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11/717,524	03/13/2007	Sevim Z. Erhan	0071.06	9606

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EXAMINER

CARR, DEBORAH D

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PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SEVIM Z. ERHAN, KENNETH M. DOLL,
and BRAJENDRA K. SHARMA

Appeal 2011-008127
Application 11/717,524
Technology Center 1600

Before TONI R. SCHEINER, DEMETRA J. MILLS and
STEPHEN WALSH, *Administrative Patent Judges*.

WALSH, *Administrative Patent Judge*.

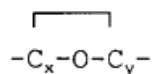
DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Patent Examiner's rejection of claims 2-10, 14-16, and 22. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

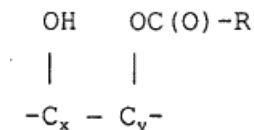
STATEMENT OF THE CASE

Claim 22 is representative and reads as follows:

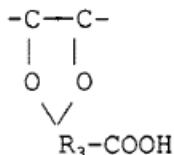
22. A method of making fatty acid ester derivatives comprising:
reacting in the presence of an acid catalyst an epoxidized fatty acid or
an ester thereof having one or more oxirane rings of the formula:



wherein x and y are consecutive integers, with a first carboxylic acid
of the formula R-COOH to form (a) a hydroxy fatty acid ester
derivative wherein said oxirane ring is opened and converted to a
hydroxy ester of the formula:



in combination with (b) a fatty acid ketal wherein said oxirane ring is
opened and converted to a ketal group of the formula:



wherein said R of said first carboxylic acid is a ketone or aldehyde of
the formula R₃(O) wherein said R₃ is selected from the group
consisting of cyclic, straight or branched chain hydrocarbons, and
substituted cyclic, straight or branched chain hydrocarbons.

Claims 2-10, 14-16, and 22 stand rejected under 35 U.S.C. §103(a) as
unpatentable over Campanella¹ in view of Bloom² or Pajerski³ or Sato⁴ or
Doorakian.⁵

¹ A. Campanella and M. A. Baltanás, *Degradation of the oxirane ring of epoxidized vegetable oils in liquid-liquid systems: II. Reactivity with solvated acetic and peracetic acids*, 35 LAT. AM. APPL. RES. 211-216 (2005), printed from

<http://www.scielo.org.ar/scielo.php?script=sci_arttext&pid=S0327-07932005000300007&lng=es&nrm=iso> April 21, 2008.

² Paul D. Bloom, WO 2006/014483 A2, published Feb. 9, 2006.

OBVIOUSNESS

The Issue

The rejection established that Campanella disclosed a method of reacting an epoxidized fatty acid with a carboxylic acid that produced a hydroxyl ester. (Ans. 3.) The rejection concluded:

[i]t would have been obvious to one skilled in the art to combine the method of Campanella with the absence of a catalyst of [Sato] in order to avoid the discoloration or production of dark by-products or to combine the method of Campanella with the lack of solvent of [Doorakian] in order to prevent interference with the reaction rate with the unsaturated fatty acid of [Bloom] in order to provide a plasticizer with significantly lower volatility or with the levulinic acid of [Pajerski] in order to improve the flexibility of films since these modifications are conventionally known.

(*Id.* at 7.)

Appellants contend that the claimed method produces two products in combination: (1) a hydroxyl fatty acid ester derivative, and (2) a fatty acid ketal. (App. Br. 10.) According to Appellants, “the prior art does not disclose or suggest any reactions which would produce appellants' second product, a fatty acid ketal of the formula [shown in claim 22].” (*Id.* at 12.)

The issue is whether the rejection established the prima facie obviousness of the claimed method producing both a hydroxyl fatty acid ester derivative and a fatty acid ketal.

³ Anthony D. Pajerski, US 2006/0264568 A1, published Nov. 23, 2006.

⁴ Setsuo Sato et al., US 6,274,750 B1, issued Aug. 14, 2001.

⁵ George A. Doorakian et al., US 4,171,420, issued Oct. 16, 1979.

Findings of Fact

1. The Examiner's findings concerning the scope and content of the prior may be found at Ans. 3-7.

Principles of Law

When determining whether a claim is obvious, an Examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teachings of the prior art." *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995).

Analysis

After reviewing the facts and arguments, we conclude that the evidence and rational set out in the rejection are insufficient to establish a prima facie case of obviousness for the method of claim 22. In particular, although the rejection identified prior art teachings concerning the production of a hydroxyl ester product, the rejection did not identify prior art teachings concerning the production of a ketal product in combination with the hydroxyl ester product, and did not resolve that difference between the prior art methods and the claimed method.

SUMMARY

We reverse the rejection of claims 2-10, 14-16, and 22 under 35 U.S.C. §103(a) as unpatentable over Campanella in view of Bloom or Pajerski or Sato or Doorakian.

REVERSED

cdc