

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIDENORI GOTO

Appeal 2007-4496
Application 10/437,885
Technology Center 1700

Decided: April 11, 2008

Before CHARLES F. WARREN, CATHERINE Q. TIMM, and
LINDA M. GAUDETTE, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1-23. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm the sole ground of rejection made by the Examiner. However, we have modified the rationale for the ground of rejection to the extent that we denominate the rejection as a new ground of rejection to give Appellant an opportunity to respond to the modified rationale. 37 CFR § 41.50(b) (2005). *See In re Kronig*, 539 F.2d 1300, 1302-03 (CCPA 1976)("[T]he ultimate criterion of whether a rejection is considered 'new' in

a decision by the board is whether appellants have had a fair opportunity to react to the thrust of the rejection.”).

I. BACKGROUND

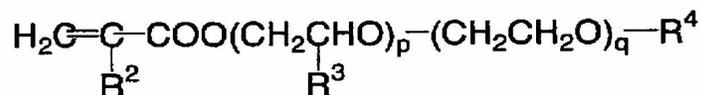
The invention relates to an image forming material, such as a color filter for an LCD display. (Spec. 1). The image forming material includes a support, an alkali-soluble thermoplastic resin layer and a photosensitive resin layer, in that order, wherein the alkali-soluble thermoplastic resin layer includes a specific fluorine containing copolymer. (Spec. 6-7). The copolymer is added to provide a smooth coat surface and an even thickness and to prevent coating irregularities, color irregularities, cissing, and pinholes. (Spec. 6). When the image forming material is used as a transfer material to transfer the photosensitive material, the support is a temporary support and the alkali-soluble thermoplastic resin layer is capable of being separated from the temporary support. (Spec. 6). The copolymer also assists with transferring the image forming material from the temporary support to a permanent support. (Spec. 6). Claims 1 and 23 are illustrative of the subject matter on appeal:

1. An image forming material comprising at least an alkali-soluble thermoplastic resin layer and a photosensitive resin layer, which are coated on a support in this order, wherein the image forming material includes, in at least the thermoplastic resin layer, a copolymer comprising a monomer represented by the following general formula (a) and a monomer represented by the following general formula (b), a content ratio by mass of the monomer represented by general formula (a) to the monomer represented by general formula (b) is from 20/80 to 60/40:

General formula (a)



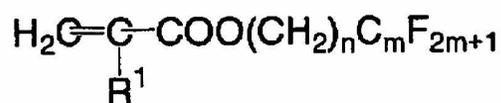
General formula (b)



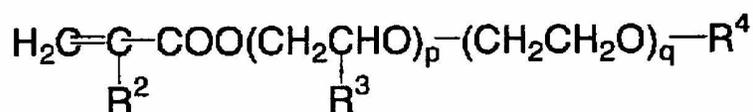
in the formula, each of R^1 , R^2 and R^3 independently represents a hydrogen atom or a methyl group, R^4 represents a hydrogen atom or an alkyl group having 1 to 5 carbon atoms, n represents an integer of 1 to 18, m represents an integer of 2 to 14, each of p and q represents an integer of 0 to 19, however p and q cannot be 0 simultaneously.

23. An image forming transfer material comprising at least an alkali-soluble thermoplastic resin layer and a photosensitive resin layer, which are removably coated on a temporary support in this order, wherein the image forming material includes, in at least the thermoplastic resin layer, a copolymer comprising a monomer represented by the following general formula (a) and a monomer represented by the following general formula (b), a content ratio by mass of the monomer represented by general formula (a) to the monomer represented by general formula (b) is from 20/80 to 60/40:

General formula (a)



General formula (b)



in the formula, each of R^1 , R^2 and R^3 independently represents a hydrogen atom or a methyl group, R^4 represents a hydrogen atom or an alkyl group having 1 to 5 carbon atoms, n represents an integer of 1 to 18, m represents an integer of 2 to 14, each of p and q represents an integer of 0 to 18, however p and q cannot be 0 simultaneously,

and wherein the thermoplastic resin layer is configured to separate from the support upon transfer of the thermoplastic resin layer and the photosensitive layer to a permanent substrate.

Appellant requests review of the sole rejection maintained by the Examiner, namely, the rejection of claims 1-23 under 35 U.S.C. § 103(a) over U.S. Patent No. 5,279,971, issued January 18, 1994 to Adachi et al. (“Adachi”) in view of U.S. Patent No. 5,292,613 to Sato et al. (“Sato”). Appellant provides arguments directed only to claims 1 and 23. Thus, we consider this ground of rejection on the basis of representative claims 1 and 23 per 37 C.F.R. § 41.37(c)(1)(vii) (2005).

II. DISCUSSION

The Examiner finds that Adachi teaches a photosensitive resin layer containing the claimed copolymer coated on a support, and also finds that Adachi suggests that the support may be “paper coated with a resin.” (Ans. 3-5). The Examiner concludes that “it would have been obvious to one of ordinary skill in the art to prepare the material of Adachi et al choosing to employ a paper support coated with a resin.” (Ans. 4-5 and 6-7).

Adachi does not disclose what resin is coating the paper. (Adachi, col. 9, l. 67-col. 10, l. 10). Although, not included in the grounds of rejection, the Examiner’s Answer provides additional evidence of what was known to one of ordinary skill in the art regarding the resin. (Ans. 6-7). In this regard, the Examiner finds that it was conventional in the art to employ a polyolefin thermoplastic resin on a paper support. (Ans. 4-5). The Examiner relies on the teaching in Sato *solely* to suggest that one skilled in the art would have employed the fluorine-containing surfactant copolymer

taught by Adachi in the thermoplastic resin layer taught by Adachi. (Ans. 7-8).

In the Appeal Brief, Appellant argues that the Examiner provided no support for the findings that Adachi teaches an alkali-soluble thermoplastic resin layer and that the teachings of Adachi and Sato cannot be properly combined. (App. Br. 10-11). In the Reply Brief, Appellant does not address the merits of the Examiner's additional evidence. Rather, Appellant argues that the additional evidence included in the Examiner's Answer should not be considered because the additional evidence was not provided as part of a rejection. (Reply Br. 1-2).

The issue arising is: Are claims 1 and 23 unpatentable under 35 U.S.C. § 103(a) based on the teachings of Adachi and Sato? We answer this question in the affirmative.

The following are our Findings of Facts (FF):

1. Sato teaches a photosensitive transfer material "comprising a temporary support having formed thereon in sequence a thermoplastic resin layer, a separating layer . . . , and a photosensitive resin layer." (Sato, abstract). Sato also teaches that the thermoplastic resin layer may be an alkali-soluble thermoplastic resin layer. (Sato, col. 2, ll. 58-61).

2. Sato teaches the use of fluorine containing surfactants in a thermoplastic resin layer. (Sato, col. 5, ll. 55-61; col. 6, ll. 1-14). The surfactant is added as a "releasing agent" to provide a releasing property between the thermoplastic resin layer and the separating layer. (Sato, col. 5, ll. 55-61).

3. While Sato provides examples of fluorine containing surfactants (e.g., "a perfluoroalkyl group.hydrophillic group containing

oligomer F-171”), Sato does not teach or suggest the use of the particular copolymer recited in claims 1 and 23. (Sato, col. 6, ll. 4-14).

4. Sato also teaches “peeling off the temporary support and the thermoplastic resin layer” and “pattern-exposing the photosensitive layer through the separating layer.” (Sato, col. 2, ll. 48-52).

5. Adachi teaches adding a fluorine containing surfactant that is a copolymer of a (polyoxyalkylene)acrylate or (polyoxyalkylene)methacrylate with an acrylate or methacrylate to a coating solution containing a light-sensitive composition in an alkali soluble resin. (Adachi, abstract). Adachi teaches that this fluorine containing surfactant improves the uniformity of the coating. (Adachi, col. 1, ll. 6-12, 20-32, 51-55; col. 11, ll. 20-24).

6. The Description of Related Art section of Appellant’s Specification discusses Japanese Patent Application Publication No. 56-40824 as disclosing a support, a separation layer, a thermoplastic resin layer and a photosensitive resin layer in which “only the support has been separated therefrom.” (Spec. 1-2).

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18,

(1966). *See also KSR*, 127 S. Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”).

Applying these legal principles to the Factual Findings in the record of this appeal, we determine that claims 1 and 23 are not patentable under 35 U.S.C. § 103(a).

Sato clearly teaches a structure including a support, an alkali-soluble thermoplastic resin layer, and a photosensitive resin layer, in that order. (FF1). Sato also teaches the use of fluorine containing surfactants, which are added to the thermoplastic resin layer as release agents. (FF2).

Sato teaches all the features of claim 1, with the exception that Sato only teaches broad examples of fluorine containing surfactants for use as release agents (FF3) and does not teach that the fluorine containing surfactant in the thermoplastic resin layer is the particular copolymer claimed in claim 1. Likewise, Sato teaches all the features of claim 23, with two exceptions: a) Sato does not teach that the fluorine containing surfactant in the thermoplastic resin layer is the particular copolymer claimed; and b) Sato does not teach that “the thermoplastic resin layer is configured to separate from the support upon transfer of the thermoplastic resin layer and the photosensitive layer to a permanent substrate.”

First, we address the deficiency that Sato does not teach that the fluorine containing surfactant in the thermoplastic resin layer is the particular copolymer claimed in claims 1 and 23. We note that Appellant does not dispute that the fluorine containing surfactant taught by Adachi satisfies the copolymer recitation in claims 1 and 23. It would have been obvious to one of ordinary skill in the art to use the known fluorine

containing surfactant taught by Adachi in the thermoplastic resin layer of Sato to improve the uniformity of the coating. (FF5). Thus, claim 1 is obvious based on the teachings of Adachi and Sato.

Next, we address that Sato does not teach that “the thermoplastic resin layer is configured to separate from the support upon transfer of the thermoplastic resin layer and the photosensitive layer to a permanent substrate” as recited in claim 23. To the contrary, Sato teaches that separation occurs between the thermoplastic resin layer and the photosensitive resin layer. (FF4). However, Appellant’s own Specification admits that separating between a support and a thermoplastic resin layer would have been known to one of ordinary skill in the art. (FF6). Thus, one of ordinary skill in the art would have modified the teaching of Sato to have the support separate from the thermoplastic resin layer to retain the properties of the thermoplastic resin layer in the image forming product. Thus, an image forming transfer material with layers configured as required by claim 23 would have been obvious to one of ordinary skill in the art based on the teachings of Adachi and Sato.

A preponderance of the evidence supports a conclusion of a prima facie case of obviousness under 35 U.S.C. § 103(a) based on the teachings of Adachi and Sato.

While the Appellant had before him these references based on the Examiner’s original rejection, we find that we have significantly modified the Examiner’s rationale. In particular, we note that the Examiner relies on a limited use of Sato “*solely*” to suggest that one of ordinary skill in the art would have employed the claimed fluorine-containing surfactant copolymer of Adachi in the thermoplastic resin of the paper and resin support of

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Adachi. (Ans. 7-8). Having modified the rationale for the ground of rejection pursuant to our authority under 37 C.F.R. § 41.50(b), we denominate our affirmance as including a new ground of rejection to give Appellant an opportunity to respond. *Kronig*, 539 F.2d at 1302-03.

With respect to the original rejection by the Examiner, we cannot subscribe to the Examiner's reasoning.

Adachi discloses that a support may be "paper coated with a resin" but does not disclose what resin is coating the paper. (Adachi, col. 9, l. 67-col. 10, l. 10). The Examiner takes notice that one of ordinary skill in the art would have known that the "resin" would have been not just a thermoplastic resin, but an alkali-soluble thermoplastic resin. (Ans. 4-5 and 6-7). We find that such a contention, even if true, requires additional support.

We note that Appellant questioned the Examiner's reasoning as early as the Amendment filed August 5, 2005, stating that "[i]t should be noted that 'paper coated with a resin' does not constitute a thermoplastic resin layer. There is no indication in Adachi that the resin is a thermoplastic resin." (Amendment, filed August 5, 2005, at 2). We find that the Examiner failed to include evidence regarding what Adachi's teaching of a "paper coated with a resin" would disclose to one of ordinary skill in the art until an Appeal Brief was filed reiterating Appellant's concern. (Ans. 6-7). Further, the Examiner failed to include the evidence as part of a formal rejection.

While the Examiner may rely on official notice of what would be apparent to one of ordinary skill in the art, as noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091 (CCPA 1970), the notice of facts beyond the record which may be taken by the Examiner must be "capable of such instant and unquestionable demonstration as to defy dispute" (citing *In re*

Knapp Monarch Co., 296 F.2d 230 (CCPA 1961)). We find that, in this particular rejection, additional support for the Examiner's official notice would have been necessary since the Examiner's notice was not sufficient to defy reasonable dispute.

III. CONCLUSION

Based on the factual findings set forth above, we affirm the Examiner's decision rejecting the claims on appeal as obvious under 35 U.S.C. § 103(a). However, we denominate our affirmance as including a new ground of rejection pursuant to our authority under 37 C.F.R. § 41.50(b), since our reasons for affirming are materially different from those proffered by the Examiner.

IV. DECISION

We affirm the decision of the Examiner, but denominate our affirmance as involving a new rejection.

V. PROCEDURAL MATTERS

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). This regulation provides that “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that the Appellant, WITHIN TWO MOTNHS FROM THE DATE OF THE DECISION, must exercise one of the following tow options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

- (1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the

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examiner, in which event the proceeding will be
remanded to the examiner....

(2) *Request rehearing.* Request that the
proceeding be reheard under § 41.52 by the Board
upon the same record....

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

AFFIRMED

37 C.F.R § 41.50(b)

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