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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* JONATHAN WOOD, ALEXANDRA MEUSER, and  
MUSTAFA GRIT<sup>1</sup>

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Appeal 2017-005552  
Application 13/124,064  
Technology Center 1600

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Before JEFFREY N. FREDMAN, TAWEN CHANG, and  
TIMOTHY G. MAJORS, *Administrative Patent Judges*.

CHANG, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) involving claims to a composition for the permanent shaping of human hair, which have been rejected as obvious and on the ground of nonstatutory obviousness-type double patenting. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> Appellants identify the Real Party in Interest as KAO GERMANY GMBH. (Appeal Br. 2.)

## STATEMENT OF THE CASE

In permanent waving of hair, cysteine disulfide bonds in hair are first split by a reducing agent, such as thioglycolic acid, and then restored by application of an oxidizing agent. (Spec. 1.) According to the Specification,

‘[i]t has surprisingly been found . . . that a permanent shaping composition for hair based on at least one reducing agent further comprising an aqueous emulsion of a high viscosity silicone copolymer and at least one alkyl ether or ester or amine alkyl amine or quaternary ammonium compound shows excellent waving effect and further hair feels natural upon touching and excellent shine, elasticity and bounce.

(*Id.* at 2.)

Claims 1, 4–10, 16, and 18–23 are on appeal. Claim 1 is illustrative and reproduced below:

1. A composition for the permanent shaping of human hair, wherein the composition comprises:
  - at least one reducing agent selected from the group consisting of thioglycolic acid, its salt, thiolactic acid, its salt, cystein and acetylcystein;
  - an aqueous emulsion of divinyl dimethicone/dimethicone copolymer with an internal phase viscosity of more than  $1 \times 10^8$  mm<sup>2</sup>/s measured at 0.01 Hz and at about 25°C; and
  - a compound selected from the group consisting of stearamidopropyl dimethyl amine, stearamidopropyl trimonium chloride, stearoxypropyl trimonium chloride and palmitamidopropyl trimonium chloridewherein the composition has a pH in a range from 8.0 to 10.5, and  
further wherein the composition comprises the at least one reducing agent at a concentration from 0.5 to 15 % by weight, the aqueous emulsion at a concentration from 0.1 to 2.5 % by weight and the compound at a concentration from 0.1 to 2.5 % by weight, wherein all concentration values are calculated to the total composition.

(Appeal Br. 25 (Claims App., formatting added).)

The Examiner rejects claims 1, 4–7, 9, 10, 16, 18, 20–23 under 35 U.S.C. § 103(a) as being unpatentable over Cassier,<sup>2</sup> Decoster,<sup>3</sup> Zofchak,<sup>4</sup> and Torgerson.<sup>5</sup> (Final Act. 3.)<sup>6</sup>

The Examiner rejects claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Cassier, Decoster, Zofchak, Torgerson, and Wood.<sup>7</sup> (Final Act. 6–7.)

The Examiner rejects claim 19 under 35 U.S.C. § 103(a) as being unpatentable over Cassier, Decoster, Zofchak, Torgerson, and Lennon.<sup>8</sup> (Final Act. 8.)

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<sup>2</sup> Cassier, EP 1 880 709 A1, published Jan. 23, 2008.

<sup>3</sup> Decoster et al., US 6,451,298 B1, issued Sep. 17, 2002.

<sup>4</sup> Zofchak et al., US 7,101,954 B2, issued Sep. 5, 2006.

<sup>5</sup> Torgerson, US 2006/0083704 A1, published Apr. 20, 2006.

<sup>6</sup> The Examiner and Appellants state, in the Answer and Appeal Brief respectively, that the Examiner rejects claims 1–7, 9–11, 16, 18, 20, and 21 over Cassier, Decoster, Zofchak, and Torgerson. (Ans. 2; Appeal Br. 5.) However, claims 2, 3, and 11 have been cancelled. (Appeal Br. 2.) Claim 17, which the Examiner rejected as obvious over Cassier, Decoster, Zofchak, Torgerson, and Rollat in the Final Action, has also been cancelled. (Final Act. 7; Appeal Br. 2.) In addition, claims 22 and 23 were added in the April 11, 2016 Amendment after Final Rejection, and the Examiner entered the Amendment in the May 17, 2016 Advisory Action. (Appeal Br. 2–3.) The Examiner stated that “[t]he newly added claims . . . are rendered obvious by the prior art for the reasons discussed in the Final Rejection”; thus, we understand that claims 22 and 23 are also rejected as obvious over Cassier, Decoster, Zofchak, and Torgerson and on the grounds of nonstatutory obviousness-type double patenting over U.S. Patent Nos. 7,850,953, 8,361,447, 8,542,208, 8,524,209, and Application Nos. 13/128,055, 12/145,206, 13/124,028, and 13/124,053, in view of Cassier, Zofchak, Rollat, Torgerson, and/or Decoster.

<sup>7</sup> Wood et al., EP 1 797 861 A1, published June 20, 2007.

<sup>8</sup> Lennon et al., US 2003/0171479 A1, published Sep. 11, 2003.

The Examiner rejects claims 1, 4–10, 16, and 21–23 on the ground of nonstatutory obviousness-type double patenting over the claims of U.S. Patent No. 7,850,953 in view of Cassier, Zofchak, Rollat,<sup>9</sup> Torgerson, and/or Decoster. (Final Act. 12.)<sup>10</sup>

The Examiner rejects claims 1, 4–10, 16, and 21–23 on the ground of nonstatutory obviousness-type double patenting over claims 1–15 of U.S. Patent No. 8,361,447 in view of Cassier, Zofchak, Rollat, Torgerson, and/or Decoster. (Final Act. 14.)

The Examiner rejects claims 1, 4–10, 16, and 21–23 on the ground of nonstatutory obviousness-type double patenting over the claims of U.S. Patent No. 8,542,208 in view of Cassier, Zofchak, Rollat, Torgerson, and/or Decoster. (Final Act. 15.)

The Examiner rejects claims 1, 4–10, 16, and 21–23 on the ground of nonstatutory obviousness-type double patenting over the claims of U.S. Patent No. 8,524,209 in view of Cassier, Zofchak, Rollat, Torgerson, and/or Decoster. (Final Act. 17.)

The Examiner rejects claims 1, 4–10, 16, and 21–23 on the ground of nonstatutory obviousness-type double patenting over the claims of U.S. Patent No. 9,750,679 in view of Cassier, Zofchak, Rollat, Torgerson, and/or Decoster.<sup>11</sup> (Final Act. 18.)

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<sup>9</sup> Rollat et al., US 2003/0147834 A1, Aug. 7, 2003.

<sup>10</sup> Appellants state in the Appeal Brief that the Examiner rejects claims 1–11, 16, 17, and 21 on the grounds of nonstatutory obviousness-type double patenting over various patents and applications, in view of Cassier, Zofchak, Rollat, Torgerson, and/or Decoster. (Appeal Br. 17–23.) However, claims 2, 3, 11, and 17 have been cancelled. (Appeal Br. 2.)

<sup>11</sup> The Examiner entered a provisional rejection based on Application No. 12/145,206, but that application has issued as the '679 patent, so the

## DISCUSSION

### *Issue*

The same issue is dispositive of all of the rejections on appeal. We therefore discuss all the rejections together.

As to claim 1, the Examiner finds that Cassier teaches all of the limitations of the claim, except that Cassier does not teach a composition comprising “an aqueous emulsion of divinyl dimethicone/dimethicone copolymer with an internal phase viscosity of more than  $1 \times 10^8$  mm<sup>2</sup>/s measured at 0.01 Hz and at about 25°C,” as recited in claim 1.<sup>12</sup> (Final Act. 3–5.) The Examiner finds that Cassier also teaches that its composition may comprise a cationic polymer. (*Id.* at 3.)

The Examiner finds that Decoster discloses “compositions for the permanent waving of hair that comprise Down Corning DC-1997 (an ‘aqueous emulsion of divinyl dimethicone/dimethicone copolymer’)” and teaches that “[u]se of the emulsion . . . overcome[s] disadvantages caused by the presence of a cationic polymer in hair care compositions, such as an

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rejection is no longer provisional. In the Final Action, the Examiner also provisionally rejects claims 1, 4–10, 16, and 21–23 on the ground of nonstatutory obviousness-type double patenting over the claims of Application Nos. 13/128,055, 13/124,028, and 13/124,053 in view of Cassier, Zofchak, Rollat, Torgerson, and/or Decoster. (Final Act. 18.) These applications have been abandoned. We therefore vacate the provisional double patenting rejections over these three applications as moot.

<sup>12</sup> In the Final Action, the Examiner also finds that Cassier does not explicitly teach a cationic surfactant “within the scope of the formula recited by [] claim 1, such as stearamidopropyl methylamine.” (Final Act. 4.) However, as discussed below, the limitation referred to by the Examiner in this statement is no longer present in the version of claim 1 currently on appeal. *See infra* n. 13.

unpleasant laden feel, stiffening of hair, and interfiber adhesion.” (*Id.* at 5.) The Examiner also finds that Torgerson discloses “hair conditioning compositions comprising high internal phase viscosity silicone copolymer emulsions,” which “may be used in the amount of 0.1% to about 15%,” and discloses an embodiment comprising an aqueous emulsion of divinyl dimethicone/dimethicone copolymer having viscosity recited in claim 1. (*Id.*) The Examiner finds that Torgerson teaches that use of such emulsion provides benefits such as “smooth feel and reduced friction to . . . hair” and “a slippery and slick feel on wet hair.” (*Id.*)

The Examiner concludes that

it would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to modify the composition of Cassier by . . . incorporating a nonionic aqueous emulsion of HMW-2220 divinyl dimethicone/dimethicone copolymer as disclosed by Torgerson and in an amount within the range [of from 0.1 to 2.5% or from 0.01 to 0.45% by weight], . . . , since Torgerson discloses that a divinyl dimethicone/dimethicone copolymer emulsion such as HMW-2220 in amounts within the claimed range imparts benefits to a hair care composition . . . and Decoster teaches that divinyl dimethicone/dimethicone copolymer emulsions can be generated using nonionic surfactants.

(*Id.* at 6.)

Appellants do not dispute that the Examiner has established a prima facie case of obviousness; however, Appellants contend that the prima facie case of obviousness is rebutted by evidence of unexpected results as set forth in the Declaration of Jonathan Wood under 37 C.F.R. § 1.132 (Oct. 29, 2015) (“Wood Declaration”).

The issue with respect to this rejection is whether the Wood Declaration sets forth evidence of unexpected results that, when taken together with the evidence of obviousness, shows the claims to be non-obvious.

*Analysis*

Except as otherwise noted, we adopt the Examiner's findings of fact and reasoning regarding the scope and content of the prior art with respect to claim 1 (Final Act. 3-6, 9-11, 12-19; Advisory Act. 2; Ans. 2-7, 8.) and agree that claim 1 is obvious over Cassier, Decoster, and Togerson.<sup>13</sup> Only those arguments made by Appellants in the briefs have been considered; arguments not presented in the briefs are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

As discussed above, Appellants contend that the Examiner erred by maintaining the rejection of claim 1 as obvious over Cassier, Decoster,

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<sup>13</sup> In the Final Action, the Examiner cites Zofchak only for its disclosure of stearamidopropyl methylamine as a surfactant in hair care compositions. (Final Act. 6.) In the April 11, 2016 Amendment after Final Rejection, Appellants amended claim 1 such that the claimed composition comprises "a compound selected from the group consisting of stearamidopropyl dimethyl amine, stearamidopropyl trimonium chloride, stearoxypropyl trimonium chloride and palmitamidopropyl trimonium chloride." The Examiner entered the Amendment in the May 17, 2016 Advisory Action. Because the stearamidopropyl methylamine disclosed in Zofchak is not recited in claim 1 as amended, we do not adopt the Examiner's reasoning regarding Zofchak with respect to the rejection of claim 1. Because Cassier teaches a composition for the permanent shaping of human hair comprising stearamidopropyl dimethylamine, one of the compounds recited in claim 1 as amended, we nevertheless agree with the Examiner that claim 1 is obvious over the combination of Cassier, Decoster, and Togerson. *See generally In re Bush*, 296 F.2d 491, 496 (CCPA 1961) (the Board may rely on less than all of the references relied upon by Examiner).



Zofchak, and Togerson, in view of the Wood Declaration showing that the claimed composition achieves surprising and unexpected superior results.

The Wood Declaration describes an experiment in which the composition of Working Example 1 in the Specification (“Inventive Composition”<sup>14</sup>) and a Comparative Composition were applied to “hair streaks having a length of 13 cm.” (Wood Decl. 2.) The Comparative Composition “was prepared by excluding the 0.5% Dow Corning HMW 2220 (i.e., a divinyl dimethicone/dimethicone copolymer as recited in claim 1). (*Id.*) The Wood Declaration states that, after the compositions were applied to hair streaks on curlers with a 4.5 cm diameter, the hair streaks were processed for 20 minutes, rinsed off with water, and treated with an oxidizing composition. (*Id.*) The Wood Declaration reports that the length of the hair permanently shaped with the Inventive Composition was 8.5 cm and that the length of the hair treated in the same way with the Comparative Composition was 9.1 cm, resulting in a curl retention loss of 47.1 and 54.1% respectively. (*Id.* at 3.)

The Wood Declaration does not persuade us that the subject matter of claim 1 exhibits unexpected results that outweigh the evidence of obviousness. In this regard, we note that “[m]ere improvement in properties does not always suffice to show unexpected results.” *In re Soni*, 54 F.3d 746, 751 (Fed. Cir. 1995). Rather, unexpected results may be established

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<sup>14</sup> Example 1 of the Specification describes a composition consisting of 21.3% by weight ammonium thioglycolate (60%), 5.0% by weight ammonium hydrogen carbonate, 3% by weight 1, 3-butylene [glycol], 0.5% by weight Dow Corning HMW 2220, 0.5% by weight stearamidopropyl dimethyl amine, 0.7% by weight PEG-40-Hydrogenated castor oil, 0.4% by weight perfume, ammonia (25%) to reach pH 8.3, and water to reach 100.0% weight.

where, in the absence of evidence to the contrary, “an applicant demonstrates *substantially* improved results . . . and *states* that the results were *unexpected*.” *Id.*

Appellants contend that “[a] 13% curl retention loss improvement achieved by the Inventive Composition is both unexpected and significant.” (Reply Br. 2.) However, as the Examiner points out, the Wood Declaration provides no indication that any alleged superior performance is statistically significant. (Ans. 3.) Neither are we persuaded by Appellants’ contention that, “[b]ased on the fact that multiple hair streaks were used while testing both Compositions, Appellants submit that the superior and unexpected improved result is both reproducible and statistically significant.” (Reply Br. 3.) Assuming for argument’s sake that the alleged 13% curl retention loss improvement is the improvement averaged from multiple samples, Appellants still fail to provide information regarding, for instance, the number of samples tested, the curl retention loss for individual samples, and/or any indication of statistical significance such as p-value or standard deviation.

As our reviewing court has explained,

[t]he Board has broad discretion as to the weight to give to declarations offered in the course of prosecution. *See Velandier v. Garner*, 348 F.3d 1359, 1371 (Fed. Cir. 2003) (“[A]ccord[ing] little weight to broad conclusory statements [in expert testimony before the Board] that it determined were unsupported by corroborating references [was] within the discretion of the trier of fact to give each item of evidence such weight as it feels appropriate.”).

*In re American Acad. of Science Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004). In this case, in light of the paucity of underlying data and the lack of statistical analysis provided in the Wood Declaration, we accord little weight

to the declaration and find it insufficient to establish that the subject matter of claim 1 exhibits unexpected results.

We note also that “[i]t is well established that the objective evidence of nonobviousness must be commensurate in scope with the claims.” *In re Lindner*, 457 F.2d 506, 508 (CCPA 1972). As the Examiner points out in the Advisory Action, the data Appellants provided as evidence of unexpected results is not commensurate with the scope of claim 1. (Advisory Act. 2.) More specifically, the Wood Declaration provided comparative data only for a single “Inventive Composition” comprising 21.3% by weight ammonium thioglycolate (60%) (i.e., reducing agent), 0.5% by weight Dow Corning HMW 2220 (i.e., aqueous emulsion of divinyl dimethicone/dimethicone copolymer), and 0.5% by weight staramidopropyl dimethyl amine, even though claim 1 encompasses compositions comprising reducing agent from 0.5 to 15% by weight, an aqueous emulsion from 0.1 to 2.5% by weight, and compounds such as stearamidopropyl dimethyl amine from 0.1 to 2.5% by weight.

Appellants argue in the Appeal Brief that “the present pending claim 1 is commensurate in scope with the Experiment’s Inventive Composition of the [Wood] Declaration.” (Appeal Br. 11.) We are not persuaded, however, because Appellants fail to provide an adequate basis for reasonably concluding that the breadth of compositions encompassed by claim 1 would behave in the same manner as the single tested “Inventive Composition.” *Lindner*, 457 F.2d at 508 (explaining that “mere lawyers’ arguments unsupported by factual evidence are insufficient to establish unexpected results”).

Finally, in light of the deficiencies discussed above, we also agree with the Examiner that, even were we to find in the Wood Declaration some evidence of unexpected results, such evidence does not persuade us to conclude that the claim is nonobvious when considered with the evidence of obviousness. (Ans. 4–7.)

Appellants contend in response that “the present rejection does not lay out a strong *prima facie* case of obviousness as alleged by the Examiner,” because “the [E]xaminer had to piece together four (4) different prior art references to allegedly find the subject matter of claim 1 obvious.” (Reply Br. 3.) We are not persuaded. Reliance upon even a large number of references does not, without more, weight against a holding of obviousness. *In re Gorman*, 933 F.2d 982, 986 (Fed. Cir. 1991).

Accordingly, we affirm the Examiner’s rejection of claim 1. Claims 4–7, 9, 10, 16, 18, 20–23, which are not separately argued, fall with claim 1.<sup>15</sup> 37 C.F.R. § 41.37(c)(1)(iv). Appellants argue that the rejections of

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<sup>15</sup> With respect to claims 4–7, 9, 10, 16, 18, and 20–23, Appellants only state that the claims depend directly or indirectly from claim 1, recite the additional dependent claim limitations, and state that the claims are “further commensurate in scope with the Experiment’s Inventive Composition of the Declaration which achieved surprisingly synergistic and unexpected superior results rebutting any alleged *prima facie* case of obviousness raised by the Examiner.” (Appeal Br. 11–15.) Such conclusory statements do not constitute proper separate argument of the dependent claims. *Cf. In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[T]he Board [has] reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”). Moreover, even assuming Appellants have properly argued the claims separately, Appellants’ arguments that the dependent claims are “further commensurate in scope with the Experiment’s Inventive Composition of the [Wood] Declaration” are unavailing. First, as discussed above, we find Appellants

claims 8 and 9 over Cassier, Decoster, Zofchak, Togerson, and, respectively, Wood or Lennon, as well as all of the double patenting rejections, should be reversed for the same reasons set forth above with respect to claim 1 and because the dependent claims are “further commensurate in scope with the . . . Inventive Composition of the [Wood] Declaration.” (Appeal Br. 15–23.) We are not persuaded for the reasons already discussed above.

#### SUMMARY

For the reasons above, we affirm the Examiner’s decision rejecting claims 1, 4–7, 9, 10, 16, 18, 20–23.

#### 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

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have not established unexpected results even as to the tested “Inventive Composition.” Second, with the possible exception of claims 22 and 23, the dependent claims are not limited to compositions comprising reducing agent, aqueous emulsion, and compounds such as stearamidopropyl dimethyl amine in concentrations similar to those in the tested “Inventive Composition.” Thus, the alleged unexpected results are not commensurate in scope even as to those dependent claims.