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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GILBERT BLANCHARD

Appeal 2012-000508
Application 10/551,914
Technology Center 1700

Before CHARLES F. WARREN, LINDA M. GAUDETTE, and
DEBORAH KATZ, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision¹ finally rejecting claims 16-19, 22, 24-34, 36, and 37 under 35 U.S.C. § 103(a) as unpatentable over Blanchard (WO 01/10545 A1, published Feb. 15, 2001)² in view of Wakefield (US 2005/0066571 A1, published Mar. 31, 2005).³ We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

“The [] invention relates to a colloidal dispersion of a rare earth compound comprising an antioxidant and its use as diesel fuel additive for internal combustion engines.” (Specification (“Spec.”) 1:7-10.) Claim 16 is representative of the invention and is reproduced below from the Claims Appendix to the Appeal Brief:

16. A colloidal dispersion comprising particles of a rare earth compound, an acid, an organic phase, an antioxidant, and an element E; wherein at least 90% by weight of the particles are monocrystalline, wherein the rare earth compound is cerium and the element E is iron.

At the time of Appellant's invention, it was known in the art to add dispersions of rare earth compounds to motor fuels to reduce autoignition temperature of the soot. (Spec. 1:23-26.) Stability of such known dispersions was affected by quality of the diesel fuel. (*Id.* at 30-32.) The inventor is said to have discovered that “[t]he presence of an antioxidant has the advantage of making the stability of the dispersion of the invention independent of the diesel fuel in which it

¹ Final Office Action mailed Jul. 9, 2010.

² Appellant has not objected to the Examiner's use of US 2006/0005465 A1, published Jan. 12, 2006, as the English translation. All references to Blanchard herein are to US 2006/0005465 A1.

³ Appeal Brief filed May 2, 2011 (“App. Br.”)

is incorporated.” (*Id.* at 2:9-12.) An antioxidant, as defined in the Specification, is “an agent that is capable of preventing the oxidation of organic compounds in particular, this oxidation possibly occurring for example by attack of the double or triple bonds, the conjugate double bonds or the alcohol functions.” (*Id.* at 11:35-12:5.)

Blanchard “relates to an organic colloidal dispersion comprising essentially monocrystalline particles of at least one compound based on at least one rare earth, and to a process for its preparation. The invention also concerns the use of this dispersion as a gas oil additive for internal combustion engines.” ([0001].) Blanchard discloses cerium as one of four preferred rare earths ([0030]), and identifies iron as another element which is advantageously included in the dispersion ([0033-0034]). The dispersion “comprises at least one acid, advantageously an amphiphilic acid.” ([0041].) Blanchard’s “colloidal dispersions . . . also comprise at least one diluent . . . [which] can be an apolar hydrocarbon” ([0057-0058]), i.e. an organic phase (*see generally*, Spec. 6:26-7:12).

The Examiner acknowledges Blanchard “does not specifically teach antioxidants.” (Ans.⁴ 5.) However, the Examiner finds Blanchard teaches “diluent that are cryo-TEM, aromatic solvents and alcohols which are disclosed as preservatives,” (*id.* at 5 (citing Blanchard [0026])) and that one of ordinary skill in the art would have known “antioxidants and preservatives both have properties that inhibit oxidation” (*id.*).

Appellant has persuasively argued the Examiner reversibly erred in further finding that the aforementioned diluents are “antioxidants” in a colloidal dispersion as recited in the appealed claims (*see id.*), pointing out Blanchard uses these diluents solely “for examination of samples to freeze the particles and help

⁴ Examiner’s Answer mailed Jul. 27, 2011.

determine aggregation thereof by TEM” (App. Br. 9). We agree with Appellant that “there is no teaching or suggestion in Blanchard to include the diluents in [an] organic colloidal dispersion for addition to fuels” (*id.*).⁵ (Compare Blanchard [0028] (“Cryo-TEM preserves the state of dispersion of the particles and is representative of that state in the actual medium”) with Spec. 8:22-24 (providing a similar description of the cryo-TEM technique).)

In sum, because Appellant has persuasively argued that the Examiner failed to establish a prima facie case of obviousness, the Examiner’s decision to reject claims 16-19, 22, 24-34, 36, and 37 is:

REVERSED

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⁵ A detailed discussion of Wakefield is unnecessary to our decision as this reference is relied on for a teaching of using an antioxidant that is a phenolic as a fuel additive, i.e., a feature recited only in dependent claims. (See Ans. 5-6.) However, we agree with Appellant that the Examiner’s proposed motivation for modifying Blanchard to include Wakefield’s antioxidants is based on the Examiner’s erroneous finding that Blanchard suggests the use of antioxidants in an organic colloidal dispersion (*see* Ans. 5-6). (*Cf.* Reply Brief, filed Sep. 27, 2011, 5-6.)