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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ERIC BAER and ANNE HILTNER<sup>1</sup>

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Appeal 2017-002756  
Application 12/631,964  
Technology Center 1700

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Before GEORGE C. BEST, N. WHITNEY WILSON, and  
CHRISTOPHER C. KENNEDY, *Administrative Patent Judges*.

KENNEDY, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the Examiner’s decision rejecting claims 1, 3–5, 7–9, 11–13, 15, and 23–31.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM-IN-PART.

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<sup>1</sup> According to the Appellants, the real party in interest is Case Western Reserve University. App. Br. 2. The Specification states that “[t]he United States government has certain rights in the invention.” Spec. ¶ 2.

<sup>2</sup> The “Office Action Summary” attached to the Final Action dated January 25, 2016, does not list claims 27–31 as being subject to the Office Action. However, claims 27–31 are substantively addressed in the Office Action, e.g., Final Act. 5, 7, 9, and, in the Appeal Brief, the Appellants acknowledge that those claims are subject to the Office Action. See App. Br. 2, 4 (listing claims 27–31 as among the claims subject to the appeal).

## BACKGROUND

The subject matter on appeal relates to a multilayer film that includes a confined crystallization layer. *E.g.*, Spec. ¶ 3; Claim 1. Claim 1 is reproduced below from page 28 (Appendix A) of the Appeal Brief (formatting added):

1. A multilayer film comprising
  - a first polymer layer coextruded with and confined between second polymer layers,
    - the first polymer layer having a thickness under confinement of the second polymer layers that provides the first polymer layer with high aspect ratio substantially crystalline lamellae,
      - the crystalline lamellae having an aspect ratio of at least about 5,
  - the multilayer film being-selective [sic] to the diffusion of gases therethrough.

## REJECTIONS ON APPEAL

The claims stand rejected as follows:

1. Claims 1, 3, 5, 7–9, 11, 13, 15, 24, and 27 under 35 U.S.C. § 102(b) as anticipated by Baer<sup>3</sup> (US 2005/0105191 A1, published May 19, 2005);
2. Claims 4 and 12 under 35 U.S.C. § 103(a) as unpatentable over Baer and Ohta (US 2005/0219683 A1, published Oct. 6, 2005);
3. Claims 23, 25, 26, 28, and 29 under 35 U.S.C. § 103(a) as unpatentable over Baer and Wheatley (US 6,451,414 B1, issued Sept. 17, 2002);

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<sup>3</sup> Both named inventors of the application subject to this appeal are named inventors on the Baer prior art reference.

4. Claims 1, 3–5, 7–9, 11–13, 15, and 23–31 under 35 U.S.C. § 103(a) as unpatentable over Baer, VanPutte (US 5,429,874, issued July 4, 1995), and Dasher (US 5,312,689, issued May 17, 1994).<sup>4</sup>

#### ANALYSIS

As set forth below, we REVERSE as to Rejection 1, we AFFIRM as to Rejections 2 and 3, and we AFFIRM-IN-PART as to Rejection 4.

##### *Rejection 1*

With respect to claim 1, the Examiner finds that Baer teaches a multilayer film comprising a first polymer layer coextruded with and confined between second polymer layers. Ans. 2. The Examiner finds that Baer teaches a crystalline first polymer layer, and that Baer teaches a first polymer layer having a thickness of from 5 nm to 1,000  $\mu\text{m}$ . *Id.* The Examiner acknowledges that Baer does not explicitly disclose high aspect ratio crystalline lamellae, a specific aspect ratio of at least about 5, or selective diffusion of gases. *Id.* The Examiner finds, however:

[G]iven that Baer et al. produces the multilayer film using coextrusion process which is the same process used in the present invention wherein the first polymer layer has a thickness identical to that of the present invention and is confined between second polymer layers identical to the present invention and

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<sup>4</sup> In the Final Rejection and Answer, the Examiner lists two separate rejections involving Baer, VanPutte, and Dasher, and the claims subject to the first stated rejection are fully encompassed by those subject to the second stated rejection. *Compare* Ans. 6 (claims 23, 25, 26, and 28–31 as unpatentable over Baer, VanPutte, and Dasher), *with* Ans. 8 (claims 1, 3–5, 7–9, 11–13, 15, and 23–31 as unpatentable over Baer, VanPutte, and Dasher). In the Appeal Brief, the Appellants treat the rejection over Baer, VanPutte, and Dasher as a single ground of rejection. *E.g.*, App. Br. 4. We do the same in this Decision.

absent evidence to the contrary, it is clear that the first polymer layer would inherently possess the high aspect ratio, substantially crystalline lamellae, and gas impermeability as present [sic] claimed.

*Id.* at 3. In view of those findings, the Examiner determines that claim 1 is anticipated by Baer. *Id.* at 2–3.

The Appellants argue that the Examiner’s findings regarding inherency are not supported by the record because Baer teaches multiple options for the thickness and identity of its first polymer, and at least some of those options would result in a composition that does not inherently possess the high aspect ratio lamellae of claim 1. *See* App. Br. 6–10; Reply Br. 2–3.

The Appellants have identified reversible error in the anticipation rejection of claim 1. Baer teaches a polymer layer thickness of from 5 nm to 1,000  $\mu\text{m}$ . Baer ¶ 41. The Appellants’ Specification discloses a first polymer layer thickness of “about 10 nm to about 500 nm” as “effective to promote crystallization of the first polymer layer.” Spec. ¶ 10. The upper end of Baer’s thickness range is 2,000 times the upper end of the range disclosed by the Specification (1,000  $\mu\text{m}$  = 1,000,000 nm; 1,000,000 nm / 500 nm = 2,000). Thus, the Examiner’s determination that Baer teaches that “the first polymer layer has a thickness identical to that of the present invention,” *see* Ans. 3, such that it anticipates thicknesses that would have been expected to inherently produce the claimed crystalline lamellae, is not supported by the record.

The Examiner has provided no basis to believe that layer thicknesses greater than the 500 nm disclosed by the Specification would inherently yield the claimed crystalline lamellae. *See* Ans. 2–3. Although Baer’s

disclosed thickness range fully encompasses the range disclosed by the Specification as suitable for promoting crystallization, the difference between the upper end of Baer's range (1,000,000 nm) and the upper end of the range disclosed by the Specification (500 nm) is large enough that Baer cannot be said to "describe[] [a range that would have been expected to inherently yield the claimed crystalline lamellae] with sufficient specificity to anticipate" claim 1. *See, e.g., Atofina v. Great Lakes Chem. Corp.*, 441 F.3d 991, 999 (Fed. Cir. 2006) (reversing anticipation rejection where claimed range was 330–450°C and prior art disclosed a range of 100–500°C). Accordingly, we reverse the Examiner's anticipation rejection of claim 1.

Because the Examiner relies on the same analysis in rejecting the other claims subject to Rejection 1, we likewise reverse the Examiner's anticipation rejection of claims 3, 5, 7–9, 11, 13, 15, 24, and 27 as set forth in Rejection 1.

#### *Rejection 2*

Unlike Rejection 1, Rejection 2 is based on obviousness under 35 U.S.C. § 103(a). Although the Examiner states that "Baer et al. is relied upon as disclosed above [in Rejection 1]," the Examiner's findings regarding Baer are sufficient to support an obviousness rejection of claim 1. *E.g.*, Ans. 2 (finding that Baer's disclosed thickness range "encompasses" the range described by the Specification as promoting crystallization). Indeed, in Rejection 4 the Examiner sets forth an obviousness rejection of, *inter alia*, claim 1 based on primary reference Baer. We affirm that rejection below.

Although the Examiner's findings were not sufficient to sustain an anticipation rejection based on Baer, the error identified in our discussion of

Rejection 1 is harmless in the context of a rejection based on obviousness. *See infra* Rejection 4. On appeal, the Appellants do not challenge the Examiner's reliance on Ohta as teaching or suggesting the additional limitations of claims 4 and 12 (subject to Rejection 2); nor do the Appellants argue that a person of ordinary skill in the art would not have combined Baer and Ohta as proposed by the Examiner. *See* App. Br. 23. Accordingly, on this record, the Appellants have not identified reversible error in the Examiner's obviousness rejection of claims 4 and 12.

### *Rejection 3*

Like Rejection 2, Rejection 3 is based on obviousness under 35 U.S.C. § 103(a). Thus, as with Rejection 2, the error identified above in our discussion of Rejection 1 is harmless in the context of a rejection based on obviousness. *See infra* Rejection 4. Below we address the Appellants' specific arguments directed to Rejection 3.

The Appellants present arguments with respect to claims 23 and 26, and do not present distinct arguments for the other claims subject to Rejection 3. We address claims 23 and 26 below. Claim 25 falls with claim 1, *see infra* Rejection 4, from which it depends. Claim 28 falls with claim 9, *see infra* Rejection 4, from which it depends. With respect to independent claim 29, it is unclear why that claim was grouped with Rejection 3 because it does not require the specific polymer materials or melting point properties recited by claims 23, 25, 26, and 28. The Appellants do not raise distinct arguments against the rejection of claim 29 in the context of Rejection 3; the Appellants, however, do raise distinct arguments concerning claim 29 in the context of Rejection 4. Thus, we address claim 29 below in our discussion of Rejection 4.

Claims 23 and 26 depend from claims 1 and 9, respectively, and recite “the second polymer layers being selected from the group consisting of ethylene-co-acrylic acid and polyoxymethylene.”

The Examiner finds that Baer does not teach the specific materials recited by claims 23 and 26. However, the Examiner finds that Baer teaches “the second polymer layers being polyethylene naphthalate,” and that Wheatley “teaches a multilayer film comprising a second polymer layer of polyethylene naphthalate and polyoxymethylene.” Ans. 4. The Examiner determines:

Given that Wheatley et al. discloses the use of polyethylene naphthalate and polyoxymethylene as being interchangeable and, thus, materials [sic] being equivalents, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the polyethylene naphthalate in the second polymer layers of Baer et al. with polyoxymethylene as a matter of substitution of equivalents known for the same purpose.

*Id.*

The Appellants argue that Baer is directed to GRIN lenses and that Wheatley is directed to optical bodies for polarizers and/or mirrors, and that a person of ordinary skill “would not look to the materials used to form the polarizer/mirror of Wheatley because the materials in the Baer and Wheatley [references] are intended for completely different purposes.” App. Br. 23–24; Reply Br. 7. The Appellants also argue that, because Baer lists “dozens of suitable polymeric materials for the component (b),” and “Wheatley lists dozens [if not hundreds] of suitable polymeric materials for the layers B,” “[t]he number of possible permutations and substitutions . . . is innumerable and, thus, it is clear that specifically selecting POM [polyoxymethylene]

from Wheatley to replace PEN [polyethylene naphthalate] in Baer would require undue experimentation.” App. Br. 25.

Those arguments are not persuasive. Both Baer and Wheatley are directed to optical components made of multilayer polymer compositions. *E.g.*, Baer at Abstract; Wheatley at Abstract. Both Baer and Wheatley teach an alternating two-layer polymer structure. *E.g.*, Baer ¶ 41; Wheatley Fig. 2. Both Baer and Wheatley teach that the alternating layers should have different indices of refraction. *E.g.*, Baer ¶ 51; Wheatley at 5:7–10.

In the Appeal Brief, the Appellants do not persuasively dispute the Examiner’s determination that Wheatley describes polyethylene naphthalate and polyoxymethylene as interchangeable in the context of optical multilayer polymer compositions, and the Appellants have not provided any specific reason that a person of ordinary skill in the art would have considered polyoxymethylene unsuitable in the context of Baer’s optical multilayer polymer composition. The mere fact that Baer and Wheatley are not directed to precisely the same optical application, *see* App. Br. 23–24, is not sufficient to show reversible error in the Examiner’s reasoning. *See In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“[I]t has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections.”); *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416–21 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”); *see also id.* at 416 (“[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.”).

In the Reply Brief, the Appellants argue that the Examiner has not provided evidence that Wheatley's materials are interchangeable with Baer's materials. Reply Br. 7. However, the relevant disclosures of Baer and Wheatley include a significant number of overlapping polymers beyond polyethylene naphthalate. *Compare* Baer ¶ 47, with Wheatley at 14:14–15:35 (both references disclosing polyethylene terephthalate, polybutylene terephthalate, poly-1,4-cyclohexanedimethylene terephthalate, polyimides, syndiotactic polystyrene, polycarbonates, etc.). And, as set forth above, Baer and Wheatley include other relevant similarities, including an alternating layer structure and a disclosure that alternating layers have different indices of refraction. Absent evidence to the contrary, the significant list of overlapping materials, particularly in view of the other similarities between Baer and Wheatley, is sufficient to support the Examiner's finding that a person of ordinary skill in the art reasonably would have inferred that the materials are interchangeable, particularly in view of the fact that both Baer and Wheatley concern multilayer films for use in optical components. On this record, the Appellants have not shown reversible error in the Examiner's determination that Wheatley reasonably suggests the use of polyoxymethylene in Baer's composition because a person of ordinary skill would have viewed it as interchangeable with materials disclosed by Baer. *See Jung*, 637 F.3d at 1365.

Similarly, the mere fact that Baer and Wheatley each disclose numerous polymers suitable for use as the second polymer layer, *see* App. Br. 24–25, does not make any particular polymer choice less obvious. *See Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) (“That the [prior art] patent discloses a multitude of effective combinations

does not render any particular formulation less obvious.”). The Appellants’ argument concerning undue experimentation is not persuasive. *See* App. Br. 25. Although the term “undue experimentation” typically arises in the context of enablement, the Appellants have not argued that the prior art is not enabled (and, in any event, have not overcome the presumption of enablement, *see, e.g., In re Antor Media Corp.*, 689 F.3d 1282, 1287–88 (Fed. Cir. 2012)). In this case, any experimentation involved in the combination proposed by the Examiner would be routine experimentation specifically guided by the disclosures of the prior art and, thus, would not amount to undue experimentation. *See In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988) (“The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed . . .”).

On this record, the Appellants’ arguments do not persuade us that the combination of Baer and Wheatley is improper. We affirm the Examiner’s rejection of claims 23, 25, 26, and 28.

#### *Rejection 4*

The Examiner’s findings regarding Baer for purposes of Rejection 4, which is based on obviousness under § 103, are similar to the Examiner’s findings for purposes of Rejection 1. *See* Ans. 8–9. In particular, the Examiner finds that Baer teaches a multilayer film comprising a first polymer layer coextruded with and confined between second polymer layers. *Id.* The Examiner finds that Baer teaches a crystalline first polymer layer, and that Baer teaches a first polymer layer having a thickness of from 5 nm

to 1,000  $\mu\text{m}$ , “which encompasses the claimed range [claim 5] of about 10 nm to about 500 nm.” *Id.*

With respect to the use of specific polymers recited by claims 4, 12, 23, 26, 30, and 31, the Examiner finds that VanPutte “teaches a multilayer film comprising a first polymer layer, wherein the first polymer layer comprises polyethylene oxide.” *Id.* at 9 (internal citations omitted). The Examiner finds that a person of ordinary skill would have been motivated to use PEO as the first polymer in Baer “to control tensile strength, bulk, and abuse resistance.” *Id.* The Examiner finds that Dasher “teaches a multilayer film comprising a first polymer layer coextruded with a second polymer layer, wherein the second polymer layer comprises ethylene co-acrylic acid.” *Id.* (internal citations omitted). The Examiner finds that a person of ordinary skill would have been motivated to use ethylene-co-acrylic acid as the second layer “in order to impart chemical resistance, better adhesion and optical properties.” *Id.*

The Examiner acknowledges that the combined prior art does not expressly disclose certain limitations recited by the rejected claims,<sup>5</sup> but the Examiner determines that compositions rendered obvious by the combined prior art would “intrinsically possess” the claimed features and properties. *Id.* at 10.

With respect to claim 29, which recites a “multilayer food packaging film” in both the preamble and body of the claim, the Examiner finds that the language is not limiting because it merely states the purpose or intended use of the invention. *Id.* at 10–11.

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<sup>5</sup> Including limitations concerning crystalline lamellae, melting points, and gas impermeability.

In view of those and other determinations, the Examiner concludes that the subject matter of claims 1, 3–5, 7–9, 11–13, 15, and 23–31 would have been obvious to a person of ordinary skill in the art.

**Claim 1.** With respect to claim 1, the Appellants argue that “VanPutte does not cure the deficiencies of Baer [argued by the Appellants in the context of Rejection 1], that a person of ordinary skill would not have combined Baer and VanPutte, and that a person of ordinary skill in the art would not have combined Baer and Dasher. App. Br. 14–19.

Although, as set forth below in the discussion of claim 4, we agree with the Appellants that the Examiner has not adequately established that a person of ordinary skill in the art would have had reason to combine Baer and VanPutte, any error in the Examiner’s rejection involving reliance on VanPutte is harmless in the context of claim 1. Claim 1 does not require the use of polyethylene oxide as the first polymer, for which the Examiner relies on VanPutte. The Examiner finds that Baer itself discloses crystalline polymers suitable for use as the first polymer layer of claim 1. *E.g.*, Ans. 8–9, 11 (“Baer does teach first polymer layer is formed from a crystallizable material including polyethylenes, polypropylenes, polyamides, polyesters, and polyvinylidene fluoride.”). Thus, the Examiner’s reliance on VanPutte is unnecessary for the rejection of claim 1.

Baer teaches a multilayer polymer that “alternate[s] between at least two types [of polymer]: (A) and (B).” Baer ¶ 41. Baer teaches that “[l]ayers of type (A) are comprised of component (a) and layers of type (B) are comprised of component (b).” *Id.* Baer discloses an embodiment in which its composition is “prepared by multilayered coextrusion of the two polymeric materials.” *Id.* ¶ 55. Baer teaches that components (a) and (b)

“are polymeric materials, preferably thermoplastic polymeric materials, such as glassy, crystalline or elastomeric materials.” *Id.* Baer specifically teaches that “[s]uitable polymeric materials” include “polyethylene, polypropylene, . . . polyvinylidene fluoride, . . . [and] polyamides . . . .” *Id.* ¶ 47. Baer teaches that the “layers of the multilayered polymer composite film of the present invention have a thickness in the range of from 5 nanometers (nm) to 1,000 micrometers (µm).” *Id.* ¶ 41.

As set forth above, Baer expressly teaches not only the genus of “crystalline” polymeric materials, but also several individual species of that genus, including at least polyethylene, polypropylene, polyvinylidene fluoride, and polyamides—several of the polymers specifically disclosed by the Appellants’ Specification as suitable first polymers. *Compare* Baer ¶ 47, *with* Spec. ¶ 8.

Baer teaches layer thicknesses of 5 nm to 1,000 µm. Baer ¶ 41. The Appellants’ Specification discloses that “[t]he first polymer layer can have a thickness that is effective to promote crystallization of the first polymer layer. For example, the first polymer layer can have an average thickness of about 10 nm to about 500 nm.” Spec. ¶ 10. As recognized above in the discussion of the anticipation analysis of Rejection 1, Baer’s disclosed thickness range fully encompasses, but is broader than, the range disclosed by the Specification as promoting crystallization. However, “even a slight overlap in range establishes a prima facie case of obviousness.” *See In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003).

We recognize that, in the obviousness rejection set forth in Rejection 4 (as in the anticipation rejection set forth in Rejection 1), the Examiner states that “the first polymer layer has a thickness . . . identical to that of the

present invention.” Ans. 10. As set forth above in our discussion of Rejection 1, the record does not support that finding. However, the error is harmless in the context of the Examiner’s obviousness rejection because, although the thickness ranges are not identical, there is no dispute that the range of the prior art fully encompasses the claimed range. While an overlapping range may not be sufficient for anticipation in this case, it does establish a prima facie case of obviousness. *See Peterson*, 315 F.3d at 1329.

Thus, given that (1) Baer discloses several of the same first polymer materials disclosed by the Specification, and (2) Baer discloses a first polymer thickness range that overlaps the range disclosed by the Specification as suitable for promoting crystallization, Baer reasonably teaches or suggests compositions for which both the identity and thickness of the first polymer are the same as those disclosed by the Specification as suitable for the invention.

In the Reply Brief, the Appellants concede that they are “not arguing whether the claimed construction *would* be formed if the appropriate materials and layer thickness were selected in Baer. Rather, the Appellant contends that it would not be obvious . . . to make the very specific material and thickness selections in Baer.” Reply Br. 3 (emphasis in original).

For the reasons set forth above, we disagree. Baer specifically discloses the materials that the Appellants assert would not have been obvious to select, and Baer specifically discloses a range of thicknesses that overlaps the thickness that the Appellants assert would not have been obvious to select. We agree with the Examiner that selection of such materials and thicknesses would have been obvious in view of Baer’s disclosure of them. The Appellants do not dispute that, once such materials

and thicknesses are selected, the crystalline lamellae, aspect ratio, and gas diffusion limitations naturally flow from the composition. *See id.*; *cf. Ex parte Obiaya*, 227 USPQ 58, 60 (BPAI 1985) (“The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious.”); *In re Kubin*, 561 F.3d 1351, 1357 (Fed. Cir. 2009) (“Even if no prior art of record explicitly discusses the [limitation], [applicants’] application itself instructs that [the limitation] is not an additional requirement imposed by the claims on the [claimed invention], but rather a property necessarily present in [the claimed invention].”); *cf. also In re Best*, 562 F.2d 1252, 1255 (CCPA 1977) (“Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product.”).

In the context of Rejection 1, the Appellants also raise arguments concerning crystallinity and transparency. *See* App. Br. 10–11. However, those arguments constitute attorney argument unsupported by evidence, and are entitled to little—if any—weight. *See In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) (“Attorney’s arguments in a brief cannot take the place of evidence.”). In the Answer, the Examiner specifically notes that those arguments are not supported by evidence. *E.g.*, Ans. 15, ¶¶ 62–63. In the Reply Brief, the Appellants provide no evidence or persuasive argument that selecting crystalline materials in Baer would be undesirable due to concerns regarding transparency. Reply Br. 3. On this record, the Appellants

arguments concerning transparency are not persuasive of reversible error in the Examiner's obviousness rejection.

Having carefully considered the arguments presented, we conclude that the Appellants have not identified reversible error in the Examiner's obviousness rejection of claim 1. Because the Appellants raise no distinct arguments for claims 3, 5, 7–9, 11, 13, 15, 24, 25, 27, or 28, we likewise conclude that the Appellants have not identified reversible error in the Examiner's obviousness rejection of those claims.

**Claim 4.** Claim 4 depends from claim 1 and further requires that “the first polymer layer be[] selected from the group consisting of polyethylene oxide and polycaprolactone.” Claim 12 includes the same limitation. Claims 30 and 31 require the first polymer layer to comprise polyethylene oxide.

As noted above, the Examiner finds that VanPutte “teaches a multilayer film comprising a first polymer layer, wherein the first polymer layer comprises polyethylene oxide.” Ans. 9 (internal citations omitted). The Examiner finds that a person of ordinary skill would have been motivated to use PEO as the first polymer in Baer “in order to control tensile strength, bulk, and abuse resistance.” *Id.*

Essentially for reasons stated by the Appellants, *see* Ans. 15–18, the Examiner's analysis does not persuasively establish that a person of ordinary skill in the art would have been motivated to combine Baer and VanPutte. In particular, unlike Baer, VanPutte is not directed to optical applications and does not concern a two-layer polymer structure. The Examiner has not adequately established that properties such as tensile strength, bulk, and/or abuse resistance would have been desirable or present in the significantly

different compositions of Baer. Accordingly, we reverse the Examiner's rejection of claims 4, 12, 30, and 31.

**Claim 23.** Claim 23 depends from claim 1 and further requires that “the second polymer layers being selected from the group consisting of ethylene co-acrylic acid and polyoxymethylene.” Claim 26 includes the same limitation.

As noted above, the Examiner finds that Dasher “teaches a multilayer film comprising a first polymer layer coextruded with a second polymer layer, wherein the second polymer layer comprises ethylene co-acrylic acid.” *Id.* (internal citations omitted). The Examiner finds that a person of ordinary skill would have been motivated to use ethylene-co-acrylic acid as the second layer “in order to impart chemical resistance, better adhesion and optical properties.” *Id.*

The Appellants argue that a person of ordinary skill in the art would not have been motivated by Dasher to use ethylene-co-acrylic acid as the second layer of Baer. *See* App. Br. 17–18. However, the arguments are largely directed to differences between Baer and Dasher without persuasively explaining why those differences are indicative of error in the stated rejection. *See id.* We recognize that Dasher's layer structure does not fall within the scope of claim 1 and is not the same as Baer's layer structure. *See* App. Br. 18. The Examiner, however, does not rely on Dasher for the claimed layer structure, and the Appellants do not dispute the Examiner's finding that Dasher teaches that its ethylene-co-acrylic acid layer “impart[s] chemical resistance, better adhesion and optical properties.” Ans. 9. Notwithstanding the fact that Baer “does not employ an epoxy or experience migration between Layers (A), (B),” and thus arguably does not need the

chemical resistance described by Dasher, *see* App. Br. 18; Reply Br. 6, the Appellants provide no reason that a person of ordinary skill would not have found the other identified benefits—i.e., improved adhesion and improved optical properties, *see* Dasher at 4:18–20 (“A higher acrylic acid content will give better adhesion and optical characteristics, but worse chemical barrier performance.”)—to be desirable in Baer. Unlike VanPutte, which is not directed to optical applications, Dasher is directed to optical applications. *See generally* Dasher (title: “Laminated ophthalmic lens”). On this record, the Examiner’s determination that a person of ordinary skill in the art would have viewed as desirable in the GRIN lens of Baer the improved adhesion and optical properties disclosed by Dasher is supported by the record. In that regard, we note that the Appellants concede that both Baer and Dasher describe optical uses for their disclosed multilayer polymer films. *See* App. Br. 18.

Additionally, and contrary to the Appellants’ arguments, the Examiner’s rejection does not propose the incorporation of a new layer (i.e., Dasher’s barrier layer) into Baer’s multilayer polymer composition. *See* Reply Br. 6 (“the barrier layer 22 of Dasher has no purpose or function in the GRIN lens of Baer”). Rather, the Examiner proposes the use of a polymer (ethylene-co-acrylic acid) known as suitable for use in optical applications as the second polymer layer in Baer with the expectation that it will provide improved adhesion and optical properties. *See* Ans. 9. The use of a known element according to an established function typically does not result in nonobvious subject matter. *E.g., KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416–21 (2007).

The Appellants also argue that Dasher's ethylene-co-acrylic acid might not "satisfy the required elastic modulus and refractive index criterion of Baer." App. Br. 16, 18. However, as the Examiner explains, Ans. 16, the Appellants do not persuasively identify a disclosure in Baer with specific requirements related to elastic modulus or refractive index beyond a requirement that there be "a difference in refractive index between the polymeric components of the layers," Baer ¶ 45; *see also* Baer ¶ 51. The Appellants have not alleged, much less provided evidence, that the ethylene-co-acrylic acid proposed by the Examiner for use as the second polymer has the same refractive index as materials taught by Baer for use as the first polymer. Thus, we are not persuaded that concerns regarding elastic modulus and refractive index would have dissuaded a person of ordinary skill in the art from making the proposed combination. *See Jung*, 637 F.3d at 1365.

As stated above with respect to claim 1, although the Examiner's statement of the rejection purports to rely on VanPutte, the error in the Examiner's reliance on VanPutte is harmless in the context of claims that do not require the use of polyethylene oxide as the first polymer, including claims 23 and 26. Accordingly, on this record, we are not persuaded of reversible error in the Examiner's rejection of claims 23 and 26.

**Claim 29.** Claim 29 recites, *inter alia*, a "multilayer food packaging film" and a "multilayer food packaging film for enclosing food." The Appellants argue that, because claim 29 is limited to food packaging films, and Baer, VanPutte, and Dasher do not disclose food packaging films, the combination of those references does not render claim 29 unpatentable. *Id.* at 21–22. The Appellants also state that "none of Baer, VanPutte, and

Dasher teach or suggest a structure both capable of enclosing food and which is selective to the diffusion of gasses therethrough.” *Id.*

“It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable.” *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). The body of claim 29 recites a structurally complete multilayer polymer composition. Although the body also recites the intended use (“film for enclosing food”), the Appellants do not persuasively explain how that claim recitation structurally distinguishes the multilayer polymer composition of the combined prior art. Although Baer discloses optical applications for its multilayer polymer composition that may have hundreds or thousands of layers, Baer’s disclosure is not limited to compositions comprising hundreds or thousands of layers. Baer teaches, “[p]referably, stacking 5 to 100,000 multilayered polymer composite films will form a multilayered composite . . . .” Baer ¶ 43. Baer teaches that each film “compris[es] at least 10 alternating layers (A) and (B).” *Id.* ¶ 51. Even assuming that a multilayer polymer film comprising thousands of layers may be structurally unsuitable for use as a food packing film, there is no evidence of record that Baer’s thinner films would be structurally incapable of satisfying the intended use recited by claim 29. *See Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) (“Attorney’s arguments in a brief cannot take the place of evidence.”); *cf. Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469 (Fed. Cir. 1990) (“[A]pparatus claims cover what a device *is*, not what a device *does*.” (emphasis in original)). Indeed, the Appellants’ Specification discloses embodiments having “1025 alternating layers,” Spec. ¶ 25, which is significantly more than the minimum disclosed by Baer. *See also* Spec. ¶ 41

(“The multilayer film of the present invention preferably have at least 3 layers, for example, at least about 30 layers, 50 layers, 100 layers, or 1000 layers, including any number of layers within that range.”). Accordingly, we are not persuaded that the intended use recited by claim 29 patentably distinguishes the claimed composition from compositions taught or suggested by Baer, alone or in combination with the other prior art of record.

As above, although the Examiner’s statement of the rejection lists VanPutte as part of the rejection of claim 29, the Examiner’s reliance on VanPutte is harmless because claim 29 does not require the use of polyethylene oxide as the first polymer (nor, for that matter, does it require the use of a specific second polymer).

#### CONCLUSION

We REVERSE the Examiner’s rejection of claims 1, 3, 5, 7–9, 11, 13, 15, 24, and 27 under 35 U.S.C. § 102(b) as anticipated by Baer.

We AFFIRM the Examiner’s rejection of claims 4 and 12 under 35 U.S.C. § 103(a) as unpatentable over Baer and Ohta.

We AFFIRM the Examiner’s rejection of claims 23, 25, 26, and 28 under 35 U.S.C. § 103(a) as unpatentable over Baer and Wheatley.

We AFFIRM the Examiner’s rejection of claims 1, 3, 5, 7–9, 11, 13, 15, and 23–29 under 35 U.S.C. § 103(a) as unpatentable over Baer, VanPutte, and Dasher. We REVERSE the Examiner’s rejection of claims 4, 12, 30, and 31 under 35 U.S.C. § 103(a) as unpatentable over Baer, VanPutte, and Dasher.

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

AFFIRMED-IN-PART