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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHRISTOPHE FRINGANT, YVES VANDERVEKEN,
PATRICK LACROIX-DESMAZES, and JEFF TONNAR

Appeal 2011-013153
Application 12/305,255
Technology Center 1700

Before CHARLES F. WARREN, TERRY J. OWENS, and
GEORGE C. BEST, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

DECISION ON APPEAL

Applicants appeal to the Board from the final rejection of claims 1-20.
We have jurisdiction. 35 U.S.C. §§ 6 and 134(a) (2002); 37 C.F.R.
§ 41.31(a) (2010).

An oral hearing was held January 17, 2013.

We reverse the decision of the Primary Examiner with respect to the
grounds of rejection based on prior art.

Claims 1 and 2 illustrate Appellants' invention of a process of
controlled free-radical polymerization in aqueous dispersion in the presence

of molecular iodine and an oxidant soluble in water for the preparation of a block copolymer at least one block of which is a block of a halogenated polymer (Spec. 1-3), and are representative of the claims on appeal:

1. A process of controlled free-radical polymerization in aqueous dispersion for the preparation of a block copolymer at least one block of which is a block of a halogenated polymer, the process comprising synthesizing a first block of the block copolymer in an aqueous dispersion in the presence of molecular iodine and at least one oxidant whose solubility in water is at least 10 g/l.

2. The process according to Claim 1, wherein the first block of the block copolymer is synthesized using

(A) at least one ethylenically unsaturated monomer of which one is used as main monomer and is selected from the group consisting of styrene and its derivative, acrylic acid and its derivatives, methacrylic acid and its derivatives, dienes, vinyl esters, vinyl ethers, vinyl derivatives of pyridine, vinylsulphonic acid and its derivatives, vinylphosphonic acid and its derivatives, N-vinyl monomers, and halogenated vinyl monomers,

(B) at least one free-radical generator chosen among diazo compounds, peroxides and dialkylphenylalkanes,

(C) molecular iodine, and

(D) at least one oxidant whose solubility in water is at least 10 g/l, at least one of which is optionally one of (B);

wherein said process comprises:

(1) introducing at least one fraction of each of the compounds (A), (B), (C), and (D) into a reactor;

(2) reacting the contents of the reactor while introducing any balance of each of the compounds (A), (B), (C), and (D) therein; and

(3) obtaining an aqueous dispersion comprising the polymer constituting the first block of the block copolymer.

Appellants request review of the grounds of rejection advanced on appeal by the Examiner: under 35 U.S.C. § 102(b), claims 1, 2, 4-6, 10, and

12 over Lacroix-Desmazes ‘704 (WO 03/097704 A1)¹ and the Specification (Spec. 9:5-15); and under 35 U.S.C. § 103(a), claims 3, 7-9, and 15-17 over Lacroix-Desmazes ‘704 and the Specification, as applied to claim 2; claims 11-13 over Lacroix-Desmazes ‘704 and the Specification, as applied to claim 2, and Pouralimady (EP 0 947 527 A1); claim 18 over Lacroix-Desmazes ‘704 and the Specification, as applied to claim 10. App. Br. 4; Ans. 5, 6, 8, 9.

We have not considered claims 19 and 20. Appellants submitted new claims 19 and 20 in the Amendment filed June 16, 2010. The Examiner designated claims 19 and 20 as rejected claims in the Final Office Action mailed September 17, 2010 (PTOL-326 ¶ 6), and the Examiner and Appellants include these claims with the appealed claims. Ans. 3; App. Br. 2. However, claims 19 and 20 have not been included in any ground of rejection advanced on appeal. App. Br. 4, 6, 9, 10; Ans. 5, 6, 8, 9.

We decline to reach the provisional obviousness-type double patenting rejection. *See Ex parte Jerg*, No. 2011-000044, 2012 WL 1375142, at *3 (BPAI April 4, 2012) (Informative Decision). The Examiner provisionally rejected claims 1-10 over claims 1-10 of copending Application 12/308,977 (‘977 Application) in view of Lacroix-Desmazes ‘704 advanced on appeal. Ans. 11, 20; App. Br. 4, 10. The USPTO official electronic record of the ‘977 Application shows that an Amendment to claims 1-10 and a request for Continued Examination were filed on September 7, 2011, subsequent to the mailing of the Answer and the filing of

¹ We refer to Lacroix-Desmazes ‘473 (US 7,078,473 B2) relied on by the Examiner as a translation of Lacroix-Desmazes ‘704, which Appellants do not contest.

the Reply Brief in the present Application. The amended claims 1-10 of the '977 Application are clearly different from the claims 1-10 relied on by the Examiner in the provisional ground of rejection.

OPINION

I.

The Examiner must establish a prima facie case of anticipation under § 102 by showing, as a matter of fact, that all elements arranged as specified in a claims are disclosed within the four corners of a reference, either expressly or inherently, in a manner enabling one skilled in the art to practice an embodiment of the claimed invention without undue experimentation. *ClearValue, Inc. v. Pearl River Polymers, Inc.*, 668 F.3d 1340, 1344 (Fed. Cir. 2012); *Sanofi-Synthelabo v. Apotex Inc.*, 550 F.3d 1075, 1083 (Fed. Cir. 2008). A reference that does not disclose a specific embodiment which satisfies all of the claim limitations will nonetheless describe the claimed invention within the meaning of § 102 if it “clearly and unequivocally . . . [directs] those skilled in the art to [the claimed invention] without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference.” *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972) (quoted with approval in *Sanofi-Synthelabo*, 550 F.3d at 1083).

We agree with Appellants that the Examiner erred in finding that Lacroix-Desmazes '473, taken with the cited portion of the Specification, would have described to one skilled in the art an embodiment of a process that meets all of the limitations arranged as specified in representative claims 1 and 2 in a manner that enables the practice of that embodiment without undue experimentation. Ans. 5-6. 14-16, citing Lacroix-Desmazes

‘473, col.5 ll.17-57, col.15 ll.50-55, col.15 l.50 to col.16 l.8, Examples 1-5, 7; App. Br. 5-6; Reply Br. 2-3. We find that as Appellants point out, Lacroix-Desmazes ‘473 would have disclosed to one skilled in the art a number of processes using a number of different reaction media, reagents and process conditions to prepare a number of different polymer and copolymer products. Lacroix-Desmazes ‘473, e.g., col.2 l.46 to col.11 l.26. We further find as Appellants point out, that Lacroix-Desmazes ‘473 Examples 1-3, 5, and 7 do not constitute embodiments of processes falling within claims 1 and 2. We find that the Examples 1-3 and 5 embodiments produce a polymer and a copolymer using oil-soluble diazo and oil-soluble peroxide radical-generating agents in water, and the Example 7 embodiment produces a block copolymer using an oil-soluble diazo radical-generating agent in benzene.

Indeed, the Examiner finds at least one difference between Examples 1-3, 5, and 7 and claims 1 and 2, and submits modifications of the processes of these examples relying on other disclosures in Lacroix-Desmazes ‘473 in support of the contention that such modifications would result in embodiments that read on claims 1 and 2. We note that the Examiner’s proposed modifications of the differences in the process embodiments of the Lacroix-Desmazes ‘473 Examples 1-3, 5, and 7 and claims 1 and 2 do not account for all of the differences between the embodiments of these examples and the processes encompassed by claims 1 and 2.

On this record, we are of the opinion that the Examiner’s reliance on Lacroix-Desmazes ‘473 is more akin to an obviousness analysis than to an anticipation analysis. Indeed, the Examiner’s analysis relies on picking and choosing different parts of Lacroix-Desmazes ‘473 without establishing that

such parts of the reference provide a pattern of preferences enabling one skilled in the art to practice an embodiment of a process falling within the processes encompassed by claims 1 and 2 without undue experimentation.

Accordingly, in the absence of a prima facie case of anticipation, we reverse the rejection of claims 1, 2, 4-6, 10, and 12 under 35 U.S.C. § 102(b) over Lacroix-Desmazes ‘704.

II.

With respect to the grounds of rejection under § 103(a), the Examiner must establish a prima facie case of obviousness by explaining why the prior art relied on would have taught or suggested the claimed process, including all of the elements thereof arranged as specified in the claim, to one of ordinary skill in the art. *See, e.g., KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992); *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967) (“A rejection based on section 103 clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art”).

The Examiner relies on the same analysis of Lacroix-Desmazes ‘473 set forth with respect to claims 2 and 10 in the ground of rejection under § 102(b) along with additional analysis of the reference in stating the grounds of rejection under § 103(a). Ans. 5-6, 6, 8, 9. We are of the opinion that the Examiner’s analyses of Lacroix-Desmazes ‘473, which relies on picking and choosing different parts of the disclosure of a number of

processes using a number of different reaction media, reagents and process conditions to prepare a number of different polymer and copolymer products, does not establish that the disclosure of Lacroix-Desmazes '473 as a whole would have led one of ordinary skill in the art to processes encompassed by claims directly or ultimately dependent on claims 2 and 10, with and without further reliance on Pouralimady. Indeed, all of the process limitations arranged as claimed must be accounted for, including the limitations of claims 2 and 10 with respect to the dependent claims, and the Examiner's analysis of Lacroix-Desmazes '473 with respect to the ground of rejection under § 102(b) did do so, which deficiency is not cured by the further analysis of the reference with respect to the grounds of rejection under § 103(a).

Accordingly, in the absence of a prima facie case of obviousness, we reverse the rejection of claims 3, 7-9, 11, and 13-18 under 35 U.S.C. § 103(a) over Lacroix-Desmazes '704 alone and in view of Pouralimady.

The Primary Examiner's decision is reversed.

REVERSED

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