UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/568,016	10/17/2006	Donna Hui-Ing Hwang	101215-241	8186

143559 7590 11/03/2016
Schwegman Lundberg & Woessner / Coty
P.O. Box 2938
Minneapolis, MN 55402

EXAMINER
KARPINSKI, LUKE E

ART UNIT	PAPER NUMBER
1616	

NOTIFICATION DATE	DELIVERY MODE
11/03/2016	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@slwip.com
slw@blackhillsip.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DONNA HUI-ING HWANG, RALPH MACCHIO, DOMNICA CERNASOV, and SALVATORE BARONE[1]

Appeal 2015-002783
Application 11/568,016
Technology Center 1600

Before DONALD E. ADAMS, DEMTRA J. MILLS, and TIMOTHY G. MAJORS, *Administrative Patent Judges*.

MAJORS, *Administrative Patent Judge*.

DECISION ON APPEAL

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

We affirm.

STATEMENT OF THE CASE

Appellants' "invention relates to a hydrous or water-free sweat-absorbing cosmetic product, e.g. an antiperspirant, containing a base formulation and a sweat-absorbing complex." (Spec. 1.)

---

[1] Appellants identify the Real Party in Interest as COTY B.V. (Br. 2.)

Claims 1, 4–8, 13–15 and 18–23 are on appeal. Claim 1 is illustrative:

> 1. A sweat-absorbing cosmetic product prepared by a process having the steps of:
>
> (i) mixing at least one water-absorbing component, at least one surface-active agent, and at least one solvent and/or at least one vehicle to produce a sweat-absorbing complex; and
>
> (ii) mixing the sweat absorbing complex with a base formulation of the cosmetic product to produce the cosmetic product, wherein the sweat-absorbing complex comprises:
>
> (a) 20 to 70 wt.-% of the at least one water-absorbing component,
>
> (b) 20 to 60 wt.-% of the at least one surface-active agent, and
>
> (c) 0 to 50% of the at least one solvent and/or at least one vehicle,
>
> wherein the sweat-absorbing complex forms particles of a three-dimensional water-swellable network of the at least one water-absorbing component, wherein the particles are covered by a coating layer of the at least one surface-active agent such that the at least one water-absorbing component is protected from absorption of water from the base formulation by the coating layer of the at least one surface-active agent and further wherein the particles are emulsified in the base formulation . . .

(Br. 13–14 (Claims App'x).) The remainder of Claim 1 has been omitted here for brevity, but generally recites that the water-absorbing component comprises a first component selected from gums, and a second component selected from silicic acids or derivatives/modifications (e.g., fumed silica, silica gel, etc.). Claim 1 further lists numerous categories of compounds that may be selected as the at least one surface active agent (e.g., fatty alcohols, sugar esters, amine oxides, etc.) and the at least one solvent and/or vehicle (e.g., oils, hydrocarbons, ethers, esters, etc.). (*Id.*)

Claims 1, 4–8, 13–15, and 18–23 stand rejected as obvious under 35 U.S.C. § 103(a) over Chopra,[2] Callingham,[3] JP '421,[4] and Ross.[5]

DISCUSSION

Issue

Has the Examiner established by a preponderance of the evidence that claims 1, 4–8, 13–15 and 18–23 would have been obvious over Chopra, Callingham, JP '421, and Ross.

Findings of Fact (FF)

FF 1. The Examiner's findings of fact and statement of the rejection may be found at pages 3–9 of the Non-Final Action dated May 12, 2014. (*See also* Ans. 2–6.) We adopt those findings and provide the following for emphasis.

FF 2. Chopra teaches substantially anhydrous antiperspirant compositions comprising, *inter alia*, 0.01–20% water lock superabsorbent polymer and 0–5% surfactant. (Chopra Abstract; *see also id.* at 2, l. 10 through 3, l. 9; Ans. 2–3.)

FF 3. Chopra teaches several example formulations, including a formulation comprising the following ingredients and respective concentrations: Water Lock Superabsorbent, C200 (10%); Dimethicone (10

---

[2] Chopra et al., WO 03/030853 A1, published Apr. 17, 2003 ("Chopra").
[3] Callingham et al., US 4,264,586, issued Apr. 28, 1981 ("Callingham").
[4] JP 2002/249421, abstract translation of record ("JP '421").
[5] Ross et al., US 5,500,209, issued Mar. 19, 1996 ("Ross").

cst) (12%); Cyclomethicone 245 (50%); Fragrance (1.2%); Stearyl alcohol (20%); Hydrogenated castor oil (4%); and PEG-8 distearate (4%). (Chopra 16 (Example 2, Table 2).) In Example 2 of Chopra, the ingredients are mixed sequentially. (*Id.* at 16, ll. 1–11; Ans. 3.)

FF 4. Callingham teaches antiperspirant emulsions, and discloses "[i]t is also possible to employ as antiperspirant agents moisture absorbent non-astringent polymeric materials . . . . Examples of preferred polymers . . . [include polymers] of natural origin: carragheenates, starches guar gum, locust bean gum . . ." (Callingham col. 4, ll. 13–23; Ans. 3.)

FF 5. JP '421 teaches guar gum used as a moisture-absorbing component for antiperspirant formulations. (JP '421 Abstract; Ans. 5.)

FF 6. Ross teaches deodorant and antiperspirant compositions comprising, *inter alia*, "a waxy substance such as stearyl alcohol for the antiperspirant stick." (Ross col. 1, ll. 23–26.) Ross discloses "[a]lternative gelling or thickening agents such as the bentones, fumed silica or polyethylene can be used in place of the wax to form the gel or paste." (*Id.* at col. 1, ll. 54–56; Ans. 3.)

FF 7. As to the use of silica compounds in deodorants, the Examiner finds "silica was a well know[n] water absorbing component at the time of the instant invention . . . as evidenced by USPN 5,185,159 to Yamamoto (col. 1)."[6] (Ans. 6; *see also* Non-Final Act. 8.) Yamamoto teaches "deodorizers include absorptive deodorizers such as, active carbon and silica

[6] Yamamoto, US 5,185,169, issued Feb. 9, 1993 ("Yamamoto").

gel. . . . Silica gel used as a moisture absorbent can also show deodorant effects." (Yamamoto col. 1, ll. 40–45.)

Analysis

Claim 1

Appellants argue the patentability of the pending claims as a group. We select claim 1 as representative.

Claim 1 recites a product according to the process by which it is produced. Claim 1 recites a sweat-absorbing cosmetic product where, in a first step, a water-absorbing component (20–70 %), surface-active agent (20–60 %), and solvent/vehicle (0–50 %) are mixed. (Br. 13–14.) Then, in a second step, the mixture from step one is mixed with a base formulation to form the cosmetic product. (*Id.*) The claim recites that the product, so formed, has certain properties such as particles of the water-absorbing component coated by the surface active agent, and that the particles are emulsified in the base formulation. (*Id.*) Claim 1 further specifies that the water-absorbing component of the first step comprises a gum, as well as a silicic acid or a derivative/modification thereof. (*Id.*) The remainder of the claim lists compounds that may be selected as a surface-active agent and solvent/vehicle employed in the first step. (*Id.*)

The Examiner finds that Chopra teaches an antiperspirant formulation that combines a water-absorbent compound, surface-active agent (PEG-8 distearate), and solvent (castor oil), along with other ingredients comprising a base formulation. (Ans. 2–3.) Regarding the percentages recited in the claim for the water-absorbent compound, surface-active agent, and solvent, the Examiner finds that, if those three ingredients were mixed separately —

without the silicones (dimethicone and cyclomethicone), stearyl alcohol, and fragrance that were mixed sequentially with the other three ingredients in Example 2 of Chopra — the percentages would be within claim 1's scope.[7] More specifically, the Examiner finds the percent of water-absorbent compound would be about 55% and the percent of surface-active agent and solvent would each be about 22%. (Ans. 3.)[8] In other words, according to the Examiner, he "has simply cited the claimed end product [in Chopra] wherein the 3 component mixture has already been mixed with a base formulation . . . [and] extracted the 3 claimed components to show applicant when pre-mixed said components have percentages within the claimed amounts." (Ans. 8–9.)

The Examiner finds that Chopra does not expressly teach using a gum or a silica derivative as an absorbent compound and so turns to the other cited art. The Examiner finds that Callingham and JP '421 teach guar gum for use as a moisture-absorbing component in antiperspirant compositions. (*Id.* at 3 and 5.) The Examiner finds that Ross teaches use of fumed silica as a gelling agent (like stearyl alcohol) in deodorant/antiperspirant

---

[7] The ingredients in Example 2 of Chopra were mixed in the following order: (i) cyclomethicone and dimethicone, (ii) stearyl alcohol, (iii) castor oil, (iv) PEG-8 distearate; and (v) water lock superabsorbent. (Chopra 16.) Example 2 does not indicate when the fragrance was added; Example 1, however, indicates it was added last. (*Id.* at 15–16.)

[8] In effect, the Examiner applied a factor of about 5.5x to the percentages of the water absorbent (10%), PEG-8 distearate (4%) and castor oil (4%) expressly recited in Example 2 of Chopra, which, again, assumes the other ingredients in Example 2 would have been mixed separately. (Ans. 3 and 5–6.)

formulations, and further that it would have been well known to the skilled artisan that silica compounds are moisture-absorbing agents in deodorants as evidenced by Yamamoto. (*Id.* at 3 and 6.) The Examiner reasons that it would have been obvious to the skilled artisan to use gums and silica compounds as alternative or additional water-absorbing components in Chopra's formulations. (Ans. 4–6.)

Regarding the properties of the product recited in claim 1, the Examiner finds "said properties are viewed a[s] inherent to the gum and silica taught by Callingham [] and Ross []" and "these limitations would necessarily have been found in the combined compositions provided by the examiner." (Ans. 6.)

Appellants raise three arguments in response. First, Appellants argue "[t]he Examiner commits reversible error by formulating an improper hypothetical 3-component mixture." (Br. 5–6.) Absent this improper hypothetical and hindsight, Appellants contend Chopra does not teach the features of the presently claimed sweat-absorbing complex. (*Id.* at 5–7.) Second, Appellants argue the Examiner fails to give proper consideration to evidence of superior and unexpected results that arise when the product is prepared with the pre-mixing step recited in claim 1. (Ans. 8.) Third, Appellants argue the cited art fails to teach or suggest the properties recited in claim 1 or a formulation with the two water-absorbing components that are claimed.

As discussed below, Appellants' arguments are unpersuasive.

Regarding the first argument, Appellants have merely changed the mixing order of known or obvious ingredients for an antiperspirant

formulation, and assigned percentages to a pre-mixed subset of those ingredients. As the Examiner points out, "Appellant[s] [have] done nothing more than deconstruct a known product, recombined a select number of components and assigned said composition the label 'sweat absorbing complex.'" (Ans. 8.) In Example 2 of Chopra, a base formulation is prepared comprising silicones (cyclomethicone, dimethicone) and a thickening agent (stearyl alcohol), and then a solvent, surface-active agent, and superabsorbent material are added one after the other to the base formulation. (FF 2–3; Chopra 16.) Appellants, on the other hand, combine a moisture-absorbent material, surface-active agent, and solvent first, and then add to a base formulation — the base formulation comprising, for example, "50-60 wt.-% silicone fluid (cyclomethicon), 18-22% stearyl alcohol, 20% aluminum oxide salts, 10% wax." (Spec. 15.) Thus, the basic ingredients substantially overlap but are mixed in a different order.

Appellants do not dispute that, if a different mixing order in Chopra's Example 2 was followed, the percentages of the moisture-absorbing component, surface-active agent, and solvent would be encompassed by the ranges recited in claim 1. (Ans. 3 and 8; FF 1–3.) Moreover, as noted by the Examiner, "there is no criticality in the mixing order and any variation in said mixing order would not result in a material difference and would have been viewed as obvious to one of ordinary skill in the art." (Ans. 9.) Under these circumstances, and without factual evidence to the contrary, we are not persuaded that changing the mixing order of the ingredients disclosed in the prior art would have been nonobvious. *In re Thorpe*, 777 F.2d 695, 697 (Fed. Cir. 1985) ("The patentability of a product does not depend on its

method of production. If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process."); *see also In re Marosi*, 710 F.2d 799, 803 (Fed. Cir. 1983).

We turn next to Appellants' evidence of alleged unexpected results. According to Appellants, when the three ingredients are mixed before being added to a base formulation, "there is a superior and significant benefit in the water absorption capacities" of the product. (Br. 8.) In support, Appellants cite the September 5, 2013 Declaration of co-inventor Salvatore J. Barone ("Barone Decl."). (*Id.*) The Barone Decl. describes further experiments to an example in Appellants' Specification. (Barone Decl. ¶ 4 ("The same experiments as set forth in example (5) of the present application (see pages14–16 of the present specification) were conducted but with a higher number of repeating tests, namely eight (8).")) The Barone Decl. provides the water-absorption percentages (with standard deviation) of Control (a), Comparative Example (b) (no pre-mixing), and Inventive Example (c). (Decl. ¶ 4; *see also id.* at 4 (Table and Graph).)

The Examiner determined that Appellants' evidence does not persuasively demonstrate that claim 1 would have been nonobvious. According to the Examiner,

> [t]he difference in composition b and c, when accounting for the standard deviation, 86.67% vs 90.81% respectively, is nominal at best and considered merely a difference in degree not a difference in kind especially when such large standard deviations are taken into account (i.e. 38.24%.)

(Ans. 7.) In addition, the Examiner finds "the data provided is not commensurate in scope with the claimed subject matter." (*Id.*) As the Examiner explains:

> Appellant claims a plurality of water absorbing components, surfactants, and solvents, or different combinations thereof as well as large percentage ranges for said components. However, the data provided shows only one specific water absorbing mixture, one specific surfactant, only one percentage for each of said components which is neither the upper nor the lower limit and a solvent present in the middle of the claimed percentage range.

(*Id.*) The Examiner further explains:

> [A]ppellant provides only two compositions of the instant invention in the specification, each are based on example 5 in the specification which includes 33% water absorbing component, 40% surfactant, and 27% solvent. . . . [H]owever applicant recites from 20-70% water absorbent component and 20-60% surfactant in the water absorbing complex. Applicant has not provided nearly enough data to account for such a broad percentage range . . . . Further, applicant claims that 0% solvent may be present, yet has provided no examples with 0% solvent.

(*Id.* at 10.)

We agree with the Examiner. Appellants' evidence is not sufficiently persuasive to overcome the Examiner's prima facie case for at least the reason that the data is not commensurate in scope with the breadth of the claims. *In re Lindner*, 457 F.2d 506, 508 (CCPA 1972) ("It is well established that the objective evidence of nonobviousness must be commensurate in scope with the claims."). Claim 1, for example, encompasses numerous compounds that may be the water-absorbing component, surface-active agent, and solvent, but the data is limited to a

single compound for each of these three ingredients. (Spec. 15 (Table 1, describing ingredients of "Complex A"). Similarly, as noted by the Examiner, the data does not reasonably reflect the broad percentage ranges of the ingredients recited in claim 1. (Ans. 7 and 10–11.) *In re Peterson*, 315 F.3d 1325, 1330–31 315 F.3d 1325, 1329 (Fed. Cir. 2003) ("[T]he applicant's showing of unexpected results must be commensurate in scope with the claimed range.")

In support of Appellants' third argument, Appellants contend "Chopra fails to teach or suggest at least a combination of two water-absorbing components," where one component is a gum and another is a silica compound. (Br. 9.) Appellants contend Callingham and JP '421 fail to make up for this deficiency because they employ different processes or ingredients from the claims, and fail to exhibit the properties claimed (i.e., "particles that are covered by a coating layer of the at least one surface-active agent such that the at least one water-absorbing component is protected from absorption of water . . . ."). (Br. 9–10.)

This argument is unpersuasive. The Examiner relies on Callingham and JP '421 to show that it was known to the skilled artisan to use gums (*e.g.,* guar gum) as a moisture-absorbing agent in antiperspirant formulations, such as in Chopra's Example 2. (FF 1 and 4–5.) Appellants' argument is an attack on Callingham and JP '421 individually, rather than addressing the rejection as framed. *See*, *e.g.*, *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) ("Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references [].") Regarding the properties

recited in claim 1, the Examiner determined the prior art (or an obvious modification of it) would have necessarily or inherently possessed those properties. (Ans. 6.) And Appellants have not provided persuasive evidence to the contrary. *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977).

We reject Appellants' criticism of Ross for similar reasons. Appellants contend "fumed silica according to Ross is not used as an active ingredient, such as an absorbent" and "Ross teaches using fumed silica as part of the base formulation in which the complex is dispersed." (Br. 11.) This too is an unpersuasive attack on Ross individually, especially in the face of additional, unrebutted evidence from the Examiner showing that it was known in the art to use silica compounds as moisture-absorbing agents for deodorants. (*See* Ans. 6 and 11; FF 6–7.). Moreover, as discussed above, Appellants' evidence of secondary considerations does not persuade us that a nonobvious distinction arises based on the order in which certain ingredients are mixed. Appellants have thus not shown that addition of fumed silica in a premixture with a surface-active agent and solvent results in a product that is patentably distinct from a product prepared where fumed silica is added along with other ingredients of a base formulation.

Conclusion of Law

The preponderance of the evidence supports the Examiner's conclusion that claim 1 would have been obvious.

Claims 4–8, 13–15, and 18–23 have not been argued separately and therefore fall with claim 1.

SUMMARY

We affirm the rejection of claims 1, 4–8, 13–15, and 18–23 over Chopra, Callingham, JP '421, and Ross.

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