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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GEOFFREY WHITE and BRIAN SCOTT BODNAR¹

Appeal 2019-000035
Application 14/925,125
Technology Center 1600

Before ERIC B. GRIMES, ULRIKE W. JENKS, and
MICHAEL A. VALEK, *Administrative Patent Judges*.

GRIMES, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) involving claims to a sunscreen composition, which have been rejected as obvious. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

STATEMENT OF THE CASE

“‘Oil-free’ compositions are preferred for certain applications in the cosmetics industry because of their water content.” Spec. 1:16–17. However,

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

“despite perceived benefits from water content, such water-based compositions can be problematic when acrylate-based thickeners are used, resulting in unstable, tacky and/or pilling compositions.” *Id.* at 1:20–22.

The Specification discloses a composition comprising, among other components, a “copolymer comprising at least one monomer comprising a carboxylic acid containing α,β -unsaturation, at least one monomer containing an ester of a carboxylic acid containing α,β -unsaturation, and at least one monomer containing an oxyalkylenated fatty alcohol.” *Id.* at 7:12–15. “As an example, Aculyn 22 sold by the company Rohm & Haas, which is a methacrylic acid/ethyl acrylate/oxyalkylenated stearyl methacrylate terpolymer (also known as Acrylates/Steareth-20 Methacrylate Copolymer) is acceptable.” *Id.* at 8:8–10.

The Specification states that

combining the copolymer with [a] hydrophilic sunscreen agent comprising a sulfonic acid group resulted in a very thin, unstable mixture. Combining the copolymer with surfactants resulted in a very thick, stable composition which pilled upon application. However, compositions of the present invention containing copolymer, the required surfactants and the required sunscreen active agent were thick . . . and stable and did not pill upon application.

Id. at 21:6–13.

Claims 1–12, 14, 17, and 20–24 are on appeal. Claim 1 is illustrative and reads as follows:

1. A composition comprising (1) water, (2) at least one hydrophilic sunscreen active agent comprising a sulfonic acid group, (3) at least one surfactant selected from the group consisting of alkoxyated fatty alcohols, sorbitan esters, alkoxyated silicones, and mixtures thereof, (4) at least one copolymer comprising at least one monomer comprising a carboxylic acid containing α,β -unsaturation, at least one

monomer containing an ester of a carboxylic acid containing α,β -unsaturation, and at least one monomer containing an oxyalkylenated fatty alcohol, and (5) at least one coloring agent, wherein the surfactant(s) and copolymer(s) are present in a weight ratio between 3:1 and 1:3 and wherein the hydrophilic sunscreen active agent(s) and copolymer(s) are present in a weight ratio between 3:1 and 1:3.

Claim 20 is also independent and is directed to a method of preparing a composition comprising combining the components recited in claim 1.

DISCUSSION

The Examiner has rejected claims 1–12, 14, 17, and 20–24 under 35 U.S.C. § 103 as obvious based on Wang² and Loeffler.³ Final Action⁴ 4. The Examiner finds that Wang teaches “personal care compositions which comprise water and at least one sun care active . . . [,] including phenylbenzimidazole sulfonic acid.” *Id.* The Examiner finds that Wang also “discloses different surfactant compounds including, for example, fatty acids and their alkoxyates.” *Id.*

The Examiner finds that Wang “teaches that the composition will further comprise at least one rheology modifier (thickener) such as Acrylates Steareth-20 Methacrylate Copolymer.” *Id.* “The use of colorants or pigments is taught.” *Id.* at 5. The Examiner thus finds that Wang discloses all of the components recited in claim 1.

Regarding the ratio of surfactant to copolymer, the Examiner finds that “[s]urfactants are taught as being preferably present in the composition

² Wang et al., US 2014/0202485 A1, published July 24, 2014.

³ Loeffler et al., US 2010/0278763 A1, published November 4, 2010.

⁴ Office Action mailed Dec. 6, 2017.

in an amount ranging from 0.1–5 wt% of the composition . . . as are thickeners,” and concludes that a skilled artisan “would have been adept at establishing the instantly claimed weight ratio [of] copolymers to surfactant (e.g., 1:1).” *Id.* at 4–5.

Regarding the ratio of copolymer to sunscreen, the Examiner finds that Wang discloses “a preferred weight percent range for methylcellulose ether which appears to be a preferred active ingredient,” and thus suggests a preferred amount of 5–40 wt% for actives, including sun care actives. *Id.* at 5. Alternatively, the Examiner reasons that “the amount of sunscreen active ingredient would be . . . a result-effective parameter in its ability to convey protection against the sun” and therefore the optimum or workable range of sunscreen would be adjusted through routine experimentation. *Id.* at 5–6. (The Examiner relies on Loeffler only with regard to the specific surfactants that are required by claims 9–11. Ans. 6.)

Appellant argues that “the art associated with using and combining the required ingredients was unpredictable and unexpected. It was not clear how to use or combine the required ingredients to yield an acceptable product.” Appeal Br. 8. Specifically, Appellant points to the Specification’s disclosure that subcombinations of the components of claim 1 were unsatisfactory:

Mere combination of hydrophilic sunscreen agent(s) and the required copolymer(s) did not work (the composition breaks down or loses viscosity, and copolymer/pigment compatibility is not good). Also, mere combination of the required copolymer(s) and the required surfactant(s) did not work (pilling occurs). And compositions containing acrylic-based thickeners were tacky and pilled upon application.

Id. at 7. Thus, Appellant argues, the evidence shows that combining some but not all of the ingredients required by the claims resulted in undesirable

products. *Id.* at 5. Appellant argues that neither Wang nor Loeffler suggests that combining the specific ingredients required by the claims would produce an acceptable product. *Id.* at 8–9.

We agree with Appellant that the rejection on appeal is not supported by a preponderance of the evidence. Wang discloses personal care compositions. Wang ¶ 1. Wang states that its compositions comprise “water, a methylcellulose that gels at 45° C or less,” and a personal care active agent, which can be a “hair fixative polymer, moisturizer, conditioner, humectant, cationic conditioning polymer, anti-aging active, or sun care active.” *Id.* ¶ 5. The sun care active can be a sunscreen, and suitable sunscreens include phenylbenzimidazole sulfonic acid and sulisobenzone, which have a sulfonic acid group. *Id.* ¶ 36; *see also* Spec. 11:9–10.

Wang discloses that—in addition to water, methylcellulose, and an active agent—its compositions can include “one or more rheology modifier polymers such as, for example, Acrylates Steareth-20 Methacrylate Copolymer.” *Id.* ¶ 17. The compositions can also include an emulsifier or surfactant; “[a]nionic surfactants include soaps or salts of fatty acids . . . or their alkoxyates.” *Id.* ¶ 29. “[T]he personal care compositions of the present invention further comprise at least one additional ingredient. Optional ingredients include any suitable substance for personal care compositions, for example, colorants,” etc. *Id.* ¶ 37.

Thus, based on Wang, it would have been obvious to make a composition comprising water, methylcellulose, and a sunscreen active agent comprising a sulfonic acid group, and to include other optional ingredients for their known functions in personal care compositions, including a surfactant such as a fatty acid alkoxyate, a rheology modifier

such as Acrylates Steareth-20 Methacrylate Copolymer, and/or a coloring agent. Wang’s description of including certain compounds for certain functions would have provided a reason to combine those components in order to produce a composition having the combined properties of its components.

Appellant’s Specification, however, provides evidence that each of the components recited in claim 1 does not independently provide its known function to a composition when combined with other components required by the claims. The Specification states that an acrylate-based thickener, such as Acrylates Steareth-20 Methacrylate Copolymer, can cause a water-based cosmetic composition to become tacky and to pill upon application. Spec. 1:16–19.

The Specification also provides a working example in which “[v]arious combinations of copolymer (Aculyn-22), sunscreen agents, and surfactants were examined in a base composition (foundation).” *Id.* at 18:18–19. “It was determined whether the compositions were stable . . . , thick . . . , or pilled upon application.” *Id.* at 18:22–26. The Specification summarizes the results as follows:

[C]ombining the copolymer with the hydrophilic sunscreen agent comprising a sulfonic acid group resulted in a very thin, unstable mixture. Combining the copolymer with surfactants resulted in a very thick, stable composition which pilled upon application. However, compositions of the present invention containing copolymer, the required surfactants and the required sunscreen active agent were thick (having a viscosity greater than or equal to 130 cPs) and stable and did not pill upon application. Further, the invention compositions were stable gel compositions having a nice and cushiony structure.

Id. at 21:6–13.

Thus, the evidence of record shows that the results of combining the components of claim 1 are unpredictable, with different properties resulting from combining different components. A preponderance of the evidence does not support a finding that combining the various components disclosed by Wang would have reasonably been expected to result in a composition having the combined properties of the individual components.

We therefore conclude that the cited references do not support a prima facie case of obviousness under 35 U.S.C. § 103.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1-12, 14, 17, 20-24	103	Wang, Loeffler		1-12, 14, 17, 20-24

REVERSED