

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CLEARWATER PAPER CORPORATION,
Petitioner,

v.

GRAPHIC PACKAGING INTERNATIONAL LLC,
Patent Owner.

IPR2025-00878
Patent 8,637,126 B2

Before CARL M. DEFRANCO, CHRISTOPHER M. KAISER, and
MARY C. HOFFMAN, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

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

I. INTRODUCTION

Graphic Packaging International LLC (“GPI”) is the owner of U.S. Patent No. 8,637,126 B2 (Ex. 1001, “the ’126 patent”). Clearwater Paper Corporation (“Clearwater”) filed a petition requesting *inter partes* review of claims 1–3 and 11 of the ’126 patent. Paper 3 (“Pet.”). We instituted *inter partes* review of all claims as challenged in the Petition. Paper 6 (“Inst. Dec.”). GPI did not file a patent owner response, and no further briefing or evidence was filed by either party after institution of trial. Nor did either party request a hearing.

We have authority to hear this *inter partes* review under 35 U.S.C. § 6(c). We enter this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. We have considered the evidence of record in this proceeding in light of Clearwater’s burden, as petitioner, to prove unpatentability of each challenged claim by a preponderance of the evidence. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015); 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). Based on the existing record, we determine that Clearwater proves, by a preponderance of the evidence, that the challenged claims of the ’126 patent are unpatentable as anticipated and/or as obvious under 35 U.S.C. §§ 102 and 103.

II. BACKGROUND

A. *Real Parties-in-Interest*

Clearwater identifies itself as the real party in interest. *See* Pet. 2. GPI is silent as to any real party-in-interest.

B. *Related Matters*

Clearwater represents there are no related matters. *See* Pet. 2.

C. Overview of the Challenged '126 Patent

The '126 patent is directed to a laminated paper cup made of a “biodegradable paper-based laminate” having layers “with oxygen and moisture barrier properties.” Ex. 1001, 1:10–11, 2:18–20. For example, Figure 1 of the '126 patent, reproduced below, is a schematic representation of the various layers of the laminate.

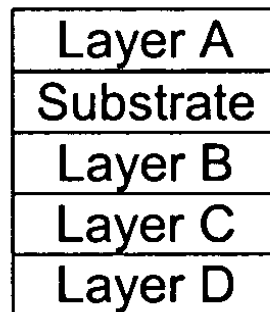


Fig. 1

As shown and described, the laminate includes a paper-based substrate with layer A on the exterior of the cup and layers B, C, and D comprising the interior layers of the cup. *Id.* at 3:60–4:42. In particular, the substrate “is paperboard, such as bleached or unbleached (natural) kraft sheet or bleached or unbleached (natural) paperboard.” *Id.* at 3:60–62. Layer A, in turn, includes “a polymer that will provide the substrate adequate protection from liquid and vapor water in the surrounding environment” and is “biodegradable.” *Id.* at 3:63–67. Next, “Layer B is chosen from materials that will coat the substrate to protect the following layers from moisture from the substrate and the exterior environment.” *Id.* at 4:17–19. “Layer C generally includes a material that will provide the oxygen barrier,” but “this layer may not be necessary if Layer B includes an oxygen barrier material.” *Id.* at 4:24–28. Finally, “Layer D is the product

contact layer” and “provides resistance to penetration by vapor (water), liquid (i.e. water, oil, etc.), and solid materials and aids in sealing the package.” *Id.* at 4:37–39.

“[T]he three layer laminate of FIG. 1 may be applied to the substrate as a single coextrusion step.” *Id.* at 5:14–15. Also, “[a]s desired, calcium carbonate may be added to one or more of the individual layers of the extrusion or aqueous coatings in [FIG. 1] as a cost savings measure and to provide an increase in the degradation rate by displacement of some of the biodegradable resin material.” *Id.* at 6:4–8.

D. The Challenged Claims

Of the challenged claims, only claim 1 is independent. It recites (with bracketed nomenclature added for clarity):

1. [1.pre] A product in the form of a cup comprising a laminate forming moisture barriers, said laminate comprising:

[1.1] a paperboard substrate having a separate interior product facing surface and a separate exterior surface;

[1.2] a first moisture protectant layer is coated directly only on said interior surface of said paperboard substrate and [1.3.1] comprising at least one biodegradable polyester polymer, [1.3.2] wherein the first moisture protectant layer has a coat weight of from 5 to 30 lbs/3000 ft² and;

[1.4] a second moisture protectant layer is coated directly only on said exterior surface of said paperboard substrate and [1.5.1] comprising at least one biodegradable polyester polymer, [1.5.2] wherein the second moisture protectant layer has a coat weight of from 5 to 30 lbs/3000 ft² and [1.6] is separate from the first moisture protectant layer coated on and directly adhered to said interior surface of said substrate.

Ex. 1001, 6:62–7:10.

Challenged claims 2 and 3, which depend from claim 1, add that each of the first and second moisture protectant layers “further comprises from 5 to 20 percent by weight of at least one filler selected from the group consisting of calcium carbonate and starch” (*id.* at 7:11–18), while claim 11, which depends from claim 3, further limits the filler of the first layer to just “calcium carbonate” (*id.* at 8:22–24).

E. The Asserted Challenges

Claims Challenged	35 U.S.C. §	Basis
1–3, 11	102	Cleveland ^{1, 2}
1–3, 11	103	Nakagawa ³
1–3, 11	103	Nakagawa, Tanner ⁴

In support of these challenges, Clearwater submits the declaration of Dr. Karl Englund. *See* Ex. 1003. There is no dispute that Dr. Englund is competent and qualified to testify as an expert witness in this proceeding. As mentioned earlier, GPI did not submit any evidence in rebuttal of Dr. Englund’s declaration.

¹ US 2006/0051603 A1, published Mar. 9, 2006 (Ex. 1005, “Cleveland”).

² Cleveland is prior art “by another” under 35 U.S.C. § 102(e)(1) because, on its face, it has a different inventive entity than the ’126 patent. *Compare* Ex. 1001, (75), *with* Ex. 1005, (75); *see also* M.P.E.P. § 2136.04.I (citing *In re Land*, 368 F.2d 866 (CCPA 1966); *Ex parte DesOrmeaux*, 1992 WL 457519 (BPAI 1992)).

³ JP H6-62944 A, published Mar. 8, 1994 (Ex. 1008 (certified translation), Ex. 1007 (original), “Nakagawa”).

⁴ US 5,213,858, issued May 25, 1993 (Ex. 1009, “Tanner”).

III. ANALYSIS

A. Legal Standard

In an *inter partes* review proceeding, “the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Technology, Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3)’s requirement that petitions identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”). The burden of persuasion never shifts to the patent owner. *See Dynamic Drinkware*, 800 F.3d at 1378 (discussing the burden of proof in AIA review proceedings).

B. Level of Ordinary Skill in the Art

Here, Clearwater contends that one of ordinary skill in the art in the relevant time frame:

would have at least a bachelor’s degree in mechanical or chemical engineering, materials science, polymer science, or equivalent coursework, at least a year of experience developing paper-based laminates involving the application of polymer coatings to a substrate, and the appropriate industry familiarity with biodegradability standards and degradability techniques [and] . . . [l]ess work experience may be compensated by a higher level of education, such as a master’s degree, and vice versa.

Pet. 16 (citing Ex. 1003 ¶ 50).

Clearwater’s definition is uncontested, and we apply that definition here, as it accords with the level of skill reflected in the asserted prior art and the problems addressed in the specification of the ’126 patent.

C. Claim Construction

We apply the claim construction standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). Here,

Clearwater does not propose an express construction of any claim terms beyond their ordinary and customary meaning. *See* Pet. 16. And GPI neither disputes this position nor proposes its own claim construction.

“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). After reviewing the record, we do not see the need to expressly construe any particular claim term.

D. Ground 1—Anticipation by Cleveland

Clearwater challenges claims 1–3 and 11 as anticipated by Cleveland. *See* Pet. 17–42. As noted earlier, GPI offers no opposition to Clearwater’s showing on the merits.

1. Overview of Cleveland

Cleveland relates to the same field of endeavor—biodegradable laminated paper cups—as the ’126 patent. *See* Ex. 1005, cover page, item (54). In particular, Cleveland discloses “a biodegradable laminate for use in shaped paper-based articles such as containers for liquid or solid, hot or cool, food products.” *Id.*, Abstract. As described, the biodegradable laminate comprises “a paper-based substrate having first and second copolyester layers deposited onto at least one surface of the substrate.” *Id.*

2. Prior Art Status

In our institution decision, we preliminarily found that Cleveland qualifies as prior art under 35 U.S.C. § 102(e)(1) “based on both its provisional and non-provisional filing dates.” Inst. Dec. 4 n.5. We were persuaded by Clearwater’s proof that Cleveland’s provisional (Ex. 1006) is

“virtually identical” to Cleveland itself (Ex. 1005) and that the provisional provides written description support for at least claim 1 of Cleveland. *See* Pet. 18–21 (citing Ex. 1006, 2–6, 9). We were also persuaded by Clearwater’s showing that the provisional provides written support for the subject matter relied upon in Cleveland. *Id.* at 21–40 (citing Ex. 1006, 1–9). We are still persuaded by Clearwater’s showing. Thus, we see no reason to disturb our earlier finding that Cleveland is prior art to the ’126 patent.

3. *Claim 1*

In general, claim 1 recites “a cup” formed of “a laminate” that includes:

- (1) “a paperboard substrate” having an interior and exterior surface;
- (2) “a first moisture protectant layer” coated on the interior surface of the paperboard substrate; and
- (3) “a second moisture protectant layer” coated on the exterior surface of the paperboard substrate.

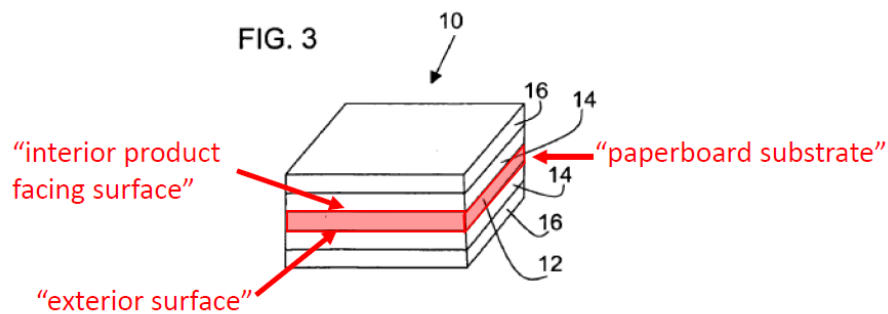
Ex. 1001, 6:62–7:10. As also claimed, each moisture protectant layer comprises “at least one biodegradable polyester polymer” having “a coat weight of from 5 to 30 lbs/3000 ft².” *Id.*

Clearwater provides a detailed comparison of how Cleveland discloses a biodegradable coffee cup that meets each element of claim 1, i.e., claim elements [1.pre]–[1.6] as labeled above in Section I.D. *See* Pet. 22–40 (citing Ex. 1005). Again, none of Clearwater’s assertions are contested. For the reasons below, we are persuaded that Cleveland teaches each and every element of claim 1.

a. Claim Elements [1.pre] and [1.1]

Claim 1 begins by reciting “a cup” comprising “a laminate forming moisture barriers” while also comprising “a paperboard substrate.”

Indisputably, Cleveland discloses a “biodegradable laminate suitable for use in shaped paper-based articles such as containers for liquid or solid, hot or cool, food products.” Ex. 1005, Abstract. As disclosed, such containers include “a biodegradable paper-based cup” made of “a biodegradable laminate 10 which is paper-based, meaning that the substrate 12 of the laminate comprises paper, commonly a paper-based stock known as SBS cup-stock.” *Id.* ¶¶ 19, 24 (emphasis added); *see also id.*, item (54) (“Biodegradable Paper-Based Cup”). Clearwater annotates Figure 3 of Cleveland, reproduced below, to illustrate the paperboard substrate of the biodegradable laminate used to make Cleveland’s paper-based cup. *See* Pet. 26.

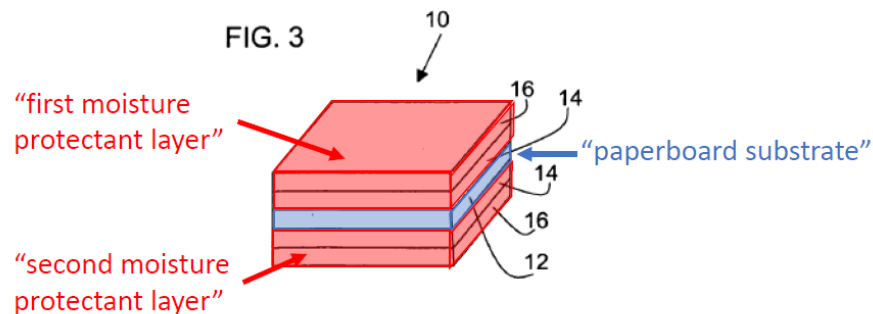


As shown above, Cleveland’s laminate 10 includes a paperboard substrate 12 having two opposing surfaces, an interior facing surface (i.e., facing the product inside the cup) and a separate exterior facing surface (i.e., contacting user’s hand). *See* Ex. 1005 ¶ 9 (“a paper-based substrate having two or more surfaces”); *see also id.*, claim 14 (“biodegradable paper-based shaped article comprising a paper-based substrate having at least two surfaces”). Notably, Cleveland explains that the paper-based laminate used

to make the biodegradable cup overcomes the disadvantages of purely paper cups by “hold[ing] liquids for a longer period of time *without leaking or becoming soft.*” Ex. 1005 ¶¶ 3, 6 (emphasis added). As such, the laminate acts as a moisture barrier for the paperboard-based cup. Thus, we find that Cleveland discloses elements [1.pre] and [1.1] of claim 1.

b. Claim Elements [1.2], [1.4], and [1.6]

Moreover, in terms of the moisture barrier, claim 1 requires that the laminate comprise “a first moisture protectant layer” coated on one side of the paperboard substrate and “a second moisture protectant layer” coated on a “separate” side of the paperboard substrate. Toward that end, Clearwater again annotates Figure 3 of Cleveland, reproduced below, to illustrate how Cleveland’s laminate includes such an arrangement of moisture protectant layers. *See* Pet. 39.



Annotated Figure 3 depicts Cleveland’s paper-based laminate 10 as having first moisture protectant layers 14, 16 (red top layers) “coextruded onto one of the surfaces of the paper-based substrate” (blue mid layer) and second moisture protectant layers 14, 16 (red bottom layers) “provided on the opposite flat surface of substrate.” Ex. 1005 ¶¶ 25, 32. As described, layers 14 and 16 are “coextruded Eastar Bio or Ecoflex (preferably Ecoflex) and Biomax” onto each surface, with the “Biomax being disposed outermost from the substrate.” *Id.* ¶ 32. Clearwater’s expert, whose testimony is

unrebutted, explains that Ecoflex and Eastar Bio are well-known as “water resistant polymers used in food packaging” for “provid[ing] a moisture barrier.” *See* Ex. 1003 ¶ 67 (citing Ex. 1019, at 3, 6; Ex. 1025). That evidence, in our view, shows that Cleveland’s laminate comprises a paperboard substrate having a first moisture protectant layer coated directly on one side of the paperboard substrate and a second moisture protectant layer coated directly on the other side, as called for by elements [1.2], [1.4], and [1.6] of claim 1. *See* Ex. 1003 ¶¶ 66–68 (“*paperboard substrate . . .*”), ¶¶ 71–74 (“*first moisture protectant layer . . .*”), ¶¶ 88–91, 97–98 (“*second moisture protectant layer . . .*”).

c. Claim Elements [1.3.1] and [1.5.1]

As for claim 1’s requirement that the moisture protectant layers comprise “biodegradable polyester polymer,” Cleveland discloses that layers 14 and 16 are made of “copolyester materials” that “are products of copolymerization” and “have been certified to be biodegradable in a compost environment (as tested per ASTM D6400-99) thereby rendering the laminate highly desirable as a material for use in forming food containers which are commonly used once, or a minimum number of times, before disposal thereof.” Ex. 1005 ¶¶ 10–14; *see also id.* ¶ 29 (specifying the “criteria for biodegradability/compostability” of a “coextruded layer of Ecoflex and Biomax”). Those explicit disclosures show that Cleveland’s Eastar Bio/Ecoflex layer 14 and Biomax layer 16 are not only biodegradable, but also comply with ASTM biodegradability standards. *See* Ex. 1003 ¶ 81. Thus, we find that Cleveland satisfies claim elements 1.3.1 and 1.5.1.

d. Claim Elements [1.3.2] and [1.5.2]

Finally, claim 1 requires that each of the first and second moisture protectant layers has “a coat weight of from 5 to 30 lbs/3000 ft².” As noted by Clearwater, Cleveland discloses a total coat weight for layers 14 and 16 as falling within the claimed range. Pet. 32–34 (citing Ex. 1005 ¶ 32). In particular, Cleveland discloses that “the coextruded layer of copolyester (irrespective of which side of the substrate the layer is disposed) is of a total coat weight of between about 10 and about 40 lb/3000 ft² in any combination of between about 80/20 to 20/80 parts by weight of Ecoflex to Biomax,” of which “a total coat weight of 25 lb/3000 ft² is preferred.” Ex. 1005 ¶ 32. As disclosed, Cleveland’s total coat weight range of 10–40 lb/3000 ft² falls almost entirely within the claimed range, and the preferred total coat weight of 25 lb/3000 ft² falls squarely within the claimed range. Thus, Cleveland satisfies claim elements [1.3.2] and [1.5.2]. *See Titanium Metals Corp. v. Banner*, 778 F.2d 775, 782 (Fed. Cir. 1985) (“[W]hen, as by a recitation of ranges or otherwise, a claim covers several compositions, the claim is anticipated if one of them is in the prior art.”) (citation omitted). As such, we find that Clearwater adequately demonstrates that Cleveland discloses all the elements of claim 1.

4. Dependent Claims

Clearwater challenges dependent claims 2, 3, and 11 as also being anticipated by Cleveland. *See* Pet. 41–42. Dependent claim 2 recites that “the second moisture protectant layer further comprises from 5 to 20 percent by weight of at least one filler selected from the group consisting of calcium carbonate and starch.” Dependent claim 3 recites the same requirement for

the “first moisture protectant layer.” As noted by Clearwater, Cleveland explains that

calcium carbonate may be added to any or all of the copolyester extrusions as a cost savings measure and to provide increase in the degradation rate by displacement of some of the biodegradable resin material. Other possible organic and inorganic fillers may be employed with, or in lieu of, calcium carbonate, including starch, . . .

Ex. 1005 ¶ 34.

That is, calcium carbonate and/or starch may be added to the coextruded Eastar Bio/Ecoflex sublayer 14 and Biomax sublayer 16, which make up both the first and second moisture protectant layers of Cleveland’s laminate. Although Cleveland does not prescribe a specific percentage of filler to use, Clearwater’s expert testifies that a skilled artisan reasonably would have readily known that 5–20% by weight of calcium carbonate and/or starch is a suitable amount to decrease costs without reducing the desirable features of a biodegradable laminate for a paper cup. *See* Ex. 1003 ¶ 105. We find that testimony credible and persuasive, not to mention it is unrebutted. Thus, on this record, we find that Clearwater adequately shows that Cleveland discloses the requirements of claims 2 and 3.

Dependent Claim 11, which depends from claim 3, recites that “the first moisture protectant layer comprises from 5 to 20 percent by weight of calcium carbonate as the filler.” Claim 11 differs from claim 3 only in that the filler must specifically be calcium carbonate, not calcium carbonate *or* starch. Because, as discussed above in the context of claim 3, Cleveland discloses the use of calcium carbonate alone as a filler, we find that it also discloses this additional limitation called for by dependent claim 11.

5. Conclusion

In sum, Clearwater persuasively shows that Cleveland discloses each and every element of claims 1–3 and 11. None of Clearwater’s showing, which includes specific citations to Cleveland and credible testimony from its expert, is contested by GPI. Based on this particular record, we determine that Clearwater demonstrates that claims 1–3 and 11 are unpatentable as anticipated by Cleveland.

E. Ground 2—Obviousness Over Nakagawa

Clearwater also challenges claims 1–3 and 11 as obvious over Nakagawa alone. Pet. 43–66. We find persuasive Clearwater’s showing that Nakagawa teaches and/or suggests each element of claim 1. *See id.* at 43–66.

Generally, Nakagawa discloses “a paper cup using a biodegradable plastic that has the same performance as a conventional paper.” *See* Ex. 1008, Abstract, Figs. 1, 4. Nakagawa’s paper cup is laminated with “biodegradable plastic” on either “one side or both sides” of the paper cup. *Id.* As described, the biodegradable plastic’s “main component is a biodegradable microbially produced polyester or an aliphatic polyester. *Id.* Nakagawa explains that “microbially produced polyester is a general term for polyesters obtained by cultivating microorganisms such as bacteria or yeast, and isolating and purifying the polyester compounds that accumulate within the cells or culture medium, and is characterized by being derived from microorganisms.” *Id.* ¶ 12. Thus, according to Nakagawa, the cup’s biodegradable plastic layers have the same, or better, biodegradability as paper, with the biodegradable plastic fully degrading after being buried in soil for three months. *See id.* ¶ 35.

Figures 1 and 4, reproduced below, show Nakagawa's paper cup with biodegradable plastic layers:

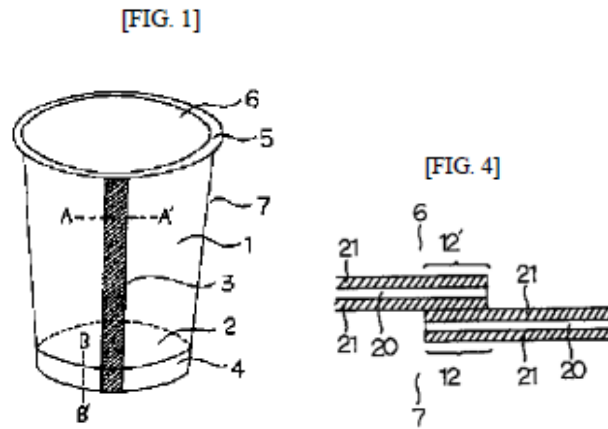
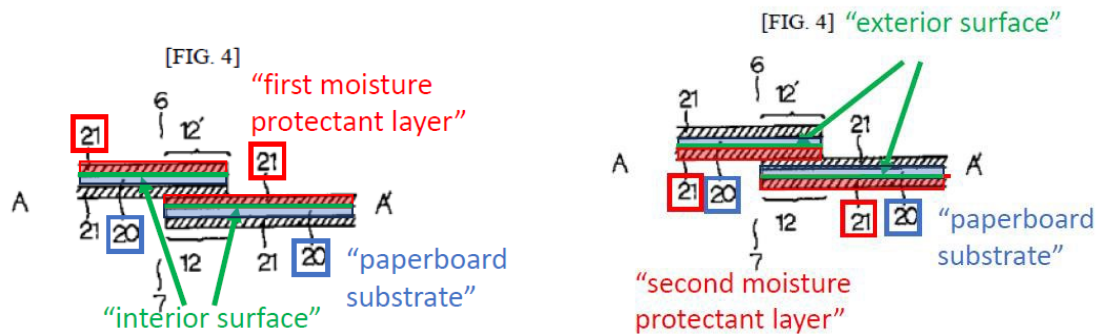


Figure 1, above left, shows “a perspective view illustrating one embodiment of the paper cup,” while Figure 4 depicts a “cross-sectional view of the side surface sealing part illustrating one embodiment of the paper cup.” Ex. 1008 ¶ 40. As shown and described, biodegradable plastic 21 is laminated on both inner surface 6 and outer surface 7 of paper cup 20. Nakagawa states that, where biodegradable plastic is laminated to both surfaces 6, 7, the paper cup can be sealed without the use of an adhesive because the “[biodegradable] plastics 21 have heat-sealing properties” with “sufficient seal strength” to marry the paper with itself. Ex. 1008 ¶ 22.

To show how the laminated layers of Nakagawa's cup satisfy the “paperboard substrate” and “moisture protectant layer[s]” of claim 1, Clearwater annotates Nakagawa's Figure 4, as reproduced below. See Pet. 49, 60.



Annotated Figure 4 (above left) depicts Nakagawa's laminate structure as including paperboard substrate 20 (blue) with first moisture protectant layer 21 (red) coated on the interior surface (green) of the paperboard substrate, while annotated Figure 4 (above right) depicts second moisture protectant layer 21 (red) coated on the exterior surface (green) of the paper substrate.

To satisfy the claim limitation reciting that each of the moisture protectant layers have “a coat weight of from 5 to 30 lbs/3000 ft²,” Clearwater relies on the testimony of its expert, who calculates the coat weight of one of the five exemplary paper cups described in Nakagawa. *See* Pet. 53 (citing Ex. 1008 ¶¶ 24–34; Ex. 1003 ¶¶ 132–133). According to Clearwater, because each example identifies the specific polymers and thickness of the coat, “[a] POSITA would recognize that the disclosed polymers have a given density, and therefore the coat weight can be calculated by determining the total volume of polymer used (thickness multiplied by 3000 ft²) and multiplying the volume by the polymer's known density.” *Id.* at 53–54 (citing Ex. 1003 ¶ 132; Ex. 1008 ¶¶ 24–34; Ex. 1024, 4). “With these known parameters,” Clearwater explains, “the coat weight is easily calculated to be 23.04 lbs./ 3000 ft² —falling squarely within the

claimed range.” *Id.* at 54 (citing Ex. 1003 ¶¶ 132–133; Ex. 1008 ¶ 24; Ex. 1024, at 4).

We have reviewed the cited testimony of Clearwater’s expert, including their calculations for arriving at a coat weight in Nakagawa that falls within the claimed range. *See* Ex. 1003 ¶¶ 132–33. We find that testimony, which is unrebutted, both credible and supported by the evidence of record. Thus, in light of Clearwater’s contentions, the cited portions of Nakagawa, and the unrebutted testimony of Clearwater’s expert, we are persuaded that Nakagawa discloses or otherwise suggests each and every element of claim 1. *See* Pet. 45–54, 60–64. Clearwater also persuades us that Cleveland discloses the additional subject matter of dependent claims 2, 3, and 11. *See* Pet. 64–66. Thus, we determine that Clearwater demonstrates that claims 1–3 and 11 are unpatentable as obvious over Nakagawa.

F. Ground 3—Obviousness Over Nakagawa and Tanner

Alternatively, Clearwater challenges claims 1–3 and 11 as obvious over the combined teachings of Nakagawa and Tanner. *See* Pet. 67–75. Again, GPI does not submit any arguments to the contrary.

For this ground, Clearwater relies on the teachings of Tanner rather than the testimony of its expert to show the “coat weight” limitations. *See* Pet. 68–69, 73–74. In particular, Clearwater relies on its showing in Ground 2 for Nakagawa’s teaching of claim elements [1.pre], [1.1], [1.2], [1.3.1], [1.4], [1.5.1], [1.6] (*see* Pet. 67–68, 73–74), while adding “[i]t would have been obvious to modify the biodegradable plastic layer of Nakagawa to have a coat weight as disclosed in Tanner” (*see id.* at 68–69).

According to Clearwater, because “no specific coat weight is prescribed by Nakagawa, a POSITA would have been motivated to use known coat weights used in extrusion coating of paper-based cups,” such as Tanner’s teaching of “a coating weight of 7 to 20 lbs., preferably 9 lbs” (as expressed in pounds per 3000 square feet), “because both Tanner and Nakagawa disclose extrusion coating of biodegradable polymers onto a paperboard substrate for paper cups.” *Id.* at 69–72 (citing Ex. 1003 ¶¶ 171–178; Ex. 1008 ¶¶ 8, 13; Ex. 1009, Abstract, 1:66–2:2, 2:18–40, 2:55–68, 3:56–60). Clearwater also contends that, because Nakagawa describes multiple different coat thicknesses and because coat thickness is directly proportional to coat weight, “a POSITA would have been motivated to try various coat weights, including the coat weights for biodegradable polymers disclosed by Tanner.” *Id.* at 71 (Ex. 1008 ¶¶ 24–34).

After reviewing Clearwater’s contentions, the cited portions of Nakagawa and Tanner, and the unrebutted testimony of Clearwater’s expert, we agree with Clearwater that the combination of Nakagawa and Tanner suggests each and every claim element of claim 1 and that a skilled artisan would have had sufficient reason to combine their teachings and successfully arrive at the subject matter of claims 1–3 and 11. Thus, we determine that Clearwater demonstrates that claims 1–3 and 11 are additionally unpatentable as obvious over the combined teachings of Nakagawa and Tanner.

IV. CONCLUSION⁵

Claims	35 U.S.C. §	Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–3, 11	102	Cleveland	1–3, 11	
1–3, 11	103	Nakagawa	1–3, 11	
1–3, 11	103	Nakagawa, Tanner	1–3, 11	
Overall Outcome			1–3, 11	

V. ORDER

Accordingly, it is:

ORDERED that claims 1–3 and 11 of U.S. Patent 8,637,126 B2 are *unpatentable* as anticipated under 35 U.S.C. § 102 and/or as obvious under 35 U.S.C. § 103; and

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

⁵ Should GPI wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw its attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). And should GPI choose to file a reissue application or a request for reexamination of the challenged patent, we remind it of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. §§ 42.8(a)(3), (b)(2).

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Patent 8,637,126 B2

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