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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PETRA HÄDE,
YVONNE DÜPRE, and THOMAS GOTTFREUND

Appeal 2019-005732
Application 14/441,913
Technology Center 1700

Before MICHAEL G. MCMANUS, MERRELL C. CASHION, JR., and
JANE E. INGLESE, *Administrative Patent Judges*.

CASHION, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision to finally reject claims 25–33, 35, 37, 41, and 43–48.¹ We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Treofan Germany GmbH & Co. KG, as the real party in interest. Appeal Br. 2.

Appellant's invention relates to a foodstuffs packaging containing a polyolefin-based film with properties providing a barrier to mineral oils. Spec. 1. Claim 25 is illustrative of the subject matter claimed and is reproduced below:

25. A foodstuff packaging comprising:

a) a foodstuff,

b) a polyolefin-based film which film encases the foodstuff wherein the polyolefin-based film is a biaxially oriented polypropylene (boPP) film,

c) a cardboard based on recycled cardboard, which encases the boPP film containing the foodstuff,

wherein the polyolefin-based film comprises at least one coating comprising (i) acrylate polymer and/or (ii) halogen-containing vinyl polymers and/or vinylidene polymers and/or (iii) polymers based on vinyl alcohol (VOH), and the coating is present at least on the side of the film facing towards the cardboard based on recycled cardboard and wherein a total thickness of the coating is the sum of the thickness of individual coating layers on the polyolefin-based film and is between 0.1 to 5 μm .

Appellant requests review of the following rejections from the Examiner's Final Office Action mailed November 7, 2018:^{2, 3}

² The Examiner withdrew the rejection under 35 U.S.C. §112, 2nd paragraph. Advisory Action (mailed March 6, 2019, hereinafter "Adv. Act.") 2.

³ We cite to the pre-AIA versions of 35 U.S.C. because the effective filing date for the application from which this appeal is taken is before the effective date of the AIA legislation of March 16, 2013.

I. Claims 25–27, 32, 35, 37, 41, and 43–48 rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Seyffer (US 2012/0305436 A1, published December 6, 2012).⁴

II. Claims 28–31 rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Seyffer and Okamoto (US 2008/0085977 A1, published April 10, 2008).⁵

III. Claim 33 rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Seyffer and Lu (US 5,776,604, issued July 7, 1998).

IV. Claims 25–27, 32, 35, 37, 41, and 43–48 rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Seyffer and Alger (Polymer Science Dictionary, 42, Chapman & Hall, London, 2nd ed. (1997)).

V. Claims 28–31 rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Seyffer, Alger, and Okamoto.

VI. Claim 33 rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Seyffer, Alger, and Lu (US 5,776,604, issued July 7, 1998).⁶

⁴ The Examiner further relies on Ewender (Ewender et al., *Evaluation of different mineral oil barriers for cardboard packed food*, 14–16, 2012 (poster presented at the Berlin 5th International Symposium on Food Packaging, November 2012) as evidentiary reference for claim 43 in both Rejections I and IV.

⁵ The Examiner further relies on Crass (US 4,786,533, issued November 22, 1988) as evidentiary reference for claim 29 in both Rejections II and V.

⁶ The Examiner omitted the reference to Alger in Rejection VI. Final Act. 15. The Examiner corrected the rejection statement in the Answer by including the omitted reference. Ans. 14. While Appellant notes that the two rejections are the same in the Appeal Brief, Appellant does not object to the Examiner's subsequent addition of the reference in the Answer's corrected statement. *See* Appeal Br. 24; *see also generally* Reply Br. Accordingly, we deem this omission a harmless error.

OPINION

*Rejections I and IV*⁷

After review of the respective positions Appellant provides in the Appeal and Reply Briefs and the Examiner provides in the Non-Final Office Action and the Answer, we affirm the Examiner's prior art Rejections I and IV of claims 25–27, 32, 35, 37, 41, and 43–48 under 35 U.S.C. § 103(a) for the reasons the Examiner presents. We add the following for emphasis.

Appellant argues claims 25–27, 32, 35, 37, 41 and 48 as a group and presents separate arguments for claims 43–45 and 47. *See generally* Appeal Br. We select independent claim 25 as representative of the group and decide the issues as to the appealed rejections based on the arguments as applied to independent claim 25. Claims argued separately are addressed separately.

Claim 25

The subject matter of independent claim 25 recites a foodstuff packaging comprising a biaxially oriented polypropylene (boPP) film encased in a recycled cardboard, wherein the boPP film comprises a barrier coating and the total thickness of the coating is the sum of the thickness of individual coating layers on the boPP is between 0.1 to 5 μm .⁸

⁷ We find little difference between the Examiner's statements of Rejections I and IV. In addition, Appellant relies on essentially the same line of arguments in addressing these two rejections. For brevity, we focus on Rejection I with the understanding that our discussion applies equally to Rejection IV. In addition, we also address Rejections II and V and Rejections III and VI together for the same reasons.

⁸ We need not address the reference to Alger, cited in Rejections IV–VI, for disposition of this Appeal.

The Examiner finds that Seyffer discloses a packaging article comprising an oriented polypropylene film encased in a recycled cardboard, wherein the film comprises a barrier coating and the total thickness of the coating is at least 1 μm . Final Act. 4–5; *see also* Seyffer ¶¶ 36–38. Like Appellant, Seyffer is directed to reducing the risk of food items becoming contaminated with mineral oil residues from the recycled cardboard. Seyffer ¶¶ 1–3; Spec. 1. The Examiner finds that Seyffer does not teach using boPP as the film for the packaging article. Final Act. 5. The Examiner finds that Appellant acknowledges the benefits of using boPP as packaging films. Ans. 16. The Specification discloses that boPP films “are nowadays used as packaging films in a wide range of applications” because of their advantageous properties and have “also [been] used in combination with other packaging materials” in the field of foodstuffs. Spec. 1. The Examiner concludes that it would have been obvious to one of ordinary skill in the art to modify Seyffer’s packaging article by using a well-known boPP packaging film in place of Seyffer’s plastic film with a reasonable expectation that it is capable of performing as the inner bag of Seyffer’s packaging article. Final Act. 5.

Appellant argues that Seyffer does not state the use of *biaxially oriented* polypropylene (boPP) and, thus, the Examiner is relying on impermissible hindsight to arrive at the claimed invention from Seyffer’s teachings. Appeal Br. 7–8.

Appellant’s arguments do not identify reversible error in the Examiner’s determination of obviousness.

There is no dispute that Seyffer discloses the use of oriented polypropylene as the material for Seyffer’s inner bag. Final Act. 4; *see also*

Appeal Br. 8; and Seyffer ¶ 38. While Appellant contends that Seyffer provides no guidance as to whether the disclosed oriented polypropylene is mono-oriented or biaxially oriented stretched, Appellant fails to explain persuasively why one skilled in the art would not understand Seyffer's disclosure to encompass both types of films. Appeal Br. 8. Moreover, given Appellant's acknowledgement in the Specification that boPP films are "often also used in combination with other packaging materials, in particular in the field of foodstuffs," Appellant has not explained adequately why one skilled in the art, using no more than ordinary creativity, would not have been capable of modifying Seyffer's packaging article by replacing Seyffer's plastic film with boPP and still reasonably expect that the modified packaging article would perform as a suitable packaging for foodstuff. *See* Spec. 1; *see also KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) ("A person of ordinary skill is also a person of ordinary creativity, not an automaton."); *In re Sovish*, 769 F.2d 738, 743 (Fed. Cir. 1985) (presuming skill on the part of one of ordinary skill in the art); *In re O'Farrell*, 853 F.2d 894, 904 (Fed. Cir. 1988) ("For obviousness under § 103, all that is required is a reasonable expectation of success.").

Appellant argues that Seyffer does not teach the claimed thickness range for the barrier coating of between 0.1 to 5 μm . Appeal Br. 9. According to Appellant, Seyffer discloses an embodiment that teaches away from the claimed invention because the embodiment would have a total coating thickness of 20–25 μm , well above the claimed range. Appeal Br. 9; *see also* Seyffer ¶ 32.

Appellant's arguments lack persuasive merit. It is well settled that a reference may be relied upon for all that it discloses and not merely the

preferred embodiments as suggested by Appellant. *See Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) (“[A]ll disclosures of the prior art, including unpreferred embodiments, must be considered.”) (quoting *In re Lamberti*, 545 F.2d 747, 750 (CCPA 1976)); *see also In re Fracalossi*, 681 F.2d 792, 794 n.1 (CCPA 1982) (explaining that a prior art reference’s disclosure is not limited to its examples). The disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or non-preferred embodiments. *In re Susi*, 440 F.2d 442, 446 n.3 (CCPA 1971).

Seyffer describes the embodiment disclosed in paragraph 32 as a *particularly effective* barrier layer. Thus, this embodiment appears to be, at best, a preferred embodiment. As the Examiner points out, Seyffer expressly discloses that “[t]he thickness of the dried coating is preferably at least 1 μm , more particularly in the range from 1 to 50 μm and more preferably in the range from 2 to 30 μm or from 5 to 30 μm .” Ans. 17; *see also* Seyffer ¶ 36. Appellant has not explained adequately why Seyffer’s disclosure in paragraph 32 limits or teaches away from Seyffer’s broader disclosure. In addition, Appellant directs us to no objective evidence with respect to the criticality of the claimed range of thicknesses.

Appellant argues that data in the Specification demonstrates the advantages and effects of the claimed invention. Appeal Br. 9. Specifically, Appellant contends that Examples 1–4 demonstrate superior mineral oil barrier properties against Comparative Example 1. *Id.* at 9–10.

When evidence of secondary considerations is submitted, we begin anew and evaluate the rebuttal evidence along with the evidence upon which the conclusion of obviousness was based. *In re Rinehart*, 531 F.2d 1048,

1052 (CCPA 1976). The burden of establishing unexpected results rests on the Appellant. Appellant may meet this burden by establishing that the difference between the claimed invention and the closest prior art was an unexpected difference. *See In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972). Appellant must establish the unexpected results with factual evidence; attorney statements are insufficient to establish unexpected results. *See In re Geisler*, 116 F.3d 1465, 1470–71 (Fed. Cir. 1997). Further, a showing of unexpected results with evidentiary support must be reasonably commensurate in scope with the degree of protection sought by the claims on appeal. *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983); *see also In re Clemens*, 622 F.2d 1029, 1035 (CCPA 1980).

We have considered Appellant’s evidence of unexpected results and agree with the Examiner’s analysis that the evidence is insufficient to show nonobviousness. Ans. 18.

The Examiner points out that Comparative Example 1 does not comprise an acrylate coating layer taught by Seyffer. Ans. 18. Therefore, we agree with the Examiner that it is not clear that the showing in the Specification compares the claimed invention against the closest prior art (Seyffer). *Id.*

Further, Examples 1–4 are principally limited to testing a coating thickness of 0.8 μm , with Example 2 having a coating on one side of 2.0 μm . Appellant does not explain why the thicknesses of 0.8 and 2.0 μm are representative of the broad range of thicknesses claimed of between 0.1 to 5 μm .

Thus, on this record, Appellant has not explained adequately why one of ordinary skill in the art would have found the evidence relied upon

unexpected or why that evidence is reasonably commensurate in scope with the claims.

Claim 43

Claim 43 recites a foodstuff packaging “wherein the recycled cardboard comprises from 300-1000 mg/kg mineral oil.”

The Examiner relies on the evidentiary reference Ewender as teaching that unprinted cardboard made with recycled fibers contains about 300 to 1,000 mg/kg of mineral oil components. Final Act. 6; *see also* Ewender 1 (Introduction).

Appellant argues that Ewender is not a proper reference because it is antedated by Appellant’s priority document filed November 12, 2012. Appeal Br. 13–14.

In certain circumstances, references cited to show a universal fact need not be available as prior art before applicant’s filing date. *In re Wilson*, 311 F.2d 266, 268–269 (CCPA 1962). Such facts include the characteristics and properties of a material or a scientific truism.

The Examiner relies on Ewender to establish that some recycled cardboards contain about 300 to 1000 mg/kg mineral oil components. We note that the footnote associated with Ewender’s discussion of the mineral oil content refers to a publication as the source of this information, M. Biedermann, K. Grob, *Is recycled newspaper suitable for food contact materials? Technical grade mineral oils from printing inks*, European Food Research and Technology, 230(5), 785–796 (2010). Ewender 1. This source was published in 2010, which is well before the filing date of November 12, 2012 of Appellant’s priority document. Therefore, the Examiner’s reliance on Ewender to show a characteristic of recycled

cardboard as containing 300 to 1000 mg/kg mineral oil components appears proper.

We also note that Appellant appears to acknowledge this characteristic as known in the Specification statement that “[c]ardboard packaging . . . based on recycled cardboard *typically* contains at least 300-1000 mg/kg mineral oil (emphasis added).” Spec. 17. Therefore, Appellant’s arguments do not point to reversible error in the Examiner’s determination of obviousness.

Claims 44–47

Each of these claims recites that the film comprises a barrier for the mineral oils present in the recycled cardboard that limits the amount of mineral oil diffusing into the foodstuff to a certain level.

The Examiner finds that Seyffer teaches that the barrier coating serves as a barrier to mineral oils present in the recycled cardboard. Final Act. 6; *see also* Seyffer ¶ 1. The Examiner also finds that the barrier layer taught by Seyffer is identical or substantially identical to the claimed barrier layer in terms of the composition and thickness of the coating material present on the side of the film of the inner bag. Final Act. 6. The Examiner recognizes that Seyffer is silent regarding quantifying the degree to which the barrier coating prevents mineral oil from diffusing into a foodstuff simulant. *Id.* However, the Examiner concludes that, in the absence of objective evidence to the contrary, there is a reasonable expectation that the barrier coating on the side of the inner bag of the packaging article of Seyffer would have exhibited the claimed degree of mineral oil barrier properties. *Id.*

We have considered Appellant’s arguments addressing the rejection of these claims. *See generally* Appeal Br. 14–20. The premise of the

arguments for each of the claims is that Seyffer does not teach the claimed thickness for the barrier coating and that Seyffer does not teach the use of boPP in the packaging article. *Id.*

We have addressed these arguments above and again find that these arguments still do not point to reversible error in the Examiner's determination of obviousness for the reasons the Examiner presents and we give above.

Moreover, given that Seyffer teaches generally the use of a barrier coating to reduce the risk of contaminating food items with mineral oil residues from recycled cardboard, Appellant has not explained adequately why one skilled in the art, using no more than ordinary creativity, would not have been capable of determining the thickness of the barrier coating necessary to minimize contamination of a food item. Seyffer ¶ 3; *see also KSR*, 550 U.S. at 421; *Sovish*, 769 F.2d at 743.

Accordingly, we AFFIRM the Examiner's prior art Rejections I and IV for the reasons the Examiner presents and we give above.

Rejections II and V

Claims 28–31

We refer to the Examiner's Final Office Action for a statement of rejection for these claims. Final Act. 6–9, 12–15.

For all these claims, Appellant argues that Okamoto does not relate to food packaging comprising cardboard-based material. *See* Appeal Br. 22–24.

Appellant's argument does not identify error in the Examiner's determination of obviousness because the argument does not address

adequately the rejection the Examiner presents. It is well settled that nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *see also In re Keller*, 642 F.2d 413, 425–26 (CCPA 1981) (citations omitted) (“The test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”).

Appellant’s argument does not consider the Examiner’s findings and conclusions based on Seyffer, in light of Appellant’s acknowledgement in the Specification, that a packaging article comprising a boPP film and recycled cardboard would have been obvious to one of ordinary skill in the art in light of these findings. As the Examiner points out, Okamoto is directed towards oriented packaging films used in food packaging applications which is the same field of endeavor as Appellant and Seyffer. Ans. 20; *see also* Okamoto ¶ 806 and Spec. 1. Appellant has not explained adequately why one skilled in the art, using no more than ordinary creativity, would not have been capable of modifying Seyffer’s packaging article by using a boPP film comprising the claimed characteristics given Okamoto’s disclosure. Final Act. 6–9, 12–15.

We have also considered Appellant’s arguments regarding the evidentiary reference to Crass as not related to food packaging comprising cardboard based material but, instead, relating to a transparent film for candy twist wrapping. Appeal Br. 23.

The Examiner relies on Crass solely to establish that Okamoto’s use of ASTM 01238 standard to measure the melt flow rate (MFR) of the propylene-based polymer is the same as the DIN 53735 standard recited in

claim 29. Final Act. 8; *see also* Crass, col. 2, ll. 31–35. Appellant’s argument does not dispute or address adequately this Examiner’s finding.

Accordingly, we affirm the Examiner’s prior art Rejections II and V for the reasons the Examiner presents and we give above.

Rejections III and VI

Claim 33

Claim 33 recites that “the polyolefin-based film comprises, on one or both sides, an adhesion promoter made of polyethylene imine, to which the coating/s is/are applied.”

The Examiner relies on Lu as teaching that polyethyleneimine primers enhance the binding of a coating based on acrylic/acrylate polymers to an oriented polypropylene film. Final Act. 9, 15; *see also* Lu, col. 2, ll. 4–46, col. 3, ll. 13–27, col. 5, ll. 38–67; col. 6, ll. 1–4. The Examiner determines that it would have been obvious to one of ordinary skill in the art to use Lu’s polyethyleneimine primers in Seyffer’s packaging article to bind the barrier composition to the plastic film in view of Lu’s teaching. Final Act. 9–10, 15.

Appellant principally argues that Lu is directed to using polyethyleneimine primers to enhance the printability of plastic surfaces; particularly plastic films. Appeal Br. 25. Appellant contends that a skilled artisan trying to solve the underlying problem of the claimed invention would not have considered Lu. *Id.*

Appellant’s arguments lack persuasive merit. As the Examiner explains, Lu teaches that polyethyleneimine primers enhance the binding of the acrylate-based polymer coating composition to polypropylene film. Ans.

21. Appellant's arguments do not address persuasively the Examiner's reasons for relying on Lu's teachings.

Accordingly, we affirm the Examiner's prior art Rejections III and VI for the reasons the Examiner presents and we give above.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
25–27, 32, 35, 37, 41, 43–48	103(a)	Seyffer	25–27, 32, 35, 37, 41, 43–48	
28–31	103(a)	Seyffer, Okamoto	28–31	
33	103(a)	Seyffer, Lu	33	
25–27, 32, 35, 37, 41, 43–48	103(a)	Seyffer, Alger	25–27, 32, 35, 37, 41, 43–48	
28–31	103(a)	Seyffer, Alger, Okamoto	28–31	
33	103(a)	Seyffer, Alger, Lu	33	
Overall Outcome			25–33, 35, 37, 41, 43–48	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED