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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SERGE NICOLAS, ALEXANDER KORZHENKO, AMÉLIE MERCERON, and YVAN LECOMTE

Appeal 2017-006523
Application 14/359,159
Technology Center 1700

Before MICHAEL P. COLAIANNI, CHRISTOPHER L. OGDEN, and MERRELL C. CASHION, JR., *Administrative Patent Judges*.

CASHION, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1–12. We have jurisdiction under 35 U.S.C. § 6.

We affirm.

Claim 1 is illustrative of the subject matter on appeal and is reproduced below:

> 1. A process for the preparation of a pasty composition based on carbon-based conductive fillers, comprising:
>
> (i) the introduction into a kneader, and then the kneading, of carbon-based conductive fillers, of at least one polymeric binder, of at least one solvent and of at least one polymeric dispersant distinct from said binder, selected from the group consisting of poly(vinylpyrrolidone), poly(phenylacetylene), poly(meta-phenylene vinylidene), polypyrrole, poly(para-phenylene benzobisoxazole), poly(vinyl alcohol) and their mixtures, in order to form a masterbatch comprising a proportion by weight of 15% to 40% of carbon-based conductive fillers and of 20% to 85% of solvent and in which the ratio by weight of the polymeric binder to the carbon-based conductive fillers is between 0.04 and 0.4 and the ratio by weight of the polymeric dispersant to the carbon-based conductive fillers is between 0.1 and 1, limits included;
>
> (ii) the extrusion of said masterbatch in a solid form;
>
> (iii) the diluting of said masterbatch in a solvent which is identical to or different from that of stage (i), in order to obtain a pasty composition, the pasty composition having a viscosity of between 200 and 1000 mPa.s at a temperature of 23°C.

Appellant[1] requests review of the Examiner's rejection of claims 1–12 under 35 U.S.C. § 103(a) as unpatentable over Nicolas (US 2011/0256454 A1, published October 20, 2011) and Xing (US 2011/0171364 A1, published July 14, 2011). App. Br. 4; Final Act. 2.

[1] Arkema France is the Applicant and is also identified as the real party in interest in the Appeal Brief. App. Br. 2.

Appellant addresses only claims 1 and 11 using essentially the same line of arguments with respect to the viscosity of the composition. *See generally* App. Br. Accordingly, we select claim 1 as representative of the subject matter before us for review on appeal and decide the appeal as to the ground of rejection based on the arguments made by Appellant in support of patentability of claim 1.

OPINION

Prior Art Rejection

Claim 1

After review of the respective positions provided by Appellant and the Examiner, we AFFIRM the Examiner's rejections of claims 1–12 for the reasons presented by the Examiner. We add the following for emphasis.

The claimed invention is directed to a process for the preparation of a pasty composition based on carbon-based conductive fillers where the resulting pasty composition has a viscosity of between 200 and 1000 mPa.s at a temperature of 23°C. App. Br. 3–4.

The Examiner finds Nicolas discloses a pasty composition that, like the pasty composition resulting from the claimed process, is made from the combination of carbon-based conductive fillers, a polymeric binder, and at least one solvent where the disclosed amounts for these components overlap the claimed amounts for the same components. Final Act. 2–3; Nicolas ¶¶ 19–24, 43–58, 70–72 and examples 1 and 2. While Nicolas does not disclose the addition of a dispersant, the Examiner finds Xing discloses as known to use a dispersant, such as polyvinylpyrrolidone (PVP), in the amounts claimed in pasty compositions comprising carbon-based conductive

fillers to reduce or eliminate the amount of polymeric binder needed in the pasty composition. Final Act. 3; Xing ¶¶ 11, 38, 61 and Figure 3. Xing also discloses that the dispersant serves as an aid for dispersing carbon nanotubes (carbon-based conductive fillers) in a solvent. Xing ¶ 38. The Examiner determines that it would have been obvious to one skilled in the art to use Xing's dispersant in Nicolas's pasty composition for the reasons given by Xing. Final Act. 3. The Examiner also determines that, while Nicolas does not disclose a viscosity for the compositions, one skilled in the art would expect the claimed viscosity would necessarily be present in the prior art pasty composition because the claimed and prior art products (pasty compositions) are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes. *Id.* at 4.

Appellant argues the Examiner has not provided adequate evidence or scientific reasoning to support the finding that compositions made by the process from the combined teachings of Nicolas and Xing inherently possess the same viscosity as the claimed composition. App. Br. 5. According to Appellant, by basing the inherency on the alleged identical nature of the compositions, the Examiner completely ignores that the claimed viscosity results from specific combinations of at least four components with precise ranges/ratios, extruding this specific combination, and then diluting this extrusion to obtain a pasty composition with the claimed viscosity. *Id.* That is, Appellant contends the Examiner fails to consider that not all pasty compositions will have the claimed viscosity. *Id.* Appellant further argues the Examiner has not pointed to any teaching in the cited references, or provided any explanation based on scientific reasoning, that would support

the conclusion that those skilled in the art would have considered it obvious to optimize the cited art compositions by decreasing their viscosity to the level recited in the claims. *Id.* at 6.

We are unpersuaded by these arguments for the reasons presented by the Examiner. Ans.6–10. The mere recitation of a property or characteristic not disclosed by the prior art does not necessarily confer patentability. *Cf. In re Skoner*, 517 F.2d 947, 950 (CCPA 1975). Where 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 Appellant 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).

As noted above and in the Answer, the Examiner established that the pasty compositions resulting from prior art process and the claimed process are identical or substantially identical. Final Act. 2–4; Ans. 6–7. Thus, the Examiner has provided a reasonable basis for one skilled in the art to believe that the pasty compositions of the prior art possess the claimed viscosity property. Having established this, it is proper to shift the burden to Appellant to show that this characteristic or property is not possessed by the prior art. *In re Best*, 562 F.2d at 1255. Further, the reference to Nicolas and the instant application are owned by the same assignee (Arkema France) and share four common inventors. Thus, the reference to Nicolas is Appellant's own prior art and Appellant is in the best position to explain the reference and distinguish the claimed method from the method disclosed in Nicolas. Appellant has not proffered evidence showing any difference in the

properties between the claimed pasty composition and the one of the prior art.

While Appellant argues Xing's pasty compositions have viscosities falling outside the claimed range for viscosities (App. Br. 7–8), this argument does not address the reasons presented by the Examiner for combining the teachings of the prior art. That is, the Examiner is not replacing Nicolas's pasty composition with Xing's pasty composition but, instead, determines that one skilled in the art would use a dispersant in making Nicolas's pasty composition for the reasons disclosed by Xing. Final Act. 3. Given that Xing discloses the dispersant as an aid for dispersing carbon nanotubes (carbon-based conductive fillers) in a solvent (Xing ¶ 38), there is a reasonable basis for one skilled in the art to reasonably expect that Xing's dispersant would have been suitable as an aid for dispersing carbon nanotubes (carbon-based conductive fillers) in a solvent used in making Nicolas's pasty composition. *In re O'Farrell*, 853 F.2d 894, 904 (Fed. Cir. 1988) ("For obviousness under § 103, all that is required is a reasonable expectation of success."). Appellant's arguments do not adequately explain why one skilled in the art would not have found Xing's dispersant suitable for making Nicolas's pasty composition. Appellant does not adequately explain why one skilled in the art would not have expected Xing's dispersant to also serve as an aid for dispersing carbon nanotubes (carbon-based conductive fillers) in a solvent in Nicolas's process for making a pasty composition based on carbon-based conductive fillers.

Accordingly, we affirm the Examiner's rejection of claims 1–12 under 35 U.S.C. § 103(a) for the reasons presented by the Examiner and given above.

ORDER

The Examiner's rejection of claims 1–12 under 35 U.S.C. § 103(a) is affirmed.

TIME PERIOD

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