

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AIRBUS AMERICAS, INC.,
Petitioner,

v.

HARPER ENGINEERING COMPANY,
Patent Owner.

IPR2022-00192
Patent 10,760,315 B2

Before BART A. GERSTENBLITH, JAMES A. TARTAL, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

TARTAL, *Administrative Patent Judge*.

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

I. INTRODUCTION

Airbus Americas, Inc. (“Petitioner”)¹ filed a Petition pursuant to 35 U.S.C. §§ 311–319 requesting an *inter partes* review of claims 1–17 of U.S. Patent No. 10,760,315 B2 (Ex. 1001, “the ’315 patent”). Paper 1 (“Pet.”). Harper Engineering Company (“Patent Owner”)² filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). In its Preliminary Response, Patent Owner states that it “has separately disclaimed claims 1 and 7–11 of the ’315 [p]atent, rendering Petitioner’s challenge of those claims moot.” *Id.* at 1 n.1 (citing Ex. 2001; 37 C.F.R. § 42.107(e)). With our authorization, Petitioner filed a Reply to Patent Owner’s Preliminary Response (Paper 7 (“Reply”)) and Patent Owner filed a Sur-reply (Paper 8 (“Sur-reply”)).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b) (2018); 37 C.F.R. § 42.4(a) (2021). An *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Moreover, a decision to institute under 35 U.S.C. § 314 may not institute on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

Upon consideration of the Petition, the Preliminary Response, the Reply, the Sur-reply, and the evidence of record, we conclude that the information presented does not show a reasonable likelihood that Petitioner would prevail in showing the unpatentability of at least one of the

¹ Petitioner identifies no additional real parties in interest. Pet. 3.

² Patent Owner identifies no additional real parties in interest. Paper 5, 2.

challenged claims not subject to Patent Owner's disclaimer. Accordingly, we do not institute an *inter partes* review.

II. BACKGROUND

A. The '315 Patent

The '315 patent issued on September 1, 2020, from U.S. Application No. 16/036,048, which was filed on July 16, 2018, and, ultimately, claims priority to U.S. Provisional Application No. 62/533,575, filed on July 17, 2017.³ Ex. 1001, codes (45), (21), (22), (60). The '315 patent is directed to a "stowage bin assembly." *Id.* at code (57). The '315 patent explains that stowage bin assemblies of transportation vehicles generally include bin buckets and stowage bin doors pivotably coupled thereto via hinges. *Id.* at 1:23–24, 1:30–31. The '315 patent states as follows:

hinges typically protrude outwardly from a wall of the bin bucket or other attaching structure to which they are attached. For example, in some instances, hinges or similar structures about which the stowage bin door pivotably rotates protrude outwardly from an inside surface of a sidewall of the bin bucket. Such hinges, however, reduce compactness of the stowage bin assemblies, reduce storage capacity of the bin buckets, and contribute to increased weight of the stowage bin assemblies.

Id. at 1:32–40.

³ Petitioner acknowledges this priority claim to July 17, 2017, and does not challenge it as the effective date of the '315 patent. Pet. 12.

Figure 1 of the '315 patent is reproduced below.

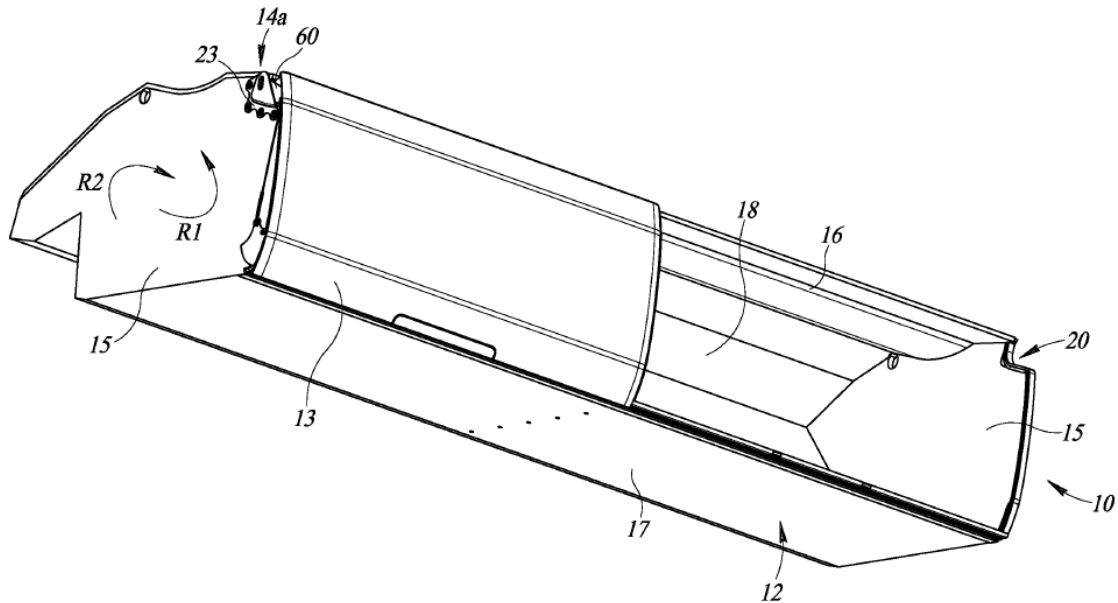


FIG. 1

Figure 1 illustrates an embodiment of integrated stowage bin assembly 10 including bin bucket assembly 12 coupled to stowage bin door 13 via hinge assemblies 14a, 14b (hinge assembly 14b hidden from view by storage bin door 13). *Id.* at 3:25–30. Bin bucket assembly 12 includes sidewalls 15, upper wall 16, lower wall 17, and rear wall 18. *Id.* at 3:40–43. One or more of sidewalls 15 include a notch for hinge assembly 14a. *Id.* at 3:51–53.

Figure 6 of the '315 patent is reproduced below.

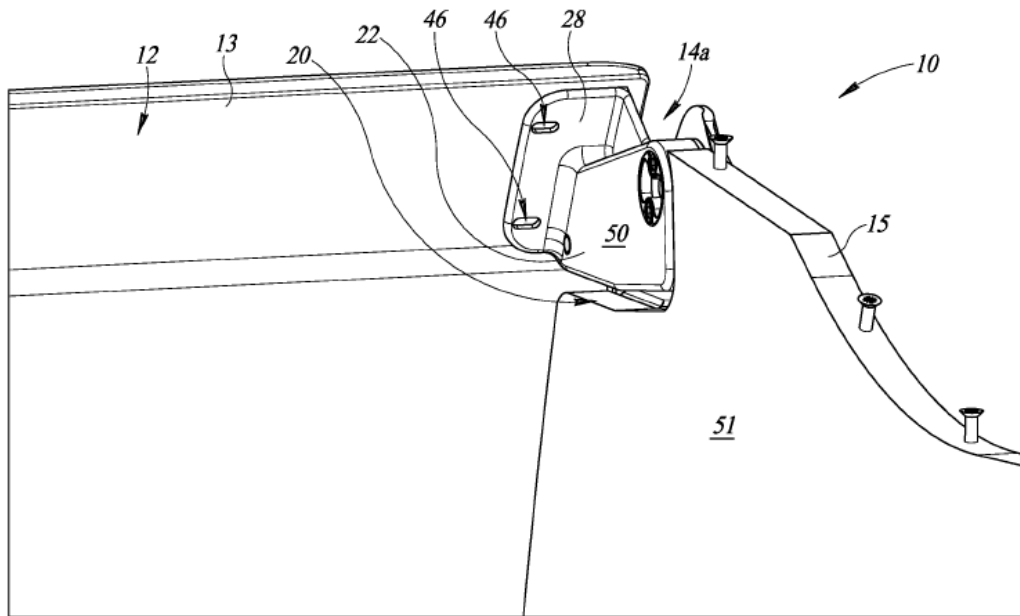


FIG. 6

Figure 6 depicts notch 20 in sidewall 15 of bin bucket assembly 12. *Id.* at 4:10–13. The '315 patent explains that “notch 20 is sized and shaped in a manner such that the hinge assembly 14a is seated substantially flush with an interior surface of the sidewall 15, such that any protrusion of the hinge assembly 14a is reduced and/or minimized.” *Id.* at 3:56–60. In particular, housing 22 of hinge assembly 14a includes interior surface 50, which substantially aligns with interior surface 51 of sidewall 15. *Id.* at 4:13–15. According to the '315 patent, seating hinge assembly 14a in notch 20 of sidewall 15 increases storage capacity of the bin buckets and reduces weight. *Id.* at 4:15–19.

Figure 7 of the '315 patent is reproduced below.

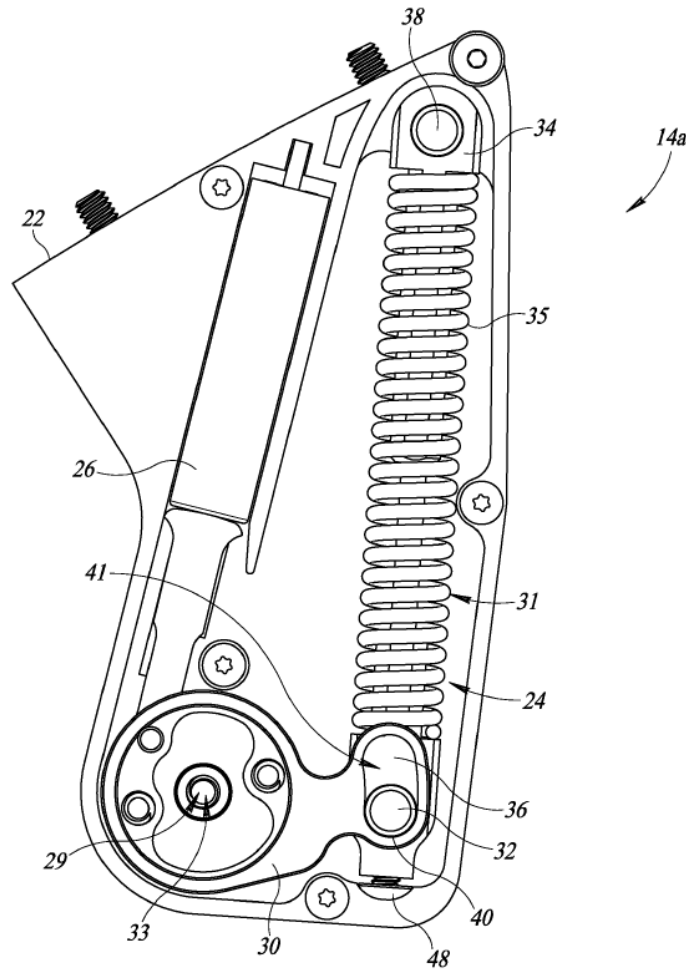


FIG. 7

Figure 7 depicts hinge assembly 14a including self-opening mechanism 24 and damper 26. *Id.* at 4:7–10. Damper 26 “is sized and shaped to control the rate of pivotable movement of the stowage bin door 13 between open and closed positions.” *Id.* at 4:53–56. “[S]elf-opening mechanism 24 is generally configured to provide a variable force that varies proportional to torque of the stowage bin door 13 that varies based, in part, on the variable gravitational torque of the stowage bin door 13.” *Id.* at 4:59–63. Self-opening mechanism 24 provides a variable counteracting force based on the

non-linear, radial path of stowage bin door 13 when moving between closed and open positions. *Id.* at 4:63–66, 5:6–9. In particular, self-opening mechanism 24 includes rotary crank 30 with opening aperture 41, biasing device 31 with spring 35, and rotary pin 32. *Id.* at 5:10–14, 31–33. The '315 patent explains as follows:

as the stowage bin door 13 moves between the open and closed positions, a moment arm of the spring 35 changes proportionally to the gravitational torque applied by the stowage bin door 13, where the compressive forces applied by the spring 35 variably adjust as the opening aperture 41 allows the biasing device 31 to adjust its position to, in part, align with, and counteract the gravitational torque.

Id. at 5:39–46.

B. Illustrative Claims

Petitioner challenges claims 1–17 of the '315 patent in the Petition. Pet. 1. As noted above, after the Petition was filed, Patent Owner disclaimed claims 1 and 7–11. Prelim. Resp. 1 n.1 (citing Ex. 2001; 37 C.F.R. § 42.107(e)).

Claims 1 and 12 are independent. Ex. 1001, 7:32–46, 8:27–43. Claim 2 depends from claim 1 and claims 3–6 each depend, directly or indirectly, from claim 2. *Id.* at 7:47–8:26. Claims 13–17 depend from claim 12. *Id.* at 8:44–64. Claims 2 and 12 are illustrative of the claimed subject matter at issue and, along with claim 1 from which claim 2 depends, are reproduced below.

1. A stowage bin assembly comprising:
 - a bin bucket assembly including a bin bucket having at least one sidewall, the at least one sidewall including a notch, the at least one sidewall having an interior surface;
 - at least one hinge assembly having a housing which is received in the notch, the housing having an interior surface, the interior surface of the housing being flush with

the interior surface of the at least one sidewall when the housing of the at least one hinge assembly is received in the notch; and

a stowage bin door pivotably coupled to the bin bucket assembly via the at least one hinge assembly, the stowage bin door moveable between an open position and a closed position.

Id. at 7:32–46.

2. The stowage bin assembly of claim 1 wherein the at least one hinge assembly includes a self-opening mechanism.

Id. at 7:47–49.

12. A hinge assembly that pivotably couples a stowage bin door to a stowage bin bucket assembly, the hinge assembly comprising:

a housing;

a housing cover plate that couples to the housing, an interior cavity disposed between the housing and the housing cover plate; and

a self-opening mechanism disposed in the interior cavity, the self-opening mechanism including:

a rotary crank having an opening aperture;

a rotary pin received in the opening aperture; and

a biasing device directly coupled to the rotary pin, the biasing device urging the rotary crank to move about the rotary pin within the opening aperture to counteract a gravitational torque applied by the stowage bin door when the stowage bin door moves between an open position and a closed position.

Id. at 8:27–43.

C. Asserted Grounds of Unpatentability

In the Petition, Petitioner asserts that claims 1–17 of the ’315 patent are unpatentable based on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 7–11	102	Rheaume ⁴
2–6, 12–17	103	Rheaume, Savian ⁵
1–17	103	Savian, Frazier ⁶

Pet. 5. Because Patent Owner disclaimed claims 1 and 7–11, Petitioner’s contentions that claims 1 and 7–11 are anticipated by Rheaume or obvious over the combination of Savian and Frazier is moot. Accordingly, we do not consider Petitioner’s contentions directed at claims 1 and 7–11 for purposes of determining whether to institute *inter partes* review other than to the extent those contentions separately apply to elements of dependent claims, such as claim 2, which depends from claim 1 and was not disclaimed. *See* Prelim. Resp. 1 n.1 (citing Ex. 2001; 37 C.F.R. § 42.107(e)).

Petitioner relies on the supporting Declaration of Daniel Codd, Ph.D., dated November 8, 2021. Ex. 1003. Patent Owner’s Preliminary Response is supported by the Declaration of Dr. Adam Dershowitz, dated February 15, 2022. Ex. 2002.

D. Related Proceedings

The parties identify the ’315 patent as a subject of *Harper Engineering Co. v. FACC Operations GmbH and Airbus Americas, Inc.*, No. 1:20-cv-00510-CG-C (S.D. Ala.). Pet. 3; Paper 5, 2. Petitioner also states that it concurrently filed a petition for *inter partes* review of U.S.

⁴ US 2020/0040633 A1, published Feb. 6, 2020 (Ex. 1005, “Rheaume”).

⁵ WO 2014/127161 A1, published Aug. 21, 2014 (Ex. 1006, “Savian”).

⁶ U.S. Patent No. 9,090,351 B1, issued July 28, 2015 (Ex. 1008, “Frazier”).

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Patent No. 10,801,244 B1 (IPR2022-00195), which shares the same specification as the '315 patent. Pet. 3–4.

III. ANALYSIS

A. *Legal Standards*⁷

A patent claim is unpatentable under 35 U.S.C. § 103 “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” In *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under § 103 that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) “secondary considerations” of nonobviousness such as “commercial success, long felt but unsolved needs, failure of others, etc.” *Id.* at 17–18; *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). Neither party presents evidence or argument directed to secondary considerations.

B. *Level of Ordinary Skill in the Art*

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are

⁷ Although the Petition includes a ground based on anticipation, Patent Owner disclaimed all claims challenged under that ground, leaving only two grounds based on obviousness for our consideration in determining whether to institute *inter partes* review. See Prelim. Resp. 1 n.1 (citing Ex. 2001; 37 C.F.R. § 42.107(e)).

made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). Petitioner contends that a person of ordinary skill in the art “would have had at least a bachelor’s degree in mechanical engineering, aerospace engineering industrial design, or a similar discipline, or the equivalent experience, with at least some experience in the field of aircraft interior design, aerospace engineering, or hinges for use in mobility or stationary-use storage solutions.” Pet. 14 (citing Ex. 1003 ¶¶ 19–24).

Patent Owner argues that “Petitioner’s broad definition fails to consider that a [person of ordinary skill in the art] *must* have some prior education and experience specific to aeronautical/aerospace engineering as well as the unique environment presented by aircraft interiors.” Prelim. Resp. 10 (citing Ex. 2002 ¶¶ 54–63). Patent Owner further asserts that “Petitioner provided no evidence that a [person of ordinary skill in the art] can include practitioners having general knowledge only of hinges in ‘mobility or stationary-use storage solutions.’” *Id.* According to Patent Owner, “a [person of ordinary skill in the art] on July 17, 2017, would have [had] at least a bachelor’s degree in aeronautical or aerospace engineering, and at least three years’ experience working in a field related to aircraft interiors.” *Id.* at 8–9 (citing Ex. 2002 ¶¶ 54–63).

Patent Owner offers no plausible explanation for its proposed level of ordinary skill in the art in light of the subject matter of the ’315 patent, which is not limited to “aeronautical” or “aerospace” applications, claims a “stowage bin assembly” and a “hinge assembly,” and expressly refers broadly to “transportation vehicles” as including “overhead storage compartments,” identifying “airplanes” only as an “example” of a transportation vehicle. Ex. 1001, code (57), 1:12–15, 7:31–8:64. Patent

Owner's argument appears to be no more than a transparent attempt to baselessly suggest that Dr. Codd should be excluded from testifying because he lacks "the proper background or sufficient experience in the field" under Patent Owner's unreasonable proposed level of ordinary skill. *See* Prelim. Resp. 18.

Dr. Dershowitz's testimony in support of Patent Owner on the level of ordinary skill is not credible because it is inconsistent with the '315 patent and the asserted art. Ex. 2002 ¶¶ 58–63. For example, Dr. Dershowitz acknowledges that "[h]inges are common to many mechanical systems," but then suggests "being familiar with hinges in general may not directly apply to the specifics of this invention" without identifying anything "specific" to the '315 patent that requires the level of skill Dr. Dershowitz endorses. *Id.* ¶ 64. Dr. Dershowitz suggests "hinges used in storage solutions that are stationary have fewer requirements related to mass and volume and are not subject to the same forces and stresses that are experienced on an aircraft," however, the challenged claims of the '315 patent do not preclude "stationary" storage solutions, do not require anything pertaining to "mass and volume," and are not required to withstand any "forces and stresses" experienced on an aircraft. Dr. Dershowitz's opinion that "[d]ue to the unique environment and specialized nature of the technology at issue" a person of ordinary skill in the art would have needed "to have an educational background and experience that is specific to the aerospace field" is not supported by the '315 patent or the asserted art. *See id.* ¶ 63; *see also* Ex. 1005 ¶ 2 (Rheaume stating it "relates to a hinge assembly and, more particularly to a hinge assembly for retaining a door of a storage bin"); Ex. 1006 ¶ 2 (Savian stating it "relates generally to overhead storage bin assemblies"); Ex. 1008, 3:24–27 (Frazier stating it discloses "improvements

to standard luggage and storage bins commonly found in commercial aircraft as well as other aircraft, buses, passenger vans, and other vehicles”).

Dr. Dershowitz’s misapprehension of the appropriate level of ordinary skill in the art is a consideration we apply in weighing his opinion of how a person of ordinary skill in the art would have understood the prior art at issue.

We find that the ’315 patent and the cited prior art references reflect the appropriate level of skill at the time of the claimed invention and that the level of appropriate skill reflected in these references and in the ’315 patent is consistent with the definition of a person of ordinary skill in the art proposed by Petitioner. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Accordingly, we adopt Petitioner’s proposed level of ordinary skill in the art.

C. Claim Construction

“In an *inter partes* review proceeding, a claim of a patent . . . shall be construed 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). That standard “includ[es] construing 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.*; *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). “When a patentee explicitly defines a claim term in the patent specification, the patentee’s definition controls.” *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1380 (Fed. Cir. 2009). “[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.” *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner contends that no claim term requires an express construction. Pet. 15 (citing Ex. 1003 ¶¶ 63–65). Each of claims 2–6 and 12–17 require a “hinge assembly” that includes “a self-opening mechanism.” Ex. 1001, 7:47–8:8, 8:27–64. The “hinge assembly” pivotably couples a “bin bucket assembly” to a “stowage bin door.” *Id.* Patent Owner proposes an express construction for “stowage bin door” and “self-opening mechanism.” Prelim. Resp. 13–17. We address the arguments of the parties with regard to “self-opening mechanism” below and further find no other claim term requires an express construction.

Patent Owner argues that “self-opening mechanism” means “a device that provides sufficient force to counteract the gravitational torque and move the stowage bin door to an open position.” Prelim. Resp. 14–15. Patent Owner notes the ’315 patent states that “self-opening mechanism 24 is generally configured to provide a variable force that varies proportional [*sic*] to torque of the stowage bin door 13 that varies based, in part, on the variable gravitational torque on the stowage bin door 13.” *Id.* at 15–16 (quoting Ex. 1001, 4:59–63) (alteration in original). According to Patent Owner, “[b]ecause the self-opening mechanism is disclosed as generally taking on this configuration, one of skill in the art would understand that the self-opening mechanism can take on other configurations that exert a torque to open the bin door.” *Id.* at 16 (citing Ex. 2002 ¶ 88). Patent Owner further argues its proposed construction “accords with the plain meaning of ‘self-opening’ as that which ‘opens automatically or of its own accord.’” *Id.* (citing Ex. 2006) (emphasis omitted).

In its Reply to Patent Owner’s Preliminary Response, Petitioner does not directly address the meaning of “self-opening mechanism.” Instead, Petitioner asserts that “[w]hile bins that open upward might include a self-

opening mechanism ‘that provides sufficient force to counteract the gravitational torque,’ bins that open downward need only some damping against gravity to be ‘self-opening.’” Reply 2 (citing Pet. 32–34). To the extent Petitioner’s argument is directed to “bins that open upward” and “bins that open downward” it is misplaced, because the claims require a self-opening mechanism that opens a stowage bin door, not the bin itself. Ex. 1001, 7:47–8:8, 8:27–64 (requiring a “hinge assembly” with “a self-opening mechanism” that pivotably couples a “bin bucket assembly” to a “stowage bin door”). Thus, Petitioner’s unsupported assertion that “bins that open downward need only some damping against gravity to be ‘self-opening’” fails to address the claim language at issue, which does not require a “self-opening” bin, but rather a hinge assembly with a “self-opening mechanism” acting on a stowage bin door.

More importantly, Petitioner provides no sufficient reasoning and cites no support for construing the required “self-opening mechanism” to be so broad as to include a mechanism that provides “only some damping against gravity to be ‘self-opening.’” Reply 2. We agree with Patent Owner that, contrary to Petitioner’s assertion, a component that only opposes opening is not a “self-opening mechanism.” *See* Sur-reply 2. In short, as shown by Patent Owner, the plain and ordinary meaning of “self-opening mechanism” in the context of the ’315 patent, as required by claims 2–6 and 12–17, is a mechanism that acts on its own accord to open the stowage bin door. *See* Prelim. Resp. 16 (citing Ex. 2006).

An express construction of any other claim term is not necessary for purposes of this Decision. *See Vivid Techs.*, 200 F.3d at 803.

D. Scope and Content of the Prior Art

Petitioner relies on Rheume, Savian, and Frazier, each of which we briefly summarize in relevant part below. Pet. 15–19.

1. Summary of Rheaume

Rheume, titled “Hinge Assembly,” relates to “a hinge assembly for retaining a door of a storage bin.” Ex. 1005, code (54), ¶ 2. Rheume explains that overhead bins in aircraft cabins typically have door hinges that are attached to the inner surfaces of the bin walls, which reduces available storage space in the bin. *Id.* ¶ 3.

Figure 2 of Rheaume is reproduced below.

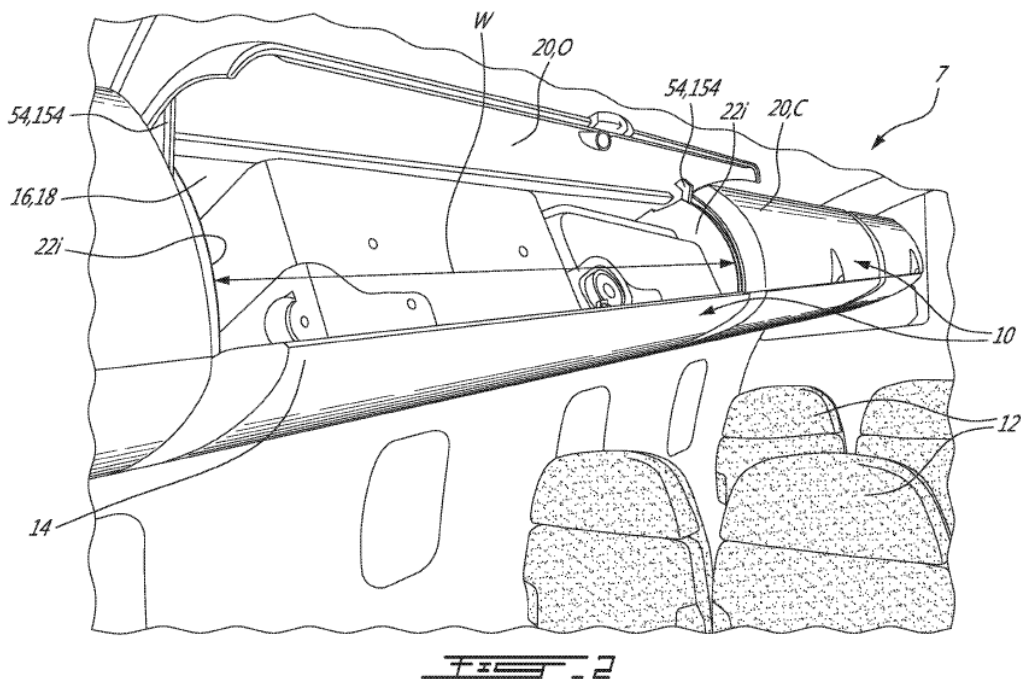


Figure 2 depicts overhead storage bin 10 including bin body 14, which defines storage space 16 for luggage, and opening 18 for accessing storage space 16. *Id.* ¶ 34. Door 20 pivots between open position O and closed position C with respect to opening 18. *Id.* Storage bin 10 also includes walls 22 having inner surface 22i located within storage space 16. *Id.* ¶ 35.

hinge assembly 30, 130 advantageously allows for support of the door 20 without causing an obstruction in the storage space 16, since the hinge arm 54, 154 remains outward of the inner wall

surface 22i of the corresponding wall 22, and the structure supporting the hinge arm 54, 154 is also provided outward of the inner wall surface 22i.

Id. ¶ 56.

2. Summary of Savian

Savian, titled “Pivot Bin Assembly,” relates to “an overhead storage bin assembly that includes a clamshell pivot bin.” Ex. 1006, code (54), ¶ 2. Savian discloses a pivot bin assembly configured to receive luggage in the interior of an aircraft. *Id.* ¶ 51.

Figure 21 of Savian is reproduced below.

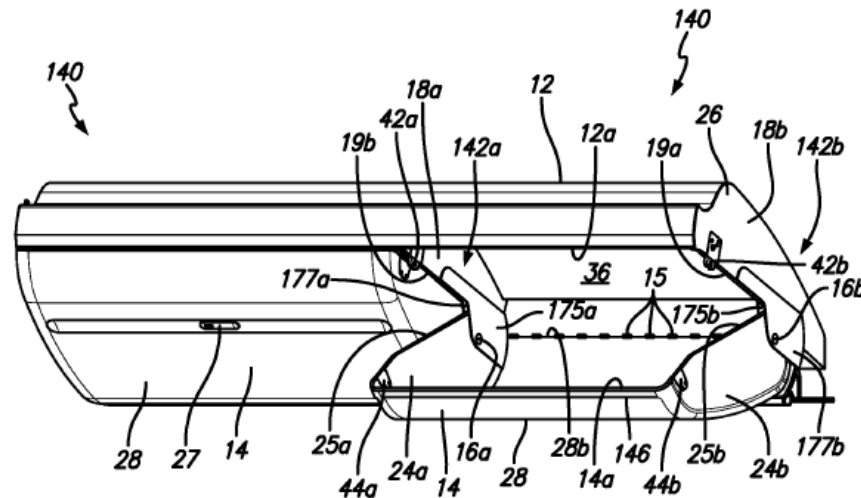


FIG. 21

Figure 21 of Savian depicts pivot bin assembly 140, which includes upper housing 26 having bucket 14 pivotally-connected via clevis assemblies 142a, 142b and pivot axles 16a, 16b to define bin interior 36. *Id.* ¶¶ 108–109. Upper housing 26 includes strongback 12 and side panels 18a, 18b. *Id.* ¶ 109. A plurality of stop members 15, positioned on strongback 12 and bucket 14, stop bucket 14 from opening further than a preferred open position. *Id.* Savian explains as follows:

bucket 14 and upper housing 26 provide a “clamshell design,” where at least a portion of the bottom edge 19a of the first side panel 18a and the bottom edge 19b of the second side panel 18b meet edge to edge with or abut one another and the front bottom edge 12a of the strongback 12 meets edge to edge with or abuts the top edge 14a of the bucket 14.

Id. ¶ 110.

Figure 25B of Savian is reproduced below.

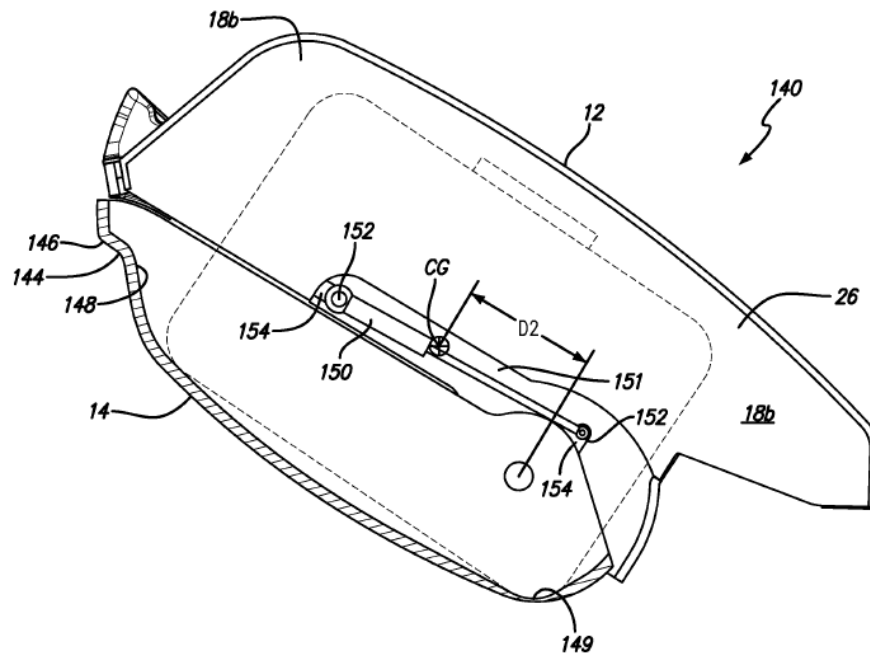


FIG. 25B

Figure 25B depicts one end of pivot bin assembly 140 with connector unit 150 positioned in cut out 151 of side wall 18b. *Id.* ¶ 123. One end of connector 150 connects to bucket 14 and the other end connects to side wall 18b of upper housing 26. *Id.* Savian explains that “connector unit 150 generally can be used for either one or both of damping the opening of the bucket 14 or assisting with the closing of the bucket 14.” *Id.* Connector unit 150 includes springs (not shown) and pivots about pivotal connections 152 to lengthen and contract as necessary for opening and closing bucket 14. *Id.* ¶ 124.

3. Summary of Frazier

Frazier, titled “Aircraft Luggage Bin Attachment and Stop System,” is directed to “improvements to standard luggage and storage bins commonly found in commercial aircraft as well as other aircraft, buses, passenger vans, and other vehicles.” Ex. 1008, 3:24–27. In particular, Frazier discloses an attachment system for coupling a luggage bin to a housing. *Id.* at 1:14–18.

Figure 7 of Frazier is reproduced below.

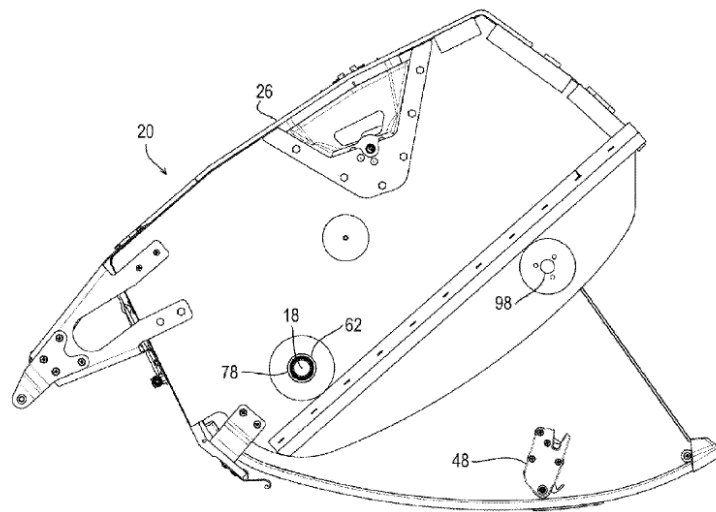


Fig. 7

Figure 7 depicts aircraft luggage bin attachment and stop system 20 with the bin in a fully open position. *Id.* at 4:46. Frazier explains, with reference to Figure 7, that “the left bin housing wall 74 and right bin housing wall 76 may have a surface defining a void 78 utilized independent of, or in cooperation with, the pivot receiver 68 to engage the outer surface of the bushing 66.” *Id.* at 5:2–6. Frazier states as follows:

this arrangement allows for a relatively long pivot protrusion 62 to be utilized within a relatively shallow pivot receiver 68 to maximize the internal width 78 (storage volume) of each bin 44 between internal surfaces 80 and 82 of the bin end-walls 184 and 186 and maintain structural integrity of the system.

Id. at 5:6–11.

E. Alleged Obviousness over Rheume and Savian

Petitioner contends that claims 2–6 and 12–17 would have been obvious over Rheume and Savian. Pet. 32–51. Each of claims 2–6 and 12–17 requires a “hinge assembly” that includes “a self-opening mechanism.” Ex. 1001, 7:47–8:8, 8:27–64. Petitioner relies only upon Savian as teaching a “self-opening mechanism.” Pet. 32–34, 45. We focus our discussion on the “self-opening mechanism” limitation because it is dispositive and, for the reasons that follow, we determine that Petitioner has not shown sufficiently that Savian teaches this limitation.

As described above (*supra* Section III.D.2), Savian states that “connector unit 150 generally can be used for either one or both of damping the opening of the bucket 14 or assisting with the closing of the bucket 14.” Ex. 1006 ¶ 123. Petitioner contends Savian’s connector unit 150 corresponds to a “self-opening mechanism,” as required by the challenged claims, because it includes “both spring 156 and damper 160 in order to provide damping and spring assist during opening and closing of the bin.” Pet. 33 (citing Ex. 1006 ¶ 124). More specifically, Petitioner proposes adding “one or more dampers (with spring assistance) in the form of connecting unit 150 disclosed by Savian within the hinge assembly of Rheume . . . in order to assist the user in opening or closing the bin door of Rheume.” *Id.*

Patent Owner argues, and we agree, that Savian’s connector unit 150 does not open Savian’s pivot-style bin, and that instead the bin of Savian opens “due to the effect of gravity, not because of any mechanical component.” Prelim. Resp. 48 (citing Ex. 1006 ¶ 59; Ex. 2002 ¶¶ 92–95). Patent Owner’s argument is supported by the express disclosure of Savian, which explains that “the bin is damped when opened,” which “prevents the

bucket 14 from slamming open as a result of gravity.” Ex. 1006 ¶ 118.

Although Savian also teaches the use of springs, that mechanism in Savian only provides a “closing assist force,” such that “[w]hen a user pushes to close bucket 14, the closing assist force created by the preloaded spring will help.” *Id.* ¶ 119.

Petitioner’s argument based on Savian is premised on Petitioner’s construction of “self-opening mechanism” as including a mechanism that provides “only some damping against gravity to be ‘self-opening,’” which we reject for the reasons provided above (*supra* Section III.C). *See* Reply 2. Petitioner seeks to disregard the insufficiency of its arguments in its Reply, asserting “[i]n any event, as explained in the Petition, Savian describes various dampers, coil springs, and ‘assist springs’ to assist the user in both opening and closing the bin (with and against gravity).” Reply 2 (citing Pet. 32–34; Ex. 1006, Fig. 29 (showing, according to Petitioner, “damper to open and spring to close”)). While Petitioner directs us to various elements in Savian that an inventor might rearrange and employ in different ways to potentially create a “self-opening mechanism,” missing from Petitioner’s argument is any evidence of a teaching in Savian, itself, of a “self-opening mechanism,” as required by each of claims 2–6 and 12–17 of the ’315 patent. Accordingly, Petitioner has not shown sufficiently how the combination of Rheume and Savian teaches or suggests each limitation of claims 2–6 and 12–17, and, therefore, has not shown a reasonable likelihood of prevailing with respect to at least one of those claims.

F. Alleged Obviousness over Savian and Frazier

Petitioner contends that claims 2–6 and 12–17 would have been obvious over Savian and Frazier. Pet. 51–74. Petitioner relies only upon Savian as teaching a “self-opening mechanism,” as required by each of

claims 2–6 and 12–17.⁸ Pet. 62–63, 71. For the same reasons discussed above with regard to Petitioner’s contention that the same claims would have been obvious over Rheaume and Savian, missing from Petitioner’s argument based on Savian and Frasier is any evidence of a teaching in Savian of a “self-opening mechanism.” *See supra* Section III.E. Accordingly, Petitioner has not sufficiently shown how the combination of Savian and Frazier teaches or suggests each limitation of claims 2–6 and 12–17, and, therefore, has not shown a reasonable likelihood of prevailing with respect to at least one of those claims.

IV. CONCLUSION

For the foregoing reasons, we determine that Petitioner does not demonstrate a reasonable likelihood of prevailing with respect to at least one of the claims challenged in the Petition not subject to Patent Owner’s

⁸ As to claim 2, Petitioner states that Frazier “also discloses ‘lift assist mechanism 106’ (self-opening mechanism) within the housing that is received in the void.” Pet. 63 (citing Ex. 1008, 6:12–46, Fig. 9). Petitioner offers no further explanation of how lift assist mechanism 106 of Frazier corresponds to the required “self-opening mechanism,” the declaration of Dr. Codd is identical to what appears in the Petition with no further explanation, and, most importantly, the Petition and Dr. Codd expressly state that “[t]he only feature taken from Frazier and combined with Savian is the ‘void’ in the sidewall to receive a pivot receiver, resulting in an interior surface of the hinge housing that is flush with the interior surface of the bin sidewall.” *See* Pet. 72–73; Ex. 1003 ¶¶ 118, 140. Consistent with this statement, the Petition offers no reasoning to support applying any teaching related to lift assist mechanism 106 of Frazier to Savian. *See* Pet. 72–74. Moreover, with regard to claim 12, Petitioner asserts only that Savian teaches the required “self-opening mechanism.” *Id.* at 71.

disclaimer. Accordingly, we do not institute *inter partes* review of the '315 patent.⁹

V. ORDER

Upon consideration of the record before us, it is:

ORDERED that the Petition is *denied* and no trial is instituted.

⁹ Patent Owner also argues that we should exercise our discretion under 35 U.S.C. §325(d) to deny institution of *inter partes* review. Prelim. Resp. 36–46. We deny institution of *inter partes* review for the reasons provided above and, therefore, do not reach Patent Owner's arguments regarding discretionary denial.

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Patent 10,760,315 B2
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