

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte ROBERT RASMUSSEN and JIANPING P. YANG

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Appeal No. 2006-0780  
Application No. 10/331,716

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ON BRIEF

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Before TIMM, JEFFREY T. SMITH and FRANKLIN, Administrative Patent Judges.

JEFFREY T. SMITH, Administrative Patent Judge.

DECISION ON APPEAL

Appellants' appeal the Examiner's final rejection of claims 1 to 15 and 48-49, all of the pending claims in the application. We have jurisdiction under 35 U.S.C. § 134.

Appellants' invention relates to a method of applying phosphor particles to a substrate. The process includes applying the phosphor particles to a substrate and submerging the substrate into a binder and subsequently removing the

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substrate from the binder. Representative claim 1, as presented in Appellants' brief, appears below:

1. A method, comprising:  
  
applying phosphor particles to a substrate;  
  
submerging the substrate into a binder solution; and  
  
removing the substrate from the binder solution at a rate selected based upon at least one property of the binder solution.

As evidence of unpatentability the Examiner relies on the following references:

Gallaro, et al. (Gallaro)	3,463,686	Aug. 26, 1969
Evans et al. (Evans)	3,689,265	Sep. 5, 1972
Benham	4,264,408	Apr. 28, 1981
Libman et al. (Libman)	4,891,110	Jan. 2, 1990
Endo et al. (Endo)	5,665,422	Sep. 9, 1997
Rasmussen (Rasmussen '773)	5,762,773	Jun. 9, 1998
Rasmussen (Rasmussen '750)	6,068,750	May 30, 2000

The Examiner entered the following grounds of rejection (Answer, pages 3-7):

A) Claims 1 to 15, 48 and 49 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement of this paragraph.

B) Claim 49 stands rejected under 35 U.S.C. § 112, second paragraph, as comprising indefinite language.

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C) Claims 1-3, 8-9, 48 and 49 stand rejected under 35 U.S.C. § 103(a) as obvious over Benham in view of Endo.

D) Claims 4-6 stand rejected under 35 U.S.C. § 103(a) as obvious over the combined teachings of Benham, Endo and Evans.

E) Claim 7 stands rejected under 35 U.S.C. § 103(a) as obvious over the combined teachings of Benham, Endo and Gallaro.

F) Claims 1, 48 and 49 stand rejected under 35 U.S.C. § 102(b) as anticipated by Libman.

G) Claims 10, 11 and 15 stand rejected under 35 U.S.C. § 103(a) as obvious over the combined teachings of Libman and Rasmussen '773.

H) Claims 12-14 stand rejected under 35 U.S.C. § 103(a) as obvious over the combined teachings of Libman, Rasmussen '773 and Rasmussen '750.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the Appellants regarding the above noted rejections, we make reference to the Answer (mailed September 1, 2005) for the Examiner's reasoning in support of the rejections and to the Brief (filed June 17, 2005) for Appellants' arguments thereagainst.

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OPINION

Upon careful review of the respective positions advanced by Appellants and the Examiner, we reverse the Examiner's rejection under 35 U.S.C. § 112, first paragraph. However we affirm the remaining rejections. Our reasons follow.

THE REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

The Examiner has rejected claims 1-15, 48 and 49 as unpatentable under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time that the application was filed, had possession of the claimed invention. We reverse.

With regard to written descriptive support, all that is required is that Appellants' specification reasonably convey to one of ordinary skill in the art as of the filing date of the application, Appellants were in possession of the presently claimed invention; how the specification accomplishes this is not material. See In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983); In re Edwards, 586 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978).

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The Examiner urges that the specification does not provide adequate descriptive support for the properties of the binder solution. In particular, the Examiner asserts "[t]here is no support for the scope of the limitation 'a rate selected based upon at least one property of the binder solution' because Appellant's [sic, Appellants'] cited support at p. 10, lines 17-23 does not provide support for the entire claim genus of all binder solution properties." (Answer, p. 3).

The Examiner's position is not persuasive. As correctly noted by Appellants, the specification at page 10 describes properties of the binder solution such as drying uniformity, binder type and binder concentration. While it is recognized that the specification does not describe all possible properties of the binder solution, the determination of proper binder properties would have been conveyed by the original disclosure to one of ordinary skill in the art. Consequently, the Examiner's rejection under 35 U.S.C. § 112, first paragraph, of claims 1-15, 48 and 49 is reversed.

THE REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

The Examiner has rejected claim 49 under 35 U.S.C. § 112, second paragraph, as indefinite. We affirm. The Examiner

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asserts the phrase "'a rate selected to improve adherence of the phosphor particles to the substrate based upon at least one property of the binder solution'" is indefinite because there is no basis for comparison of improved adherence. (Answer, p. 3).

Appellants assert that "a person of ordinary skill in the art would understand that the rate is to be selected among other possible withdrawal rates such that the selected rate results in relatively improved adherence of the phosphor particles to the substrate." (Brief, p. 7).

"The legal standard for definiteness [under the second paragraph of 35 U.S.C. § 112] is whether a claim reasonably appraises those of skill in the art of the scope." In re Warmerdam, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). The inquiry under the second paragraph of 35 U.S.C. § 112 is to determine whether the claims set out and circumscribes a particular area with a reasonable degree of precision and particularity. The definiteness of the language employed in the claim must be analyzed not in a vacuum but in light of the teachings of the particular application. In re Moore, 439, F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

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After consideration of the present record, we determine that a person of ordinary skill in the art would not have recognized the basis for determining improved adherence. As such the Examiner's rejection on this basis is affirmed.

THE PRIOR REJECTIONS

Claims 1-3, 8, 9, 48 and 49 stand rejected under 35 U.S.C. § 103(a) as obvious over Benham in view of Endo.<sup>1</sup>

The Examiner finds that Benham describes a method of applying phosphor particles to a substrate that differs from the subject matter of claim 1 in that the rate of removal of the substrate from the binder solution is not provided. The Examiner properly recognizes that the substrate with the applied phosphor particles is not maintained in a liquid state. That is, the substrate is removed from immersion in the binder solution. (Answer, p. 4; Benham, col. 5, lines 20-24). The Examiner relies on the Endo reference for disclosing that persons of ordinary skill in the art would have recognized controlling the withdrawal rate from an immersion bath affects the properties of the coated article. (Answer, p. 4).

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<sup>1</sup> Appellants have not provided separate arguments for the rejected claims. Therefore, we select claim 1 as representative of the rejected claims and will limit our discussion thereto.

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Appellants argue that Benham does not teach or suggest removing the substrate from the binder solution at "a rate selected based upon at least one property of the binder solution" (Brief, p. 8).

Appellants' argument is not persuasive. Benham discloses that the purpose of the invention is to provide high quality and high efficient phosphor coatings. (Column 5, ll. 25-29). Claim 10 of Benham discloses that suitable immersion times are up to approximately five minutes. Thus, a person of ordinary skill in the art would have recognized from the disclosure of the Benham reference that the phosphor coated substrate should have been submerged in the binding solution for a sufficient time so as to provide the desired high quality and highly efficient phosphor coatings. Appellants have not set forth a specific removal rate or identified specific properties of the binder solution used to determine the removal rate. As such, Appellants have not described their invention in a manner that avoids the teachings of the cited prior art.

The Examiner rejected claims 4-6 under 35 U.S.C. § 103(a) over the combined teaching of Benham, Endo and Evans. The Examiner also rejected the subject matter of claim 7 under 35

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U.S.C. § 103(a) over the combined teachings of Benham, Endo and Gallaro. We affirm each of these rejections.

For each of these rejections, Appellants state that the additionally cited references, Evans and Gallaro, do not remedy the deficiencies of Benham and Endo discussed previously. Brief, pp. 10-11). Appellants have not challenged the Examiner's findings regarding the specific references or the suitability of their being combined with the Benham and Endo references. Since Appellants have not challenged the Examiner's motivation for combining the Evans and Gallaro references with Benham and Endo, we presume that they are in agreement with the Examiner that there is motivation to use the teachings of these references together. Consequently for the reasons stated above when discussing the rejection over the Benham and Endo references and the reasons presented in the Answer by the Examiner we affirm these rejections.

We now turn to the prior art rejections over the Libman reference.

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Claims 1, 48 and 49 stand rejected under 35 U.S.C.  
§ 102(b) as anticipated by Libman.<sup>2</sup>

The Examiner finds Libman describes a process of applying phosphor particles to a substrate including the step of submerging the substrate into a binder solution. The Examiner recognizes that Libman does not describe the removal rate of the substrate from the binder, however, the Examiner asserts that the substrate must necessarily be removed from the bath and therefore must have a removal rate. (Answer, p. 6).

Appellants do not argue that Libman does not disclose emerging a substrate coated with phosphor particles into a bath comprising a binder. Rather, Appellants argue that the rate of removal of the substrate from the binder was not based upon at least one property of the binder solution. (Brief, p. 11).

Appellants' arguments are not persuasive. Libman discloses that the binder is used to provide the substrate the ability to withstand further processing steps. (Col. 10, ll. 25-30). Thus, the application of the binder solution must necessarily be at a rate that provides the substrate with the

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<sup>2</sup> Appellants have not presented separate arguments for the rejected claims. Therefore we select claim 1 as representative of the rejected claims.

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desired properties. Appellants have not directed us to evidence that the Libman method of applying phosphor to a substrate is different from the subject matter of claim 1.

Claims 10, 11 and 15 stand rejected under 35 U.S.C. § 103(a) over the combined teachings of Libman and Rasmussen '773. Claims 12 and 14 stand rejected under 35 U.S.C. § 103(a) over the combined teachings of Libman, Rasmussen '773 and Rasmussen '750. We affirm each of these rejections. For each of these stated rejections Appellants argue that the additional references, Rasmussen '773 and Rasmussen '750, do not remedy the deficiency of the primary reference. Appellants have not challenged the Examiner's findings regarding the specific references or the suitability of their being combined with the Libman reference. Since Appellants have not challenged the Examiner's motivation for combining the Rasmussen references with Libman, we presume that they are in agreement with the Examiner that there is motivation to use the teachings of these references together. Consequently for the reasons stated above when discussing the rejection over the Libman reference and the reasons presented in the Answer by the Examiner we affirm these rejections.

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As a final point we note that the Appellants have not directed us to evidence of secondary considerations in support of their arguments against the Examiner's rejections.

CONCLUSION

The rejection of claims 1-15, 48 and 49 under 35 U.S.C. § 112, first paragraph is reversed. The rejection of claim 49 under 35 U.S.C. § 112, second paragraph is affirmed. We affirm all of the stated prior art rejections.

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

AFFIRMED

CATHERINE TIMM	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	
JEFFREY T. SMITH	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
	)	
BEVERLY A. FRANKLIN	)	
Administrative Patent Judge	)	

JTS/hh

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