

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEX RECREATION CORP. AND BESTWAY (USA), INC.
Petitioners

v.

TEAM WORLDWIDE CORPORATION
Patent Owner

Case IPR2018-00873
Patent No. 7,246,394 B2

Before BEVERLY M. BUNTING, JAMES J. MAYBERRY, and
ERIC C. JESCHKE, *Administrative Patent Judges*.

PETITIONER'S NOTICE OF APPEAL

IPR2018-00873
Petitioner's Notice of Appeal

Pursuant to 35 U.S.C. §§ 141, 142, and 319, and in accordance with 37 C.F.R. §§ 90.2 and 90.3, Petitioner Intex Recreation Corp. ("Petitioner") hereby appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision of the Patent Trial and Appeal Board entered on October 18, 2019 (Paper 133) in case number IPR2018-00873 (the "Final Written Decision"), and from all underlying findings, determinations, rulings, opinions, orders, and decisions that are adverse to Petitioner. A copy of the Final Written Decision is attached as Exhibit A.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), Petitioner states that the issues on appeal include, but are not limited to: the Board's determination that claims 1-12 and 16-23 of U.S. Patent No. 7,246,394 are not unpatentable under 35 U.S.C. § 103; the Board's consideration of (or failure to consider) the expert testimony, prior art, and other arguments and/or evidence of record; any finding or determination supporting or related to the foregoing issues and all other issues decided adversely to Petitioner; and the validity and/or enforceability of the Final Written Decision in view of *Arthrex, Inc. v. Smith & Nephew, Inc.*, No. 2018-2140, 2019 WL 5616010 (Fed. Cir. Oct. 31, 2019).

A copy of this Notice of Appeal is being timely filed with the Clerk's Office for the United States Court of Appeals for the Federal Circuit along with payment

IPR2018-00873
Petitioner's Notice of Appeal

of the required docketing fee. In addition, a copy of this Notice of Appeal is being filed simultaneously with the Patent Trial and Appeal Board and with the Director of the United States Patent and Trademark Office.

FAEGRE BAKER DANIELS LLP

Dated: November 12, 2019

By: /R. Trevor Carter/
R. Trevor Carter
Reg No. 40,549

*Lead Counsel for Petitioner,
Intex Recreation Corp.*

CERTIFICATE OF FILING AND SERVICE

I certify that on November 12, 2019, Petitioner's Notice of Appeal was filed electronically through the Patent Trial and Appeal Board's E2E system, and has been filed with the Director of the United States Patent and Trademark Office by Priority Mail Express at the following address:

Director, United States Patent and Trademark Office
c/o Office of the General Counsel
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

I further certify that on November 12, 2019, Petitioner's Notice of Appeal was filed with the Clerk's Office for the United States Court of Appeals for the

IPR2018-00873
Petitioner's Notice of Appeal

Federal Circuit and the required docket fee was paid electronically through the Court's CM/ECF system.

I further certify that, pursuant to 37 C.F.R. § 42.6(e) and Patent Owner's agreement to accept electronic service, I caused a true and correct copy of Petitioner's Notice of Appeal to be served via email on November 12, 2019, to the following:

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EXHIBIT A

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEX RECREATION CORPORATION and
BESTWAY (USA) INC.,
Petitioner,

v.

TEAM WORLDWIDE CORPORATION,
Patent Owner.

IPR2018-00873
Patent 7,246,394 B2

Before BEVERLY M. BUNTING, JAMES J. MAYBERRY, and
ERIC C. JESCHKE, *Administrative Patent Judges*.

JESCHKE, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

ORDER
Denying Petitioner's Motion to Exclude
Denying Patent Owner's Motion to Exclude
37 C.F.R. § 42.64

Intex Recreation Corporation and Bestway (USA) Inc. (collectively, “Petitioner”)¹ challenges the patentability of claims 1–12 and 16–23 (“the Challenged Claims”) of U.S. Patent No. 7,246,394 B2 (Ex. 1301, “the ’394 patent”), which is assigned to Team Worldwide Corporation (“Patent Owner”). We have jurisdiction under 35 U.S.C. § 6, and we issue this Final Written Decision under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons below, we conclude that Petitioner has *not* proven by a preponderance of the evidence that any of claims 1–12 and 16–23 of the ’394 patent is unpatentable.

I. BACKGROUND

A. Procedural History

Petitioner filed a Petition seeking *inter partes* review of the Challenged Claims. Paper 1 (“Pet.”). Patent Owner filed a Preliminary Response. Paper 8. We instituted a trial as to all the Challenged Claims on all asserted grounds. Paper 14 (“Decision on Institution” or “Dec. Inst.”).

During the trial, Patent Owner filed a Response (Paper 47, “PO Resp.”), Petitioner filed a Reply (Paper 76, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 83, “PO Sur-reply”).² Petitioner and Patent Owner also filed Motions to exclude evidence (Papers 102 and 103, respectively),

¹ Walmart Inc., Wal-Mart Stores Texas, LLC, Wal-Mart.com USA LLC, and Sam’s West, Inc. d/b/a Sam’s Club (“the Walmart Entities”) were originally named as petitioners (Paper 1, 1); however, this proceeding was terminated with respect to the Walmart Entities during trial (Paper 99).

² Paper 48 is a public version of the Patent Owner Response. Paper 77 is a public version of the Petitioner’s Reply. Paper 84 is a public version of the Patent Owner Sur-reply.

Oppositions to the Motions (Papers 104 and 105, respectively), and Replies to the Oppositions (Papers 110 and 108, respectively).

Petitioner relies on the declaration testimony of Dr. Joseph J. Beaman, Jr. (Exs. 1302 and 1625) and Mr. W. Todd Schoettelkotte (Ex. 1649). Patent Owner relies on the declaration testimony of Dr. Glen Stevick (Ex. 2329) and Dr. Stephen L. Becker (Ex. 2638). Oral argument was held on July 29, 2019, and a copy of the transcript of that argument was entered into the record. Paper 121 (public); Paper 122 (confidential) (“Tr.”).

B. Related Proceedings

The parties identify a prior proceeding in the U.S. District Court for the Eastern District of Texas (“the Texas District Court”) involving the ’394 patent: *Team Worldwide Corp. v. Walmart Inc. et al.*, No. 2:17-cv-00235-JRG (E.D. Tex.), filed March 29, 2017 (“the Texas Litigation”). Pet. 1–2; PO Resp. 1; Paper 93, 1; Paper 124, 2. The Texas District Court issued a claim construction order on March 15, 2018. Ex. 1363. On November 20, 2018, the Texas District Court dismissed the Texas Litigation with prejudice. Ex. 1680.

The Texas Litigation also involved U.S. Patent No. 9,211,018 B2 (“the ’018 patent”) and U.S. Patent No. 7,346,950 B2 (“the ’950 patent”). Pet. 2; PO Resp. 1. Petitioner filed four additional petitions for *inter partes* review of claims 1–12 and 16–23 of the ’394 patent in IPR2018-00870, IPR2018-00871, IPR2018-00872, and IPR2018-00874. Petitioner also filed petitions for *inter partes* review of (1) claims 1, 5, 7, and 11–14 of the ’018 patent, in IPR2018-00859, and (2) claims 1, 7, and 11–14 of the ’950 patent, in IPR2018-00875.

The parties also identify the following proceedings in the Texas District Court involving the '394 patent, the '018 patent, and the '950 patent:

- (1) *Team Worldwide Corp. v. Macy's, Inc. and Macys.com, LLC*, No. 2:19-cv-00099-JRG (E.D. Tex.);
- (2) *Team Worldwide Corp. v. Target Corp. and Target Brands, Inc.*, No. 2:19-cv-00100-JRG (E.D. Tex.);
- (3) *Team Worldwide Corp. v. The Home Depot, Inc.*, No. 2:19-cv-00098-JRG (E.D. Tex.);
- (4) *Team Worldwide Corp. v. Dick's Sporting Goods, Inc.*, No. 2:19-cv-00097-JRG (E.D. Tex.);
- (5) *Team Worldwide Corp. v. Costco Wholesale Corp.*, No. 2:19-cv-00096-JRG (E.D. Tex.);
- (6) *Team Worldwide Corp. v. Bed Bath & Beyond, Inc.*, No. 2:19-cv-00095-JRG (E.D. Tex.);
- (7) *Team Worldwide Corp. v. Amazon.com, Inc. and Amazon.com LLC*, No. 2:19-cv-00094-JRG (E.D. Tex.);
- (8) *Team Worldwide Corp. v. Ace Hardware Corp.*, No. 2:19-cv-00093-JRG (E.D. Tex.); and
- (9) *Team Worldwide Corp. v. Academy, Ltd. d/b/a Academy Sports + Outdoors*, No. 2:19-cv-00092-JRG (E.D. Tex.).

Paper 93, 2–3; Paper 124, 4. According to Patent Owner, these nine proceedings are stayed pending the outcomes of IPR2018-00859 and IPR2018-00870 through -00875. Paper 93, 3.

Patent Owner also states it “filed a claim in *In re Sears Holding Corporation, et al.* chapter 11 bankruptcy cases pending before the United States Bankruptcy Court for the Southern District of New York, Case No. 18-23538 (RDD) (Jointly Administered) in which Patent Owner asserts infringement” of the '394 patent, the '018 patent, and the '950 patent. Paper 93, 3.

C. The '394 Patent

The '394 patent, titled “Inflatable Product with Built-in Housing and Switching Pipe,” issued on July 24, 2007. Ex. 1301, codes (54), (45). It “relates in general to an inflatable product provided with an electric air pump.” *Id.* at 1:14–15. According to the '394 patent, prior air mattresses included inflatable chambers that “are inflated by an electric air pump . . . , which is separately provided, requiring users to carry two items, the air mattress itself, and an electric air pump” such that “[i]nconvenience results, especially for outdoor use.” *Id.* at 1:17–24. The '394 patent, in contrast, “provides a modified air mattress, which has a built-in electric air pump eliminating the need for an external pump.” *Id.* at 1:25–27.

Figure 1A is reproduced below:

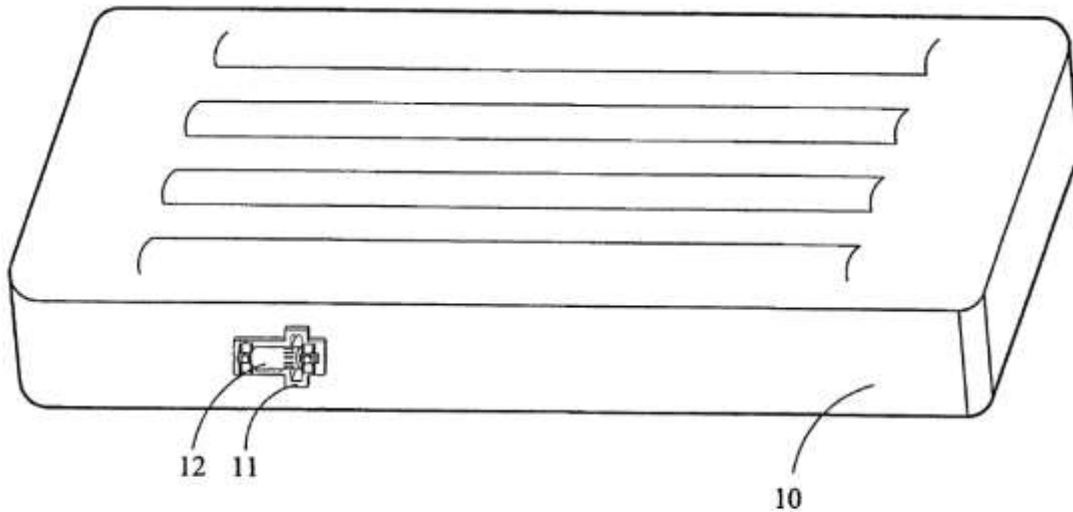


FIG. 1A

Figure 1A depicts “a perspective diagram of an inflatable product,” which includes inflatable chamber 10, pump seat 11, and air pump 12. Ex. 1301, 1:50–51, 3:15–21.

Figures 3A and 3B are reproduced below:

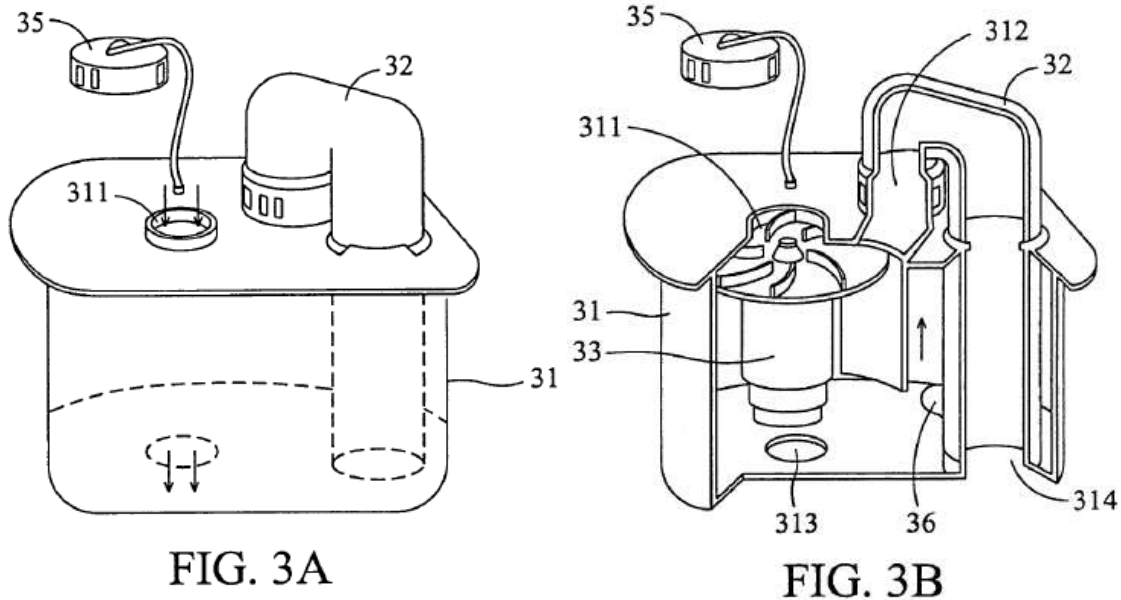


Figure 3A depicts an air pump of an embodiment of an inflatable product (as shown, for example, in Figure 1A) during inflation. Ex. 1301, 1:66–67. Figure 3B depicts the air pump of Figure 3A with portions of certain structures removed. *Id.* at 2:1–2. Figures 3A and 3B show, among other aspects, housing 31, fan and motor 33, switching pipe 32, flap 36, and cover 35. *Id.* at 4:13–16. For inflation, “the switching pipe 32 is connected to the air outlet 312 on the top surface of the housing 31” and “cover 35 is removed from the air intake 311.” *Id.* at 4:22–25.³ In this configuration, “[t]he inflatable product (not shown) is inflated by the fan and motor 33” as “[a]ir flows through the air intake 311 and the air outlet 313, and into the inflatable product.” *Id.* at 4:25–28.

³ Throughout this Decision, we omit any bolding of reference numerals in quotations from the '394 patent and from prior art references.

Figures 3C and 3D are reproduced below:

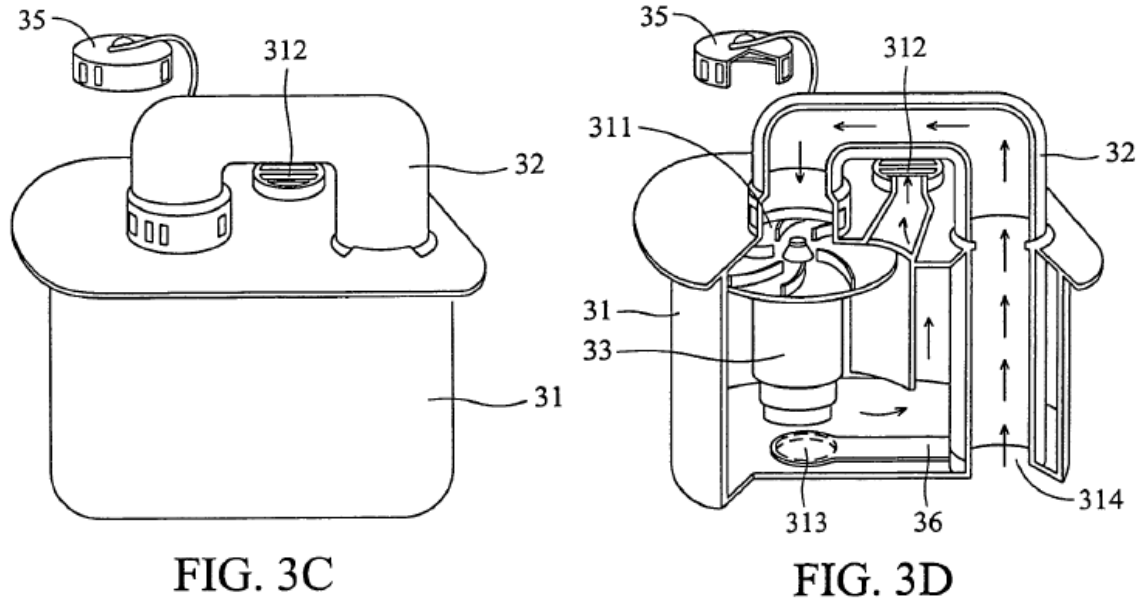


Figure 3C depicts an air pump of an embodiment of an inflatable product during deflation. Ex. 1301, 2:3–4. Figure 3D depicts the air pump of Figure 3C with portions of certain structures removed. *Id.* at 2:5–6. For deflation, “the switching pipe 32 is switched from the air outlet 312 to the air intake 311 on the top surface of the housing 31” and “the flap 36 follows the switching pipe 32 to rotate to close the air outlet 313 on the bottom surface of the housing 31.” *Id.* at 4:29–33. In this configuration, “air in the inflatable product is evacuated by the fan and motor 33” along the path indicated by arrows such that “[a]ir flows through the air intake 314, the switching pipe 32 and the air intake 311, and into the housing 31” and “out from the air outlet 312.” *Id.* at 4:33–38.

D. Illustrative Claims

Of the Challenged Claims, claims 1 and 16 are independent. Claims 2–12 depend from claim 1, and claims 17–23 depend from claim 16.

Claim 1 is reproduced below:

1. An inflatable product including:
 - an inflatable body;
 - a fan and motor assembly for pumping air;
 - a housing built into the inflatable body, the housing having an interior region; and
 - an air conduit disposed at least in part in the housing, the air conduit being movable between a first position and a second position while remaining disposed at least in part in the housing, the fan and motor inflating the inflatable body when the air conduit is in the first position, and deflating the inflatable body when the air conduit is in the second position;
- wherein air flows between the interior region of the housing and the inflatable body during inflation and deflation.

Ex. 1301, 8:24–38.

Claim 16 is reproduced below:

16. An inflatable product including:
 - an inflatable body;
 - a fan and motor assembly for pumping air;
 - a housing built into the inflatable body, the housing having an interior region; and
 - an air conduit having a first end and a second end, the air conduit disposed at least in part in the housing and arranged to convey air pumped by the fan and motor assembly, the air conduit being movable between a first position and a second position, the fan and motor inflating the inflatable body when the air conduit is in the first position, and deflating the inflatable body when the air conduit is in the second position;

wherein air flows between the interior region of the housing and the inflatable body during inflation and deflation, and

wherein the fan and motor assembly causes air to be conveyed from the first end of the air conduit to the second end of the air conduit when the air conduit is in the first position, and the fan and motor assembly causes air to be conveyed in sequence from the inflatable body, through the second end of the air conduit, to the first end of the air conduit, to ambient when the air conduit is in the second position.

Ex. 1301, 9:38–10:19.

E. Instituted Grounds of Unpatentability

We instituted *inter partes* review of the Challenged Claims based on the following grounds of unpatentability asserted by Petitioner:

Claims Challenged	35 U.S.C. §	References
1–12 and 16–23	103	Parienti ⁴ and Renz ⁵
1–12 and 16–23	103	Parienti and Wu ⁶

II. ANALYSIS

A. The Level of Ordinary Skill in the Art

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). In the Decision on Institution, we adopted Patent Owner’s formulation of the level of ordinary skill in the art: one of

⁴ US 6,018,960, issued Feb. 1, 2000 (Ex. 1308, “Parienti”).

⁵ EP 0275896 A2 (and certified translation), published July 27, 1988 (Ex. 1371, “Renz”).

⁶ US 6,698,046 B1, issued Mar. 4, 2004 (Ex. 1305, “Wu”).

ordinary skill in the art would have had either (1) a bachelor's degree in mechanical engineering or an equivalent field or (2) at least two years of experience in mechanical and electrical design aspects of inflatable products having electric air pumps. Dec. Inst. 13.

Following institution, neither Petitioner nor Patent Owner objected to this determination. *See* PO Resp. 20 (repeating the same formulation as stated prior to institution); *see also* Dec. Inst. 13 n.6 (discussing why we did not discern any special meaning for the term “designer” in Patent Owner’s formulation of the level of skill in the art for an individual without a bachelor’s degree in mechanical engineering). For the same reasons provided in the Decision on Institution (Dec. Inst. 12–14), we maintain this determination of the level of ordinary skill in the art for purposes of this Final Written Decision. Further, the patentability and claim construction analyses below would reach the same findings and determinations under either party’s definition of the level of ordinary skill in the art.

B. Claim Construction

In an *inter partes* review based on a petition filed prior to November 13, 2018, claim terms in an unexpired patent, such as the '394 patent, are given their broadest reasonable construction in light of the specification.⁷ *See* 37 C.F.R. § 42.100(b) (2017); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable

⁷ Patent Owner’s contentions regarding the applicability of the district-court-type claim construction standard are inapposite because the Petition in this proceeding was filed prior to the rule change effective November 13, 2018. *See* PO Resp. 13–14, 13 n.3. Although the applicable version of Rule 42.100(b) permitted a party to request that the Board apply the district-court-type claim construction standard, Patent Owner did not provide either the required certification or the required request. *See* 37 C.F.R. § 42.100(b).

interpretation standard as the claim construction standard to be applied in an *inter partes* review); *see also* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018). Under the broadest reasonable construction standard, claim terms are generally given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art at the time of the invention in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner proposes constructions for the terms “fan” (Pet. 24), “inflatable body” (*id.* at 25–26), and “pipe” (*id.* at 26–27). Patent Owner proposes constructions for the terms “built into” (PO Resp. 14–15), “inflatable body” (*id.* at 15–18), “pipe” (*id.* at 18–19), and “fan” (*id.* at 19). We determined in our Decision on Institution that express construction of only the term “built into” was necessary. Dec. Inst. 14–18.

Based on the full record developed at trial, we maintain that view for purposes of this Final Written Decision, as the determination as to the alleged obviousness of the Challenged Claims does not turn on the express interpretation of any of the remaining claim terms. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that “we 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)). We discuss the term “built into” below.

Independent claims 1 and 16 each recite “a housing *built into* the inflatable body.” Ex. 1301, 8:27, 9:41 (emphasis added). In the Decision on

Institution, we preliminarily construed “built into” in accordance with its plain and ordinary meaning in light of the Specification—“integrated into and not detachable from.” Dec. Inst. 18.

Patent Owner agrees with this construction. *See* PO Resp. 15 (stating that “‘built into’ should be construed as ‘integrated into and not detachable from’” (emphasis omitted)), 14 (stating that the preliminary construction “matches Patent Owner’s proposed definition”). Petitioner did not address this claim term in the claim construction section of the Petition or in the Reply. *See* Pet. 23–27; *see generally* Pet. Reply. Here, the parties agree on the construction of “built into,” but do not agree on the application of that construction to the asserted prior art. *See* Tr. 9:17–19 (counsel for Petitioner stating that “there’s no dispute about [the construction of ‘built into’] between the parties”), 56:19–21 (counsel for Patent Owner stating that “everybody seems to agree” on the construction of “built into”). We address the disagreements as to the *application* of this construction to the prior art in the discussion of the asserted grounds below.

Based on the complete record, for the reasons provided in the Decision on Institution, we maintain our construction of “built into” in accordance with its plain and ordinary meaning in light of the Specification—“integrated into and not detachable from.” *See* Dec. Inst. 15–18.

C. Asserted Obviousness of Claims 1–12 and 16–23 Based on Parienti and Renz

Petitioner asserts that claims 1–12 and 16–23 of the ’394 patent are unpatentable under 35 U.S.C. § 103(a) based on Parienti and Renz. Pet. 23, 31–64; Pet. Reply 1–13. Patent Owner provides arguments specifically addressing this asserted ground. PO Resp. 20–47; PO Sur-reply 1–12. We

begin our analysis with an overview of the asserted prior art and then address the parties' specific contentions.

1. Parienti

Parienti discloses that the “invention is made up of an inflatable mattress and an associated device for automatic inflating and deflating of the mattress” and that “[t]h[e associated] device is made interdependent with the mattress by means of gluing or any other means.” Ex. 1308, 1:22–25.

Figure 1 of Parienti is reproduced below:

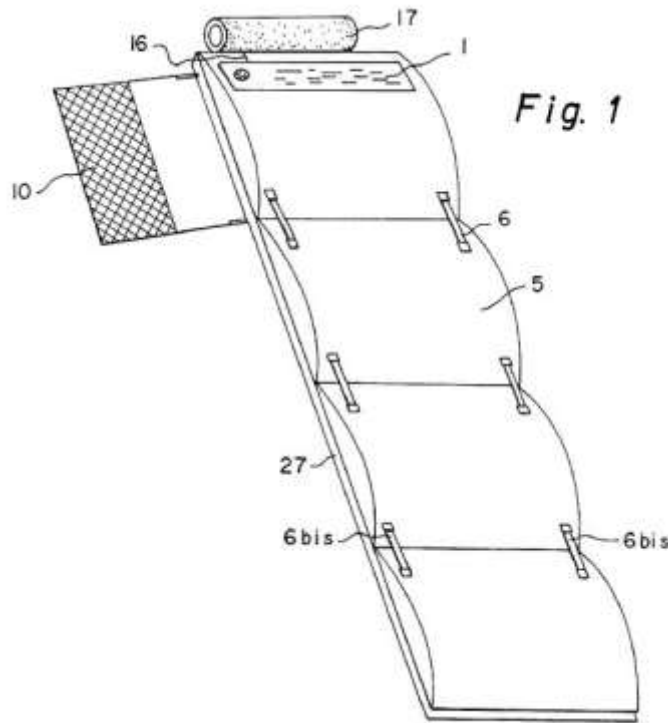


Figure 1 depicts “a plan view of the solar powered mattress of the . . . invention.” Ex. 1308, 1:36–37. The embodiment in Figure 1 shows, among other aspects, mattress 5, photovoltaic cells 1, and pipe 16, which may direct airflow to porous cylinder 17 for cooling a user. *See, e.g., id.* at 3:20–29.

Figures 4 and 5 are reproduced below:

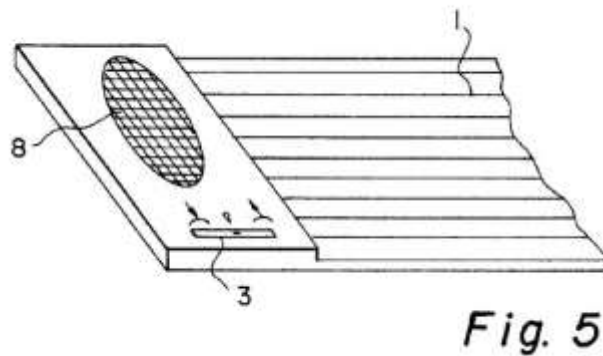
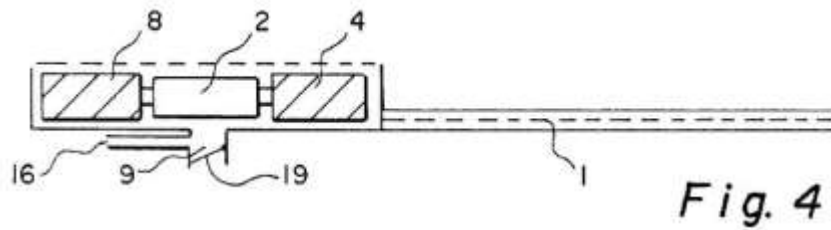


Figure 5 depicts “a plan view of a device for inflation/deflation of the solar powered mattress” and Figure 4 depicts a cross-sectional view of the device of Figure 5. Ex. 1308, 1:44–46. Parienti discloses:

Switching from inflating to deflating function is performed by reversing the polarity of the motor (2) that drives the turbine (4). Inflating is performed through the rotation of the turbine in one direction, what causes the suction of ambient air through the protective grid (8) and the introduction of the air into the mattress through the pipe (9). Likewise, deflating is performed through the rotation of the turbine in the reverse direction, what causes the suction of the air from the mattress and its exhausting to the exterior (FIG. 4).

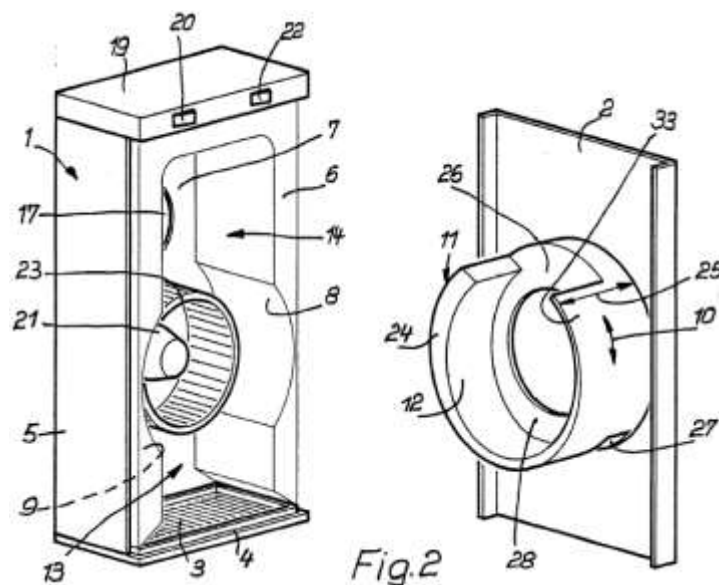
Ex. 1308, 2:64–3:6.⁸

⁸ The lead line for protective grid 8 in Parienti’s Figure 4 mistakenly extends to a portion of turbine 4 rather than to protective grid 8, which is represented as the horizontal dashed line *above* turbine 4 and motor 2. *Compare* Ex. 1308, Fig. 4, *with id.* at Fig. 5.

2. Renz

Renz “relates to a ventilation device with a radial fan, the propellable fan wheel of which is able to rotate in a fan housing with at least one inlet opening and one outlet opening” with a “first flow channel” from the fan housing to the interior of the space and a “second flow channel” from the fan housing to atmosphere. Ex. 1371, at 10.⁹

Figure 2 of Renz is reproduced below:

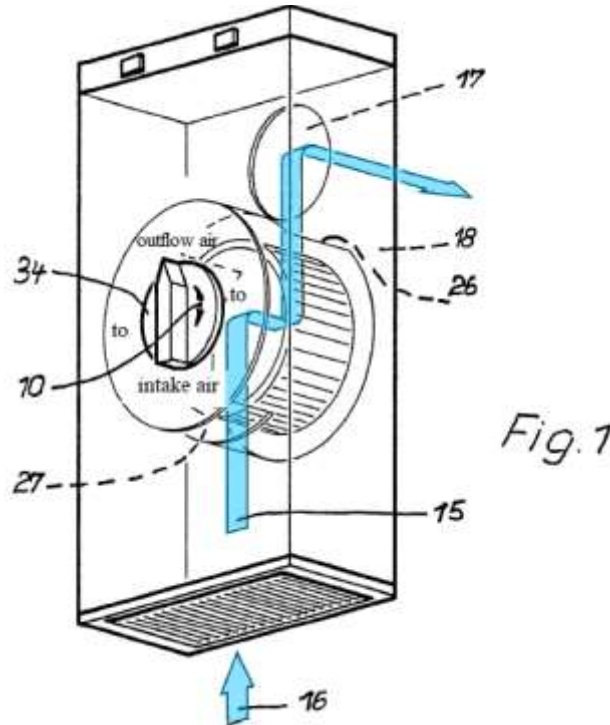


Ex. 1371, at 19 (Fig. 2). Figure 2 depicts “[a]n exploded view of the ventilation device, opened in the ‘outflow’ setting.” *Id.* at 14. The embodiment in Figure 2 shows, among other aspects, housing 1, first channel 13, second channel 14, fan motor 21, fan wheel 23, ventilation grille 3, fan housing 11, outlet opening 26, inlet opening 27, and front wall 2. *Id.* at 14–15. Renz discloses that “[w]hen front wall 2 is placed on, the fan

⁹ Exhibit 1371 includes both the original German publication and a certified translation in English. *See, e.g.,* Ex. 1371, at 21–22 (providing the translator’s declaration). When citing to Renz, we cite to the page number of Exhibit 1371 added by Petitioner.

housing 11 adjoins [inner surfaces 8 and 9], able to rotate as per dual arrow 10, with no play or with minimal play.” *Id.* at 14.

An annotated version of Figure 1 of Renz is reproduced below:

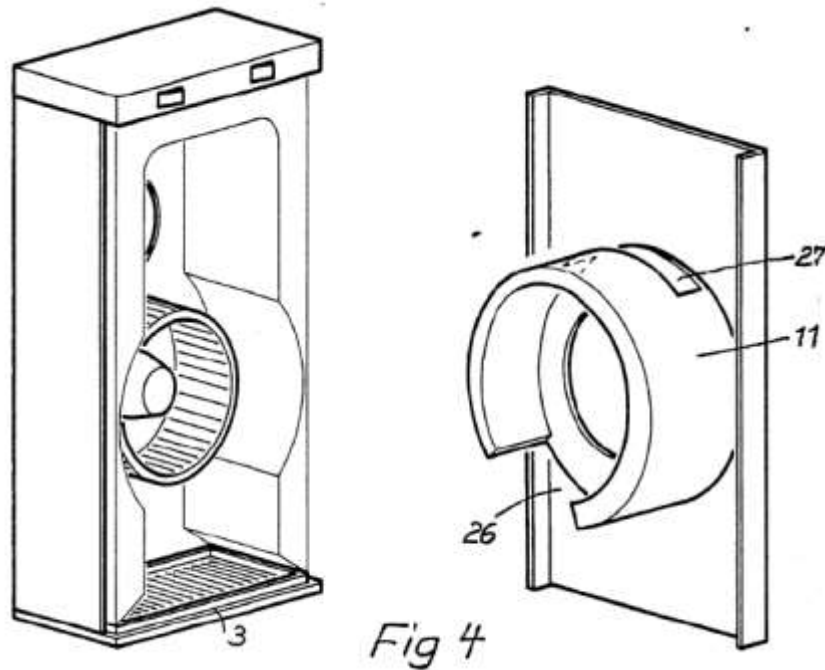


Ex. 1371, 19 (Fig. 1).¹⁰ Figure 1 depicts “[t]he ventilation device shown in perspective with a view of the underside.” *Id.* at 14. In the annotated version of Figure 1, we have added blue overlay to arrows 15, 16. Renz discloses that “[t]he flow path is visualized in figure 1 by the arrow 15” and that “[t]he space is subjected to ventilation outflow in this setting of fan housing 11.” *Id.* at 15. When the ventilation device is in the configuration shown in Figure 1, “[t]he room air passes as per arrow 16 via air grille 3 into the first channel, passes through the fan in the axial direction and then enters radially into second flow channel 14” in which “the air flow makes a right-

¹⁰ This version of Figure 1 has been modified by Petitioner to include translated text on the front of housing front wall 2. *Compare* Ex. 1371, 19 (Fig. 1 with English text), *with id.* at 7 (Fig. 1 with German text).

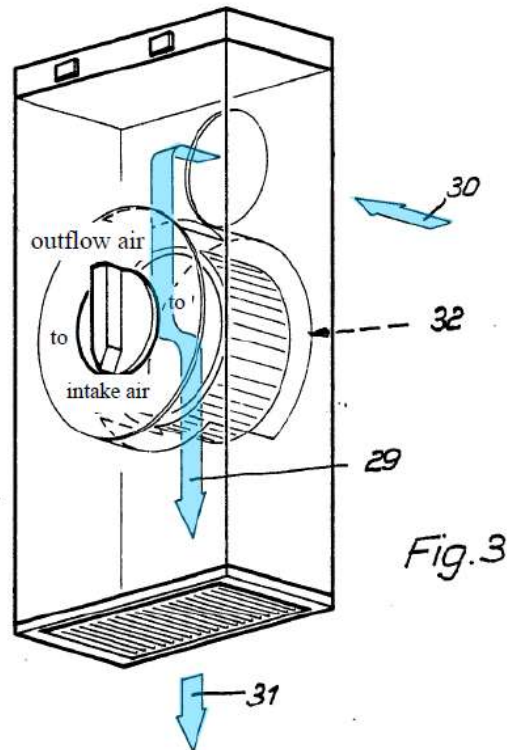
angle deflection, to then flow out via opening 17 in the rear housing wall into the atmosphere.” *Id.*

Figure 4 of Renz is reproduced below:



Ex. 1371, 20 (Fig. 4). Figure 4 provides a “[d]epiction[] as per figure[] 2, but in the ‘intake air’ setting.” *Id.* at 14. Renz discloses that “[i]n figure 4, fan housing 11 is rotated by 180° from the position as per figure 2” and “[a]s a result, the flow direction is reversed in the ventilation device, which is illustrated by the arrow 29 (figure 3).” *Id.* at 15.

An annotated version of Figure 3 of Renz is reproduced below:



Ex. 1371, 20 (Fig. 3).¹¹ Figure 3 provides a “[d]epiction[] as per figure[] 1, but in the ‘intake air’ setting.” *Id.* at 14. In the annotated version of Figure 3, we have added blue coloring to arrows 29, 30, and 31. Renz discloses that “[t]he outer air flows as per arrow 30 into second flow channel 14, and flows via the now lower outlet opening 26 of radial fan 32 into first flow channel 13” and then “leaves same via air grille 3 and finally as per arrow 31 gets into the space equipped with this ventilation device.” *Id.* at 15.

¹¹ This version of Figure 3 has been modified by Petitioner to include translated text on the front of housing front wall 2. *Compare* Ex. 1371, 20 (Fig. 3 with English text), *with id.* at 8 (Fig. 3 with German text).

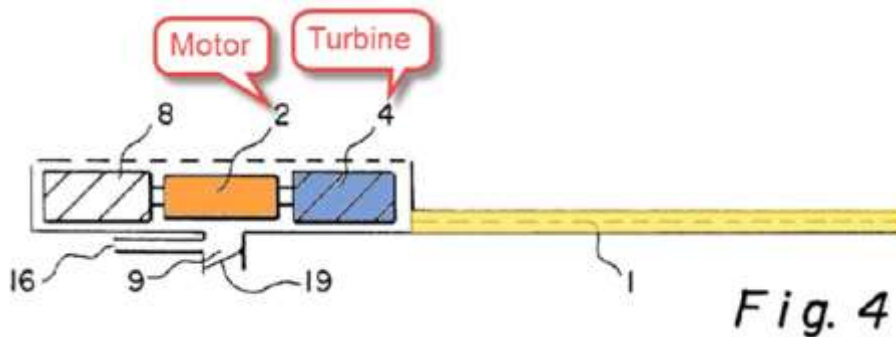
3. Analysis

a. Independent Claim 1

Petitioner contends that the proposed combination of Parienti and Renz satisfies each of the limitations of claim 1. Pet. 31–51. To support its arguments, Petitioner identifies certain passages in the cited references and explains the significance of each passage with respect to the corresponding claim limitation. *Id.* We first provide an overview of the proposed modification and then we discuss Petitioner’s positions with respect to the requirement in claim 1 for a “housing built into the inflatable body” (“the ‘built into’ limitation”). *See* Ex. 1301, 8:27.

(1) Overview of the Proposed Modification

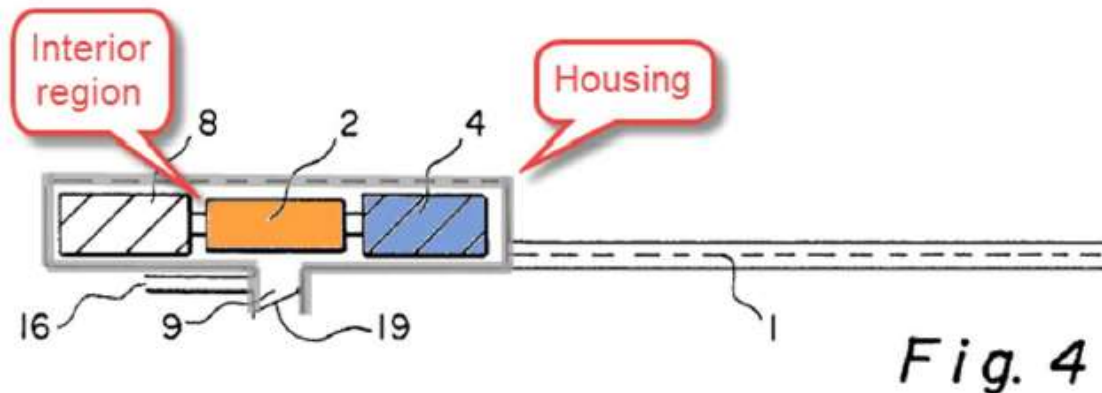
Petitioner provides its annotated version of Figure 4 of Parienti shown below, and states that Parienti discloses “a pump device, including ‘a photovoltaic cell array (1) [yellow], a motor (2) [orange] powered by said cell array, [and] a [three] position switch (3) (FIG. 5).’” Pet. 32–33 (quoting Ex. 1308, 2:56–59). Petitioner contends that, in Parienti, “[s]witching from inflating to deflating function is performed by reversing the polarity of the motor (2) that drives the turbine (4) [blue].” *Id.* (quoting Ex. 1308, 2:64–66; citing Ex. 1302 ¶ 172).



Pet. 33. Figure 4 depicts a cross-sectional view of a “device for inflation/deflation of the solar powered mattress.” Ex. 1308, 1:44–46. In

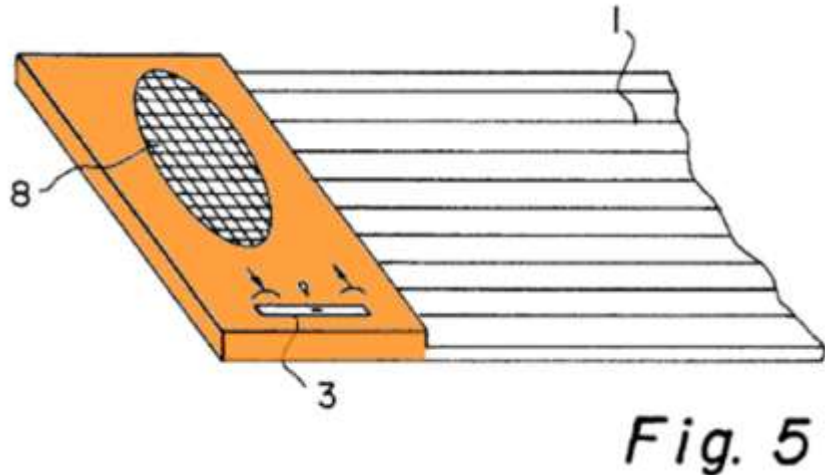
the above annotated version of Parienti's Figure 4, Petitioner added (1) a text box identifying element 2 as a "Motor," (2) a text box identifying element 4 as a "Turbine," (3) an orange overlay to motor 2, (4) a blue overlay to a portion of turbine 4 (*see supra* n.8), and (5) a yellow overlay to photovoltaic cell array 1. Pet. 33. According to Petitioner, "Parienti's turbine 4 and motor 2 are part of a Reversible Pump Assembly." *Id.* (citing Ex. 1302 ¶¶ 113–115).

Petitioner also provides the following *additional* annotated version of Figure 4 of Parienti:



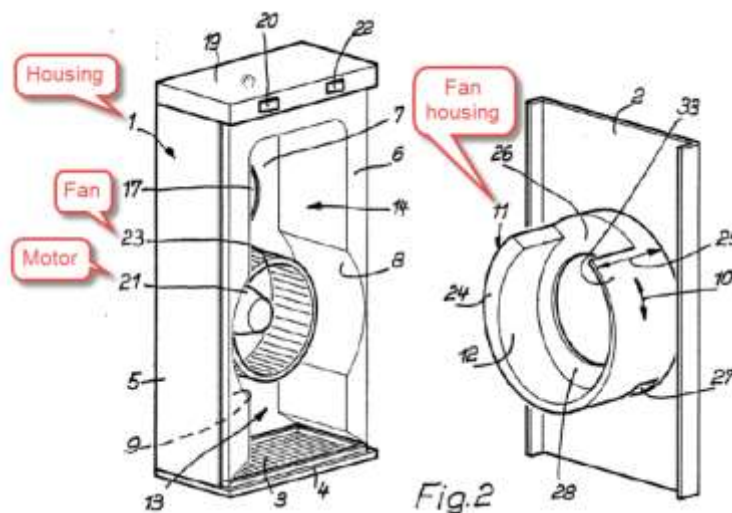
Pet. 38. Figure 4 depicts a cross-sectional view of a "device for inflation/deflation of the solar powered mattress." Ex. 1308, 1:44–46. In this annotated version of Figure 4 of Parienti, Petitioner added (1) an orange overlay to motor 2, (2) a blue overlay to a portion of turbine 4 (*see supra* n.8), (3) a text box identifying an "Interior region," and (4) a gray outline and text box identifying a "Housing." Pet. 38.

In the background discussion of Parienti, Petitioner also identifies a “housing” in the following annotated version of Figure 5 of Parienti:



Pet. 30. Figure 5 of Parienti depicts “a plan view of a device for inflation/deflation of the solar powered mattress.” Ex. 1308, 1:46–47. The annotated version of Figure 5 above adds orange overlay to an alleged “housing.” See Pet. 29.

Petitioner also provides the following annotated version of Figure 2 of Renz below, and states that Renz discloses “a uni-directional fan 23 and motor 21 as part of a Uni-directional Pump Assembly for a ‘ventilation device.’” Pet. 33–34 (quoting Ex. 1371, 10; citing Ex. 1302 ¶¶ 119, 174):



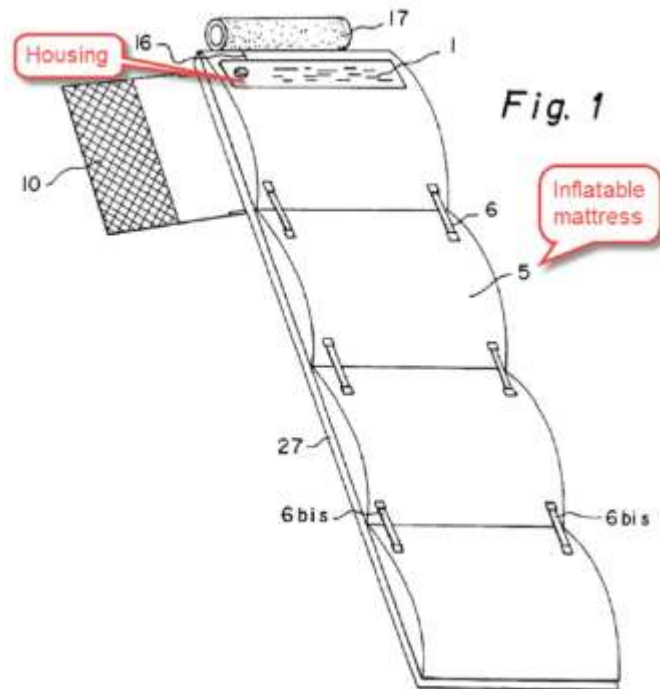
Pet. 35. Figure 2 depicts “[a]n exploded view of the ventilation device, opened in the ‘outflow’ setting.” Ex. 1371, at 14. In the annotated version of Figure 2 of Renz, Petitioner added text boxes to identify (1) element 1 as a “Housing”, (2) element 11 as a “Fan housing,” (3) element 21 as a “Motor,” and (4) element 23 as a “Fan.” Pet. 35. Petitioner provides various reasons why a person of ordinary skill in the art at the time of the invention would have allegedly “been motivated to use a Uni-directional Pump Assembly, as taught by Renz (*see* Renz, Figs. 1-4), in place of Parienti’s Reversible Pump Assembly.” Pet. 40; *see also id.* at 40–43 (providing five different reasons to modify Parienti as proposed).

*(2) The Parties’ Positions as to the “Built Into”
Limitation*

With that background, we turn now to the parties’ positions as to the “built into” limitation. Petitioner relies on the combination of Parienti and Renz for the “built into” limitation and the requirement for a “housing having an interior region” (Ex. 1301, 8:27–28) (“the ‘interior region’ limitation”). Pet. 36 (citing Ex. 1302 ¶ 176). Specifically, Petitioner asserts that “Renz disclose[s] a housing having an interior region” in mapping Renz to the “interior region” limitation. *Id.* (citing Ex. 1302 ¶ 179). Petitioner also asserts that the interior of Parienti’s housing contains a motor and turbine in mapping Parienti to the interior region limitation. *Id.* at 37 (citing Ex. 1308, Fig. 5; Ex. 1302 ¶ 177). Petitioner proposes to replace Parienti’s “pump device” with “the Uni-directional Pump Assembly as taught by Renz includes a housing 1 having an interior region.” *Id.* at 38 (citing Ex. 1302 ¶¶ 177–179).

As to the “built-into limitation,” Petitioner states that “Parienti disclose[s] that its pump housing is built into the inflatable mattress 5 (the

inflatable body).” *Id.* at 38 (citing Ex. 1302 ¶ 180). More specifically, Petitioner refers to its annotated version of Figure 1 of Parienti below and states that “Parienti disclose[s] that the pump device, which is surrounded by a housing, ‘is made *interdependent* with the mattress [5] by means of gluing or any other means.’” *Id.* (quoting Ex. 1308, 1:24–25 (emphasis added); citing Ex. 1363, 23–24¹²):



Pet 39. Figure 1 depicts “a plan view of the solar powered mattress of the . . . invention.” Ex. 1308, 1:36–37. In this annotated version of Figure 1, Petitioner identifies (1) a “Housing” and (2) an “Inflatable mattress.” Pet. 39. Petitioner asserts that “Parienti described the benefit of this built in design as eliminating the ‘need to get an air pump’ separate from the

¹² Although Petitioner cites to pages 23–24 of Exhibit 1373 (Pet. 38), we understand Petitioner to have intended to refer to Exhibit 1363.

inflatable mattress.” *Id.* at 38–39 (quoting Ex. 1308, 1:25–20; citing Ex. 1302 ¶ 180). According to Petitioner:

Because Parienti taught that its pump assembly is built into mattress 5 and specifically explained the benefits of such a design, a POSA would have known that the use of a Uni-directional Pump Assembly as taught by Renz in place [of] Parienti’s pump assembly would have resulted in an inflatable product with a pump assembly housing built into the inflatable body.

Id. at 39–40 (citing Ex. 1302 ¶ 181).

As discussed in the Decision on Institution, in the context of this asserted ground, the modified device includes, for example, housing 1, fan motor 21, and fan wheel 23 *from Renz*, but Petitioner proposes modifying housing 1 of Renz to be located and configured (with respect to mattress 5) the same way as the identified “housing” in Parienti in order to address the “built into” limitation. *See, e.g.*, Pet. 49 (showing an annotated version of Figure 7 of Parienti with the identified “housing” referred to as “Renz housing”). Petitioner confirmed this understanding during the oral hearing. Tr. 30:1–11.

Patent Owner responds that, even if combined, Parienti as modified by Renz does not satisfy the “built into” limitation. PO Resp. 41–47. Patent Owner asserts that the term “interdependent” as used in Parienti (Ex. 1308, 1:24–25) and relied on in the Petition, does not mean “not detachable from”—one of the requirements of “built into.”¹³ PO Resp. 41–43 (discussing Pet. 38). Patent Owner also argues that “[g]luing the

¹³ As discussed above, we construe “built into” in accordance with its plain and ordinary meaning in light of the Specification—“integrated into and not detachable from.” *See supra* § II.B.3.

inflating/deflating device to the surface of Parienti does not cause it to be ‘integrated into’ the mattress”—the *other* requirement of “built into.” *Id.* at 44 (citing Ex. 2329 ¶ 117).

In addition, Patent Owner asserts that the “component collection” in Parienti is not “integrated into” mattress 5. PO Resp. 44–47.¹⁴ According to Patent Owner, “being *integrated into* the inflatable body means to construct the housing and the inflatable body such that the housing and the inflatable body as a ‘harmonious, interrelated whole’” such that “the housing itself forms a part of the inflatable body and is designed to hold air within the chamber like the other portions of the chamber wall which do not include the housing.” *Id.* at 46. Patent Owner asserts that “Parienti does not teach this,” but “[i]nstead, Parienti teaches placing its ‘housing structure’ *on* the outside wall of the mattress.” *Id.* (citing Ex. 2329 ¶¶ 117–122).

In its Reply, Petitioner argues that Parienti satisfies the “built into” limitation because (1) the identified “housing is not detachable from mattress 5” (Pet. Reply 1; *see id.* at 1–3 (discussing Ex. 1625 ¶¶ 16–18)),

¹⁴ It is unclear whether Patent Owner uses the term “component collection” to refer to the *same* collection of structures identified as a “housing” by Petitioner (*see* Pet. 38) or whether Patent Owner uses the term “component collection” to refer to a *subset* of Petitioner’s collection of structures. During the oral hearing, counsel for Patent Owner appears to indicate that the structures at issue in this discussion *do not* include pipe 9. *See* Tr. 158:18–159:2 (discussing how on pages 44 and 45 of the Response, Patent Owner “we didn’t talk about pipe per se but . . . did identify the thing that was the pump housing as being on top of the mattress and next to the solar panel which would not include pipe 9 and we said it right after the picture from Figure 7 so you would know that we were not including a pipe 9 because what we identified as the housing was on top of the mattress, not in the mattress”).

and because (2) the identified “housing is integrated into mattress 5” in that “pipe 9 is part of [Parienti’s] pump housing and pipe 9 extends into mattress 5” (Pet. Reply 3; *see id.* at 3–4 (discussing Ex. 1625 ¶¶ 19–21)).

In its Sur-reply, Patent Owner argues that “Parienti’s air inflating/deflating device is not built into an inflatable body.” PO Sur-reply 1–3. Patent Owner states: “Petitioner[] argue[s] that pipe 9 is part of an alleged housing, but it is not.” *Id.* at 1. According to Patent Owner, “[p]ipe 9 is separated from the purported turbine housing by at least pipe 16.” *Id.* at 2; *see also* Ex. 1308, Fig. 4 (showing the relationship of pipe 9 to pipe 16).

*(3) Whether Petitioner’s Reply Arguments as to the
“Built Into” Limitation Are Proper*

We first address whether certain of Petitioner’s Reply arguments as to the “built into” limitation are proper. A petitioner has the ultimate burden of persuasion to prove unpatentability of the challenged claims, and the burden of persuasion never shifts to the patent owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). “Because of the expedited nature of IPR proceedings, “[i]t is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify “with particularity” the “evidence that supports the grounds for the challenge to each claim.”” *Henny Penny Corp. v. Frymaster LLC*, No. 2018-1596, 2019 WL 4308876, at *4 (Fed. Cir. Sept. 12, 2019) (quoting *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (quoting 35 U.S.C. § 312(a)(3))); *see also* 37 C.F.R. § 42.104(b)(5) (requiring a petition to identify “the supporting evidence relied upon to support the challenge and the relevance of the evidence to the challenge raised, including identifying specific portions of the evidence that support the challenge”).

A “[p]etitioner may not submit new evidence or argument in reply that it could have presented earlier, e.g. to make out a prima facie case of unpatentability.” Trial Practice Guide Update, 14 (Aug. 2018), available at <https://go.usa.gov/xU7GP>. A reply that raises “new theories or arguments necessary to make out petitioner’s case-in-chief for the unpatentability of an original . . . claim” “may not be considered.” *Id.* at 15. Instead, under the Board’s rules, a petitioner’s reply “may only respond to arguments raised in the corresponding . . . patent owner response.” 37 C.F.R. §42.23(b); *see also Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1367 (Fed. Cir. 2015) (discussing how, in *inter partes* reviews, a petitioner’s reply is “limited to a true rebuttal role” (citing 37 C.F.R. §§ 42.104(b)(5), 42.23(b))). The burden of persuasion assigned to a petitioner in *inter partes* review, “together with the procedural rules impartially applied, means that, in some cases, a challenge can fail even if different evidence and arguments might have led to success.” *Ariosa*, 805 F.3d at 1367.

As summarized above (*see supra* § II.C.3.a.2), in the Petition in this proceeding, Petitioner did not mention or rely on pipe 9 of Parienti as part of the basis for why the alleged “housing” in Parienti—as identified, for example, in the annotated version of Figure 4 reproduced above (*see supra* p. 20)—satisfies the “built into” limitation. *See* Pet. 38–40. Nor did Petitioner explain why its proposed replacement of Parienti’s “pump device” with Renz’s “Uni-directional Pump Assembly” would retain Parienti’s pipe 9 to satisfy the “built into” limitation. *See id.* at 38. Instead (as also summarized above (*see supra* § II.C.3.a.2)), Petitioner argued that Parienti satisfies that limitation because “Parienti disclose[s] that the pump device, which is surrounded by a housing, ‘is made interdependent with the mattress

[5] by means of gluing or any other means.’” *Id.* at 38 (quoting Ex. 1308, 1:24–25; citing Ex. 1363, 23–24). In other words, Petitioner *originally* asserted that the identified “housing” satisfied the “built into” limitation because Parienti discloses it being “interdependent,” e.g., glued to mattress 5. *Id.* at 38. Critically, Petitioner’s arguments in the Petition do not address the “integrated into” aspect of the “built into” limitation.

Then, in the Reply, Petitioner shifted its argument to focus on pipe 9 as the basis for Parienti satisfying the “integrated into” portion of the “built into” limitation. *See* Pet. Reply 3–4. Specifically, Petitioner now takes the position that “Parienti’s housing is integrated into mattress 5” because “Parienti teaches that pipe 9 is part of its pump housing structure and pipe 9 extends into mattress 5.” *Id.* at 3. Although we are mindful of the fact that, in the Decision on Institution, the panel stated that “[t]he parties may wish to further develop during trial whether Figure 7 (for example) of Parienti depicts a ‘Housing’ as ‘integrated into’ mattress 5 (in light of, for example, the relative locations of pipe 9 and mattress 5)” (Dec. Inst. 37), for the reasons discussed above, a petitioner cannot present, in a reply, a new argument necessary for its case-in-chief. *See Intelligent Bio-Sys.*, 821 F.3d at 1370 (“In these circumstances, we find that the Board did not err in refusing the reply brief as improper under 37 C.F.R. § 42.23(b) because [the petitioner] relied on an entirely new rationale to explain why one of skill in the art would have been motivated to combine” the prior art.); *Ariosa*, 805 F.3d at 1367 (“We see no error in the Board’s rejection of [a petitioner’s] reliance, in its Reply submissions, on previously unidentified portions of a prior-art reference to make a meaningfully distinct contention.”); Trial Practice Guide Update, 14 (“Petitioner may not submit new evidence or

argument in reply that it could have presented earlier, e.g. to make out a prima facie case of unpatentability.”).

Relatedly, at the oral hearing, Petitioner asserted that Patent Owner’s Sur-reply arguments that pipe 9 is *not* part of an alleged housing is untimely. *See, e.g.*, PO Sur-reply 1. Specifically, counsel for Petitioner stated

despite the Panel’s invitation request to address whether pipe 9 is integrated into the mattress, there is nothing in the Patent Owner’s response on that issue, they only put in their arguments on that point in the [S]urreply, so we think that those raise new issues that they should have put in the response for us to address in the reply.

Tr. 24:4–8. Counsel for Patent Owner responded that pipe 9 “wasn’t raised . . . as a real point in the petition” and that “[t]he first time we got a full argument about pipe [9] was . . . in the reply and then we addressed it” in the Sur-reply. Tr. 158:1–3. We agree with Patent Owner on this issue.

As discussed above, Petitioner did not rely specifically on pipe 9 to address the “built into” limitation until the Reply. Contrary to Petitioner’s argument (Tr. 24:4–8), Patent Owner was *not* required to address pipe 9 in its Response when Petitioner did not provide a developed position on the issue in its Petition. In other words, Patent Owner did not need to rebut Petitioner’s arguments as to pipe 9 before those arguments were ever made. *See, e.g., Dynamic Drinkware*, 800 F.3d at 1379–80 (discussing the burdens of persuasion and production between parties in *inter partes* review); *see also* Tr. 158:15–17 (counsel for Patent Owner stating that Petitioner’s argument as to pipe 9 “wasn’t made before [the Reply] so we were responding to that in our sur reply”).

Given that the Decision on Institution identified the issue that Petitioner presented in its Reply, however, and in order to ensure a full and

complete record, below we analyze two alternatives: (1) the outcome if Petitioner’s Reply Arguments *are not* considered (*see infra* § II.C.3.a.4), and (2) the outcome if Petitioner’s Reply arguments *are* considered (*see infra* § II.C.3.a.5). Our analysis as to the “built into” limitation does not turn on whether Petitioner’s argument is “new” or “responsive.”

*(4) Whether Petitioner, with the Arguments in the
Petition, Has Demonstrated that the Identified
“Housing” is “Integrated Into” Mattress 5*

We first discuss whether, if only the arguments in the Petition are considered, Petitioner has carried its burden of persuasion to support a finding by a preponderance of the evidence that the identified “housing” in Parienti satisfies the “built into” limitation. We determine that it has not.

We are persuaded by Patent Owner’s argument that the fact that the identified “housing” is “made interdependent with the mattress by means of gluing or any other means” (Ex. 1308, 1:24–25) does not *by itself* lead to the conclusion that it is “built into” mattress 5 in Parienti; instead, the cited disclosure in Parienti is relevant to only *one part* of the construction of “built into”—i.e., whether the identified “housing” is “detachable from” mattress 5 in Parienti. *See* PO Resp. 43 (“Petitioner[] allege[s] that structures that are ‘glued or welded’ are ‘built into’ according to the district court, (Petition, p. 38), but that ignores the ‘integrated into’ requirement. . . . Gluing the inflating/deflating device to the surface of Parienti does not cause it to be “integrated into” the mattress.” (citing Ex. 2329 ¶ 117)), 45 (“Petitioner[’s] conclusion that ‘glued to’ means ‘built into’ also ignores the district court’s full claim construction of ‘built into’ as meaning ‘*integrated into and* not detachable from.’”); *see also* Dec. Inst. 35 (discussing this issue).

Further, we are not persuaded by Petitioner’s argument that the Texas District Court, in its claim construction order, “cit[ed] ‘glued or welded’ as examples of built in structures.” Pet. 38 (citing Ex. 1363, 23–24); *see supra* n.12. As discussed in the Decision on Institution, the Texas District Court’s reference to “glued or welded” comes in a discussion of the term “permanently held” in the ’018 patent. Dec. Inst. 34–35.

For these reasons, if Petitioner’s arguments relying on pipe 9 as to the “integrated into” aspect of the “built into” limitation (Pet Reply 3–4) *are not* considered, Petitioner has not shown by a preponderance of the evidence that the identified “housing” in Parienti satisfies the “built into” limitation. Under that assumption, we determine, based on the otherwise complete record, that Petitioner has not demonstrated by a preponderance of the evidence that claim 1 would have been obvious based on Parienti and Renz.

*(5) Whether Petitioner, with the Arguments in the
Petition and Reply, Has Demonstrated that
Parienti Satisfies the “Integrated Into” Aspect
of the “Built Into” Limitation*

In the alternative to the analysis in the prior section, we also discuss whether Petitioner has carried its burden of persuasion to support a finding by a preponderance of the evidence that Parienti satisfies the “built into” limitation if the arguments at issue in the Reply are considered. *See* Pet Reply 3–4. For the reasons below, we determine that Petitioner still has not carried its burden.

We first discuss whether Petitioner has shown by a preponderance of the evidence that pipe 9 in Parienti would have been understood by one of ordinary skill in the art to be part of a “housing.” In the Petition, Petitioner provides the annotated version of Figure 4 of Parienti shown above (*see*

supra p. 20), which adds gray overlay to pipe 9 to identify it as part of an alleged “housing” (Pet. 38), but neither Petitioner nor Dr. Beaman explain *why* one of ordinary skill in the art would have considered pipe 9 as part of a “housing.” *See* Pet. 36–40 (citing Ex. 1302 ¶¶ 176–181). Indeed, Petitioner does not mention pipe 9 in the analysis of the “interior region” limitation of the “built into” limitation. *See* Pet. 36–40. Similarly, Dr. Beaman does not discuss pipe 9 in the testimony cited. *See* Ex. 1302 ¶¶ 176–181.

In the Reply, Petitioner states that “Parianti teaches that pipe 9 is part of its pump housing structure and pipe 9 extends into mattress 5.” Pet. Reply 3 (citing Ex. 1625 ¶¶ 19–20). Patent Owner argues that pipe 9 is not “part of an alleged housing” as asserted by Petitioner. PO Sur-reply 1. We address Petitioner’s Reply arguments in detail below.

Although Dr. Beaman does state, in the declaration in the Reply, that “Parianti’s housing is integrated into inflatable mattress 5 via at least pipe 9,” with that testimony, Dr. Beaman assumes, without support, that pipe 9 is part of the “housing” in the first place. Ex. 1625 ¶ 19. Petitioner also states that Patent Owner’s expert “Dr. Stevick agrees that pipe 9 is built into mattress 5.” Pet. Reply 3 (citing Ex. 1602, 714:3–8; Ex. 1647 ¶ 62). In the cited deposition testimony, when Dr. Stevick is asked whether he “believe[s] that the pipe 9 that holds the valve 19 is a separate part from the housing that has the motor and turbine” in Parianti, he stated “Yes. And you build that into the mattress.” Ex. 1602, 714:3–8; *see also* PO Sur-reply 2–3 (“Petitioner[’s] allegation that Dr. Stevick admitted, in IPR2018-0875, that pipe 9 is built in the mattress 5 is false. He stated that pipe 9 is *not* part of the alleged housing. *See, e.g.*, IPR2018-0875 Stevick Declaration, Ex. 1647, ¶ 62.”). Again, with this argument, Petitioner assumes that pipe 9 is part of

a “housing” in the first place; indeed if pipe 9 is not part of a “housing,” whether pipe 9 is “built into” mattress 5 in Parienti is not relevant to whether Parienti discloses a “housing built into the inflatable body.” Similarly, although Dr. Stevick testified (in the cited declaration from IPR2018-00875) that “at most, only pipe 9 *and not* the pump is built in the chamber wall” (Ex. 1647 ¶¶ 62), that, again, does not address whether pipe 9 is part of a “housing” in the first place.

Petitioner makes three additional statements on this issue in the Reply: (1) “Parienti’s Figure 4 ‘is a cross-section of the device shown in FIG. 5 . . . ’ ([Ex. 1625 ¶¶ 19–20]);” (2) “Parienti’s Figure 5 shows a ‘housing,’”; and (3) “Figure 4 clearly shows pipe 9 as part of that housing. ([Ex. 1625 ¶¶ 19–20]; Ex. 1634, 248:20–249:9.)” Pet. Reply 3. The record supports Petitioner’s position on point (2)—i.e., that the box-shaped structure shown in Figure 5 (overlaid in orange in the annotated version above (*see supra* p. 21)) is a “housing.” *See, e.g.*, Ex. 1602, 701:9–10 (Patent Owner’s expert, Dr. Stevick, stating that “Figure 5 [of Parienti] shows a housing with a switch and a grid and a solar cell”); Ex. 1634, 245:15–23 (Dr. Stevick stating that “[y]ou could call” the device shown in Figure 5 a “housing”). As shown by comparing Figures 4 and 5, this box-shaped structure houses motor 2 and turbine 4. *See* Ex. 1308, Figs. 4, 5. The record also supports Petitioner’s position on point (1), as Parienti discloses that Figure 4 “is a cross-section of the device shown in” Figure 5. Ex. 1308, 1:44–46.

We turn now to point (3)—that “Figure 4 clearly shows pipe 9 as part of that housing,” i.e., in Figure 5. Pet. Reply 3 (citing Ex. 1625 ¶¶ 19–20; Ex. 1634, 248:20–249:9). We do not agree with Petitioner that point (3) necessarily follows from the prior two. Petitioner has not explained why—

under the logic that Figures 4 and 5 show the same “device” (*id.*)—one of ordinary skill in the art *would have included* pipe 9 in the alleged “housing” *but not included* other structures shown in Figure 4, such as, for example, pipe 16. Instead, the gray line identifying the “housing” in the annotated version of Figure 4 spans *across the inlet* of pipe 16, omitting it from the identified “housing.” *See* Pet. 38. In the cited declaration of Dr. Beaman, he essentially restates Petitioner’s points (1), (2), and (3), but does not provide further explanation for his statement that “there can be no reasonable dispute that pipe 9 is part of Parienti’s housing.” Ex. 1625 ¶ 20 (citing Ex. 1308, Figs. 4 and 5; Ex. 1634, 248:20–249:23, 250:18–251:7); *see* 37 C.F.R. § 42.65(a).

Further, in deposition testimony of Dr. Stevick highlighted by Petitioner (Pet. Reply 3) and Dr. Beaman (Ex. 1625 ¶ 20), Dr. Stevick discusses how pipe 9 could be screwed into or welded to “the housing that holds motor [2] and turbine [4].” Ex. 1634, 248:12–249:11; *see id.* at 249:1–2 (Dr. Stevick discussing how “you could have the pipe [9] screw into a threaded fitting on a housing”). Taken in context, however, we are not persuaded that this testimony supports the proposition for which Petitioner cites it—i.e., that “Figure 4 clearly shows pipe 9 as part of that housing” (Pet Reply 3). Instead, in a portion of testimony cited by Dr. Beaman (but not by Petitioner), it is clear that Dr. Stevick takes the position that “pipe 9 is separate from the housing.” Ex. 1634, 249:17–23 (“**Q:** Okay. So under the way you’re looking at this, *where pipe 9 is separate from the housing*, you’re saying that pipe 9 could be screwed into the housing or 20 welded into the housing, correct? **A:** Sure. And that’s why it’s -- it has a separate number. They don’t call [pipe] 9 a housing.” (emphasis added)), *cited at* Ex.

1625 ¶ 20.¹⁵ On the record in this proceeding, this testimony of Dr. Stevick does not support Petitioner’s position as contended by Petitioner.¹⁶ For the reasons above, even if the Reply arguments are considered, we determine that Petitioner has not shown by a preponderance of the evidence that one of ordinary skill in the art would have considered pipe 9 in Parienti as part of a “housing.”

We turn now to whether Petitioner has have shown by a preponderance of the evidence that the remaining structure—i.e., if pipe 9 is *not* included in the identified “housing” (*see* Pet. 38)—is “integrated into” mattress 5 in Parienti. In the Reply, Petitioner argues in the alternative that,

¹⁵ We note that Dr. Beaman also cites to the portion of Dr. Stevick’s deposition that discusses certain features in Figure 4C of the ’950 patent. *See* Ex. 1625 ¶ 20 (citing Ex. 1634, 250:18–251:7). Although the Reply also cites this testimony (Pet. Reply 4), Petitioner does not address either Figure 4C or this testimony by Dr. Stevick as a basis for why one of skill in the art would consider pipe 9 to be part of a “housing.” Thus, we do not consider this testimony as to Figure 4C in our analysis. *See* Trial Practice Guide Update, 4 (discussing how “parties that incorporate expert testimony by reference in their petitions, motions, or replies without providing explanation of such testimony risk having the testimony not considered by the Board”).

¹⁶ This understanding of pipe 9 as separate from a “housing” aligns with Patent Owner’s argument that the remaining structure—i.e., if pipe 9 is *not* included in the identified “housing” (*see* Pet. 38)—is “*on* the outside wall of the mattress.” PO Resp. 46 (citing, *inter alia*, Ex. 2329 ¶ 121); *see also* Tr. 158:18–159:2 (discussing how on pages 44 and 45 of the Response, Patent Owner “we didn’t talk about pipe per se but . . . did identify the thing that was the pump housing as being on top of the mattress and next to the solar panel which would not include pipe 9 and we said it right after the picture from Figure 7 so you would know that we were not including a pipe 9 because what we identified as the housing was on top of the mattress, not in the mattress”).

even if pipe 9 is *not* part of a “housing,” the remaining structure “is integrated with mattress 5 by [Patent Owner’s] own cited definitions of ‘integrate.’” Pet. Reply 3 (citing PO Resp. 46).¹⁷ In support, Petitioner argues that “Parianti teaches that the first embodiment pump is made ‘*interdependent*’ with the mattress by means of gluing or any other means, such that a user need not separately retrieve a pump.” *Id.* (citing Ex. 1625 ¶ 21). Petitioner also argues that “[t]his non-detachable pump provides a ‘harmonious, interrelated whole with’ the mattress, as the pump housing extends into the mattress and keeps it inflated.” *Id.* at 4 (citing Ex. 1625 ¶ 21; Ex. 1634, 250:18–251:7, 253:13–21, 254:10–14, 256:1–257:22).

As an initial matter, for the reasons discussed above (*see supra* § II.C.3.a.4), we are persuaded by Patent Owner’s argument that the fact that a structure is “made interdependent with the mattress by means of gluing or any other means” (Ex. 1308, 1:24–25) does not *by itself* lead to the conclusion that the structure is “built into” mattress 5 in Parianti as we have defined this term; instead, that fact only addresses *one part* of the construction of “built into”—i.e., whether the structure is “detachable from” mattress 5 in Parianti

Further, we are not persuaded that the identified “housing” *without* pipe 9 satisfies Patent Owner’s own understanding of “integrated into.” Although Patent Owner did use the phrase “harmonious interrelated whole”

¹⁷ Although Petitioner does not expressly state that this argument assumes pipe 9 is *not* part of the “housing,” in the cited declaration testimony, Dr. Beaman begins: “Regardless of pipe 9, though, I consider Parianti’s pump housing to be integrated with mattress 5 by Dr. Stevick’s own cited definitions of ‘integral’ and ‘integrate.’” Ex. 1625 ¶ 21, *cited at* Pet. Reply 3.

when discussing “integrated into” (PO Resp. 46), Patent Owner also clearly stated that “integrated into” means that “the housing itself *forms a part of the inflatable body and is designed to hold air* within the chamber like the other portions of the chamber wall which do not include the housing.” *Id.* (emphasis added); *see also* Tr. 57:9–11 (counsel for Patent Owner stating that “integrated into” means “you have to remove part of the inflatable body wall, and this has to become that part of the wall”).

Although we do not necessarily agree with Patent Owner’s view that “integrated into” requires the “housing” to take the place of a portion of the wall of the “inflatable body” (*see* PO Resp. 46; Tr. 57:9–11), we do agree that “integrated into” requires *at least some* level of recess of the “housing” *into* the “inflatable body.”¹⁸ Petitioner focuses on “integrate” (Pet. Reply 3), but the phrase at issue from our construction (and that of the Texas District Court) is “integrated *into*.” That phrase, in turn, reflects the claim language “built *into*.” The understanding that “built into” requires at least some level of recess of the “housing” into the “inflatable body” is also supported by the Specification, which, for example, describes pump assembly 43 in Figure 4A as “*built into* the mattress pad 41.” Ex. 1301, 4:39–43 (emphasis added).

Here, if pipe 9 is not part of the “housing,” the remaining structure is, as argued by Patent Owner, merely glued “*on* the outside wall of the mattress.” PO Resp. 46 (“Instead, Parienti teaches placing its ‘housing structure’ *on* the outside wall of the mattress.” (citing Ex. 2329 ¶¶ 117–122)); *see supra* § II.C.3.a.4. This does not satisfy the at-least-partial recess requirement discussed above. Thus, even if the arguments in the Reply as to

¹⁸ This at-least-partial recess requirement is necessary, but may not be sufficient to satisfying “integrated into.”

the “integrated into” aspect of the “built into” limitation (Pet. Reply 3–4) *are* considered, Petitioner has not shown by a preponderance of the evidence that Parienti satisfies the “built into” limitation.

In view of the foregoing, we determine, based on the complete record, that Petitioner has not demonstrated by a preponderance of the evidence that claim 1 would have been obvious based on Parienti and Renz.

b. Dependent Claims 2–12

Claims 2–12 depend from claim 1. *See* Ex. 1301, 8:40–9:9. For the reasons discussed above as to claim 1 in the context of this asserted ground, we determine, based on the complete record, that Petitioner has not demonstrated by a preponderance of the evidence that claims 2–12 would have been obvious based on Parienti and Renz.

c. Claims 16–23

For independent claim 16 and claims 17–23, which depend from claim 16, Petitioner references their positions with respect to claims 1–9, 11, and 12. *See* Pet. 63–64. For the reasons discussed above as to claim 1 in the context of this asserted ground, we determine, based on the complete record, that Petitioner has not demonstrated by a preponderance of the evidence that claims 16–23 would have been obvious based on Parienti and Renz.

D. Asserted Obviousness of Claims 1–12 and 16–23 Based on Parienti and Wu

Petitioner asserts that claims 1–12 and 16–23 of the ’394 patent are unpatentable under 35 U.S.C. § 103(a) based on Parienti and Wu. Pet. 23, 64–93; Pet. Reply 13–21. Patent Owner provides arguments specifically addressing this asserted ground. PO Resp. 47–67; PO Sur-reply 13–20. We begin our analysis with an overview of the asserted prior art and then address the parties’ specific contentions.

I. Wu

In this ground, Petitioner relies on Wu, in addition to Parienti (*see supra* § II.C.1). Wu is generally directed to a system for controlling air flow into chambers of an air mattress. Ex. 1305, 1:12–14.

Figure 1 of Wu is reproduced below:

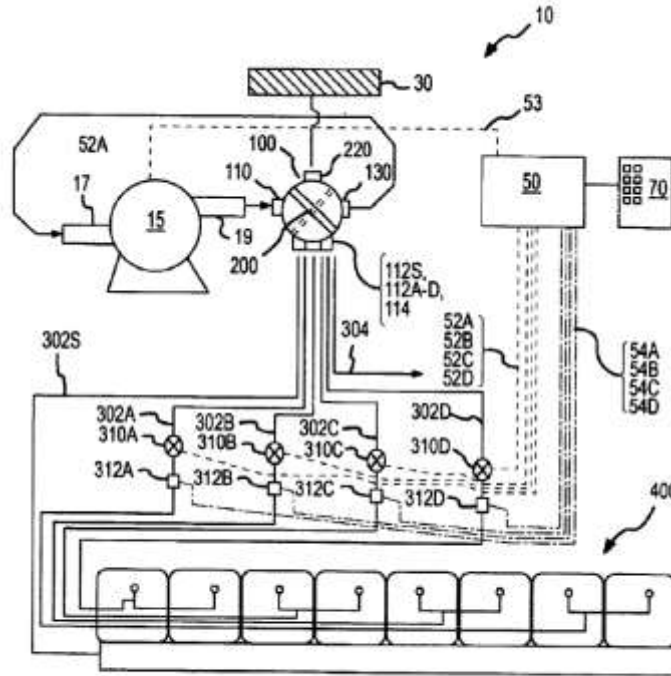


FIG. 1

Figure 1 depicts a schematic representation of the overall disclosed system 10, which includes, among other aspects, electric motor powered blower 15, two-position rotary valve 100, and air mattress supply lines 302A–D and 302S for supplying air to air mattress 400. Ex. 1305, 2:43–48. Included in rotary valve 100 is gate member 200, which is shown in Figure 1 “in a first position for directing air flow in a pressurizing mode.” *Id.* at 3:3–8. Wu discloses that “[w]hen gate member 200 is in the first position, air can flow through inlet port 110 of housing 101, into the second portion of

gate member 200 and then out through air mattress supply ports 112S, 112A, 112B, 112C and 112D and exhaust port 114.” *Id.* at 5:56–60.

The system can be deflated by turning gate member 200 “to a second position shown in phantom” in Figure 1. Ex. 1305, 4:48–53. According to Wu, “[w]hen in the second position, gate member 200 directs air from air mattress 400 into intake 17 of blower 15 while air leaving blower 15 is directed through filter 30 to the outside environment.” *Id.* at 4:54–57.

Figure 2 is reproduced below:

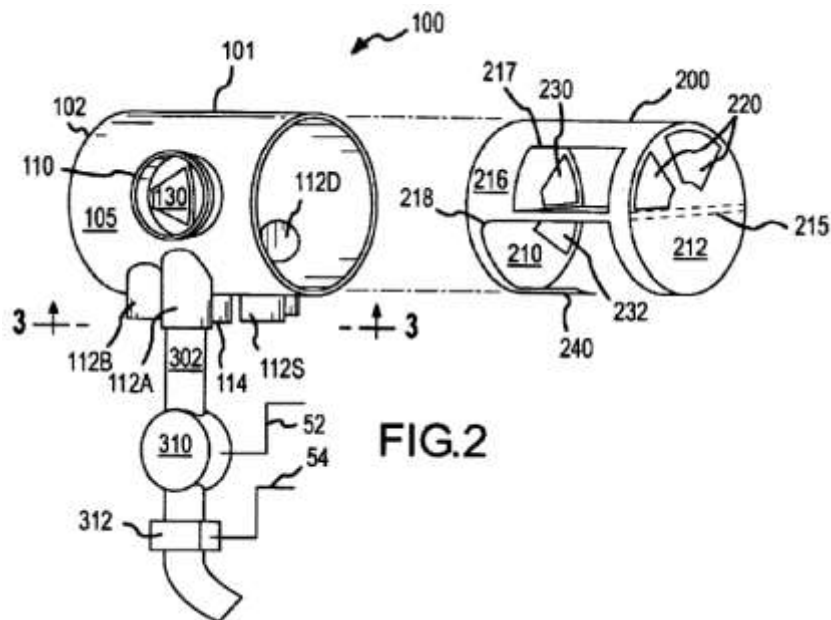


Figure 2 depicts a perspective view of rotary valve 100. Ex. 1305, 2:36–37, 4:60–61. As shown, rotary valve 100 includes cylindrically shaped valve housing 101 with outer wall 105, which includes inlet port 110 that connects with exhaust port 19 of blower 15. *Id.* at 4:61–66. Outer wall 105 also includes exhaust ports that supply air to air mattress 400’s air supply ports. *Id.* at 4:66–5:1.

Gate member 200 fits within valve housing 101 and includes two end walls that close gate member 200 within valve housing 101. Ex. 1305, 5:9–

19. Horizontal wall 215 divides gate member 200 into two sections. *Id.* at 5:19–22. The port arrangement in gate member 200 and valve housing 101 allows the valve to operate in a first position that allows air to be delivered to air mattress 400 and a second position that allows air mattress 400 to be deflated. *Id.* at 5:44–48.

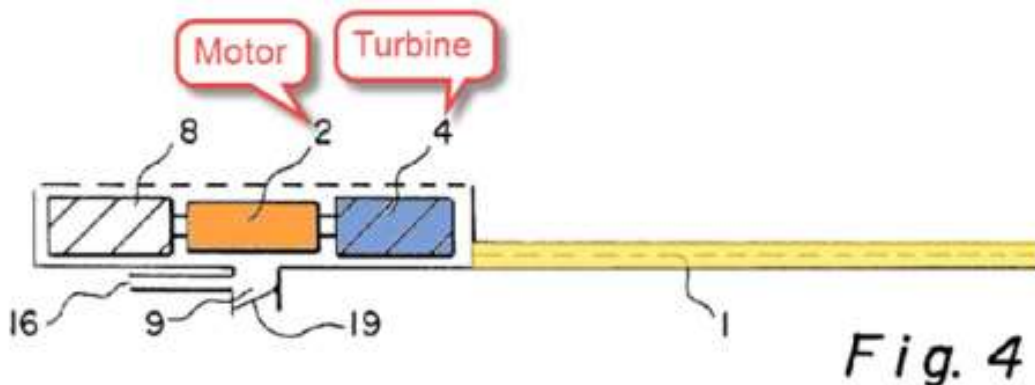
2. Analysis

a. Independent Claim 1

Petitioner contends that the proposed combination of Parienti and Wu satisfies each of the limitations of claim 1. Pet. 65–84. To support its arguments, Petitioner identifies certain passages in the cited references and explains the significance of each passage with respect to the corresponding claim limitation. *Id.* We first provide an overview of the proposed modification and then we discuss Petitioner’s positions with respect to the “built into” limitation.

(1) Overview of the Proposed Modification

In discussing this asserted ground, Petitioner refers back to the annotated version of Figure 4 of Parienti shown below and to a discussion in the context of the asserted ground of Parienti and Renz, and state that Parienti discloses “a Reversible Pump Assembly including a motor 2 and turbine 4.” Pet. 65 (citing Ex. 1302 ¶ 260; referencing Pet. 32–36).



Pet. 33. Figure 4 depicts a cross-sectional view of a “device for inflation/deflation of the solar powered mattress.” Ex. 1308, 1:44–46. In the annotated version of Figure 4 of Parienti, Petitioner added (1) a text box identifying element 2 as a “Motor,” (2) a text box identifying element 4 as a “Turbine,” (3) an orange overlay to motor 2, (4) a blue overlay to a portion of turbine 4 (*see supra* n.8), and (5) a yellow overlay to photovoltaic cell array 1. Pet. 33.

Petitioner also provides the annotated version of Figure 1 of Wu below, and state that Wu discloses “a Uni-directional Pump Assembly, including blower 15 and rotary valve 100, ‘for supplying air and controlling the flow of air into and out of the chambers of a patient supporting air mattress [400].’” Pet. 67–68 (quoting Ex. 1305, Abstract, 2:44–47) (citing Ex. 1302 ¶ 125; Ex. 1366, 4:4–6, 15:5–6).

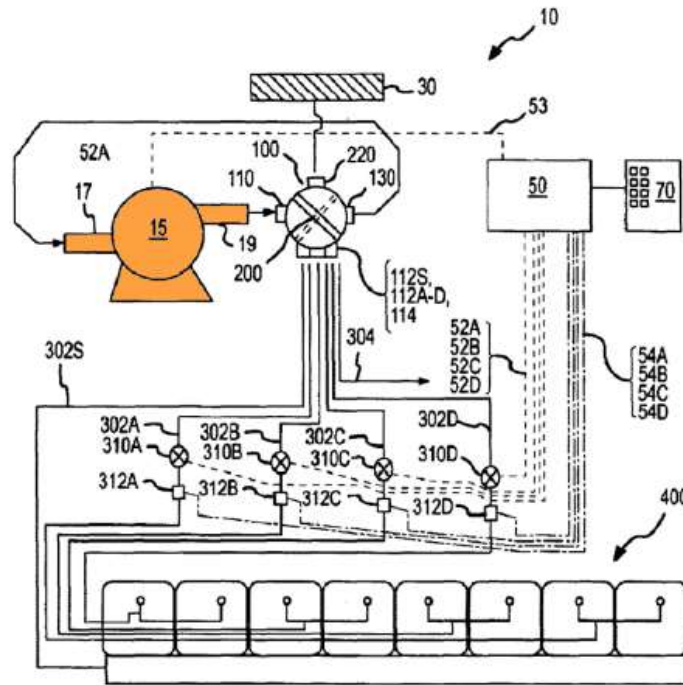
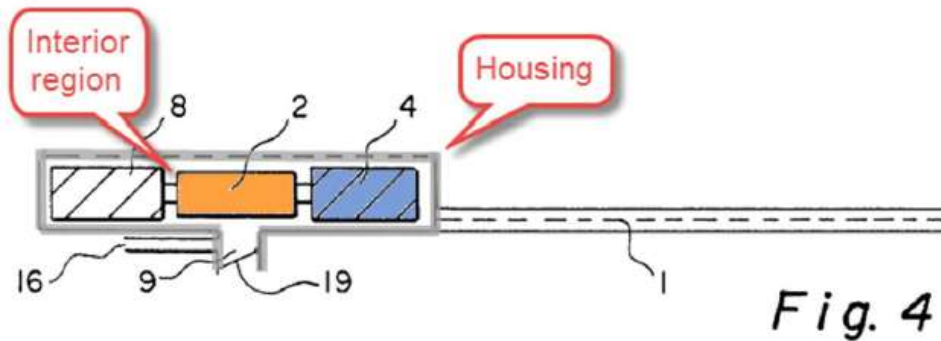


FIG.1

Pet. 68. Figure 1 depicts a schematic representation of the overall disclosed system 10, which includes, among other aspects, electric motor powered blower 15, two-position rotary valve 100, and air mattress supply lines 302A–D and 302S for supplying air to air mattress 400. Ex. 1305, 2:43–48. In the annotated version of Figure 1 of Wu, Petitioner added an orange overlay to electric motor powered blower 15. Pet. 68. Petitioner asserts that a person of ordinary skill in the art at the time of the invention “would have been motivated to convert Parienti’s Reversible Pump Assembly into a Uni-directional Pump Assembly in view of Wu’s teachings” for various reasons. Pet. 71–72 (citing Pet. 40–47; Ex. 1302 ¶ 268).

Petitioner also provides the following annotated version of Figure 4 of Parienti:



Pet. 70. Figure 4 depicts a cross-sectional view of a “device for inflation/deflation of the solar powered mattress.” Ex. 1308, 1:44–46. In the annotated version of Figure 4 of Parienti here, Petitioner added (1) an orange overlay to motor 2, (2) a blue overlay to a portion of turbine 4 (*see supra* n.8), (3) a text box identifying an “Interior region,” (4) a gray outline and text box identifying a “Housing.” Pet. 70.

Petitioner also provides the annotated version of Figure 1 of Wu shown below:

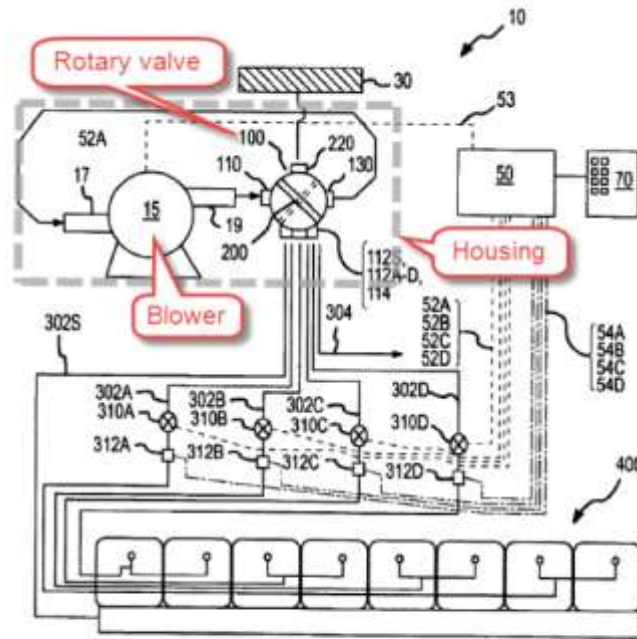


FIG.1

Pet. 73. Figure 1 depicts a schematic representation of the overall disclosed system 10, which includes, among other aspects, electric motor powered blower 15, two-position rotary valve 100, and air mattress supply lines 302A–D and 302S for supplying air to air mattress 400. Ex. 1305, 2:43–48. In the annotated version of Figure 1 of Wu here, Petitioner added (1) a text box identifying element 15 as a “Blower,” (2) a text box identifying element 100 as a “Rotary valve,” and (3) a gray dotted outline and text box identifying a “Housing.” Pet. 73.

Petitioner states that “[i]ncorporating Wu’s teachings of a rotary valve 100 (a directional control valve), along with blower 15 . . . , into Parienti’s pump device would have allowed for th[e] conversion” of “Parienti’s Reversible Pump Assembly into a Uni-directional Pump Assembly in view

of Wu’s teachings.” Pet. 72 (citing Ex. 1302 ¶¶ 126, 269), 71. Petitioner explains that “[i]n the [proposed] conversion, Parienti’s housing (as described [in pages 69–71 of the Petition]) would surround Wu’s blower 15 and rotary valve 100, as represented by gray dashed lines in Wu’s Figure 1, above.” *Id.* at 73 (citing Ex. 1302 ¶ 269). Petitioner provides various reasons why, “[i]n converting Parienti into a Uni-directional Pump Assembly in view of Wu, a POSA would have retained Parienti’s housing-contained design (as described in [pages 71–84 of the Petition]), such that Wu’s rotary valve 100 (which includes gate member 200) and blower 15 were disposed in Parienti’s housing.” Pet. 76–78 (citing Ex. 1302 ¶¶ 272–276).

*(2) The Parties’ Positions as to the “Built Into”
Limitation*

With that background, we turn now to the parties’ positions as to the “built into” limitation in the context of this asserted ground. Petitioner states that it relies on Parienti for the “built into” limitation and the “interior region” limitation. Pet. 69 (citing Ex. 1302 ¶ 263). Petitioner states that the “Housing” identified by Petitioner in the same annotated version of Figure 4 of Parienti provided above (*see supra* p. 20)¹⁹ “is built into mattress 5 (the inflatable body), as it is ‘made interdependent with the mattress [5] by means of gluing or any other means.’” Pet. 70 (quoting Ex. 1308, 1:24–25); *see also* Pet. 71 (providing the same annotated version of Figure 1 of Parienti shown *supra* p. 23). Petitioner asserts that “Parienti described the benefit of this built in design as eliminating the ‘need to get an air pump’

¹⁹ Compare Pet. 70, with *id.* at 38 (providing the same annotated version of Figure 4 shown *supra* p. 20).

separate from the inflatable mattress.” *Id.* (quoting Ex. 1308, 1:25–20; citing Ex. 1302 ¶ 266).

Patent Owner responds that, even if combined, Parienti as modified by Wu does not satisfy the “built into” limitation. PO Resp. 67. On this issue, Patent Owner relies on the arguments it made as to the “built into” limitation in the context of the asserted ground of Parienti and Renz. *Id.* (“Patent Owner respectfully submits that the reasons why Parienti does not teach a housing ‘built into the inflatable body’ of Section VI.A.4 also apply to the combination of Parienti and Wu.”).

Petitioner does not address the “built into” limitation in the context of the discussion of this asserted ground in the Reply. *See* Pet. Reply 13–21. Patent Owner does not address this limitation in the context of the discussion of this asserted ground in the Sur-reply. *See* PO Sur-reply 13–20.²⁰

(3) *Analysis*

Given the similarity of the parties’ positions and arguments as to the “built into” limitation in the context of the asserted ground of Parienti and Wu and the prior asserted ground of Parienti and Renz, for the same reasons discussed above (*see supra* § II.C.3.a.3–5), Petitioner has not shown by a preponderance of the evidence that Parienti satisfies the “built into” limitation. Thus, we determine, based on the complete record, that

²⁰ Although neither Petitioner nor Patent Owner, in discussing the asserted ground of Parienti and Wu in the Reply and Sur-reply, respectively, expressly reference their arguments as to the “built into” limitation from the discussion of the prior asserted ground, we assume that both Petitioner and Patent Owner intended to rely on their prior arguments on this issue. *See* Pet. Reply 1–4 (addressing the “built into” limitation in a discussion of the asserted ground of Parienti and Renz); PO Sur-reply 1–4 (same).

Petitioner has not demonstrated by a preponderance of the evidence that claim 1 would have been obvious based on Parienti and Wu.

b. Dependent Claims 2–12

Claims 2–12 depend from claim 1. *See* Ex. 1301, 8:40–9:9. For the reasons discussed above as to claim 1 in the context of this asserted ground, we determine, based on the complete record, that Petitioner has not demonstrated by a preponderance of the evidence that claims 2–12 would have been obvious based on Parienti and Wu.

c. Claims 16–23

For independent claim 16 and claims 17–23, which depend from claim 16, Petitioner reference their positions with respect to claims 1–9, 11, and 12. *See* Pet. 92–93. For the reasons discussed above as to claim 1 in the context of this asserted ground, we determine, based on the complete record, that Petitioner has not demonstrated by a preponderance of the evidence that claims 16–23 would have been obvious based on Parienti and Wu.

E. Motions to Exclude Evidence

1. Petitioner’s Motion to Exclude Evidence

Petitioner filed a motion to exclude Exhibits 2030–2033, 2335, 2341, 2342, 2343, 2345, and 2755, which Petitioner contends are not cited in the Patent Owner Response, Sur-reply, or any expert declaration. Paper 102, at 1. Petitioner seeks to exclude this evidence (the “Uncited Exhibits”) as irrelevant under Federal Rules of Evidence Rules 401 and 402. *Id.* Petitioner also argues that certain paragraphs in Exhibit 2329 (Dr. Stevick’s declaration) and Exhibit 2638 (Dr. Becker’s declaration) (collectively, the “Declaration Portions”) should be excluded. *Id.* at 3–7.

a. Uncited Exhibits

With respect to the Uncited Exhibits, Petitioner argues that prior Board decisions provide that exhibits not cited in a patent owner's papers should be excluded. Paper 102, 1–3.

In opposition, Patent Owner argues that some of the Uncited Exhibits are exhibits to depositions. Paper 104, 4–6. Specifically, Patent Owner argues that Exhibits 2030–2033 are exhibits to Dr. Beaman's deposition testimony (Exhibits 2040 and 2753). *Id.* at 4–6. Patent Owner adds that Petitioner did not properly object, as it did not object to the evidence during the depositions. *Id.* at 5.²¹ In addition, Patent Owner argues that Exhibits 2335, 2345, and 2755 are, in fact, cited in Patent Owner's briefing. *Id.* at 1.

Petitioner replies that Patent Owner addresses only a subset of the exhibits covered in Petitioner's motion. Paper 110, 1 n.1 (identifying Exhibits 2341, 2342, and 2343 as uncontested by Patent Owner). As to the contested exhibits, Petitioner argues that Patent Owner does not identify where in its papers it relies on Dr. Beaman's testimony directed to any of the exhibits challenged by the motion. *Id.* at 3–4. Petitioner maintains that Patent Owner's argument that Petitioner failed to object at the deposition is nonsensical. *Id.* at 4. Petitioner argues that it could not have known at the time of the deposition that Patent Owner would not rely on those exhibits in its later-filed papers. *Id.*

As to Exhibits 2335, 2345, and 2755, we deny Petitioner's motion. We are persuaded by Patent Owner's argument, which is supported by the

²¹ Patent Owner does indicate that Exhibit 2030 was objected to at the deposition, but on the basis that it was derived from a different proceeding. Paper 104, 5.

record, that these Exhibits *were* cited in at least one of Patent Owner's Response or Sur-reply. Paper 104, 1.

As to Exhibits 2341, 2342, and 2343, which are not contested by Patent Owner, we deny Petitioner's motion as moot, as we do not rely on them in this Decision. *See* Trial Practice Guide Update, 17 ("In the Board's experience, consideration of the objected-to evidence is often unnecessary to resolve the patentability of the challenged claims, and the motion to exclude is moot."). As to Exhibits 2030–2033, we also deny Petitioner's motion as moot, as we do not rely on them in this Decision, and also do not rely on Dr. Beaman's depositions (Ex. 2040 and Ex. 2753). *See* Trial Practice Guide Update, 17.

b. Declaration Portions

With respect to the Declaration Portions, Petitioner argues that this evidence represents arguments that are improperly incorporated by reference by Patent Owner. Paper 102, 3–7.

Patent Owner argues that a motion to exclude evidence is not the proper vehicle to address incorporation by reference. Paper 104, 6–7. Patent Owner explains that we ruled on a motion to strike directed to the Declaration Portions. *Id.*; *see* Paper 73 (Order denying Petitioner's motion to strike portions of the Patent Owner Response). Patent Owner also argues that Petitioner has not met its burden in seeking exclusion of the Declaration Portions. Paper 104, 7–9. Finally, Patent Owner argues that it did not improperly incorporate arguments from its experts' declarations. *Id.* at 9–13. In reply, Petitioner reiterates that the Declaration Portions were improperly incorporated by reference into the Patent Owner Response. Paper 110, 4–5.

We deny Petitioner’s motion to exclude the Declaration Portions. Motions to exclude evidence are used to exclude evidence that is inadmissible. *See* Trial Practice Guide Update, 16–17. Petitioner does not argue that the Declaration Portions represent *inadmissible* evidence. Paper 102, 3–7; Paper 110, 4–5. Instead, Petitioner argues that the Declaration Portions represent improper *argument*, rather than evidence. *See* Paper 102, 3–7; Paper 110, 4–5. Petitioner fails to provide any basis under the Federal Rules of Evidence as to why the Declaration Portions are inadmissible. *See* Paper 102, 3–7; Paper 110, 4–5; Trial Practice Guide Update, 16 (“A motion to exclude must explain why the evidence is not admissible (e.g., relevance or hearsay).”). Although Petitioner did object to Exhibits 2329 and 2638, the objections were directed to bases under the Federal Rules of Evidence not argued in their motion. *See* Paper 51, 2–3, 19–20. As such, it is unclear on this record why Petitioner contends that the Declaration Portions are inadmissible.

Petitioner appears to use the motion to exclude to reargue their motion to strike, this time trying to exclude the underlying declaration paragraphs, rather than the sections of the Patent Owner Response that allegedly incorporate by reference these paragraphs. *See* Paper 102, 3–7; *see also* Paper 73 (denying Petitioner’s motion to strike). We already addressed Petitioner’s motion to strike and how we would address any arguments improperly incorporated by reference. Paper 73.

2. Patent Owner’s Motion to Exclude Evidence

We now turn to Patent Owner’s motion, in which Patent Owner seeks to exclude the entirety or portions of several exhibits filed by Petitioner and

also seeks to exclude certain testimony cited by Petitioner. We address each category of information in turn below.

a. Exhibits 1368–1370, and References to These Exhibits in Dr. Beaman’s Declaration

Patent Owner contends that Exhibits 1368–1370, and references to these exhibits in Dr. Beaman’s declaration (Exhibit 1302), should be excluded under Federal Rules of Evidence 402, 403, and 1002. Paper 103, 1–2. According to Patent Owner, Exhibits 1368–1370 are animations that do not accurately or completely represent the evidence underlying the animations. *Id.* at 1.

In opposition to Patent Owner’s motion generally, Petitioner argues that Patent Owner fails to follow the proper rules and procedures, and that we should deny the motion, in its entirety, on that basis. Paper 105, 1–2 (quoting Trial Practice Guide Update, 16). We decline to deny Patent Owner’s motion on this basis. We note that Petitioner’s motion, addressed above, also fails to follow the procedure outlined in the Trial Practice Guide Update. *See* Paper 102.

As to the merits, we deny Patent Owner’s motion as to Exhibits 1368–1370 as moot, as we do not rely on them in this Decision. *See* Trial Practice Guide Update, 17. We also do not rely on any of the paragraphs of Dr. Beaman’s declaration (Ex. 1302) that refer to these exhibits. *See id.*

b. Exhibit 1311

Patent Owner argues that Exhibit 1311 should be excluded under Federal Rule of Evidence 1002 “as not being an original” and under Federal Rule of Evidence 1003 “as not being an admissible duplicate due to it being an inaccurate copy with portions of the document cut off.” Paper 103, 2 (discussing Ex. 1311, 11 (and “odd numbered pages following that”)). We

deny Patent Owner's motion as to Exhibit 1311 as moot, as we do not rely on it in this Decision. *See* Trial Practice Guide Update, 17.

c. Exhibits 1665–1669

Patent Owner “objects to Exhibits 1665–1669 on the ground that they contain improper attorney argument in violation of the page/word count limits for replies.” Paper 103, 2. Patent Owner argues that these exhibits improperly incorporate attorney argument into Petitioner's Reply. *Id.* at 2–4. These exhibits relate to Petitioner's allegations that Patent Owner improperly incorporates arguments from declarations into its Patent Owner Response. *See id.*

In opposition, Petitioner argues that Patent Owner does not cite any evidentiary basis for excluding these exhibits, and argues that a motion to exclude is not the proper procedure to challenge these exhibits. Paper 105, 5 (discussing Trial Practice Guide Update, 17). Patent Owner replies that, by filing Exhibits 1665–1669, Petitioner exceeded the word count for a Reply. Paper 108, 2–3.

We do not exclude Exhibits 1665–1669 because Patent Owner provides no evidentiary basis as to why these exhibits constitute inadmissible evidence. To the extent that these exhibits do contain attorney argument, the proper remedy in such a situation is for us, when considering Petitioner's Reply arguments and evidence as a whole, to not consider any “arguments” found only in these exhibits and not adequately explained in the Reply. *See* Trial Practice Guide Update, 17–18; *cf.* Paper 73, 5 (addressing Petitioner's motion to strike).

d. Exhibit 1625

Patent Owner contends that Exhibit 1625, Dr. Beaman’s declaration supporting the Reply, mischaracterizes certain earlier testimony of Patent Owner’s expert and exceeds the proper scope of a reply. Paper 103, 5. According to Patent Owner, Dr. Beaman’s Reply declaration mischaracterizes testimony from Patent Owner’s declarant in support of its Preliminary Response (Dr. William K. Durfee) based on characterizations of the testimony from Petitioner’s counsel. *Id.* at 5–6. Patent Owner also argues that addressing Dr. Durfee’s testimony, which was not relied on in the Patent Owner Response, is outside the scope of a proper reply. *Id.* at 6.

Petitioner responds that Patent Owner does not provide a basis under the Federal Rules of Evidence to exclude Dr. Beaman’s testimony. Paper 105, 8. Petitioner adds that a motion to exclude should not be directed to arguments or evidence that a party believes exceeds the proper scope of a reply. *Id.* at 8–9. According to Petitioner, the testimony sought to be excluded identifies inconsistencies between Patent Owner’s declarants’ testimony. *Id.* at 9.

In reply, Patent Owner argues that Dr. Beaman’s testimony lacks proper foundation. Paper 108, 3–4.

We do not exclude this evidence. Patent Owner did not rely on a lack of foundation in its objection to Dr. Beaman’s testimony or in its opening brief on its Motion to Exclude. *See* Paper 80, 5 (“Team Worldwide objects to the Reply Declaration of Joseph J. Beaman, Jr. (Exhibit 1625), which mischaracterizes Exhibit 2301 and/or exceeds the proper scope of reply.”); Paper 103, 5–6 (contending that Exhibit 1625 “mischaracterizes Patent Owner’s early expert testimonial evidence (Exhibit 2301) and/or exceeds the

proper scope of reply”). Accordingly, Patent Owner does not identify an evidentiary basis to exclude the evidence. Also, neither Patent Owner’s motion to exclude nor its objection identifies, with particularity, those portions of Dr. Beaman’s Reply declaration to be excluded, as Patent Owner’s citations were presented as exemplary only. *See* Paper 80, 5 (“See, for example, Exhibit 1625 at ¶¶ 7, 8, 14, 15, 20, 63, 108, and 113.”); Paper 103, 5 (same), 6 (same).

e. Exhibit 1650

Patent Owner states to have “objected to the Declaration of Ryan Slate in Support of Petitioner[’s] Reply (Ex. 1650) on the basis that as of the discussions between the Parties conducted to date Patent Owner was not afforded a proper opportunity to cross-examine Mr. Slate.” Paper 103, 6. Patent Owner does not address this evidence in reply to Petitioner’s contention that this objection should be withdrawn. *See* Paper 105, 10; Paper 108. To the extent Patent Owner’s motion as to this exhibit was not withdrawn, we deny it as moot, as we do not rely on Exhibit 1650 in this Decision. *See* Trial Practice Guide Update, 17.

f. Exhibits 1651–1654 and 1679

Patent Owner contends that Exhibits 1651–1654 and 1679 include hearsay, are irrelevant, are unfairly prejudicial, and lack foundation. Paper 103, 7. We deny Patent Owner’s motion as to these exhibits as moot, as we do not rely on them in this Decision. *See* Trial Practice Guide Update, 17.

III. CONCLUSION

Upon consideration of the Petition, Response, Reply, Sur-reply and the evidence of record, we determine that Petitioner (1) has *not* proven by a preponderance of the evidence that claims 1–12 and 16–23 of the '394 patent would have been obvious based on Parienti and Renz, and (2) has *not* proven by a preponderance of the evidence that claims 1–12 and 16–23 of the '394 patent would have been obvious based on Parienti and Wu.

IV. ORDER

For the reasons above, it is:

ORDERED that Petitioner has not proven by a preponderance of the evidence that any of claims 1–12 and 16–23 is unpatentable;

FURTHER ORDERED that Petitioner's and Patent Owner's Motions to Exclude Evidence (Papers 102, 103) are denied; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

In summary:

Claims	35 U.S.C. §	References	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–12, 16–23	103	Parienti and Renz		1–12, 16–23
1–12, 16–23	103	Parienti and Wu		1–12, 16–23
Overall Outcome				1–12, 16–23

IPR2018-00873
Patent 7,246,394 B2

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IPR2018-00873
Patent 7,246,394 B2

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