

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FIRST QUALITY BABY PRODUCTS, LLC,
Petitioner,

v.

KIMBERLY-CLARK WORLDWIDE, INC.,
Patent Owner.

Case IPR2016-00168
Patent 8,579,876 B2

Before TONI R. SCHEINER, FRANCISCO C. PRATS, and
HYUN J. JUNG, *Administrative Patent Judges*.

SCHEINER, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
Inter Partes Review
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

We have jurisdiction to hear this *inter partes* review under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

First Quality Baby Products, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) on November 6, 2015, requesting an *inter partes* review of claims 1–14 and 23–37 of U.S. Patent No. 8,579,876 B2 (Ex. 1001, “the ’876 patent”). Petitioner provided the Declaration of Daniel D. Gardner (Ex. 1002, “Gardner Declaration”) in support of its positions. Kimberly-Clark Worldwide, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”) on February 22, 2016.

We instituted trial on May 19, 2016, (Paper 7, “Decision to Institute” or “Dec.”) to determine whether claims 1–14 and 23–37 are unpatentable under 35 U.S.C. § 103(a) as obvious over Fletcher,¹ Widlund,² and Toyo.³

Subsequent to institution, Patent Owner filed a Patent Owner Response (Paper 13, “PO Resp.”). Petitioner filed a Reply (Paper 16, “Reply”), and a Motion to Exclude Evidence (Paper 20, “Mot. to Exclude”). Patent Owner did not move to amend any claim of the ’876 patent, and oral argument was waived by the parties. Paper 21.

¹ WO 00/37009 (published June 29, 2000) (Ex. 1004).

² WO 95/27462 (published Oct. 19, 1995) (Ex. 1005).

³ JP 3021190 (issued Feb. 16, 1996) (Ex. 1006) (a certified English translation begins on page 12 of the exhibit, and all citations to Toyo are to the paragraph numbers in the English translation portion of the Exhibit).

For the reasons discussed below, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–14 and 23–37 of the ’876 patent are unpatentable.

Petitioner’s Motion to Exclude Evidence is dismissed as moot.

A. Related Proceedings

Petitioner previously filed a petition for *inter partes* review of claims 15–22 of the ’876 patent—*First Quality Baby Products, LLC v. Kimberly-Clark Worldwide, Inc.*, Case IPR2014-00169 (PTAB Nov. 19, 2013) (Paper 1) (“the ’169 IPR”). We instituted an *inter partes* review in that case on May 30, 2014, and issued a Final Written Decision on May 28, 2015, holding claims 15–22 of the ’876 patent unpatentable under 35 U.S.C. § 103. *First Quality Baby Products*, Paper 41.

B. The ’876 Patent (Ex. 1001)

The ’876 patent, titled “Tucked Fastener for Improved Fastener Performance,” issued November 12, 2013 to Robert Lee Popp, Marcille Faye Ruman, and Kathleen Irene Ratliff. Ex. 1001, [45], [75].⁴ The ’876 patent relates to pants-like absorbent garments, e.g., children’s diapers and training pants, with refastenable side seams. *Id.* at 1:14–15, 2:2–4.

⁴ The ’876 patent matured from Application No. 12/849,260 (“the ’260 application”), filed November 25, 2010. The ’260 application is a continuation of Application No. 12/102,680, filed April 14, 2008, which in turn, is a continuation of Application No. 09/799,814, filed March 5, 2001, now abandoned. Ex. 1001, [21], [63].

The '876 patent explains that portions of these garments are typically folded, or tucked, “to create a more compact orientation” for packaging, but “fastener performance can be compromised when a resilient fastening component in a refastenable seam is creased during processing or compression in preparation for or during packaging.” *Id.* at 7:50–52, 8:35–38.

The '876 patent discloses several orientations of the refastenable seams resulting in a garment “having resilient fastening components lying in a plane such that the fastening component will not become creased during packaging.” *Id.* at 18:20–23. An example of such an orientation is depicted in Figure 18 of the '876 patent, reproduced below.

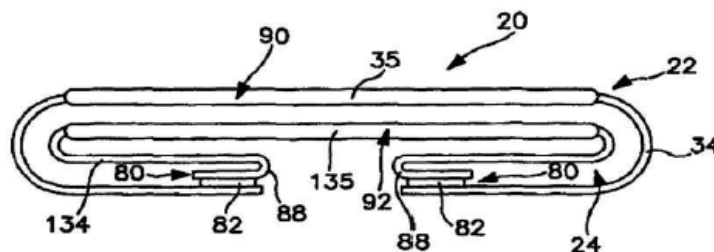


FIG. 18

Figure 18 is a top view of the waist region of absorbent garment 20, depicting front side panels 34 and back side panels 134 folded over back panel 135. As shown in the figure, each back side panel 134 has two folds, one at or near the edge of back panel 135, and another at or near the edge of fastening component 82; each front side panel 34 has only one fold. Ex. 1001, 17:56–18:10. In that configuration, refastenable seams 80 and fastening components 82 lie flat in a plane parallel to front waist region 90 and back waist region 92.

Id.

According to the '876 patent,

Due to the flat orientation of the refastenable seams 80 lying parallel to the flat waist regions 90, 92 of the garment, the resilient fastening components remain flat and do not become creased or crushed when the garment is compressed and packaged. Fastener seam strength is thereby preserved such that the fastening components 82, 84 are less likely to disengage during product application and wear, compared to fastening components that become creased during packaging and compression.

Id. at 19:12–20.

C. Illustrative Claims

Petitioner challenges claims 1–14 and 23–37 of the '876 patent. Claims 1, 23, and 33 are independent claims. Claims 1 and 2, reproduced below, are illustrative.

1. A folded disposable absorbent garment comprising:
 - an absorbent chassis defining a front region, a back region, a crotch region extending between and interconnecting the front and back regions, an inner surface, and an outer surface opposite the inner surface, the crotch region having a fold therein such that the front region generally overlies the back region,
 - a pair of front side panels extending from the front region of the absorbent chassis, each of the front side panels being elastic;
 - a pair of back side panels extending from the back region of the absorbent chassis, each of the back side panels being elastic;
 - a first fastening component disposed on each of the front side panels;
 - a second fastening component disposed on each of the back side panels, each of the second fastening components being releasably attached to a respective one of the first fastening components to define a pair of refastenable seams,

the front side panels and the back side panels being folded such that each of the refastenable seams overlies the outer surface of one of the front region and the back region of the absorbent chassis in a plane generally parallel to the front and back regions of the absorbent chassis.

2. The folded disposable absorbent garment of claim 1 wherein each of the back side panels is folded more than once and each of the front side panels is folded once, each of the front side panels overlying a respective one of the back side panels.

Ex. 1001, 19:41–20:5.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

“Petitioner submits that a POSITA [person of ordinary skill in the art] has two to four years of work experience in product design and testing of disposable absorbent articles, such as diapers, training pants, and incontinence briefs,” and Patent Owner agrees. Pet. 19 (citing Ex. 1002 ¶ 68); PO Resp. 12. We adopt the parties’ shared definition, as well as Patent Owner’s further qualification that “the level of skill is that of a POSITA at the time of the invention.” PO Resp. 12.

B. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under that standard, the claim language should be read in light of the specification, as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir.

2010). We generally give claim terms their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Only terms which are in controversy need to be construed and only to the extent necessary to resolve the controversy. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011); *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). We determine that only the following claim terms require express construction for purposes of this decision.

Claim 2 recites that “each of the back side panels is folded more than once and each of the front side panels is folded once,” and claim 24 recites that “each of the back side panels is folded twice and each of the front side panels is folded once.” Ex. 1001, 20:1–5, 21:62–64.

In the Petition, Petitioner proposed that those claim terms “should be interpreted to mean ‘the front and back side panels each have a first fold where the side panels are folded over the absorbent assembly, and the back side panel has a second fold different from the first fold in the back side panel.’” Pet. 15. Patent Owner did not propose a construction for those terms.

Petitioner provided an annotated version of Figure 18, graphically illustrating Petitioner’s interpretation of the relevant folds in back side panels 134 and front side panels 34 of diaper 20. Figure 18, as annotated by Petitioner, is reproduced below.

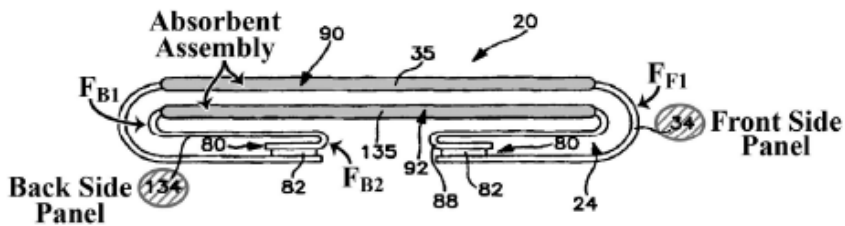


FIG. 18
ANNOTATED

Annotated Figure 18 shows two folds, labeled F_{B1} , F_{B2} by Petitioner, in each back side panel 134, and one fold F_{F1} in each back side panel 34. Pet. 16.

Claim 2 depends from claim 1—claim 1 recites “the front side panels and the back side panels being folded such that each of the refastenable seams overlies the outer surface of one of the front region and the back region of the absorbent chassis in a plane generally parallel to the front and back regions of the absorbent chassis.” Claim 24 depends from independent claim 23, which is similar to claim 1—claim 23 recites “each of the back side panels and each of the front side panels being folded such that each of the refastenable side seams overlies one of the front region and the back region of the chassis and lies in a plane generally parallel to a plane in which the front and back regions lie.” The specification, in describing Figure 18, indicates that the requisite parallel configuration is achieved by folding the front side panels twice, and the back side panels once, or vice versa. Ex. 1001, 17:56–18:10.

In our Decision to Institute, we preliminarily agreed with Petitioner that the broadest reasonable construction of “each of the back side panels is folded more than once and each of the front side panels is folded once,” and “each of the back side panels is folded twice and each of the front side panels is folded once” in light

of the specification is that the front and back side panels each have a first fold where the side panels are folded over the absorbent assembly, and the back side panel has a second fold different from the first fold in the back side panel. Dec. 8.

Neither Petitioner nor Patent Owner disputes that preliminary determination. PO Resp. 12. We have reviewed that determination in light of the full record developed at trial, and maintain it.

C. Obviousness over Fletcher, Widlund, and Toyo

Petitioner asserts that the folded absorbent garment of claims 1–14 and 23–37 is unpatentable under 35 U.S.C. § 103, given the combined disclosures of Fletcher, Widlund, and Toyo. Essentially, Petitioner asserts that it would have been obvious for one of ordinary skill in the art to prefasten Fletcher’s absorbent garment in the same manner Widlund’s absorbent garment is prefastened prior to packaging, and then to fold the prefastened garment for final packaging as instructed by Toyo, resulting in a garment meeting all the limitations of the claims. Pet. 28. Petitioner presents a claim chart purporting to show where the individual features of the challenged claims can be found in the cited references. *Id.* at 47–60.

Patent Owner “does not contest” the Board’s conclusion in the ’169 IPR that “it would have been obvious to fold the already folded side panels of Widlund’s training pants . . . around the absorbent assembly as taught by Toyo.” PO Resp. 26 (citing the ’169 IPR, Paper 41). Rather, Patent Owner contends that Petitioner has not “established by a preponderance of the evidence that a POSITA at the time of the invention of the Popp ’876 patent would have found it obvious *to first fold the*

training pant of Fletcher in the manner taught by Widlund before further folding it in the manner taught by Toyo.” PO Resp. 26 (emphasis added).

We begin our analysis with a discussion of the prior art.

1. Overview of the Prior Art

a) Fletcher (Ex. 1004)

Fletcher discloses a refastenable training pant, depicted in Figure 1, reproduced below:

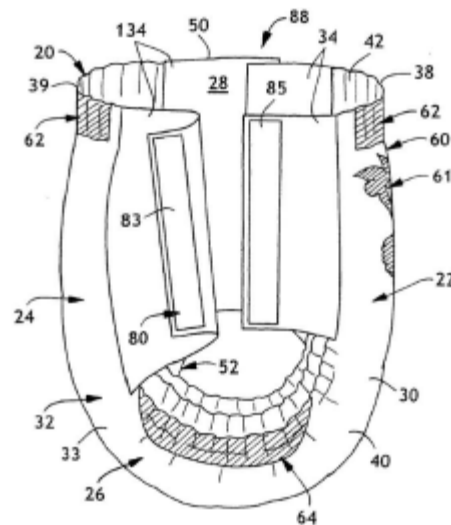


FIG. 1

Figure 1 of Fletcher depicts a side view of a disposable absorbent article—training pant 20—with absorbent chassis 32, front waist region 22, back waist region 24, crotch region 26, inner surface 28, and outer surface 30. Front side panel 34 and back side panel 134 are connected by hook fasteners 82, 83 and loop fasteners 84, 85 to form refastenable seams 88 (collectively, fastening system 80). Ex. 1004, 11:19–29, 19:18–32, 22:7. In Figure 1, fastening system 80 is shown engaged on

Side panels 34 and 134 may comprise “an elastic material” or “stretchable but inelastic materials.” *Id.* at 18:27–28, 19:15–17.

Figure 3, reproduced below, depicts a plan view of Fletcher's disposable absorbent article, training pant 20, shown in Figure 1, in an unfastened, flat condition.

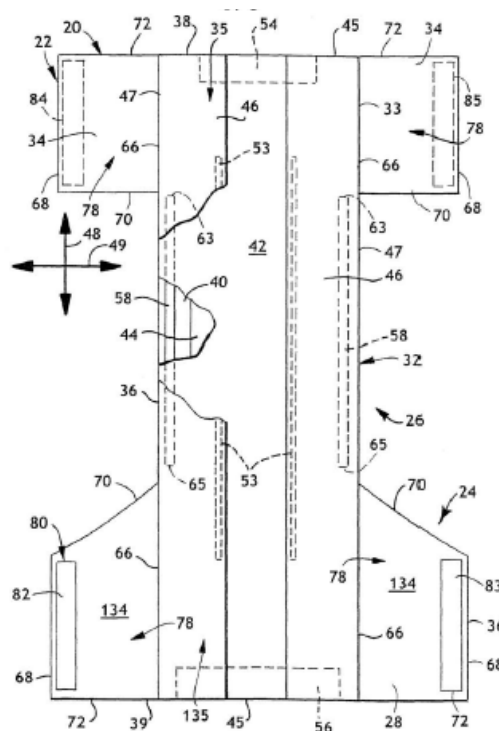


FIG. 3

Figure 3 of Fletcher depicts a plan view of disposable absorbent article 20, showing fastening components 82, 83 located on the inner surface of back side panels 134 and mating fastening components 84, 85 disposed on the outer surface of front side panels 34. Ex. 1004, 10:34, 20:22–26.

Figure 8 of Fletcher, reproduced below, depicts a plan view of another embodiment of Fletcher's disposable absorbent article, training pant 400, shown in an unfastened, flat condition.

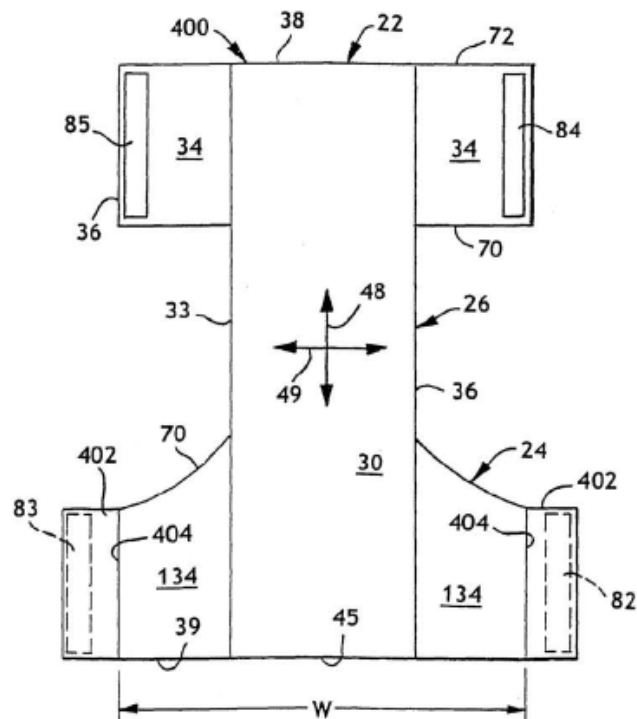


FIG. 8

Figure 8 of Fletcher depicts a plan view of disposable absorbent article 400, showing elastomeric front side panels 34, support members 402 bonded to and extending transversely outward from back side panels 134, fastening components 82, 83 disposed on the inner surface of support members 402, and “adapted to releasably engage first and second mating fastening components 84 and 85 that are connected to the [outer surface of] respective front side panels 34.” Ex. 1004, 25:7–32.

Fletcher teaches that its “absorbent article . . . is extremely compatible with high-speed manufacturing processes,” and is “desirably pre-fastened to provide a pant-like product for the user,” but does not disclose explicit instructions for prefastening the article. *Id.* at 4:18–19, 6:29–30, 26:4.

b) Widlund (Ex. 1005)

Widlund discloses “a pants-type diaper,” depicted in Figure 5, reproduced below.

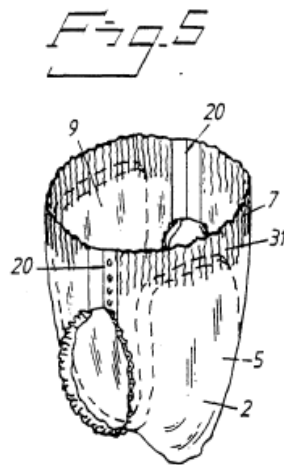
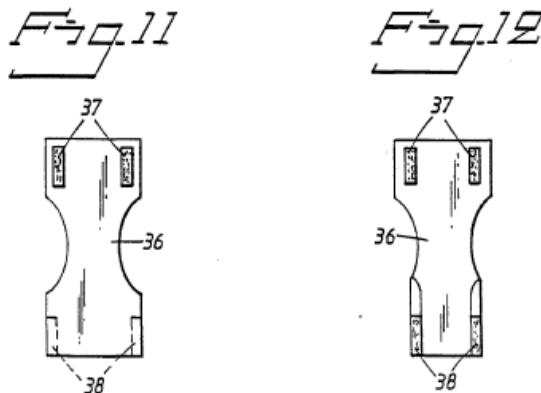


Figure 5 of Widlund is a perspective view of pants-type diaper 20 comprising absorbent body 5 enclosed between inner and outer casing sheets 9 and 2, respectively. Ex. 1005, 8:34–9:1. As shown in the figure, “the front and rear side parts of the pant diaper are joined together by means of a releasable and refastenable fastener means 20.” *Id.* at 10:18–20.

Figures 11 and 12 of Widlund are reproduced below.



Figures 11 and 12 of Widlund “illustrate schematically a pants-type diaper blank 36 in which . . . a fastener element is comprised of two mutually coacting parts 37, 38.” Ex. 1005, 14:30–33. Figures 11 and 12 show that parts 37 “are fastened respectively to the inner surface of the blank [36] at the front side parts thereof, while the other part[s] 38 of the fastener elements . . . [are] fastened to the outer surface of the blank at the rear side parts thereof.” *Id.* at 14:33–37.

Widlund additionally discloses:

In order to produce a finished pants-type diaper [e.g., the diaper shown in Figure 5] from a blank that has the configuration illustrated in Figure 11, those parts of the rear side parts of the blank 36 that contain the parts 38 of the fastener elements are folded against the inner surface of the blank, so as to provide a blank 36 having the configuration shown in Figure 12. The blank is then folded so that the front and the rear side parts thereof are placed edge-to-edge, and the coacting parts 37, 38 are pressed firmly against one another.

Id. at 15:6–15.

Widlund discloses that the finished diapers (i.e., prefastened with parts 37, 38 pressed firmly against one another) are conveyed “to a packaging station in

which they are packaged,” but does not provide any further folding instructions or explicit packaging instructions. *Id.* at 7:34–35.

c) Toyo (Ex. 1006)

Toyo discloses disposable underpants, similar to both Fletcher’s training pant and Widlund’s pants-type diaper, except that “both side edges [of Toyo’s underpants] are adhered” permanently (Ex. 1006 ¶ 2), rather than being releasable and refastenable.

According to Toyo, if the disposable underpants were packaged in their unfolded “approximate” or “truncated” pentagon form (*id.* ¶¶ 2, 4), “any resulting package would be too irregularly shaped for easy handling” (*id.* ¶ 4). Toyo, therefore, recommends folding the side selvages of the underpants toward the center of the underpants to form “an approximately rectangular shape” suitable for packaging. *Id.* ¶¶ 4, 5. Toyo explains that:

[T]he “selvages” of these disposable underpants are parts corresponding to the two sides of the underpants in which an absorbent part is not interposed in the layered structure . . . and thus the thickness of the selvages is thinner than that of the absorbent part. Therefore there is no increase in the thickness of the disposable underpants when the disposable underpants . . . are folded.

Id. ¶ 9.

Toyo discloses several possible folding configurations for its disposable underpants resulting in a flat, approximately rectangular shape. Figure 6, reproduced below, depicts the first of these folding configurations.

Figure 6

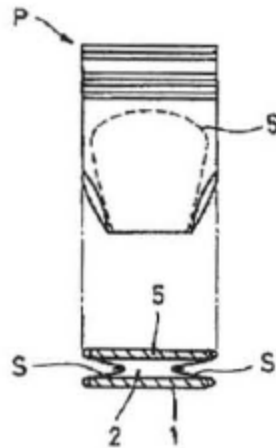


Figure 6 depicts a front elevation and cross-section of Toyo's folded disposable underpants wherein selvages S, S are folded and inserted between the front panel and the back panel of the disposable underpants. Ex. 1006, Abstract, ¶ 5. In other words, selvages S, S are tucked between the front and back panels of the underpants to achieve a flat, approximately rectangular shape.

However, Toyo teaches "it is extremely difficult to perform the folding process illustrated in Figure 6" using the "typical continuous production method for disposable underpants" (*id.* ¶ 6). Toyo cautions:

If the folding is not done precisely, many underpants will be produced in which one selvage S of the underpants will be folded irregularly and the selvage S is not accurately inserted between the front and rear panels of the underpants, or when the underpants are folded, the selvage S protrudes on the outside, which results in partial irregular protrusion when the underpants are packaged in packaging bags.

Id. ¶ 8.

Accordingly, Toyo discloses alternative folding configurations wherein “the resulting underpants are folded correctly and compactly into a rectangle of about the same size as the absorbent region” (*id.* ¶¶ 10, 11, 18), so that “even when stacking a . . . number of disposable underpants, there is no abnormal bulging or protrusion, and a cubic package can be smoothly achieved” (*id.* ¶ 18). In one of these alternative configurations, “one of the right or left selvages is housed between the . . . thick front panel and the absorbent panel of the back panel (which is folded in two front-to-back)” (*id.* ¶ 10), and “the other selvage is folded back toward the outside of the disposable underpants” (*id.*). In another alternative configuration, “both the left and right selvages are folded back to the outside of the front panel of the underpants, or . . . both the left and right selvages are folded back to the outside of the back panel of the underpants” (*id.* ¶ 11). Finally, “either the left or right selvage is folded back to the front panel of the underpants or to the rear part thereof” (*id.*).

Figure 2 of Toyo is reproduced below.

Figure 2

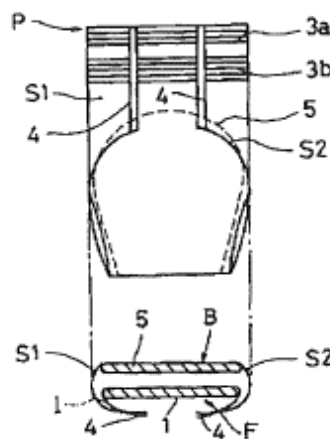


Figure 2 of Toyo depicts a front elevation and cross-section of Toyo's disposable underpants "wherein both selvages S1 and S2 of disposable underpants P are folded up towards the front of the front panel F." Ex. 1006 ¶ 16. Alternatively, "selvages S1 and S2 can be folded to the outside of the back panel B of the underpants." *Id.*

2. *Petitioner's Contentions*

Claims 1 and 23

With respect to independent claims 1 and 23, Petitioner asserts that "Fletcher, Widlund, and Toyo all disclose children's training pants, with the primary difference [between their respective training pants] being that Fletcher and Widlund use refastenable seams to close the pant, whereas Toyo uses bonded seams." Pet. 28–29. Petitioner asserts that the "refastenable training pant of Fletcher has all of the elements of the absorbent garment of Claims [1 and 23], except that the side panels are not folded in the manner recited in the Claims." *Id.* at 28. Moreover, Petitioner asserts that "the training pants in Fletcher and Widlund are very similar" (*id.* at 31), except that Fletcher expressly teaches that the side panels can be elastic or stretchable (*id.* at 23, 47, 53, 57).

Petitioner contends that it would have been obvious for one of ordinary skill in the art to prefasten Fletcher's garment in the same way that Widlund's similar garment is prefastened, and then to fold it for final packaging as instructed by Toyo, resulting in a garment meeting all the limitations of the claims, including the folded configuration required by claims 1 and 23. *Id.* at 28.

Specifically, Petitioner contends that “these three references all relate to the same field of endeavor.” Pet. 29 (citing Ex. 1002 ¶ 95). Petitioner notes that Widlund discloses “a manufacturing line that includes a ‘packaging station’ where the refastenable training pants ‘are packaged,’” and that Toyo “is directed to folding training pants and placing such products into a package.” *Id.* (citing Ex. 1005, 7:30–36, Fig. 1; Ex. 1006, Summary). In addition, Petitioner contends that Fletcher discloses that “its refastenable training pant is ‘extremely compatible with high-speed manufacturing processes’” (*id.* (citing Ex. 1004, 4:18–19)), and one of ordinary skill in the art “would have understood that such processes would have included placing the training pants in a package, since this is how these products were typically provided to consumers” (*id.* (citing Ex. 1002 ¶ 97)).

Petitioner contends that

Widlund teaches how to produce a “finished” (i.e., prefastened) refastenable training pant (*see, e.g.*, Ex. 1005, Figures 5 and 8), which is then sent to a “packaging station” where it is packaged. (*Id.* at 7:34–36). To prefasten the pant, a portion of each of the side panels containing outwardly facing fastening component 38 (e.g., loop fastener on back side panels) is folded against the inner surface of the pant 36, as shown in Figure 12 . . . The pant 36 is then folded in half (not shown) so that the front and back side panels are “placed edge-to-edge.” (*Id.* at 15:6–13). The fastening components 37, 38 on the front and back side panels are then “pressed firmly against one another” to form refastenable seams. (*Id.* at 15:13–15; *see also id.*, Abstract, Figs. 11, 12, 5, 7, 8). As a result, a fold is formed in the side panels, next to the refastenable seams.

(*Id.*; *see also* Ex. 1002, Gardner Decl., ¶ 103). Pet. 30.

Petitioner contends that Fletcher, like Widlund, “teaches that its training pant should be ‘prefastened’” (Pet. 30 (citing Ex. 1004, 26:4)), and “[l]ike the training pant shown in Figures 11 and 12 of Widlund, Figures 1–3 of Fletcher show side panels 34 that have outwardly facing fastening components” (*id.* at 31 (citing Ex. 1004, 20:30–32, 19:32–35; Ex. 1002 ¶ 104)). Thus, Petitioner contends, it would have been obvious for one of ordinary skill in the art “to fold a portion of each of Fletcher’s front side panels against the inner surface of the pant,” as shown in Widlund. *Id.* at 32 (citing Ex. 1005, 15:8–12).

Petitioner asserts that “[t]his folding technique would invert Fletcher’s (initially outward facing) fasteners to be inwardly facing, just like in Figure 12 of Widlund” (*id.*), and “[a]s a result, a first fold is formed in Fletcher’s side panels 34, next to the fastening components” (*id.* (citing Ex. 1002 ¶ 106)). Petitioner further contends:

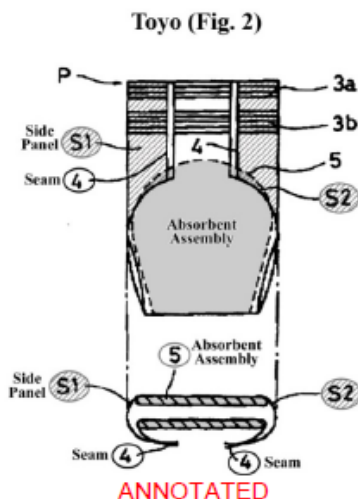
Next, following Widlund’s teachings, a [person of ordinary skill in the art] would have folded Fletcher’s training pant in half so that the front side panels 34 and back side panels 134 are “placed edge-to-edge.” (Ex. 1005, 15:12-13). A [person of ordinary skill in the art] would then use Widlund’s technique of “press[ing]” Fletcher’s fastening components “firmly against one another” (*id.* at 15:13-15) to form [a] finished (i.e., prefastened) training pant having refastenable seams (*id.* at 15:6-8). Using Widlund’s techniques on Fletcher’s training pant provides the same results and improvements. At this point, Fletcher’s training [pant] is prefastened and can now be further processed for packaging. (Ex. 1002, Gardner Decl., ¶ 107).

Pet. 32.

Petitioner contends that a person of ordinary skill in the art “would also have understood that once Fletcher’s refastenable training pant is prefastened with

Widlund’s techniques, the training pant would need to be packaged.” Pet. 33 (citing Ex. 1002 ¶ 97). Petitioner contends, “[s]ince Widlund does not discuss a specific method for packaging training pants, a [person of ordinary skill in the art] would have looked to known packaging methods, such as Toyo’s.” Pet. 33 (citing Ex. 1002 ¶ 110).

According to Petitioner, “[i]n Toyo, as shown below [in Figure 2], the side panels S1 and S2 of the training pant P are folded such that the seams 4 overlie the outer surface of either the front region or the back region of the absorbent assembly 5 in a plane generally parallel to the absorbent assembly 5.” *Id.* (citing Ex. 1006 ¶¶ 16–18, Figs. 2, 3). Petitioner asserts, “[a]s a result, a fold is created in the front side panels and back side panels S1 and S2, next to the absorbent assembly 5.” *Id.* (citing Ex. 1002 ¶ 111). Figure 2 of Toyo, as annotated by Petitioner, is reproduced below.



Annotated Figure 2 of Toyo depicts side panels S1 and S2 folded over, and lying in a plane generally parallel to, the absorbent assembly of training pant P. Pet. 34.

Petitioner asserts that it would have been obvious for one of ordinary skill in the art to fold the side panels of Fletcher’s training pant—prefastened according to Widlund’s techniques—over the absorbent assembly in preparation for packaging, because “there were only ‘a finite number of identified, predictable solutions’ for positioning side panels of training pants in a package,” (*id.* at 35) and Toyo “recommends folding the side panels over the absorbent assembly” (*id.* at 34) to avoid protrusions which cause a package of training pants to swell (*id.*). Stated another way, Petitioner contends it would have been obvious “to fold the side panels of Widlund’s [refastenable] training pants over the absorbent assembly in preparation for packaging based on Toyo’s suggestion, in order to avoid irregular protrusions and bulges which would interfere with packaging the underpants.” *Id.* at 35 (citing Ex. 1002 ¶ 125 (brackets Petitioner’s)).

Petitioner further asserts that in this manner, “a fold is created in Fletcher’s front side panels and back side panels 34, 134, next to the absorbent assembly” and “Fletcher’s refastenable seams will overlies the outer surface of the front or back region of the absorbent chassis . . . in a plane generally parallel to the front and back regions of the absorbent chassis, as required by Claim[s] 1 and 23.” *Id.* at 36 (citing Ex. 1006 ¶¶ 16–18, Fig. 2; Ex. 1002 ¶¶ 118, 120).

Claims 2 and 24

In addition, Petitioner asserts that the combined teachings of Fletcher, Widlund, and Toyo meet the limitations of dependent claims 2 and 24, “since the front and back side panels would be folded over the absorbent chassis to have a ‘first fold’ in each panel near the absorbent chassis, and each of the back side

panels has a ‘second fold’ (e.g., near the refastenable seam) which is different from its ‘first fold.’” *Id.* at 39 (citing Ex. 1002 ¶¶ 133, 134).

Claim 33

With respect to independent claim 33, which is similar in most respects to claims 1 and 23, Petitioner contends that “fold[ing] Fletcher’s side panels as per Widlund . . . [and Toyo] will result in the same configuration recited in Claim 33.” Pet. 43 (citing Ex. 1005, Fig. 12; Ex. 1006 ¶¶ 11, 16, Fig. 2; Ex. 1002 ¶ 153). That is, Petitioner contends:

As such, each of Fletcher’s front side panels 34 will have a fold which brings the front side panels 34 into face-to-face relationship with the back side panels, forming refastenable seams 88, as required by Claim 33. Further, each of Fletcher’s back side panels 134 will have (1) a first fold which brings the back side panels 134 into face-to-face relationship with the outer surface of the back region 24 of the absorbent chassis, and (2) a second fold which causes the fastening components on the back side panels to face away from the outer surface of the back region 24, all as required by Claim 33.

Pet. 44–45 (citing Ex. 1002 ¶¶ 157–158).

Claims 3–14, 25–32, and 34–37

Petitioner provides a claim chart purporting to show where the limitations of dependent claims 3–14, 25–32, and 34–37 are disclosed in the prior art. Pet. 49–60. For example, claim 3 requires each of the refastenable seams to overlie the outer surface in the back region of the absorbent article, and Petitioner cites both Fletcher and Widlund as disclosing refastenable seams, and Toyo as disclosing folding the front and back side panels over the back region of the absorbent chassis. Pet. 49–50 (citing Ex. 1004, Fig. 1, 18:24–26, 22:1–36; Ex. 1005, Figs. 5,

8, 11, 12, 10:18–11:26, 14:27–15:22; Ex. 1006 ¶¶ 11, 16, Fig. 3). Claim 6 specifies that the front and back side panels are formed separately from and bonded to the front and back regions of the chassis, and Petitioner cites Fletcher as disclosing this feature. *Id.* at 51 (citing Ex. 1004, Figs. 2, 3, 11:32–34, 17:20–33, 18:21–26, 23:34–24:5, 24:22–29, Fig. 8, 25:14–17). Claims 8 and 28 require that one of the fastening components is a hook fastener, while claims 10 and 30 require that the other fastening component is a “loop fastener,” and Petitioner cites several portions of Fletcher as disclosing these features. *See* Pet. 51, 52, 55, 56 (citing Ex. 1004, Figs. 1–3, 6, 19:29–32, 20:6–21, Fig. 8, 25:27–34). Similarly, claim 13 recites that “the absorbent garment . . . has a graphic disposed on the front region,” and Petitioner cites several portions of Fletcher for this feature as well. *See* Pet. 52 (citing Ex. 1004, Figs. 1, 2, 14:26–15:11).

Patent Owner’s Arguments

As discussed above, Patent Owner contends that Petitioner has not “established by a preponderance of the evidence that a POSITA at the time of the invention of the Popp ’876 patent would have found it obvious to first fold the training pant of Fletcher in the manner taught by Widlund before further folding it in the manner taught by Toyo” (PO Resp. 26) for the reasons discussed below.

a) Mr. Gardner’s Declaration (Ex. 1002)

As an initial matter, Patent Owner contends that the opinions of Petitioner’s witness, Daniel D. Gardner, “are improperly rendered from the point of view of a POSITA ‘at the time the ’876 patent was filed,’” rather than “***at the time the invention was made***” (PO Resp. 27), and are therefore, invalid and entitled to no

weight. Specifically, Patent Owner contends that “the time of invention of the Popp ’876 patent is the March 5, 2001 filing date of U.S. Patent application No. 09/799,814” (the parent of the ’876 patent), rather than the August 3, 2010 filing date of the ’876 patent (PO Resp. 28), yet Mr. Gardner “repeatedly states that his opinions are rendered ‘at the time of the filing of the ’876 patent’” (*id.* at 29 (citing Ex. 1002 ¶¶ 94, 97, 100, 105, 112, 165)).

b) Reasons for Combining and Expectation of Success

Patent Owner additionally contends that the reasons Petitioner advances for why one of ordinary skill in the art “would have been motivated to fold the training pant of Fletcher in the manner taught by Widlund prior to further folding it in the manner of Toyo” (PO Resp. 30) “lack the rational underpinning necessary to support a conclusion of obviousness” (*id.*), and therefore, are not “supported by a preponderance of the evidence” (*id.* at 31).

Specifically, Patent Owner contends that Petitioner asserts that “each of the references ‘addressed the same need to package training pants’” (*id.* at 30 (citing Pet. 29; Ex. 1002 ¶¶ 96–100)), but “Fletcher does not refer to packaging at all” (*id.* at 33) and “Widlund is equally silent on packaging related needs” (*id.* at 34). Patent Owner acknowledges Mr. Gardner’s testimony that “in his experience all commercial training pants are packaged,” but contends “[t]hat fact alone cannot render it obvious to combine the teachings of every prior art packaged training pant, nor does it mean that there is a packaging need or problem that is going unaddressed.” PO Resp. 32 (citing Ex. 2006, 52:18–21). Similarly, Patent Owner acknowledges that Widlund “teaches a manufacturing line that includes a

‘packaging station,’” but contends that “this is no more of a teaching than Mr. Gardner’s assertion that it was known to place products in packaging before delivery to consumers.” *Id.* at 34 (citing Ex. 1005, 7:30–36; Pet. 29; Ex. 1002 ¶ 97). According to Patent Owner, given the “absence of any disclosure in Fletcher or Widlund of a need to address . . . packaging needs or problems, there is insufficient evidence to support Petitioner’s assertion that there is a ‘clear motivation’ to combine these references on the grounds that they address the same need.” *Id.* at 34–35.

In addition, Patent Owner contends that one of ordinary skill in the art “would have no reason to combine Fletcher and Widlund” because “Fletcher is already prefastened . . . [thus] Widlund does not present an improvement over Fletcher or otherwise provide a reason that would motivate one of ordinary skill in the art to modify Fletcher.” PO Resp. 36. Patent Owner contends:

Neither Petitioner nor Mr. Gardner’s Declaration offer an assertion or evidence that one of ordinary skill in the art would recognize a benefit or otherwise have a reason with a rational underpinning to now use the “finishing” technique of Widlund to prefasten the training pant—e.g., as opposed to simply folding the already prefastened and ready for packaging training pant of Fletcher in the manner taught by Toyo irrespective of the manner in which the Fletcher pant is prefastened.

Id. at 38–39.

Patent Owner further contends that “neither Petitioner nor Mr. Gardner considered other ways to prefasten the Fletcher training pant.” *Id.* at 39. Patent

Owner cites Schmitz⁵—submitted by Petitioner as Exhibit 1011—as disclosing a prefastening method that “does not include the [first] fold taught by Widlund in order to prefasten the fasteners.” *Id.* at 40 (citing Ex. 1011, Figs. 6–9, 1:43–2:1).

Finally, Patent Owner contends although Fletcher’s and Widlund’s training pants “do appear to be similar, the positioning of the respective fastening components is noticeably different” (*id.* at 45). Patent Owner contends:

Specifically, in the Figure 11 pant of Widlund, the front side fasteners 37 are spaced inboard away from the side edges of the front side panels, while the back side fasteners 38 are located along the side edges of the back side panels. (Ex. 1005, Figure 11; Ex. 2006, Gardner Tr. at 95:15–23). As a result, before folding as in Figure 12, the transverse spacing between the front side fasteners 37 is less than the transverse spacing between the back side fasteners 38. (Ex. 1005, Figure 11; Ex. 2006, Gardner Tr. at 95:24–96:7).

PO Resp. 45–46. According to Patent Owner, “[t]his differential positioning . . . assures that when the back side panels are folded as in Figure 12, the fasteners 38 on the back side panels are aligned with the fasteners 37 on the front side panels.” *Id.* at 46. Patent Owner contends that Fletcher’s fastening components, in contrast, are “desirably positioned along the distal edges 68” of back side panels 134, and front side panels 34—i.e., the fastening components “start[] at the same transverse width”—and therefore, would not be aligned after “folding in the same manner as Figure 11 of Widlund.” *Id.* at 47, 50. That being the case, Patent Owner contends that Petitioner has failed to establish that one of ordinary skill in the art “could fold Fletcher in the manner of Widlund with anticipated success.” *Id.* at 44.

⁵ U.S. Patent No. 5,779,831, issued July 14, 1998 (Ex. 1011).

Analysis

a) Mr. Gardner's Declaration

First, we have considered Patent Owner's contention that "Mr. Gardner's opinions [in his Declaration] are not rendered from the perspective of a POSITA at the required time of invention" (PO Resp. 30), but are not persuaded.

We note that Mr. Gardner, as a preliminary matter in the same Declaration, testified as follows:

It is my understanding that in considering the issue of obviousness, I should consider what a person of ordinary skill in the pertinent art would have known at the time of the invention, as well as what such a person would have reasonably expected to have been able to do in view of that knowledge.

Ex. 1002 ¶ 16. And,

I understand that the application leading to the '876 Patent was a continuation of an earlier application filed on March 5, 2001. For the purpose of my analysis, I assume that the time of the purported invention of the '876 Patent was March 5, 2001.

Id. ¶ 31.

Moreover, when cross-examined on this issue by Patent Owner's counsel, Mr. Gardner confirmed that his analysis in the Declaration was based on the perspective of one of ordinary skill in the art, at the time of the invention:

Q. So just breaking that down, when you are looking at obviousness, you are looking at it from the perspective of one of ordinary skill in the art; correct?

A. Yes.

Q. And in terms of temporal perspective, you are using the time of the invention; correct?

A. Correct.

Ex. 2006 (Gardner Deposition), 17:2–10.

Q. . . . The original application was filed March 5th, 2001; correct?

A. That’s correct.

Q. And with reference to paragraph 31 [of your Declaration], that’s the time of the invention for the Popp patent; correct?

A. Correct.

Id. at 19:17–24.

We acknowledge that Mr. Gardner refers several times in the course of his Declaration to “the time the ’876 patent was filed” (*see e.g.*, Ex. 1002 ¶¶ 94, 97, 100, 105). Having reviewed Mr. Gardner’s testimony in both his Declaration and Deposition, however, we are satisfied that he understood that his analysis should be based on the time of the invention, that he understood the time of invention to be March 5, 2001, and that he formulated his opinion on that basis. Accordingly, we do not agree with Patent Owner that Mr. Gardner’s testimony should be accorded no weight.

b) Reasons for Combining

Turning to Patent Owner’s criticisms of Petitioner’s reasons for combining the teachings of the prior art, we agree with Patent Owner to the extent that neither Fletcher nor Widlund can be said to address packaging “needs” or “problems”—or that Fletcher discloses a need for packaging “improvement.” That is not to say, however, that Petitioner has failed to establish that one of ordinary skill in the art

would have had reason to combine the teachings of Fletcher, Widlund, and Toyo in the manner required by the challenged claims.

For an obviousness analysis, 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) (quoting *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). Moreover, “it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826 (CCPA 1968). That is because an obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007); *see also Translogic Tech., Inc.*, 504 F.3d at 1259.

Claims 1, 2, 23, and 24

As discussed above, Petitioner contends that Fletcher and Widlund disclose similar absorbent articles with similar fastening systems for their refastenable seams, and we agree that this contention is supported by the evidence of record. *Compare, e.g.*, Fletcher’s Figs. 3, 8, *with* Widlund’s Figs. 11, 12. The record further shows that although both Fletcher and Widlund explicitly teach that their absorbent articles should be prefastened (Ex. 1004, 6:29–30; 26:4–5; Ex. 1005, 15:6–15), of the two references, only Widlund provides detailed, specific instructions for doing so (Ex. 1005, 15:16–15). Accordingly, we agree with Petitioner that it would have been obvious for one of ordinary skill in the art to

prefasten Fletcher's absorbent article in the conventional manner detailed by Widlund—regardless of whether Fletcher identifies any particular problem with prefasting its absorbent article.

As for Patent Owner's reliance on Schmitz (PO Resp. 40) as disclosing another way of folding absorbent articles—different from Widlund's—we are not persuaded that the existence of another folding method detracts from the obviousness of the combination asserted by Petitioner.

Nor are we persuaded by Patent Owner's argument that Petitioner has failed to establish that one of ordinary skill in the art “could fold Fletcher in the manner of Widlund with anticipated success.” PO Resp. 44. As discussed above in Section II.C.1b, and as noted by Petitioner (Pet. 30), Widlund teaches,

In order to produce a finished pants-type diaper from a blank that has the configuration illustrated in Figure 11, those parts of the rear side parts of the blank 36 that contain the parts 38 of the fastener elements are folded against the inner surface of the blank, so as to provide a blank 36 having the configuration shown in Figure 12. The blank is then folded so that the front and the rear side parts thereof are placed edge-to-edge, and the coacting parts 37, 38 are pressed firmly against one another.

Ex. 1005, 15:6–15. Thus, Widlund instructs the artisan to fold fastener elements 38 to the inner surface of the blank, and then fold the blank front to rear such that the front and rear side parts are “placed edge-to-edge” and fasteners 37, 38 are pressed against one another. *Id.* In other words, once fastener elements 38 are folded against the inner surface of the blank so that they will face fastener elements 37 when the front of the blank is folded into the finished pants shape, Widlund

instructs one to align the front and rear side parts (“edge-to-edge”). We credit Mr. Gardner’s testimony that one of ordinary skill in the art would understand that “the point of Widlund is to get [fasteners 37, 38] oriented so that they are facing each other and engage them” (Ex. 2006, 103:21–24), and “that the only way you can engage [fasteners 37, 38] is if you line them up so they can be engaged” (*id.* at 102:24–103:1).⁶

Finally, we turn to the additional folds required by the claims—e.g., “the front side panels and the back side panels being folded such that each of the refastenable seams overlies the outer surface of one of the front region and the back region of the absorbent chassis in a plane generally parallel to the front and back regions of the absorbent chassis.” Ex. 1001, 19:62–67 (Claim 1). Again, Patent Owner does not contest our earlier conclusion in the ’169 IPR that it would have been obvious for one of ordinary skill in the art to fold the side panels of the pre-fastened training pant over the absorbent assembly as taught by Toyo. PO Resp. 26.

Nevertheless, in an *inter partes* review, “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

⁶ We further note that Figure 8 of Fletcher, cited by Petitioner (Pet. 23) and Mr. Gardner (Ex. 1002 ¶¶ 36, 76–80, 160, 163, 167), depicts a training pant in which the front and back side panels do not start out at the same transverse width.

claim”)). That burden never shifts to Patent Owner. *See 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). Thus, at this final stage, we determine whether a preponderance of the evidence of record shows that the challenged claims would have been obvious over the proposed combinations of prior art, regardless of whether Patent Owner contests our earlier conclusion.

As discussed above, Widlund teaches that its prefastened absorbent article is sent to a packaging station for packaging, but does not provide specific packaging instructions (Ex. 1005, 7:34–35). Toyo, on the other hand, does provide specific instructions for packaging absorbent articles (e.g., children’s disposable underpants). That is, Toyo teaches that the side panels of its absorbent article should be folded toward the center of the article in order to convert the article, which has a generally pentagonal shape, into a rectangular shape before packaging. We agree with Petitioner that it would have been obvious for one of ordinary skill in the art to fold the side panels of Fletcher’s absorbent article—prefastened as disclosed by Widlund—toward the center of the article in the manner disclosed by Toyo, regardless of whether Fletcher or Widlund identifies any particular problem with packaging its absorbent article, in order to convert the article into an approximately rectangular shape before packaging, thereby avoiding the irregular protrusions and bulges Toyo warns of which would interfere with packaging the underpants. Pet. 34–35.

Accordingly, we are persuaded that Petitioner has established, by a preponderance of the evidence, that the subject matter of claims 1, 2, 23, and 24

would have been obvious over the combined teachings of Fletcher, Widlund, and Toyo.

Claim 33

Patent Owner does not specifically address the limitations of claim 33, but argues “for the same reasons discussed above, Petitioner has not proved by a preponderance of the evidence that independent claim 33 is unpatentable on the grounds relied on by Petitioner.” PO Resp. 59.

Nevertheless, we are persuaded, for the same reasons discussed above, that Petitioner has established, by a preponderance of the evidence, that the subject matter of claim 33 would have been obvious over the combined teachings of Fletcher, Widlund, and Toyo.

Claims 3–14, 25–32, and 34–37

Patent Owner does not address specifically the limitations of dependent claims 3–14, 25–32, and 34–37. However, having reviewed the claim charts on pages 47–60 of the Petition, we are persuaded that Petitioner has demonstrated that the prior art discloses the limitations of these dependent claims. For example, as discussed above, claims 8 and 28 require that one of the fastening components is a hook fastener, while claims 10 and 30 require that the other fastening component is a “loop fastener,” and Petitioner cites several portions of Fletcher as disclosing these features. See Pet. 51, 52, 55, 56 (citing Ex. 1004, Figs. 1–3, 6, 19:29–32, 20:6–21, Fig. 8, 25:27–34). Similarly, claim 13 recites that “the absorbent garment . . . has a graphic disposed on the front region,” and Petitioner cites several

portions of Fletcher for this feature as well. *See* Pet. 52 (citing Ex. 1004, Figs. 1, 2, 14:26–15:11).

We are persuaded, for the same reasons discussed above, that Petitioner has established, by a preponderance of the evidence, that the subject matter of claims 3–14, 25–32, and 34–37 would have been obvious over the combined teachings of Fletcher, Widlund, and Toyo.

D. Petitioner’s Motion to Exclude

Petitioner moves to exclude Exhibit 2005, an annotated version of Figure 3 of Fletcher, as “lack[ing] foundation and authentication under FRE 901,” as “inadmissible hearsay under FRE 801 and 802,” and “under FRE 401, 402, and 403 because it is irrelevant.” Mot. to Exclude, 2.

Nevertheless, we decline to exclude Exhibit 2005 from the record, as we did not rely on it in any way in reaching our decision. Petitioner’s Motion to Exclude Evidence is dismissed as moot.

III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–14 and 23–37 of the ’876 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Fletcher, Widlund, and Toyo.

IV. ORDER

Accordingly, it is

ORDERED that claims 1–14 and 23–37 of U.S. Patent 8,579,876 B2 are held *unpatentable*;

FURTHER ORDERED that Petitioner’s Motion to Exclude is *dismissed* as moot; and

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

IPR2016-00168
Patent 8,579,876 B2

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