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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KARL ZUERCHER, JOUKO VYORYKKA, BERNARD FEHR, RONALD WEVERS, PEKKA SALMINEN, and ALEXANDER HIPP

Appeal 2019-005556
Application 13/203,677
Technology Center 1700

Before JEFFREY T. SMITH, GEORGE C. BEST, and JEFFREY R. SNAY, *Administrative Patent Judges*.

SNAY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant appeals from the Examiner's decision rejecting claims 1, 5, and 6.[1] A hearing was conducted on June 24, 2020, a transcript of which will be made of record. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies Dow Global Technologies LLC as the real party in interest. Appeal Br. 3.

BACKGROUND

The invention relates to a multilayer structure. Spec. 1. Claim 1 reads as follows:

> 1. A multilayer structure comprising:
> a first layer comprising one or more primary layers, wherein said first layer has a thickness in the range of less than 1 cm;
> a second layer that includes:
> one or more polyolefin dispersions having at least one or more base polymers selected from the group consisting of ethylene-alpha olefin copolymers and propylene-alpha olefin copolymers;
> one or more polar polymer stabilizing agents selected from the group consisting of ethylene-acrylic acid copolymer and ethylene methacrylic acid copolymer;
> one or more neutralizing agents;
> calcium carbonate and water,
> wherein said polyolefin dispersions includes from 10 to 70 percent by weight of said at least one or more base polymers and **from 25 to 65 percent by weight of the calcium carbonate**; and wherein said second layer has a thickness in the range of from 0.5 to 10 μm; and
> a third layer having a thickness in the range of less than 150 μm;
> wherein said second layer is disposed therebetween said first layer and said third layer.

Appeal Br. 12 (Claims Appendix) (emphasis added to highlight the key recitation in dispute). Each of claims 5 and 6 depends from claim 1.

REJECTION[2]

Claims 1, 5, and 6 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Vratsanos,[3] Moncla,[4] and McCarthy.[5]

OPINION

Appellant argues only claim 1, which we select as representative of the rejected claims. Claims 5 and 6 stand or fall with claim 1.

Relevant to Appellant's arguments on appeal, the Examiner finds Vratsanos discloses a polymer dispersion adhesive layer in a composite structure, and finds Moncla teaches formulating a polymer dispersion adhesive composition with the second layer components recited in claim 1, including calcium carbonate as filler. Final Act. 6–7. The Examiner further finds McCarthy teaches use of 20–50 wt.% calcium carbonate as filler in adhesive films. *Id.* at 7. *See also* Vratsanos 2:9–13 ("The present invention provides for use as the intermediate adhesion layer an adhesive composition consistently [sic] essentially of an aqueous adhesive emulsion polymer and 0.1 to 10 wt. % vinylamine (VAm) polymer, based on emulsion polymer."); Moncla ¶¶ 13–15, 143–145 (disclosing use of aqueous polyolefin dispersions, including filler such as calcium carbonate, as coatings to impart adhesiveness and other properties to substrates); McCarthy ¶ 3 ("One method to reduce cost is to add an inexpensive filler, such as calcium

[2] Additional rejections under 35 U.S.C. § 103(a) have been withdrawn. Ans. 5–6.
[3] US 5,492,765, issued February 20, 1996.
[4] US 2007/0292705 A1, published December 20, 2007.
[5] US 2009/0110855 A1, published April 30, 2009.

carbonate, with a cost lower than that of the polymer, to a polymer formulation.").

Appellant argues that "nothing in the cited art teaches or even suggests the use of calcium carbonate in the claimed amount *to realize improved adhesion*." Appeal Br. 7 (emphasis added); *see also* Reply Br. 2–4 (arguing neither McCarthy nor Moncla addresses affects of calcium carbonate on adhesion). Appellant further argues "there was no rational basis for the suggested modifications, short of impermissible hindsight." *Id.* Appellant contends Vratsanos tacitly acknowledged use of calcium carbonate filler in adhesive compositions but remained silent regarding use of fillers in the disclosed adhesive compostions. *Id.* at 8. Appellant acknowledges that Moncla provides that the disclosed aqueous dispersion may include calcium carbonate filler, but argues that "nothing in Moncla, however, teaches or suggests that the use of calcium carbonate has the surprising improvements in adhesion." *Id.* at 9. Appellant also argues McCarthy fails to teach use of calcium carbonate in connection with polymers other than polystyrene. *Id.* Lastly, Appellant purports that data for specified samples reported in the Specification demonstrates unexpected improvements in adhesion achieved by use of calcium carbonate. *Id.* at 9.

Having considered Appellant's arguments and the evidence presented, we are not persuaded of reversible error.

That the prior art may provide a different reason or motivation to include calcium carbonate filler is of no moment as long as there is a sufficient reason to make the combination. *See In re Kemps*, 97 F.3d 1427, 1430 (Fed. Cir. 1996) ("[T]he motivation in the prior art to combine the references does not have to be identical to that of the applicant to establish

obviousness."). Here, the prior art teaches that use of calcium carbonate filler reduces cost. McCarthy ¶ 3. The fact that the prior art expressly provides a reason for the use of calcium carbonate filler also negates any contention that the Examiner employed impermissible hindsight.

Appellant's argument that Vratsanos is silent regarding use of filler, or that McCarthy focusses on calcium carbonate filler in polystyrene compositions, does not address the basis of the rejection, which is founded on the collective teachings of Vratsonos, Moncla, and McCarthy. The Examiner does not rely on Vratsonos as evidence of providing filler. Nor does the Examiner rely on McCarthy as evidence of providing the recited polyolefin dispersion. "Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references." *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) ("[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art.")).

The burden of establishing that unexpected results support a conclusion of nonobviousness rests with the Appellant. *In re Huang*, 100 F.3d 135, 139 (Fed. Cir. 1996). "[W]hen unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared with the closest prior art." *In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991). "[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." *See In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972) (emphasis in original). Additionally, the relied-upon results must be commensurate in scope with the claims. *See In re*

Peterson, 315 F.3d 1325, 1329–31 (Fed. Cir. 2003). "Establishing that one (or a small number of) species gives unexpected results is inadequate proof, for 'it is the view of [the CCPA] that objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support.'" *See In re Greenfield*, 571 F.2d 1185, 1189 (CCPA 1978) (quoting *In re Tiffin*, 448 F.2d 791, 792 (CCPA 1971)). Finally, "it is well settled that unexpected results must be established by factual evidence. 'Mere argument or conclusory statements in the specification does not suffice.'" *See In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1994)); *see also In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) ("Attorney's argument in a brief cannot take the place of evidence.").

Here, Appellant relies on Table IV of the Specification as evidence that "the specific use of calcium carbonate as required by the present claims would not have been obvious to one skilled in the art as it provides unexpected and surprising results." Appeal Br. 9. According to Appellant, Table IV shows improvements in adhesion for samples 5A, 6A, 11A, 12A, 17A, 18A, 23A, 24A, 29A, 30A, 35A, and 36A, each of which is said to include about 50 wt.% calcium carbonate. *Id.*

With the exception of samples 35A and 36A, each of the listed samples reportedly includes a second layer formed from equal parts of an ethylene polymer based dispersion identified as POD 2, and a filler identified as Hydrocarb 60 (HC60). Spec. 37 (Table III). Appellant does not point us to any part of the record in which the filler Hydrocarb 60 is defined, but states that this material is calcium carbonate. Appeal Br. 9. Samples 35A and 36A do not specify what filler is used. Spec. 39. Even

accepting Appellant's contention that the listed samples provide an adhesive layer comprising about 50 wt.% calcium carbonate filler, Appellant neither alleges nor demonstrates why that singular concentration would have been representative of the 25 to 65 wt.% range recited in claim 1. Moreover, Appellant provides no explanation of the data reported in Table IV. Although Table IV includes values corresponding to what is identified as an "adhesion rating," Appellant does not explain whether or how the reported values demonstrate the purported unexpected improvement in adhesion. Nor does Appellant explain how the relied upon data demonstrates that any such improvement was attributable to calcium carbonate filler. For example, samples 4A and 5A, both of which are characterized as inventive, are reported to have similar adhesion ratings even though sample 4A omits calcium carbonate. Samples 10A and 12A reportedly have identical adhesion ratings even though samples appear to be identical but for the use of calcium carbonate in 12A and not in 10A.

For all of the foregoing reasons, Appellant has not persuasively demonstrated reversible error in the Examiner's obviousness determination with regard to claim 1. The rejection of claims 1, 5, and 6 is sustained.

CONCLUSION

The Examiner's decision rejecting claims 1, 5, and 6 is affirmed.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 5, 6	103(a)	Vratsanos, Moncla, McCarthy	1, 5, 6	

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