Paper No. 37

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte TOSHINORI MORIZANE

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Appeal No. 1999-0787
Application 08/813,953

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HEARD: October 11, 2001

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Before PAK, WARREN and OWENS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 1-3 and 7, which are all of the claims remaining in the application.

THE INVENTION

The appellant's claimed invention is directed toward a

> 1. A method for producing a metal oxide film, which comprises: subjecting a hydrolyzable organic metal compound to hydrolysis in a mixed solution consisting of water and organic solvent, containing halogen ions and boron ions followed by dehydration and condensation to obtain a reaction product; thereafter, applying the reaction product onto the surface of a base material; and maintaining said reaction product at a temperature of 200°C or below to obtain said metal oxide film.

REFERENCE RELIED UPON BY THE EXAMINER

Kondo et al. (Kondo) 5,160,358 Nov. 3, 1992

THE REJECTIONS

Claims 1-3 and 7 stand rejected as follows: under 35 U.S.C. § 101, as being inoperable, and under 35 U.S.C. § 112, enablement and written description requirements.

OPINION

We reverse the aforementioned rejections.

Rejections under 35 U.S.C. § 101 and 35 U.S.C. § 112, enablement requirement

Before utility, which is a question of fact, is determined, the claims must be interpreted as a matter of law to define the invention to be tested for utility. *See Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 956, 220 USPQ 592, 596 (Fed. Cir. 1983),

The claimed invention is a method for making a metal oxide film by subjecting a hydrolyzable organic metal compound to hydrolysis in a recited solution followed by dehydration and condensation to obtain a reaction product, and then applying the reaction product to a surface and maintaining the reaction product at a temperature of 200°C or below to form the metal oxide film.[1]

The examiner argues that the appellant's claims, when read in light of the specification, are limited to a method for making a transparent, nonporous metal oxide glass film by vitrifying a reaction product at 200°C or below (answer, pages 3-4). It reasonably appears that "metal oxide film" in the appellant's claims and "metal oxide glass film" in the appellant's specification have the same meaning. Each term refers to the film formed by the appellant's method. Also, "maintaining ... at a temperature" reasonably appears to be the same as "vitrifying ... at a temperature", both meaning holding the reaction product at a particular temperature to produce the metal oxide film.

Although the appellant's specification (page 19) states that the film is transparent and nonporous, the specification does not indicate that the claimed method is limited to one which produces a metal oxide film having these characteristics.

Regarding utility, a predecessor of our appellate reviewing court stated in *In re Langer*, 503 F.2d 1380, 1391, 183 USPQ 288, 297 (CCPA 1974):

> [A] specification which contains a disclosure of utility which corresponds in scope to the subject matter sought to be patented *must* be taken as sufficient to satisfy the utility requirement of § 101 for the entire claimed subject matter *unless* there is reason for one skilled in the art to question the objective truth of the statement of utility or its scope.

The examiner argues that the appellant's claimed method cannot work because glass cannot be vitrified at temperatures as low as 200°C or below (answer, page 4).[2] In support of this argument the examiner relies upon Kondo, which discloses making a porous silica gel plate by a sol-gel method and then calcining the plate at a temperature of as least 900°C to render it

nonporous and suitable for use as a base for a planar optical waveguide (col. 3, line 67 - col. 4, line 11; col. 8, lines 49-59).

The appellant, however, distinguishes the claimed method over the sol-gel method which, the appellant states, requires heat treatment at 1,100°C or higher (specification, page 2). The appellant states that the appellant's method permits a metal oxide glass film to be produced at 200°C or below (specification, page 3), and provides five examples wherein a metal oxide film is produced using heat treatment of the reaction product at temperatures within this range (specification, pages 11-16).[3] The examiner has provided no evidence that if the appellant's claimed method rather than Kondo's sol-gel method is used, a metal oxide film cannot be formed at 200°C or below. Consequently, we are not persuaded by the examiner's argument that the appellant's claimed method lacks utility.

In the rejection under 35 U.S.C. § 112, first paragraph, enable requirement, the examiner relies upon the same rationale

used in the rejection under 35 U.S.C. § 101 (answer, page 5).[4] We are not convinced by the examiner's argument for the reasons set forth above regarding that rejection.

For the above reasons we conclude that the examiner has not carried the burden of establishing a *prima facie* case of lack of utility or of nonenablement. Accordingly, we reverse the rejections under 35 U.S.C. §§ 101 and 112, first paragraph, enablement requirement.

Rejection under 35 U.S.C. § 112, written description requirement

A specification complies with the 35 U.S.C. § 112, first paragraph, written description requirement if it conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of the invention. *See Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991); *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983); *In re Edwards*, 568 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978);

In re Wertheim, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976).

The examiner argues that the specification does not provide adequate written descriptive support for the term "maintaining" in claim 1 (answer, page 6).

As stated above regarding the rejection under 35 U.S.C. § 101, the maintaining at 200°C or below in claim 1 reasonably appears to be the vitrifying at 200°C or below described in the specification (page 3). This maintaining or vitrifying necessarily must be maintained for the time period required for the metal oxide film to be produced. Moreover, the specification discloses examples wherein the reaction product is heated at 120°C for 30 minutes (page 12), 180-200°C for 20 minutes (page 12), and 120-150°C for 20-30 minutes (page 14) to produce metal oxide films. Hence, the specification would have conveyed with reasonable clarity to those skilled in the art that the inventor was in possession of a method in which the reaction product is maintained at 200°C or below to obtain a metal oxide film. Accordingly, we reverse the rejection under 35 U.S.C.

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DECISION

The rejections of claims 1-3 and 7 under 35 U.S.C. § 101 and under 35 U.S.C. § 112, enablement and written description requirements, are reversed.

REVERSED

CHUNG K. PAK Administrative Patent Judge	)	
CHARLES F. WARREN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
TERRY J. OWENS Administrative Patent Judge	)	

tjo/vsh

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