



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/168,722	06/24/2011	Satoshi AOKI	740250-931	1620
7055	7590	11/21/2016	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			FAISON, VERONICA F	
			ART UNIT	PAPER NUMBER
			1731	
			NOTIFICATION DATE	DELIVERY MODE
			11/21/2016	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
greenblum.bernsteinplc@gmail.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* SATOSHI AOKI, MANAMI SHIMIZU, and  
KYOKO MOTOYAMA

---

Appeal 2015-005481  
Application 13/168,722  
Technology Center 1700

---

Before ROMULO H. DELMENDO, JEFFREY R. SNAY, and  
BRIAN D. RANGE, *Administrative Patent Judges*.

SNAY, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

Appellants<sup>2</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

---

<sup>1</sup> We cite to the Specification (“Spec.”) filed Jun. 24, 2011; Final Office Action (“Final Act.”) dated Dec. 19, 2013; Examiner’s Answer (“Ans.”); and Appellants’ Appeal Brief (“App. Br.”) and Reply Brief (“Reply Br.”).

<sup>2</sup> Appellants identify Riso Kagaku Corporation as the real party in interest. App. Br. 2.

## BACKGROUND

The subject matter on appeal relates to “an oily inkjet ink adapted for use in inkjet recording systems.” Spec. 1. According to the Specification, the ink’s penetration drying characteristics are enhanced, and roller transfer staining is suppressed, by providing a three-part solvent composed of a low polarity hydrocarbon solvent A, a high polarity solvent B having at least an ester group and an ether group in one molecule, and a solvent C that is soluble in both solvents A and B. Spec. 3–5. Sole independent claim 1 is illustrative and reproduced from the Claims Appendix of the Appeal Brief as follows:

1. An oily inkjet ink, comprising: a pigment, a pigment dispersant, and a solvent, wherein the solvent contains:
  - i) a hydrocarbon type solvent (A),
  - ii) a solvent (B) having at least an ester group and an ether group in one molecule, and
  - iii) a solvent (C) that is soluble in the hydrocarbon type solvent and the solvent having at least an ester group and an ether group in one molecule.

## REJECTION<sup>3</sup>

Claims 1–20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Endo<sup>4</sup> and Nagaswa.<sup>5</sup>

---

<sup>3</sup> Final Act. 2–5; Ans. 2–5.

<sup>4</sup> US 2007/0101901 A1, pub. May 10, 2007 (“Endo”).

<sup>5</sup> US 2005/0020728 A1, pub. Jan. 27, 2005 (“Nagaswa”).

## DISCUSSION

The Examiner found, and Appellants do not dispute, that Endo discloses an inkjet ink formulation comprising a multi-component solvent composed of 30–70% by weight of a hydrocarbon solvent (A), at least 20% by weight of an ester solvent (C), and one or more other solvents. *Compare* Final Act. 2–3 *with* App. Br. 13 (acknowledging that Endo discloses “elements A and C of the present invention”). As so-called other solvents, Endo identifies alcohol solvents, higher fatty acid solvents, ether solvents, and other ester solvents, but fails to identify a solvent (B) having at least an ester group and an ether group in one molecule. Final Act. 2–3 (citing Endo ¶¶ 15–20).

The Examiner also found that Nagaswa discloses a pigment ink comprising pigment and various solvents “such as alcohol solvent, glycol solvent or other non-toxic solvents.” *Id.* at 3 (citing Nagaswa Abstract). Nagaswa also discloses certain additives, including glycol ether diesters of aliphatic dibasic acids, which the Examiner and Appellants agree fall within the scope of solvent B recited in claim 1. *Compare id.* at 4 (citing Nagaswa ¶ 81) *with* App. Br. 13 (“Appellant respectfully notes that paragraphs [0080] and [0081] of *Nagasawa* (sic) list the substance included in composition B of Appellant’s claimed invention as an erasing agent, which is an example of an additive.”).

Appellants challenge the Examiner’s determination that it would have been obvious to combine Nagaswa’s glycol ether diesters with Endo’s ink composition, Final Act. 4, on the basis that Nagaswa discloses such diesters solely as additives to serve as erasing agents (e.g. in writing board inks). App. Br. 13. Appellants contend that the Examiner failed to articulate a

reason why one of ordinary skill would have added Nagaswa' erasing agent additive to Endo's inkjet ink composition. *See id.* at 13–15. We agree.

Nagaswa plainly identifies the materials listed in the relied-upon paragraphs 80 and 81 as additives taught to be useful as erasing agents. *See* Nagaswa ¶ 79 (“Various additives may be added . . . to prepare various kinds of ink having desired properties. Examples of the additives include erasing agents . . .”); *id.* at ¶ 80 (“Preferred examples of the erasing agents include . . .”). Such erasing agents are included in Nagaswa's writing board ink formulation but omitted from Nagaswa's inkjet ink formulation.

*Compare* Nagaswa ¶¶ 108, 109 *with id.* at ¶¶ 145, 146.

The Examiner proffered no reason why one of ordinary skill would have desired the function of erasing agent in an inkjet ink composition. Rather, the Examiner reasoned that because both Endo and Nagaswa disclose esters of aliphatic monobasic and dibasic acids, Nagaswa's listed materials would be viewed as functional equivalents to those listed in Endo. Ans. 6–7. The problem with that reasoning is that Endo teaches such esters as solvents in an inkjet ink composition, whereas Nagaswa identifies them solely for use as erasing agent additives in erasable writing board ink compositions. We find no evidence cited by the Examiner to support the proposition that Nagaswa's glycol ether diester erasing agent would have been seen as a functional equivalent of any of Endo's disclosed solvents.

On this record, we are persuaded that the Examiner has not set forth a factual basis sufficient to support a *prima facie* case of obviousness. For that reason, we do not sustain the rejection.

Appeal 2015-005481  
Application 13/168,722

DECISION

The Examiner's decision rejecting claims 1-20 is reversed.

REVERSED