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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte QING STELLA, CURTIS BOBBY MOTLEY,
VICTOR MANUEL ARREDONDO, and CYNTHIA ANN GARZA

Appeal 2018-003294
Application 13/865,449
Technology Center 1600

Before ULRIKE W. JENKS, JOHN G. NEW, and RYAN H. FLAX,
Administrative Patent Judges.

JENKS, *Administrative Patent Judge.*

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from Examiner's decision to reject claims as obvious. 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 the real party in interest as The Procter & Gamble Company. Br. 1.

STATEMENT OF THE CASE

Claims 1–8, 13–18, and 21 are on appeal, and can be found in the Claims Appendix of the Appeal Brief. Claims 1 and 13 are representative of the claims on appeal, and read as follows:

1. A method of increasing skin chroma, the method comprising depositing about $5 \mu\text{g}/\text{cm}^2$ or more of a hydrophobic benefit agent comprising a sucrose polyester which exhibits a total surface energy of about $20 \text{ mJ}/\text{m}^2$ to about $30 \text{ mJ}/\text{m}^2$ and a change in heat of fusion of about $50 \text{ J}/\text{g}$ or less, and a soy oligomer on the skin, wherein the hydrophobic benefit agent is deposited on the skin via a multi-phase personal cleansing composition comprising:

a structured cleansing phase comprising sodium tridecyl ether sulfate, a zwitterionic surfactant comprising a betaine, an electrolyte, and an organic cationic deposition polymer; and

a benefit phase comprising the sucrose polyester and the soy oligomer, wherein the soy oligomer is present in an amount of about 2% to about 10%, by weight of the benefit phase, and where the composition is applied once a day for 3 or more days and the skin chroma increases by about 0.3 units or more versus a water control at 3 hours after the treatment on day 3.

Br. 7 (Claims Appendix).

13. A method of increasing skin chroma, the method comprising improving skin hydration by applying to skin a multiphase personal cleansing composition comprising:

a benefit phase comprising a benefit agent comprising a sucrose polyester which exhibits a total surface energy of about $20 \text{ mJ}/\text{m}^2$ to about $30 \text{ mJ}/\text{m}^2$ and a change in heat of fusion of about $50 \text{ J}/\text{g}$ or less and about 2% to about 10%, by weight of the benefit phase, of a soy oligomer; and

a structured cleansing phase comprising sodium tridecyl ether sulfate, a zwitterionic surfactant comprising a betaine, an electrolyte, and an organic cationic deposition polymer, wherein the level of hydration is in accordance with at least one of the following: a Corneometer improvement of 0.3 Corneometer units or more as compared to a water control after

treatment of at least once a day for at least 4 days when measured at 24 hours after the fourth treatment in accordance with the Corneometer Testing Method; a dry skin grade improvement of about 0.4 units or more versus the water control after treatment of at least once a day for at least 3 days when measured 3 hours after the third treatment when measured in accordance with the Dry Skin Grade Method; or a combination thereof.

Id. at 8–9 (Claims Appendix).

Appellant requests review of the following grounds of rejection made by Examiner:

- I. Claims 1–8 and 21 under 35 U.S.C. § 103(a) over Wagner² as evidenced by CAS (sodium trideceth sulfate)³ and Halpern,⁴ in view of Starch,⁵ Kitko,⁶ Hoffman,⁷ and Abbas.⁸

² J. A. Wagner et al., US 2006/0079418 A1, published April 13, 2006 (“Wagner”).

³ CAS Registry Number: 54116-08-4 (sodium trideceth sulfate) (2016) (“CAS”).

⁴ A. Halpern, *The surface tension of oils*, JOURNAL OF PHYSICAL AND COLLOID CHEMISTRY, 53:895-897 (1949) (“Halpern”).

⁵ M. Starch, *New Cosmetic Ingredients Based on Soybean Oil*, IP.com Nu. IPCOM0015410D (2007) (“Starch”).

⁶ D.J. Kitko et al., US 2009/0246236 A1, published October 1, 2009 (“Kitko”).

⁷ L. Hoffman, Benefits of an emollient bodywash for patients with chronic winter dry skin, *Dermatologic Therapy* 21:416–21 (2008) (“Hoffman”).

⁸ S. Abbas, *Personal cleanser technology and clinical performance*, DERMATOLOGIC THERAPY 17:35–42 (2004) (“Abbas”).

II. Claims 13–18 under 35 U.S.C. § 103(a) over Wagner as evidenced by CAS and Halpern, in view of Starch, Kitko, and Heinrich.⁹

I. *Obviousness over Wagner as evidenced by CAS and Halpern, in view of Starch, Kitko, Hoffman, and Abbas*

Examiner finds that Wagner teaches a multiphase personal care composition for application to skin or hair. Final Act. 6. Examiner finds that Wagner’s cleansing phase comprises sodium tridecyl ether sulfate, betains, electrolytes, and sodium chloride. *Id.* at 7. Examiner finds that Wagner’s benefit phase comprises hydrophobic materials. *Id.* In addition, Examiner finds that Wagner also teaches including organic cationic deposition polymers as well as colorants. *Id.*

Examiner acknowledges that Wagner does not teach the inclusion of sucrose polyester, soy oligomer, or a particular increase in skin chroma. *Id.* at 8. Examiner relies on the teachings of Starch, Kitko, Hoffman, and Abbas for these limitations. Examiner determined:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the oligomeric soy wax in combination with vegetable oils as taught by Starch for the petrolatum hydrophobic material in the benefit phase of the multi-phase personal care composition of Wagner because Starch teaches the soy wax in combination with vegetable oils is a suitable replacement for petrolatum which has fallen out of favor with consumers because petrolatum is not natural/sustainable. . . .

⁹ U. Heinrich, *Multicentre comparison of skin hydration in terms of physical-, physiological- and product-dependent parameters by the capacitive method (Corneometer CM 825)*, INTERNATIONAL JOURNAL OF COSMETIC SCIENCE 25:45–53 (2003) (“Heinrich”).

Id. at 11. Additionally, Examiner determined that sucrose polyester conditioning actives can “replace conditioning actives like silicones or can be used in combination with other conditioning actives in order to maximize the conditioning activity.” *Id.* at 12.

Appellant contends that Examiner has not presented a prima facie case of obviousness. Br. 3. Even if a prima facie case was made in the first place, Appellant argues its showing of unexpected results should overcome the prima facie case. *Id.*

The issue is: Does the preponderance of evidence of record support Examiner’s conclusion that the combination of references renders obvious a skincare composition as recited in claim 1?

A. *Findings of Fact (FF)*

1. Wagner teaches a personal care composition providing both cleansing properties and conditioning benefit to the skin. Wagner ¶¶ 3, 13, 133–136.
2. Wagner teaches a structured cleansing phase comprising branched anionic surfactants including sodium trideceth sulfate. Wagner ¶ 47. Sodium trideceth sulfate is another name for sodium tridecyl ether sulfate. *See* CAS.
3. Wagner teaches a structured cleansing phase comprising zwitterionic surfactants including betaines, such as lauryl amidopropyl betaine. Wagner ¶ 56.
4. Wagner teaches a structured cleansing phase comprising an electrolyte, preferably sodium chloride. Wagner ¶ 58.
5. Wagner teaches a structured cleansing phase comprising an organic cationic deposition polymer (Wagner ¶ 96), such as for

- example “cationic cellulose derivatives. Preferred cationic cellulose polymers are the salts of hydroxyethyl cellulose reacted with trimethyl ammonium substituted epoxide, referred to in the industry (CTFA) as Polyquatemium 10.” Wagner ¶ 97.
6. Wagner teaches a benefit phase that is preferably anhydrous, and typically comprises hydrophobic materials. Wagner ¶ 62. Wagner teaches hydrophobic diglycerides and triglycerides derived from plant sources. *Id.* ¶ 70. Wagner teaches suitable “hydrophobic materials are selected from the groups of petrolatum, mineral oil, paraffins, polyethylene, polydecene, dimethicones, alkyl siloxanes, lanolins.” *Id.* ¶ 76. Wagner teaches that benefit phase “comprises hydrophobic materials having a Vaughan Solubility Parameter (VSP) of from about 5 to about 15 (cal/cm³)^½, preferably from about 5 to about 10 (cal/cm³)^½, more preferably from about 6 to about 9 (cal/cm³)^½.” *Id.* ¶ 63.
 7. Wagner teaches optional ingredients such as pigments. Wagner ¶ 108.
 8. Examiner finds that Halpern teaches “the surface tension of liquid petrolatum ranges from 33.1 to 23.4 dynes/cm (mJ/m²) as the temperature increases from 20 to 130 °C.” Final Act. 7 (citing Halpern Table 2).
 9. Starch teaches the use of soy wax, either alone or in combination with vegetable oils in personal care applications.

Starch 3.¹⁰ Starch teaches using soy wax (metathesized, hydrogenated soybean oil) “in combination with vegetable oils as a replacement for petrolatum.” *Id.* “HY 3050 Soy Wax is compatible with a wide variety of triglyceride oils and that these soy wax/vegetable oil blends offer a good alternative to the use of petrolatum in many types of skin and hair care formulations.” *Id.* at. 7.

10. Starch explains that:

In personal cleansing formulations such as bar soaps and liquid body wash products, it is often desirable to include an emollient to provide a skin conditioning benefit. The skin conditioning benefit is designed to offset the effects of the cleanser which can remove too much of the skin lipids, leaving the skin feeling dry and rough. The emollients of choice for liquid cleansing products are emollient oils such as mineral oil, petrolatum, vegetable oils, or silicones.

Starch 13.

11. Kitko teaches that “there is a need to find a conditioning active which can be derived from a natural source, thereby providing a conditioning active derived from a renewable resource,” as opposed to petroleum-based silicone. Kitko ¶ 5. “Sucrose polyesters are derived from a natural resource and therefore, the use of sucrose polyesters as the conditioning active can result in a positive environmental impact.” *Id.* ¶ 25. Kitko teaches the inclusion Sefose, a sucrose polyester in hair conditioning

¹⁰ Starch has no pagination so the page counts starts with the cover page as page 1.

products. *Id.*

B. Principle of Law

“If the claim extends to what is obvious, it is invalid under § 103.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007). It is obvious to those skilled in the art to substitute one known equivalent for another. *See In re Omeprazole Patent Litig.*, 483 F.3d 1364, 1374 (Fed. Cir. 2007); *see also KSR*, 550 U.S. at 416 (holding that “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results”).

C. Analysis

Appellant’s arguments do not persuade us that the preponderance of the evidence fails to support Examiner’s prima facie case of obviousness. Wagner teaches a multiphase personal care composition containing both a cleansing phase and a benefit phase. FF1–FF7. With respect to the benefit phase, Wagner teaches the use of hydrophobic materials such as petrolatum, a petroleum-based product, mineral oils, and paraffins among others. FF6. Examiner finds that petrolatum has the requisite surface tension as claimed. FF8. Examiner explains that “[c]hroma’ refers to a parameter that measures skin color saturation. A color having a high chroma is vivid, almost completely free of white, while a color having a low chroma is dull, washed out, and pale in appearance.” Ans. 5 (citing Spec. 3:5–7). Examiner finds that the broadest reasonable interpretation of increasing skin chroma is measuring a change/decrease in skin dullness/paleness. *Id.* at 6. Examiner finds that Wagner’s benefit phase would achieve the instantly claimed skin

chroma increases because the change is a result associated with “the daily application of multi-phase personal care compositions according to Wagner.” *Id.* at 8.

Starch teaches the use of soy wax as an alternative to petrolatum. FF9. In addition, Starch teaches that when formulating cleansing compositions it is important to include benefit agents that offset the effects of the cleanser in order for the skin not to feel dry. FF10. In other words, Starch provides a reason to include benefit agents in a cleansing product in order to ensure that the skin retains moisture. Kitko teaches the use of naturally derived sucrose polyester benefit agents that have the desirable environmental quality of being a renewable product. FF11.

Applying the *KSR* standard of obviousness to the findings of fact, we agree with Examiner that it would have been obvious to an ordinary artisan to substitute renewable benefit agents disclosed in Starch and Kitko for the petroleum-based benefit agents taught in Wagner.

Because Examiner presents a *prima facie* case of obviousness, we consider whether Appellant submits sufficient evidence or argument in rebuttal. *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993). Evidence rebutting a *prima facie* case of obviousness may include “[e]vidence of unexpected results.” *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1369 (Fed. Cir. 2007).

Appellant’s present a comparison between example X and example 12 as measured by *in vitro* chroma. Br. 3. The results in the table below show compositions containing 90% cleansing phase and 10% benefit phase.

	Example 12	Ex. X
SBO	0	0
Sefose 1618S	100	0
SO	0	100
Cleansing phase: benefit phase	90:10	90:10
In vitro chroma	21.45	20.2

The table shows *in vitro* chroma measurements with samples containing a sucrose polyester only or a soy polyester only benefit phase. Br. 3. In addition, Appellant relies on examples 13, 14, and 15 as set out in Table 4 of the Specification to show the effects of replacing soy oligomer with sucrose polyester as a benefit agent. *Id.*

Appellant contends, without evidence, that example X, example 12, and examples 13–15 of the Specification are statistically different, however, Appellant’s Specification does not provided any statistical analysis. Br. 4 (“Examples 13–15 are statistically different, even where a difference in chroma is less than 1.”) “Attorney[’s] argument is no substitute for evidence.” *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1581 (Fed. Cir. 1989). Additionally, Examiner points to peculiarities in the data set presented in the Specification. Specifically, Examiner identifies Example 2 (*see* Spec. 25, Table 2) as containing 15% soybean oil showing an increase skin chroma by 1.2 while Example 8 (*see* Spec. 26, Table 3) containing 10% soybean oil increase chroma by 1.5. *See* Ans. 8.

Here, “the skin chroma is lower when 50% more soybean oil is applied via compositions comprising the same cleansing phase.” *Id.* Given the small value of the difference, and the lack of any evidence of a statistical analysis, we are not persuaded by Appellant’s argument that the data presented in Appellant’s Specification is sufficient to demonstrate a

statistically significant difference between chroma values in the inventive or control samples. Consequently, we are not persuaded by Appellant's argument that the data rebuts Examiner's rejection.

“When unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared with the closest prior art.” *In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991); *see also Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1322 (Fed. Cir. 2004) (A showing of “new and unexpected results” must be “relative to the prior art.”). Here, the data presented in the Specification does not compare the inventive samples to the closest prior art, which is Wagner.

Evidence of unexpected results requires showing a difference between claimed property and the closest prior art. Differences in degree, however, are not as persuasive as differences in kind when used as rebuttal evidence. *See Bristol-Myers Squibb Co. v. Teva Pharmaceuticals USA, Inc.*, 752 F.3d 967, 977 (2014); *see In re Aller*, 42 C.C.P.A. 824, 827 (1955); *In re Harris*, 409 F.3d 1339, 1344 (Fed. Cir. 2005). We recognize that there are differences in vitro chroma units when including 100% sucrose polymer and 100% soybean oil as the benefit phase component. Br. 3 (Table comparing Examples 12 and X). We also recognize that the Specification shows that the inclusion of soy oligomer in a benefit phase also contributes to differences *in vitro* chroma value readings. *See* Spec. 26 (Table 3), 27 (Table 4). Pointing out that there are differences in the data, however, is insufficient to show a “difference in kind” required to be persuasive of unexpected results.

Examiner notes that Table 3 of the Specification measures skin chroma values with samples containing soy oil and soy oligomer. This

combination “is similar to the combination of soybean oil and soy oligomer/wax taught by Starch” to be a good petrolatum replacement. Ans. 8; Starch 3, 7 (“adding about 10% of HY 3050 to partially hydrogenated soybean oil produces a blend that is similar to petrolatum in consistency and can be used as a petrolatum replacement in many applications.”). Thus, mixing hydrogenated soybean oil with soybean oil to replace petrolatum in a lotion produces an expected moisturizing effect. *See* Starch 10 (“the petrolatum and the HY 3051 produced very similar moisturization effects. . . . This data indicates that the partially hydrogenated soybean oil is essential for providing the moisturizing effect in the HY 3051.”). “Expected beneficial results are evidence of obviousness of a claimed invention. Just as unexpected beneficial results are evidence of unobviousness.” *In re Skoner*, 517 F.2d 947, 950 (CCPA 1975).

In sum, weighing Appellant’s arguments over and evidence of secondary consideration against the evidence relied upon by Examiner, we find that the method of claim 1 is no more than “the predictable use of prior art elements according to their established functions,” *KSR*, 550 U.S. at 417, and that the unexpected result advanced by Appellant is inadequate to establish nonobviousness.

II. Obviousness Wagner as evidenced by CAS and Halpern, in view of Starch, Kitko, Heinrich

Examiner finds that Wagner does not teach a method of increasing skin chroma by improving skin hydration with the application of benefit phase containing sucrose polyester. Final Act. 14. Examiner relies on Heinrich for teaching that measuring skin hydration using the Corneometer as an efficient way to measure water content of the stratum corneum in order

to improve comparability of results when testing subjects' skin. *Id.* at 15. Based on the combined teachings of Wagner and Starch, Examiner finds that there would be a reasonable expectation that substituting HY3051, which is a blend of 10% soy wax in soybean oil, for petrolatum taught by Wagner would result in an improvement of skin feel. *Id.* at 16. Examiner concludes that a person of ordinary skill in the art would have had a reasonable expectation of success in combining the references, because Wagner teaches that hydrophobic materials, including vegetable oils, are useful for skin conditioning "via the deposition of sufficient amounts of skin conditioning agents." *Id.* at 17.

Appellant does not provide additional arguments beyond those presented with respect to claim 1 discussed above (*see I.*). Because Appellant's rebuttal based on unexpected results even after reconsideration of the entire merits of the case is not sufficient to outweigh Examiner's conclusion of obviousness, we affirm the rejection as set out in the Final Office Action and Answer.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-8, 21	103	Wagner, CAS, Halpern, Starch, Kitko, Hoffman, Abbas	1-8, 21	
13-18	103	Wagner, CAS, Halpern, Starch, Kitko, Heinrich	13-18	
Overall Outcome			1-8, 13-18, 21	

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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)(1)(iv).

AFFIRMED