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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VOLKER SCHEUNEMANN and
ERIK SCHULZE ZUR WIESCHE

Appeal 2020-001745
Application 15/366,278
Technology Center 1600

Before FRANCISCO C. PRATS, TAWEN CHANG, and
MICHAEL A. VALEK, *Administrative Patent Judges*.

VALEK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ submits this appeal under 35 U.S.C. § 134(a) involving claims to a hair treatment agent. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Henkel AG & Company, KGaA as the real party in interest. Appeal Br. 2. Herein, we refer to the Final Office Action mailed March 21, 2019 (“Final Act.”); Appellant’s Appeal Brief filed July 25, 2019 (“Appeal Br.”); Examiner’s Answer mailed November 18, 2019 (“Ans.”); and Appellant’s Reply Brief filed January 6, 2020 (“Reply Br.”).

STATEMENT OF THE CASE

“The present invention relates to hair treatment agents. In particular to shampoos and conditioners having active ingredients for hair care.” Spec. ¶ 1. According to the Specification, “[i]t has now been discovered that a combination of certain ingredients has an especially positive effect on hair treated therewith and on the hair follicles.” *Id.* ¶ 13.

Claims 1–12, 14–18, and 21–23 are on appeal and can be found in the Claims Appendix of the Appeal Brief. Claim 17 is illustrative of the claims on appeal and reads as follows:

17. A hair treatment agent, comprising:
 - 5 % to 10 % by weight of the agent of at least one anionic surfactant from the group of alkyl sulfates and/or alkyl ether sulfates,
 - 1 % to 5 % by weight of the agent of at least one amphoteric and/or nonionic surfactant,
 - 0.3 % to 3 % by weight of the agent of at least one divalent or trivalent metal salt,
 - 0.15 % to 0.8 % by weight of the agent of at least one cationic polymer, and
 - 0.05 % to 0.4 % by weight of the agent of ethyl lauroyl arginate.

Appeal Br. 18.

Appellant seeks review of the following rejections:

- I. Claims 1–12 and 14–18 under 35 U.S.C. § 103 as obvious over Baumer,² Aminat-G,³ and Wiesche⁴; and

² US 2010/0069601 A1, published Mar. 18, 2010 (“Baumer”).

³ Vedeqsa, AMINAT-G: Preservative and Active Antimicrobial for Cosmetics, 2010 (“Aminat-G”).

⁴ US 2011/0274640 A1, published Nov. 10, 2011 (“Wiesche”).

II. Claims 21–23 under 35 U.S.C. § 103 as obvious over
Baumer, Aminat-G, and Wiesche.

Appeal Br. 8.

Both rejections are premised on the same combination of references, and Appellant presents “substantially the same” arguments concerning independent claims 1 and 21 that it does for claim 17. Appeal Br. 14; *see also id.* at 13 (asserting that “[c]laim 1 has the same problems discussed with respect to claim 17, above”); Reply Br. 9–10 (same). Appellant does not present any separate argument for patentability of the dependent claims. Accordingly, we analyze the rejections together, selecting claim 17 to be representative of the claims on appeal. *See* 37 C.F.R. § 41.37 (c)(1)(iv).

The issue is whether the preponderance of the evidence supports Examiner’s conclusion that claim 17 is obvious over the cited prior art.

Findings of Fact

FF1. Baumer describes “[t]ypical personal care” products including “hair-care preparations” such as shampoos and conditioners. Baumer ¶¶ 12–13. Baumer teaches these products contain “anionic, neutral, amphoteric or cationic tensides.” *Id.* ¶ 78.

FF2. Baumer teaches “[e]xemplary anionic tensides” for its products include “alkylsulfate and alkylethersulfate.” Baumer ¶ 79. Baumer teaches “suitable amphoteric tensides” include cocamidopropylbetaine. ¶ 81. Baumer further teaches that cationic tensides such as “quaternised ammonium compounds” and “cationic guar derivatives such as guarhydroxypropyltrimoniumchloride (INCl) may be used.” ¶¶ 83–84.

FF3. Baumer teaches that such anionic, amphoteric and cationic tensides are “[p]referably” present in “about 0.01 wt. % to about 20 wt. % of

the total weight of the composition” and “[m]ost preferred” in an amount of “about 0.1 wt. % to about 10 wt. %.” Baumer ¶ 85.

FF4. Baumer teaches its compositions may also comprise “electrolytes,” including divalent metal salts such as magnesium and zinc sulfate, in amounts ranging from “about 0.01 wt. % to about 8 wt. %.” Baumer ¶ 97.

FF5. In addition, Example 17 of Baumer describes a “Shine Shampoo” composition comprising 15 wt. % sodium laureth sulfate, 2 wt. % cocamidopropylPYL betaine, 0.5 wt. % guar hydroxypropyltrimonium chloride, and 0.2 wt. % mica. Baumer ¶ 271. Appellant’s Specification evidences that these ingredients correspond to all of the components recited in claim 17, other than ethyl lauroyl arginate. *See Spec.* ¶¶ 19–20, 23 (identifying “cocamidopropyl betaines” as an amphoteric surfactant); 68 (identifying “cationic guar derivatives” as a cationic polymer); 17, 177 (identifying alkali salts of lauryl ether sulfate as preferred anionic surfactants and including “sodium laureth sulfate” in Series 2 examples).⁵

FF6. Aminat-G describes AMINAT-G, which is “a 20% solution of N^α-Lauroyl-L-arginine ethyl ester monohydrochloride,” i.e., an ethyl lauroyl arginate, in glycerin. Aminat-G 1. Aminat-G teaches that AMINAT-G “is easy to incorporate into personal care formulations” is “non toxic,” “non irritating,” and has “Major Potential Applications” as an “[a]ctive ingredient for antidandruff hair care formulations” at a recommended dosage “from 1% to 4%.” *Id.* at 2–3.

⁵ Examiner finds that mica is a “silicate salt/trivalent salt.” Final Act. 3. Appellant does not dispute that finding on appeal.

FF7. Aminat-G also teaches that AMINAT-G is “an effective preservative in concentrations of 0.25-1%” in hair care products such as shampoos and conditioners. Aminat-G 2–3. In addition to providing “excellent formula preservation,” Aminat-G teaches another benefit of the ethyl lauroyl arginate in AMINAT-G is it “provides additional smoothness to hair and skin and improves the skin [sic] natural defense against pathogens, besides an excellent formula preservation.” *Id.* at 3.

FF8. Aminat-G teaches AMINAT-G “might lose activity in systems with high content of anionic surfactants or anionic thickeners, such as Carboxymethylcellulose, Xanthan Gum, Bentonite or Carbomer.” Aminat-G 2. Aminat-G does not explain what would constitute a “high content” of anionic surfactant, nor does it identify alkyl sulfates or alkyl ether sulfates specifically as anionic materials that may be incompatible with AMINAT-G.

Analysis

Examiner finds Baumer teaches hair care products comprising the recited ingredients of claim 17 in amounts that overlap with the claimed ranges, but does “not teach ethyl lauroyl arginate.” Final Act. 3; *see also id.* at 7 (acknowledging that the shampoo in Baumer Example 17 contains 15% anionic surfactant, but finding Baumer also teaches compositions comprising lower amounts, i.e., “preferably about 0.1–10 wt. % of an anionic surfactant”). Examiner finds Aminat-G teaches a preservative (i.e., AMINAT-G) “which is 20% ethyl lauroyl arginate HCL in glycerin” for use in “hair conditioners (i.e., hair treatment) and [a]s an active ingredient in antidandruff shampoos” in an amount corresponding to “0.05–0.2%”⁶ ethyl

⁶ Examiner calculates this range by multiplying the 0.25–1% range of AMINAT-G solution disclosed in Aminat-G by 20%. Final Act. 4.

lauroyl arginate. *Id.* at 4. Thus, Examiner determines Aminat-G teaches the addition of ethyl lauroyl arginate to shampoos and other hair care products in amounts that overlap with the claimed range.

Examiner concludes that a “skilled artisan would have been motivated to modify Baumer’s hair treatment agent by adding 0.05-0.2% ethyl lauroyl arginate HCL by weight in order to improve the shelf life and hair smoothing properties” of Baumer’s composition. *Id.* at 5. Examiner acknowledges Aminat-G’s statement that “AMINAT-G might lose activity in systems with high content of anionic surfactants or anionic thickeners,” but finds

one of ordinary skill would have been directed to the broader disclosure of Baumer and further motivated to provide a shine shampoo comprising about 0.1–10 wt. % of an anionic surfactant that also includes lauroyl arginate HCL (i.e., Aminat-G) to avoid any problems that may arise from the combination of the two agents having a reasonable expectation of success. . . . Accordingly, it would have been well within the purview of one skilled in the art to optimize the amount of an anionic surfactant in a hair treatment agent to comprise about 5–10 wt. % of sodium laureth sulfate by following the teachings in Baumer in view of the warning provided in Aminat-G.

Id. at 8–9. Moreover, Examiner notes Aminat-G’s statement “is only an indication of a result that may occur . . . and does not specify the amount (i.e., about wt. %) that would constitute a high content of anionic surfactant.” *Id.* at 9. Thus, Examiner determines Aminat-G does not teach away from the use of ethyl lauroyl arginate in combination with sodium laureth sulfate at the amounts taught in Baumer and concludes there would have been a reasonable expectation of successfully combining the two. *See Id.* at 9–10.

After considering the record and the arguments in the Appeal Brief, we adopt Examiner’s findings of fact and reasoning regarding the scope and content of the prior art (Final Act. 3–11; FF1–FF8) and agree that the hair treatment agent of representative claim 17 would have been obvious over Baumer, Aminat-G, and Wiesche. We address Appellant’s arguments below.

Appellant argues that Aminat-G teaches away from the combination of ethyl lauroyl arginate and the claimed anionic surfactants. *See* Appeal Br. 9–12. The premise for this argument is the statement in Aminat-G that “AMINAT-G might lose activity in systems with high content of anionic surfactants or anionic thickeners, such as Carboxymethylcellulose, Xanthan Gum, Bentonite or Carbomer.” Appeal Br. 10 (quoting Aminat-G 2). According to Appellant, this statement “establishes that mixing Aminat-G with anionic surfactants is unpredictable and may inactivate the ethyl lauroyl arginate.” *Id.*

We disagree. The statement Appellant relies upon refers to “systems with *high content* of anionic surfactants or anionic thickeners.”⁷ Aminat-G 2 (emphasis added). However, Baumer teaches products containing a relatively low content of anionic surfactant, i.e., 10 wt. % or less. FF3. Nothing in the cited references suggests that such a low amount of anionic

⁷ Appellant’s assertion that “*other* materials are known to similarly inactivate . . . ethyl lauroyl arginate” – because neither xanthan gum nor Bentonite would have been considered an “anionic thickener or anionic surfactant” but are nevertheless described in Aminat-G as inactivating ethyl lauroyl arginate (Appeal Br. 10) – is unsupported attorney argument and, therefore, unpersuasive. *See In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984) (explaining that arguments and conclusions unsupported by factual evidence carry no evidentiary weight).

surfactant could interfere with the activity of ethyl lauroyl arginate. Thus, Aminat-G does not “criticize, discredit, or otherwise discourage investigation” into the combination of ethyl lauroyl arginate with the recited anionic surfactants at the amounts taught in Baumer and recited in claim 17. *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 738 (Fed. Cir. 2013) (quoting *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009)) (explaining “[a] reference does not teach away . . . if it merely expresses a general preference for an alternative invention but does not criticize, discredit, or otherwise discourage investigation into the invention claimed”).

Contrary to Appellant’s argument, the fact that the exemplary “shine shampoo” in Baumer Example 17 contains a somewhat higher amount (i.e., 15%) of anionic surfactant than the range recited in claim 17 does not undermine the rejection. *See* Appeal Br. 11–12. Examiner found that it would have been obvious for a skilled artisan to optimize the amount of sodium laureth sulfate to the 5-10 wt. % range in claim 17 based both on the Baumer’s teaching of a lower, substantially overlapping “[m]ost preferred” range (i.e., 0.1–10 wt. %) and Aminat-G’s statement that a “high content” of anionic surfactant could interfere with the activity of AMINAT-G. Final Act. 8–9, 13. Examiner’s finding is supported by the record. FF3; FF8. Appellant asserts that Baumer provides multiple examples of shampoos with higher amounts of anionic surfactant and, therefore, its teaching of a lower preferred range does not apply to shampoos. Appeal Br. 12; Reply Br. 8. However, that argument is unpersuasive because, as Appellant acknowledges, Baumer describes preferred ranges for the amount of the anionic surfactant in “personal care products” (Appeal Br. 12 (citing Baumer

¶ 83)) and Baumer specifically identifies shampoos as an example of a “[t]ypical personal care” product. FF1.

In addition, and notwithstanding the teaching that AMINAT-G *might* lose activity in formulations with a high content of anionic surfactant, we agree with Examiner that one of ordinary skill in the art would have had a reasonable expectation of success. Aminat-G teaches that AMINAT-G is easily incorporated into hair care products to provide a number of benefits FF6–FF7. The fact that a skilled artisan would understand there was a possibility that AMINAT-G could lose activity if the anionic surfactant content were too high, i.e., it was not absolutely certain ethyl lauroyl arginate would work in Baumer’s hair care compositions, does not demonstrate that Examiner’s findings are flawed. *See Par Pharma., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1198 (Fed. Cir. 2014) (“The reasonable expectation of success requirement for obviousness does not necessitate an absolute certainty for success.”). This is especially true in light of Baumer’s express teaching that the amount of anionic surfactant could be lowered from the 15% in Example 17 to the “[m]ost preferred” range of 10 wt. % or less, if necessary. *See* FF3.

Finally, we are not persuaded by Appellant’s argument that “a person of ordinary skill in the art would not find any motivation to combine ethyl lauryl arginate with Baumer’s shine shampoo *because it is not an anti-dandruff shampoo.*” Appeal Br. 13. Examiner’s rationale for combining the references is not premised on the use of AMINAT-G as an antidandruff agent, but rather on Aminat-G’s teaching that ethyl lauroyl arginate is an effective preservative for hair care products that also provides a beneficial hair smoothing effect. Final Act. 5; FF7. We agree with Examiner that

these teachings provide a sufficient rationale for adding ethyl lauroyl arginate to the shine shampoo in Baumer Example 17. Moreover, as Examiner points out, Baumer teaches that its hair care products may include antidandruff agents such as zinc pyrithione. Ans. 8, 10 (citing Baumer ¶ 103); *see* Aminat-G 3 (teaching that “AMINAT-G could be a ‘green’ substitute of Zn-pyrithione”). That teaching further supports that it would have been obvious to add ethyl lauroyl arginate to Baumer’s products to achieve the benefits (*see* FF6–FF7) taught in Aminat-G.

For these reasons, we determine the preponderance of the evidence supports Examiner’s rejection of claim 17. We determine that Examiner’s rejections of the other claims are supported by a preponderance of the evidence for the same reasons as claim 17. Thus, we affirm.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–12, 14–18	103	Baumer, Aminat-G, Wische	1–12, 14–18	
21–23	103	Baumer, Aminat-G, Wische	21–23	
Overall Outcome			1–12, 14–18, 21–23	

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