THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte KOCK-YEE LAW and IHOR W. TARNAWSKYJ

_____

Appeal No. 1996-1362
Application 08/234,074

_____

ON BRIEF

_____

Before WINTERS, WARREN, and ROBINSON, Administrative Patent Judges.

ROBINSON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 1-3, 6-11, 17-27, and 30-32. Claim 33 has been indicated allowable by the examiner. (Paper No. 21). Claim 4 is not subject to any rejection. While the examiner has not stated the status of this claim, we presume it is not before us on this appeal.

Claim 1 is illustrative of the subject matter on appeal and reads as follows:

1. A toner composition consisting essentially of resin, pigment, optional charge additive and a flow aid surface additive comprised of hydrophobic silica of a size diameter of from about 5 to about 40 nanometers, and which silica has been treated with a long chain aliphatic alcohol, and which long chain aliphatic alcohol has a carbon chain length of from 16 to 18 carbon atoms.

The references presently relied upon by the examiner are:

Tomono et al. (Tomono)	5,023,158	June 11, 1991
Creatura	5,102,769	April 7, 1992
Jugle et al. (Jugle)	5,171,653	Dec. 15, 1992
Ketcham et al. (Ketcham)	5,175,132	Dec. 29, 1992
Ong et al. (Ong)	5,332,636	July 26, 1994 (filed April 19, 1993)
Akiyama et al. (Akiyama)[1] (Japanese Kokai)	5-165250	July 2, 1993
Matsumura et al. (Matsumura),[2] (Japanese Kokai)	63-174068	July 18, 1988

[1] The examiner in his answer and appellants in their principal and reply briefs have referred to the Translation of JP Kokai 5-165250 provided to the PTO by Schreiber Translations in November 1994. In considering the issues in this appeal, we also have relied on the translation of this reference.

[2] While the examiner indicates at page 2 of the Supplemental Examiner's Answer of April 28, 2000 (Paper No. 27) that "The rejection is maintained for the combination considering Matsumura (CA113:106409g) as the primary reference for reasons given in the Answer. . . .," the examiner cites to portions of the full translation of the underlying Japanese Kokai in support of the rejection under 35 U.S.C. § 103. In considering the issues presented by this appeal, we refer to the translation of this document prepared for the PTO by The Ralph McElroy Translation Company in April, 2000.

Bonetzkaya et al. (Bonetzkaya), "Adsorption of Aliphatic Alcohols from Solutions on Silica Gel and "White Soot"," Proc. Acad. Sci. USSR, (Phys. Chem. Engl. Transl.), Vol. 114, pp. 421-424 (1957).

GROUND OF REJECTION

Claims 1-3, 6-11, 17-27, and 30-32 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies on Matsumura, Akiyama, Tomono, Creatura, Jugle, Ketcham, Ong, and Bonetzkaya.

BACKGROUND

The invention is described at pages 5-6 of the specification as being directed to improved toner and developer compositions containing modified silica particles having long chain aliphatic alcohols adsorbed thereon. The treated silica is said to provide a toner composition having an improved resistance to relative humidity and excellent flow characteristics.

DISCUSSION

Procedural Background

On March 24, 2000, the Board issued an initial decision in this appeal wherein we reversed the pending rejection of claims 4 and 32 under 35 U.S.C. § 112, second paragraph, and remanded the application for further consideration of the rejection under 35 U.S.C. § 103. In that decision, we urged the examiner to obtain translations of the full text documents which were abstracted by the abstracts of Okuno and Matsumura. On April

28, 2000, the examiner issued a Supplemental Examiner's Answer (Suppl. Answer) in which he withdrew the reliance on the Okuno reference (Page 2), but maintained the rejection of the claims over the combination considering Matsumura as the primary reference. (Id.) Appellants filed a response, entitled Appellants' Response to the Examiner's Supplemental Answer (App. Response),on May 30, 2000 (Paper No. 28) in which they responded to the examiner's further explanation of the rejection and the reliance on the translation of the Japanese Kokai to Matsumura. Appellants did not dispute the procedural handling of the prosecution or consideration of this new document as a basis for the rejection of the claims. Appellants responded to the examiner's new arguments in support of the rejection and additionally referred back to those arguments presented in the Appeal Brief (App. Response, page 2). It is in light of these filings by both the examiner and appellants and the translation of the Japanese Kokai to Matsumura that we again consider the issues raised by this appeal.

The rejection under 35 U.S.C. § 103

In rejecting claims 1-3, 6-11, 17-27, and 30-32 under 35 U.S.C. § 103, the examiner has relied on the disclosure of Matsumura in view of Akiyama further in view of Jugle, Tomono, Creatura, and Ong all considered with Bonetzkaya and Ketcham. We refer to pages 5-7 of the Board Decision of March 24, 2000 for the discussion of the examiner's reliance on the cited references as well as appellants' response. In reaching our decision

in this appeal, we have given careful consideration to the appellants' specification and claims and to the respective positions articulated by the appellants and the examiner. We make reference to the Examiner's Answer mailed November 22, 1995 (Paper No. 18) as supplemented by the additional Answer of January 26, 1996 (Paper No. 21) and the Supplemental Answer of April 28, 2000 (Supp. Answer) (Paper No. 27) for the examiner's reasoning in support of the rejection and to the Appellants' Brief of October 19, 1995 (Paper No. 17), as supplemented by the reply briefs filed March 9, 1999 (Paper No. 24) and May 30, 2000 (Paper No. 28) for appellants' arguments thereagainst.

In our view, the determinative question presented by this rejection is whether it would have been obvious to one of ordinary skill in this art at the time of the invention to substitute silica (silicon dioxide) for the titania (titanium dioxide) in the toner composition disclosed by Matsumura wherein titania is surface treated with an organic compound having a melting point in a specified range prior to the addition of the powder to a toner composition. Matsumura specifically exemplifies the treatment of titania with cetyl (C16) alcohol. (See Supp. Answer, page 5 and Supp. Brief, paragraph bridging pages 3-4). The examiner has established that both silica and titania were known "treating agents that increase toner fluidity and caking resistance (Matsumura translation, page.2)." (Supp. Answer, page 3). Further, the examiner notes that treating of titania with certain defined organic compounds, including cetyl alcohol "avoids poor cleaning, solidified toner on the

photosensitive member causing black spots on the produced image, and [provides] improved charging characteristics and reduced deterioration over time (translation p.2: problem solved by the invention).” (Id.) The examiner acknowledges that Matsumura "does not exemplify the use of alcohol treated silica," but relies on Akiyama as disclosing "that alcohol coated titanium oxide and alcohol coated silica are alternatives for each other in the treatment of toners (see Table 1's list of inorganic compounds and specifically additives M through R)." (Id.) The examiner further urges that (Supp. Answer, page 4):

> The supporting Akiyama reference teaches an advantage to be gained through the use of alcohol carbon chains of 20 to 60 because the strength of the film formed on the silica or titania is improved. Below this carbon chain length, a film is still present on the titania or silica and abrasion is reduced during fixing (translation, p 9). There is also substantial overlap in the properties desired by the references such as, with reference to Akiyama, cleaning, environmental stability (charging stability in Matsumura) and durability (reduced deterioration over time in Matsumura).

Here, the examiner is referencing that portion of Akiyama from page 9, quoted in our previous decision, which states:

> The alcohol with a carbon numbers of 20-60 that is solid at ordinary temperatures . . . Straight-chain alcohols are desirable. Crystallinity drops in alcohols having a carbon number of less than 20 and the strength of the film formed by the lubricant is low . . . and there is little increase in resistance to abrasion. When only a solid alcohol with a carbon number

> greater than 60 is employed, the firming (sic, filming) effect is weak and a film tends not to form, effectively precluding lubrication. [Emphasis added].

While we would agree that the quoted portion of Akiyama directs one skilled in this art to the use of a preferred range of C_{20} to C_{60} aliphatic alcohols in the treatment of the microparticle material such as titania and silica, we find nothing in the reference which would reasonably suggest that the use of alcohols having a lower carbon number would be desirable. It remains that the Akiyama does not direct one or ordinary skill in the art to the use of alcohols having a carbon chain of less than 20. Similarly, Matsumura, while initially teaching that the materials including silica and titania are conventional micropowders useful in toner materials, does not teach or reasonably suggest that the described alcohol coating of titania particles is equally applicable to materials other than the specific exemplified titania. In view of the fact that Matsumura explicitly recognizes the equivalence of such micropowders as additives in toner compositions and then fails to teach or suggest that the alcohol treatment would have been equally appropriate or desirable for the other known micropowders is notable. The omission is conspicuous by its absence. Thus, the best evidence for treating silica with a C_{16} to C_{18} aliphatic alcohol is Akiyama. But Akiyama tends to teach away, i.e., if you go below C_{20} aliphatic alcohol you will have problems.

In our view, neither Matsumura or Akiyama provides a suggestion or direction which would have reasonably led one of ordinary skilled in this art to substitute hydrophobic

surface treated silica for hydrophobic surface treated titania in a toner composition wherein the silica particles have been treated or coated with an aliphatic alcohol have 16 to 18 carbon atoms in the carbon chain as presently claimed. The initial burden of persuasion rests on the patent examiner to establish that claims presented in an application for patent are unpatentable. In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). To establish a prima facie case of obviousness, there must be more than the demonstrated existence of all of the components of the claimed subject matter. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the substitutions required. That knowledge cannot come from the applicants' invention itself. Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 678-79, 7 USPQ2d 1315, 1318 (Fed. Cir. 1988); In re Geiger, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987); Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985). The extent to which such suggestion must be explicit in or may be fairly inferred from, the references, is decided on the facts of each case, in light of the prior art and its relationship to the invention. It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention using applicants' specification as a template and selecting elements from references to fill the gaps. In re Gorman, 933 F.2d 983, 986-987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). On the record before us, we find no reasonable

suggestion for combining the disclosure of Matsumura and Akiyama in a manner which would support the substitution of silica for titania in Matsumura and result in the claimed toner composition consisting of hydrophobic silica which has been treated with a long chain aliphatic alcohol, wherein the alcohol has a carbon chain length of from 16 to 18 carbon atoms. It naturally follows that if a prima facie case of obviousness has not been established for the toner composition of claim 1, for example, that the prior art relied upon by the examiner similarly does not establish a prima facie case within the meaning of 35 U.S.C. § 103 as to a developer composition such as claimed in claim 17 which is comprised of a toner which contains the silica which has been treated in the manner called for by the invention.

The remaining references relied upon by the examiner in rejecting the claims on appeal do not provide that which is missing from the combination of Akiyama and Matsumura. Thus, on this record, the examiner has failed to provide those facts or evidence which would establish a prima facie case of obviousness within the meaning of 35 U.S.C. § 103 as to the claimed subject matter. Where, as here, the examiner fails to establish a prima facie case, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Having determined that the examiner has failed to establish a prima facie case of obviousness

with regard to the claimed subject matter, we find it unnecessary to consider the evidence

of unexpected results proffered by the appellants.

CONCLUSION

The examiner's rejection of claims 1-3, 6-11, 17-27, and 30-32 under 35 U.S.C .§ 103 is reversed.

REVERSED

SHERMAN D. WINTERS Administrative Patent Judge	)	
CHARLES F. WARREN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
DOUGLAS W. ROBINSON Administrative Patent Judge	)	

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