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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SHANDON DEE HART

Appeal 2018-003228
Application 13/655,968
Technology Center 1700

Before LINDA M. GAUDETTE, N. WHITNEY WILSON, and DEBRA L. DENNETT, *Administrative Patent Judges*.

WILSON, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's February 26, 2016 decision rejecting claims 1–21, 23, and 29–34 ("Non-Final Act."). We have jurisdiction over the appeal 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 Corning Incorporated as the real party in interest (Br. 2).

CLAIMED SUBJECT MATTER

Appellant's disclosure relates to glass laminates with asymmetric impact resistance (Spec. ¶ 2). According to the Specification, in some applications it is desirable to have glass laminates that exhibit a different impact resistance depending on which side of the glass is impacted (Spec. ¶ 3). The Specification states that, for example, in automotive applications it may be desirable for a glass laminate to exhibit a higher impact resistance for external objects such as falling trees, while exhibiting a lower resistance against interior impact, such as a passenger's body during a collision (*id.*). Thus, the disclosure is generally directed to strengthened glass laminates comprising at least one layer of strengthened glass having a first surface and a second surface disposed opposite the first surface, with one or more coatings adhered to the first surface of the strengthened glass, where the coating(s) impart(s) an asymmetric impact resistance to the glass laminate (Abstract). Details of the claimed structure are set forth in representative claim 1, which is reproduced below from the Claims Appendix to the Appeal Brief:

> 1. A strengthened glass laminate comprising:
>
> at least one layer of strengthened glass having a first surface and a second surface disposed opposite the first surface; and
>
> one or more coatings comprising silica adhered to the first surface of the strengthened glass,
>
> wherein the one or more coatings impart an asymmetric impact resistance to the at least one layer of strengthened glass, and
>
> wherein the one or more coatings do not show evidence of delamination when inspected under an optical microscope after indentation with a Berkovich diamond indenter with a load of from about 4 grams to about 40 grams.

REJECTIONS

1. Claims 1–4, 10–16, and 30 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as unpatentable over, Amin I.[2]

2. Claims 5–9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Amin I in view of Blackwell.[3]

3. Claim 17 is rejected under 35 U.S.C. § 103(a) as unpatentable over Amin I in view of Kim.[4]

4. Claims 18, 19, 23, and 29 are rejected under 35 U.S.C. § 103(a) as unpatentable over Amin I in view of Kimura.[5]

5. Claims 20, 21, and 31–34 are rejected under 35 U.S.C. § 103(a) as unpatentable over Amin I in view of Amin II.[6]

6. Claims 1, 2, 10–15, 18, 19, 23, 29, and 30 are rejected under 35 U.S.C. § 103(a) as unpatentable over Kimura in view of Amin I.

7. Claims 3, 4, 16, 20, and 21 are rejected under 35 U.S.C. § 103(a) as unpatentable over Kimura in view of Amin I and Amin II.

8. Claims 5–9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Kimura in view of Amin I and Blackwell.

[2] Amin et al., US 2009/0197048 A1, published August 6, 2009.
[3] Blackwell et al., WO 00/00855 A1, published January 6, 2000.
[4] Kim, US 2004/0201883 A1, published October 14, 2004.
[5] Kimura, US 5,928,793, issued July 27, 1999.
[6] Amin et al., US 2010/0047521 A1, published February 25, 2010.

9. Claim 17 is rejected under 35 U.S.C. § 103(a) as unpatentable over Kimura in view of Amin I and Kim.

DISCUSSION

Appellant does not separately argue any claim or rejection (*see* Br. 19–20). Accordingly, our analysis will focus on the § 102/§ 103 rejection of claim 1 over Amin I. The Examiner's findings underlying this rejection are set forth at pages 2 and 5 of the Non-Final Action.

The Examiner finds that Amin I discloses a strengthened glass laminate made of alkali aluminosilicate having an antireflective layer on it (Non-Final Act. 4, citing Amin I, FIG. 3 and ¶ 66). The Examiner further finds that Amin I's antireflective coating is made of SiO_2 (Non Final Act., citing Amin I ¶¶ 63, 64).

The Examiner finds that although Amin I does not disclose that its SiO_2 coating would impart impact resistance to the glass, the presence of the SiO_2 coating would inherently impart such a property and, because the coating is applied to only side of the glass, "it is inherent that the impact resistance impart[ed] by the coating is asymmetric" (Non-Final Act. 4). The Examiner also finds that Amin I does not explicitly disclose the final limitation in claim 1 ("wherein the one or more coatings do not show evidence of delamination when inspected under an optical microscope after indentation with a Berkovich diamond indenter with a load of from about 4 grams to about 40 grams"), but that because Amin I's coating "is identical" to the claimed coating, that property would be inherent in Amin I's coating (Non-Final Act. 5).

Thus, the rejection relies on a finding of inherency for two of the claim limitations. "[I]n order to rely on inherency to establish the existence of a claim limitation in the prior art in an obviousness analysis[,] the limitation at issue necessarily must be present, or the natural result of the combination of elements explicitly disclosed by the prior art." *PAR Pharm., Inc. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1195–96 (Fed. Cir. 2014). To properly rely on the doctrine of inherency in a rejection, "the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990).

Appellant first argues that information presented in the Specification shows that simply because the claimed coating and the coating in Amin I have the same chemical composition is not sufficient to show that Amin I's compositions necessarily impart the claimed asymmetric impact properties and/or adhesion properties (Br. 13). In particular, Appellant points to Examples 1 and 2 in the Specification as showing that coatings comprising silica produced using RF sputtering provided good adhesion and imparted asymmetric impact resistance while silica coatings produced using E-bean evaporation did not impart asymmetric impact resistance and did not show good adhesion (Br. 13, citing Spec., Example 1, ¶¶ 30–32), and curing identical polymer coatings at different temperatures can either provide asymmetric impact resistance, or not provide asymmetric impact resistance (Br. 13, citing Spec., Example 2, ¶ 36).

The Examiner states that the evidence provided by Appellant in the Specification as demonstrating that the impartment of asymmetric impact

resistance and adhesion properties of the coating are not inherent in the use of silica as a coating on one side of a glass substrate is not persuasive (Ans. 24–25). The Examiner finds that:

> Regarding Example 1 (see paragraphs 0030-0031 of published application) and comparative example (see paragraphs 0032 of published application), these examples are not proper side-by-side comparisons given that Example 1 comprises a 4-layer coating which includes SiO_2 and Nb_2O_5 whereas comparative example comprises a single layer SiO_2 coating. Therefore, it is not clear if it is the different process or the different coating that is causing the difference in properties and thus, the data is not persuasive. Regarding Example 2, the data is not persuasive given that the data is not commensurate in scope with scope of present claims given that present claim recite silica coating (SiO_2 coating) and Example 2 is drawn to polymer coating (siloxane film) (see paragraphs 0033, 0036, 0037). Therefore, there is no evidence how silica coating (SiO_2 coating) cured at different temperatures (higher, lower) will affect asymmetric impact resistance and other properties such as delamination.

(Ans. 24–25).

Thus, the determinative issue in this appeal is whether the Examiner has adequately shown that Amin I inherently teaches the claimed asymmetric impact resistance and adhesion properties.

As discussed above, to rely on the doctrine of inherency, "the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art." *Levy*, 17 USPQ2d at 1464. In this instance, the Examiner's basis for determining that Amin I's coating provides the claimed properties to the claimed glass laminate is that Amin I's coating is made of the same material

(SiO_2) as is described as being used in claimed invention (Ans. 4–5).[7] In view of the fact that the claim does not provide any specific structural details about the coating, we conclude that the Examiner has a sound basis for believing that the coatings of Amin I would impart the claimed properties to Amin I's glass laminate. Such a basis is sufficient to shift the burden to Appellant to demonstrate that the claimed properties would not inherently be present in Amin I's glass laminate. *See In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990) ("[W]hen the [US]PTO shows sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not" (citation omitted). As stated by the predecessor of our reviewing court:

> 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. Whether the rejection is based on 'inherency' under 35 U.S.C. § 102, on 'prima facie obviousness' under 35 U.S.C. § 103, jointly or alternatively,[] the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products.

In re Best, 562 F.2d 1252, 1255 (CCPA 1977) (internal citations omitted).

As noted at page 5, *supra*, Appellant has sought to meet this burden by reference to Examples 1 and 2 from the Specification, which were said to

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[7] Appellant argues that the Examiner has provided no evidence to support the "allegation" that the prior art and claimed coatings are the same (Br. 14; *see also* Br. 16). However, the Examiner has found, and Appellant has not disputed, that both teach coatings made of SiO_2. Thus, it is not accurate to say that the Examiner has not "provid[ed] any evidence supporting this allegation" (*id.*) (emphasis omitted).

show that different methods of application and/or curing temperatures would affect the final properties of the glass laminate, specifically the asymmetric impact and adhesion properties. However, Appellant's reliance on this data is insufficient to meet its burden to prove that the prior art product (the glass laminate of Amin I) does not inherently have the claimed asymmetric impact resistance and adhesion properties.

This is because, in the case of the data from Example 1, the comparison relied on by Appellant is between a 4-layer coating which includes SiO_2 and Nb_2O_5 and a coating made of a single layer of SiO_2 (Amin I ¶¶ 30–32). Thus, as discussed by the Examiner, the comparison does not allow for a determination as to whether the different properties between the example and the comparative example is because of different processes used to create the coatings, or different coatings. Accordingly, it does not provide persuasive evidence that glass laminates of Amin I would not inherently have the claimed properties. In the case of Example 2, the coatings are not made of silica, but instead are made of a siloxane film (Amin I ¶¶ 33, 36, and 37). Hence, the results are not probative of the effect of temperature on the properties imparted by a silica coating, and do not provide persuasive evidence that Amin I's glass laminates would not inherently have the claimed properties.

Appellant has simply not pointed to factual evidence in the Specification which adequately supports an argument that different methods of applying and/or curing SiO_2 coatings onto glass substrates would result in glass laminates having different properties.

Appellant also cites to evidence from the Rule 132 Declaration of Dr. Shandon Hart ("Hart Decl.") to support the argument that the claimed properties are not inherent in Amin I's glass laminates (Br. 16–17). This argument is not persuasive of reversible error because, as articulated by the Examiner (Ans. 32–34), the Declaration does not specifically address the glass laminate of Amin I, which appears to be identical (i.e. the same glass and the same coating) to the claimed glass laminate. To overcome the findings of inherency, Appellant bears the burden of showing that Amin I's glass laminate does not have the claimed properties. *In re Best*, 562 F.2d at 1255. By not showing that glass laminates prepared as taught by Amin I do not have the claimed asymmetric impact resistance and adhesion properties, the Declaration fails to persuasively show that those glass laminates do not inherently have the claimed properties.

Because in this instance, based on the holding of *In re Best*, Appellant bears the burden of showing that the prior art products do not necessarily or inherently possess the characteristics of the claimed product, Appellant's failure to meet this burden prevents a showing of reversible error in the rejections.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–4, 10–16, 30	102(b)/103(a)	Amin I	1–4, 10–16, 30	
5–9	103(a)	Amin I, Blackwell	5–9	
17	103(a)	Amin I, Kim	17	
18, 19, 23, 29	103(a)	Amin I, Kimura	18, 19, 23, 29	
20, 21, 31–34	103(a)	Amin I, Amin II	20, 21, 31–34	
1, 2, 10–15, 18, 19, 23, 29, 30	103(a)	Kimura, Amin I	1, 2, 10–15, 18, 19, 23, 29, 30	
3, 4, 16, 20, 21	103(a)	Kimura, Amin I, Amin II	3, 4, 16, 20, 21	
5–9	103(a)	Kimura, Amin I, Blackwell	5–9	
17	103(a)	Kimura, Amin I, Kim	17	
Overall Outcome			1–21, 23, 29–34	

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

AFFIRMED