

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAMODAR M. PAI and JOHN F. YANUS

Appeal No. 1997-3646
Application No. 08/172,521

ON BRIEF

Before GARRIS, KRATZ, and TIMM, Administrative Patent Judges.
KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 15-17 and 19-29, as amended after final rejection. Claim 30, the only other claim pending in this application, has been indicated as allowable by the examiner.¹

BACKGROUND

¹ See page 2 of the supplemental examiner's answer.

Appellant's invention relates to an electrophotographic imaging member comprising a substrate, a charge generating layer,
a charge transport layer and a particularly specified overcoat layer, and a method of preparing such a member. An understanding of the invention can be derived from a reading of exemplary claim 15, which is reproduced below.

15. An electrophotographic imaging member comprising a substrate, a charge generating layer, a charge transport layer, and an overcoat layer comprising a hydroxy triphenyl methane having at least one hydroxy functional group and a polyamide film forming binder capable of forming hydrogen bonds with said hydroxy functional group of said hydroxy triphenyl methane molecule, said charge transport layer being substantially free of triphenyl methane molecules.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Yanus et al. (Yanus)	4,806,443	Feb.
21, 1989		
Lindblad et al. (Lindblad)	EP 473 292	Mar. 04,
1992		
(published European Patent Application)		

Kanbo et al. (Kanbo)² JP 55-98754 Jul. 28,
1980
(published Japanese Kokai Patent Application)

Takei et al. (Takei)³ JP 63-14153 Jan. 21,
1988
(published Japanese Kokai Patent Application)

Claims 15, 16, 19-24 and 26-29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lindblad (EP '292) in view of Takei (JP '153). Claim 17 stands rejected under 35 U.S.C. § 103 as being unpatentable over Lindblad (EP '292) in view of Takei (JP '153) and Kanbo (JP '754). Claim 25 stands rejected under 35 U.S.C. § 103 as being unpatentable over Lindblad (EP '292) in view of Takei (JP '153) and Yanus.

OPINION

Upon careful review of the entire record including the respective positions advanced by appellants and the examiner with respect to the rejections that remain before us for

² All references to Kanbo in this decision are to the English language translation thereof of record. A copy of the translation accompanies this decision.

³ All references to Takei in this decision are to the English language translation thereof of record. A copy of the translation accompanies this decision.

review⁴, we find ourselves in agreement with appellants that the examiner has failed to carry the burden of establishing a prima facie case of obviousness. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1471-1472, 223 USPQ 785, 787-788 (Fed. Cir. 1984). Accordingly, we will not sustain the examiner's rejections.

Lindblad (page 4, lines 41-43) teaches that an electrophotographic imaging member may be made of a substrate layer, a charge generating layer, a charge transport layer and an overcoat layer. Lindblad (page 4, lines 39 and 40) discloses that the overcoat layer may include a charge transport compound and a binder, which are bonded through hydrogen bonds. Lindblad notes that one of the preferred binders which may be used in the overcoat layer is a particular polyamide (page 7, lines 29-36). Lindblad is concerned with the surface roughness of the overcoat layer and the wear rate thereof and suggests a number of materials that

⁴ We agree with the examiner that the only issues before us relate to the § 103 rejections as carried forward in the answer. See item No. 6 of the answer as modified by the supplemental answer in light of the amendment after final filed December 23, 1996.

may be useful as a charge transport compound therein including aromatic amine compounds of the formulas as set forth at pages 6 and 7 of the published European Patent Application.

Lindblad points out that the charge transport compound may include hydroxy groups for reacting with the binder. See, e.g., page 6, lines 15 and 16 and page 7, lines 4-17 of Lindblad. However, as acknowledged by the examiner (answer, page 7), Lindblad "does not exemplify the use of hydroxy-containing charge transporting molecules in said overcoat layer as described in the instant claims;" that is, a hydroxy triphenyl methane type compound. Also, Lindblad does not explicitly describe the herein claimed requirement that the charge transport layer be substantially free of triphenyl methane molecules while a hydroxy triphenyl methane type compound is used in the overcoat layer.

Takei describes a positively charging electrophotographic photosensitive material that is made by "sequentially laminating a charge transport layer, a charge generating layer and a protective layer if desirable on a conductive support"

wherein the "charge generating layer contains a charge transporting substance and an arylalkane compound..." of a specified formula. See the carryover sentence at pages 8 and 9 of Takei and the general formula of the arylalkane compound that is set forth on page 9 of Takei.⁵ While the arylalkane compound may be used in the protective layer of Takei, the arylalkane compound is a distinct compound from the charge transporting material (CTM) of Takei. See pages 26 through 34a of Takei for a listing of charge transporting materials and pages 9-13 for a description of the arylalkane compound additive. According to Takei (page 10, lines 12-26), the arylalkane compound is used for protecting the CTM compound from ozone attack.

The examiner's position appears to be that it would have been obvious to one of ordinary skill in the art to have selected an hydroxy substituted triphenyl methane type compound from among the plethora of compounds disclosed as an arylalkane additive compound in Takei for use as a charge transporting compound in the overcoat layer of Lindblad based

⁵ As set forth in footnote 3 above, our references to Takei are to the English language translation thereof, of record.

on Lindblad's teaching of using a hydroxy containing charge transport molecule in the overcoat layer. See pages 8 and 11 of the answer. We disagree. The examiner has not adequately explained how Lindblad taken with Takei suggests such a modification. While Lindblad does suggest that the charge transport molecules may contain hydroxy groups, the examiner has, in essence, acknowledged that Lindblad does not teach the use of the herein claimed hydroxy triphenyl methane as a charge transport material (CTM) for use in the overcoat layer of Lindblad. See answer, page 7. The mere fact that the general formula for the arylalkane compound additive of Takei may be inclusive of a hydroxy triphenyl methane does not explain why one of ordinary skill in the art would be led to select such a hydroxy triphenyl methane for use as a CTM in the overcoat layer of Lindblad. This is especially so given that the examiner has not explained why one of ordinary skill in the art would have selected one of the many types of arylalkane compounds disclosed in Takei as an alternative CTM for use in Lindblad since Takei teaches that a CTM should be selected from among

the separate list of charge transport materials (CTMS) set forth at pages 26-34a thereof. The examiner has not adequately explained, nor do we find, that either of the applied references, alone or in combination, teaches or suggests that the properties of only select hydroxy containing arylalkane compounds of Takei are such that they would serve as a ready substitute for the CTM materials taught by Lindblad for use in the overcoat layer.

In order for a *prima facie* case of obviousness of the claimed invention to be established, the prior art as applied must be such that it would have provided one of ordinary skill in the art with both a suggestion to carry out appellants' claimed invention and a reasonable expectation of success in doing so. *See In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988). "Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure." *Id.*

For the foregoing reasons, we find that the examiner has not established a *prima facie* case of obviousness. Because we reverse the stated rejection of claims 15, 16, 19-24 and 26-29 under 35 U.S.C. § 103 as being unpatentable over Lindblad (EP '292) in view of Takei (JP '153) on this basis, we need not reach the issue of the sufficiency of the asserted showing of unexpected results. See *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987).

Since the examiner has not shown how the other references that are additionally applied against each of claims 17 and 25 make up for the above-noted deficiencies, we shall also reverse the § 103 rejections of those claims.

CONCLUSION

The decision of the examiner is reversed.

REVERSED

BRADLEY R. GARRIS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
PETER F. KRATZ)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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CATHERINE TIMM)	
Administrative Patent Judge)	

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RONALD ZIBELLI
XEROX CORPORATION
XEROX SQUARE 020
NEW YORK, NY 14644