

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte BURKHARD ROSE

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Appeal No. 96-0419  
Application No. 07/928,063<sup>1</sup>

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HEARD: June 10, 1999

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Before KIMLIN, GARRIS and SPIEGEL, Administrative Patent Judges.  
SPIEGEL, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1, 3, 4 and 7 through 10, which are all of the claims pending in this application.

We REVERSE.

Appellant's invention relates to a composition for permanent waving of human hair comprising a reducing agent and 0.01 to 0.2% by weight, of the total composition, of a chlorophyll or chlorophyll derivative which is at least partially water soluble, its manufacture and

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<sup>1</sup> Application for patent filed August 11, 1992.

use in permanent waving of human hair (Brief, page 2). The added chlorophyll or chlorophyll derivative provides an improved curling effect (specification, page 2). Claim 1 is illustrative and reads as follows:

1. A composition for the permanent waving of human hair, comprising a permanent waving effective amount of a reducing agent and 0.01 to 0.2% by weight, calculated based on the total composition, of a chlorophyll or chlorophyll derivative which is at least partially water-soluble.

The chlorophyll derivative may be an alkali magnesium chlorophyllin, an alkali copper chlorophyllin or a mixture thereof (claim 4), such as, sodium magnesium chlorophyllin or potassium magnesium chlorophyllin (claim 10). The reducing agent may be a thioglycolic acid salt, glycerol monothioglycollate, thiolactic acid or esters and inorganic sulfites thereof (claim 9).

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Isobe	4,898,899	Feb. 06, 1990
Miki et al. (Miki)	4,906,462	Mar. 06, 1990
Amari et al. (Amari) <sup>2</sup> (Kokoku)	56-29513	Mar. 24, 1981

THE MERCK INDEX (Merck), ninth edition, at 274-275 (Merck & Co., Inc., 1976).

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<sup>2</sup> We refer in our opinion to the translation of Amari prepared for the PTO by Schreiber Translations, Inc., in August 1994, a copy of which is attached to this decision.

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Claims 1, 3, 7 and 9 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite.<sup>3</sup> Claims 1, 3, 4 and 7 through 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Amari in view of Merck. Claims 1, 3, 4, 9 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Miki or Isobe. We *reverse* these rejections for reasons which follow.

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. We make reference to the examiner's answer (Paper No. 20, mailed July 19, 1995) for the examiner's complete reasoning in support of the rejections, and to the appellant's brief (Paper No. 19, filed June 26, 1995) and reply brief (Paper No. 21, filed September 19, 1995) for the appellant's arguments thereagainst.

#### OPINION

A. *Rejection of claims 1, 3, 7 and 9 under 35 U.S.C. § 112, second paragraph, as indefinite.*

The legal standard for indefiniteness under 35 U.S.C. § 112, second paragraph, is whether a claim reasonably appraises those of skill in the art of its scope. *See Amgen Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200, 1217, 18 USPQ2d 1016, 1030 (Fed. Cir.), *cert. denied sub nom., Genetics Inst., Inc. v. Amgen, Inc.*, 112 S.Ct. 169 (1991). The definiteness of claim

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<sup>3</sup>The examiner has withdrawn the rejection of claims 4, 8 and 10 under 35 U.S.C. § 112, second paragraph, "to simplify issues for appeal" (Answer, page 3).

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language is analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing an ordinary level of skill in the pertinent art. *In re Moore*, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

The examiner maintains the term “derivative(s)” is of indeterminate scope (Answer, page 3) and relies on *Petrolite Corp. v. Watson*, 113 USPQ 248 (D.C.D.C. 1957) for holding “‘derivative’ is, ... in that instance, ‘so indefinite as to be meaningless’” (Answer, page 5). However, we agree with appellant that one of ordinary skill in the art reading the specification at pages 2-3 as well as the examples in the specification would have been reasonably apprised of the scope of a “chlorophyll derivative” (Brief, pages 6-9; Reply Brief, pages 1-4). Secondly, unlike in *Petrolite*, the claimed derivatives are derivatives of a defined structure, i.e., chlorophyll, with at least one positively stated limitation, i.e., at least partially water-soluble. Therefore, the holding in *Petrolite* is not on point. Accordingly, the examiner’s rejection of claims 1, 3, 7 and 9 under 35 U.S.C. § 112, second paragraph, as indefinite is reversed.

*B. Rejection of claims 1, 3, 4 and 7 through 10 under 35 U.S.C. § 103 as unpatentable over Amari in view of Merck.*

Amari describes a permanent wave method comprising treating hair rolled around rods with a liquid No. 1 containing a reducing agent, such as thioglycolate, for a time sufficient to break cystine bridge bonds in the hair’s keratin (reducing step), washing the treated hair with water to rinse out liquid No. 1, and then treating the rinsed hair with a liquid No. 2 containing an oxidizing agent and 0.01-5 wt.

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% chlorophyll for a time sufficient to reform cystine bridge bonds in the hair's keratin (oxidizing step) before removing the rods and washing and drying the "permed" hair (pages 1-5). Addition of chlorophyll to oxidizing liquid No. 2 helps restore hair to its original condition prior to the permanent wave treatment and helps maintain the waves with color, gloss and springiness for a longer time (pages 4-5).

Merck discloses chlorophyll and derivatives thereof, e.g., chlorophylls a through d and chlorophyllins. Chlorophyllins are water soluble salts obtained by alkaline hydrolysis of chlorophyll wherein methyl and phytyl ester groups of chlorophyll are replaced by Na and K.

The examiner relies on Merck's disclosure "that chlorophyll may be converted to its salt form for purposes of increasing solubility" (Answer, sentence bridging pages 2-3).

Acknowledging that Amari adds chlorophyll to liquid No. 2 containing the oxidizing agent rather than to liquid No. 1 containing the reducing agent, the examiner concludes that it would have been obvious to one skilled in the art to add chlorophyll to liquid No. 1 as part of the reducing step to obtain the same conditioning, waving effects because all components of the waving solutions are applied to the hair within the same time frame, because additives, e.g., conditioning agents, are conventionally added to waving solutions, and because both the reducing step and the oxidizing step damage hair (Answer, pages 3 and 6).

However, since liquid No. 1 containing the reducing agent is rinsed out of the hair prior

to application of liquid No. 2 containing the oxidizing agent and the chlorophyll (see Amari pages 36), we agree with appellant that Amari fails to disclose or suggest including chlorophyll as part of liquid No. 1 containing the reducing agent or as part of the permanent waving method's reducing step (Brief, page 10). Secondly, the examiner has not presented evidence or a reasoned statement as to why one of ordinary skill in the art would have reasonably expected chlorophyll to provide the same benefits in a reducing environment which is not only chemically opposite the oxidizing environment described by Amari, but also designed to have the opposite effect on hair, i.e., breaking S-S bonds rather than reforming S-S bonds in hair keratin, as argued by appellant (Brief, page 11; Reply brief, pages 4-5). Finally, there is no evidence of record disclosing or suggesting that chlorophyll is a conventional hair conditioner. Notably, the examiner does *not* rely on Merck for disclosing or suggesting that chlorophyll should be included in a permanent waving solution or used as a hair conditioner.<sup>4</sup> Thus, we agree with appellant that Merck does not cure the deficiencies of Amari (Brief, page 10).

Therefore, we find that the examiner has relied on impermissible hindsight in making her determination of obviousness. *W.L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Accordingly, the rejection

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<sup>4</sup> Merck discloses that commercial chlorophyll is used as colorants, color film sensitizers, antiknock agents in gasoline, rubber vulcanizing accelerators and in deodorants (page 275, col. 1).

of claims 1, 3, 4 and 7 through 10 under 35 U.S.C. § 103 as unpatentable over Amari in view of Merck is reversed.

*C. Rejection of claims 1, 3, 4, 9 and 10 under 35 U.S.C. § 103 as unpatentable over Miki or Isobe.*

Miki discloses a deodorant composition comprising an acidic phosphoric compound, a copper compound and a reducing agent (col. 1, lines 29-35). The copper compound may be sodium copper chlorophyllin or potassium copper chlorophyllin, singly or in combination, usually present in 0.001 to 200 parts by weight per 100 parts by weight of the phosphoric acid compound (col. 2, lines 14-33 and 63-66). The reducing agent may be sodium sulfite or sodium thiosulfate and is usually present in 0.001 to 50 parts by weight per 100 parts by weight of the phosphoric acid compound (col. 2, lines 43-53; col. 3, lines 2-6).

Isobe discloses an adhesive composition comprising a (meth)acrylate monomer, a polymerization initiator, and an additive, such as chlorophyll, metal-substituted chlorophyll or chlorophyllin salt (col. 2, lines 43-53; col. 3, lines 2-6). The polymerization initiator may be a combination of an organic peroxide and a reducing agent, such as diacylperoxide and thioglycolic acid (col. 4, line 63 - col. 5, line 25). The reducing agent is present at 0.1-5 parts by weight, preferably 0.3-2 parts by weight, per 100 parts by weight of the (meth)acrylate monomer (col. 5, lines 41-43). Sodium copper chlorophyllin is a preferred additive compound because of its high stability (col. 6, lines

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22-23). The additive is present at 0.01-5 parts by weight, preferably, 0.1-2 parts by weight, per 100 parts by weight of the (meth)acrylate monomer (col. 7, lines 1-4).

According to the examiner, the intended functional use of appellant's composition fails to differentiate the claimed compositions over the compositions of Miki and Isobe, which only differ in failing to disclose each claimed compound species and concentration species within their disclosed compound genus and broader concentration ranges (Answer, pages 4 and 7-8).

Generally, the preamble of a claim does not limit the scope of the claim when it merely recites a purpose or intended use of the invention, *DeGeorge v. Bernier*, 768 F.2d 1318, 1322 n.3, 226 USPQ 758, 761 n. 3 (Fed. Cir. 1985), unless it breathes life and meaning into the claim, i.e., is "essential to point out the invention defined by the claim." *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The effect of the preamble language can only be determined by reviewing the entirety of the appellant's disclosure to gain an understanding of what the appellant actually invented and intended to encompass by the claim. *See Corning Glass Works v. Sumitomo Elect. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989).

Here, the specification makes it clear that appellant's invention is directed to a composition for permanent waving of human hair. The specification is not directed to a composition containing any reducing agent and any copper compound/additive, but to a composition containing a "permanent

waving effective amount of a reducing agent”<sup>5</sup> and “0.01 to 0.2% by weight ... chlorophyll or chlorophyll derivative...”. Further, “permanent waving” is referenced in both the preamble and the body of the claim. Thus, in this case, we agree with the appellant that the preamble cannot be ignored as merely stating an intended use for the claimed composition (Brief, pages 14-15).

Secondly, viewing the invention as a whole, we find that neither Miki nor Isobe provide sufficient guidance or direction to enable one of ordinary skill in the art to select the narrowly claimed concentration range of chlorophyll/chlorophyll derivative or particular combination of only certain specific copper compounds and certain reducing compounds from the lists of potential ranges and compounds in these references. The examiner has not explained what would have motivated one of ordinary skill in the art to select sodium/potassium copper chlorophyllin from Miki’s list of potential copper compounds in combination with sodium thiosulfate from Miki’s list of potential reducing agents (see col. 2, lines 14-31 and 44-53) or to provide the chlorophyllin in the narrow range of 0.01 to 0.2 wt. % given Miki’s suggested range of 0.001 to 200 parts by weight per 100 parts by weight phosphoric acid compound (col. 2, lines 63-66). Similarly, the examiner has failed to explain what would have motivated one skilled in the art to select a specific amount of thioglycolic acid from Isobe’s list of potential polymerization initiators (col. 3, line 66 - col. 5, line 50) as the claimed “permanent

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<sup>5</sup> According to specification page 4, third paragraph, “the applied reducing agent normally ranges between about 1 and about 15% by weight of the total reducing composition, preferably between about 3 and about 10% by weight.”



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BRADLEY R. GARRIS  
Administrative Patent Judge

CAROL A. SPIEGEL  
Administrative Patent Judge

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CAS/kis

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APPLICATION NO. 07/928,063

APJ SPIEGEL

APJ KIMLIN

APJ GARRIS

DECISION: **REVERSED**

Prepared By:

**DRAFT TYPED:** 21 Mar 00

**FINAL TYPED:**