

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 35

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HENRY ASHJIAN, THOMAS J. GIACOBBE,
FREDERICK C. LOVELESS, CARL R. MACKERER,
NORMAN J. NOVICK and THOMAS P. O'BRIEN

Appeal No. 95-2950
Application No. 07/855,127¹

ON BRIEF

Before SOFOCLEOUS, GARRIS and PAK, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

¹ Application for patent filed March 18, 1992. According to appellants, this application is a continuation of Application 07/612,771 filed November 6, 1990, now abandoned.

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This is a decision on an appeal from the final rejection of claims 66 through 76 and 85 through 99 which are all of the claims remaining in the application.

The subject matter on appeal relates to a method for increasing the resistance to biological degradation of a cutting fluid emulsion via a bioresistant surfactant composition (in an amount sufficient to impart bioresistant properties) comprising succinic acid or derivatives thereof containing at least one branched aliphatic substituent group having at least nine carbon atoms, at least three of which are tertiary carbon atoms. The appealed subject matter also relates to the corresponding cutting fluid. This appealed subject matter is adequately illustrated by independent claims 66, 85 and 99, a copy of which taken from the appellants' Brief is appended to this decision.

The references relied upon by the examiner in the rejections before us are:

Oasterhout et al. (Oasterhout) 1956	2,741,597	Apr. 10,
Murphy et al. (Murphy) 1978	4,100,083	Jul. 11,

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Gutierrez et al. (Gutierrez) 12, 1987	4,664,826	May
Laemmle et al. (Laemmle) 2, 1987	4,670,168	Jun.
Dohner 1987	4,689,166	Aug. 25,
Malito et al. (Malito) 1988	4,767,554	Aug. 30,
Rawlinson et al. (Rawlinson) 18, 1988	4,778,614	Oct.
Biresaw et al. (Biresaw) 1, 1988	4,781,848	Nov.
Lenack et al. (Lenack) 1990	4,956,110	Sep. 11,

Under 35 U.S.C. § 102(b), claims 70-72, 76, 88-93 and 99 stand rejected as being anticipated by Biresaw, and claims 66-72, 87-93 and 99 stand rejected as being anticipated by Laemmle².

Under 35 U.S.C. § 103, claims 66-76 and 85-99 stand rejected as being unpatentable over Oasterhout, Rawlinson, Biresaw or Laemmle alone or in combination with Gutierrez, Dohner, Murphy and Malito, and claims 94-99 stand rejected as

² For some unknown reason, each of the § 102 rejections incongruously includes certain dependent claims but not their parent independent claims.

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unpatentable over these references and further in view of
Lenack³.

We refer to the various Briefs and Answers of record for
a complete exposition of the opposing viewpoints expressed by
the appellants and the examiner concerning the above noted
rejections.

OPINION

For the reasons which follow, we cannot sustain any of
the rejections presented by the examiner in this appeal.

³ On this record, it is unclear why the examiner rejected
claims 94-99 first without and then with the Lenack reference.

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The § 102 Rejections

Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention. RCA v. Applied Digital, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). Here, the examiner has failed to carry her burden of establishing that either Biresaw or Laemmler discloses, expressly or inherently, each and every element of the claims under rejection including most particularly the claim requirement that the branched aliphatic substituent of the succinic acid or derivative contain at least nine carbon atoms, at least three of which are tertiary carbon atoms.

For example, the examiner makes the finding "Laemmler explicitly teaches 2-dodecenyl succinic acid salts" and then concludes "which is clearly appellants' dodecenyl (propene tetramer)" (Answer, page 8). Although her finding is correct, the examiner's conclusion is completely without support. Moreover, this conclusion is rebutted by the appellants' argument that "[t]he term '2-dodecenyl', without more fails to suggest branching and means nothing more than a 12 carbon olefin having one double bond at the second carbon atom"

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(Reply Brief, page 5) which is supported by the accepted dictionary definition of dodecene (e.g., see Hawley's Condensed Chemical Dictionary, 11th edition)⁴.

In light of the foregoing, we cannot sustain either the § 102 rejection of claims 70-72, 76, 88-93 and 99 as being anticipated by Biresaw or the § 102 rejection of claims 66-72, 87-93 and 99 as being anticipated by Laemmler.

The § 103 Rejections

On the record of this appeal, the examiner has failed to carry her burden of establishing a prima facie case of obviousness with respect to the subject matter defined by the appealed claims.

For example, the answers contain no basis for concluding that an artisan with ordinary skill, in the absence of hindsight, would have modified the previously discussed

⁴ With this argument in mind, we feel obliged to point out that the previously discussed feature involving at least three tertiary carbon atoms is not explicitly recited in appealed independent claim 99 nor inherently required by the claim 99 term "2-dodecenyl". Nevertheless, it is clear to us that neither Biresaw nor Laemmler expressly or inherently discloses the monoisobutyl-2-dodecenyl succinate surfactant recited in this claim.

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Biresaw and Laemmle references in such a manner as to supply the aforementioned deficiencies and thereby obtain the method and cutting fluid claimed by the appellants. Similarly, the examiner has advanced no rational proposal for somehow modifying the subject matter of Oasterhout (which concerns an alkenyl succinic acid that concededly corresponds to certain of the appellants' succinic acids but that is for use as an anti-corrosive for mineral lubricating oil) in such a manner as to result in the here claimed method and cutting fluid. As for Rawlinson, the examiner states that "Rawlinson teaches use of branched C₃ to C₅ olefin, particularly polyisobutene sulphonate and polyisobutene succinimide as emulsifier in aqueous cutting fluid having resistant [sic] to breakdown by micro-organisms" (Answer, page 4) and concludes that "it would have been obvious to one of ordinary skill in the art to substitute the secondary references ester succinate for the primary reference bioresistant surfactant because they are derivatives of succinic acid or anhydrides and are used for the same or similar functions in metalworking fluids rendering the claims prima facie obvious" (Answer, page 5). However, we find nothing and the examiner points to nothing in the applied

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references which would have suggested, in the absence of hindsight, replacing a surfactant of the primary reference to Rawlinson with some ester succinate of the secondary references, as proposed by the examiner, to thereby yield a method and cutting fluid as claimed by the appellants⁵.

For the above stated reasons, we also cannot sustain the examiner's § 103 rejection of claims 66-76 and 85-99 as being unpatentable over Oasterhout, Rawlinson, Biresaw or Laemmler alone or in combination with Gutierrez, Dohner, Murphy and Malito or her § 103 rejection of claims 94-99 as being unpatentable over these references and further in view of Lenack.

⁵ In any further prosecution that may occur, the appellants and the examiner should consider whether the polyisobutene succinimide emulsifier which preferably has a molecular weight of from 1000 to 3000 (e.g., see lines 64-66 in column 2) of Rawlinson's cutting fluid would necessarily and inherently possess at least three tertiary carbon atoms and thus would necessarily and inherently satisfy the requirements, such as the bioresistant surfactant feature, of at least some of the claims on appeal.

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The decision of the examiner is reversed.

REVERSED

MICHAEL SOFOCLEOUS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
BRADLEY R. GARRIS)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
CHUNG K. PAK)	
Administrative Patent Judge)	

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APPENDIX

66. A method for increasing the resistance to biological degradation of a cutting fluid emulsion made from a bioresistant cutting fluid concentrate and water comprising:

preparing the bioresistant cutting fluid concentrate by treating a lubricative basestock material with an amount sufficient to impart bioresistant properties to the cutting fluid concentrate of a bioresistant surfactant composition comprising succinic acid, or derivatives thereof, containing at least one branched aliphatic substituent group, derived from a propylene oligomer, on the alpha carbon of the succinic acid, the substituent containing at least nine carbon atoms, at least three of which are tertiary carbon atoms; and

blending the bioresistant cutting fluid concentrate with water, in the absence of a biocide, to produce a bioresistant emulsion.

85. In an aqueous cutting fluid comprising water, an oil component and a surfactant component for maintaining the oil in the form of an emulsion, wherein the improvement comprises use as a bioresistant surfactant of succinic acid or derivative thereof containing branched aliphatic substituent group, derived from a propylene oligomer, on the alpha carbon of the succinic acid, said substituent containing at least nine carbon atoms, at least three of which are tertiary carbon atoms.

99. An aqueous cutting fluid comprising water, an oil component and a bioresistant surfactant component for maintaining the oil in the form of an emulsion, the surfactant component is monoisobutyl-2-dodecenyl succinate.

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