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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GANG SI, KOUSHIK MUKHERJEE, QI ZHANG,
PENG QIN, MARK ROBERT SIVIK,
AARON FLORES-FIGUEROA, and SUSANNE BIRKEL

Appeal 2017-007632¹
Application 14/669,013
Technology Center 1700

Before BEVERLY A. FRANKLIN, BRIAN D. RANGE, and
JENNIFER R. GUPTA, *Administrative Patent Judges*.

RANGE, *Administrative Patent Judge*.

DECISION ON APPEAL

SUMMARY

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–4 and 8–21. We have jurisdiction. 35 U.S.C. § 6(b).

We AFFIRM.

¹ The Appeal Brief states the applicant, The Proctor & Gamble Company, is the real party in interest. App. Br. 1.

STATEMENT OF THE CASE²

Appellant describes the invention as relating to a laundry detergent composition with cationic polymer in an effective amount for optimizing sudsing profile while also minimizing fabric whiteness loss. Spec. 1:5–8. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A laundry detergent composition comprising an effective amount of a cationic polymer for sudsing profile optimization, said cationic polymer comprising:
 - (i) from about 60 mol% to about 90 mol% of a first structural unit derived from (meth)acrylamide (AAm);
 - (ii) from about 5 mol% to about 40 mol% of a second structural unit derived from a diallyl dimethyl ammonium salt (DADMAS); and
 - (iii) from 0 mol% to about 25 mol% of a third structural unit derived from vinylpyrrolidone (VP),wherein said cationic polymer is characterized by a molecular weight of from about 20,000 to about 350,000 Daltons and is substantially free of any silicone-derived structural component.

Appeal Br. 7 (Claims App.).

REFERENCES

The Examiner relies upon the prior art below in rejecting the claims on appeal:

Panandiker et al. US 2012/0309663 A1 Dec. 6, 2012

² In this Decision, we refer to the Final Office Action dated August 25, 2016 (“Final Act.”), the Appeal Brief filed October 25, 2016 (“Appeal Br.”), the Examiner’s Answer dated February 24, 2017 (“Ans.”), and the Reply Brief filed April 24, 2017 (“Reply Br.”).

REJECTIONS

The Examiner maintains the following rejections on appeal:

Rejection 1. Claims 1–4 and 8–19 under 35 U.S.C. § 103 as unpatentable over Panandiker et al., US 2012/0309663 A1, Dec. 6, 2012 (“Panandiker”).³ Ans. 3.

Rejection 2. Provisionally, claims 1–4 and 8–21 on the ground of nonstatutory double patenting as being unpatentable over claims 1–21 of copending Application No. 14/669,014. Final Act. 3.

Rejection 3. Provisionally, claims 1–4 and 8–21 on the ground of nonstatutory double patenting as being unpatentable over claims 1–23 of copending Application No. 14/937,910. *Id.*

Rejection 4. Provisionally, claims 1–4 and 8–21 on the ground of nonstatutory double patenting as being unpatentable over claims 1–20 of copending Application No. 14/848,596. *Id.*

Rejection 5. Provisionally, claims 1–4 and 8–21 on the ground of nonstatutory double patenting as being unpatentable over claims 1–20 of copending Application No. 14/848,610. *Id.*

ANALYSIS

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

³ The Examiner has withdrawn the prior rejection based on 35 U.S.C. § 102(a)(1). Ans. 4.

alleged error in the examiner’s rejections.”). After considering the evidence presented in this Appeal and each of Appellant’s arguments, we are not persuaded that Appellant identifies reversible error. Thus, we affirm the Examiner’s rejections for the reasons expressed in the Final Office Action and the Answer. We add the following primarily for emphasis.

Rejection 1. The Appeal Brief does not make any substantively distinct arguments for any claims aside from claims 1 and 2. *See* Appeal Br. *passim*.⁴ Therefore, consistent with the provisions of 37 C.F.R. § 41.37(c)(1)(iv) (2013), we limit our discussion to claims 1 and 2, and all other claims on appeal stand or fall together with claim 1.

Claim 2 recites, “[t]he laundry detergent composition of claim 1, wherein the second structural unit is derived from diallyl dimethyl ammonium chloride (DADMAC).” Appeal Br. 7 (Claims App.).

The Examiner rejects claims 1–4 and 8–19 under 35 U.S.C. § 103 as unpatentable over Panandiker. Ans. 2–3. The Examiner finds that Panandiker teaches a cationic polymer formed from 60–95 mole percent of acrylamide, 1–40 mole percent of diallyl dialkyl ammonium chloride (“DADMAC”), and 1–80% by weight anionic surfactants. Ans. 2–5 (citing Panandiker). The Examiner finds that Panandiker teaches a molecular weight for the cationic polymer of 10,000 to 1,500,000 daltons and preferably 200,000 daltons. *Id.* at 2.

Appellant argues that a person of skill in the art would not have reason to modify Panandiker’s broad disclosure to arrive at the recitations of

⁴ Appellant presents cursory argument as to other claims in the Reply Brief. Reply Br. 3–4. We decline to consider this argument because it is raised in the Reply Brief, was not raised in the Appeal Brief, and is not responsive to an argument raised in the Answer. 37 C.F.R. 41.41(a)(2).

claim 1 or claim 2 without hindsight. Appeal Br. 4–5. Appellant argues that Panandiker does not identify specific monomers, monomeric ratios or molecular profile as impacting sudsing profile or whiteness. *Id.*

Appellant’s argument does not persuade us of reversible error. Rather, the preponderance of the evidence supports the Examiner’s findings. *See, e.g.*, Panandiker ¶¶ 68–69 (teaching use of DADMAC and acrylamides to form cationic polymers), 76 (teaching an acrylamide to DADMAC ratio of 70:30), 77 (teaching molecular weight between 10,000 and 5,000,000 daltons and preferably from 200,00 and 1,500,000 daltons); *see also, e.g., id.* at Table 2 (indicating that Panandiker refers to molecular weight in daltons). Appellant does not persuasively dispute the Examiner’s findings. The ranges taught by Panandiker overlap with the ranges of claim 1, and Panandiker teaches DADMAC as recited by claim 2. Even the ratio taught by Panandiker falls within the range of ratios taught by claims 1 and 2.⁵ Because the recited ranges are entirely encompassed by ranges taught by Panandiker, prima facie obviousness of the ranges is established. *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003) (“[a] prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art”); *In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997) (acknowledging that claimed invention was rendered prima facie obvious by prior art reference whose disclosed range (50–100 Angstroms) overlapped the claimed range (100–600 Angstroms)).

⁵ Claim 1 encompasses a ratio of component (i) to component (ii) between 1.5 (60 mol% divided by 40 mol%) and 18 (90 mol% divided by 5 mol%). Panandiker expressly teaches, for example, a ratio of 2.5 (70 mol% divided by 30 mol%). *See, e.g.*, Panandiker ¶ 76.

Appellant also argues “surprising” (i.e., unexpected) results. Appeal Br. 4–6. In the Appeal Brief, Appellant refers to Examples IV and V of the Specification. *Id.*; *see also* Reply Br. 2–3.

A party asserting unexpected results as evidence of nonobviousness has the burden of proving that the results are unexpected. *In re Geisler*, 116 F.3d 1465, 1469–70 (Fed. Cir. 1997). The evidence of unexpected results also must also be reasonably commensurate with the scope of the claims. *In re Peterson*, 315 F.3d at 1330–31 (Fed. Cir. 2003) (explaining that applicant may overcome a prima facie case of obviousness by showing unexpected results but the showing of unexpected results “must be commensurate in scope with the claims which the evidence is offered to support”) (internal quotation marks and citation omitted). “If an applicant demonstrates that an embodiment has an unexpected result and provides an adequate basis to support the conclusion that other embodiments falling within the claim will behave in the same manner, this will generally establish that the evidence is commensurate with scope of the claims.” *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011). We have carefully considered Appellant’s evidence and arguments, but the proffered evidence is ultimately unpersuasive.

Here, we agree with the Examiner that Appellant’s evidence is not reasonably⁶ commensurate in scope with claim 1 or claim 2. Ans. 5. Claim 1, for example, permits inclusion of *any* structural unit derived from

⁶ Appellant argues that the Examiner erred by stating that the results are not commensurate in scope rather than stating the results are not reasonably commensurate in scope. Reply Br. 2. Because Appellant does not meet the burden of establishing unexpected results for the reasons explained herein, this argument does not identify harmful or reversible error.

(meth)acrylamide for component (i), permits *any* second structural unit derived from a diallyl dimethyl ammonium salt (DADMAS) for component (ii), permits any third structural unit derived from vinylpyrrolidone for component (iii), and permits a wide range of mole percent composition for each of these components. Claim 2 permits any structural unit derived from DADMAC for component 2. Appellant fails to explain how the data provided would adequately support a conclusion that other embodiments within the scope of the claim would exhibit the same results.

Appellant also fails to present evidence that the proffered results are unexpected. Establishing that results are unexpected requires, for example, Appellant to proffer factual evidence that shows unexpected results relative to the closest prior art. *See In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991). Appellant does not explain why Examples IV or V provide better or unexpected results as compared to any Panandiker examples. Reply Br. 2–3.

Because Appellant’s arguments do not demonstrate reversible error, we sustain the Examiner’s rejection.

Rejections 2–5. Appellant does not dispute the Examiner’s obviousness type double patenting rejections. Appeal Br. 2. We summarily affirm these rejections.

DECISION

For the above reasons, we affirm the Examiner’s rejections of claims 1–4 and 8–21.

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

Appeal 2017-007632
Application 14/669,013

AFFIRMED