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THE PROCTER & GAMBLE COMPANY  
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CINCINNATI, OH 45202

EXAMINER
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JUSTICE, GINA CHIEUN YU

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* RUSSELL PHILLIP ELLIOTT and JOANNE WATSON

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Appeal 2015-005593  
Application 12/496,376<sup>1</sup>  
Technology Center 1600

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Before JEFFREY N. FREDMAN, JOHN G. NEW and DAVID COTTA,  
*Administrative Patent Judges.*

COTTA, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a process for reducing the appearance of ashiness on darker skin by applying to the darker skin a cosmetic composition. The Examiner rejected the claims on appeal as obvious under 35 U.S.C. § 103(a).

We affirm.

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<sup>1</sup> According to Appellants, the real parties in interest is The Proctor & Gamble Company. App. Br. 1.

STATEMENT OF THE CASE

Claims 1, 3–10, and 22–32 are on appeal. Claim 1 is illustrative and reads as follows:

1. A process for reducing the appearance of ashiness on darker skin by applying to the darker skin a cosmetic composition comprising:
  - a) non-pigmentary grade, transparent iron oxide particles having an average surface area from about 30 m<sup>2</sup>/g to about 150 m<sup>2</sup>/g;
  - b) pigmentary-grade, iron-containing titanium dioxide particles having an average surface area from about 1m<sup>2</sup>/g to about 30 m<sup>2</sup>/g, an average primary particle size of at least 105 nm, and comprising from about 1% to about 15% iron by weight of the titanium dioxide; and
  - c) a cosmetically acceptable carrier;wherein the composition comprises a weight ratio of the pigmentary-grade, iron containing titanium dioxide particles to the non-pigmentary grade, transparent iron oxide particles, and the weight ratio is from 3:1 to 300:1.

The claims stand rejected as follows:

Claims 1, 3–6, 8–10, and 22–32 under 35 U.S.C. § 103(a) as unpatentable over the combination of Futamata<sup>2</sup> and Themens.<sup>3</sup>

Claim 7 under 35 U.S.C. § 103(a) as unpatentable over the combination of Futamata, Themens, and Stephens.<sup>4</sup>

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<sup>2</sup> Futamata et al., JP 7069636, published March 14, 1995 as evidenced by machine translation thereof (“Futamata”).

<sup>3</sup> Themens et al., US Patent Publication No. 2006/0177401 A1, published Aug. 10, 2006 (“Themens”).

<sup>4</sup> Stephens et al., US Patent No. 7,166,276 B2, issued Jan. 23, 2007 (“Stephens”).

The Examiner also rejected claims 1, 2–10, and 22–32 on the ground of non-statutory double patenting over claims 1–17 of Application Nos. 12/496,305. As this application has been abandoned by Appellants, the Examiner’s double patenting rejection is now moot.

#### REJECTION OVER FUTAMATA AND THEMENS

Appellants argue claims 1, 3–6, 8–10, and 22–32 as a group. We designate claim 1 as representative for claims 1, 3–6, 8–10, and 22–32.

The Examiner found that Futamata disclosed a composition comprising iron-containing titanium dioxide particles. Final Act. 3. The titanium dioxide particles comprise from 1–15% iron by weight. *Id.* The Examiner found, that Futamata’s “nonpigmentary iron-containing titanium dioxide [particles] do not cause color separation into iron and titanium components when incorporated in cosmetics under powerful dispersing conditions, they have good UV shielding effects; and the cosmetics can be applied to skin without causing color separation and ‘white float’ phenomenon.” *Id.* Futamata, however, does not disclose non-pigment grade transparent iron oxide particles as recited in claim 1. *Id.*

The Examiner found that Themens exemplified compositions comprising non-pigment grade transparent iron oxide particles. Specifically, Themens exemplifies compositions comprising 1.9% and 2.2% yellow iron oxide, 0.35% and 0.8% black iron oxide, and 0.8% and 1% brown iron oxide. *Id.* at 4. The Examiner noted that the iron oxides disclosed in Themens were the same as those identified in the specification. *Id.*; *compare*, Themens ¶ 207 with Specification p. 8, ll. 2–5.

Based on Themens, the Examiner concluded that “formulating a foundation with non-pigmentary grade, transparent iron oxide as dyestuff,

crosslinked organosiloxane elastomers as fillers, and cinnamate derivatives as UV screening agents is well known in cosmetic art.” Final Act. 4. The Examiner then concluded that it would have been obvious to “adopt such conventional cosmetic formulation to modify the teachings of Futamata and make a foundation which imparts good UV shielding effect without white float . . .” *Id.*

With respect to the weight ratio of “pigmentary-grade, iron-containing titanium dioxide particles” to “non-pigmentary grade, transparent iron oxide particles, the Examiner concluded:

Futamata teaches the workable weight range of the iron-containing titanium dioxide which is expected to yield UV protection without white float phenomenon.

Themens teaches the amount of the yellow, brown or black iron oxide conventionally used with variation to add color to cosmetic foundation to make up skin.

Therefore, optimization of the concentrations of the two components by routine experimentations would have been well within the skill in the art, given the specific functions of these pigments and expected outcome of producing UV-protection skin foundations without white hues for various skin tones.

*Id.* at 5. The Examiner also noted that “differences in concentration will not generally support the patentability of subject matter encompassed by the prior art unless there is evidence indicating that such concentration [] is critical.” *Id.*

Appellants argue that the Examiner’s “interpretation of the law regarding routine experimentation as applied to the claimed ratio is not correct.” App. Br. 3. More particularly, Appellants argue that a result must be characterized as a results effective variable before the optimization of ranges can be characterized as “routine experimentation.” *Id.* As applied to

the claims at issue, Appellants assert the claimed ratio is not obvious because the person of ordinary skill would not have recognized that “the claimed weight ratio of the pigmentary-grade, iron-containing titanium dioxide particles to the non-pigmentary grade, transparent iron oxide particles [was] related to reducing the appearance of ashiness on darker skin.” *Id.* We are not persuaded.

The Specification expressly defines “ashiness” to mean “the white/blue hue which is observed onto skin after applying onto skin, particularly darker skin, a cosmetic composition providing high coverage.” Specification p. 3, ll. 22–23. The Specification teaches that “ashiness” is “generally associated with the reflectance of violet & blue light.” *Id.* at p. 2, ll. 7–9.

As an initial matter, it is not clear what role the ratio of titanium dioxide to iron oxide plays in “reducing ashiness.” The Specification suggests that reducing the appearance of ashiness is more a function of the iron content of titanium dioxide than of the ratio of titanium dioxide to iron oxide. For example, with respect to the iron content of titanium dioxide, the Specification states:

If these particles comprise less than 1% iron by weight of titanium dioxide, then the combination of these particles with the transparent iron oxide particles may not significantly minimize the reflectance of violet & blue light, particularly the violet & blue light back-scatter. If these particles comprise more than 15% iron by weight of titanium dioxide, the combination of these particles with the transparent iron oxide particles may not minimize further the reflectance of violet & blue light and the iron-containing titanium dioxide particles may impart yellowness to the cosmetic composition and/or to the skin.

*Id.* at p. 5, l. 33 – p. 6, l. 6; *see also, id* at p. 7, ll. 15–21 (“The proportion of these particles may vary depending on the desired level of coverage and/or shade of the product. For example, to minimize ashiness, when the composition is expected to be used onto darker skins for obtaining a high coverage, it is preferable that this composition comprises a high proportion of iron-containing titanium dioxide particles, for example from 5% to 10% particles by weight of the total composition.”). By comparison, the entirety of the Specification’s discussion of the ratio of titanium dioxide to iron oxide is as follows:

The cosmetic composition may comprise a weight ratio of iron-containing titanium dioxide particles : transparent iron oxide particles from 3:1 to 300:1, preferably from 4:1 to 150:1, more preferably from 5:1 to 70:1.

*Id.* at p. 8, ll. 11–13.

In any event, we find that each of the components of the claimed ratio is, independently, a results effective variable. As the Examiner explained, iron-containing titanium dioxide is “used for UV protection and white-floating reduction”<sup>5</sup> while iron oxide is used to “adjust[] the color of the foundation to match different skin tones.” Ans. 4. Appellants have not established that optimization of each of these variables would not reasonably be expected to result in an optimized ratio of the two variables. Nor have Appellants established that the claimed ratio is critical. Accordingly, we

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<sup>5</sup> Futamata describes iron-containing titanium dioxide as preventing “color separation and white float.” Futamata ¶ 3. As it is not necessary for our decision, we do not reach the issue of whether “color separation and white float” as described in Futamata is the same phenomena as the “ashiness” described in the Specification.

affirm the Examiner's decision to reject claim 1 as obvious over the combination of Futamata and Themens. Because they were not argued separately claims 3–6, 8–10, and 22–32 fall with claim 1.

#### REJECTION OVER FUTAMATA, THEMENS AND STEPHENS

Appellants argue that the rejection of claim 7 over the combination of Futamata, Themens, and Stephens should be reversed for the same reasons that the rejection of claims 1, 3–6, 8–10, and 22–32 over Futamata and Themens should be reversed. Accordingly, we affirm the Examiner's decision to reject claim 7 as obvious over the combination of Futamata, Themens and Stephens for the reasons discussed above with respect to claims 1, 3–6, 8–10, and 22–32.

#### SUMMARY

For these reasons and those set forth in the Examiner's Answer, the Examiner's final decision to reject claims 1, 3–10, and 22–32 is affirmed.

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).

#### AFFIRMED