

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JUANITA PARRIS, NING WU,  
JEANNETTE SIMONI-TRUNCELLITO,  
ROBERT CATENA, JITU MODI,  
WILLIAM P. KEAVENY,  
and ROBERT AUERBACH

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Appeal 2008-0254  
Application 10/034,005  
Technology Center 1700

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Decided: March 31, 2008

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Before EDWARD C. KIMLIN, CHUNG K. PAK, and PETER F. KRATZ,  
*Administrative Patent Judges.*

KRATZ, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on an appeal from the Examiner's final rejection of claims 1, 2, 6, 8, 9, 11-13, 15, and 19-24. We have jurisdiction pursuant to 35 U.S.C. § 6.

Appellants' invention is directed to a method of preparing a universal base composition including the step of dissolving a pigment in a resin that is soluble in both water and organic solvent wherein the resin is defined in terms of hydrophobic and hydrophilic monomer. Claim 1 is illustrative and reproduced below:

1. A method of preparing a universal base composition comprising dispersing a pigment in a sin that is soluble in both water and organic solvent and wherein:

- (a) said resin comprises both hydrophobic and hydrophilic monomers;
- (b) the total weight of the hydrophobic and hydrophilic monomers is at least about 20% of the total weight of the resin; and
- (c) the weight ratio of hydrophobic monomers to hydrophilic monomers is from about 1/5 to about 5.

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Thomm	3,846,507	Nov. 5, 1974
Login	4,098,741	Jul. 4, 1978
Takahashi	4,234,466	Nov. 18, 1980
Burlone	EP 0 116 666	Aug. 29, 1984
Scheibelhoffer	5,670,561	Sep. 23, 1997

Claims 1, 2, 12, 13, 19, and 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Scheibelhoffer. Claims 1, 2, 9, and 21-24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Takahashi. Claims 1, 2, 6, 8, 9, 11, 12, 15, 19, 20, and 22-24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by EP 116666, as further evidenced by Thomm and Login.

We procedurally reverse the stated rejections and enter a new ground of rejection under the second paragraph of 35 U.S.C. § 112, which rejection is applied to all of the pending claims, including claims 1-52.

With respect to the stated rejections, Appellants basically maintain that each of the applied allegedly anticipatory references does not disclose a method of dispersing a pigment in a resin of a type in accordance with the claimed hydrophobic/hydrophilic monomer ratio and weight percent requirements for the resin, as well as describing the use of such a resin having the here-claimed characteristics in terms of solubility in water and in a organic solvent (Br. 5-12). The Examiner's contentions are to the contrary (Ans. 4-13).

However, in order to make a proper comparison between the claimed invention and the prior art, the language of the claims must first be properly construed. *See In re Paulsen*, 30 F.3d 1475, 1479 (Fed. Cir. 1994). *See also, Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567-68 (Fed. Cir. 1987) (In making a patentability determination, analysis must begin with the question, "what is the invention claimed?" since "[c]laim interpretation, . . . will normally control the remainder of the decisional process.") *See Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997) (requiring explicit claim construction as to any terms in dispute). During examination, claims are given the broadest reasonable construction in light of the Specification. *See In re American Academy of Science Tech Center*, 367 F.3d 1359, 1369 (Fed. Cir. 2004).

If the scope and breadth of the claims cannot be properly determined, then the claims should be rejected under 35 U.S.C. § 112, ¶ 2. *See In re*

*Zletz*, 893 F.2d 319, 322 (Fed. Cir. 1989)(if claims do not “particularly point[ ] out and distinctly claim[ ]”, in the words of section 112, appropriate PTO action is to reject the claims for that reason) and *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004)(“[A] patent applicant has the opportunity and responsibility to remove any ambiguity in claim term meaning by amending the application.”). Cf. *In re Steele*, 305 F.2d 859, 862-63 (CCPA 1962) and *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970)(rejections under 35 U.S.C. § 103 cannot be based on speculations and assumptions).

With respect to the argued resin employed in the claimed process and the called for ratio and total content of hydrophilic and hydrophobic monomers associated therewith and the solubility characteristics thereof, we note that Appellants have furnished definitions for the claim terms hydrophilic monomer and hydrophobic monomer in the subject Specification as follows:

A Hydrophilic monomer is defined for the purpose of this invention as a monomer that, after being made into a polymer, contains at least one functional group that impart[s] the solubility in both water and solvent (lower alcohol and lower alcohol/acetate mixtures). Such functional groups include but are not limited to -COOH, -OH, -PEO, -NH<sub>2</sub>, -SO<sub>3</sub>H, piperazine, pyrrolidone.

...

Hydrophobic monomer is defined for the purpose of this invention as a monomer that contains [a] paraffinic chain with at least six carbon atoms, or contains [a] hydrocarbon ring with at least 8 carbon atoms. Furthermore, a hydrophobic monomer, after being made into a polymer, does not contain the functional groups that impart solubility in both water and solvent (lower alcohol and lower alcohol/acetate mixtures).

(Spec. 4 and 5)

Rather than clarifying the scope of the claims, however, these claim term definitions render the scope thereof unclear and indeterminable. For example, the hydrophilic monomer definition indicates that the portion of the resin “monomers” that qualify for the “hydrophilic” moniker is dependent on the polymer that is ultimately made, on the functional group(s) that can be attributed to such a monomer after being turned into a polymer, as well as on the functional characteristic thereof with respect to imparting solubility not only in water, but also in a solvent (lower alcohol and lower alcohol/acetate mixtures). In this regard, the provided definition does not clearly delimit the type of alcohols or alcohol/acetate mixtures that are considered to be “lower alcohol and lower alcohol/acetate mixtures” such that a reasonable determination could be made as to which monomers would count as “impart[ing] solubility...” and be considered “hydrophilic monomer[s]” within the scope of the furnished definition. While Appellants present some examples of functional groups in the formed polymer that are included within the scope of the definition and would count as hydrophilic, these examples are described as being non-limiting (Spec. 4 and 5). As such, the furnished definition for the claim term “hydrophilic monomer” works to undermine rather than clarify the scope of the claim terms employed and hence the scope of the claims themselves given the relative terminology employed in the solubility requirement for the hydrophilic monomer definition. The furnished open ending listing of eligible monomers and functional groups does not resolve this ambiguity.

This claim indefiniteness is further attenuated by considering, as we must, the further provided definition for “hydrophobic monomer” together

with the above-noted “hydrophilic monomer” definition. With regard to the “hydrophobic monomer” claim term, the Specification provides a definition including several requirements for a monomer to be considered hydrophobic (Spec. 5). In particular, the monomer itself must contain a paraffinic chain having at least six carbon atoms or, in the alternative, the monomer must contain a hydrocarbon ring with at least eight carbon atoms (*id.*). In addition and in order to earn the name “hydrophobic”, the monomer must, after being made into a polymer, fail to contain functional groups that would serve to impart resin solubility in both water and solvent, with the solvent being parenthetically defined, as above, for the hydrophilic monomer (*id.*).

Again, as for the hydrophilic monomer definition, non-limiting examples of monomers that could be considered hydrophobic are presented (*id.*). Taking these two definitions together, it is not readily apparent how it can be determined whether a given resin falls within or without the hydrophobic monomer/ hydrophilic monomer ratio and total weight percent ratio claimed. This is particularly so in light of the unclearly defined scope of the solubility imparting requirement or non-solubility imparting requirement for a polymer or polymer group made from a monomer, for the monomer to be labeled as hydrophilic or hydrophobic. This is the case, at least in part, because of the language employed in describing the functional groups that can not be included in a polymer made from such a monomer. This language is based on the unclearly identified reach of the solvents (lower alcohol and lower alcohol/acetate mixtures) in addition to water, that a polymer, made from a monomer, cannot possess functional groups that

would impart solubility toward, as one of the requirements for the monomer to be counted as “hydrophobic.”<sup>1</sup>

In sum, the Examiner and the Appellants disagree on the correspondence of the hydrophobic monomer and hydrophilic monomer weight ratio and total weight percent content of the applied references’ resins relative to the here-claimed requirements therefore. The Specification definitions for the relevant claim terms necessary to determine the reach of the claims with respect to these argued requirements have not been explicitly employed in the Briefs and Answer before us. Moreover, these definitions, from our perspective, leave the scope of the affected claims unclear and seemingly indeterminate. Thus, we are unable to determine the propriety of the Examiner’s § 102 rejections, on this record. To do so would require speculation with regard to the metes and bounds of the claimed subject matter. Accordingly, we procedurally reverse the Examiner’s § 102 rejections<sup>2</sup>, and we enter a new ground of rejection against the claims on appeal as shown below.

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<sup>1</sup> We are aware that Table 2 of the subject Specification reports data for hydrophilic group weight percent and hydrophobic group weight percent for several resins. However, the manner in which the hydrophilic and hydrophobic group content of these resins was assessed or measured for each of the identified resins in a manner consistent with the definitions furnished in the subject Specification has not been detailed in the Specification. Moreover, the claims of this application are not limited to the particular resins identified in Table 2 of the Specification.

<sup>2</sup> This procedural reversal is not based upon the merits of the Examiner’s § 102 rejections.

#### NEW GROUND OF REJECTION

Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter the following new ground of rejection.

Claims 1-52 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention for the reasons set forth above.<sup>3</sup>

After all, it is well settled that the purpose of the definiteness requirement is:

to provide those who would endeavor, in future enterprise, to approach the area circumscribed by the claims of a patent, with the adequate notice demanded by due process of law, so that they may more readily and accurately determine the boundaries of protection involved and evaluate the possibility of infringement and dominance.

*In re Hammack*, 427 F.2d 1378, 1382 (CCPA 1970).

Here, the claimed requirement for using a resin having a specified hydrophobic/hydrophilic monomer ratio and total resin content of such monomers based on the furnished definitions for hydrophobic monomers and hydrophilic monomers provided in the subject Specification renders the scope of the claims indefinite for reasons discussed above. In this regard, it is not clear how one of ordinary skill in the art could determine whether a particular prior art resin would or would not possess or have been made from

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<sup>3</sup> Previously allowed claims 25-52 and objected to (as depending from a rejected base claim) and claims 3-5, 7, 10, 14, and 16-18 are included in this new ground of rejection, as these claims also employ the above-discussed monomer characterizations that we determine, on this record, to lend *prima facie* indefiniteness to the claims employing such terminology.

the claimed total content of hydrophobic and hydrophilic monomers and/or the claimed ratio of these monomer types based on the seemingly unique and indeterminate definitions furnished by Appellants in their Specification for a monomer to be counted as a hydrophobic or hydrophilic in assessing the claimed ratio and total amount requirements for such in a resin made therefrom.

#### CONCLUSION

In view of the new rejection set forth above, the Examiner's §§ 102 and 103(a) rejections are procedurally reversed.

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provide that the Appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner . . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record . . . .

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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)(2006).

REVERSED/§ 41.50(b)

PL Initial:  
sld

NORRIS, MCLAUGHLIN & MARCUS, PA  
875 THIRD AVENUE  
18<sup>TH</sup> FLOOR  
NEW YORK, NY 10022