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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DORIS PIK-YIU CHUN and HOU T. NG

Appeal 2015-006320
Application 13/383,706
Technology Center 1700

Before BEVERLY A. FRANKLIN, N. WHITNEY WILSON and
AVELYN M. ROSS, *Administrative Patent Judges*.

ROSS, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellants² appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–11. We have jurisdiction under 35 U.S.C. § 6(b).

¹ In our Decision below we refer to the Specification filed January 12, 2012 (Spec.), the Final Office Action appealed from mailed July 15, 2014 (Final Act.), the Appeal Brief filed December 9, 2014 (Appeal Br.), the Examiner's Answer mailed April 16, 2015 (Ans.), and the Reply Brief filed June 12, 2015 (Reply Br.).

² Appellants identify “the real party in interest in the above-captioned application is the assignee.” Appeal Br. 2. The prosecution history, available through PAIR, indicates that the Hewlett-Packard Development Company L.P. is the assignee. *See e.g.*, Notification from the International Searching Authority (mailed April 2, 2010) filed with the USPTO January

We AFFIRM.

STATEMENT OF CASE

The claims are directed to electrically chargeable encapsulated particles for use in electronic and other applications. Spec. ¶¶1 and 2. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method of encapsulating particles in polymer, comprising:
 - mixing particles of one or more materials with one or more initial radical polymerizable monomers and one or more initial charge-generating components to form a first suspension of monomer-wetted particles;
 - after forming the first suspension, mixing the first suspension with an aqueous dispersant medium to form a second suspension;
 - adding one or more initial reaction initiators to at least one of the first suspension and the second suspension;
 - subjecting the second suspension to homogenization sufficient to form a stable submicron emulsion having an aqueous continuous phase; and
 - reacting available radical polymerizable monomers of the emulsion to encapsulate the particles in one or more layers of polymer and to incorporate ionic species from available charge-generating components.

Claims Appendix at Appeal Br. 30.

REJECTIONS

The Examiner maintains the following rejections:

12, 2012 (identifying Hewlett-Packard Development Company, L.P. as the Applicant).

- A. Claims 1 and 4–11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Dyllick-Brenzinger.³ Final Act. 3.
- B. Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dyllick-Brenzinger. *Id.* at 9.
- C. Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dyllick-Brenzinger and further in view of Ganschow.⁴ *Id.* at 11.
- D. Claims 1–11 stand rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1–4 and 6–11 of copending Application No. 13/384,235 in view of Sacripante.⁵ *Id.* at 14.

OPINION

Rejection A — Anticipation (claims 1, 4–11)

The Examiner rejects claim 1 as anticipated by Dyllick-Brenzinger and finds that Dyllick-Brenzinger teaches each and every element of claim 1. *Id.* at 3–4. The Examiner finds—relevant to Appellants’ arguments—that Dyllick-Brenzinger discloses “a method of encapsulating at least one effect substance in a polymer” and where the effect substance is mixed “with one or more initial radical polymerizable monomers to form a first suspension of monomer-wetted effect substance.” *Id.* at 3. In addition, the Examiner finds that the polymerizable monomers

³ Dyllick-Brenzinger et al., US 2008/0146448 A1, published June 19, 2008 (hereinafter “Dyllick-Brenzinger”).

⁴ Ganschow et al., US 2007/0227401 A1, published October 4, 2007 (hereinafter “Ganschow”).

⁵ Sacripante et al., US 5,346,790, issued September 13, 1994 (hereinafter “Sacripante”).

comprise[] cationisable monomers, basic monomers that are a salt, basic monomers in quaternized form, monomers exhibiting acids groups in the form partially or completely neutralized with alkali metal bases or ammonium bases . . . , acid monomers in partially or completely neutralized form . . . , mixtures of basic monomers and acidic monomers that produce amphoteric copolymers that are anionically or cationically charged.

Id. The Examiner also finds that Dyllick-Brenzinger “teaches that the method further comprises emulsifying the first suspension in an aqueous dispersant medium . . . , wherein emulsification takes place by homogenization sufficient to form a stable miniemulsion having an aqueous continuous phase.” Advisory Action, mailed August 27, 2014, at 3. The Examiner further explains that “[b]efore it is possible to perform Dyllick-Brenzinger’s step of emulsifying by homogenization, one of Dyllick-Brenzinger’s first suspension or Dyllick-Brenzinger’s aqueous dispersant medium must be added to the other, which results in their being mixed to some extent and results in the formation of a second suspension.” *Id.* at 3–4.

Appellants dispute the Examiner’s findings and present three arguments in support of their position that Dyllick-Brenzinger does not anticipate claim 1. Appeal Br. 20–26. Because we find Appellants’ first argument persuasive, we do not reach Appellants’ additional arguments. Appellants argue that effect substances of Dyllick-Brenzinger, identified by the Examiner as corresponding to “monomer-wetted particles” of claim 1, are not *particles*. *Id.* at 20–21. Appellants contend that the effect substances are “soluble in ethylenically unsaturated monomers which form the core of the polymer particles of the aqueous dispersion,” and therefore, teaches away from the monomer-wetted particles of claim 1. *Id.* at 21 (quoting Dyllick-Brenzinger ¶26). Moreover, Appellants reason that both Dyllick-

Brenzinger and the instant application discuss particles in the context of “solid materials” and not solutions. *Id.* at 22–23.

We understand Appellants to argue that a “first suspension of monomer-wetted particles” is not taught by Dyllick-Brenzinger. Appeal Br. 20–21. For the reasons expressed by Appellants, we agree that the Examiner has not identified a “first suspension of *monomer-wetted particles*” within the teachings Dyllick-Brenzinger. Instead, the Examiner identifies the effect substance mixed with an initial radical polymerizable monomer as the “first suspension of monomer-wetted effect substance.” Final Act. 3. But, as the Appellants detail (Appeal Br. 20–21), the effect substance is soluble in the monomer, and thus not a particle. *See generally* Dyllick-Brenzinger ¶¶ 12, 26, 27, 39, and 227. And, as Appellants explain, wetting is defined as a “[p]rocess by which an interface between a solid and a gas is replaced by an interface between the same solid and a liquid.” Reply Br. 2. The Examiner’s position that Dyllick-Brenzinger teaches the effect substances may be dissolved in the form of a “colloidal dispersion” (Ans. 16) does not address the claim language at issue—i.e., “*suspension of monomer-wetted particles.*”⁶ Moreover, the Examiner does not attempt to establish that a dissolved colloidal dispersion is equivalent to the claimed suspension. Thus, on this record, we cannot sustain the Examiner’s rejection.

⁶ Notably, the same source used by the Examiner to define “colloid dispersion”, defines “suspension” to mean “[a] liquid in which solid particles are dispersed.” IUPAC. Compendium of Chemical Terminology, 2nd ed. (the “Gold Book”). Compiled by A. D. McNaught and A. Wilkinson. Blackwell Scientific Publication <http://goldbook.iupac.org> (2006–) created by M. Nie, J. Jirat, B. Kosata; updates compiled by A. Jenkins. ISBN 0-9678550-9-8. doi:10.1351/gold book.).

Rejections B and C — Obviousness (claims 2 and 3)

For the reasons discussed above, we reverse the rejections of dependent claims 2 and 3, as the rejections of these claims do not address the deficiency of the base rejection.

Rejection D — Nonstatutory Double Patenting (claims 1–11)

The Examiner provisionally rejects claims 1–11 as unpatentable on the ground of nonstatutory double patenting over Application No. 13/384,235 in view of Sacripante. Final Act. 14. Appellants do not argue the merits of the Examiner’s provisional nonstatutory double patenting rejection of claims 1–11. *See* Appeal Br. 27. We therefore summarily affirm this rejection.

CONCLUSION

The Examiner *reversibly erred* in rejecting claims 1 and 4–11 under 35 U.S.C. § 102(b) as being anticipated by Dyllick-Brenzinger.

The Examiner *reversibly erred* in rejecting claim 2, under 35 U.S.C. § 103(a), as being unpatentable over Dyllick-Brenzinger.

The Examiner *reversibly erred* in rejecting claim 3, under 35 U.S.C. § 103(a), as being unpatentable over Dyllick-Brenzinger and further in view of Ganschow.

The Examiner did not reversibly err in rejecting claims 1–11 on the ground of nonstatutory double patenting as being unpatentable over claims 1–4 and 6–11 of copending Application No. 13/384,235 in view of Sacripante.

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Application 13/383,706

DECISION

For the above reasons, the Examiner's rejection of claims 1–11 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED