

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MASAYUKI TATEWAKI, HIROMASA
KATO and KENICHI OBINATA

Appeal No. 95-3481
Application 08/017,977¹

ON BRIEF

Before JOHN D. SMITH, PAK and WALTZ, ***Administrative Patent Judges.***

WALTZ, ***Administrative Patent Judge.***

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 4, 7 and 8, which are the only claims remaining in this application.

¹ Application for patent filed February 12, 1993. According to applicants, this application is a continuation of Application 07/834,612, filed February 12, 1992, which is a division of Application 07/667,829, filed March 12, 1991, now Patent No. 5,186,994, granted February 16, 1993.

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According to appellants, the present invention is an improved method for forming a reflective layer of aluminum on an optical disk. This method is accomplished by introducing a small amount of oxygen into the atmosphere during formation of the aluminum reflective layer by the well-known techniques of evaporation or sputtering. This process forms a stable oxide of aluminum dispersed within the aluminum layer to improve the degradation property (brief, pages 1-2).

As stated by appellants on page 2 of the brief, the claims stand or fall together. Accordingly, we will limit our discussion of the claims to the broadest claim on appeal, independent claim 4, which is reproduced below:

4. A method for producing a reflective film essentially composed of aluminum on an optical disc, wherein aluminum oxide is interdispersed within the aluminum, said method comprising introducing an amount of oxygen into an atmosphere in the course of forming said reflective film on a transparent substrate of said optical disc wherein the amount of oxygen introduced into the atmosphere is such that the oxide of aluminum contained in the formed reflective film bears an oxygen to aluminum atomic ratio between 1.3 and 2.0.

No prior art was relied upon by the examiner in the rejection of the appealed claims. Claims 4, 7 and 8 stand rejected under 35 U.S.C. § 112, second paragraph, as incomplete for not reciting the parameters of the method for producing the

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desired result of an aluminum oxide having an oxygen to aluminum atomic ratio between 1.3 and 2.0" (answer, page 2). We reverse this rejection for reasons that follow.

OPINION

The examiner's only rejection is made under 35 U.S.C. § 112, second paragraph (answer, page 2). However, the language employed by the examiner in this rejection leaves doubt as to the exact ground of the rejection. Appellants note that the language used by the examiner seems to refer to the standard for enablement under section 112, first paragraph, i.e., the use of the term "undue experimentation" on page 2 of the Final Rejection (Paper No. 17 dated May 11, 1994, see appellants' brief, the paragraph bridging pages 2-3). Appellants present arguments in the brief against the rejection based on either the first or second paragraphs of 35 U.S.C. § 112. The examiner has failed to give any reasoning to support a theory of "undue experimentation" (see *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)). Similarly, the examiner has used the language in the answer that "essential steps" are "absent form [sic, from] the claims" (answer, page 3). Unclaimed essential matter should be rejected under the first paragraph of section 112 (see *Manual*

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of *Patent Examining Procedure*, § 2172.01, 6th ed., Rev. 3, July 1997, and *In re Mayhew*, 527 F.2d 1229, 1233, 188 USPQ 356, 358 (CCPA 1976)). To the extent the examiner may have been relying on the enablement requirement of section 112 as basis for the rejection, there are no reasons presented to support this rejection.

We will only address the reasoning presented for the rejection under the second paragraph of 35 U.S.C. § 112. Under the second paragraph of section 112, we must conclude, absent evidence to the contrary, that the subject matter of the claims is "that which the applicant regards as his invention". Therefore, our discussion will only focus on the requirement of section 112, second paragraph, that the specification conclude with "one or more claims particularly pointing out and distinctly claiming" the subject matter which appellants regard as their invention, i.e., indefiniteness.

The legal standard for indefiniteness under paragraph two of 35 U.S.C. § 112 is whether a claim reasonably apprises those of skill in the art of its scope. *Amgen Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200, 1217, 18 USPQ2d 1016, 1030 (Fed. Cir.), cert. denied sub nom., *Genetics Inst., Inc. v. Amgen, Inc.*, 112 S.Ct. 169 (1991). The definiteness of the

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language employed must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and the application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. See ***In re Angstadt***, 537 F.2d 498, 501, 190 USPQ 214, 217 (CCPA 1976).

The examiner states that the claims are "incomplete" for not reciting the parameters of the method for producing the desired result of an aluminum oxide having an oxygen to aluminum ratio between 1.3 and 2.0 (answer, page 2). The examiner concludes that without recitation of the source materials, temperatures, proportions, etc., the claims are considered incomplete (answer, pages 2-3).

Considering the claimed phrase in question² in light of the application disclosure, we find that a critical part of the claimed method is the oxidized state of the aluminum oxide (specification, page 3, last line). The oxide needs to be a "stable oxide" and this is determined by checking the oxygen to aluminum ratio in the oxide of Al to insure that it is 1.3 or more, with an upper limit of 2.0 being imposed by the chemical

² This phrase is "wherein the amount of oxygen introduced into the atmosphere is such that the oxide of aluminum contained in the formed reflective film bears an oxygen to aluminum atomic ratio between 1.3 and 2.0." See claim 4, lines 7-10.

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composition of the oxide (specification, page 4). During the well known sputtering or evaporation techniques, the amount of oxygen introduced into the atmosphere can easily be determined, as a function of the rate of film formation, so that the produced Al reflective film will satisfy the above mentioned ratios (specification, page 5). Furthermore, the produced film may be analyzed by X-ray photoelectron spectrometry (XPS) to determine the amount of Al bound with oxygen (specification, page 7). Appellants disclose that the amount of Al bound with oxygen accounts for substantially 26 to 33 atomic percent (specification, page 5).

Contrary to the examiner's allegations, we do not find that the source materials, temperatures, or proportions are critical or that essential steps are absent from the claims (answer, pages 2-3). As stated in *In re Moore*, 439 F.2d 1232, 1236, 169 USPQ 236, 239 (CCPA 1971), "We simply cannot understand why it is felt that process parameters are important here." If these parameters are not important to the formation of the aluminum oxide, there is no reason why they must be included in the claims. See *In re Spiller*, 500 F.2d 1170, 1180, 182 USPQ 614, 622 (CCPA 1974) ("...we agree with appellant that there is no reason why he must state in his claims 'a feature of no importance' to his

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invention").

As discussed above, appellants disclose how to monitor and determine the amount of oxygen added to the conventional sputtering or evaporation method to achieve the desired ratio of oxygen to aluminum with improved results. Appellants disclose that what is important is the formation of an aluminum oxide interdispersed within the aluminum such that this oxide bears an oxygen to aluminum atomic ratio of between 1.3 and 2.0. This is clearly set forth in the claims on appeal.

For the foregoing reasons, it is clear that the claims do, when read in light of the specification, reasonably apprise one

of ordinary skill in the pertinent art of their scope.

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Accordingly, the rejection of claims 4, 7 and 8 under 35 U.S.C.
§ 112, second paragraph, is reversed.

REVERSED

JOHN D. SMITH)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
CHUNG K. PAK)	
Administrative Patent Judge)	APPEALS AND
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