

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOACHIM WERNER, SCOTT A. KANE,
HERMAN P. DOERGE and ERIC F. BOONSTRA

Appeal No. 1998-1146
Application No. 08/410,177

ON BRIEF

Before, KIMLIN, OWENS, and KRATZ, Administrative Patent Judges.
KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 2, 4-6 and 8-10. Claims 3 and 7, which are all of the remaining claims pending in this application, stand withdrawn from further consideration by the examiner as drawn to a non-elected invention.

BACKGROUND

Appellants' invention in its broadest form relates to a composition consisting essentially of 1,3-dioxolane and one of cyclopentane, 2-methyl pentane, 3-methyl pentane or n-hexane in specified amounts. The composition is described as possessing azeotropic attributes by appellants. The composition is disclosed as being useful as a blowing agent in the production of foams and for solvent cleaning applications (specification, pages 4 and 5). An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. An azeotropic composition consisting essentially of
 - a) from about 4 to about 50% by weight 1,3-dioxolane and
 - b) one compound selected from the group consisting of
 - 1) from about 75 to about 96% by weight cyclopentane or
 - 2) from about 60 to about 79% by weight 2-methyl pentane or
 - 3) from about 59 to about 77% by weight 3-methyl pentane or
 - 4) from about 50 to about 69% by weight n-hexane in which the sum of the weight percent of a) plus weight percent b) is approximately 100 percent.

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

Comelli et al. (Comelli), "Liquid Phase Excess Enthalpies for the Binary Systems of 1,3-Dioxolane with n-Pentane, 3-Methylpentane, or Methylcyclopentane," J. Chem. Eng. Data., 35, 283-84 (1990).

Inglese et al. (Inglese), "Thermodynamics of binary mixtures containing cyclic ethers 2. Excess enthalpies of oxolane, 1,3-dioxolane, oxane, 1, 3-dioxane, and 1, 4-dioxane with cycloalkanes," J. Chem. Thermodynamics, 12, 1047-1050 (1980).

Claims 1, 2, 4-6 and 8-10 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 2, 5 and 9 stand rejected under 35 U.S.C. § 102 as anticipated by Comelli. Claims 1 and 2 stand rejected under 35 U.S.C. § 102 as anticipated by Inglese.

Since appellants do not argue any of the claims separately as they are grouped with respect to each of the above-noted grounds of rejection (brief, page 3), our focus here is primarily limited to the application of each separate

ground of rejection to one claim within each grouping, in this case the subject matter defined by independent claim 1. See 37 CFR § 1.192(c)(7) and (c)(8) (1995).

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. This review leads us to conclude that the examiner's

§ 112, second paragraph rejection is not sustainable.

However, we shall sustain the examiner's rejections based on the applied prior art. Our reasoning follows.

Rejection Under 35 U.S.C. § 112, second paragraph

The relevant inquiry under 35 U.S.C. § 112, second paragraph, is whether the claim language, as it would have been interpreted by one of ordinary skill in the art in light of appellants' specification and the prior art, sets out and circumscribes a particular area with a reasonable degree of precision and particularity. See In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

With regard to the appealed claims, the examiner (answer, pages 3 and 4) argues that:

Said claims are indefinite in failing to recite either the boiling point at a specified pressure or the vapor pressure at a specified temperature to define the azeotropic or azeotropic-like compositions.... A single boiling point (at a particular pressure) is the characteristic by which the presence or absence of an azeotrope is determined. Therefore by failing to define this critical, defining characteristic applicant fails to particularly point out and distinctly claim the inventive subject matter.

The examiner, however, does not carry the burden of persuasively explaining why the language of the appealed claims, as it would have been interpreted by one of ordinary skill in the art in light of appellants' specification, drawings and the prior art, fails to set out and circumscribe a particular area with a reasonable degree of precision and particularity.

We give the terms of the appealed claims their ordinary meaning unless we find that another meaning is intended by appellants. See In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1996). Here, as explained by appellants in their specification (page 6, lines 10-25), any of the compositions made up of the specified components in the specified amounts have "properties which are

characteristic of a true binary azeotrope." While we are cognizant that appellants offer a more conventional and perhaps more limiting definition of "azeotrope" (page 9, lines 25-29 of their specification), it is clear from the specification as a whole that appellants use the term "azeotropic" in their claims to embrace all of the compositions that include the claimed specified components in the specified amounts. In this regard, we note that the specification makes manifest that mixtures that do "not tend to fractionate to any great extent upon evaporation" (specification, page 6, lines 18-20) are included within appellants' definition of "azeotropic." This expansive definition of "azeotropic" is in accord with appellants' use of components of "normal commercial purity (i.e., at least 95%)" (specification, page 6, lines 8 and 9) in forming their so called azeotropic composition. Also see appellants' brief, page 4, lines 3-7.

Since we find appellants' claims reasonably definite, we will not sustain the examiner's rejection of the appealed claims under 35 U.S.C. § 112, second paragraph.

§ 102 Rejections

The examiner (answer, pages 4 and 5) has found that Comelli exemplifies the use of a mixture of 1,3-dioxolane with 3-methylpentane in determining thermodynamic properties of such mixtures. As found by the examiner, the fifth composition reported in the third column of Table II of Comelli "exemplifies having a molar ratio of 0.3182 moles of 1,3-dioxolane and 0.6818 moles of 3-methylpentane" which corresponds to "a weight ratio of about 29 weight percent 1,3-dioxolane and about 71 weight percent 3-methylpentane" (answer pages 5 and 6). Appellants' representative claim 1 is inclusive of such a composition by calling for from about 4 to about 50% by weight of 1,3-dioxolane and from about 59 to about 77% by weight of 3-methylpentane as one optional azeotropic mixture. As such, we agree with the examiner that Comelli anticipates, prima facie, the composition required by representative claim 1 as well as claims 2, 5 and 9 which latter claims stand or fall together with representative claim 1. Similarly, we agree with the examiner that Inglese anticipates, prima facie, the composition required by representative claim 1 as well as claim 2 for reasons as set forth by the examiner at page 7 of the answer.

Appellants do not continue to maintain any serious disagreement with the examiner's determinations regarding the weight percents that correspond to the molar percents described in the applied references.¹ Rather, appellants argue that Comelli does not teach the compositional ranges set forth in representative claim 1 and that both of the separately applied references do not teach that their respective mixtures are azeotropic. In this regard, appellants assert that the applied references being relied upon represent accidental results. We are not persuaded by those arguments.

It has long been held that the disclosure in the prior art of any value within a claimed range is an anticipation of the claimed range. In re Wertheim, 541 F.2d 257, 267, 191

¹ Appellants initially disagreed with the examiner's determination regarding the corresponding weight percents of the components in Table II, column 3, row 5 of Comelli (reply brief, page 4). However, the examiner maintained the correct weight percents were 29% for 1,3-dioxolane and 71% for 3-methylpentane in the supplemental answer. Appellants did not dispute that continued assertion by the examiner in their supplemental reply brief. We note that the molecular weight of 1,3-dioxolane is approximately 74 and the molecular weight of 3-methylpentane is approximately 86, which upon a routine calculation would support the examiner's position.

USPQ 90, 100 (CCPA 1976); Ex parte Lee, 31 USPQ 1105, 1106 (Bd. App. & Int. 1993). Additionally, we observe that the azeotropic property simply does not serve to distinguish over the applied prior art, when, as here, it is inherently or intrinsically possessed by the prior art exemplified composition. See In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-434 (CCPA 1977). Moreover, when a claimed product appears to be identical or substantially identical, the burden is on appellants to prove that the product of prior art does not possess characteristics attributed to the claimed product. See In re Spada, 911 F.2d 705, 708-709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). In this regard, we note that the making of the particular tested compositions of each of the applied references was purposeful to obtain useful information on the properties of such mixtures and not mere happenstance or accidental as apparently urged by appellants. Appellants reference to an election/restriction requirement at page 9 of the brief is noted. However, the propriety of the rejections made by the examiner is before us for review, not the propriety of any election or restriction requirement that may

have been maintained by the examiner. On this record, we shall sustain the stated § 102 rejections.

CONCLUSION

The decision of the examiner to reject claims 1, 2, 4-6 and 8-10 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention is reversed. The decision of the examiner to reject claims 1, 2, 5 and 9 under 35 U.S.C. § 102 as anticipated by Comelli and to reject claims 1 and 2 under 35 U.S.C. § 102 as anticipated by Inglese is affirmed.

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

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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TERRY J. OWENS)	APPEALS
Administrative Patent Judge)	AND
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APPEAL NO. - JUDGE KRATZ
APPLICATION NO.

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DECISION: **ED**

Prepared By:

DRAFT TYPED: 29 Apr 02

FINAL TYPED: