door hinged at one side thereof on the front wall so as to close the opening 1.” *Id.* at 1:24–27.



Shibata's Figure 3 above illustrates a conventional aircraft lavatory where "[a] toilet bowl 2 is provided on one side wall of the lavatory module, while a washstand 5 is provided on the back wall opposite the front wall." *Id.* at 1:39–42.

2. *Betts (Ex. 1008)*

Betts notes a desire to "provide more room for passengers in an aircraft or other vehicle." Ex. 1008, 1:6–7. Figure 1 of Betts is reproduced below.

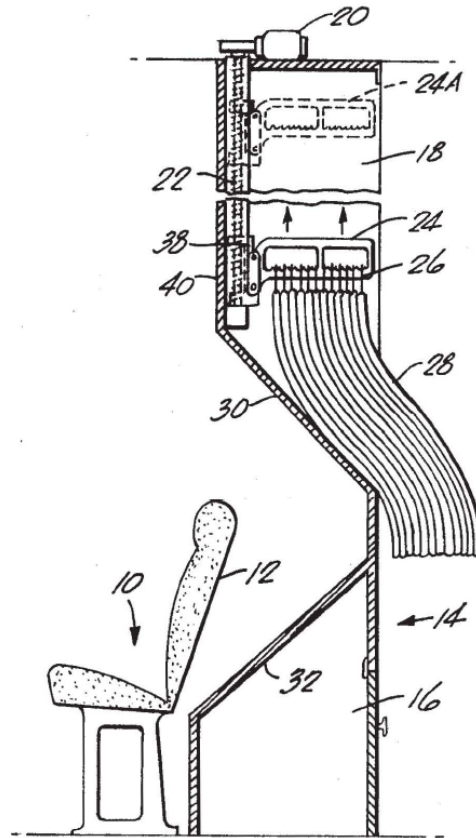


Fig. 1

Betts' Figure 1 discloses airplane passenger seat 10 having tiltable backrest 12. Ex. 1005, 2:8–9. Behind the seat is coat closet 14, which has luggage space 16 along the floor and overhead coat compartment 18. *Id.* at 2:9–14. Betts describes that “[t]he lower portion 30 of the coat compartment 18 slants rearwardly to provide a space for seatback 12 to be tilted rearwardly as desired by the occupant. The top 32 of storage space 16 also slants rearwardly so as not to interfere with seatback 12 when tilted.” *Id.* at 2:19–24.

3. *Bentley (Ex. 1010)*

Bentley is titled “Adjustable Seats” and describes a reclining and “general bucket style of seat 10.” Figure 5 of Bentley is reproduced below.

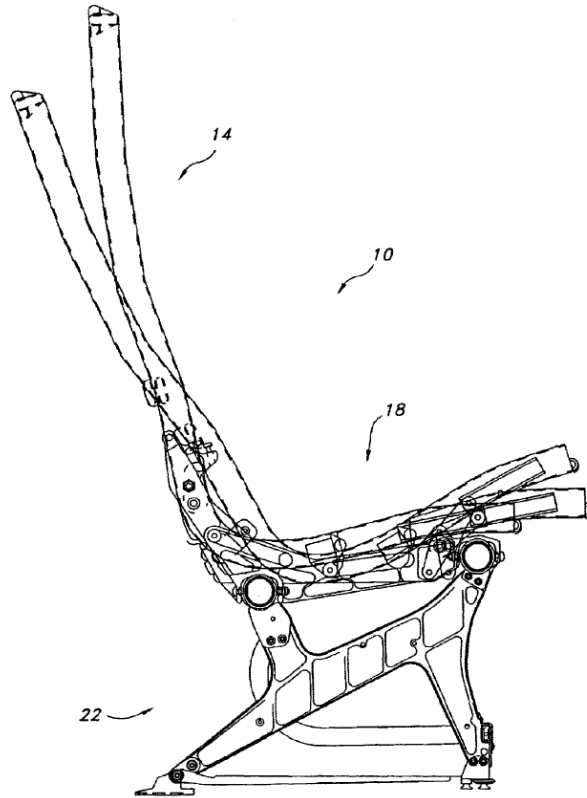


FIG 5

Bentley’s Figure 5, above, illustrates a side elevation view of seat 10 having backrest 14 and seat bottom 18 supported by frame 22.

4. *Independent Claim 1*

We consider initially the elements of claim 1.

a) *Petitioner’s Arguments*

(1) *Preamble – [a] lavatory for a cabin of an aircraft*

To the extent the recitation in the preamble of “[a] lavatory for a cabin of an aircraft” is limiting, Petitioner argues that “such lavatories were well

known in the prior art is confirmed by Figure 1 of the '862 Patent, and the Federal Circuit's prior findings in addressing patents in this family. Pet. 28 (citing *B/E Aerospace, v. C&D Zodiac*, 962 F.3d 1373 (Fed. Cir. 2020)).

(2) Limitation [1a] – a plurality of walls including a first wall and a second wall opposite the first wall, wherein the first wall and the second wall define a lavatory stall unit for the lavatory

Petitioner argues this lavatory structure was well known to those of ordinary skill in the art and that, by way of example, “Shibata discloses a lavatory comprising a plurality of walls defining a lavatory stall unit, including a first wall and a second wall opposite the first wall.” *Id.* (citing Ex. 1009, Fig. 2; Ex. 1003 ¶¶ 74–79).

(3) Limitation [1b] – the second wall comprising: an upper portion

Petitioner argues that “this is nothing more than the top quarter of the second wall of the flat-walled lavatory shown in Shibata’s Figures 1, 2, and 3. *Id.* at 29 (citing Ex. 1003 ¶ 77).

(4) Limitation [1c] – a middle portion defining an upper recess below the upper portion, wherein a first distance between the upper portion of the second wall and the first wall along a first line perpendicular to the first wall is greater than a second distance between the upper recess and the first wall along a second line perpendicular to the first wall and parallel to the first line

According to Petitioner, where Betts discloses a contoured wall to accept a tiltable backrest it would have been obvious to a person of ordinary skill in the art to modify Shibata’s flat front wall

to include a middle portion defining an upper recess below the upper portion, wherein a first distance between the upper portion of the second wall and the first wall along a first line

perpendicular to the first wall is greater than a second distance between the upper recess and the first wall along a second line perpendicular to the first wall and parallel to the first line based on Betts' teaching of a contoured wall.

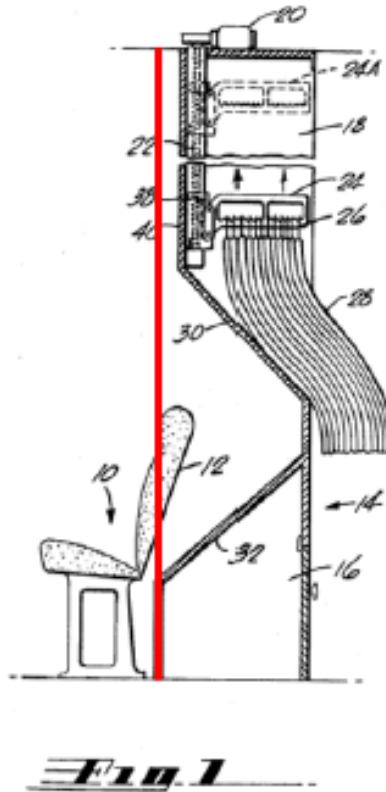
Id. at 29–30 (citing Ex. 1003 ¶¶ 85–87). Petitioner argues that the Board and “the Federal Circuit has already confirmed that it would be obvious to modify a flat walled lavatory based on Betts to include both an upper recess and a lower recess.” *Id.* at 30 (citing *B/E Aerospace*, 962 F.3d at 1379).

(5) *Limitation [1d] – a lower portion below the middle portion, wherein a third distance between the lower portion and the first wall along a third line perpendicular to the first wall and parallel to the first line is greater than the second distance;*

Petitioner argues that

[a] person of ordinary skill in the art would recognize that the flat wall lavatory shown in Shibata could be modified to include a lower portion below the middle portion wherein a third distance between the lower portion and the first wall along a third line perpendicular to the first wall and parallel to the first line is greater than the second distance based on Betts' teaching of a contoured wall.

Id. at 30–31 (citing Ex. 1008 Fig. 1; Ex. 1003 ¶ 87). Petitioner provides the following annotated Figure 1 from Betts:



Petitioner's annotated version of Betts's Figure 1, above, illustrates a vertical red line coincident with the forward and lower most wall portion of Betts's contoured wall. *Id.* at 30. Petitioner asserts that considering Betts's annotated Figure 1, "the distance between the front wall and the back wall is smaller at the location of the upper recess than at other non-recessed locations, such as the lower portion. *Id.* at 31 (citing Ex. 1003 ¶ 87).

(6) Limitation [1e] – wherein at least an area of the upper portion, an area of the middle portion, and an area of the lower portion of the second wall are accessible from an interior of the lavatory stall unit.

Petitioner argues that "the entirety of Shibata's second wall is accessible from within the Shibata lavatory." Pet. 32 (citing Ex. 1003 ¶ 78). Petitioner also points out that the Board has previously determined for similar limitations that "it would have been obvious to apply the space-

saving recessed forward wall design of Betts to other enclosure units, including lavatories,” for example, Shibata’s. *Id.* at 32–33 (quoting Ex. 1005, 17)

b) Patent Owner’s Arguments

Apart from its arguments directed to discretionary denial issues, Patent Owner makes several arguments with respect to the merits of the Petition. Prelim. Resp. 28. Patent Owner argues that Petitioner fails to provide an “adequately supported rationale for modifying Shibata’s lavatory to include Betts’s contoured forward wall to arrive at the claimed invention.” *Id.* at 29. Patent Owner also argues that “Petitioner fails to even allege that one of ordinary skill would have had a reasonable expectation of success in combining Shibata and the other prior art to achieve the claimed invention as a whole.” *Id.* at 31. Patent Owner argues further that Petitioner has not provided sufficient evidence that the prior art discloses limitation [1c] and, for independent claim 11, limitation [11b]. *Id.* at 32–35. We address these arguments in turn.

We are persuaded that Petitioner has presented sufficient rationale for the modification of Shibata’s lavatory wall with Betts’s contoured wall. The Petition explains that Betts’s “contoured forward wall makes more efficient use of the valuable space in the aircraft passenger cabin than would be available with [Shibata’s] flat forward wall.” Pet. 23 (citing Ex. 1003 ¶¶ 54–56). Dr. Meyer testifies that “[a] primary goal of the design of interiors of commercial aircraft is efficient use of valuable passenger cabin space.” Ex. 1003 ¶ 54. Dr. Meyer testifies further that Betts’s “curved forward wall makes more efficient use of the valuable space in the aircraft passenger cabin than would be available with a flat forward wall . . . [a] person of

ordinary skill in the art would have been motivated to apply the curved wall of Betts to a lavatory to achieve that same benefit.” *Id.* at ¶¶ 55–56.

As to a reasonable expectation of success, Petitioner explained that “[o]ne of ordinary skill in the art would understand that the forward wall of the enclosure shown in Betts would also be suitable for use with other aircraft enclosures, including lavatories.” Pet. 24 (citing Ex. 1003 ¶¶ 55–56). Dr. Meyer’s testifies that “[a] person of ordinary skill in the art would have been motivated to apply the curved wall of Betts to a lavatory . . . [t]hus, combining different types of enclosures and employing different types and designs of recesses would have been obvious to one of skill in the art.” Dr. Meyer’s testimony is currently un rebutted in this proceeding. On this record, we have before us no evidence that replacing a flat lavatory wall with a curved or contoured lavatory wall would have been particularly difficult, or beyond the level of ordinary skill in the art. To the extent it could be, we will consider and evaluate all expert testimony and any evidence with respect to expectation of success during trial.

Considering Patent Owner’s arguments and Petitioner’s evidence and arguments with respect to claim limitation [1c], we determine that Petitioner has shown a reasonable likelihood of success that the combination of Shibata and Betts’s discloses limitation [1c]. Petitioner’s asserted combination would modify Shibata’s flat forward wall to include Betts’s forward contoured wall. *See* Pet. 29 (“A person of ordinary skill in the art would recognize that the flat wall lavatory shown in Shibata could be modified to include a middle portion defining an upper recess below the upper portion.”). Considering Shibata’s aircraft lavatory and front wall as modified by Betts, on this record, we find persuasive Petitioner’s assertion that such an aircraft lavatory discloses

a first distance between the upper portion of the second wall and the first wall along a first line perpendicular to the first wall is greater than a second distance between the upper recess and the first wall along a second line perpendicular to the first wall and parallel to the first line based on Betts' teaching of a contoured wall."

Id. at 29–30 (citing Ex. 1003 ¶¶ 85–87).

c) Conclusion as to Claim 1

We have considered, and on the record at this point in the proceeding, we find persuasive and accept as our own for purposes of institution, Petitioner's arguments and evidence as set forth at pages 28–33 of the Petition. Also, at this early stage, the testimony of Petitioner's declarant, Dr. Meyers, is un rebutted. Accordingly, we determine that Petitioner has shown a reasonable likelihood that Shibata in view of Betts and Bentley renders obvious the limitations of independent claim 1.

5. Analysis of Claims 2–9, 11–16, and 18–19

Petitioner provides an element-by-element analysis of where each element in challenged claims 2–9, 11–16, and 18–19 is disclosed in, or would have been obvious in view of, Betts, Shibata, and Bentley. Pet. 33–54. For certain limitations and clauses in independent claims 11, 18, and 19 that are similar to those in claim 1, Petitioner refers to its arguments for claim 1. *See, e.g., id.* at 45 (referring to its analysis for claim 1). As discussed above, we also determine that Petitioner also provides articulated reasons and evidentiary underpinnings explaining why it would have been obvious to modify and combine the references with a reasonable expectation of success. *Id.* at 21–27. Petitioner relies throughout the analysis of these claims on the testimony of Dr. Meyers (Ex. 1003) for evidentiary support.

Patent Owner presents its arguments mainly in the context of claim 1. Prelim. Resp. 29–34. Patent Owner also argues that the prior art as combined does not disclose claim limitation [11b] “a single piece wall structure,” or the “[lower/second] recess” as recited in claims 2, 11, 18, and 19. *Id.* at 34–35. Because we determine that Petitioner has shown a reasonable likelihood that at least claim 1 would have obvious to one of ordinary skill in the art, we leave this and all remaining issues raised by Patent Owner for trial, and do not separately address the merits of claims 2–9, 11–16, and 18–19.

Accordingly, based on the arguments and evidence of parties on the record before us, we determine, for purposes of this Decision, that Petitioner has established a reasonable likelihood of prevailing on at least claim 1.

III. CONCLUSION

On this record, we are persuaded that Petitioner demonstrates a reasonable likelihood of prevailing on its challenges that Betts, Shibata, and Bentley renders obvious at least claim 1 of the ’862 patent. That said, Petitioner’s remaining challenge based on Shibata in view of Betts, Bentley, and Rezag is best left for trial after full development of the record. 37 C.F.R. § 42.108(c); *SAS Inst. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (“Equal treatment of claims and grounds for institution purposes has pervasive support in *SAS*.”). We therefore institute trial on all claims and all challenges included in the Petition.

Our factual findings and determinations at this stage of the proceeding are preliminary, and based on the evidentiary record developed thus far. This is not a final decision as to the patentability of claims for which *inter*

partes review is instituted. Our final decision will be based on the record as fully developed during trial.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that *inter partes* review of the '862 patent is hereby instituted as to claims 1–19 on all grounds set forth in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial on the grounds of unpatentability authorized above; the trial commences on the entry date of this decision.

IPR2022-00749
Patent 10,625,862 B2

For PETITIONER:

John C. Alemanni
Michael T. Morlock
KILPATRICK TOWNSEND
jalemanni@kilpatricktownsend.com
mmorlock@kilpatricktownsend.com

For PATENT OWNER:

Benjamin A. Saidman
Patrick J. Coyne
Jason E. Stach
Jency J. Mathew
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.
benjamin.saidman@finnegan.com
patrick.coyne@finnegan.com
jason.stach@finnegan.com
jency.mathew@finnegan.com