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THE PROCTER & GAMBLE COMPANY
Global IP Services
Central Building, C9
One Procter and Gamble Plaza
CINCINNATI, OH 45202

EXAMINER
ROSENTHAL, ANDREW S

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID ARTHUR STURGIS,
ERIC SHANE HENLEY, RANDALL DUDLEY GRIFFITH,
PHI VAN CHU, and STEVEN MICHAEL WUJEK JR
(APPLICANT: THE PROCTER & GAMBLE COMPANY)

Appeal 2019-003489
Application 14/205,924[1]
Technology Center 1600

Before DONALD E. ADAMS, ULRIKE W. JENKS, and
MICHAEL A. VALEK, *Administrative Patent Judges*.

ADAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This Appeal under 35 U.S.C. § 134(a) involves claims 1, 4–16, and 19 (Final Act.[2] 3). Examiner entered rejections under 35 U.S.C. § 103(a). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] Appellants identify "The Procter & Gamble Company" as the real party in interest (Appellants' December 11, 2018 Corrected Appeal Brief 1).
[2] Examiner's June 11, 2018 Final Office Action.

STATEMENT OF THE CASE

Appellants' disclosure "relates to methods of making solid stick antiperspirant compositions comprising a surfactant" (Spec.[3] 1: 5–6).

Appellants' claim 1 is representative and reproduced below:

> 1. A method of manufacturing a packaged solid stick antiperspirant composition, comprising:
>
> combining an antiperspirant active, one or more structurants and a surfactant to form a mixture;
>
> dispensing the mixture from an exit opening to fill a dispensing package;
>
> forming a solid stick antiperspirant composition within the dispensing package; and
>
> wherein the solid stick composition is a single phase, the surfactant has a melt temperature that is greater than the crystallization onset temperature of the solid stick antiperspirant composition, and wherein the antiperspirant active and the surfactant are in contact for about 5 minutes or less from the moment that the antiperspirant active and the surfactant and the structurant are mixed until the moment that the mixture is dispensed from the exit opening;
>
> and wherein the active is a particulate and the solid stick antiperspirant composition is anhydrous.

(App. Br.[4] 9.)

[3] Appellants' March 12, 2014 Specification.
[4] Appellants' November 12, 2018 Appeal Brief.

Grounds of rejection before this Panel for review:

Claims 1, 4–16, and 19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Walling,[5] Banowski,[6] Galante,[7] Swaile,[8] and Aston.[9]

Claims 1, 4–13, 15, 16, and 19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Greczyn,[10] Galante, Swaile, and Aston.

ISSUE

Does the preponderance of evidence relied upon by Examiner support a conclusion of obviousness?

FACTUAL FINDINGS (FF)

FF 1. Walling discloses "antiperspirant and deodorant products and methods for making such product" (Walling ¶ 1).

FF 2. Walling discloses that "[c]osmetic actives suitable for use in . . . [Walling's] composition . . . include . . . antiperspirants . . . and surfactants" (Walling ¶ 51).

FF 3. Walling discloses

> a process comprising the steps of: (a) providing a container; (b) providing a material process stream comprising a gellant and heating the material process stream to a first temperature to substantially completely melt the gellant; (c) lowering the

[5] Walling et al., US 2008/0063616 A1, published Mar. 13, 2008.
[6] Banowski et al., US 6,849,251 B2, issued Feb. 1, 2005.
[7] Galante et al., WO 2007/030139 A1, published Mar. 15, 2007.
[8] Swaile et al., US 2005/0123494 A1, published June 9, 2005.
[9] Aston Chemicals Ltd., *Performathox 450*, available at http://www.aston-chemicals.com/single-product?id=620, last accessed Jan. 4, 2017.
[10] Greczyn, US 5,378,452, issued Jan. 3, 1995.

> material process stream to a second temperature that is lower than the first temperature by at least 10° C., but is still above the onset of crystallization of the gellant; (d) after and/or during step (c), adding an antiperspirant and/or deodorant active to the material process stream to form an antiperspirant composition; (d) charging a volume of the antiperspirant composition into the container; (f) disposing an outer jacket at least partially around the container to define a double-walled container; and (g) achieving an antiperspirant composition temperature that is lower than the second temperature by 15° C. within 30 minutes of completing steps (e) and (f).

(Walling ¶ 5; *see also id.* ¶ 36; *id.* ¶ 57 (Walling's process provides "improved product uniformity").)

FF 4. Walling discloses "[t]he step of forming a cold process stream involves mixing an antiperspirant or deodorant or cosmetic active, as described herein, and a solvent and optionally a heat sensitive component in a cold process tank . . . . The cold process stream may include a liquid emollient or solvent" (Walling ¶ 41; *see also id.* ¶ 42 ("The cold process stream may also optionally comprise any heat sensitive component that could chemically degrade or deteriorate or react with components of the cosmetic or antiperspirant composition at elevated temperatures or corrode metal process equipment at elevated storage temperatures.")).

FF 5. Banowski discloses "water-free antiperspirant compositions for applying antiperspirant agents to the skin" (Banowski 1: 14–15).

FF 6. Banowski "provide[s] a water-free antiperspirant composition with improved antiperspirant performance, particularly high dermatological compatibility and optimized release of the antiperspirant agent which would be quickly and completely absorbed by the skin" (Banowski 1: 58–63).

FF 7. Galante discloses

> an anhydrous topical antiperspirant composition comprising a dermatologically acceptable carrier and a perspiration reducing effective amount of a particulate antiperspirant salt suspended in the carrier. In addition, the composition includes behenoxy dimethicone and a non-polar, non-volatile liquid emollient oil. Such a composition provides improved skin feel (i.e. softer skin), good moisturization and softer, less noticeable hair (or hair stubble).

(Galante, Abstract; *see also id.* ("a method of reducing perspiration from human skin by applying the aforementioned antiperspirant composition.").)

FF 8. Galante's "particulate antiperspirant salt is suspended in an anhydrous, dermatologically acceptable carrier, particularly a carrier comprising a silicone (e.g., cyclomethicone, dimethicone, etc.), typically at a concentration of about 3% to about 25% (USP) active by weight, more typically at about 6% to about 22% (USP) active by weight" (Galante 2: 7–10).

FF 9. Galante discloses an antiperspirant composition that "preferably, includes a surfactant," "[a] preferred surfactant will have an HLB greater than 5, typically 9 to 16," and "[a] particularly preferred surfactant is C_{20-40} Pareth-10" (Galante 2: 27–28; *id.* at 3: 4–5; Ans. 6 (citing Aston 1) (Examiner finds that "in order to improve antiperspirant efficacy, a preferred choice of surfactant in anhydrous antiperspirant compositions is C_{20-40} Pareth-10, which has an HLB value of 10)).

FF 10. Swaile discloses "antiperspirant products comprising foaming antiperspirant composition in combination with a dispensing applicator, wherein the applicator and the antiperspirant composition are designed to substantially preclude the composition to slide off the applicator and

prevents the composition from becoming airborne during dispensing, and is not messy during its use" (Swaile ¶ 2).

FF 11. Swaile discloses that it is beneficial to minimize the interactions between the antiperspirant active and anionic or cationic surfactants (Swaile ¶ 86).

FF 12. Greczyn discloses

> an improved process for producing an antiperspirant-deodorant cosmetic stick product. An essential aspect of the process improvement is a phased order of ingredient addition and blending of formulation ingredients under controlled temperature conditions. A bicarbonate salt deodorant is added as the last ingredient during the processing, in order to minimize degradation of the bicarbonate salt under the elevated temperature conditions of the ingredient blending operation.

(Greczyn, Abstract.)

FF 13. Greczyn discloses an antiperspirant deodorant cosmetic stick comprising: volatile silicone oil, liquid emollient, wax, antiperspirant, bicarbonate deodorant, compatibility enhancer, and surfactant (*see* Greczyn 3: 13–30; *id.* at 4: 33–52; *id.* at 5: 27–29 (Greczyn's "surfactant ingredient . . . is selected from nonionic, cationic and anionic polymers")).

FF 14. Greczyn discloses a process, wherein:

> Silicone oil DC 245 (600 lbs, Dow Corning) is charged to the mixing tank. Agitation (55-65 RPM) is initiated, and heating the liquid medium to 176° F. is commenced.
>
> During the heating period, the following order of ingredients are added to the stirred liquid medium:

	lbs.
diisopropyl adipate	60
PPG 14 butyl ether (Americol)	40
stearyl alcohol	340
castor wax (MP-70)	60
eicosanol	10
PEG 600 distearate (Mazer)	40

> The mixture is stirred at 176° F. for about 30 minutes until the ingredients are melted and the liquid medium is homogeneous. The stirring speed is reduced to about 35 RPM, then Cab-o-sil M-5 (15 lbs, Cabot) and aluminum zirconium tetrachlorohydrex glycine (480 lbs, Rebels) are added. The temperature is maintained at 176° F. for about 40 minutes until the fluid medium is uniform, and then the temperature is lowered to 124° F.
>
> Sodium bicarbonate 3 DF (140 lbs, Church & Dwight) and a fragrance (6 lbs, lFF 567-AT) respectively are added with stirring to Silicone oil DC 245 (245 lbs, Dow Coming) in a second mixing tank at a temperature of 124° F. to form a homogeneous suspension medium.
>
> The contents of the two mixing tanks which contain heated fluid medium are transferred to separate fill tanks through a Greer mill, and the fill tanks are connected to a mixing and dispensing nozzle device . . . . The nozzle device is adapted for homogeneously blending the two separate streams of fluid media, and dispensing a predetermined quantity of the blended fluid.
>
> Plastek 2 oz. bottom-fill stick containers are filled with the blended fluid. The container contents are cooled to a room temperature solid stick over a period of about 45 minutes. The average hardness value of the solid sticks is 7 (ASTM Method D5).

(Greczyn 6: 35 – 7: 9; *see* Ans. 12 (citing Greczyn 3: 1–7) (Examiner finds that "Greczyn broadly teaches mixing (no time requirement) and teaches that the result is a homogenous suspension" and that Greczyn's "mixing time is specifically taught as being 'until the fluid medium is uniform'").)

ANALYSIS

The combination of Walling, Banowski, Galante, Swaile, and Aston:

Based on the combination of Walling, Banowski, Galante, Swaile, and Aston, Examiner concludes that, at the time Appellants' invention was made, it would have been prima facie obvious

> to have modified the method of Walling to include the surfactant in the hot stream, particularly if an anionic or cationic surfactant were selected. Swaile teaches that if one of said surfactants is used, interaction with the antiperspirant agent must be minimized. The use of a nonionic surfactant is preferred and it is hypothesized that use thereof may be beneficial to prevent interactions with the antiperspirant. Walling teaches the cosmetic active (surfactant) as being a part of the cold stream, however, it is obvious to adjust the sequence of adding ingredients, particularly in view of the teachings of Swaile wherein surfactants should avoid interaction with the antiperspirant . . . . Although Swaile does teach that nonionic surfactants are desirable and does not present the same warning as if using anionic or cationic surfactants, the skilled artisan would still have found it obvious to separate the agents based on the possibility of any undesired interaction and to limit the exposure of one with the other to as short a time period as possible.

(Ans. 7; *see* FF 1–11.) Examiner further finds that "the amount of time the two streams interact can be viewed as a variable which achieves the recognized result of successfully creating an antiperspirant composition without reducing the efficacy of the active agent" and that "[t]he optimum or workable range of time can be . . . characterized as routine optimization and experimentation" (Ans. 7 (citing MPEP [§] 2144.05(II)(B))).

Appellants contend that their Specification discloses that "the amount of time the surfactant and antiperspirant active interact impacts their ability to bind and impacts the resulting efficacy of the solid stick antiperspirant

composition" (App. Br. 3; *see* Spec. 8: 14–16 ("it is believed the amount of time the surfactant and antiperspirant active have to interact impacts their ability to bind and impacts the resulting efficacy of the solid stick antiperspirant composition")). Swaile, as relied upon by Examiner, also teaches that it is beneficial to minimize the interactions between the antiperspirant active and anionic or cationic surfactants (FF 11; *see also* Ans. 15). Therefore, we are not persuaded by Appellants' contention that "noting in the prior art even hints that . . . the amount of interaction time for the active and surfactant is significant" (App. Br. 3).

Appellants minimize the interaction between antiperspirant active and surfactant, as Swaile suggests, by limiting the mixing time of the two ingredients to "5 minutes or less," thereby "binding to the antiperspirant active by the surfactant may be sufficiently minimized and the resulting solid stick antiperspirant composition will have an improved efficacy over its non-surfactant containing counterpart" (Spec. 8: 19–22; *see also* App. Br. 3 ("When the contact time of the surfactant and antiperspirant active while mixed is less than 5 minutes, the surfactant is enabled to exhibit a benefit")). According to Appellants, "[t]he key point is that more than a certain amount of interaction time results in the loss of the surfactant's benefit in the composition" (App. Br. 3). We recognize Appellants' contention and find that Appellants' "key point" is that it is beneficial to minimize the interactions between surfactant and antiperspirant active, which is taught by Swaile (FF 11). In this regard, we agree with Examiner that limiting the amount of time the ingredients are in physical contact with each other is an obvious way of minimizing the interaction between surfactant and antiperspirant active (*see* Ans. 7).

For the foregoing reasons, we are not persuaded by Appellants' contention that minimizing the interaction between antiperspirant active and surfactant, by for example, limiting the mixing time of the two ingredients to "about 5 minutes or less is not a result of routine optimization or experimentation, but an insight regarding how to achieve a surfactant's benefits without its detriments that none of the cited references even hint at" (App. Br. 4; *cf.* FF 11).

Appellants contend that "everything Swaile teaches makes no sense in the context of a solid stick antiperspirant," because "Swaile does not have a particulate active, Swaile does not teach a composition that is a single phase, and Swaile does not teach or even suggest an anhydrous product, or even a solid stick composition" (App. Br. 4). We are not persuaded.

Notwithstanding the final product Swaile achieves, Swaile expressly teaches minimizing the interaction between an antiperspirant active and surfactant that would have been reasonably expected to occur when these two ingredients are combined for whatever purpose. We find no evidence on this record to support a contrary conclusion.

As discussed above, Swaile expressly teaches minimizing the interaction between surfactant and antiperspirant active (FF 11). Thus, a person of ordinary skill in this art would have found it prima facie obvious to limit the interaction time of these two ingredients. It is proper to "take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). *See also id.* at 421 ("A person of ordinary skill is also a person of ordinary creativity, not an automaton."). Therefore, we are not persuaded by Appellants' contention that "Swaile states nothing about limiting the

interaction time of an active and a surfactant, or that limiting the time of interaction can be beneficial" (App. Br. 4–5).

Swaile discloses the use of a non-ionic, anionic, or cationic surfactant and directs a person of ordinary skill in this art to minimize the interaction between anionic or cationic surfactants and an antiperspirant active (FF 11). Therefore, we are not persuaded by Appellants' contention that "Swaile teaches to solubilize its active by use of a non-ionic surfactant, as opposed to the present invention's teaching to minimize the time of interaction of the active and surfactant" (App. Br. 5).

Wallings discloses that "[t]he cold process stream may also optionally comprise any heat sensitive component that could chemically degrade or deteriorate or react with components of the cosmetic or antiperspirant composition at elevated temperatures or corrode metal process equipment at elevated storage temperatures" (FF 4). Although Wallings suggests keeping components that may react with components of the cosmetic or antiperspirant composition separate, i.e. keeping the surfactant separate from the antiperspirant active, we find no evidence on this record to support a conclusion that surfactants are a "heat sensitive component that could chemically degrade or deteriorate . . . or react with components of the cosmetic or antiperspirant composition at elevated temperatures or corrode metal process equipment at elevated storage temperatures" (*cf.* FF 4). Therefore, we find no error in Examiner's rationale that a person of ordinary skill in this art would have found it prima facie obvious to limit the interaction between antiperspirant active and surfactant by placing the surfactant in the hot process stream of Wallings method (Ans. 7). For the foregoing reasons, we are not persuaded by Appellants' contention that

"Walling explicitly suggests 'any heat sensitive component', such as surfactants, should be in the cold process stream" (App. Br. 4). *See In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) ("Attorney's argument in a brief cannot take the place of evidence.").

For the foregoing reasons, we are not persuaded by Appellants' contention that

> [w]hat is surprising in the present invention is the discovery of how to gain the efficacy benefit of a surfactant through the inventive method of manufacture, which can include a hot stream with a surfactant and structurants, and a cold stream comprising an antiperspirant active, thus limiting the amount of time for the active and the surfactant to interact.

(App. Br. 5.) To the contrary, we find that the combination of Walling, Banowski, Galante, Swaile, and Aston, suggests Appellants' claimed invention, wherein the interaction between the surfactant and antiperspirant active are minimized by limiting the amount of time the two ingredients interact (*see* FF 1–11).

We are not persuaded by Appellants' contentions regarding the examples provided in their Specification (*see* App. Br. 5–6). As Examiner explains, Appellants' claimed invention is not limited to the specific ingredients exemplified in Appellants' Specification, as relied upon by Appellants (*see* Ans. 14 ("The claims are broad as to any active, structurant, and surfactant but these agents are specified in Examples 1–2); *cf.* Spec. 5: Table 2). In addition, we do not find, and Appellants' do not identify, the formula of Inventive Examples 1–2. Thus, we find that Appellants' examples are not commensurate in scope with Appellants' claimed invention. In order to be persuasive of non-obviousness, "[e]vidence of

secondary considerations must be reasonably commensurate with the scope of the claims." *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011).

The combination of Greczyn, Galante, Swaile, and Aston:

Based on the combination of Greczyn, Galante, Swaile, and Aston, Examiner concludes that, at the time Appellants' invention was made, it would have been prima facie obvious substitute Galante's C_{20-40} Pareth-10 for the PEG 600 distearate surfactant in Greczyn's method of preparing an antiperspirant composition, which comprises aluminum zirconium pentachlorohydrex glycine as the antiperspirant active and castor wax (MP-70) as the structurant (*see* Ans. 11–12; *see also* FF 7–14). In this regard, Examiner reasons that "[i]t is prima facie obvious to substitute one equivalent component or process for another, each of which is taught by the prior art to be useful for the same purpose" and "select a known material for incorporation into a composition, based on its recognized suitability for its intended use" (Ans. 11). Thus, Examiner concludes that the combination of Greczyn, Galante, Swaile, and Aston makes obvious Appellants' claimed method, wherein "[t]he resulting composition is anhydrous and comprises all the required agents, thus reading on the resulting composition. Each agent would necessarily address the claimed physical properties based on the elected species being addressed in the prior art" (*id.* at 11–12).

In addition, Examiner reasons that because Greczyn discloses mixing until a homogenous suspension, i.e. "until the fluid medium is uniform," "if the medium is uniform in 5 minutes or less, the mixing step would be finished," thus, "the mixing time of the streams can be viewed as a variable which achieves the recognized result of providing uniformity and

homogeneity to the suspension" (Ans. 12). In this regard, Examiner finds that the "'[discovery] of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art'" (*id.* (quoting *In re Boesch* 617 F.2d 272, 276 (CCPA 1980))). We find no error in Examiner's prima facie case of obviousness.

Having found no deficiency in the combination of Walling, Banowski, Galante, Swaile, and Aston, we are not persuaded by Appellants' contention that "Greczyn fails to remedy any of the deficiencies discussed above" (App. Br. 7).

As Examiner explains, Appellants' claimed invention is not limited to a particular release rate (*see* Ans. 18). Therefore, we are not persuaded by Appellants' contention that "[a]ny use of sodium bicarbonate or any basic material would defeat the present invention's goal of effective antiperspirant active release, which is clearly demonstrated in Table 3" of Appellants' Specification (App. Br. 7). We do not find, and Appellants have not identified, an exemplification of a composition comprising sodium bicarbonate in Appellants' Table 3, or elsewhere in Appellants' Specification (*see* Spec. 7; *see generally id.* at 1–32).

We are not persuaded by Appellants' unsupported assertion that "any basic material will degrade both the efficacy of an antiperspirant active as well as the expression of the fragrance. Sodium bicarbonate will release with a pH of about 8.3, which will harm any antiperspirant active and drive down antiperspirant active efficacy" (App. Br. 7). *See In re Pearson*, 494 F.2d at 1405 ("Attorney's argument in a brief cannot take the place of evidence.").

Because Greczyn discloses compositions comprising bicarbonate and astringent salts and antiperspirants, we are not persuaded by Appellants' contention that Greczyn discloses, as background, that "sodium bicarbonate is incompatible with the active astringent salts and with other ingredients of conventional stick compositions, and then overcomes this deficiency as part of Greczyn's disclosure (*see* Greczyn 3: 13–30; *id.* at 4:37–53; FF 12–14; *cf.* App. Br. 7).

We are not persuaded by Appellants' contention that Greczyn fails to disclose limiting the interaction time of the antiperspirant active and surfactant, which, as discussed above, is suggested by Swaile (App. Br. 7; *cf.* FF 11). *See Soft Gel Techs., Inc. v. Jarrow Formulas, Inc.*, 864 F.3d 1334, 1341 (Fed. Cir. 2017) ("[N]on-obviousness cannot be established by attacking references individually where the rejection is based on the teachings of a combination of references.") (citations omitted).

CONCLUSION

The preponderance of evidence relied upon by Examiner supports a conclusion of obviousness.

The rejection of claim 1 under 35 U.S.C. § 103(a) as unpatentable over the combination of Walling, Banowski, Galante, Swaile, and Aston is affirmed. Claims 4–16 and 19 are not separately argued and fall with claim 1.

The rejection of claim 1 under 35 U.S.C. § 103(a) as unpatentable over the combination of Greczyn, Galante, Swaile, and Aston is affirmed. Claims 4–13, 15, 16, and 19 are not separately argued and fall with claim 1.

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).

AFFIRMED