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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROLAND FEOLA and
LEILA KHATAI¹

Appeal 2015-006854
Application 13/003,949
Technology Center 1700

Before CATHERINE Q. TIMM, CHRISTOPHER C. KENNEDY, and
JEFFREY R. SNAY, *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 to reject claims 2, 13, and 14. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

BACKGROUND

The subject matter on appeal relates to aqueous coating binders “preferably used to formulate corrosion protection coatings for metals, and to formulate sealers for wood.” *E.g.*, Spec. 1:1, 23–24; Claim 2. Claim 2 is reproduced below from page 9 (Appendix A) of the Appeal Brief:

¹ According to the Appellants, the real party in interest is Allnex Austria GmbH, f/k/a Cytec Austria GmbH. App. Br. 2.

2. Aqueous binder mixtures comprising mass fractions of
- from 50 % to 96 % of a chain-extended epoxy amine adduct A obtained from a process comprising the reaction of an epoxy resin A1 having at least one epoxide group per molecule with an aliphatic amine A2 having at least one primary or secondary amino group per molecule to form an epoxy amine adduct A12, neutralising at least partly the epoxy amine adduct A12 by addition of acid, transferring the neutralised epoxy amine adduct A12n into an aqueous phase under stirring, heating the aqueous mixture and adding thereto a further epoxy resin A3 having at least two epoxide groups per molecule, the quantity of A3 being chosen such that the number of reactive hydroxyl and amino groups in A12 is equal to, or greater than, the number of epoxide groups in A3;
 - from 2 % to 30 % of a carboxy functional polyester B that contains a limited amount of aromatic constituents in a mass fraction of up to 15 % and has an acid number of from 4 mg/g to 50 mg/g, and
 - from 2 % to 30 % of a crosslinker C selected from the group consisting of aminoplast resins, phenol resols, triazine tri-alkyl carbamates, and mixtures of such crosslinking agents, with the proviso that the sum of the mass fractions of components A, B and C is always 100 %.

ANALYSIS

Claims 2, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gam et al. (US 2006/0084726 A1, published Apr. 20, 2006) in view of Paar et al. (US 6,653,370 B2, issued Nov. 25, 2003), as evidenced by Wismer et al. (US 4,419,467, issued Dec. 6, 1983). The Appellants argue the claims as a group, focusing on limitations that appear in claim 2. *See* App. Br. 4–7. Accordingly, we limit our discussion to claim 2. Claims 13 and 14 will stand or fall with claim 2.

After review of the cited evidence in the appeal record and the opposing positions of the Appellants and the Examiner, we determine that the Appellants have not identified reversible error in the Examiner's rejection. Accordingly, we affirm the rejection for reasons set forth below, in the Final Action, and in the Examiner's Answer. *See generally* Final Act. 2–4; Ans. 2–8.

The Examiner finds that Gam teaches a composition comprising each element of claim 2 except that Gam does not explicitly teach (1) “the amounts of the epoxy resin and the crosslinker,” (2) “the claimed species of crosslinker,” or (3) “the specific epoxy amine adduct claimed.” Ans. 3–4.

Concerning (1) and (2), the Examiner finds that Wismer, which is incorporated by reference in Gam,² teaches an aminoplast resin crosslinker, and further “teaches the amount of epoxy amine adduct as being 60 to 95 % and the amount of aminoplast resin as being 5 to 40%.” *Id.* at 3.

Concerning (3), the Examiner finds that Paar teaches a chain-extended epoxy amine adduct that falls within the scope of claim 2. *Id.* at 4. The Examiner finds that Gam's epoxy amine adduct is also a chain-extended epoxy amine adduct, and that it would have been obvious to substitute the adduct of Paar for the adduct of Gam “to provide a coating with good chemical resistance, stability and corrosion resistance.” *Id.*

² The Appellants acknowledge that “Gam includes a citation to epoxy amine adducts of Wismer and incorporates Wismer by reference.” App. Br. 4; *see also Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000) (“Incorporation by reference provides a method for integrating material from various documents into a host document . . . by citing such material in a manner that makes clear that the material is effectively part of the host document as if it were explicitly contained therein.”).

The Appellants first argue that it would not have been obvious to substitute Paar's adduct for Gam's adduct. *See* App. Br. 4; Reply Br. 3. They assert that "[t]he epoxy amine resins of Gam and Wismer are not chain-extended epoxy amine adducts and thus they differ from those described by Paar and those required by the present claims." *Id.* at 5. In the Reply Brief, the Appellants further argue that Paar does not explicitly disclose the use of its chain-extended epoxy amine adducts in electrocoating applications. *See* Reply Br. 2–3.

Those arguments are not persuasive of reversible error in the Examiner's rejection. Contrary to the Appellants' assertion that Gam's epoxy amine resins are not chain-extended, the Examiner finds that Gam states that they are. *See* Ans. 5. That finding is supported by Gam. *See, e.g.,* Gam ¶¶ 3, 62. Even if Gam's resins were not chain-extended, however, the Appellants fail to persuasively explain why that would have been significant to a person of ordinary skill in the art, particularly given that Gam and Paar appear to disclose the use of epoxy amine adducts for similar purposes. The combination proposed by the Examiner is simply the substitution of one known epoxy amine adduct for another. Such substitutions typically do not result in nonobvious subject matter. *See 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."). The Appellants provide no persuasive basis to conclude otherwise in this case.

The Appellants also argue that, because Paar “suggests that no further curing agents are needed,” a person of ordinary skill in the art “would not have had reason to apply the cationic epoxy amine adducts of Paar into compositions of Gam that comprise crosslinkers.” *Id.*

That argument is not persuasive. As the Examiner explains, the rejection proposes the simple substitution of Paar’s epoxy amine adduct into Gam’s composition, which already includes a crosslinker. Ans. 5–6. Paar does not teach away from the use of a crosslinker; it merely states that the epoxy amine adduct “*may be* formulated without additional curatives.” Paar at Abstract; Ans. 6; *see also In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (“The prior art’s mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed . . .”).

The Appellants argue that “none of the references provide sufficient reason or motivation to replace the main crosslinker of Gam with the aminoplast resin of Wismer.” App. Br. 5. More specifically, the Appellants suggest that Gam’s incorporation by reference of Wismer applies only to Wismer’s adducts, and not to Wismer’s crosslinkers. *See id.* They suggest that, because Gam teaches isocyanate curing agents, and not aminoplast resin curing agents, it would not have been obvious to use Wismer’s aminoplast resins with Gam. *See id.* at 5–6.

Even if Gam’s reference to Wismer were primarily concerned with Wismer’s epoxy amine adduct, rather than Wismer’s crosslinkers, that argument would not establish reversible error in the Examiner’s rejection. The references as a whole make clear that both isocyanates and aminoplast

resins are suitable crosslinking agents for epoxy amine adducts. *Cf. Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1076 (Fed. Cir. 2015) (reference must be considered for everything it teaches). Wismer expressly indicates that isocyanates and aminoplast resins are known alternative curing agents. *See, e.g.*, Wismer at 6:45–48 (“Examples of suitable curing agents are aminoplast resins, capped isocyanates and phenolic resins . . .”). The Appellants provide no persuasive basis to conclude that it would not have been obvious to use a known crosslinking agent with a known epoxy amine adduct. *See* Gam ¶ 48. We agree with the Examiner that it would have been obvious to use Wismer’s crosslinking agent in the composition of Gam as modified by Wismer and Paar. *See KSR*, 550 U.S. at 416–21.

The Appellants also argue that unexpected results support a conclusion of nonobviousness. *See* App. Br. 6. That argument is not persuasive because, as the Examiner explains, *see* Ans. 7–8, the comparison relied on by the Appellants is not to the closest prior art. *See In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991) (“[W]hen unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared with the closest prior art.”). Nor have the Appellants shown that the alleged unexpected results are commensurate in scope to the claims. *See In re Greenfield*, 571 F.2d 1185, 1189 (CCPA 1978) (“Establishing that one (or a small number of) species gives unexpected results is inadequate proof, for ‘it is the view of this court that objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support.’”) (quoting *In re Tiffin*, 448 F.2d 791, 792 (CCPA 1971)).

We further note that the Appellants' argument focuses on whether the results are an improvement over the prior art but fails to explain why a person of ordinary skill in the art would have considered those results to be unexpected. *See In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972) (“[I]t is not enough to show that results are obtained which differ from those obtained in the prior art: that difference must be shown to be an *unexpected* difference.”).

On this record, we are not persuaded that unexpected results rebut the prima facie case of obviousness set forth by the Examiner.

For those reasons, we affirm the Examiner's rejection of claim 2.

CONCLUSION

We AFFIRM the Examiner's rejections of claims 2, 13, and 14.

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