

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOMMY JOHN, INC.,
Petitioner,

v.

PACKAGE APPAREL, INC.,
Patent Owner.

IPR2024-01163
Patent 10,834,974 B2

Before BARRY L. GROSSMAN, JAMES A. TARTAL, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Petitioner Tommy John, Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–13, 15, and 16 of US 10,834,974 B2 (Ex. 1001, “the ’974 patent”). Paper 1 (“Pet.”), 1.

Pakage Apparel, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”).

With our prior authorization (Paper 9), Petitioner filed a Preliminary Reply (Paper 10, “Prelim. Reply”) and Patent Owner filed a Preliminary Sur-reply (Paper 11, “Prelim. Sur-reply”), which were directed to the issues of discretionary denial.

After considering the Petition, the Preliminary Response, the Preliminary Reply, the Preliminary Sur-reply, and the evidence of record, we instituted an *inter partes* review of claims 1–13, 15, and 16 of the ’974 patent. Paper 12 (“Institution Decision” or “Inst. Dec.”).

After institution, Patent Owner filed a Patent Owner Response (Paper 16, “PO Resp.”). Thereafter, Petitioner filed a Reply (Paper 19, “Reply” or “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 25, “Sur-reply” or “PO Sur-reply”).

Oral argument was held on October 9, 2025, and a transcript of the hearing is included in the record. Paper 33 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(b). Petitioner bears the burden of proving unpatentability of the Challenged Claims, and the burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). In order to prevail, as to a particular patent claim, Petitioner must establish unpatentability of the claim by a preponderance of the evidence. *See*

35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.¹ For the reasons below, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–13, 15, and 16 of the ’974 patent are unpatentable.

II. BACKGROUND

A. Real Parties in Interest

Petitioner (Tommy John, Inc.) states that it is the sole real party in interest. Pet. 3.

Patent Owner (Pakage Apparel, Inc.) states that it is the sole real party in interest. Paper 4, 2.

We may refer to Petitioner and Patent Owner, together, as the “parties.”

B. Related Matters

The ’974 patent is a subject of a district court action, *Pakage Apparel, Inc. v. Tommy John, Inc.*, 24-cv-06371 (LJL) (S.D.N.Y.) (transferred from S.D. Tex. Aug. 22, 2024).² See Pet. 3; Paper 23, 2.

C. The ’974 Patent

The ’974 patent, which is titled “Garments for Men,” issued on November 17, 2020, from U.S. Application No. 16/030,769 (filed July 9,

¹ The one year deadline for entry of a final written decision in this proceeding was extended for good cause. See Paper 34.

² The parties are reminded to update the Board regarding any material events occurring in the related litigation. See 37 C.F.R. § 42.8(a)(3).

2018). Ex. 1001, codes (21), (22), (45), (54). On its face, the '974 patent indicates priority claims to several related earlier-filed applications. *Id.* at code (63), 1:6–14.

The '974 patent Specification states that “[t]he invention relates to next-to-skin garments” and “[e]xample embodiments of the invention include briefs, underpants, swim suits, boarding shorts, cycling shorts, and the like.” Ex. 1001, 1:18–20. According to the Specification, “[n]ext-to-skin clothing for men must comfortably accommodate the wearer’s genitalia,” pointing out that “[u]ncomfortable pressure and/or chafing of the genital area are common especially for wearers who are performing sports or other activities.” *Id.* at 1:24–27. Hence, “[t]he garments provide a stretch panel having an opening for receiving a wearer’s genitals” and “[a] pouch is defined between the stretch panel and a front of the garment.” *Id.* at 1:39–41.

Figure 1 of the '974 patent (reproduced below) shows a disclosed embodiment, undershorts 10.

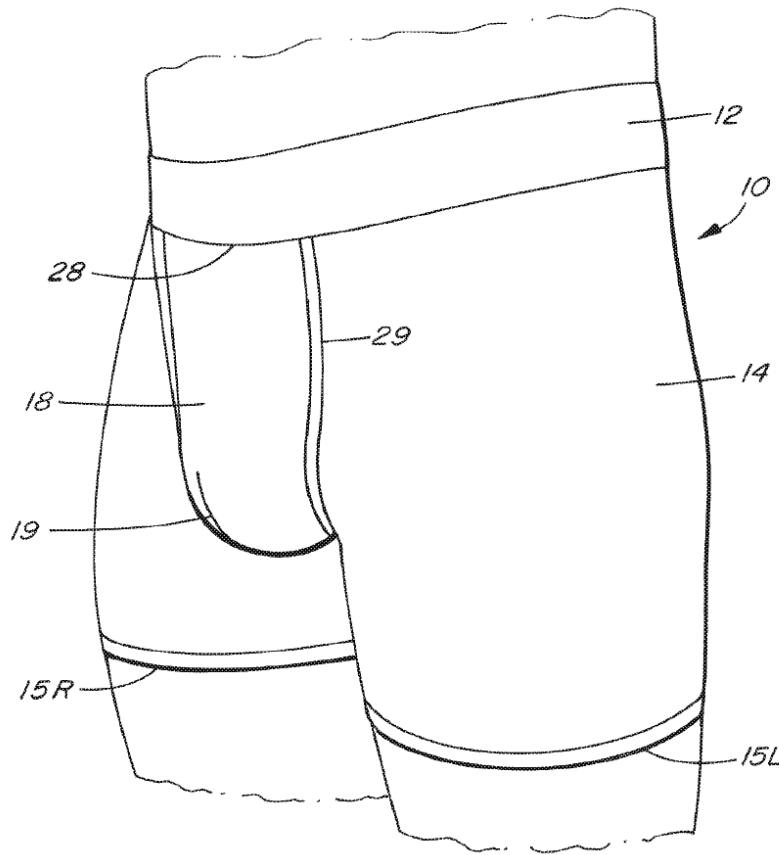


FIG. 1

Figure 1 shows a perspective view of undershorts 10 having waist band 12 and fabric body 14, which includes front portion 18. Ex. 1001, 2:33–38.

“[F]ront portion 18 of body 14 is shaped to include extra fabric so that front portion 18 is not pulled tightly against a wearer’s body.” *Id.* at 2:36–38.

The ’974 patent states that “front portion 18 forms the front part of a three-dimensional pouch 20 that receives and gently supports a wearer’s genitalia.” *Id.* at 2:39–41.

Figure 3, reproduced below, is a top plan view of the undershorts shown in Figure 1.

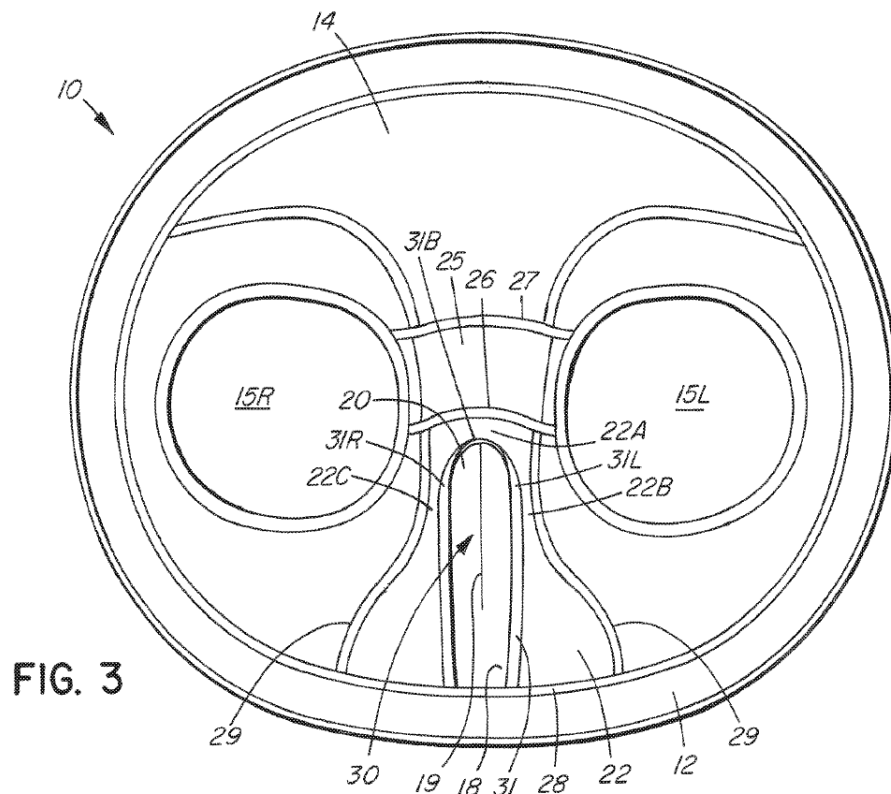


Figure 3, a view looking downward into the inside of undershorts 10, shows waist band 12, as well as body 14 and its front portion 18 — although, in the view of Figure 3, front portion 18 is partly obscured by stretch panel 22. *See* Ex. 1001, 2:50–61. The arrangement of front portion 18 and stretch panel 22 are further described, for example, as follows:

When undershorts 10 are held open as shown for example in FIG. 3 with waistband 12 under gentle tension and body 14 hanging freely, stretch panel 22 is contracted and pulled away from front area 18 so as to provide a three-dimensional pouch 20 between stretch panel 22 and front portion 18. The bias of stretch panel 22 to be contracted more than front portion 18 helps to cause opening 30 to be held open. Pouch 20 and opening 30 may be self-aligning with the penis and scrotum of a wearer as the wearer inserts his legs through leg openings 15.

Id. at 2:62–3:4. The '974 patent further explains:

As can be seen in FIG. 3, holding the waistband of undershorts open as one would do to put undershorts 10 on naturally causes pouch 20 to be open to receive a wearer's genitals which can drop into place in pouch 20 through opening 30 as undershorts 10 are put on. In other words, when undershorts 10 is held by a man so as to be in a ready-to-wear position (i.e. held in mid-air by the waistband), the weight of undershorts 10 holds stretch panel 22 so that opening 30 is open and clearly defined. The man's genitals are thus naturally guided through opening 30 and positioned forward into pouch 20 as a result of this bias. As undershorts 10 are pulled on, stretch panel stretches. This bias prevents the man's genitals from falling out of pouch 20 in use, such as during physical activity and other movement.

Id. at 3:22–36.

Other aspects of the subject matter disclosed in the '974 patent, bearing upon the present Decision, are addressed below.

D. The Challenged Claims

Petitioner alleges that claims 1–13, 15, and 16 of the '974 patent (the “challenged claims”) are unpatentable. Pet. 1.

Claim 1, the sole independent claim of the '974 patent, reproduced below, including Petitioner's added sub-numbering (*see, e.g.*, Pet. 9–21) in boldface, illustrates the subject matter at issue:

1[pre] A male garment comprising:

1[a] a body including a front portion and having leg openings for a wearer's legs;

1[b] a waistband attached by a waistband seam at an upper edge of the body;

1[c] a stretch panel attached to the body inside the front portion, **1[d]** the stretch panel comprising a sheet of elastically resilient four-way stretch material **1[e][i]** having a top edge attached to the body at a top location, **[ii]** a bottom edge

attached to the body at a bottom location, [iii] side edges attached to the body at side seams extending substantially continuously along either side of the front portion and [iv] an opening for receiving a wearer's genitals;

1[f] the stretch panel being resiliently elastic both in a direction between the top edge and the bottom edge and in a direction between the side edges, 1[g] the stretch panel having a length when unstretched smaller than a length measured along the front portion between the top and bottom locations and a width when unstretched smaller than a width measured along the front portion between the side seams such that the front portion is gathered from side-to-side and top-to-bottom by the stretch panel and defines a three-dimensional pouch between the stretch panel and the front portion for receiving the wearer's genitals and holding the wearer's genitals while the garment is being worn.

Ex. 1001, 8:23–49.

E. The Asserted Grounds

Petitioner contends that claims 1–13, 15, and 16 of the '974 patent are unpatentable based on the following grounds (Pet. 4):

Ground	Claims Challenged	35 U.S.C. §	Basis
1	1–13, 15, 16	103	Kitsch, ³ Brocks ⁴
2a	1–9, 11, 13, 16	103	Carrillo, ⁵ Brocks
2b	10, 12, 15	103	Carrillo, Brocks, Kitsch

³ U.S. Pub. No. 2008/0178369 A1, published July 31, 2008 (Ex. 1007).

⁴ U.S. Patent No. 5,461,729, issued Oct. 31, 1995 (Ex. 1008).

⁵ WO 01/37687 A1, published Nov. 16, 2000 (Ex. 1009). A certified English language translation is Exhibit 1010. Herein, all citations and references to the text and figure of Carrillo refer to the English translation, Ex. 1010.

In addition to the foregoing identified prior art references, Petitioner relies upon the Declaration of Robin Wagner (Ex. 1005). *See* Pet. 8 n.3.

In disputing the asserted grounds, Patent Owner relies upon the Declaration of Bernard Kahn (Ex. 2013). *See* PO Resp. 21.

III. ANALYSIS

A. Legal Standards for Evaluating the Asserted Grounds

“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d, 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)); *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review). To the extent this Decision indicates that certain Patent Owner arguments are not persuasive, we nevertheless do not shift the ultimate burden away from Petitioner.

The asserted grounds of unpatentability are based upon obviousness under 35 U.S.C. § 103. *See* Pet. 4.

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any

differences between the claimed subject matter and the prior art; (3) the level of skill in the art;⁶ and (4) when in evidence, objective evidence of obviousness or non-obviousness (i.e., so-called secondary considerations).⁷ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We also recognize that prior art references must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)).

The Supreme Court has explained that an obviousness determination may consider, the teachings of multiple prior art references, the knowledge and capabilities of persons having ordinary skill in the art (at the relevant time), as well as “the effects of demands known to the design community or present in the marketplace,” “in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” (alteration in original))). As the Federal Circuit has stated, “[w]ithout any explanation as to how or why the references would be combined to arrive at the claimed invention, we are left with only hindsight bias that *KSR* warns against” and “we cannot allow hindsight bias

⁶ *See infra* Section III(B).

⁷ The present record does not include any evidence of any proposed objective evidence of non-obviousness.

to be the thread that stitches together prior art patches into something that is the claimed invention.” *Metalcraft of Mayville, Inc., v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017). “Whether an ordinarily skilled artisan would have been motivated to modify the teachings of a reference is a question of fact.” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1327 (Fed. Cir. 2016).

Further, the Federal Circuit has explained that, “where a party argues a skilled artisan would have been motivated to combine references, it must show the artisan ‘would have had a reasonable expectation of success from doing so.’” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1360–61 (Fed. Cir. 2017) (quoting *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Pat. Litig.*, 676 F.3d 1063, 1068–69 (Fed. Cir. 2012)). “Evidence of a reasonable expectation of success, just like evidence of a motivation to combine, may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved.” *Elekta Ltd. v. ZAP Surgical Sys., Inc.*, 81 F.4th 1368, 1377 (Fed. Cir. 2023) (internal quotation marks omitted). “[T]he evidence establishing a motivation to combine may establish a finding of reasonable expectation of success.” *Id.*

B. Level of Ordinary Skill in the Art

“[T]he level of skill in the art is a prism or lens through which a judge, jury, or the Board views the prior art and the claimed invention. This reference point prevents these factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness.” *Okajima v. Bourdeau*, 261

F.3d 1350, 1355 (Fed. Cir. 2001). The Federal Circuit has identified various factors that bear upon the level of ordinary skill, including “1) the types of problems encountered in the art; 2) the prior art solutions to those problems; 3) the rapidity with which innovations are made; 4) the sophistication of the technology; and 5) the educational level of active workers in the field.”

Ruiz v. A.B. Chance Co., 234 F.3d 654, 666–67 (Fed. Cir. 2000).

Petitioner argues, in view of Ms. Wagner’s testimony, that a person of ordinary skill in the art (“POSITA”), with respect to the ’974 patent, “would have had an undergraduate degree in apparel design, apparel manufacturing, textile science, or similar disciplines, along with one year of experience working in apparel design or manufacturing or textile or fabric engineering.” Pet. 8 (citing Ex. 1005 ¶¶ 31–32).

Patent Owner contends that Petitioner does not analyze any of the factors used to determine the level of ordinary skill. PO Resp. 20. Patent Owner also contends that Petitioner’s expert, Ms. Wagner, was not familiar with such factors. *Id.* at 20–21 (citing Ex. 2012, 40:7–41:20, 43:8–16). Yet, Patent Owner regards Ms. Wagner’s description as indicating that “the level of ordinary skill in the art at the time of the ’974 Patent was low,” and that Patent Owner’s expert, Mr. Kahn, agrees with this assessment. *Id.* at 21 (citing Ex. 2013 ¶¶ 2–21, 27). Indeed, Mr. Kahn states: “For my analyses . . . , Ms. Wagner’s definition of POSITA is sufficient.” Ex. 2013 ¶ 27.

Accordingly, for purposes of this Decision, we adopt Petitioner’s proposed description of the level of ordinary skill in the art, as both parties’ experts regard it as sufficient, and because it is consistent with the ’974 patent and the asserted prior art. *See Okajima*, 261 F.3d at 1355.

C. Claim Construction

In an *inter partes* review, we construe claims using the same standard applied in a district court. *See* 37 C.F.R. § 42.100(b). Under this standard, claim terms are generally given their plain and ordinary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). The sources available for guidance, when undertaking claim construction, “include both intrinsic evidence (*e.g.*, the patent specification and file history) and extrinsic evidence (*e.g.*, expert testimony).” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). “The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner contends: “Unless indicated otherwise, all claim terms herein are given such ordinary and customary meaning.” Pet. 8.

Patent Owner states that the obviousness challenge in the Petition “does not require analysis under anything other than the plain and ordinary meaning of the claim terms,” such that “Patent Owner proposes ordinary and customary constructions of all terms of the Challenged Claims.” PO Resp. 18–19.

Nevertheless, the parties’ arguments reveal disagreements, regarding the proper interpretations of certain claim terms, which we address herein. Although we agree with the parties that none of the claim terms requires an express construction, to the extent we need to address claim construction in

the context of whether a particular asserted prior art reference teaches or suggests what is claimed, that discussion is provided in our analysis below.

D. The Prior Art Relied Upon

1. Kitsch

Kitsch is a published U.S. patent application titled “Underwear Garment for a Male.” Ex. 1007, code (54). Kitsch discloses an “underwear garment” that “includes an internal double side-panel containment system and an anatomical pouch compartment, and the use of light internal fabric and moisture control athletic performance fabrics.” *Id.* ¶ 6. Other aspects of Kitsch are addressed in the analysis below.

2. Brocks

Brocks is a U.S. patent titled “Men’s Underwear Brief.” Ex. 1008, code (54). Garments disclosed in Brocks may include “concave leg opening arches,” of a “front panel,” that are “provided with elastic strips which in their unstretched condition are approximately two-thirds the length of each leg opening arch of the front panel.” *Id.* at 2:5–9. Brocks further discloses:

In assembling, the elastic strips are each stretched to the length of each of the concave leg opening arches of the front panel, causing the stitched material to be gathered together and thereby define a genital pouch in the form of shirring when the stretching force is released. The arches are then stretched to their usual size and stitched together with the back panel in the standard manner, defining the genital pouch.

Id. at 2:9–16. Other aspects of Brocks are addressed in the analysis below.

3. Carrillo

Carrillo is a published international patent application titled “Hygienic Garment for Men’s Underwear.” Ex. 1010, code (54). The reference states:

The model of the invention consists of a U-shaped elastic garment (1) sewn to the inner front part of standard briefs, in keeping with the models already existing on the market.

This garment (1) has an opening (2) in the shape of a vertical teardrop (2) from the elastic (3) of the waistband of the brief to a distance above the seam of the inseam (6) of the brief.

Id. at 2. Other aspects of Carrillo are addressed in the analysis below.

E. Patent Owner's Demonstratives

Petitioner filed Objections to Patent Owner's Demonstratives, stating that several of Patent Owner's demonstrative slides (filed in advance of the Oral Hearing) constitute improper new arguments and evidence.

Paper 32, 1.

Petitioner's objections are moot because "[d]emonstrative exhibits used at the final hearing are aids to oral argument and not evidence," and we do not rely on the slides objected to for purposes of this Decision. *See* Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019), 84.⁸

F. Analysis of Petitioner's Asserted Grounds

Petitioner states that claims 1–13, 15, and 16 of the '974 patent are unpatentable, under 35 U.S.C. § 103, because: claims 1–13, 15, and 16 are obvious over Kitsch and Brocks (Ground 1); claims 1–9, 11, 13, and 16 are obvious over Carrillo and Brocks (Ground 2a); and claims 10, 12, and 15 are obvious over Carrillo, Brocks, and Kitsch (Ground 2b). *See* Pet. 4.

⁸ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf?MURL=TrialPracticeGuideConsolidated>.

1. Ground 1

Having considered all of the parties' arguments and evidence (including expert testimony) for claims 1–13, 15, and 16, in Ground 1, we determine that Petitioner sufficiently demonstrates the unpatentability of claims 1, 2, 5–13, and 15, by a preponderance of the evidence, and that Petitioner does not sufficiently demonstrate the unpatentability of claims 3, 4, and 16, by a preponderance of the evidence.

a. Claim 1

Using Petitioner's identification of the limitations of claim 1 (*see* Pet. 9–21), Petitioner (relying on the testimony of Ms. Wagner) argues that Kitsch teaches each of limitations 1[pre], 1[a], 1[b], 1[c], 1[d], 1[e][i]–1[e][iv], and 1[f] (*see id.* at 9–21), and that the combination of Kitsch and Brocks satisfies limitation 1[g] (*see id.* at 21–27).

Patent Owner (relying on the testimony of Mr. Kahn) argues that Kitsch does not disclose limitations 1[c], 1[d], 1[e][i]–1[e][iv], and 1[f], and that Kitsch and Brocks do not satisfy limitation 1[g]. *See* PO Resp. 28–46.

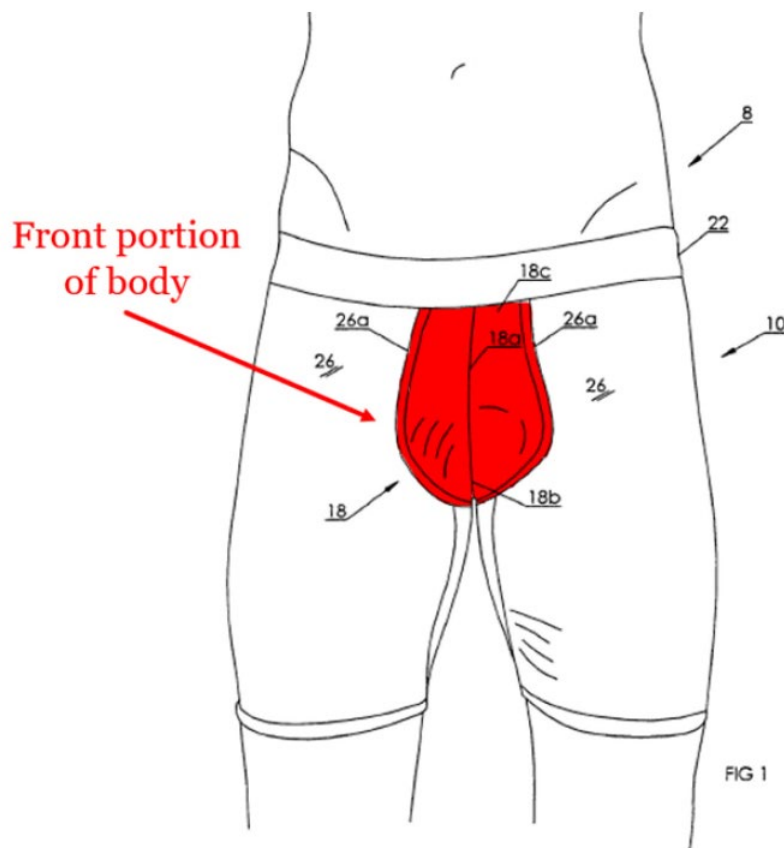
i. Undisputed Limitations 1[pre], 1[a], 1[b]

Patent Owner does not dispute Petitioner's position that Kitsch satisfies **limitations 1[pre], 1[a], and 1[b]**, because Patent Owner's analysis of claim 1 does not address these limitations. *See* PO Resp. 27–46.

In view of Petitioner's undisputed arguments and evidence (including the testimony of Ms. Wagner), a preponderance of the evidence supports Petitioner's position that Kitsch teaches or suggests each of limitations 1[pre] (“[a] male garment comprising”), 1[a] (“a body including a front

portion and having leg openings for a wearer's legs") and 1[b] ("a waistband attached by a waistband seam at an upper edge of the body"). *See* Pet. 9–12.

In particular, regarding limitation 1[a], Petitioner refers to Kitsch's disclosed garment as "includ[ing] a 'body' — for example, 'front walls/panels 26'; 'pouch compartment 18' that has an inner layer of material 18' and an outer layer of material 18''; 'rear panel 28'; 'legs 32'; and 'leg bands 32a,'" as well as "a 'front portion' in the form of pouch compartment 18 comprised of inner and outer fabric layers 18', 18''." Pet. 10 (citing Ex. 1005 ¶¶ 46–48; Ex. 1007 ¶¶ 6, 7, 29, 30, 35–41, Figs. 1–3, 6, 7); *see also id.* at 10–11 (citing Ex. 1007 ¶¶ 6, 41, Figs. 1–4, 7). Further, with regard to the recited "waistband" of limitation 1[b], Petitioner refers to Kitsch's "'waistband 22' attached to an upper edge of the body along a seam," which Petitioner identifies in an annotated version of Kitsch's Figure 1. *Id.* at 11–12 (citing Ex. 1005 ¶ 49; Ex. 1007 ¶¶ 6–10, 29, 35, Claim 1, Figs. 2, 3, 7, 11, 12). Several of Kitsch's features, identified by Petitioner as corresponding to limitations 1[pre], 1[a], and 1[b], are shown in Petitioner's annotated version of Kitsch's Figure 1 (*id.* at 11), reproduced below.



Petitioner’s annotated version of Kitsch’s Figure 1, is a front elevation view of Kitsch’s garment, having, e.g., pouch compartment 18 (shaded red), which Petitioner maps to the “front portion” of the “body” of limitation 1[a]. *Id.* at 10–11.

ii. Limitation 1[c]

Limitation 1[c] recites “a stretch panel attached to the body inside the front portion.”

Petitioner argues that “Kitsch discloses a stretch panel, in the form of ‘side *panels* 12,’ which are “constructed of an *elasticized* breathable *mesh* fabric.” Pet. 12 (citing Ex. 1005 ¶¶ 50–51; Ex. 1007 ¶¶ 7, 26, 27, claims 1–4, 8); *see also id.* at 12–13 (citing Ex. 1007 ¶ 30). In the cited portion of

the expert declaration, Ms. Wagner explains that Kitsch's side panels are "seamed to the waistband and at seam 30a." Ex. 1005 ¶ 50.

Petitioner further argues that Kitsch's side panels are "attached to the body inside the front portion" (per limitation 1[c]), because Kitsch's side panels "extend generally orthogonally inwardly from *the front of the brief*" and are "stitched to the front walls 26 and waistband 22 of brief 10." Pet. 13 (quoting Ex. 1007 ¶ 29); *see also id.* at 13–14 (citing Ex. 1007 ¶¶ 26, 27, 37–39, Figs. 3, 8). The arrangement of Kitsch's side panels is shown in Petitioner's annotated version (*id.* at 13) of Kitsch's Figure 8, which is reproduced below.

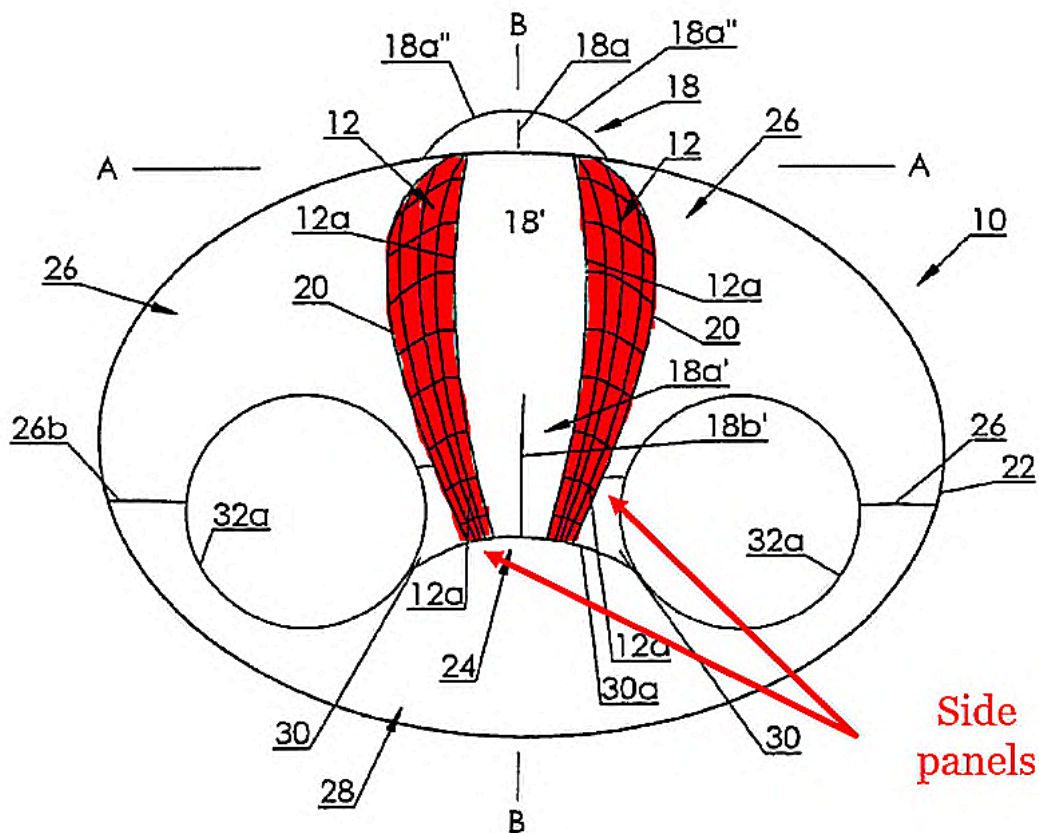


FIG 8

Petitioner's annotated version of Kitsch's Figure 8 is a top plan view, looking downward into undershorts 10 having front walls 26, rear panel 28, pouch compartment 18, side panels 12 (shaded red), waistband 22, and seam 30a. *See id. at 13; see also* Ex. 1007 ¶¶ 19, 26, 29, 41, Fig. 8.

Disputing Petitioner's mapping of limitation 1[c] to Kitsch, Patent Owner argues (in view of Mr. Kahn's supporting testimony) that "Kitsch does not disclose a stretch panel," explaining that "the only instance of the word 'stretch' in Kitsch is found describing a material" — Kitsch's "so-called four-by-four stretch weave." PO Resp. 29 (quoting Ex. 1007 ¶ 30; citing Ex. 2013 ¶ 51); *see also* PO Sur-reply 4–5.

In addition, Patent Owner contends that the recited "stretch panel" of limitation 1[c] must be a single element — i.e., "there is a lone stretch panel." PO Resp. 33. However, Patent Owner acknowledges that the '974 patent Specification states that "[s]tretch panel 22 may optionally be formed from a plurality of pieces of fabric seamed together." *Id.* (quoting Ex. 1001, 8:5–6). Instead of the recited "stretch panel," Patent Owner argues that "Kitsch discloses 'side panels,'" noting that "side panels 12 are formed of two separate and substantially parallel pieces of mesh fabric attached to the laterally spaced apart pouch seams 20." *Id.* (quoting Ex. 1007 ¶ 27; citing Ex. 1007, Fig. 3, Ex. 2013 ¶ 52). Further, Patent Owner contends, "[b]y contrast to the stretch panel of the '974 Patent, the side panels of Kitsch are attached orthogonally from the pouch." *Id.* at 29 (citing Ex. 1007 ¶ 29; Ex. 2013 ¶ 52). In addition, Patent Owner argues, "side panels 12 in Kitsch are not seamed or stitched together to surround the genitals. They are parallel to each other. They never meet." *Id.* at 30 (citing Ex. 2013 ¶ 52).

Still further, Patent Owner argues, “[n]ot only is the stretch panel 22 of the ’974 Patent structurally different than the two parallel side panels 12 of Kitsch, the stretch panel and side panels perform significantly different functions.” PO Resp. 30–31 (citing Ex. 2013 ¶ 54). Notably, the ’974 patent’s “stretch panel separates the genitalia from the body of the wearer,” whereas, the Kitsch reference depicts “the genitalia pushed against the body of the wearer,” “put[ting] the genitalia in harm’s way when the wearer sits or rides a bike.” *Id.* at 31 (citing Ex. 1001, Fig. 6, Ex. 1007, Fig. 7, Ex. 2013 ¶ 54).

The parties’ arguments raise claim construction issues, in regard to limitation 1[c] — specifically, Patent Owner contends that the scope of the recited “stretch panel” is restricted in various ways that would exclude the embodiments of the side panels disclosed in Kitsch. For the reasons that follow, we do not adopt the restrictions to claim scope proposed by Patent Owner, and we determine that Petitioner sufficiently demonstrates that Kitsch satisfies limitation 1[c], by a preponderance of the evidence.

Patent Owner argues that the nomenclature used in Kitsch (i.e., the expression “side panels”) precludes mapping the ’974 patent’s recited “stretch panel” to Kitsch’s side panels. *See* PO Resp. 29. In addition, Patent Owner argues that the recited “stretch panel” must be a single element. *See id.* at 29–30, 33. Finally, Patent Owner argues that Kitsch’s descriptions of the functions performed with its disclosed embodiments preclude mapping the recited “stretch panel” to Kitsch’s embodiments.

The difference in Kitsch’s nomenclature — i.e., the term “*side* panels” — does not preclude Kitsch’s disclosure from satisfying the recited “*stretch* panel,” as Patent Owner contends. *See* PO Resp. 29. Whether a reference

teaches a particular limitation turns on the technology disclosed — here, particular structural features — rather than the use of particular terminology in the reference to describe such features. *See Neuvolution A/S v. Chemgene Holdings APS*, IPR2017-01599, Paper 46 at 25 (PTAB Jan. 9, 2019) (“The prior art need not . . . use the same words as the claims in order to find anticipation.”) (citing *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009)). Indeed, it has been noted, in the realm of patent law, that a “verbal portrayal” does not necessarily fully capture a particular “tangible structure,” because “[t]hings are not made for the sake of words, but words for things.” *Autogiro Co. of Am. v. U.S.*, 384 F.2d 391, 397 (Ct. Cl. 1967).

Moreover, even if Kitsch does not use the word “stretch” for naming the “side panels,” Kitsch does describe side panel embodiments as being “elasticized” and employing a “four-by-four stretch weave” material — thus, conveying that the side panels do “stretch.” Ex. 1007 ¶ 30, *see also id.* ¶¶ 6, 26, 28, 29.

In any event, the name “stretch panel,” applied to an element in the ’974 patent claims, does not fully describe all of the properties of this element (including its stretching properties). Limitations 1[d], 1[e], and 1[g] — each of which is discussed below — more particularly recite the stretching properties of the “stretch panel.”

Therefore, contrary to Patent Owner’s argument, the use of the word “side” (as opposed to “stretch”), to describe the panels in the Kitsch reference, does not preclude Kitsch from satisfying the “stretch panel” of Limitation 1[c].

As to Patent Owner’s argument that Kitsch’s side panels cannot satisfy limitation 1[c], because the recited “stretch panel” must be a single

element (*see* PO Resp. 29–30, 33), the intrinsic evidence establishes otherwise. Notably, the '974 patent's Specification emphasizes that the disclosed embodiments are not limiting:

Where a component (e.g. a panel, seam, elastic, thread, opening, etc.) is referred to above, unless otherwise indicated, reference to that component (including a reference to a “means”) should be interpreted as including as equivalents of that component any component which performs the function of the described component (i.e., that is functionally equivalent), including components which are not structurally equivalent to the disclosed structure which performs the function in the illustrated exemplary embodiments of the invention.

As will be apparent to those skilled in the art in the light of the foregoing disclosure, many alterations and modifications are possible in the practice of this invention without departing from the spirit or scope thereof.

Ex. 1001, 7:43–57. In particular, the Specification states that a “stretch panel” may be composed of multiple coordinating elements:

Stretch panel 22 may optionally be formed from a plurality of pieces of fabric seamed together. For example, stretch panel 22 may be formed from three pieces of fabric, two of which extend vertically along sides of opening 30 and one of which extends transversely across the bottom of opening 30.

Id. at 8:5–10. Additionally, the Specification explains:

It is not mandatory that stretch panel 22 be free from openings. In some embodiments, stretch panel 22 comprises a continuous layer of material with no openings other than opening 30. In other embodiments, stretch panel 22 may have one or more openings around the periphery of opening 30.

Id. at 7:58–63. Also, the Specification's statement that “[i]n some embodiments, stretch panel 22 comprises a *continuous* layer of material” (*id.*

at 7:59–60) (emphasis added), suggests that other “stretch panel” embodiments may employ a discontinuous, or divided, structure.

Furthermore, the potential breadth of claim 1’s “stretch panel” may be illuminated by the way dependent claim 14 narrows the recited features, stating: “A male garment according to claim 1 wherein the stretch panel is formed from a *single unitary piece* of woven fabric.” Ex. 1001, 10:9–11 (emphasis added). The Federal Circuit has explained that “[d]ifferences among claims can . . . be a useful guide in understanding the meaning of particular claim terms,” such as where “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Phillips*, 415 F.3d at 1314–15 (citations omitted). Using claim 14 to shed light on the meaning of claim 1 — per the so-called doctrine of “claim differentiation” — does not summon “a hard and fast rule of [claim] construction.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998). Yet, the refinement added in claim 14 — i.e., that the “stretch panel” is “single” and “unitary” — suggests that such features are not required to satisfy claim 1.

Thus, the Specification indicates that a combination of separate structures, such as Kitsch’s side panels, can satisfy the recited “stretch panel” of limitation 1[c].

In addition, as Petitioner argues (*see* Pet. 12–14; *see also id.* at 15–18) and as Ms. Wagner opines, “Kitsch discloses a stretch panel, in the form of ‘side *panels* 12’” that are “seamed to the waistband and at seam 30a.” Ex. 1005 ¶ 50 (citing Ex. 1007 ¶¶ 7, 26, 27, 30, claims 1–4, 8); *see also id.* (citing Ex. 1001, 8:5–10, claim 14); Ex. 2012, 63:17–18, 66:1–5 (Ms.

Wagner testified, in a deposition, that Kitsch’s side panels 12 “are seamed together at the top and bottom.” “[T]hey are on the same seam. They are seamed together.”) Indeed, Kitsch’s Figure 8 shows that the top ends of “side panels 12 are stitched to . . . waistband 22” (Ex. 1007 ¶ 29) and their bottom ends extend to seam 30a. Thus, the arrangement of Kitsch’s two side panels corresponds to an “optional[]” version of “[s]tretch panel 22” identified in the ’974 patent, “be[ing] formed from a plurality of pieces of fabric seamed together.” Ex. 1001, 8:5–6. As noted, above, the ’974 patent provides a particular “example” of the “optional[]” version, having “stretch panel 22 . . . formed from three pieces of fabric” arranged in a particular manner (*id.* at 8:5–8), but such alternative embodiments of a “stretch panel” are not limited to the single example described in the Specification. *See Texas Instruments, Inc. v. United States Int’l Trade Comm’n*, 805 F.2d 1558, 1563 (Fed. Cir. 1986) (“This court has cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification.”)

We now turn to Patent Owner’s argument that Kitsch does not satisfy limitation 1[c], because “the stretch panel [of the ’974 patent] and [the Kitsch reference’s] side panels perform significantly different functions.” PO Resp. 30–31 (citing Ex. 2013 ¶ 54); *see also id.* at 31 (citing Ex. 1001, Fig. 6, Ex. 1007, Fig. 7, Ex. 2013 ¶ 54).

Petitioner (in view of Ms. Wagner’s testimony) argues that Kitsch’s side panels perform some of the functions ascribed to the “stretch panel” disclosed in the ’974 patent, by “isolating the genitalia . . . into the pouch compartment” and “provid[ing] the intended isolating function . . . and support for the scrotum.” Pet. 12–13 (quoting Ex. 1007 ¶¶ 27, 30; also

citing Ex. 1005 ¶¶ 50–51, Ex. 1007 ¶¶ 7, 26, claims 1–4, 8); *see also* Pet. Reply 6 (citing Ex. 1001, 8:5–10, 7:58–63; Ex. 1005 ¶ 50; Ex. 1007 ¶¶ 27–30, Figs. 3, 8; Ex. 2012, 63:5–66:5, 67:7–68:4), 7 (citing Ex. 1007 ¶¶ 6–9, 26–30; Pet. 14–15, 20–21). Petitioner further contends that the “alleged functional differences,” identified by Patent Owner, “are irrelevant — nothing in claim 1 (or the ’974 [patent]) requires the genitals be kept separate from the body.” Pet. Reply 7 (citing Ex. 1011, 98:8–100:4).

Petitioner’s argument is consistent with the ’974 patent Specification’s statement, quoted above, that a disclosed “component” (including “a panel”) “should be interpreted as including as equivalents of that component any component which performs the function of the described component (i.e., that is functionally equivalent), including components which are not structurally equivalent to the disclosed structure which performs the function in the illustrated exemplary embodiments of the invention.” Ex. 1001, 7:43–52.

Nevertheless, we restrict our analysis (of whether Kitsch satisfies the recited claim limitations) to the structural aspects of the claim language and the prior art disclosures (rather than any associated purely functional characterizations), because all the challenged claims are drawn to an apparatus, rather than a method. Thus, potential or intended uses of the claimed subject matter do not alter the claim scope. *See In re Sinex*, 309 F.2d 488, 492 (CCPA 1962) (“[A] statement of intended use . . . does not qualify or distinguish the structural apparatus claimed over the [prior art] reference.”) “[A]pparatus claims cover what a device *is*, not what a device *does*.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1468 (Fed. Cir. 1990); *see also In re Gardiner*, 171 F.2d 313, 315–16 (CCPA

1948) (“[P]atentability of apparatus claims must be shown in the structure claimed and not merely upon a use, function, or result thereof.”)

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we do not construe the “stretch panel” of limitation 1[c] to exclude Kitsch’s arrangement of side panels. Further, in view of all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner shows, by a preponderance of the evidence, that Kitsch satisfies limitation 1[c].

iii. Limitation 1[d]

Limitation 1[d] recites “the stretch panel comprising a sheet of elastically resilient four-way stretch material.”

Petitioner argues (in view of Ms. Wagner’s testimony) that Kitsch satisfies limitation 1[d] in its disclosure of “performance material used advantageously in the side panels of the present invention is a soft *elasticized* breathable mesh knit weave (in a so-called *four-by-four stretch weave*) containing 80% Nylon™ and 20% Spandex™.” Pet. 14 (quoting Ex. 1007 ¶ 30; also citing Ex. 1005 ¶ 52, Ex. 1007 ¶¶ 1, 2, 9, 26–29, claim 1). Relying on Ms. Wagner’s testimony, Petitioner contends that Kitsch’s “four-by-four stretch weave” satisfies the language of 1[d] — “a sheet of elastically resilient four-way stretch material” — “with [Kitsch’s] four-by-four stretch weave allowing the fabric to stretch in four directions (that is, up and down and left and right).” *Id.* at 14–15 (citing Ex. 1005 ¶¶ 53–54).

Arguing that Kitsch fails to satisfy limitation 1[d], Patent Owner (relying on Mr. Kahn’s testimony) contends:

Kitsch . . . calls for its side panels to be made of mesh knit weave in a 4x4 (box weave) woven fabric with a limited amount of stretch in the length and width, whereas the '974 Patent's stretch panel is constructed of 4-way stretch knit fabric which, due to its construction (tricot construction), stretches in the length and width equally.

PO Resp. 34 (citing Ex. 2013 ¶ 57). Further, Patent Owner argues that the materials of Kitsch's side panels and the "stretch panel" of the '974 patent "serve very different purposes," with "Kitsch focus[ing] on the fabric's breathability" and "the '974 Patent call[ing] for elasticity and comfort." *Id.* Patent Owner contends that, in Kitsch, "stretch is based on the content of Spandex," but the '974 Patent uses "a 4-way stretch knitted fabric yield[ing] stretch via the fabric construction and can be further enhanced by utilizing Spandex in the yarns of the fabric." *Id.*

Petitioner argues that limitation 1[d] does not require a "stretch panel" having "knit" fabric (such as fabric having a "tricot construction"); rather, limitation 1[d] may be satisfied, for example, by woven fabric. *See* Pet. Reply 8 (citing Ex. 1001, 5:20–28). In addition, Petitioner argues that the "elastically resilient four-way stretch material" language of limitation 1[d] only requires the "stretch panel" to be able to "stretch in four directions (that is, up and down and left and right)" (*see* Pet. 14–15), rather than requiring the "stretch panel" to "stretch in the length and width equally" (*see* PO Resp. 34), as Patent Owner contends.

Patent Owner's analysis focuses on various alleged characteristics of the embodiments disclosed in the '974 patent and in Kitsch. *See* PO Resp. 47–49. Yet, many of such characteristics, which Patent Owner

ascribes to the '974 patent's embodiments, are not reflected in limitation 1[d] and are not required by the claim language.

For example, Patent Owner argues that “the '974 Patent's stretch panel is constructed of 4-way stretch knit fabric” having a “tricot construction,” which is not disclosed in Kitsch. PO Resp. 34 (citing Ex. 2013 ¶ 57). Yet, neither the term “knit,” nor any reference to a type of knitted fabric (such as fabric having a “tricot construction”), appears in limitation 1[d]. On the other hand, there is support for the view that limitation 1[d] does *not* require “tricot construction” or any other “knit fabric” — e.g., to the exclusion of woven fabrics. Dependent claim 14 of the '974 patent adds a limitation (to the garment recited in claim 1) reciting that “the stretch panel is formed from a single unitary piece of *woven* fabric.” Ex. 1001, 10:9–11 (emphasis added). Because claim 14 is necessarily narrower than claim 1, claim 1 must be broad enough to include a “stretch panel” comprising “woven fabric.” The '974 patent Specification also states that the “stretch panel” may be made of “woven” fabric:

Various materials may be used for stretch panel 22. For example, stretch panel 22 may comprise an elasticized fabric. In one example embodiment the fabric comprises a cotton-Spandex™ blend. In one example embodiment the fabric comprises a *woven* blend of Modal™ and Spandex™.

Id. at 5:20–24 (emphasis added). Therefore, insofar as Patent Owner contends that limitation 1[d] requires “tricot construction” or other “knit fabrics,” and excludes woven fabrics, we determine otherwise.

Similarly, the intrinsic evidence also contradicts Patent Owner's argument that the “elastically resilient four-way stretch material” language of limitation 1[d] requires the “stretch panel” to “stretch[] in the length and

width equally” (PO Resp. 34). Dependent claim 2 of the ’974 patent adds a limitation (to the garment recited in claim 1) reciting that “the stretch panel has asymmetrical stretch characteristics such that the stretch panel stretches more easily in a direction parallel to the waistband and less easily in a direction at right angles to the waistband.” Because claim 2 is necessarily narrower than claim 1, claim 1 must be broad enough to permit such “asymmetrical stretch characteristics” — whereby the recited “stretch panel” would *not* stretch in length and width equally. The ’974 patent Specification describes such embodiments:

In some embodiments, the material of stretch panel 22 has asymmetrical stretch (i.e. the coefficient of elasticity of the material has a first value in a first direction in the plane of the material and a second value different from the first value in a second direction at right angles to the first direction in the plane of the material). The material may be oriented that it is easier to stretch the material of stretch panel 22 in a direction parallel to waistband 12 than it is to stretch the material in a direction perpendicular to waistband 12.

Ex. 1001, 5:11–19.

Further, the Specification supports the position of Petitioner (and Ms. Wagner), whereby the recited “elastically resilient four-way stretch material” of limitation 1[d] simply requires a material that can stretch in length and width. *See* Pet. 14–15 (referring to fabric that can “stretch in four directions (that is, up and down and left and right)”) (citing Ex. 1005 ¶ 53–54). The Specification states:

In some embodiments, stretch panel 22 is stretched in length only (i.e. in a direction perpendicular to waistband 12) as it is being attached to front portion 18 during manufacture. In some embodiments, stretch panel 22 is *stretched in both width*

and length (four-way stretch) relative to front portion 18 as it is being attached to front portion 18 during manufacture.

Ex. 1001, 6:28–34 (emphasis added).

There is no dispute that Kitsch’s side panels (which Petitioner maps to claim 1’s “stretch panel”) satisfy limitation 1[d], under the proper construction, which only requires the “stretch panel” to be able to stretch in both length and width. In this regard, Patent Owner admits that Kitsch’s side panels possess “a limited amount of stretch in the length and width.” PO Resp. 34.

Therefore, having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner shows, by a preponderance of the evidence, that Kitsch satisfies limitation 1[d].

iv. Limitation 1[e]

Limitation 1[e] (with sub-parts **i–iv**) recites the following features of the recited “stretch panel”:

1[e][i] having a top edge attached to the body at a top location,
[ii] a bottom edge attached to the body at a bottom location,
[iii] side edges attached to the body at side seams extending substantially continuously along either side of the front portion and **[iv]** an opening for receiving a wearer’s genitals.

Petitioner argues (relying on Ms. Wagner’s testimony) that Kitsch satisfies limitation 1[e][i]–[iv]. *See* Pet. 15–20.

Petitioner maps the features of the “stretch panel” recited in limitation 1[e][i] (“having a top edge attached to the body at a top location”) to Kitsch’s side panels 12, referring to “*upper ends 12c* of side panels 12 where side panels 12 are stitched to the front walls 26 and waistband 22 of

brief 10.” Pet. 15 (quoting Ex. 1007 ¶ 29; also citing Ex. 1007 ¶¶ 8–10, 28, 35, 39); *see also id.* at 16 (citing Ex. 1005 ¶ 56; Ex. 1007 ¶ 29, Fig. 3).

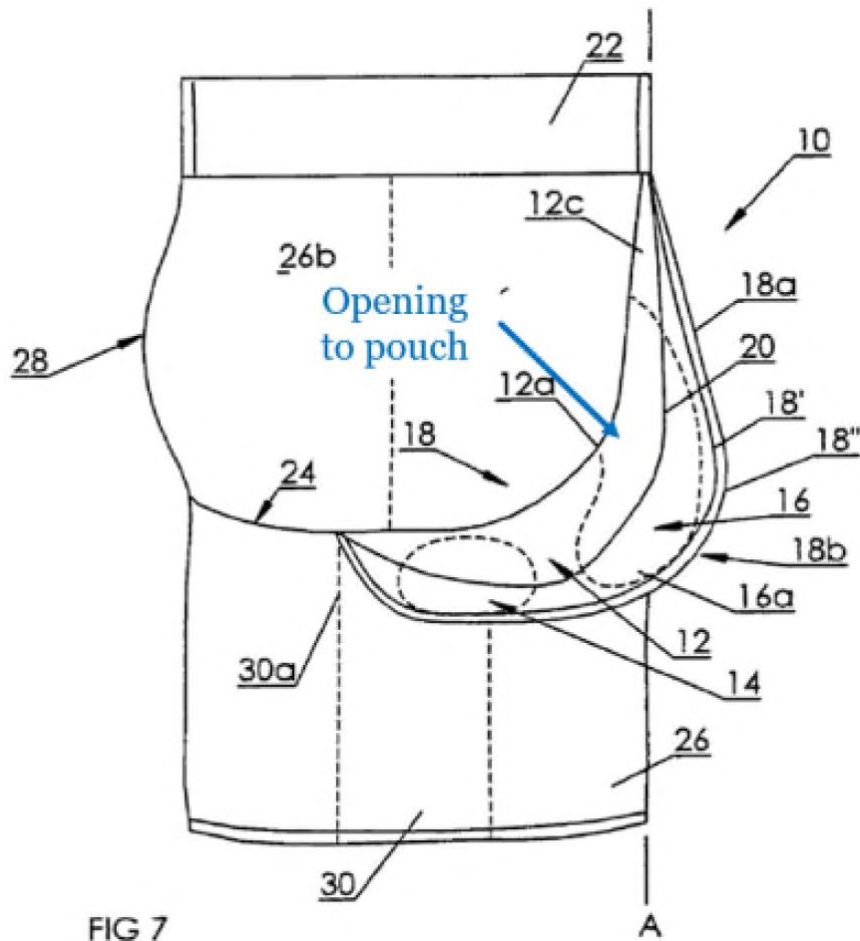
Petitioner maps the features of the “stretch panel” recited in limitation 1[e][ii] (“a bottom edge attached to the body at a bottom location”) to Kitsch’s side panels 12 that attach to front panels 26 “around the ‘perineum area 24’ at seam 30a, which is at the ‘rearmost end of pouch compartment 18’” — features that Petitioner indicates on annotated versions of Kitsch’s Figures 3 and 8. Pet. 16–18 (citing Ex. 1005 ¶ 57; Ex. 1007 ¶¶ 8, 41, Figs. 3, 8, 7).

Petitioner maps the features of the “stretch panel” recited in limitation 1[e][iii] (“side edges attached to the body at side seams extending substantially continuously along either side of the front portion”) to Kitsch’s side panels 12 that have “sides that attach to ‘laterally spaced apart pouch seams 20’ (which may be coincident with seams 26a) connecting pouch material 18 to front walls 26,” which Petitioner indicates on an annotated version of Kitsch’s Figure 3. Pet. 18–19 (citing Ex. 1007 ¶¶ 6–9, 27–29, 37–39, Fig. 3). Petitioner further points out that Kitsch’s “side seams 20/26a run continuously from around the perineum area (*i.e.*, near the bottom of the underwear), upwards along either side of pouch compartment 18, and attach around the waistband area (*i.e.*, near the top of the underwear).” *Id.* at 19 (citing Ex. 1005 ¶ 58).

Petitioner maps the features of the “stretch panel” recited in limitation 1[e][iv] (“an opening for receiving a wearer’s genitals”) to the space between Kitsch’s side panels 12, that, according to Petitioner, “forms an opening that receives the wearer’s genitalia,” which features Petitioner indicates on annotated versions of Kitsch’s Figures 7 and 8. Pet. 19–20

(citing Ex. 1005 ¶ 60; Ex. 1007 ¶¶ 6–9, 26–28, 37–39, Figs. 3, 7, 8).

Petitioner’s annotated versions of Kitsch’s Figures 7 and 8 (*id.* at 20) are reproduced below.



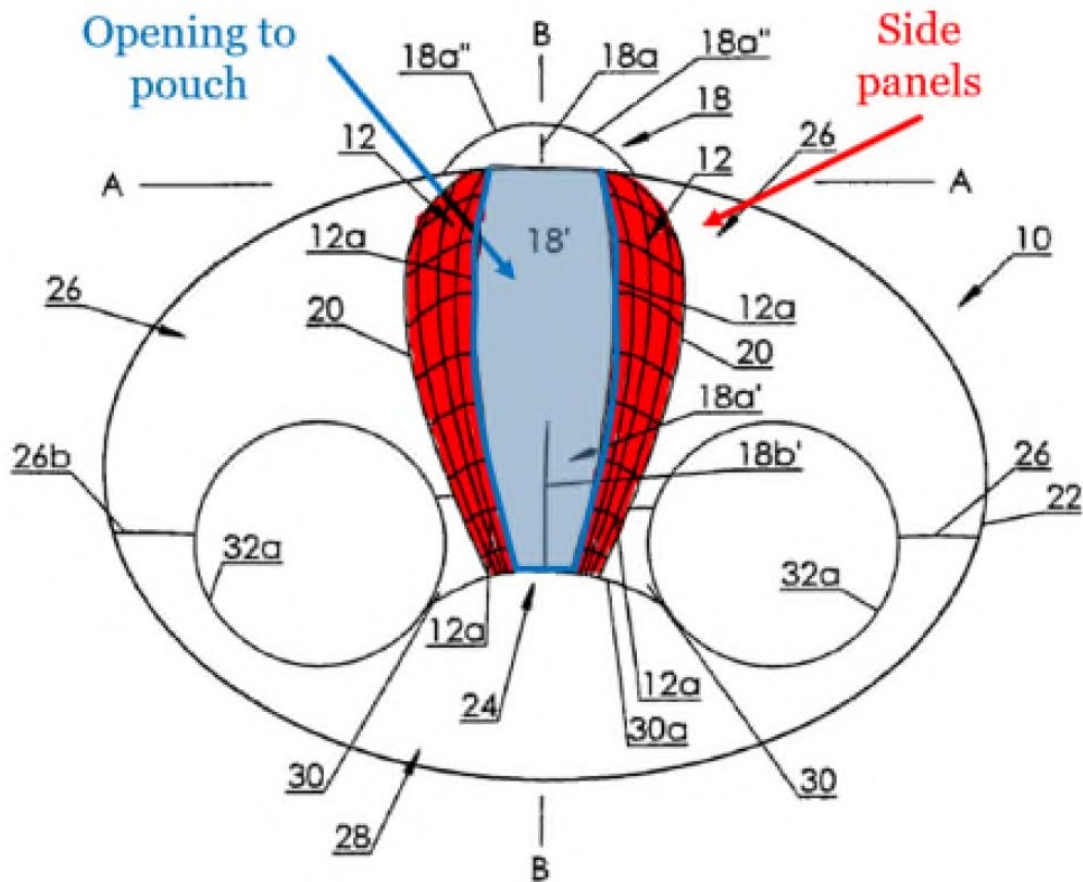


FIG 8

Petitioner’s annotated versions of Kitsch’s Figures 7 and 8 (*id.*) are sectional (Figure 7) and plan (Figure 8) views indicating what Petitioner regards as the “opening” of limitation 1[e][iv].

Patent Owner (relying on Mr. Kahn’s testimony) disputes the sufficiency of Petitioner’s comparison of limitation 1[e] to Kitsch. *See* PO Resp. 34–39.

In one aspect, Patent Owner contends that Kitsch does not “use the terms top edge and bottom edge to describe the attachment of the side panels to the body.” PO Resp. 35 (citing Pet. 15–18; Ex. 1005 ¶¶ 56–57; Ex. 1007,

Ex. 2013 ¶¶ 58, 62). Further, Patent Owner argues that “the word ‘opening’ is nowhere found in the description of Kitsch’s invention” — although, Kitsch uses the word “opening” to characterize a feature in a prior art reference. *Id.* at 36 (citing Ex. 2013 ¶ 62); *see also* Ex. 1007 ¶ 5 (discussing U.S. Pat. No. 5,029,345). Patent Owner asserts: “If Kitsch’s invention actually included an opening in the side panels, Kitsch would have disclosed it, as he knew what an opening was within a panel as evidenced by his description of [the prior art reference].” PO Resp. 36.

As discussed above (regarding Patent Owner’s similar argument for limitation 1[c]), the present patentability analysis turns on the technology disclosed in the prior art under consideration, rather than the particular terminology used therein. *See Neuvolution A/S*, IPR2017-01599, Paper 46 at 25.

In another aspect, Patent Owner reprises the argument (also addressed above, regarding limitation 1[c]) that Kitsch’s side panels do not satisfy the recited “stretch panel” of claim 1. Patent Owner argues that “[t]he Kitsch side panels are not seamed or stitched together — they are parallel, and they never meet, so they do not include any opening.” PO Resp. 36 (citing Ex. 2013 ¶ 61); *see also id.* at 38 (“Nowhere in Kitsch does it mention the side panels obstructing access to the pouch such that an opening through or between the side panels is needed.”) In this regard, Patent Owner contends that Petitioner’s expert (Ms. Wagner) “admitted,” in deposition testimony, that “the Kitsch side panels did not include an opening.” *Id.* at 37 (citing Ex. 2012, 80:24–82:5); *see also id.* (citing Ex. 2012, 62:25–68:6).

Patent Owner’s arguments, to the effect that Kitsch does not disclose the recited “opening” of limitation 1[e][iv], do not accurately characterize

Petitioner’s argument, or the opinions and testimony of Ms. Wagner. In Patent Owner’s cited deposition testimony of Ms. Wagner, she agreed only with Patent Owner’s counsel statement that “[t]he *word* opening doesn’t appear” in Kitsch’s description of the disclosed embodiments. Ex. 2012, 82:3–5) (emphasis added). However, as discussed above, the present analysis turns upon Kitsch’s disclosed structure — not the particular words used in the reference. In this regard, Ms. Wagner’s deposition testimony clearly states that Kitsch’s side panels 12 “do form an opening.” *Id.* at 82:9; *see also id.* at 82:24–25, 83:8–9.

Moreover, Patent Owner does not raise any dispute regarding the meaning of the claim language of limitation 1[e] (including its sub-parts) or the teachings of Kitsch. Rather, as Petitioner states, Patent Owner’s arguments simply express its position (addressed above, regarding limitation 1[c]) that Kitsch’s two side panels 12, connected by seam 30a, cannot disclose the “stretch panel” of claim 1. *See* Pet. Reply 9–10.

We agree with Petitioner and Ms. Wagner that the space between Kitsch’s side panels satisfies the “opening” of limitation 1[e][iv].

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner shows, by a preponderance of the evidence, that Kitsch’s side panels (and their disposition and arrangement with the other elements identified by Petitioner) satisfy limitation 1[e], including all of its sub-parts.

v. *Limitation 1[f]*

Limitation 1[f] recites “the stretch panel being resiliently elastic both in a direction between the top edge and the bottom edge and in a direction between the side edges.”

Petitioner argues (in view of Ms. Wagner’s testimony) that Kitsch satisfies limitation 1[f] in its disclosure of side panels 12 having the recited “elastically resilient four-way stretch” properties, addressed above regarding limitation 1[d]. *See* Pet. 20–21 (citing Ex. 1005 ¶¶ 61–62; Ex. 1007 ¶¶ 6–9, 26–30, claims 5, 6). In view of the disposition of Kitsch’s side panels 12, as described in regard to limitation 1[e] (*see id.* at 15–20), the particular limitation 1[f] features (“being resiliently elastic both in a direction between the top edge and the bottom edge and in a direction between the side edges”) are manifest in Kitsch’s disclosure of the side panels 12 to stretch (upward and downward) between the waistband (i.e., at the recited “top edge”) and the and the perineum, proximate seam 30a (i.e., at the recited “bottom edge”), as well as laterally (i.e., the recited “direction between the side edges”) toward and away from, e.g., pouch seams 20. *See id.* at 20–21 (citing Ex. 1005 ¶¶ 61–62; Ex. 1007 ¶¶ 6–9, 26–30, claims 5, 6); *see also* Ex. 1007 ¶¶ 27–29, 41.

Patent Owner (relying on Mr. Kahn’s testimony) argues that Kitsch does not satisfy limitation 1[f]. *See* PO Resp. 40–41 (citing Ex. 1005 ¶¶ 50, 56–57, 61; Ex. 1007 ¶¶ 28; Ex. 2013 ¶¶ 68–70).

In part, Patent Owner’s argument stems from its argument (regarding limitation 1[e]) that “Kitsch does not disclose a top edge, a bottom edge, or a side edge.” PO Resp. 40. As discussed above, we determine that Petitioner has sufficiently shown that Kitsch discloses these claimed features.

Patent Owner also argues that “Petitioner fails to show how the Kitsch side panels are directionally resilient between a top edge and a bottom edge and a direction between the side edges.” PO Resp. 40 (citing Ex. 2013 ¶ 69).

To the contrary, as Petitioner argues, Kitsch’s side panels 12 possess the recited “four-way stretch” properties (as discussed above, regarding limitation 1[d]), which are manifest in Kitsch’s description of the arrangement of side panels 12, among the waistband, seam 30a (proximate perineum 24), and pouch seams 20. *See* Pet. 20–21 (citing Ex. 1005 ¶¶ 61–62; Ex. 1007 ¶¶ 6–9, 26–30, claims 5, 6). Notably, cited portions of Kitsch disclose “[t]he pair of side panels 12 are preferably formed so as to cup the genitalia,” forming convexities that, “because of the flexibility and elasticity of the mesh side panel material, mould to gently conform to the shape” of the genitalia and “allow for resiliently supported relative movement of the scrotum relative to the pubis and perineum 24 of user 8.” Ex. 1007 ¶ 29.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner shows, by a preponderance of the evidence, that Kitsch’s side panels 12 (and their disposition and arrangement with the other elements identified by Petitioner) satisfy limitation 1[f].

vi. Limitation 1[g]

Limitation 1[g] recites:

the stretch panel having a length when unstretched smaller than a length measured along the front portion between the top and bottom locations and a width when unstretched smaller than a width measured along the front portion between the side seams such that the front portion is gathered from side-to-side and top-

to-bottom by the stretch panel and defines a three-dimensional pouch between the stretch panel and the front portion for receiving the wearer's genitals and holding the wearer's genitals while the garment is being worn.

Petitioner argues (in view of Ms. Wagner's testimony) that the combination of Kitsch with Brocks satisfies limitation 1[g]. *See* Pet. 21–27 (citing Ex. 1005 ¶¶ 63, 65–72; Ex. 1007 ¶¶ 6–9, 26–39; Ex. 1008, Abstract, 2:5–21, 2:49–64, 3:23–4:14, Figs. 1, 2, 4, 5, 8, 9).

Petitioner argues that Kitsch discloses a pouch, formed between the side panels and the front portion of the body, for receiving and supporting the wearer's genitalia. *See* Pet. 21–22 (citing the Petition's analyses of limitations 1[a], 1[c], 1[d], 1[e], 1[f]).

In addition, Petitioner argues that Brocks — which discloses a male undergarment brief having “a defined genital pouch” (Pet. 22 (citing Ex. 1008, Abstract, Figs. 1, 2)) — teaches that the “genital pouch is formed by attaching elastic strips to front fabric panels *while in a stretched state*, such that when the strips contract a ‘shirring takes place on the panels forming a genital pouch,’ . . . so as to ‘gather’ fabric of the front portion and cause it to bunch and form the pouch.” *Id.* at 23–24 (citing and quoting Ex. 1008, 2:5–21, 3:23–4:14; also citing Ex. 1005 ¶¶ 65–67); *see also id.* at 24 (citing Ex. 1005 ¶ 67; Ex. 1008, 3:27–4:14, Figs. 8–9).

Based upon the disclosures of these references, Petitioner contends that a person of ordinary skill in the art would have had a reason to modify Kitsch, in view of Brocks' teachings, “in order to create a ‘*gathering* and shirring *forming a secure* enclosure *pouch* for the male genitals.’” Pet. 25 (quoting Ex. 1008, 3:27–4:14; also citing Ex. 1005 ¶ 68); *see also id.* (citing Ex. 1005 ¶ 69; Ex. 1007 ¶¶ 6–9, 26–30, 37–39). Petitioner argues that a

person of ordinary skill in the art “would have been motivated to modify Kitsch, as taught by Brocks, to attach the side panels along seams when in a stretched state, stretching them upwards and outwards (*e.g.*, in a lengthwise and widthwise direction), to help form the pouch,” because Brocks’ teachings would “add to the formation and supportive nature of the pouch” disclosed in Kitsch. *Id.* at 26 (citing Ex. 1005 ¶ 70; Ex. 1007 ¶¶ 37–39).

In addition, Petitioner argues that a person of ordinary skill in the art “would have also understood that attaching the side panels in a stretched state, rather than an unstretched state, would merely be the simple substitution of one known method for another” and would have been motivated to do so, as taught by Brocks, in order to obtain the benefits of the elastic material “gathering” technique in forming the pouch. *Id.* (citing Ex. 1005 ¶ 71).

Petitioner also argues that “[a] POSITA would have recognized that, as taught by Brocks, when the elastic side panels of Kitsch are stitched to the seams in a stretched state, they would contract after being sewn and would assist in creating a ‘gathering’ of the front panel fabric to which they are attached, helping to form or define the supportive genital pouch.” Pet. 25 (citing Ex. 1005 ¶ 69). “[L]ike the elastic strips in Brocks,” Petitioner argues, Kitsch’s side panels are elastic and “could be similarly stretched before being attached at seams 20.” *Id.* (citing Ex. 1005 ¶ 68). Indeed, Ms. Wagner testifies that the gathering technique disclosed in Brocks “is common in the industry to create shape or volume.” Ex. 1005 ¶ 66.

Disputing Petitioner’s arguments, Patent Owner contends that Kitsch does not disclose limitation 1[g], noting that “Kitsch . . . does not disclose gathering at all.” PO Resp. 41 (citing Ex. 1001, 8:44–48; Ex. 2013 ¶ 71).

However, Petitioner does not argue that Kitsch *alone* teaches limitation 1[g]; as noted, Petitioner argues that the combination of Kitsch and Brocks satisfies this limitation. *See* Pet. 21–27.

As to the proposed combination of Kitsch and Brocks, Patent Owner argues that Petitioner relies upon hindsight and, even so, “fails to render obvious Claim 1 of the ’974 Patent.” PO Resp. 42–43; *see also id.* at 42 (citing Ex. 2013 ¶ 72).

In one aspect, Patent Owner argues that a POSITA would not combine Kitsch and Brocks, because both references disclose designs that “trap the genitals against the body, limiting the movement of the genitals to one extent or another” and “[n]either design surrounds the genitals as the ’974 Patent design to separate the genitals from the body and limit the movement of the genitals for comfort.” PO Resp. 44 (citing Ex. 2013 ¶ 75).

Yet, as Petitioner points out, claim 1 does not require the performance of these precise functions. *See* Pet. Reply 12 (citing Ex. 1001, claim 1; Ex. 1011, 98:8–100:4). Indeed, claim 1 is drawn to an apparatus; thus, it “cover[s] what a device *is*, not what a device *does*.” *Hewlett-Packard*, 909 F.2d at 1468. Therefore, even if accurate, Patent Owner characterizations of the functions of embodiments in Kitsch, Brocks, and the ’974 patent (*see* PO Resp. 44) do not bear upon whether the prior art combination would satisfy the structure of limitation 1[g]. Such intended uses as Patent Owner identifies (*see* PO Resp. 44), without a particular structural requirement, do not limit the claim. To the contrary, the alleged similar functions of Kitsch and Brocks support their combination — even if such functions differ from those performed by the ’974 patent embodiment, because, as the Supreme Court acknowledged, “the problem motivating the patentee may be only one

of many addressed by the patent’s subject matter” and “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR*, 550 U.S. at 420.

In another aspect of its argument, Patent Owner contends that Petitioner presents no viable reason to combine the teachings of Kitsch and Brocks, but instead uses the ’974 patent as a “roadmap.” *See* PO Resp. 44 (citing Pet. 25–27; Ex. 2013 ¶¶ 76–77); *see also id.* at 45 (citing Ex. 2013 ¶ 78), 45–46 (citing Ex. 2013 ¶ 79). “Kitsch already has a pouch,” Patent Owner argues, “so a POSITA would not need Brocks’ pouch or its elastic strips because the fences of Kitsch are intended to keep the genitals from contacting the legs or thighs”; thus, “Brocks does not add anything to Kitsch that Kitsch does not already do.” *Id.* at 46 (citing Ex. 2013 ¶ 80).

But, Patent Owner does not address the basic point of Petitioner’s argument. Specifically, Petitioner argues that employing Brocks’ gathering technique, with Kitsch’s teachings (specifically, the relationship of Kitsch’s side panels 12 to front panel/front walls 26 — which Petitioner maps to claim 1’s “stretch panel” and “front portion,” respectively), creates a more supportive pouch. *See* Pet. 26 (citing Ex. 1005 ¶ 70; Ex. 1007 ¶¶ 37–39). Indeed, Patent Owner argues that, even if the teachings of Kitsch and Brocks were combined, “the result would simply be a version of Kitsch with Kitsch’s side panels and Brocks’ elastic strips around the *legs*.” PO Resp. 46 (citing Ex. 2013 ¶ 80) (emphasis added). Yet, Petitioner does not argue that Kitsch should be modified, by applying Brocks’ exact disclosed use of applying elastic strips to the *leg openings* of an undergarment (*see* Ex. 1008, 3:23–4:14, Figs. 8, 9), in order to form “a secured leg opening

edge to assure that male genitals do not partially escape as is often the case with the standard briefs” (*id.* at 1:55–57). Instead, Petitioner argues that a person of ordinary skill in the art would have applied Brocks’ gathering/shirring technique to the connection of Kitsch’s side panels 12 to its front walls/front panel 26, in order add to the formation and supportive nature of Kitsch’s pouch, as discussed above. *See* Pet. 25–26; *see also* Pet. Reply 13 (citing Pet. 21–27; Ex. 1005 ¶¶ 68–72; Ex. 1008, 2:5–21, 3:23–4:14).

Rather than relying on alleged “hindsight,” Petitioner argues, a POSITA would use “the concept of attaching an elastic material in a stretched state to the front of underwear to help gather fabric and form a supportive pouch,” which “is expressly taught in Brocks,” such that “the motivations to combine Brocks with Kitsch come from the references and knowledge of a POSITA.” Pet. Reply 11 (citing Pet. 21–27; Ex. 1008, 2:5–21, 3:23–4:14); *see also id.* at 11–12 (citing Pet. 25–27; Ex. 1005 ¶¶ 68–72).

Petitioner’s arguments and evidence (including the testimony of Ms. Wagner) also demonstrate that a POSITA would have had “a reasonable expectation of achieving what is claimed in the patent-at-issue.” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016). Notably, Ms. Wagner testifies that Brocks’ gathering technique “is common in the industry to create shape or volume.” Ex. 1005 ¶ 66. Further, Petitioner points out that both Kitsch and Brocks are in the same technical field and that each forms a “pouch” capable of supporting male genitalia. *See* Pet. 21–22 (citing *id.* at 12–14, 20–21; Ex. 1008, Abstract); *see also* Ex. 1007 ¶¶ 2, 6, 7, 9, 26, 29–37, 40, 41; Ex. 1008, Abstract, 1:13–21; 2:5–

21; 4:1:13–22. Accordingly, Kitsch and Brocks have similar goals, with respect to formation of a secure pouch for containing the genitals, for which each reference discloses a distinct technical solution. Thus, a POSITA would have regarded the application of Brocks’ familiar and effective gathering technique to Kitsch’s side panels as a viable approach for improving a supportive pouch, and would have expected such combination of teachings to achieve the structural benefit used in Brocks. *See* Pet. 25–27 (citing, *inter alia*, Ex. 1005 ¶¶ 68–72). In other words, a POSITA would have had a reasonable expectation that the combination of Kitsch and Brocks, as discussed above, would result in what is recited in limitation 1[g].

Patent Owner seemingly purports to dispute that a POSITA would have had such a reasonable expectation of success in achieving the subject matter of limitation 1[g] (*see* PO Resp. 43), but no explanation is provided. Insofar as Patent Owner contends that neither Kitsch nor Brocks discloses a “design [that] surrounds the genitals as the ’974 Patent design to separate the genitals from the body and limit the movement of the genitals for comfort” (*id.* at 44 (citing Ex. 2013 ¶ 75)), the claim language does not require such features, for the reasons discussed above. An analysis of the reasonable expectation of success must be based upon a correct understanding of a claim’s scope. *See Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 962–66 (Fed. Cir. 2014).

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner shows, by a preponderance of the evidence, that Petitioner’s cited combination of Kitsch and Brocks satisfies limitation 1[g]. In particular, we determine that Petitioner sufficiently shows that a POSITA would have been motivated to

apply Brocks' gathering/shirring technique to Kitsch's arrangement of side panels 12 and front walls or front panel 26, together with the other features that Petitioner identifies, so as to achieve the subject matter of limitation 1[g] and would have had a reasonable expectation of success in doing so.

vii. Petitioner Establishes the Unpatentability of Claim 1 Under Ground 1

In view of the foregoing analysis (addressing the individual limitations of claim 1), Petitioner sufficiently demonstrates the unpatentability of independent claim 1, by a preponderance of the evidence. Petitioner sufficiently shows that the combined identified teachings of Kitsch and Brocks satisfy all of claim 1's limitations and that a POSITA would have combined such teachings with a reasonable expectation of success.

b. Dependent Claims in Ground 1

Further to Petitioner's arguments for the unpatentability of independent claim 1, Petitioner also argues that each of the remaining claims in Ground 1 is unpatentable for the additional reasons addressed below.

For the reasons provided below, we determine that Petitioner sufficiently demonstrates the unpatentability of claims 2, 5–13, and 15, by a preponderance of the evidence, and that Petitioner does not sufficiently demonstrate the unpatentability of claims 3, 4, and 16, by a preponderance of the evidence.

i. Claim 2

Claim 2 recites:

A male garment according to claim 1 wherein the stretch panel has asymmetrical stretch characteristics such that the stretch panel stretches more easily in a direction parallel to the waistband and less easily in a direction at right angles to the waistband.

Petitioner argues (relying on the supporting testimony of Ms. Wagner) that claim 2 is unpatentable as obvious over the combination of Kitsch and Brocks. *See* Pet. 27–29 (citing, *inter alia*, Ex. 1005 ¶¶ 73–78). Petitioner argues that Brocks teaches the use of materials, for men’s underwear, having asymmetrical stretch characteristics, whereby the underwear stretches more easily laterally (i.e., parallel to the waistband) and less easily longitudinally (i.e., at right angles to the waistband). *Id.* at 27 (citing Ex. 1008, 1:23–32).

Petitioner argues (relying on Ms. Wagner’s testimony) that it would have been obvious for a person of ordinary skill in the art to apply Brocks’ teaching, of using asymmetrical stretch material, to the identified “stretch panel” of Kitsch, in order to reduce the risk of tearing the stretch panel, and that a person of ordinary skill in the art would have been motivated to combine Brocks’ teaching, and expected its successful implementation, in order to help accommodate forces placed on the underwear during use, as well as to ensure that Kitsch’s stretch panel would not prevent the body material from stretching to accommodate the wearer’s body. *See* Pet. 27–28 (citing Ex. 1005 ¶¶ 74–77).

Petitioner also argues that it would have been obvious for a person of ordinary skill in the art to apply an asymmetrical stretch material to Kitsch, because a person of ordinary skill in the art would have known that elastic

material, such as that in Kitsch, must have either symmetrical stretch (e.g., stretches the same in all directions) or asymmetrical stretch (e.g., stretches more in one direction than another), and “would have found it obvious to try asymmetrical stretch material, as it would have been only one of two known options and it would have accounted for needing more stretch in the direction of the waistband when the underwear is opened up to be put on.” Pet. 28–29 (citing Ex. 1005 ¶ 78). Petitioner argues that such a modification of Kitsch “would have been a simple, well-known way to implement or construct the four-by-four stretch weave side panels disclosed in Kitsch, which would continue to function as before, only now the wearer could stretch the underwear more in the lateral direction.” *Id.* at 29 (citing Ex. 1005 ¶ 78).

Patent Owner argues (relying on the testimony of Mr. Kahn) that Petitioner’s proposed combination of Kitsch with Brocks does not render claim 2 unpatentable, because “Kitsch does not disclose an asymmetrical stretch characteristic” and because “Kitsch does not stretch parallel to the waistband because [Kitsch’s] side panels are orthogonal to the waistband.” PO Resp. 57 (citing Ex. 2013 ¶ 82).

Yet, Petitioner does not contend that Kitsch discloses an asymmetrical stretch characteristic. Rather, Petitioner argues that it would have been obvious for a POSITA to have modified Kitsch to include the asymmetric stretch characteristic, and the other features of claim 2 — either in view of Brocks’ teaching, or in view of the knowledge of a POSITA.

Critically, Patent Owner does not address Brocks’ disclosure of material having an asymmetrical stretch characteristic, and its use in

undergarments — the prior art teaching that Petitioner relies upon, as discussed above.

Having considered of all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’ teachings, so as to achieve the subject matter of claim 2 with a reasonable expectation of success.

ii. Claim 3

Claim 3 recites: “A male garment according to claim 1 wherein the stretch panel is rectangular and the opening is U-shaped.”

Petitioner argues (relying on the testimony of Ms. Wagner) that Kitsch in view of Brocks renders claim 3 obvious. *See* Pet. 29 (citing Ex. 1005 ¶¶ 79–80).

Petitioner states that the ’974 patent “indicates that its stretch panel 22 can be ‘generally rectangular,’ with a U-shaped opening, as shown, for example, in Figures 3 and 9.” Pet. 29 (citing Ex. 1001, 4:47–48, Figs. 3, 9). Petitioner argues that “Kitsch’s side panels 12 (*e.g.*, ‘stretch panel’) form a similar rectangular shape, with substantially parallel sides and top and bottom edges,” and that “the opening between side panels 12 is generally U-shaped, following the shape of front panel 18 along seams 26a that attach side panels 12 to “pear-shaped” pouch compartment 18.” *Id.* at 29–30 (citing Ex. 1007 ¶¶ 26–29, 36–39, Figs. 2, 3, 8).

Disputing Petitioner’s position, Patent Owner argues that Kitsch “does not disclose a stretch panel” and that Kitsch’s side panels “are not

rectangular,” but are, instead, “sort of boomerang shaped” (referring to Ex. 1007, Fig. 14). PO Resp. 58 (citing Ex. 2013 ¶ 83); *see also id.* (citing Ex. 1012, 102:8–9). Further, Patent Owner contends that “[t]here is no opening of any kind in the side panels of Kitsch, so there necessarily is no U-Shaped opening.” *Id.*

The '974 patent states that “[i]n the illustrated embodiment, stretch panel 22 is generally rectangular.” Ex. 1001, 4:47–48. Figures 3–8 of the patent show stretch panel 22, viewed from various perspectives of an assembled three-dimensional garment, as-worn, but Figure 9, reproduced below, offers a more direct view of a stretch panel.

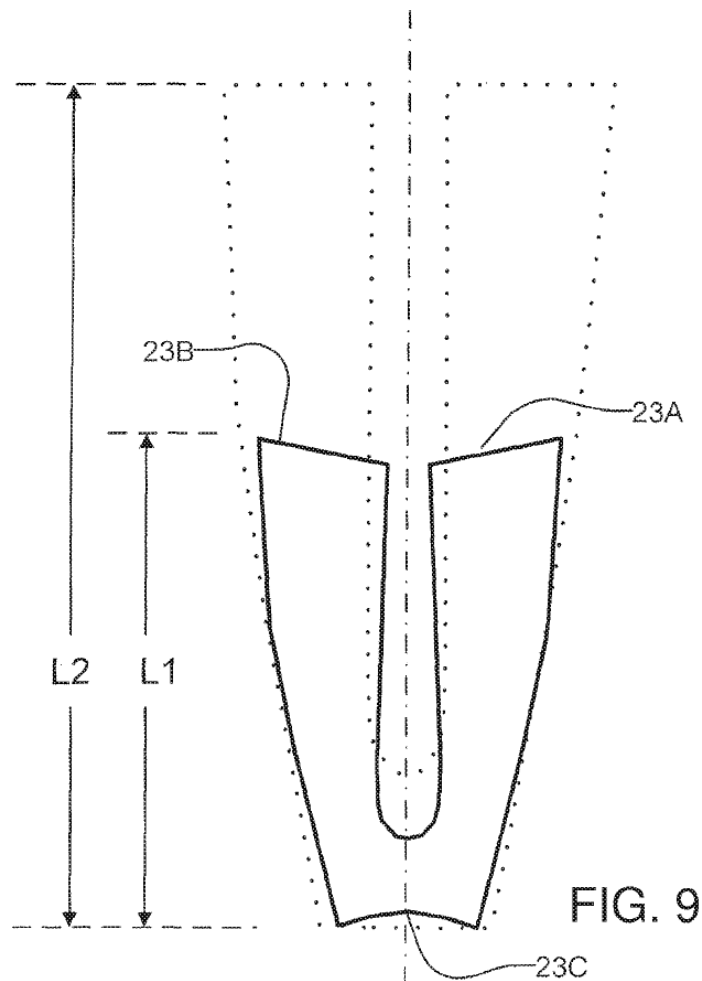


Figure 9 of the '974 patent “shows a stretch panel before and during being sewn into a garment.” *Id.* at 2:17–18. The representation in Figure 9 does not conform to a geometrically precise depiction of a “rectangle,” but it does have some straight sides with corners that form angles.

Petitioner (*see* Pet. 29–30) cites Figures 3, 8, and 9 of Kitsch, which depict side panels 12 from a variety of different perspectives, and in a variety of different configurations, which do not permit a clear sense of their shape. By contrast, Kitsch’s Figure 14, reproduced below, provides “a diagrammatic view of a pattern template of one of the side panels of the briefs of the present invention.” Ex. 1007 ¶ 25.

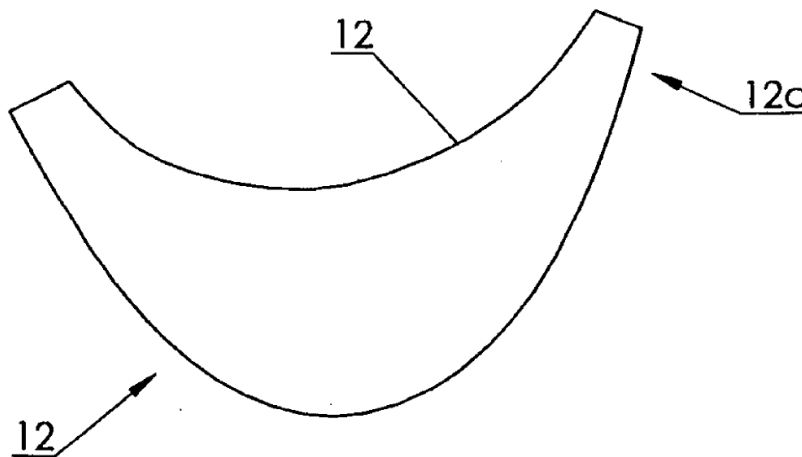


FIG 14

Kitsch’s Figure 14 shows “[a]n example of the side panel 12.” *Id.* ¶ 41. Kitsch also states that “[t]he side panels may be scimitar-shaped when viewed from the side” (*id.* ¶ 9)—a description that would apply to the embodiment in Figure 14.

Petitioner’s Reply criticizes Patent Owner’s arguments relating to Kitsch’s side panels, because Patent Owner does not address the appearance

of the side panels “as installed together in the underwear,” whereupon “they have a generally rectangular shape.” Pet. Reply 18–19 (citing Ex. 1005 ¶¶ 79–80). Although some particular vantage point might, perhaps, create such a “rectangular” appearance, it should be noted that Kitsch describes assembled side panels as “form[ing], along with the pouch, . . . a crescent half-moon-shaped basket.” Ex. 1007 ¶ 9.

As discussed above, the ’974 patent does not appear to use the term “rectangular” in a strict geometrical sense. Yet, the ’974 patent Specification applies the term “rectangular” to shapes that, at least, possess attributes of a polygon, having primarily straight exterior sides and angles at the corners. The “scimitar-shaped” side panels of Kitsch do not conform to the boundaries of claim 3 and Petitioner does not argue that a POSITA would have modified the side panels, in order to do so.

In view of the foregoing, and all the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner does not establish that the combination of Kitsch and Brocks satisfies the limitations of claim 3, by a preponderance of the evidence.

iii. Claim 4

Claim 4 recites: “A male garment according to claim 3 wherein the stretch panel comprises a fabric having a stretch of at least 30%.”

Relying on the testimony of Ms. Wagner — who applied a method, described in the ’974 patent, for determining a percentage of stretch (*see* Ex. 1005 ¶¶ 82–83 (citing, *inter alia*, Ex. 1001, 5:29–45)) — Petitioner argues that the combination of Kitsch and Brocks renders claim 4 unpatentable. *See* Pet. 30–32.

Patent Owner disputes Petitioner’s argument. *See* PO Resp. 58–59.

Notably, claim 4 depends from (and includes all limitations of) claim 3, which is addressed in the previous section. Because Petitioner does not sufficiently establish that the combination of Kitsch and Brocks satisfies the limitations of claim 3, by a preponderance of the evidence, Petitioner also does not do so for claim 4.

iv. Claim 5

Claim 5 recites:

A male garment according to claim 1 wherein the top location is the waistband seam and the bottom location is the first seam, and a length measured along material of the front portion from the first seam to the waistband seam exceeds a length measured along the fabric of the stretch panel, when unstretched, by at least 30%.

Further to Petitioner’s analysis for base claim 1, Petitioner maps the features of claim 5 to various structures in Kitsch, and argues that the “stretch panel” — resulting from the combination of Kitsch and Brocks — “exceed[s] a length measured along the fabric of the stretch panel, when unstretched, by at least 30%,” based upon Ms. Wagner’s analysis of Brocks’ teachings (including the foregoing analysis cited in relation to the claim 3 of the ’974 patent) that are used in the combination. *See* Pet. 33–35 (citing, *inter alia*, Ex. 1005 ¶¶ 84, 87); *see also id.* at 30–32; Ex. 1005 ¶¶ 82–88.

Disputing Petitioner’s position, Patent Owner argues that “there is no disclosure in Brocks indicating to a POSITA that a fabric should have at least 30% stretch.” PO Resp. 59 (citing Ex. 1001, 5:29–45; Ex. 2013 ¶ 85).

Contrary to Patent Owner’s assertion, Brocks describes, e.g., “a pair of concave lower edges which make up a portion of the leg openings,” wherein

[t]he concave edges are provided with elastic strips which in their unstretched condition are approximately $\frac{2}{3}$ the length of the concave edges. The elastic strips are each stretched to the length of the concave edges and then secured thereto. With the contraction of the elastic strips, a shirring takes place on the panels forming a genital pouch and secure leg openings.

Ex. 1008, Abstract. In view of Ms. Wagner’s analysis, (e.g., Ex. 1005 ¶¶ 82–88), we determine that Brocks sufficiently discloses the “at least 30%” stretch feature of claim 5. Further, a POSITA would have implemented such fabric, in combining the identified teachings of Kitsch and Brocks, in order to facilitate that gathering of material needed to form a sufficient pouch. *See* Pet. 30, 32, 34–35 (citing, *inter alia*, Ex. 1005 ¶¶ 81, 83, 87, 88).

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’ teachings, so as to achieve the subject matter of claim 5 with a reasonable expectation of success.

v. *Claim 6*

Claim 6 recites: “A male garment according to claim 1 wherein the garment is a pair of undershorts.”

Petitioner argues that “Kitsch in view of Brocks renders obvious Claim 6,” because “Kitsch’s garment is ‘an underwear garment for use by a male.’” Pet. 35 (citing Ex. 1005 ¶ 89; Ex. 1007, Abstract, ¶¶ 2, 6–7).

In response, Patent Owner argues that, because “Kitsch and Brocks fail to render obvious Claim 1,” the combination of these references cannot render claim 6 obvious. PO Resp. 60 (citing Ex. 2013 ¶¶ 81, 86). In other words, Patent Owner does not dispute Petitioner’s argument that the cited references teach or suggest the limitation added by claim 6.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’ teachings, so as to achieve the subject matter of claim 6 with a reasonable expectation of success.

vi. Claim 7

Claim 7 recites: “A male garment according to claim 1 wherein the stretch panel comprises a fabric different from a fabric of the body.”

Petitioner argues that “Kitsch in view of Brocks renders obvious Claim 7,” because Kitsch discloses that “(a) the side panels forming the stretch panel may be made from material ‘containing 80% Nylon™ and 20% Spandex™’ and (b) the body may be made of 82% polyester and 18% Spandex™, or a combination of 82% polyester/18% Spandex™ fabric and 92% cotton, 8% Spandex™ fabric.” Pet. 35 (citing Ex. 1005 ¶ 90; Ex. 1007 ¶¶ 25–26).

Disputing Petitioner’s position, Patent Owner argues that, because “Kitsch and Brocks fail to render obvious Claim 1,” the combination of these references cannot render claim 7 obvious. PO Resp. 60 (citing Ex. 2013 ¶¶ 81, 86). In other words, Patent Owner does not dispute Petitioner’s argument that the cited references teach or suggest the limitation added by claim 7.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’ teachings, so as to achieve the subject matter of claim 7 with a reasonable expectation of success.

vii. Claim 8

Claim 8 recites: “A male garment according to claim 1 wherein the opening has a width in excess of 2 cm.”

Petitioner argues that “Kitsch in view of Brocks renders obvious Claim 8,” because — in view of Ms. Wagner’s analysis of Kitsch and her assessment of the dimensional requirements of Kitsch’s embodiments — a POSITA would have understood that the lateral spacing between Kitsch’s side panels 12 would exceed 2 cm. Pet. 35–36 (citing Ex. 1005 ¶ 91; Ex. 1007, Abstract, ¶¶ 6–9, 26, 27, 36–40, Figs. 3, 7, 8).

In response, Patent Owner argues that “[t]here is no stretch panel with an opening disclosed in Kitsch”; therefore, “[a] POSITA looking at Kitsch would not think about an opening and thus would not arrive at a 2 cm width for a non-disclosed opening.” PO Resp. 60 (citing Ex. 2013 ¶ 88). In other

words — aside from the question of whether Kitsch discloses a “stretch panel” with an “opening,” per claim 1 — Patent Owner does not dispute Ms. Wagner’s determination that a POSITA would have understood the lateral spacing, between Kitsch’s side panels, would have exceeded 2 cm.

Having considered all of the parties’ arguments and evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’ teachings, so as to achieve the subject matter of claim 8 with a reasonable expectation of success.

viii. Claim 9

Claim 9 recites:

A male garment according to claim 1 wherein:

the front portion depends downwardly from the waistband and the front portion is formed to provide the pouch at a mid-section thereof; the stretch panel is positioned to be disposed forward of the wearer’s perineum when the garment is worn, whereby, in use, a scrotum of the wearer of the garment is supported underneath by the stretch panel to contain the wearer’s penis and scrotum in the pouch.

Petitioner argues that “Kitsch in view of Brocks renders obvious Claim 9,” because — in view of Ms. Wagner’s analysis of Kitsch’s embodiments — a POSITA would have understood that Kitsch discloses the structures recited in claim 9. Pet. 36–38 (citing Ex. 1005 ¶ 92; Ex. 1007, Abstract, ¶¶ 7–9, 26–34, 36–41, Figs. 1, 3, 7, 8, claim 1).

Patent Owner does not address the subject matter added in claim 9. Rather, referring to the argument presented for claim 1, Patent Owner states

that “Kitsch does not disclose a stretch panel as disclosed and claimed in the ‘974 Patent.” PO Resp. 61.

Having considered all of the parties’ arguments and evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’ teachings, so as to achieve the subject matter of claim 9 with a reasonable expectation of success.

ix. Claim 10

Claim 10 recites: “A male garment according to claim 1, wherein the elastically resilient four-way stretch material is comprised of a spandex blend.”

Petitioner argues that “Kitsch in view of Brocks renders obvious Claim 10,” because “Kitsch discloses that side panel 12 elastically resilient four-way stretch material is a spandex blend ‘containing 80% Nylon™ and 20% Spandex™.’” Pet. 39 (citing Ex. 1005 ¶ 98; Ex. 1007 ¶ 30).

In response, Patent Owner states that, “[w]hile Kitsch discloses Spandex, Kitsch and Brocks fail to render obvious Claim 1, so they fail to render Claim 10 obvious” (PO Resp. 62 (citing Ex. 2013 ¶ 90)), but Patent Owner does not address whether Kitsch discloses the subject matter recited in claim 10.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’

teachings, so as to achieve the subject matter of claim 10 with a reasonable expectation of success.

x. Claim 11

Claim 11 recites:

A male garment according to claim 1, wherein the stretch panel is fastened to the front portion while in a pre-stretched condition while the front portion is less stretched, whereby the stretch panel is biased to hold the opening open while the garment is held in position to be put on.

Petitioner argues that “Kitsch in view of Brocks renders obvious Claim 11,” because — as articulated in the supporting testimony of Ms. Wagner — the application of Brocks’ gathering technique to the disposition of Kitsch’s side panels 12 (i.e., the recited “stretch panel”) would result in the structure recited in claim 11. Pet. 39–41 (citing Ex. 1005 ¶¶ 99–102; Ex. 1007 ¶¶ 26–27, 37–39, Figs. 3, 7, 8; Ex. 1008, 1:64–2:21, 3:24–4:14). Petitioner explains:

[Kitsch’s] elastic side panels, attached while stretched, would be biased to hold the opening open while the garment is held in position to be put on (*e.g.*, the stretched elastic side panels would maintain the lateral space between them that provides the opening into the pouch having sufficient volume to receive the genitals).

Id. at 40 (citing Ex. 1005 ¶ 102); *see also* Ex. 1005 ¶ 102 (“[A]s shown in Figures 3 and 8 of Kitsch, the stretched elastic side panels would be biased to hold the opening between them into the pouch open when a wearer puts the underwear on (*e.g.*, the stretch panels do not overlap each other or otherwise lay so they cover or block the opening into the pouch, but instead

stretch and define the opening between them.”) (citing Ex. 1007 ¶¶ 26, 27, 37–39, Figs. 3, 7, 8).

Patent Owner argues that “Brocks does not disclose a stretch panel, nor does Brocks disclose an opening”; “[t]herefore, Brocks does not disclose biasing the stretch panel to hold the opening open,” and “Kitsch does not disclose a stretch panel with an opening.” PO Resp. 62–63 (citing *id.* at 11–13, 28–33, 41–42). “As a result,” Patent Owner argues, “neither Kitsch nor Carrillo in view of Brocks renders Claim 11 obvious.” *Id.* at 63 (citing Ex. 2013 ¶¶ 81, 91, 117, 126).

However, Petitioner does not contend that Brocks discloses the recited “stretch panel” or its “opening”; Petitioner maps these features of independent claim 1 to Kitsch, as discussed above. Further, Patent Owner does not address — let alone, dispute — the structure achieved by Petitioner’s proposed combination and coordination of features taught in Kitsch and Brocks.

Having considered all of the parties arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’ teachings, so as to achieve the subject matter of claim 11 with a reasonable expectation of success.

xi. Claim 12

Claim 12 recites:

A male garment according to claim 11, wherein the front portion is attached to a rear portion of the body that depends from the waistband at a seam disposed forward of the perineum

region of the wearer, and wherein a bottom edge of the stretch panel is fastened to the seam.

Petitioner argues that the combination of Kitsch and Brocks renders claim 12 obvious, mapping — in view of the supporting testimony of Ms. Wagner — claim 12’s limitations to Kitsch. Pet. 41–43 (citing Ex. 1005 ¶ 103; Ex. 1007 ¶¶ 35–41, Figs. 3, 7, 8).

In response, Patent Owner refers to arguments presented for claim 1, asserting that Kitsch lacks the “stretch panel as disclosed and claimed in the ’974 Patent” and that Petitioner does not present a sufficient reason to combine Kitsch with Brocks. PO Resp. 63–64.

However, Patent Owner does not address any of the additional limitations of claim 12.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’ teachings, so as to achieve the subject matter of claim 12 with a reasonable expectation of success.

xii. Claim 13

Claim 13 recites: “A male garment according to claim 1 wherein the opening has a U-shape when the stretch panel is in a relaxed state.”

Petitioner argues that “Kitsch in view of Brocks renders obvious Claim 13,” because — in view of the supporting testimony of Ms. Wagner — Kitsch discloses the limitations added by claim 13. Pet. 43–44 (citing Ex. 1005 ¶ 104; Ex. 1007 ¶¶ 29, 36–39, Figs. 1, 3, 8).

In response, Patent Owner does not address any of the limitations added by claim 13, stating only that, because “Kitsch and Brocks fail to render obvious Claim 1,” the combination of these references cannot render claim 13 obvious. PO Resp. 60 (citing Ex. 2013 ¶¶ 81, 86).

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Kitsch, in view of Brocks’ teachings, so as to achieve the subject matter of claim 13 with a reasonable expectation of success.

xiii. Claim 15

Claim 15 recites: “A male garment according to claim 1 wherein the pouch comprises a dart seam stitched along a bottom portion of the pouch and centrally to provide extra volume in front of and underneath the genitals of the wearer.”

Petitioner argues that Kitsch in view of Brocks renders obvious Claim 15,” mapping the limitations added in claim 15 to Kitsch, in view of the supporting testimony of Ms. Wagner. Pet. 44–45 (citing Ex. 1005 ¶¶ 105–107; Ex. 1007 ¶¶ 29, 30, 36–40, Figs. 2, 3, 8, 9).

In response, Patent Owner states that, “[w]hile Kitsch may disclose a dart seam, Kitsch and Brocks fail to render obvious Claim 1, so they fail to render Claim 15 obvious. PO Resp. 64 (citing Ex. 2013 ¶ 93).

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been

obvious for a POSITA to have modified Kitsch, in view of Brocks' teachings, so as to achieve the subject matter of claim 15 with a reasonable expectation of success.

xiv. Claim 16

Claim 16 recites: "A male garment according to claim 1 wherein the stretch panel is rectangular and the opening has a rounded bottom edge and opposing side edges that are spaced apart from one another on either side of the opening."

Petitioner argues — in view of Ms. Wagner's supporting testimony — that "Kitsch in view of Brocks renders obvious Claim 16," because "Kitsch's side panels 12 (*e.g.*, 'stretch panel') form a rectangular shape, with substantially parallel, spaced apart opposing side edges on either side of the opening, a top edge, and a bottom edge along curved seam 30a" and "[t]he bottom of the opening between side panels 12 has a rounded bottom edge, following the curve of seam 30a." Pet. 45–47 (citing Ex. 1005 ¶ 108; Ex. 1007 ¶¶ 26–29, 36–40, Figs. 2, 3, 8).

Referring to its argument for claim 3, Patent Owner states that, "while Kitsch does disclose side panels, they are not rectangular," but are, instead "boomerang shaped"; additionally, Patent Owner argues that "there is no opening of any kind in the side panels of Kitsch, so there necessarily is no opening with a rounded bottom edge." PO Resp. 65 (citing Ex. 2013 ¶¶ 81, 94).

For the reasons stated, above, regarding claim 3 (which, like claim 16, recites, in part, "wherein the stretch panel is rectangular") we determine, in view of all the parties' arguments and evidence, that Petitioner does not

establish that the combination of Kitsch and Brocks satisfies the limitations of claim 16, by a preponderance of the evidence.

2. Ground 2a

For the reasons provided below, having considered all of the parties' arguments and evidence (including expert testimony) for claims 1–9, 11, 13, and 16, in Ground 2a, we determine that Petitioner sufficiently demonstrates the unpatentability of claims 1–9, 11, 13, and 16, by a preponderance of the evidence.

a. Claim 1

According to Ground 2a, as to claim 1 of the '974 patent, using Petitioner's identification scheme (*see* Pet. 47–60), Petitioner argues (relying on the testimony of Ms. Wagner) that Carrillo teaches and/or renders obvious each of limitations 1[pre], 1[a], 1[b], 1[c], 1[c], 1[d], 1[e], and 1[f] (*see id.* at 47–60), and that the combination of Carrillo and Brocks satisfies limitation 1[g] (*see id.* at 60–66).

Patent Owner (relying on the testimony of Mr. Kahn) argues that Carrillo does not disclose limitation 1[d] and that Kitsch and Brocks do not satisfy limitation 1[g]. *See* PO Resp. 47–56.

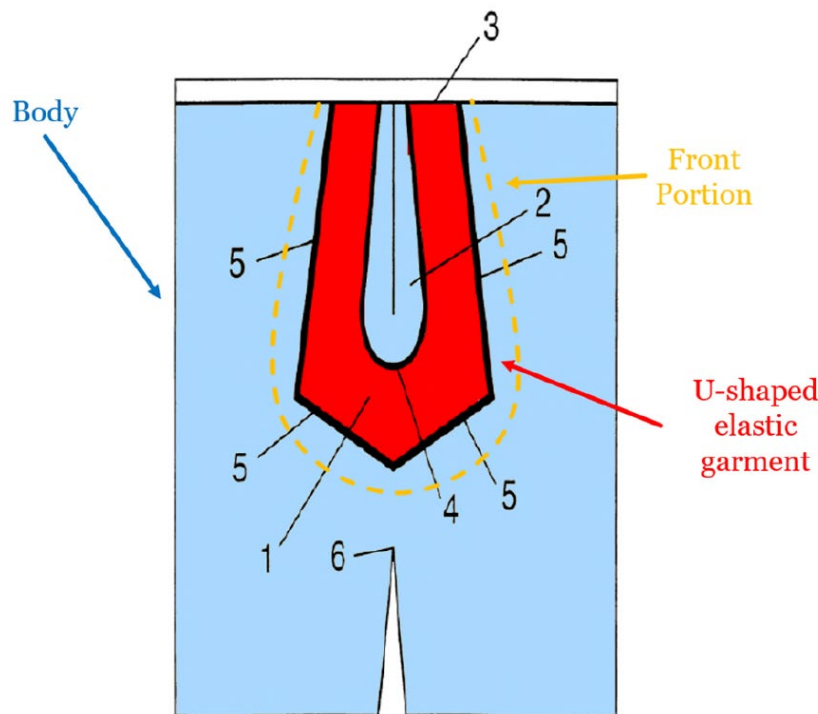
i. Undisputed Limitations 1[pre], 1[a], 1[b], 1[c], 1[e], and 1[f]

In view of Petitioner's undisputed arguments and supporting evidence (including the testimony of Ms. Wagner), we determine that a preponderance of the evidence supports Petitioner's position that Kitsch teaches or suggests each of **limitations 1[pre], 1[a], 1[b], 1[c], 1[e], and 1[f]**. *See* Pet. 47–51, 54–60.

Notably, Petitioner argues that Carrillo (Ex. 1010) discloses a “male garment” (limitation 1[pre]) having “a body including a front portion and having leg openings for a wearer’s legs” (limitation 1[a]), with a “waistband attached by a waistband seam at an upper edge of the body” (limitation 1[b]). *See* Pet. 47–49 (citing Ex. 1005 ¶¶ 113–116; Ex. 1010). Petitioner states that Carrillo discloses

a body of “classic underpants” such as “classic briefs.” (Carrillo [Ex. 1010], Abstract, 2; *see also* 1–3; Wagner Decl. [Ex. 1005], ¶ 115.) The underwear body has a front portion, as it has an “inner front part of the underwear” to which an elastic garment 1 is sewn. (Carrillo [Ex. 1010], Abstract, 2–3.) The body further includes leg openings for the wearer’s legs. (Carrillo [Ex. 1010], Fig., Abstract, 1–3; Wagner Decl. [Ex. 1005], ¶ 115.)

Id. at 47. Petitioner’s identifies certain of these elements in an annotated version of Carrillo’s Figure (reproduced below). *Id.* at 48.



Petitioner’s annotated version of Carrillo’s Figure depicts, *inter alia*, a view of Carrillo’s “U-shaped elastic garment (1) sewn to the inner front part of standard briefs” (Ex. 1010, 2), which is shaded red. Pet. 48.

Petitioner maps the “stretch panel” of the ’974 patent’s limitation 1[c] to Carrillo’s U-shaped elastic garment. Pet. 49–51 (citing Ex. 1005 ¶¶ 117–118, Ex. 1010, Abstract, 2–3).

Patent Owner does not dispute the foregoing mapping of the ’974 patent’s limitations 1[pre], 1[a], 1[b], and 1[c] to Carrillo. *See* PO Resp. 47–56 (addressing only limitations 1[d] and 1[f]). Nor does Patent Owner (*see id.*) dispute Petitioner’s argument that Carrillo discloses limitation 1[e] (reciting the “attach[ment]” of the various “edges” of the “stretch panel” to particular locations of the “body,” as well as the “opening” in the “stretch panel”) and 1[f] (“the stretch panel being resiliently elastic both in a direction between the top edge and the bottom edge and in a direction between the side edges”). *See* Pet. 54–60 (citing Ex. 1005; Ex. 1010).

Below, we address the parties’ arguments and disputes regarding the remaining limitations of claim 1 (limitations 1[d] and 1[g]).

ii. Limitation 1[d]

Limitation 1[d] recites “the stretch panel comprising a sheet of elastically resilient four-way stretch material.”

Petitioner argues (in view of Ms. Wagner’s testimony) that Carrillo “discloses and renders obvious” limitation 1[d]. Pet. 51 (citing Ex. 1005 ¶¶ 119–120); *see also id.* at 52–54 (citing Ex. 1005 ¶¶ 121–126).

First, Petitioner argues that a person of ordinary skill in the art “would have understood, both from Carrillo and the knowledge of a POSITA at the

time of the alleged invention, that this elastic material is a ‘four way stretch’ material,” in view of the arrangement of Carrillo’s elastic garment 1 (i.e., being sewn to the inside front of underwear) that would require the elastic garment 1 to stretch “in all directions (up and down, left and right),” in order to accommodate the wearer’s movements, and to perform Carrillo’s described function of pulling the “intimate parts” forward. Pet. 51–53 (citing Ex. 1005 ¶¶ 121–123; Ex. 1010, 1–3). Indeed, Petitioner notes that “a POSITA would recognize” that Carrillo’s elastic garment 1 “must stretch at least in the same direction as the waistband; otherwise, it would prevent the waistband from stretching when a wearer pulls on the underwear.” *Id.* at 52 (citing Ex. 1005 ¶¶ 121–122). Likewise, “a POSITA would have understood the elastic material would have at least some stretch in a direction perpendicular to the waistband,” to prevent tearing or bunching “as the front material stretches or is put under tension as the wearer moves.” *Id.* (citing Ex. 1005 ¶¶ 121–122). Further, as Ms. Wagner states, because Carrillo’s elastic garment 1 is sewn to underwear, “[t]he stitching might . . . break if the elastic did not stretch.” Ex. 1005 ¶ 122.

“Additionally,” Petitioner argues that “it would have been obvious to a POSITA for the ‘U-shaped elastic garment’ to be made of four-way elastic material (that is, to be able to stretch both up and down and left and right),” because the use of four-way stretch material would have been one of the only two known options (the other being two-way stretch material), and because “[a] POSITA would have been motivated to use four-way stretch material to provide greater flexibility in all directions, so the elastic garment could more easily move and adjust with the underwear as a wearer moves,” as well as preventing the underwear from bunching or tearing. Pet. 53

(citing Ex. 1005 ¶¶ 124–25). Further, Petitioner argues that “[a] POSITA would have had a reasonable expectation of success in using four-way stretch material for the elastic garment,” because the use of such materials was well-known and commonly used in the art for their moisture-wicking properties, breathability, and comfort — thereby addressing Carrillo’s stated aims of providing ventilation, avoiding friction and poor positioning of the genitalia. *Id.* at 53–54 (citing Ex. 1005 ¶ 126; Ex. 1010, 1).

Disputing Petitioner’s arguments regarding limitation 1[d], Patent Owner argues that a person of ordinary skill in the art would

likely have concluded that the fabric of Carrillo needed to be compatible with the fabric of the garments to which Carrillo’s garment is sewn, which most likely would have consisted of hydrophilic fiber fabrics, *not* Nylon-Spandex blend and polyester-Spandex blend.

PO Resp. 47 (citing Ex. 2013 ¶ 96) (emphasis added). Patent Owner argues that “Nylon-Spandex and Polyester-Spandex blends of any percentage are entirely hydrophobic fiber fabrics,” which are “moisture-repelling, not moisture-attracting fibers” that “do not have moisture wicking characteristics, are not ‘breathable’, and are therefore less comfortable than hydrophilic fiber fabrics”; hence, “[t]here is no reason a POSITA would have understood Carrillo taught a hydrophobic fabric for its insert.” *Id.* at 47–48 (citing Ex. 2013 ¶ 97).

Patent Owner argues that Petitioner’s analysis relies upon hindsight reconstruction, because

[t]he fact that Carrillo discloses something to be stitched to the front of a garment would not lead a POSITA to assume anything about the stretch characteristics of such material. [Ex. 2013 ¶ 98]. A POSITA would know that the fabric need

only stretch moderately, and in only one direction, to function.
Id.

PO Resp. 48. Indeed, Patent Owner contends:

If Carrillo’s accessory was stitched to the waistband as shown in his figure, it would not need to stretch at all, as it is only connected for only several inches along the waistband. The elastic waistband itself would stretch more than adequately for a wearer to pull the underwear on comfortably, which negates the necessity for any particular amount of horizontal stretch in the Carrillo accessory.

Id. (citing Ex. 2013 ¶ 99).

However, Patent Owner’s argument is at odds with Carrillo’s manifest disclosure of elastic material in its “U-shaped *elastic* garment.” *See* Ex. 1010, 2 (emphasis added).

Furthermore, in view of Carrillo’s explicit disclosure of elastic material, a POSITA would have regarded Carrillo as employing four-way stretch material, and would have been motivated to use four-way stretch material, in implementing Carrillo’s teachings of a U-shaped elastic garment — for the reasons that Petitioner identifies, relying on Ms. Wagner’s testimony. *See* Pet. 51–54; Ex. 1005 ¶¶ 120–125.

Moreover, Patent Owner does not dispute Petitioner’s sufficiently supported statement that there are only two possibilities for such an elastic material: two-way stretch or four-way stretch. *See* Pet. 53 (citing Ex. 1005 ¶ 124). Hence, Petitioner’s argument constitutes a proper application of the so-called “design choice” basis for combining or modifying referenced teachings, which follows from a factual determination, such as the present one, that there are only a finite number of known techniques for accomplishing a particular purpose. *See Uber Techs., Inc. v. X One, Inc.*,

957 F.3d 1334, 1340 (Fed. Cir. 2020) (“Okubo’s terminal-side plotting and Konishi’s server-side plotting were both well known in the art, and were the only two identified, predictable solutions for transmitting a map and plotting locations, it would have been obvious to substitute server-side plotting for terminal-side plotting in a combination of Okubo and Konishi.”); *Ex parte Smith*, Appeal 2007-1925, at 19 (BPAI June 25, 2007) (precedential) (“[T]he disputed claim limitation of ‘continuous two-ply seams’ and the function it performs — to create a pocket — are identical between the claimed invention and the prior art. Thus, the selection of the continuous two-ply seam of Dick over the folded seam of Wyant represents an obvious choice within the skill of the art, *i.e.*, a choice between known viable alternatives.”)

In addition, there is some reason to doubt whether the qualities of elasticity, breathability, and wicking are incompatible features for fabrics, as Patent Owner contends (*see* PO Resp. 47) — at least with regard to the demands of the undergarment techniques at issue. Indeed, the Kitsch reference refers to a “breathable pouch which includes elasticized breathable wicking mesh material side panels . . . which wick away moisture and provides superior comfort.” Ex. 1007 ¶ 6; *see also id.* ¶ 28 (“The side panels are preferably thin sheets of elasticized breathable wicking mesh knit.”)

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner shows, by a preponderance of the evidence, that the U-shaped elastic garment, taught in Carrillo, satisfies limitation 1[d] and, in addition, that a POSITA would have employed “elastically resilient four-way stretch material” in

Carrillo's U-shaped elastic garment, so as to achieve the subject matter of limitation 1[d] with a reasonable expectation of success.

iii. Limitation 1[g]

Limitation 1[g] recites:

the stretch panel having a length when unstretched smaller than a length measured along the front portion between the top and bottom locations and a width when unstretched smaller than a width measured along the front portion between the side seams such that the front portion is gathered from side-to-side and top-to-bottom by the stretch panel and defines a three-dimensional pouch between the stretch panel and the front portion for receiving the wearer's genitals and holding the wearer's genitals while the garment is being worn.

Petitioner argues (in view of Ms. Wagner's testimony) that the combination of Carrillo with Brocks satisfies limitation 1[g]. *See* Pet. 60–66 (citing, *inter alia*, Ex. 1005 ¶¶ 133–141). Petitioner's arguments, in this regard, are nearly identical to those that Petitioner presents in Ground 1, for combining Kitsch with Brocks, in order to satisfy limitation 1[g]. *See id.* at 21–27 (citing Ex. 1005 ¶¶ 63–72). The issues involved in combining the teachings of Kitsch with those of Brocks are substantially the same as those involved in combining Carrillo's teachings with those of Brocks — and Petitioner relies upon identical disclosures of Brocks, and essentially identical arguments, in both instances. *See id.* at 21–27, 60–66. We do not repeat all of that discussion, here, although the previous Kitsch/Brocks analysis applies equally to the combination of Brocks with Carrillo.

As in Ground 1, Petitioner explains that a POSITA would have applied Brocks' gathering/shirring technique, in order to improve a prior art embodiment — Carrillo in Ground 2a:

A POSITA would have been motivated to modify Carrillo, as taught by Brocks, to sew the U-shaped elastic garment to the front part of the underwear when in a stretched state, stretching it upwards and outwards (*e.g.*, in a lengthwise and widthwise direction), to aid in pouch formation. ([Ex. 1005] ¶ 139.) Carrillo already teaches attaching U-shaped elastic garment to the front portion allows a user to insert their genitals into the opening and have them be “pulled forward” into the front portion, separating them from the groin area. (Carrillo, Abstract, 2-3.) Using Brocks’s teachings would simply further this cooperation of the elastic garment and front part of the underwear providing a pouch space into which the genitals can be pulled forward, as the elastic garment being attached in a stretched state and then being allowed to contract would add to the formation and supportive nature of the pouch. ([Ex. 1005] ¶ 139.)

Pet. 65.

In disputing the sufficiency of Carrillo in combination with Brocks to satisfy limitation 1[g], Patent Owner also reprises arguments presented for limitation 1[g] in Ground 1. *See* PO Resp. 49–56 (citing, *inter alia*, Ex. 2013 ¶¶ 102–116).

Just as Patent Owner contends that Kitsch, by itself, fails to satisfy limitation 1[g] in Ground 1 (*see* PO Resp. 41–42), Patent Owner argues that Carrillo alone does not disclose limitation 1[g] in Ground 2a. *See id.* at 49–51 (citing, *inter alia*, Ex. 2013 ¶¶ 102–107). Petitioner remarks that this argument is “irrelevant — the Petition relies on Carrillo in view of Brocks for this, not Carrillo alone.” Pet. Reply 16.

Although Patent Owner argues, in Ground 1, that a POSITA would not have combined the teachings of Kitsch and Brocks, because they references are similar — i.e., “Brocks does not add anything to Kitsch that Kitsch does not already do” (PO Resp. 46) — Patent Owner contends that

there can be no reason to modify Carrillo, based on Brocks’ teachings, because “[t]he objectives of the two prior art references [Carrillo and Brocks] are different, and neither suggests the other’s objective is necessary for their respective inventions.” *Id.* at 54 (citing Ex. 2013 ¶ 113). However, even if accurate, the goals of prior art references do not resolve the obviousness inquiry, at least because “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR*, 550 U.S. at 420.

Like its analysis of the Kitsch/Brocks combination in limitation 1[g] of Ground 1, Patent Owner’s arguments for the Carrillo/Brocks combination in limitation 1[g] of Ground 2a (*see* PO Resp. 52–56 (citing, *inter alia*, Ex. 2013 ¶¶ 108–116)) avoid the fundamental point of Petitioner’s argument — namely, the proposed application of the gathering/shirring technique (disclosed in Brocks) would improve Carrillo, by “add[ing] to the formation and supportive nature of the pouch” (Pet. 65 (citing Ex. 1005 ¶ 139) — a modification that a POSTIA (based on evidence that Petitioner identifies) would have had a reason to undertake, and with an expectation of success in achieving the subject matter of limitation 1[g]. *See id.* at 60–66 (citing, *inter alia*, Ex. 1005 ¶¶ 133–141).

Having considered all of the parties’ arguments and evidence (including expert testimony), we determine that Petitioner shows, by a preponderance of the evidence, that Petitioner’s cited combination of Carrillo and Brocks satisfies limitation 1[g]. In particular, we determine that Petitioner sufficiently shows that a POSITA would have been motivated to apply Brocks’ gathering/shirring technique to Carrillo’s arrangement of its

U-shaped elastic garment and the front part of the disclosed underwear to which it is attached, together with the other features that Petitioner identifies, so as to achieve the subject matter of limitation 1[g] and would have had a reasonable expectation of success in doing so.

iv. Petitioner Establishes the Unpatentability of Claim 1 Under Ground 2a

In view of the foregoing analysis (addressing the individual limitations of claim 1), Petitioner sufficiently demonstrates the unpatentability of independent claim 1, by a preponderance of the evidence. Petitioner sufficiently shows that the combined identified teachings of Carrillo and Brocks satisfy all of claim 1's limitations and that a POSITA would have combined such teachings with a reasonable expectation of success.

b. Dependent Claims in Ground 2a

Further to Petitioner's arguments for the unpatentability of independent claim 1, Petitioner also argues that each of the remaining claims in Ground 2a is unpatentable for the additional reasons addressed below.

For the reasons provided below, we determine that Petitioner sufficiently demonstrates the unpatentability of claims 2–9, 11, 13, and 16, by a preponderance of the evidence.

i. Claim 2

Claim 2 recites:

A male garment according to claim 1 wherein the stretch panel has asymmetrical stretch characteristics such that the stretch panel stretches more easily in a direction parallel to the

waistband and less easily in a direction at right angles to the waistband.

Similar to Petitioner’s argument regarding claim 2, in Ground 1 (*see* Pet. 27–29), Petitioner relies on Brocks for the disclosure of the recited use of material having “asymmetrical stretch characteristics,” applying such teachings (in Ground 2a) in the combination of Carrillo and Brocks. *See id.* at 66–69 (citing, *inter alia*, Ex. 1005 ¶¶ 142, 144–49). In addition to the arguments presented in Ground 1, Petitioner further contends that a POSITA would have been motivated to employ Brocks’ asymmetrical stretch material features, because Carrillo discloses applying the disclosed U-shaped elastic garment with underwear “models already existing on the market” (*id.* at 68 (quoting Ex. 1010, 2)), many of which already employed such asymmetrical stretch materials (*id.* at 68–69 (citing Ex. 1005 ¶ 149)). Petitioner argues that “[a] POSITA would have been motivated to construct Carrillo’s U-shaped elastic garment from a material with similar characteristics, lest the benefits of using such material for the rest of the underwear be diminished.” *Id.* at 69 (citing Ex. 1005 ¶ 149).

Patent Owner states that “Carrillo does not disclose an asymmetrical stretch characteristic,” and contends, therefore, that the combination of Carrillo with Brocks does not render claim 2 obvious. PO Resp. 57 (citing, *inter alia*, Ex. 2013 ¶¶ 81–82, 117–118).

As in the case of Ground 1, Patent Owner does not address Brocks’ teachings, in relation to the subject matter of claim 2.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been

obvious for a POSITA to have modified Carrillo, in view of Brocks' teachings, so as to achieve the subject matter of claim 2 with a reasonable expectation of success.

ii. Claim 3

Claim 3 recites: "A male garment according to claim 1 wherein the stretch panel is rectangular and the opening is U-shaped."

Petitioner argues that "Carrillo in view of Brocks renders obvious Claim 3," and that Carrillo's U-shaped elastic garment has a rectangular shape and an opening therein (as shown in Carrillo's Figure) that "is strikingly similar to" the "stretch panel" shown in Figures 3 and 9 of the '974 patent. Pet. 69–70 (citing Ex. 1001, 4:47–48, Figs. 3, 9; Ex. 1005 ¶¶ 150–51; Ex. 1010, Abstract, 3, Fig.).

In response, Patent Owner does not address any of the similarities between the shape of Carrillo's U-shaped elastic garment and the "stretch panel" embodiments disclosed in the '974 patent. Patent Owner relies entirely on the arguments presented for base claim 1, stating only that "because Carrillo in view of Brocks does not render Claim 1 obvious, so too do they fail to render Claim 3 obvious." PO Resp. 58 (citing Ex. 2013 ¶ 119).

Having considered all of the parties' arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks' teachings, so as to achieve the subject matter of claim 3 with a reasonable expectation of success.

iii. Claim 4

Claim 4 recites: “A male garment according to claim 3 wherein the stretch panel comprises a fabric having a stretch of at least 30%.”

Similar to Petitioner’s argument regarding claims 4 and 5, in Ground 1 (*see* Pet. 30–35), Petitioner (in view of Ms. Wagner’s supporting testimony) relies on Brocks for the disclosure of the recited use of material for the “stretch panel” having “a stretch of at least 30%,” and Petitioner further articulates the reasons why a POSITA would modify Carrillo, in view of Brocks’ teachings, based upon Ms. Wagner’s supporting testimony. *Id.* at 70–72 (citing, *inter alia*, Ex. 1005 ¶¶ 152–54). Based upon Brocks’ disclosures and Ms. Wagner’s testimony, Petitioner argues that “it would have been obvious to use a stretch panel having at least 30% stretch, as taught by Brocks,” and, “to ensure Carrillo’s U-shaped elastic garment has sufficient elasticity to gather the fabric, a POSITA would have been motivated to use elastic material with at least 30% stretch,” because “[i]f the material did not have enough stretch, it would be unable to ‘gather’ enough fabric when released from the stretched to the unstretched state to create a pouch with sufficient volume.” *Id.* (citing Ex. 1005 ¶ 154; Ex. 1008, 2:5–16, 3:23–4:14).

Similar to its arguments for claim 4 in Ground 1, Patent Owner argues that “there is no disclosure in Brocks indicating to a POSITA that a fabric should have at least 30% stretch.” PO Resp. 59 (citing, *inter alia*, Ex. 2013 ¶¶ 81, 85, 117, 121).

Our analysis of these issues (i.e., a “stretch panel” comprising a fabric having “stretch of at least 30%”) for claims 4 and 5, in Ground 1, applies equally, here. However, in the situation of claim 4 in Ground 1, Petitioner

did not sufficiently demonstrate the unpatentability of base claim 3 (on account of the “rectangular” limitation). That is not so, in Ground 2a, wherein Petitioner sufficiently does so (and which Patent Owner does not dispute).

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks’ teachings, so as to achieve the subject matter of claim 4 with a reasonable expectation of success.

iv. Claim 5

Claim 5 recites:

A male garment according to claim 1 wherein the top location is the waistband seam and the bottom location is the first seam, and a length measured along material of the front portion from the first seam to the waistband seam exceeds a length measured along the fabric of the stretch panel, when unstretched, by at least 30%.

Similar to Petitioner’s argument regarding claims 4 and 5, in Ground 1 (*see* Pet. 30–35), Petitioner (in view of Ms. Wagner’s supporting testimony) relies on Brocks for the disclosed implementation of material (for the “stretch panel”) that stretches to the identified dimensions, and Petitioner further maps claim 5’s features to Carrillo and explains the reasons why a POSITA would modify Carrillo, in view of Brocks’ teachings, based upon the supporting testimony of Ms. Wagner. *Id.* at 73–75 (citing, *inter alia*, Ex. 1005 ¶¶ 155–58).

As in the instance of Ground 1, Patent Owner argues that “there is no disclosure in Brocks indicating to a POSITA that a fabric should have at least 30% stretch.” PO Resp. 59 (citing, *inter alia*, Ex. 2013 ¶¶ 81, 85, 117, 121).

Our analysis of these issues (e.g., a “stretch panel” comprising a fabric having “stretch of at least 30%”) for claims 4 and 5, in Ground 1, applies equally, here.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks’ teachings, so as to achieve the subject matter of claim 5 with a reasonable expectation of success.

v. Claim 6

Claim 6 recites: “A male garment according to claim 1 wherein the garment is a pair of undershorts.”

Petitioner argues that Carrillo discloses the limitation added by claim 6. Pet. 75 (citing Ex. 1005 ¶ 159; Ex. 1010, Title, Abstract, 1–3).

Disputing Petitioner’s position, Patent Owner argues that, because “Carrillo and Brocks fail to render obvious Claim 1,” the combination of these references cannot render claim 6 obvious. PO Resp. 60 (citing Ex. 2013 ¶¶ 117, 123). That is, Patent Owner relies entirely on the arguments presented for base claim 1.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner

establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks' teachings, so as to achieve the subject matter of claim 6 with a reasonable expectation of success.

vi. Claim 7

Claim 7 recites: "A male garment according to claim 1 wherein the stretch panel comprises a fabric different from a fabric of the body."

Petitioner argues that "Carrillo in view of Brocks renders obvious Claim 7," because "Carrillo discloses a stretch panel in the form of a U-shaped *elastic* garment" and further discloses the U-shaped elastic garment is 'sewn to *classic* underpants.'" Pet. 75–76 (citing Ex. 1005 ¶ 160; Ex. 1010, Abstract, 1–3). "Thus," Petitioner argues, "underwear body is material for classic underpants or briefs, and the stretch panel is made from a different, elastic material." *Id.* at 76 (citing Ex. 1005 ¶ 160).

In response, Patent Owner relies on the arguments presented for base claim 1, but does not address (let alone dispute) Petitioner's argument relating to the limitations of claim 7. *See* PO Resp. 60 (citing Ex. 2013 ¶¶ 81, 86, 117, 123).

Having considered all of the parties' arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks' teachings, so as to achieve the subject matter of claim 7 with a reasonable expectation of success.

vii. Claim 8

Claim 8 recites: “A male garment according to claim 1 wherein the opening has a width in excess of 2 cm.”

Petitioner argues that “Carrillo in view of Brocks renders obvious Claim 8,” because — in view of the supporting testimony of Ms. Wagner — “Carrillo discloses and renders obvious the opening of U-shaped elastic garment having a width exceeding 2 cm,” in order for the opening to be appropriately sized to receive a wearer’s genitals. Pet. 76–77 (citing Ex. 1005 ¶ 161; Ex. 1010, Abstract, 2–3, Fig.).

In response, Patent Owner argues that “Carrillo does not disclose the width of its opening.” PO Resp. 60 (citing Ex. 2013 ¶¶ 81, 88, 117, 124). However, Patent Owner does not address (let alone, dispute) the substance of Patent Owner’s argument, which is based upon the analysis of Ms. Wagner.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks’ teachings, so as to achieve the subject matter of claim 8 with a reasonable expectation of success.

viii. Claim 9

Claim 9 recites:

A male garment according to claim 1 wherein:

the front portion depends downwardly from the waistband and the front portion is formed to provide the pouch at a mid-section thereof; the stretch panel is positioned to be disposed forward of the wearer’s perineum when the garment is

worn, whereby, in use, a scrotum of the wearer of the garment is supported underneath by the stretch panel to contain the wearer's penis and scrotum in the pouch.

Petitioner argues that Carrillo discloses the limitations added in claim 9, because Carrillo's "U-shaped elastic garment" (which Petitioner maps to the recited "stretch panel") "forms a pouch at a midsection of the front portion of the body, below the waistband, to isolate a wearer's genitals," and Carrillo's "U-shaped elastic garment" is

positioned to be disposed forward of the wearer's perineum when the underwear is worn, explaining the U-shaped elastic garment is attached to the ***inner front portion*** of the garment, so "the normal tendency of the [U-shaped] elastic garment, when sewn to the inner front part of the underwear, is to gently ***pull forward*** [the genitals], achieving, with this garment, a sufficient separation to reduce the continuous direct contact and friction[.]"

Pet. 78–79 (citing Ex. 1005 ¶¶ 163–164; Ex. 1010, Abstract, 2–3, Fig.) (quoting Ex. 1010, 2). Therefore, as implemented, in view of Brocks' teachings, Petitioner contends that the combination of Carrillo and Brocks achieves the subject matter recited in claim 9. *Id.* at 79 (citing *id.* at 60–66; Ex. 1005 ¶ 164).

In response, Patent Owner argues that "Carrillo does not include a pouch," but, instead, "creates a pocket." PO Resp. 61 (citing *id.* at 49–51). Patent Owner further argues that "Carrillo simply teaches an opening through which the wearer's genitalia may be inserted but does not teach any mechanism by which the genitalia are supported by the stretch panel," and Carrillo's opening "is not suited to supporting the wearer's genitalia, as it provides no supporting surface underneath the genitalia," such that the

combination of Carrillo's and Brocks' teachings does not render claim 9 obvious. *Id.* (citing Ex. 2013 ¶¶ 81, 89, 117, 125).

The distinction that Patent Owner draws, between a “pouch” and a “pocket,” is more semantic than substantive. Indeed, Carrillo discloses forming a “pouch” (notwithstanding the absence of this word), which is manifest in the portion of Carrillo that Petitioner relies upon (*see* Pet. 78–79), referring to, “after introducing the intimate parts through the opening (2),” which is “located between the testicles and the groin, the normal tendency of the elastic garment, when sewn to the inner front part of the underwear, . . . to gently pull [the intimate parts] forward,” thereby nestling the “intimate parts” between the “U-shaped elastic garment (1)” and the front of the briefs. Ex. 1010, 2. Accordingly, the identified features of Carrillo, in view of the modification with Brocks' teachings, achieve the supportive structural arrangement recited in claim 9.

Having considered all of the parties' arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks' teachings, so as to achieve the subject matter of claim 9 with a reasonable expectation of success.

ix. Claim 11

Claim 11 recites:

A male garment according to claim 1, wherein the stretch panel is fastened to the front portion while in a pre-stretched condition while the front portion is less stretched, whereby the stretch panel is biased to hold the opening open while the garment is held in position to be put on.

Petitioner argues that “Carrillo in view of Brocks renders obvious Claim 11,” explaining that the application of Brocks’ gathering/shirring technique to Carrillo’s device achieves claim 9’s recited “stretch panel . . . fastened to the front portion while in a pre-stretched condition while the front portion is less stretched.” Pet. 79–81 (citing *id.* at 21–27; Ex. 1005 ¶¶ 165–67; Ex. 1008, 1:64–2:21, 3:24–4:14; Ex. 1010, 2, Fig.). Petitioner explains (in view of the supporting testimony of Ms. Wagner) that “Carrillo’s elastic garment (1), attached in a stretched condition as taught by Brocks, would be biased to hold opening (2) open while the garment is held in position to be put on.” *Id.* at 80 (citing Ex. 1005 ¶ 167).

In response, Patent Owner argues that “Brocks does not disclose a stretch panel, nor does Brocks disclose an opening”; “[t]herefore, Brocks does not disclose biasing the stretch panel to hold the opening open.” PO Resp. 62. However, Petitioner does not contend that Brocks alone discloses such features. Indeed, as discussed above, Petitioner argues, in Ground 2a, that Carrillo discloses the “stretch panel” and its “opening.”

Patent Owner further argues that “a wearer of Carrillo’s undergarment will need to physically manipulate his phallus, the pocket, or both in order to insert his phallus into the pocket through opening 2, due at least in part to the bagginess of the pocket and also due in part to the structure of opening 2. . . . There is no biasing in Carrillo.” PO Resp. 63 (citing *id.* at 49–51; Ex. 2013 ¶¶ 81, 91, 117, 126).

As Petitioner points out, in response, Patent Owner’s arguments about any “physical[] manipulat[i]on” allegedly required by Carrillo are unrelated to the limitations of claim 11. Pet. Reply 23. The same is true for Patent Owner’s argument about Carrillo’s alleged “bagginess” — an assertion that

Petitioner contests, in any event. *See id.* at 23 n.7 (citing *id.* at 14–17); *see also id.* at 16 (citing Ex. 1005, ¶¶ 137–41; Ex. 1010, 2–3; Pet. 64–66).

Further, Patent Owner’s arguments do not address the structure resulting from the combination of Carrillo and Brocks that Petitioner relies upon to yield the recited feature of the “stretch panel” being “biased to hold the opening open.” *See id.* at 23.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks’ teachings, so as to achieve the subject matter of claim 11 with a reasonable expectation of success.

x. Claim 13

Claim 13 recites: “A male garment according to claim 1 wherein the opening has a U-shape when the stretch panel is in a relaxed state.”

Petitioner (relying on Ms. Wagner’s testimony) argues that “Carrillo in view of Brocks renders obvious Claim 13,” because Carrillo’s elastic garment has “an opening (2) in the shape of a vertical teardrop” (including in a relaxed state), which Petitioner maps to the recited “U-shape[d]” “opening” in the “stretch panel.” Pet. 81–82 (citing *id.* at 69–70; Ex. 1005 ¶ 168; Ex. 1010, Abstract, 2, 3, Fig.).

Patent Owner does not dispute any of Petitioner’s arguments for claim 13, relying entirely upon the arguments presented for base claim 1. *See* PO Resp. 60 (citing Ex. 2013 ¶¶ 117, 123).

Having considered all of the parties' arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks' teachings, so as to achieve the subject matter of claim 13 with a reasonable expectation of success.

xi. Claim 16

Claim 16 recites: "A male garment according to claim 1 wherein the stretch panel is rectangular and the opening has a rounded bottom edge and opposing side edges that are spaced apart from one another on either side of the opening."

Petitioner (in view of the supporting testimony of Ms. Wagner) argues that "Carrillo in view of Brocks renders obvious Claim 16," because Carrillo's "U-shaped elastic garment" discloses the limitations added in claim 16. Pet. 82–83 (citing *id.* at 69–70; Ex. 1005 ¶ 169; Ex. 1010, Abstract, 3, Fig.).

Patent Owner does not dispute any of Petitioner's arguments for claim 16, relying entirely upon the arguments presented for base claim 1. *See* PO Resp. 65 (citing Ex. 2013 ¶¶ 117, 127).

Having considered all of the parties' arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks' teachings, so as to achieve the subject matter of claim 16 with a reasonable expectation of success.

3. *Ground 2b*

Further to Petitioner’s arguments for the unpatentability of the claims in Ground 2a, Petitioner also argues that each of the claims in Ground 2b is unpatentable for the additional reasons addressed below.

In Ground 2b, Petitioner alleges that dependent claims 10, 12, and 15 are unpatentable, under 35 U.S.C. § 103, as being obvious over Carrillo, Brocks, and Kitsch. *See* Pet. 4, 83–93. Petitioner articulates the manner in which the Carrillo, Brocks, and Kitsch references variously teach and/or suggest the limitations of claims 10, 12, and 15, relying upon the support of Ms. Wagner’s testimony. *See id.* (citing, *inter alia*, Ex. 1005 ¶¶ 170–183).

Having considered all of the parties’ arguments and evidence (including expert testimony) for claims 10, 12, and 15, in Ground 2b, we determine that Petitioner sufficiently demonstrates the unpatentability of claims 10, 12, and 15, by a preponderance of the evidence.

a. Claim 10

Claim 10 recites: “A male garment according to claim 1, wherein the elastically resilient four-way stretch material is comprised of a spandex blend.”

Petitioner argues (in view of Ms. Wagner’s testimony) that “Carrillo (as modified by Brocks) in view of Kitsch renders obvious Claim 10,” stating that a POSITA would have been motivated to employ a “spandex blend” material (such as that disclosed by Kitsch) in the device of claim 1 (which combines teachings of Carrillo and Brocks, per Petitioner’s analysis of claim 1 in Ground 2a). *See* Pet. 83–85 (citing *id.* at 49–54, 66–69; Ex. 1005 ¶ 170; Ex. 1010, Abstract, 1–3). Petitioner point out that, in its

elements having a structure and operation similar to that of Carrillo's U-shaped elastic garment, Kitsch discloses the use of "elasticized breathable wicking mesh material side panels to isolate the scrotum and phallus from the legs and which wick away moisture and provides superior comfort" and that Kitsch's "side panels" are made from "a soft elasticized breathable mesh knit (in a so-called four-by-four stretch weave) containing 80% Nylon™ and 20% Spandex™." *Id.* at 84 (citing Ex. 1007 ¶¶ 2, 6–8, 30–36). Thus, Petitioner argues (in view of Ms. Wagner's testimony) that "[i]t would have been obvious to a POSITA to use Kitsch's 80% Nylon and 20% Spandex blend for Carrillo's U-shaped elastic garment," because Kitsch discloses such material "for the same purpose" as that described in Carrillo. *Id.* at 84.

In particular, Petitioner states that Carrillo's U-shaped elastic garment is generally "elastic" and is intended to "improv[e] the perspiration of the [genital] area" by "eliminat[ing] direct contact between the testicles and the groin, avoiding continuous friction or poor positioning of the testicles between the legs." *Id.* (citing Ex. 1010, 1). Similarly, Petitioner states that Kitsch's side panels "wick away moisture and provide[] superior comfort" and that "the flexibility and elasticity of the mesh side panel material, mould[s] to gently conform to the shape of the scrotum 14 in particular and allow for resiliently supported relative movement of the scrotum." *Id.* at 84–85 (quoting Ex. 1007 ¶¶ 6, 29; also citing *id.* at ¶¶ 2, 8, 22–24, 30–36). Thus, Petitioner argues, "it would have been obvious to a POSITA to use Kitsch's spandex blend as the material of Carrillo's U-shaped elastic garment to achieve the same comfortable genital separation and support while wicking away moisture. *Id.* at 85 (citing Ex. 1005 ¶¶ 171–72). Further, Petitioner argues that "[a] POSITA would have understood that

using Kitsch’s spandex blend to construct Carrillo’s U-shaped elastic garment would be the normal use of a well-known material for its intended purpose,” and “a POSITA would have had a reasonable expectation of success using [Kitsch’s material] to achieve Carrillo’s desired separation and isolation of the genitals.” *Id.* (citing Ex. 1005 ¶ 173).

Disputing Petitioner’s position, Patent Owner argues that “a POSITA would not use a Spandex blend with Carrillo.” PO Resp. 62 (citing *id.* at 47–49; Ex. 2013 ¶ 129). Further, referring to other portions of its Response, Patent Owner states that “Other than impermissibly using the ’974 Patent as a roadmap, Petitioner fails to articulate why Kitsch, Carrillo and Brocks should be combined.” *Id.* (citing *id.* at 42–46, 52–56).

Notwithstanding Patent Owner’s assertion that a POSITA would not use a Spandex blend material with Carrillo, Kitsch’s disclosure of such material for a similar structural role and purpose indicates that — at least for the purposes of the technology at issue — a POSITA would have employed Kitsch’s Spandex-blend materials in a device that combines the teachings of Carrillo and Brocks, per Petitioner’s arguments.

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks’ and Kitsch’s teachings, so as to achieve the subject matter of claim 10 with a reasonable expectation of success.

b. Claim 12

Claim 12 recites:

A male garment according to claim 11, wherein the front portion is attached to a rear portion of the body that depends from the waistband at a seam disposed forward of the perineum region of the wearer, and wherein a bottom edge of the stretch panel is fastened to the seam.

Petitioner argues (in view of supporting testimony from Ms. Wagner) that Carrillo (as modified by Brocks and, further in view of Kitsch) renders claim 12 unpatentable as obvious, because Kitsch discloses the recited features of claim 12 that Petitioner does not identify in Carrillo — i.e., “the front portion is attached to a rear portion of the body that depends from the waistband at a seam disposed forward of the perineum region of the wearer, and wherein a bottom edge of the stretch panel is fastened to the seam” — and that a POSITA would have implemented these features in the Carrillo/Brocks combination of claims 1 and 11, from which claim 12 depends. *See* Pet. 85–90 (citing, *inter alia*, Ex. 1005 ¶¶ 174–79; Ex. 1007, Abstract, ¶¶ 2, 6–8, 26, 27, 30–41 Figs. 3, 7, 8, 9, claim 1; Ex. 1010, 1–3, Fig.).

In response, Patent Owner argues that “Carrillo does not disclose anything about the perineum or a perineum seam.” PO Resp. 63 (citing Ex. 2013 ¶ 130). Further, Patent Owner argues that Petitioner does not present a sufficient reason to combine Carrillo with Brocks or Kitsch with Brocks, such that Petitioner fails to show that claim 12 is unpatentable. *Id.* at 64 (citing Ex. 2013 ¶¶ 81, 92, 117, 130).

Yet, as discussed above, Petitioner refers to Kitsch (not Carrillo) for the teachings relating to claim 12’s recited “seam disposed forward of the

perineum region of the wearer.” In addition, Petitioner (in view of Ms. Wagner’s testimony) articulates several reasons why a POSITA would have been motivated to apply Kitsch’s identified teachings to the Carrillo/Brocks combination. *See* Pet. 88–90. Notably, Petitioner argues that a POSITA would have been so motivated, and would have had a reasonable expectation of success in doing so, because: “making the seam attaching the rear and front portions coincident with the seam attaching the U-shaped elastic garment to the body would reduce the number of seams necessary” and “[h]aving fewer seams also furthers Carrillo’s goal of addressing itching, friction, and irritation”; “attach[ing] Carrillo’s U-shaped garment to a back portion of its briefs at a seam forward of the perineum, as taught by Kitsch,” would help to “ensure the elastic material extends far enough back to separate and isolate the testicles from the legs and groin area,” which “is a stated purpose of both Carrillo and Kitsch,” and “a POSITA would have understood from Kitsch that extending the elastic stretch panel material to such a seam ensures the stretch panel, in cooperation with the front portion, closely resembles” what Kitsch (Ex. 1007 ¶ 31) describes as “the natural setting of the genitalia and contours for isolation of the scrotum and support”; and locating the seam (and, therefore, the bottom edge of Carrillo’s U-shaped elastic garment) forward of the wearer’s perineum region facilitates the capacity of the U-shaped elastic garment to “gently pull [the intimate parts] forward, achieving . . . sufficient separation to reduce direct contact and friction” (Ex. 1010, 2). *See* Pet. 89–90 (citing, *inter alia*, Ex. 1005 ¶¶ 175–79) (second alteration in original).

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner

establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks' and Kitsch's teachings, so as to achieve the subject matter of claim 12 with a reasonable expectation of success.

c. Claim 15

Claim 15 recites: "A male garment according to claim 1 wherein the pouch comprises a dart seam stitched along a bottom portion of the pouch and centrally to provide extra volume in front of and underneath the genitals of the wearer."

Petitioner argues that Carrillo (as modified by Brocks) in view of Kitsch renders claim 15 unpatentable, as obvious, because employing a dart seam in the pouch (as disclosed in Kitsch), in the Carrillo/Brocks combination, would have been obvious to a POSITA, in order to provide greater volume in the pouch, ensure sufficient space for front portion to receive the genitals through the opening (in Carrillo's U-shaped elastic garment), and would achieve a pouch shaped in a manner that would further advance Carrillo's goals of separating the genitals from the groin and leg to eliminate contact and reduce friction. *See* Pet. 91–93 (citing, *inter alia*, Ex. 1005 ¶¶ 180, 183; Ex. 1007 ¶¶ 30–36, Figs. 3, 8, 9; Ex. 1010, Abstract, 1–2).

In response, Patent Owner concedes that Kitsch discloses the use of a dart seam, but argues that "Petitioner fails to articulate why Kitsch, Carrillo and Brocks should be combined." PO Resp. 64 (citing, *inter alia*, Ex. 2013 ¶¶ 81, 93, 117, 131).

We determine that Petitioner’s articulated reasons for applying Kitsch’s dart-seam technique to Carrillo’s embodiment sufficiently demonstrate that a POSITA would have combined Carrillo, Brocks, and Kitsch in the manner proposed. As Petitioner argues (with supporting testimony of Ms. Wagner), “[a] POSITA would have had a reasonable expectation of success in implementing such a dart seam in Carrillo, as a dart seam was a common and well-known method to join portions of a piece of fabric to create additional volume,” and doing so “would have been nothing more than using a well-known technique for its intended purpose, and would have helped to achieve Carrillo’s goals of having a separate space for the genitals.” Pet. 93 (citing Ex. 1005 ¶ 183).

Having considered all of the parties’ arguments and supporting evidence (including expert testimony), we determine that Petitioner establishes, by a preponderance of the evidence, that it would have been obvious for a POSITA to have modified Carrillo, in view of Brocks’ and Kitsch’s teachings, so as to achieve the subject matter of claim 15 with a reasonable expectation of success.

IV. CONCLUSION

After considering the evidence and arguments presented in the current record, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1–13, 15, and 16 of the '974 patent are unpatentable.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/ Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–13, 15, 16	103	Kitsch, Brocks	1, 2, 5–13, 15	3, 4, 16
1–9, 11, 13, 16	103	Carrillo, Brocks	1–9, 11, 13, 16	
10, 12, 15	103	Carrillo, Brocks, Kitsch	10, 12, 15	
Overall Outcome			1–13, 15, 16	

V. ORDER

Accordingly, it is:

ORDERED that Petitioner has proven by a preponderance of the evidence that claims 1–13, 15, and 16 of U.S. Patent No. 10,834,974 B2 are unpatentable;

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.

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