

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
CHRISTOPHER G. PAULRAJ, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

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

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.”). GPI did not file a

preliminary response. Because we determine that Clearwater demonstrates a reasonable likelihood that at least claim 1 of the '126 patent is unpatentable, we institute an *inter partes* review of all claims as challenged in the petition. See 35 U.S.C. § 314(a).

I. BACKGROUND

A. Related Matters

Clearwater represents there are no related matters at this time. See Pet. 1.

B. The '126 Patent

The '126 patent is directed to a laminated paper cup that includes “environmentally friendly biodegradable” moisture barrier layers. Ex. 1001, 1:9–12, 1:45–67.

C. 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

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). That the '126 patent and the Cleveland reference have one or more inventors in common is immaterial. The inventive entity is different if not all inventors are the same. See 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”).

In support of these challenges, Clearwater submits the declaration of Dr. Karl Englund. *See* Ex. 1003.

D. The Challenged Claims

Claim 1, the sole independent claim at issue, recites (with bracketed text 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.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Clearwater posits 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). For purposes of institution, we adopt Clearwater’s definition of the relevant skill in the art, as it appears reasonable and consistent with the level of skill reflected in the asserted prior art and the challenged patent.

B. Claim Construction

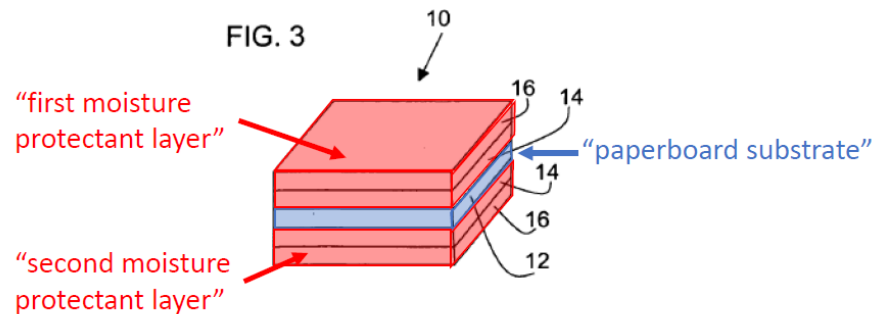
We apply the claim construction standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). Here, Clearwater does not propose an express construction of the claim terms beyond their ordinary and customary meaning. *See* Pet. 16. At this stage, we see no reason to expressly construe any of the claim terms.

C. Threshold for Institution

Clearwater challenges claims 1–3 and 11 as anticipated by Cleveland.⁵ *See* Pet. 10–49. We begin with Clearwater’s showing with respect to claim 1, which includes a detailed comparison of how Cleveland discloses a biodegradable coffee cup having a laminate structure that

⁵ Clearwater argues that Cleveland qualifies as prior art under 35 U.S.C. § 102(e)(1) “based on both its provisional and non-provisional filing dates.” Pet. 17. In support, Clearwater asserts that Cleveland’s provisional (Ex. 1006) is “virtually identical” to Cleveland itself (*id.* at 18) and submits claim charts to demonstrate that the Cleveland provisional provides written support for: (1) at least claim 1 of Cleveland (*id.* at 18–21); and (2) the subject matter relied upon in Cleveland (*id.* at 21–40 (citing Ex. 1006 throughout)). Based on our review of the Cleveland provisional, as well as Clearwater’s claim charts, we are persuaded that the current record demonstrates that Cleveland is prior art to the challenged patent. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1381 (Fed. Cir. 2015).

satisfies each claim element as identified above in Section I.D, *i.e.*, elements [1.pre]–[1.6]. *See id.* at 22–40. Clearwater also submits annotated Figure 3 of Cleveland, reproduced below, to further illustrate the specific laminate structure of Cleveland’s coffee cup. *See id.* at 39.



As shown above, annotated Figure 3 depicts Cleveland’s laminate structure as comprising paperboard substrate (blue mid-layer 12) with first moisture protectant layer (red top layers 14, 16) coated on the interior surface of the paper substrate and second moisture protectant layer (red bottom layers 14, 16) coated on the exterior surface of the paper substrate. More specifically, Clearwater cites the following evidence in support of its contentions that Cleveland discloses each claim element as recited in claim 1:

[1.pre] “A product in the form of a cup comprising a laminate forming moisture barriers, said laminate comprising” — Pet. 22–25 (citing Ex. 1005, Abstract, ¶¶ 3, 11–12, 19, 24–25, 32, 37, claim 17 (“biodegradable shaped article” can be a “cup[]”), Fig. 3 (annotated); Ex. 1019, 3, 6; Ex. 1025)).

[1.1] “a paperboard substrate having a separate interior product facing surface and a separate exterior surface” — Pet. 25–27 (citing Ex. 1005 ¶¶ 9, 24, 32, claim 14, Fig. 3 (annotated)).

[1.2] “a first moisture protectant layer is coated directly only on said interior surface of said paperboard substrate” — Pet. 27–31 (citing Ex. 1005 ¶¶ 3, 9, 25–33, 28–40, claim 14, Fig. 3 (annotated); Ex. 1003 ¶¶ 73, 75, 77; Ex. 1019, at 3, 6).

[1.3.1] “and comprising at least one biodegradable polyester polymer” — Pet. 31–32 (citing Ex. 1005 ¶¶ 11–12, 29; Ex. 1002, at 306; Exs. 1019–1023, 1025).

[1.3.2] “wherein the first moisture protectant layer has a coat weight of from 5 to 30 lbs./3000 ft²” — Pet. 32–35 (citing Ex. 1005 ¶ 32; Ex. 1003 ¶¶ 83, 86).

[1.4] “a second moisture protectant layer is coated directly only on said exterior surface of said paperboard substrate” — Pet. 35–37 (citing Ex. 1005 ¶¶ 3, 9, 13–15, 32–33, claim 15, Fig. 3 (annotated); and referencing “the same reasons discussed above for the first moisture protectant layer”).

[1.5.1] “and comprising at least one biodegradable polyester polymer” — Pet. 37 (citing Ex. 1005 ¶¶ 11–12, 29, 32; and referencing “the same reasons discussed above for element [1.3.1]”).

[1.5.2] “wherein the second moisture protectant layer has a coat weight of from 5 to 30 lbs./3000 ft²” — Pet. 38 (citing Ex. 1005 ¶¶ 11–12, 25–32; and referencing “the same reasons discussed above for element [1.3.2]”).

[1.6] “and is separate from the first moisture protectant layer coated on and directly adhered to said interior surface of said substrate” — Pet. 39–40 (citing Ex. 1005 ¶¶ 25–32, Fig. 3 (annotated)).

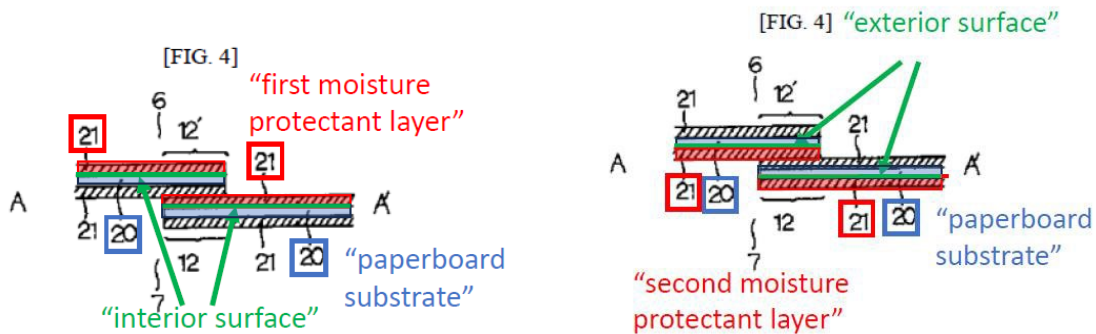
After reviewing the preliminary record (including Clearwater’s contentions, the cited portions of Cleveland, and the testimony of Clearwater’s expert), we find, *preliminarily*, that Cleveland discloses each claim element in the manner recited by claim 1. Thus, on the current record, Clearwater demonstrates a reasonable likelihood that challenged claim 1 is unpatentable as anticipated by Cleveland.

Aside from claim 1, Clearwater also challenges dependent claims 2, 3, and 11 as anticipated by Cleveland. *See* Pet. 41–42. Because, as discussed above, Clearwater meets the threshold for institution by demonstrating a reasonable likelihood that at least claim 1 is unpatentable as anticipated by Cleveland, we need not decide at this stage whether Clearwater demonstrates the same for the dependent claims. Our analysis of the challenge against the dependent claims, in our view, is best left for trial after full development of the record.

D. Additional Challenges

Clearwater also challenges claims 1–3 and 11 as obvious over Nakagawa alone (Pet. 43–66), and, alternatively, as obvious over Nakagawa in view of Tanner (*id.* at 67–75). Regarding the challenge based on Nakagawa alone, we find persuasive Clearwater’s showing that Nakagawa teaches and/or suggests each element of claim 1. *See id.* at 43–66.

More specifically, Nakagawa discloses a paper cup that is laminated with “biodegradable plastic” on each side of the paper. *See* Ex. 1008, Abstract, Figs. 1, 4. As described, the main ingredient of the plastic is “a biodegradable microbially produced polyester or an aliphatic polyester. *Id.*, Abstract. To show how the laminated layers of Nakagawa’s paper cup satisfy the elements of claim 1, Clearwater submits the following annotated figures of Nakagawa’s Figure 4. *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 meet the claim limitation reciting that each of the moisture protective layers have “a coat weight of from 5 to 30 lbs/3000 ft²,” Clearwater submits the declaration of its expert, who explains that, because Nakagawa identifies the specific polymers and the thickness of the coat used for the plastic layers and one skilled in the art “would recognize that the disclosed polymers have a given density,” then “[w]ith these known parameters, the coat weight is easily calculated to be 23.04 lbs./ 3000 ft² — falling squarely within the claimed range.” Pet. 53–54 (citing Ex. 1003 ¶¶ 132–133; Ex. 1008 ¶ 24; Ex. 1024, at 4). At this stage, we find that testimony credible and supported by the evidence presently of record.

After reviewing the preliminary record (including Clearwater’s contentions, the cited portions of Nakagawa, and the testimony of Clearwater’s expert), we find, *preliminarily*, that Nakagawa discloses or otherwise suggests each claim element in the manner recited by claim 1.

Thus, on the current record, Clearwater demonstrates a reasonable likelihood that challenged claim 1 is unpatentable as obvious over Nakagawa. We need not decide Clearwater's challenge of the dependent claims based on Nakagawa alone nor its challenge of claims 1–3 based on Nakagawa and Tanner. Our analysis of these challenges, in our view, is best left for trial after full development of the record.

III. CONCLUSION

For the above reasons, we determine that the information presented in the petition demonstrates a reasonable likelihood that at least claim 1 of the '126 patent is unpatentable as anticipated by Cleveland and/or obvious over Nakagawa. Because Clearwater satisfies the threshold for institution, we institute an *inter partes* review of all claims as challenged in the petition. *See* 37 C.F.R. § 42.108(c); *SAS Inst. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

IV. ORDER

Accordingly, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–3 and 11 of the '126 patent is *instituted*; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), notice is hereby given of the institution of trial, which will commence on the entry date of this decision.

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