

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

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT T. NILSSON
and
ROBIN P. ZIEBARTH

Appeal 2007-0738
Application 11/109,274
Technology Center 1700

Decided: February 13, 2007

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and LINDA M. GAUDETTE, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-29. Claim 1 is illustrative:

1. A method of increasing the strength of a porous ceramic body comprising:

- (a) exposing a porous ceramic body comprised of ceramic grains essentially chemically bound together to a source of boron, wherein the source of boron is uniformly distributed within the porous ceramic body and
- (b) heating the porous body in an oxygen containing atmosphere to a temperature sufficient to form the porous ceramic body having increased strength.

The Examiner relies upon the following reference in the rejection of the appealed claims:

DiChiara, Jr. (DiChiara) US 6,919,103 B2 Jul. 19, 2005

Appellants' claimed invention is directed to a method of increasing the strength of a porous ceramic body comprising exposing the body to a source of boron so as to uniformly distribute boron within the porous ceramic body. The porous body is heated after treatment with the boron. Examples of the source of boron are boron carbide and boron nitride. Also, the porous body can be exposed to the source of boron by impregnating a liquid having boron dissolved therein into the ceramic body.

Appealed claims 1-9, 15, 20-24, and 29 stand rejected under 35 U.S.C. § 102(b) as being anticipated by DiChiara. Claims 10-14, 16-19, and 25-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over DiChiara.

Appellants present separate arguments for the following groups of claims: (I) claims 3 and 4, (II) claim 15, (III) claim 7, (IV) claims 12 and 18, (V) claims 14 and 27, and (VI) claim 28. Accordingly, claims 1, 2, 5, 6, 8-11, 13, 16, 17, 19-26, and 29 stand or fall together.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we find that the Examiner's § 102 and § 103

rejections are well-founded and supported by the prior art reference relied upon. Accordingly, we will sustain the Examiner's rejections.

We consider first the Examiner's rejection under § 102. There is no dispute that DiChiara, like Appellants, discloses treating a porous ceramic body with an aqueous composition comprising boron and then drying the porous body to remove the water and leave boron within the pores of the body. DiChiara discloses that the source of boron can be an aqueous composition of boron carbide or boron nitride (*see* col. 3, ll. 34-40).

A principal argument of the Appellants is that the reference does not describe within the meaning of § 102 that the source of boron is uniformly distributed within the porous ceramic body. Appellants point to DiChiara's incorporation by reference of US Patent Nos. 5,702,761 and 5,928,775 to DiChiara for an illustration that the boron is not distributed uniformly throughout the ceramic body, i.e., from its surface to its core. However, we do not interpret the present claim language as requiring the same concentration of boron at the surface and at the core of the ceramic body, i.e., throughout the porous ceramic body. Rather, the claims only require that there is a uniform distribution within the ceramic body. Hence, since the patent drawings referenced by Appellants illustrate a substantially uniform distribution within different thicknesses of the ceramic body, we find that such uniform distribution in DiChiara meets the requirement of the appealed claims. It can be seen in the patent drawings that the boron is substantially uniformly distributed within a certain depth from the surface of the body.

Appellants submit that "DiChiara only describes drying by heating or at room temperature their impregnated body and when Applicants used heating to *dry* their impregnated porous ceramic body, a non-uniform distribution resulted" (page 7 of Br., last para.). However, we fail to see any correspondence between Appellants' Specification Example 7 which dried the body at 110 C. in an oven, and DiChiara's "letting the ceramic body dry at room temperature to remove the solvents" (col. 4, ll. 57-58). Also, claim 1 does not require any particular method of drying to remove the solvent.

Appellants also maintain that "DiChiara fails to describe precipitating the boron source from solution and teaches away from having the boron compound in a solution at all" (page 11 of Br., first full para.). However, since DiChiara uses boron carbide or boron nitride in composition with water, as do Appellants, it is reasonable to conclude that the aqueous slurry of Dichiara comprises the boron compound in solution to at least some degree.

Appellants submit for separately argued claim 7 that "the porous ceramic body is exposed by volatilizing a boron source by heating a separate source of boron in the presence of the porous ceramic body" (page 11 of Br., second full para.). However, this argument is not commensurate in scope with the language of claim 7. Claim 7 does not recite any volatilizing of a boron source, but only that "the porous ceramic body is exposed to the source of boron by heating, simultaneously, a separately provided source of boron along with the porous ceramic body." This step does not distinguish from DiChirara's heating the boron compound in aqueous composition while impregnated in the pores of the ceramic body.

Separately argued claims 12 and 18 specify that the ceramic body is mullet. The Examiner properly points out, however, that DiChiara teaches that the ceramic powder in the aqueous composition can be mullet or cordierite and that the powder "is preferably made of a ceramic material other than the ceramic material of a ceramic body to be protected" (col. 3, ll. 14-16). Consequently, we agree with the Examiner that one of ordinary skill in the art would have found it obvious to select cordierite as the ceramic powder and mullet for the ceramic body.

As for separately argued claims 14, 27, and 28, which recite that the porous ceramic body is a diesel particulate filter, appellants make the argument that DiChiara does not disclose using the treated ceramic body as a filter. However, inasmuch as the boron-treated porous ceramic body of DiChiara reasonably appears to have essentially the same structure as Appellants' boron-treated porous ceramic body, we find it reasonable to conclude that the treated porous ceramic body of DiChiara is capable of serving as a filter. It is well settled that when a product reasonably appears to be substantially the same as a product disclosed by the prior art, the burden is in the applicant to prove that the prior art product does not necessarily or inherently possess characteristics attributed to the claimed product. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In the present case Appellants have not advanced any argument, let alone the requisite objective evidence, that demonstrates that the boron-treated porous ceramic body of DiChiara is not capable of functioning as a diesel particulate filter.

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As a final point, with respect to the § 103 rejection, we note that Appellants base no argument upon objective evidence of nonobviousness, such as unexpected results.

In conclusion, based on the foregoing, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(iv)(effective Sept. 13, 2004).

AFFIRMED

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