

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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte PETER G. ODELL

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Appeal No. 1996-3982  
Application No. 08/315,005

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ON BRIEF

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Before JOHN D. SMITH, WARREN and LIEBERMAN, Administrative Patent Judges.  
LIEBERMAN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 1, 2, 6 through 10, 12 through 15 and 18 through 26 and refusing to allow claim 11 as amended subsequent to the final rejection, which are all the claims in the application.

#### THE INVENTION

The invention is directed to a process for the preparation of a liquid developer, wherein the developer comprises a liquid hydrocarbon vehicle, thermoplastic resin particles, pigment, a charge additive or adjuvant and a charge director. The process consists essentially of subjecting the liquid vehicle to a supercritical solvent extraction whereby the hydrocarbon is extracted by the supercritical solvent resulting in a liquid vehicle having a higher solids content. One supercritical solvent used is carbon dioxide.

#### THE CLAIMS

Claims 1 and 2 are illustrative of appellants' invention and are reproduced below.

1. A process for the preparation of a liquid developer consisting essentially of a hydrocarbon liquid vehicle, thermoplastic resin particles, pigment, a charge additive or adjuvant, and a charge director, which process consists essentially of a supercritical solvent extraction of said liquid vehicle and wherein said liquid developer possesses a high solids content.

2. A process for the preparation of a liquid developer consisting essentially of a liquid vehicle, thermoplastic resin particles, pigment, a charge adjuvant and a charge director, which process consists essentially of the supercritical carbon dioxide solvent extraction of said liquid vehicle of said developer and wherein said liquid developer possesses a high solids content of from about 50 to about 90 weight percent, and wherein the solids are comprised of thermoplastic resin particles, pigment, and charge adjuvant.

#### THE REFERENCES OF RECORD

As evidence of obviousness, the examiner relies upon the following references.

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Zosel	3,969,196	Jul. 13, 1976
Felder et al. (Felder)	5,206,108	Apr. 27, 1993
Lane et al. (Lane)	5,254,427	Oct. 19, 1993

#### THE REJECTIONS

Claims 1, 2, 6 through 15 and 18 through 26 stand rejected under 35 U.S.C. § 112, paragraph two, as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 23 and 24 stand rejected under 35 U.S.C. § 112, first paragraph, as the specification as originally filed does not provide support for the invention as is now claimed.

Claims 1, 2, 6, 7, 9 through 15 and 18 through 26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Felder in view of Zosel.

Claims 1, 2, 6 through 15, and 18 through 26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lane in view of Zosel.

#### OPINION

We have carefully considered all of the arguments advanced by appellant and the examiner and agree with the appellants that the aforementioned rejections under 35 U.S.C. § 103 and 35 U.S.C. § 112, paragraph two, are not well founded.

Accordingly, we will not sustain these rejections. We agree with the examiner that the rejection under 35 U.S.C. § 112, paragraph one, is well founded. Accordingly, we will sustain this rejection.

***The Rejection under Section 112 -- Indefiniteness***

“The legal standard for definiteness under the second paragraph of 35 U.S.C. § 112 is whether a claim reasonably apprises those of ordinary skill in the art of its scope.” *In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). The inquiry is to determine whether the claim sets out and circumscribes a particular area with a reasonable degree of precision and particularity. The definiteness of the language employed in a claim must be analyzed not in a vacuum, but in light of the teachings of the particular application. *In re Moore*, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

It is the examiner’s position that the claims fail to recite a step of providing a first liquid developer or composition comprising a liquid vehicle to be extracted. Furthermore, the examiner argues that it is not clear what liquid developer has said high solids content. See Answer, page 5. Hence, the claims are indefinite.

However, the specification, discloses a process for the preparation of a concentrated liquid developer,

wherein the supercritical carbon dioxide solvent extraction comprises supplying a developer suspension to the extraction vessel, which suspension can be in the form of liquid, paste, or granular solid, and which suspension contains a hydrocarbon dispersant to be removed in part or in entirety; supplying to the extraction vessel a supercritical solvent for the hydrocarbon dispersant; removing the supercritical solvent into which the hydrocarbon dispersant has dissolved from the extraction vessel; lowering the pressure of the solution to vaporize the solvent; and recovering the concentrated liquid developer.

See specification, page 7, lines 19-28; see also the examples.

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On this record, we conclude that the specification provides a reasonable standard for understanding the metes and bounds of the phrases, "process for the preparation of a liquid developer consisting essentially of a hydrocarbon liquid vehicle," and "process for the preparation of a liquid developer consisting essentially of a liquid vehicle . . . which process consists essentially of the supercritical carbon dioxide solvent extraction of said liquid vehicle of said developer and wherein said liquid developer possesses a high solids content . . . ," when the claim is read in light of the specification. **Seattle Box Co. v. Industrial Crating & Packing, Inc.**, 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984).

Similarly, with respect to claim 21, which is directed to "liquid developer possesses a high solids content of from about 30 to about 100 weight percent," weight is given to the requirement that the developer must be liquid. Hence sufficient liquid must be retained to maintain the developer in a liquid state.

Accordingly, we reverse the rejection of the examiner.

***The Rejection under Section 112 -- Written Description Requirement***

We turn next to the rejection of claims 23 and 24 under 35 U.S.C. § 112, first paragraph, as lacking written descriptive support in the original disclosure for the claims presently recited. As the court stated in ***In re Kaslow***, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983):

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession

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at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language. [Citations omitted.]

“One shows that one is ‘in possession’ of the invention by describing the invention, with all its claimed limitations, not that which make it obvious.” [Citations omitted.]

***Lockwood v. American Airlines Inc.***, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997).

In the present case, we believe appellants’ disclosure fails to reasonably convey to one of ordinary skill in the art that appellants had possession of a process for the preparation of a liquid developer, “wherein there is extracted from about 60 to about 78 weight percent of said liquid vehicle.” We determine that the disclosure as originally filed does not convey to the artisan that the inventor has possession of the aforementioned limitation.

Indeed, appellants’ principal argument is directed to the proposition that the application contains support for the claimed range on page 1 which provides for a solid content, “with a 50 or greater solids content.” See specification, page 1. We determine that “50 or greater” does not provide support for the specific limitation of “about 60 to about 78.” In addition, appellants specifically rely on working examples II and III wherein 39.1 milliliters and 18.8 grams of liquids were respectively collected. See Brief, page 10. However, appellants have not established that the proportions of liquid extract obtained by Examples II and III respectively provide support for the limitation, “extracted from about 60 to about 78 weight percent of said liquid vehicle,” or are even relevant to those limitations.

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Accordingly, from our perspective, the original disclosure would not have reasonably conveyed to one of ordinary skill in the art that appellants had "possession" of a process for the preparation of a liquid developer, "wherein there is extracted from about 60 to about 78 weight percent of said liquid vehicle." Accordingly, we affirm the examiner's decision rejecting all of the appealed claims under 35 U.S.C. § 112, first paragraph.

***The Rejections under Section 103***

Under 35 U.S.C. § 103, the obviousness of an invention cannot be established by combining the teachings of the prior art references absent some teaching, suggestion or incentive supporting the combination. ***ACS Hospital Systems, Inc. v. Montefiore Hospital***, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). This does not mean that the cited prior art references must specifically suggest making the combination. ***B.F. Goodrich Co. V. Aircraft Braking Systems Corp.***, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996); ***In re Nilssen***, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988). Rather, the test for obviousness is what the combined teachings of the prior art references would have fairly suggested to those of ordinary skill in the art. ***In re Young***, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); ***In re Keller***, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In evaluating such prior art references, it is proper to take into account not only their specific teachings but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. ***In re Preda***, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

The examiner relies upon a combination of two different combinations of references to reject the claimed subject matter and establish a *prima facie* case of obviousness. With respect to each combination of references, the examiner has stated that neither the reference to Felder nor Lane exemplifies concentrating the suspension by supercritical solvent extraction. See Answer, pages 9 and 11. Indeed, we determine that neither reference discloses nor teaches supercritical solvent extraction.

Accordingly, Zosel is relied upon as disclosing the separation of materials through the use of supercritical extraction. See Abstract. We find that the separation process is taught as "extremely simple in operation" especially on a commercial scale. See column 1, lines 42-46. We find that "[t]ransfer of organic compounds is achieved equally satisfactorily in purely inorganic gases such as CO<sub>2</sub>." See column 4, lines 65-67. Moreover, we find that Zosel discloses that, "if a gas such as ethylene or carbon dioxide is passed under the conditions of this invention through the aluminum alcoholate reaction mixture prior to hydrolysis, the organic impurities which are chiefly olefins are taken up in the supercritical phase substantially quantitatively while the aluminum alcoholate is obtained in the residue." See column 22, lines 51-57. We further find that in example 13, carbon dioxide is used to separate dodecene from paraffin oil.

However, notwithstanding the above findings, in our view the Zosel reference fails to disclose or teach that a supercritical extraction of a composition comprising a liquid hydrocarbon vehicle, thermoplastic resin particles, pigment, a charge additive

or adjuvant and a charge director would result in the extraction of only the hydrocarbon vehicle. Indeed, the entire thrust of the Zosel reference is that "transferability into the supercritical gas depends upon the specific constitution of the compound." See column 1, lines 63-65. Accordingly, the person having ordinary skill in the art must independently determine in each system of compounds and polymers, such as those present in a liquid developer, which component(s) may be extracted with a supercritical gas. Therefore, Zosel fails to suggest the proposed supercritical extraction required by the claimed subject matter.

Based upon the above analysis, the examiner's stated rejection falls short of establishing a *prima facie* case of obviousness. The mere fact that the prior art could be modified as proposed by the examiner is not sufficient to establish a *prima facie* case. *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The suggestion for the proposed modification must be in the prior art, and not in the applicant's disclosure. *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988).

In the case before us, the examiner has simply failed to provide acceptable reasons, based on the applied prior art or on the basis of knowledge generally available to one of ordinary skill in the art, for the proposed modification. This is so since the examiner has not convincingly explained why the combined references would have fairly suggested the claimed subject matter to one of ordinary skill in the art. Consequently, we will not sustain the rejections under 35 U.S.C. § 103 over these references.

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#### DECISION

The rejection of claims 1, 2, 6 through 15 and 18 through 26 under 35 U.S.C. § 112, paragraph two, as being indefinite for failing to point out and distinctly claim the subject matter applicant's regards as the invention is reversed.

The rejection of claims 23 and 24 under 35 U.S.C. § 112, first paragraph, as the specification as originally filed does not support the invention as now claimed is affirmed.

The rejection of claims 1, 2, 6, 7, 9 through 15 and 18 through 26 under 35 U.S.C. § 103 as being unpatentable over Felder in view of Zosel is reversed.

The rejection of claims 1, 2, 6 through 15, and 18 through 26 under 35 U.S.C. § 103 as being unpatentable over Lane in view of Zosel is reversed.

The decision of the examiner is affirmed-in-part.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JOHN D. SMITH	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
CHARLES WARREN	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
PAUL LIEBERMAN	)	
Administrative Patent Judge	)	

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