

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

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THEODORE TYSAK, MARK STEPHEN FRAZZA
and LEO JOSEPH PROCOPIO

Appeal No. 2004-1872
Application No. 09/886,183

ON BRIEF

Before PAK, DELMENDO, and PAWLIKOWSKI, **Administrative Patent Judges.**

PAWLIKOWSKI, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C § 134 from the examiner's final rejection of claims 7-10 and 16-19.

Claims 7 and 9 are representative of the subject matter on appeal, and are set forth below:

7. An emulsion polymer comprising as polymerized units from:

a) 75 to 99 weight% at least one nonionic monomer based on the weight of said emulsion polymer;

b) 0.5 to 5 weight % at least one ionic monomer based on the weight of said emulsion polymer;

c) 0 to 10 weight % at least one functional monomer based on the weight of said emulsion polymer; and

d) 0.5 to 10 weight % at least one photoinitiator monomer based on the weight of said emulsion polymer;

wherein the sum of said nonionic monomer, said ionic monomer, said functional monomer, and said photoinitiator monomer equals 100%;

wherein said emulsion polymer has a weight average molecular weight in the range of 30,000 to 300,000; and

wherein said emulsion polymer has a glass transition temperature in the range of -10°C to 60°C and an average particle diameter in the range of 60 nm to 500 nm.

9. A coating formulation comprising

a) an emulsion polymer comprising as polymerized units from:

i) 75 to 99.5 weight % at least one nonionic monomer based on the weight of said emulsion polymer;

ii) 0.5 to 5 weight % at least one ionic monomer based on the weight of said emulsion polymer;

iii) 0 to 10 weight % at least one functional monomer based on the weight of said emulsion polymer; and

iv) 0 to 10 weight % at least one photoinitiator monomer based on the weight of said emulsion polymer;

wherein the sum of said nonionic monomer, said ionic monomer, said functional monomer, and said photoinitiator monomer equals 100%;

wherein said emulsion polymer has a weight average molecular weight in the range of 30,000 to 300,000;

wherein said emulsion polymer has a glass transition temperature in the range of -10°C

to 60°C and an average particle diameter in the range of 60 nm to 500 nm, and
b) 0.5 weight % to 10 weight % photoinitiator molecule, based on the weight of said emulsion polymer.

Claims 7-10 and 16-19 stand rejected by the examiner under 35 U.S.C. § 102(b) as being anticipated by Rehmer.

The examiner relies upon the following reference as evidence of unpatentability:

Rehmer et al. (Rehmer)	5,162,415	Nov. 10, 1992
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I. Preliminary Matters

Pursuant to our Order under 37 CFR § 1.196(d), mailed August 27, 2004 for Appeal No. 2004-1872, appellants filed a reply to this Order on November 29, 2004.

In the brief, filed on June 2, 2003, appellants' position was that Rehmer does not disclose any specific examples of a polymer having a weight average of molecular weight in the range of 30,000 to 300,000. Appellants stated that therefore, the specific examples disclosed in Rehmer do not anticipate the present invention, and as such, appellants state that Rehmer does not anticipate their claims as asserted by the examiner.

Thereafter, we ordered appellants to measure the weight average molecular weight of the examples of Rehmer. See page 1 of our Order.

II. Appellants' Reply to Our Order

In response, appellants filed a reply to our Order, submitting a declaration by Mark S. Frazza, under 37 CFR § 1.132. The declaration includes data for measurements of the weight average molecular weight of the polymers of Examples 1 and 2 of Rehmer. The weight average molecular weight of the

emulsion polymer prepared according to Example 1 of Rehmer was found to be 17,746,493, and the weight average molecular weight of the emulsion polymer prepared according to Example 2 of Rehmer was found to be 416,902.

We note that Frazza's experiments are not identical to Rehmer's Examples 1 and 2. For example, in Frazza's example 1, the aqueous emulsion was spiked with initiator instead of being added continuously. Also, in Frazza's Example 2, the relative amounts for acrylamide, emulsifier I, and emulsifier II, are not the same as Rehmer's Example 2, and feature the use of ferrous sulfate, which was not used in Rehmer's Example 2. We presume that these differences have no appreciable effect on molecular weight.

III. The 35 U.S.C. § 102(b)

We have carefully reviewed the examiner's position for the anticipation rejection, set forth on pages 3-5 of the answer. In particular, the examiner states that Rehmer teaches a polymer having a weight average molecular weight range of from 50,000 to 2,000,000 and refers to column 9, lines 44-48 of Rehmer. Answer, page 4. Appellants claim a weight average molecular weight range of from 30,000 to 300,000.

We refer to the case of In re Arkley, 455 F.2d 586, 590, 172 USPQ 524, 526 (CCPA 1972). In this case, the court indicated that for a proper anticipation rejection, the reference must clearly and unequivocally disclose the claimed invention without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the reference.

In the instant case, there is a need for picking and choosing particular features disclosed in Rehmer, in order to

arrive at appellants' claimed polymer composition, including its weight average molecular weight range of from 30,000 to 300,000.

Hence, we reverse the anticipation rejection.

IV. New Ground of Rejection

Claims 7-10 and 16-19 are rejected under 35 U.S.C. § 103 as being obvious over Rehmer.

We refer to the examiner's findings regarding the teachings found in Rehmer, made on pages 3-5 of the answer, and incorporate them as our own. The examiner finds that each element of the claims is disclosed in Rehmer, while recognizing that Rehmer discloses a weight average molecular weight of from 50,000 to 2,000,000, while appellants' claim a range of from 30,000 to 300,000. Appellants do not dispute these findings regarding the teachings found in Rehmer as made by the examiner. Appellants dispute the examiner's conclusion of anticipation with regard to these findings. See pages 5-7 of the brief.

As pointed out by the examiner, on page 4 of the answer, Rehmer discloses a weight average molecular weight of from 50,000 to 2,000,000. See col. 9, lines 44-48 of Rehmer. This disclosed range overlaps appellants' claimed range of from 30,000 to 300,000. In addition, Rehmer teaches that molecular weight regulators may be useful. See column 9, lines 53-59 of Rehmer.

In cases involving overlapping ranges, we note that it has been consistently held that even a slight overlap in range establishes a prima facie case of obviousness. E.g., In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (concluding that a claimed invention was rendered obvious by a prior art reference whose disclosed range ("about 1-5%" carbon monoxide) abutted the claimed range ("more than 5% to about 25%

carbon monoxide)); In re Malagari, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (concluding that a claimed invention was rendered prima facie obvious by a prior art reference whose disclosed range (0.020-0.035% carbon) overlapped the claimed range (0.030-0.070% carbon)); see also In re Geisler, 116 F.3d 1465, 1469, 43 USPQ2d 1362, 1365 (acknowledging that a claimed invention was rendered prima facie obvious by prior art reference whose disclosed range (50-100 Angstroms) overlapped the claimed range (100-600 Angstroms)).

We determine that appellants' claimed weight average molecular weight overlaps the range disclosed by Rehmer and therefore is rendered obvious by Rehmer.

In view of the above, we reject claims 7-10 and 16-19 under 35 U.S.C. § 103 as being obvious over Rehmer.

This decision contains a new ground of rejection pursuant to 37 CFR § 41.50(b)(effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 CFR § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides 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

. . . .

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

REVERSED; § 41.50(b)

CHUNG K. PAK)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
)	APPEALS AND
ROMULO H. DELMENDO)	INTERFERENCES
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BAP/sld

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