



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.
12/771,089	04/30/2010	Sigfredo Gonzalez	1302-711 (5072030)	1967
52774	7590	09/13/2019	EXAMINER	
MOMENTIVE PERFORMANCE MATERIALS INC. c/o Dilworth & Barrese, LLP 1000 Woodbury Road Suite 405 Woodbury, NY 11797			MATTISON, LORI K	
			ART UNIT	PAPER NUMBER
			1619	
			MAIL DATE	DELIVERY MODE
			09/13/2019	PAPER

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SIGFREDO GONZALEZ, ANNE DUSSAUD, and JOANNE
TULLY

Appeal 2019-001645
Application 12/771,089¹
Technology Center 1600

Before DONALD E. ADAMS, RICHARD M. LEBOVITZ, and
RACHEL H. TOWNSEND, *Administrative Patent Judges*.

TOWNSEND, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) involving claims to a method of treating thermally and/or chemically damaged hair, which have been rejected as obvious. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

STATEMENT OF THE CASE

Claims 1, 6, 12, 16–18, and 23–25 are on appeal. Claim 1 is representative and reads as follows:

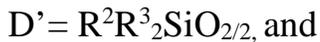
¹ We use the word “Appellant” to refer to “Applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Momentive Performance Materials Inc. (Appeal Br. 1.)

1. A method of treating thermally and/or chemically damaged hair comprising:

contacting hair which has been thermally and/or chemically damaged as a result of at least one of bleaching, dying, hair straightening, blow-drying and hair permanent treatments, the thermally and/or chemically damaged hair having a measured maximum width in the hair tip region (Lt) to the measured maximum width at the root end (Lr) ratio ((Lt)/(Lr)) of greater than about 3.7, with a hair treating composition comprising an aminosilicone of the general formula (I):



wherein:



where R^1 is an alkyl group having 12 to 50 carbon atoms, R^2 is a substituted or un-substituted hydrocarbon group having 1 to about 6 carbon atoms, R^3 is 3-aminopropyl group and/or a N-(2-aminoethyl)-3-aminopropyl group, x has a value of 50 to about 1,500, and y has a value of 3.5 to about 40, wherein the hair treating composition is an aqueous composition which is an oil-in-water emulsion;

not rinsing the hair treating composition from the chemically and/or thermally damaged hair that has been treated with the hair treating composition; and,

applying heat for physically smoothing and/or shaping the treated hair;

the hair following such treatment having lower frizziness, the lower frizziness is a measured maximum width in the hair tip region (Lt) to the measured maximum width at the root end (Lr) ratio ((Lt)/(Lr)) of less than about 3.6.

(Appeal Br. 19.)

The following grounds of rejection by the Examiner are before us on review:

Claims 1, 12, 16–18, 24, and 25 under 35 U.S.C. § 103 as unpatentable over Suenaga.²

Claims 1, 6, 12, 16–18, 23, 24 and 25 under 35 U.S.C. § 103 as unpatentable over Suenaga and Divine Caroline.³

DISCUSSION

The obviousness rejection over Suenaga alone

The Examiner finds that Suenaga teaches a method of applying a hair styling product, such as a mousse or a gel, to provide “smoothness (feeling of a slide)” to hair. (Ans. 3–4.) The Examiner finds that Suenaga teaches that the treating composition is an emulsion with an aqueous phase (*id.* at 4) and that the aminosilicone has the general formula claimed where R¹ is an alkyl group of 16–50 C atoms, R² of the M, D, and D’ monomers is methyl, and x is between 10–1,500, R³ is N-(2-aminoethyl)-3-aminopropyl, and y is between 2–50 “with Y=12 in Working Example 3” (*id.* at 7–8). According to the Examiner, one “would immediately envisage R¹ being an alkyl group of 16 or 18 carbon atoms” and “X having a value of 1,500.” (*Id.* at 7.)

Regarding the type of hair that is treated, the Examiner notes that Appellant’s Specification “explicitly teaches ‘[t]hermally and or chemically

² Suenaga, JP 2008-143858 A, published June 26, 2008. The Examiner relies upon an English translation of the JP document (*see, e.g.*, Ans. 3), as do we.

³ Mark Garrison, *How to Get Super Straight Hair*, available at <http://www.divinecaroline.com/beauty/hair/hair-care/how-get-super-straight-hair>, Jan. 2004. (“Divine Caroline”)

damaged hair can comprise hair that has been subjected to at least one of . . . wetting by water . . . hair shaping, repeated blow drying” and that “[t]hermally and/or chemically damaged hair . . . can have a (Lt)/(Lr) ratio of greater than about 3.7.” (Ans. 4.) The Examiner finds that in the Suenaga embodiment where “2–10 grams of the aminosilicone hair styling product” was applied to wet hair, not rinsed out, and the hair was dried with a blow dryer, that the hair so treated was implicitly “chemically damaged” and necessarily had the claimed Lt/Lr ratio of greater than 3.7 in light of Appellant’s disclosure. (*Id.* at 4, 6.) The Examiner further notes that an evidentiary reference “How much time”⁴ teaches that “it is routine in the art for women to blow dry their hair as a poll of 2,000 women indicated” and, thus, “the hair of the general population of women is chemically damaged by being wetted with water and thermally damaged by blow drying and hair shaping.” (*Id.* at 6–7.) The Examiner also finds that Suenaga “evaluates hair smoothness after drying and is meant to solve the consumer need for smoothness, indicating that the hair was frizzy prior to application of the treatment composition and method.” (*Id.* at 8.) In light of the foregoing, the Examiner states that Suenaga’s “treatment population is the same as that claimed by Appellant.” (*Id.* at 12.)

Regarding the claim requirement that the hair treated has lower frizziness with a (Lt)/(Lr) ratio of less than about 3.6, the Examiner reasons that the hair treated with the 2–10 mg of product that was not washed out

⁴ Eleanor Harding, *How much time*, available at <http://www.dailymail.co.uk/femail/article-2250701/How-time-really-spend-doing-hair-ladies-Answer-Ten-days-year.html>, Dec. 2012. (“How much time”)

and that was blow dried to physically smooth and shape the treated hair necessarily meets that limitation because Suenaga “explicit[ly] teach[es] that his hair cosmetic gives a ‘smooth tactile feeling to hair’, ‘smoothness after drying’ and ‘feeling of settlement to hair’ which solves the problems of the latest consumer need for smoothness to hair.” (*Id.* at 6.)

We disagree with the Examiner’s finding that Suenaga teaches a method of treating the type of hair claimed to be treated. First, we agree with Appellant, that its Specification does not teach that any hair that is wetted by water is chemically damaged, much less to the level that is required by the claims, i.e., an Lt/Lr ratio of greater than about 3.7. (Reply Br. 3.) Rather, the Specification states that hair that has been wetted by water “can” be chemically damaged, not that this is necessarily the case. (Spec. ¶ 12.)

Second, claim 1 requires that the hair that is contacted “has been thermally and/or chemically damaged as a result of at least one of bleaching, dying, hair straightening, blow-drying and hair permanents.” This list does not include damage as a result of being wetted by water.

As to the damaged hair required by the claim, we note that the Specification, explains that hair that has been bleached, dyed, or straightened with a flat iron “can” be thermally and/or chemically damaged, not that it is necessarily damaged after undergoing such processes. (Spec. ¶ 12.)

Moreover, Appellant’s Specification does not teach that all hair that is bleached, dyed, or heat treated (either by blow drying or flat iron treatment) is necessarily chemically or thermally damaged by such treatment, whether treated once or multiple times, to the extent that they have an Lt/Lr ratio of greater than 3.7. Rather, the Specification teaches that thermally and/or

chemically damaged hair “can” have an Lt/Lr ratio of 3.7 or greater, not that such is necessarily the case when hair is “thermally and/or chemically damaged.” (Spec. ¶ 16.) Furthermore, we agree with Appellant that evidence of record establishes that the foregoing would be understood by one of ordinary skill in the art. Inventor Dussaud submitted two declarations during prosecution: one submitted in June 2016 and a second declaration submitted in September 2016. In the September Declaration, inventor Dussaud explains that in the example of the application, commercially obtained bleached hair was received, but that despite it being bleached (which the Specification teaches “can” lead to chemical damage), the Lt/Lr ratio of the hair was 2.75, which is less than the claimed amount of “greater than about 3.7.” (Dussaud September Declaration ¶ 5.) It was after the hair was treated in sodium hydroxide (a harsh alkali treatment), washed with sodium laureth sulfate, and blow dried that the Lt/Lr ratio was greater than 3.7. Thus, the Declaration provides evidence that just because hair is bleached does not mean it will have chemical damage such that the Lt/Lr ratio is greater than 3.7. We find that this evidence also reasonably leads to the conclusion that one of skill in the art would not understand Appellant’s Specification to teach or suggest that just because hair is bleached or dyed or heat treated, it will necessarily be chemically damaged to the extent that it has an Lt/Lr ratio of greater than 3.7 as required by claim 1.

Furthermore, we also disagree with the Examiner that the fact that Suenaga “evaluates hair smoothness after drying and is meant to solve the consumer need for smoothness, indicating that the hair was frizzy prior to application of the treatment composition and method” (Ans. 8) teaches that the hair treated with the composition necessarily was thermally or

chemically damaged, much less that it was thermally or chemically damaged to the extent that it had an Lt/Lr ratio of greater than 3.7. Nothing in Suenaga teaches or suggests that the hair prior to treatment was damaged to the extent claimed. At most, what can be surmised from Suenaga is that the hair tested was not smooth. There is no connection made by the Examiner with any evidence that all hair that is not smooth is thermally and/or chemically damaged to the extent required by claim 1. The relied upon publication “How much time” does not purport to describe a statistically valid survey of how women treat their hair. In any event, while it does indicate that some women spend time blow drying their hair and shaping it, “How much time” does not establish that the hair so treated is thermally and/or chemically damaged, much less to the extent required by claim 1. Moreover, it does not establish that all hair has been styled by blow drying. Indeed, “How much time” reports that for some people, the effort of blow drying and styling is “just too much” and they “only brush their hair once, in the morning, and don’t bother for the rest of the day.” (How much time 2.) Thus, the Examiner failed to establish a nexus between the evidence and a conclusion that the hair treated in Suenaga was thermally and/or chemically damaged to the extent required by claim 1.

Even though it may be the case that damaged hair treated with the composition taught by Suenaga might result in hair with Lt/Lr of less than about 3.6, we disagree with the Examiner that there is any evidence in Suenaga that teaches or suggests the method claimed, namely application of such a composition to hair that is thermally or chemically damaged in the way required by the claims. Furthermore, the Examiner has not argued for or provided evidence of record to establish that one of ordinary skill in the

art would have found it obvious to have applied the composition of Suenaga to the type of hair required by the claim. “[T]he examiner bears the initial burden, on review of the prior art . . . , of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

Thus, for the foregoing reasons, we do not sustain the Examiner’s rejection of the claims as being obvious over Suenaga.

The obviousness rejection over Suenaga and Divine Caroline

The Examiner’s findings regarding the teachings of Suenaga are set forth above. The Examiner relies on Divine Caroline for the obviousness of certain dependent claims. (Final Action 10–12; Ans. 10–12.)

The Examiner also believes, however, that Divine Caroline supports that hair treated with a flat iron can damage hair to the extent that it has an Lt/Lr ratio greater than 3.7 “which is in line with Appellant’s specification that hair straightening with an iron results in thermal damage and that this thermal damage can have a Lt/Lr ratio of greater than 3.7 (Specification ¶ 12 & 16).” (Final Action 17.) While we agree with the Examiner that Divine Caroline supports that using a flat iron to straighten hair can damage it, it does not establish that such activity necessarily results in thermally damaged hair or hair that is damaged to the extent required by claim 1. Thus, Divine Caroline does not fill the evidentiary gap missing from the Examiner’s obviousness rejection discussed above. Thus, we do not sustain the Examiner’s rejection of the claims as being obvious over Suenaga and Divine Caroline.

SUMMARY

In summary:

Appeal 2019-001645
Application 12/771,089

Claims Rejected	Basis	Affirmed	Reversed
1, 12, 16–18, 24 and 25	§103 over Suenaga		1, 12, 16–18, 24 and 25
1, 6, 12, 16–18, 23, 24 and 25	§ 103 over Suenaga and Divine Caroline		1, 6, 12, 16–18, 23, 24 and 25
Overall Outcome			1, 6, 12, 16–18, 23, 24 and 25

REVERSED