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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PHILIPPE BLONDEL and THIERRY BRIFFAUD

Appeal 2019-002144
Application 14/441,647
Technology Center 1700

Before JEFFREY T. SMITH, JULIA HEANEY, and
JEFFREY R. SNAY, *Administrative Patent Judges*.

HEANEY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE¹

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the Examiner's decision to reject claims 1–13. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

The claimed subject matter relates to compositions based on a semi-aromatic copolyamide. Appeal Br. 3. Appellant's compositions are used in automotive parts, such as tubes used for circulation of coolant and brake fluid, having improved resistance to high temperature (e.g. 130–275 °C) and aggressive liquids, while maintaining a reasonable production cost. *Id.* at 1; Spec. 1–3. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A composition comprising:
 - from 10 to 36% by weight of at least one polyolefin,
 - from 0.10 to 0.25% by weight of at least one copper heat stabilizer, the copper heat stabilizer being a mixture of potassium iodide and copper iodide in a ratio of from 90/10 to 70/30, and
 - at least one semi-aromatic copolyamide in a proportion of more than 40% by weight comprising at least two

¹ In this Decision, we refer to the Specification dated May 8, 2015 (Spec.), Non-Final Office Action dated March 20, 2018 (“Final Act.”), the Appeal Brief dated July 17, 2018 (“Appeal Br.”), and the Examiner's Answer dated October 26, 2018 (“Ans.”).

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Arkema France. Appeal Br. 1.

different units corresponding to the following general formula:

A/X.T

in which:

A is selected from

- at least one unit obtained from an amino acid,
- at least one unit obtained from a lactam, and
- at least one unit corresponding to the formula (Ca diamine).(Cb diacid), with
 - a representing the number of carbon atoms of the diamine between 6 and 18,
 - b representing the number of carbon atoms of the diacid between 6 and 32, and their mixtures,
 - X.T denotes a unit obtained from the polycondensation of a Cx diamine denoted X and of terephthalic acid denoted T, with x representing the number of carbon atoms of the Cx diamine, x being between 10 and 18,
 - the weight percentages being given relative to the total weight of the composition.

Appeal Br. 12 (Claims Appendix).

REFERENCES

The Examiner relies upon the following prior art:

Name	Reference	Date
Ferreiro	US 2009/0269532 A1	Oct. 29, 2009
Briffaud	US 2011/0206881 A1	Aug. 25, 2011

REJECTION

The Examiner maintains the rejection of claims 1–13 under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Briffaud in view of Ferreiro. Final Act. 2.

OPINION

We review the appealed rejections for error based upon the issues identified by Appellant and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential), cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“[I]t has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections.”). After considering the evidence presented and each of Appellant’s arguments in this appeal, we are not persuaded that Appellant identifies reversible error. Thus, we affirm the Examiner’s rejections for the reasons expressed in the Answer. We add the following primarily for emphasis.

Appellant argues all claims as a group. *See* Appeal Br. 6–10. Therefore, consistent with the provisions of 37 C.F.R. § 41.37(c)(1)(iv) (2013), we limit our discussion to claim 1, and all other claims on appeal stand or fall together with claim 1.

The Examiner finds that Briffaud teaches a composition comprising a polyolefin and a semi-aromatic copolyamide. Ans. 3 (citing Briffaud ¶¶ 52, 122, 128, 182). The Examiner further finds that Briffaud teaches various additives such as stabilizers incorporated in its composition, but fails to teach a stabilizer that is a mixture of potassium iodide and copper iodide. Ans. 4 (citing Briffaud ¶ 120). The Examiner finds that Ferreira teaches a polyamide composition which incorporates a copper-based stabilizer which

can be a mixture of CuI and KI in a ratio of 1:5 and 1:15. *Id.* (citing Ferreiro ¶¶ 11, 31, 62). The Examiner determines that it would have been obvious to a person of ordinary skill in the art to use the copper stabilizer mixture taught by Ferreiro as a stabilizer in Briffaud’s composition, in order to have improved long-term heat resistance to hot air. *Id.*

Appellant argues that the Examiner’s proposed combination of Briffaud and Ferreiro “does not provide a solution to the technical problem defined by the present invention” and therefore a person of ordinary skill in the art would not have expected that a copper heat stabilizer would have made it possible to produce parts having improved resistance to aggressive liquids. Appeal Br. 8. This argument does not persuasively identify reversible error because Ferreiro teaches using an amount of copper-based heat stabilizer that overlaps the amount recited in claim 1, and is a mixture of copper iodide and potassium iodide in the range of ratios recited in claim 1 (*see* Ans. 4, Ferreiro ¶ 62), which Appellant does not dispute. Appeal Br. 10. The fact that Appellant recognizes an advantage of copper heat stabilizer not taught by Ferreiro cannot be the basis for patentability; there is no requirement that a reference recognize all features of its invention. *Ex parte Obiaya*, 227 USPQ 58, 60 (BPAI 1985); *see also In re Spada*, 911 F.2d 705, 709 (Fed. Cir. 1990) (explaining that a chemical composition and its properties are inseparable.).

Appellant further argues that even if the Examiner were to establish a prima facie case of obviousness, the experimental data set forth in the Specification demonstrate surprising and unexpected results that overcome the determination of obviousness. Appeal Br. 9–10. Appellant relies on inventive Examples 1–4 of the Specification, containing 0.225% of copper

heat stabilizer, as compared to Example 5, which contains 0.63% of copper heat stabilizer, similar to a composition exemplified in Ferreiro. *Id.* at 7, 10; Ferreiro ¶ 165. Appellant asserts that the inventive examples demonstrate improved performance in terms of half-life (i.e., time after which the percentage of elongation at rupture has decreased by half) as compared to Ferreiro, and that this result is surprising because a person of ordinary skill in the art would have expected that using more stabilizer (as described in Ferreiro's examples) would have led to improved performance and not to reduced performance. Appeal Br. 10.

We are not persuaded that Appellant has met the burden of showing that the difference between the claimed invention and the closest prior art was an unexpected difference. *In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991). All of Appellant's inventive examples use the same amount of copper heat stabilizer, and the same ratio of potassium iodide to copper iodide, and thus are not reasonably commensurate with the scope of the claimed invention. *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983) (“[O]bjective evidence [of] non-obviousness must be commensurate in scope with the claims which the evidence is offered to support”). Further, Appellant does not explain why a person of ordinary skill in the art necessarily would have expected that a lower amount of stabilizer would result in a lower half-life, or direct us to evidence to support that assertion.

Based on our consideration of the totality of the record before us, and having evaluated the *prima facie* case of obviousness in view of Appellant's arguments and evidence, we conclude that the preponderance of evidence weighs in favor of obviousness of the claimed subject matter within the meaning of §103. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

CONCLUSION

The Examiner's rejection is affirmed.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-13	103(a)	Briffaud, Ferreiro	1-13	

TIME PERIOD FOR RESPONSE

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