

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* GABRIEL E. UZUNIAN,  
LEILA S. SONG,  
DENNIS F. TURNER, and  
ROBERT A. LEWIS

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Appeal 2008-2392  
Application 10/908,503  
Technology Center 1700

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Decided: May 30, 2008

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Before EDWARD C. KIMLIN, CHARLES F. WARREN, and  
KAREN M. HASTINGS, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the final rejection of claims 1-2, and 6-23. We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM.

Appellants claim a pigment composition, which is useful for various and diverse applications, including printing inks, or cosmetic and personal care products (Spec. 11-12).

Claims 1 and 12 are illustrative:

1. A pigment composition comprising a pigment derived from fish uniformly dispersed with butylene glycol or propylene glycol.

12. The composition of claim 1 wherein said pigment has been deodorized by contact with a complex metal hydride.

The Examiner relies upon the following references as evidence of obviousness:

Hoercher	4,966,734	Oct. 30, 1990
Spencer	6,663,704 B2	Dec. 16, 2003
Sakuta	6,984,390 B2	Jan. 10, 2006
Masuda	6,878,382 B2	Apr. 12, 2005

The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

- a) claims 1-2, 6-11, 15-17, and 21-23 over Spencer,
- b) claims 1-2, 14, 18, and 21-23 over Masuda,
- c) claims 1, 6, 7, and 14-23 over Sakuta, and
- d) claims 12-13 over Spencer in view of Hoercher.

Appellants' arguments regarding independent claim 1 are reiterated with respect to each alternative primary reference, namely, Spencer, Masuda, and Sakuta (App. Br. 5-9, 11-12). No additional arguments have been advanced against any other claims in the groupings set forth in a, b, and

c above (App. Br. 5-12; Reply Br. 2-4). Accordingly, in considering the arguments, we will focus on representative claim 1.

The rejection of dependent claims 12-13 over Spencer and Hoercher has been separately argued, although the individual claims in this rejection have not been separately argued (App. Br. 10). We select claim 12 as representative of the claims argued in this rejection.

For the above stated reasons, this decision will specifically address only independent claim 1 and dependent claim 12. Additionally, since the essence of the arguments made against each primary reference is the same, we will address the arguments against all three alternative primary references only once, to avoid undue repetition.

#### ISSUES

Have Appellants shown reversible error in the Examiner's determination that a person having ordinary skill in the art would have found it obvious to arrive at the claimed invention in view of the applied prior art because:

(a) there is no prima facie case of obviousness since there is no motivation to pick and choose the claimed pigment and solvent of independent claim 1 in each primary reference;

(b) if there is a prima facie case of obviousness, the asserted prima facie case has been overcome by Appellants' Declaration evidence of the non-equivalence of the disbursement in butylene glycol of natural guanine pigment and synthetic titanium dioxide coated mica pigment; and

(c) one of ordinary skill would not have looked to Hoercher, which deodorizes fish oil, to deodorize a pigment derived from fish as required in dependent claim 12.

## ANALYSIS

We have thoroughly reviewed each of Appellants' arguments and evidence for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejections for the reasons set forth in the Answer, which we incorporate herein, and we add the following primarily for emphasis.

*The issue of prima facie obviousness*

*Independent Claim 1*

We choose independent claim 1 to represent each claim grouping for each of the three alternative primary references (*i.e.*, Spencer, Masuda, and Sakuta).

There is no dispute that each primary reference discloses a composition that may include a pigment from fish and at least one of the two listed glycol components (*i.e.*, butylene glycol and polypropylene glycol)<sup>1</sup>. Appellants contend, however, that since each reference discloses the above components in respective lists of pigments and solvents, there is no motivation to pick the natural pearl essence (namely, the guanine/hydroxanthine crystals from fish scales) and the glycol solvent claimed. We disagree.

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<sup>1</sup> Each reference teaches a composition that is used for a purpose explicitly included in Appellants' Specification. Spencer describes an ink (compare to Spec. para. 29), Masuda describes a personal care composition (compare to Spec. para. 30), and Sakuta describes a cosmetic material (compare to Spec. para. 30).

It is by now well settled that the disclosure of a multitude of effective combinations does not render any particular formulation less obvious, and obviousness may indeed be established when picking and choosing components from lists of ingredients. *See Merck & Co. v. Biocraft Labs.*, 874 F. 2d 804, 806-807 (Fed. Cir. 1989). In *Merck*, it was held that a species claim was obvious over a reference disclosing over 1200 possible combinations of two ingredient types useful in diuretic compositions, where the claimed combination was but one of those disclosed. Neither of the claimed ingredients was listed by the reference as being preferred. *Id.*

As Appellant concedes, each of Spencer, Sakuta and Masuda explicitly teach the use of a pigment derived from fish and at least one of the claimed glycol solvents for their respective compositions (App. Br. 3-4, 7-8, and 11). Similar to the situation in *Merck*, the artisan of ordinary skill need only make a choice from a list explicitly set forth in each reference to select an appropriate pearlescent pigment and water-soluble solvent. Thus, in our view, the Examiner properly concluded that one of ordinary skill would have considered the composition of such a pigment and glycol obvious from the explicit teachings, and lists, set out in each primary reference. *See also KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007) (“the [obviousness] analysis need not seek out precise teachings directed to the subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ”). The selection of guanine with butylene or propylene glycol as the pigment and polar solvent in each of the three alternative primary references is merely a “predictable use of prior art elements according to their established functions.” *KSR*, 127 S. Ct. at 1740.

Further, contrary to Appellants' arguments that Spencer provides an exponential number of permutations of possible pigments and solvents for combination (Reply Br. 2), Spencer lists only five (5) categories of pigments, with "natural pearl essence (guanine/hypoxanthine crystals from fish scales)" being the first on the list (col. 5, ll. 17-22). Additionally, when Spencer lists appropriate water-soluble organic solvents, the first on a list of seven (7) is "glycols" (col. 11, ll. 23-25). Likewise, each of Masuda and Sakuta contains a finite number of identified pearlescent pigments and polar solvents for use in their respective compositions. *See KSR*, 127 S. Ct. at 1742 (when there is a "design need" or "market pressure" to solve a problem, and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp).

Appellants contend that "there is no indication whatsoever...that a fish derived pigment can be uniformly dispersed with butylene glycol or propylene glycol" (*see, e.g.*, App. Br. 6, 9, 12). We disagree.

First, there would have been both a "design need" and "market pressure" for a uniform dispersion for each of the products disclosed in Spencer, Masuda, and Sakuta. Spencer indeed describes "a dispersion of a pearlescent pigment in a solvent" (*see, e.g.*, Abstract) and that insufficient dispersion will cause poor writing performance and stability of the ink (*see, e.g.*, col. 1, l. 65 to col. 12, l. 2). Each of Masuda and Sakuta teach cosmetic or personal care compositions wherein one of ordinary skill in the art would have readily appreciated that a uniform dispersion of the pigment would have been both a "design need" and a "market pressure", in order that a uniform pearlescence would have been seen by the consumer when

purchasing and using the product. In light of these circumstances, it would have been no more than routine experimentation, or optimization, for the ordinarily skilled artisan to determine a suitable combination of the guanine pigment and glycol solvent, in each of the primary references' respective compositions, to satisfy the design need and market pressure for a uniform dispersion.

Second, Appellants' Specification provides no explicit definition of what constitutes a "uniformly dispersed" composition. The Specification indicates that "[t]o uniformly disperse the pearlescent pigment...it is preferred to add an additional amount of surfactant to that which may be included in the paste from the process of separating the guanine crystals from the fish scales..." and that 0.5% to about 10% by weight of additional surfactant may be needed to obtain a uniform dispersion (Spec. pp. 9-10, para. 26). As pointed out by the Examiner, Spencer and Sakuta each describes the use of a dispersant or surfactant in their respective compositions/products (*see, e.g.*, Ans. 3, 8), in amounts which overlap those disclosed by Appellants as effective to promote uniform dispersal. As discussed above, Masuda teaches a personal care composition (*e.g.*, a lipstick) wherein the consumer would have expected a uniform dispersion of the pigment. Thus, it would have been expected that a uniform dispersion of the pearlescent pigment in the respective products of each of Spencer, Masuda and Sakuta would have been obtained.

It is also well established that when a claimed composition reasonably appears to be substantially the same as that disclosed by the prior art, the burden is on the applicant to prove that the prior art composition does not necessarily or inherently possess the characteristics attributed to the claimed

composition. *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990); *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977).

In the present case, although the patents disclose compositions that appear to be substantially the same as compositions within the scope of the appealed claims, each of the three primary references do not explicitly discuss whether the pigment is *uniformly* dispersed in the solvent. However, based on the close correspondence between each reference and claimed compositions, and the inability of the USPTO to perform tests on the compositions of the applied prior art, it is eminently fair and reasonable to place on Appellants the burden of establishing that the compositions fairly disclosed by each primary reference are not capable of attaining the claimed “uniformly dispersed” condition. However, Appellants have not brought to our attention any such evidence.

Thus, we conclude that a prima facie case of obviousness exists with respect to representative claim 1 based on each alternative primary reference. Having determined that a prima facie case of obviousness exists, we now proceed to an evaluation of Appellants' proffered evidence of nonobviousness.

*The ultimate issue of obviousness versus nonobviousness*

*Appellants' proffered evidence of non-equivalence*

As evidence of nonobviousness, Appellants refer to the Declaration under 37 C.F.R. § 1.132 by Song submitted April 10, 2006. According to Appellants, for each rejection based alternatively on Spencer, Masuda and Sakuta, the Song Declaration provides evidence of the “non-equivalence of the disbursement in butylene glycol of natural guanine pigment and synthetic titanium dioxide coated mica pigment” (*see e.g.*, App. Br. 6, 9,

12)<sup>2</sup>. Accordingly, Appellants contend that one of skill in the art would have been discouraged from combining butylene glycol and natural guanine pearl pigment.

We do not agree that the Song Declaration provides evidence that one would have been so discouraged. We determine that one of ordinary skill in the art would have readily appreciated that there were differences between organic fish scale pigments and *synthetic titanium coated mica* pigments that were compared in the Song Declaration. The prior art recognizes these substances are “equivalents” (that is, they are known alternatives in the art) for the purpose of providing pearlescent properties to various compositions. However, this does not necessarily mean that these substances behave identically under all circumstances. Further, Spencer teaches that “the density and the size of the pearlescent pigment and other pigment particles in the writing composition *necessitate* the use of one or more effective dispersants to disperse the particles into the pearlescent ink.” (col. 11, ll. 47-51; emphasis provided). So it is entirely expected that one would have needed to use additional additives, such as dispersants (i.e., surfactants) to disperse the guanine particles in the solvent.

We also find no error in the Examiner's reasoning that the evidence is not commensurate in scope with the claims, that is, the claims encompass both propylene glycol and butylene glycol as solvents whereas the declaration is only directed to butylene glycol (Ans. 14).

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<sup>2</sup> Since Appellants state on the record that they did not submit the Song Declaration to show unexpected results (*see, e.g.*, Reply Br. 2, App. Br. 9), we will not evaluate it for that purpose.

Even assuming *arguendo* that the Song Declaration provides evidence that one of ordinary skill in the art would have been discouraged from combining guanine and butylene glycol, we determine that the evidence of “non-equivalence” Appellants have provided does not overcome the strong showing of obviousness in this case. *See Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1372 (2007) (“[T]his secondary consideration does not overcome the strong showing of obviousness in this case. Although secondary considerations must be taken into account, they do not necessarily control the obviousness conclusion.”); *see also Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 769 (Fed. Cir. 1988).

These circumstances warrant an ultimate determination that the composition defined by claim 1 would have been obvious to one with ordinary skill in this art in view of any each of Spencer, Masuda and Sakuta as alternatively applied by the Examiner.

*Dependent claims 12 and 13*

We choose dependent claim 12 to represent this grouping. The Examiner added Hoercher to exemplify the known use of a complex metal hydride to remove undesirable odors from fish oil. We agree with the Examiner’s findings of fact based on Hoercher and conclusion of obviousness (Ans. 7, 14-15), and add the following primarily for emphasis.

We determine that it would have been predictable that a chemical (i.e., the complex metal hydride) known to deodorize fish oil would likewise function to deodorize fish scale pigment. Further, as the Examiner pointed out, this is a product claim. Keeping in mind that it is the claimed *product* that must be patentably distinguished from the prior art *product*, we agree that, in light of the guidance offered by Hoercher on how to deodorize fish

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oil, one of ordinary skill in the art would have used that familiar deodorizing treatment to deodorize a pigment derived from fish as claimed, with the results being predictable. *See KSR*, 127 S. Ct. at 1739 (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”).

Thus, we agree with the Examiner and determine that the Examiner has established a reasonable basis for concluding that Spencer and Hoercher establish the obviousness of the composition of claim 12.

#### CONCLUSION

Based on the foregoing and the reasons well stated by the Examiner, we sustain:

a) the § 103 rejection based on Spencer of claim 1-2, 6-11, 15-17, and 21-23; b) the § 103 rejection based on Masuda of claims 1-2, 14, 18, and 21-23; c) the § 103 rejection based on Sakuta of claims 1, 6, 7, and 14-23; and, d) the § 103 rejection based on Spencer and Hoercher of claims 12-13.

The decision of the Examiner 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)(iv).

AFFIRMED

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