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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/144,142	09/12/2011	Usama E. Younes	BMS092051US	3091
157	7590	11/10/2016	EXAMINER	
Covestro LLC 1 Covestro Circle PITTSBURGH, PA 15205			YANG, ZHEREN J	
			ART UNIT	PAPER NUMBER
			1781	
			NOTIFICATION DATE	DELIVERY MODE
			11/10/2016	ELECTRONIC

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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* USAMA E. YOUNES, JOHN H. PERRY, and  
JAMES W. ROSTHAUSER<sup>1</sup>

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Appeal 2015-006169  
Application 13/144,142  
Technology Center 1700

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Before ROMULO H. DELMENDO, JAMES C. HOUSEL, and  
LILAN REN, *Administrative Patent Judges*.

REN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from a rejection<sup>2</sup> of claims 1, 3–5, 7–15, and 30–32. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> The real party in interest is identified as Bayer MaterialScience LLC (Appeal Brief, filed October 31, 2014 (“App. Br.”), 1.)

<sup>2</sup> Final Office Action mailed December 5, 2013 (“Final Office Action,” cited as “Final Act.”).

### CLAIMED SUBJECT MATTER

The claims are directed to “a reinforced polymer composite” having “a barrier layer that does not significantly deform and remains substantially flat during curing of the reinforced . . . part.” (Spec. 3:4–6, 8–9.)<sup>3</sup> Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A reinforced polymer composite comprising:
  - a polymeric barrier layer comprising:
    - a barrier layer first surface;
    - a barrier layer second surface; and
    - a plurality of hard segment domains, the domains having a size ranging from 5 nm to 20 nm;*
    - a reinforced polymeric layer covering at least a portion of the barrier layer first surface;
      - wherein the barrier layer second surface exhibits a Class A quality; and
      - wherein the plurality of hard segment domains substantially suppress deformation of the polymeric barrier layer at a molding temperature of the reinforced polymer composite; and
      - wherein the polymeric barrier layer and the reinforced barrier layer comprise a polyurethane.

(Claim Appendix, App. Br. 5 (emphasis added) (some indentations altered).)

### REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

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<sup>3</sup> Application 13/144,142, *Long-Fiber Thermoset Composite with Low Orange Peel*, filed July 12, 2011. We refer to the “142 Specification,” which we cite as “Spec.”

Higuchi	US 5,786,070	July 28, 1998
Younes	US 2007/0098997 A1	May 3, 2007
Beck	US 2002/0195742 A1	Dec. 26, 2002

### REJECTIONS

Claims 1, 3–5, 7–10, and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Younes in view of Higuchi. (Final Act. 2.)

Claims 11–15 and 31–32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Younes in view of Higuchi and Beck. (Final Act. 7.)

### OPINION

Findings of fact throughout this Opinion are supported by a preponderance of the evidence of record.

The dispositive issue on this appeal is whether the Examiner has shown that a “reinforced polymer composite” having “a plurality of hard segment domains, the domains having a size ranging from 5 nm to 20 nm” as recited in claim 1 is present in or would have been obvious in view of the applied prior art.<sup>4</sup>

In rejecting claim 1, the Examiner acknowledges that Younes does not disclose the “hard segment domains . . . having a size ranging from 5 nm to 20 nm” as recited in claim 1. (Ans. 11.)<sup>5</sup> The Examiner, however, finds that

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<sup>4</sup> Consistent with the provisions of 37 C.F.R. § 41.37(c)(1)(iv) (2013), claims 3–5, 7–15, and 30–32 stand or fall with claim 1, as Appellants make no distinct arguments beyond the arguments regarding claim 1. (App. Br. 3–4 (arguing that claims 30–32 are patentably distinguished from the prior art because Beck “provides no additional information or expectation of success” regarding the “hard segment domains” at issue).)

<sup>5</sup> Examiner’s Answer dated April 10, 2015 (“Ans.”).

the '142 Specification discloses “urethane hard segment domains” that “are formed from isocyanate and chain extenders.” (Spec. 10:3–5, 18–19 (cited in Final Act. 3).) The Examiner also finds that the '142 Specification discloses a “suitable chain extender” which includes “isophorone diamine” (IPDA). (Spec. 17:11–12 (cited in Final Act. 3).) The '142 Specification discloses that “[t]he isocyanate-reactive component used to produce the barrier coat may also contain any of the known chain extenders” not limited to isophorone diamine. (Spec. 24:17–18.) The Examiner reasons that because Younes discloses forming a polyurethane barrier layer with an isocyanate-reactive component and because Higuchi discloses isophorone diamine as a chain extender, both prior art barrier layers would include the hard segments at issue. (Ans. 11.)

Appellants acknowledge that the “same materials” are used in the prior art as recited in claim 1 but argue that “[d]espite an overlap of the raw materials used to make the barrier coat,” “hard segment domains . . . having a size ranging from 5 nm to 20 nm” as recited in claim 1 “would not necessarily be present in the barrier coat.” (App. Br. 3.) Without presenting factual evidence, Appellants argue that “there simply is no reason to believe that every combination of the various raw materials used to make the barrier coat will necessarily result in the hard segment size required by the present claims” and “there would have not been such a reasonable expectation of success . . . .” (*Id.* at 3–4.)

The mere recitation of a property or characteristic not disclosed by the prior art does not necessarily confer patentability to a composition or a method of using that composition. *See In re Skoner*, 517 F.2d 947, 950 (CCPA 1975). Where, as here, the Examiner establishes a reasonable belief

that the property or characteristic recited in the claims would have been inherent to the product or process, the burden of proof shifts to Appellants to show that this characteristic or property is not possessed by the prior art. *See In re Best*, 562 F.2d 1252, 1255 (CCPA 1977); *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990) (“Products of identical chemical composition [cannot] have mutually exclusive properties.”).

In this case, it is undisputed that Younes teaches a composite having “at least two layers” one of which is a “barrier coat” that “is a polyurethane/polyur[i]a composition . . . .” (Younes ¶ 15.) It is undisputed that Younes teaches that the “isocyanate-reactive component used to produce the barrier coat may also contain any of the known chain extenders . . . .” (*Id.* ¶ 24.) It is also undisputed that Higuchi teaches using “isophorone diamine” as a chain extender for “a cross-linked polyurethane resin sheet.” (Higuchi, 1:5–6, 6:22, 28–29.)

Where, as here,

the claimed and prior art products are identical or substantially identical . . . 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. . . . [The] fairness [of the burden-shifting] is evidenced by the PTO’s inability to manufacture products or to obtain and compare prior art products.

*Best*, 562 F.2d at 1255.

Appellants do not refute the Examiner’s finding that

the process steps outlined in Younes . . . for making the polyurethane product is exactly the same as that disclosed in the instant application . . . that the step for the formation of the barrier layer in Younes . . . is the same as the step for forming the barrier layer in the instant application . . . [and] that even the

mold used in Younes . . . is the same as the mold used in the instant application.

(*Compare* Ans. 11 *with* Reply Br. 2–4.)<sup>6</sup> Appellants do not respond to the Examiner’s finding that the ’142 Specification shows that it is not “the usage of a different diamine chain extender” but “the polyurethane composition” that “lead[s] to the formation of hard segments.” (*Compare* Ans. 12 *with* Reply Br. 2–4.) Appellants have not presented factual evidence to show why “prior art products do not necessarily or inherently possess the characteristics of his claimed product.” *Best*, 562 F.2d at 1255. Appellants have not presented factual evidence explaining why Examiner’s proposed combination is unreasonable or showing that a skilled artisan would not have expected the combined prior art teachings to be successful. (Reply Br. 3.) No reversible error has been identified here.

Appellants’ argument that the combined prior art teachings do not recognize a certain purported benefit (i.e., the reduction of the “orange peel” effect) (Reply Br. 3–4) does not identify reversible error in the Examiner’s findings because the “[m]ere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention.” *In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991).

Appellants additionally raise, for the first time in the Reply Brief, an analogous art argument. (Reply Br. 2.) An argument raised for the first time in a Reply Brief is considered waived if Appellants do not explain why it could not have been raised previously. 37 C.F.R. § 41.41(b)(2); *cf. Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1320–

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<sup>6</sup> Reply Brief dated June 4, 2015 (“Reply Br.”).

21 n.3 (Fed. Cir. 2005) (Arguments not raised in the opening brief are considered waived).

Because Appellants have not explained why it could not have been raised previously nor shown good cause for the delay, we decline to reach this argument. *See Ex parte Nakashima*, 93 USPQ 2d 1834 (BPAI 2010) (informative) (explaining that arguments and evidence not timely presented in the principal Brief will not be considered when filed in a Reply Brief, absent a showing of good cause explaining why the argument could not have been presented in the Principal Brief).

In any event, Appellants' assertion that Higuchi is non-analogous art because it is directed to "a cross-linked polyurethane resin sheet . . . when used for laminated safety glass" is not persuasive of reversible error. (Reply Br. 2 (emphasis in original).)

Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.

*In re Clay*, 966 F.2d 656, 658–59 (Fed. Cir. 1992).

The prior art reference in this case, Higuchi, provides a "cross-linked polyurethane resin sheet . . . used for a laminated product having a layered structure comprising at least two layers" which may be "used as a window material for an automobile." (Higuchi, 3:4–6; 9:8–9.) The '142 Specification likewise seeks to provide a material for structures such as "a window." (Spec. 6:3–5.) Appellants have not shown that Higuchi is not

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“from the same field of endeavor” and no reversible error has been identified in this aspect of the obviousness analysis. *See Clay*, 996 F.2d at 658–59.

#### DECISION

The Examiner’s rejections of claims 1, 3–5, 7–15, and 30–32 are affirmed.

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