

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MITSURU HATTORI

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Appeal No. 95-3336  
Application No. 07/984,448<sup>1</sup>

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HEARD: February 11, 1999

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Before WARREN, WALTZ, and LIEBERMAN, 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 1 through 4, which are the only claims in this application.

According to appellant, the invention is directed to a method for manufacturing ceramic articles having one or more holes penetrating into or through the body of the article

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<sup>1</sup> Application for patent filed December 2, 1992.

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(brief, page 2). This method includes the steps of joining ceramic compacts along their mating surfaces by cold isostatic pressing (CIP) followed by firing the integrated compact to obtain sintering (*id.*). Claim 1 is illustrative of the subject matter on appeal and is reproduced below:

1. A method for manufacturing a ceramic having at least one hole comprising the steps of:

forming independently at least two ceramic compacts, said ceramic compacts having their shapes corresponding to the divided parts of one integrated body having at least one hole along which the integrated body is divided;

joining said ceramic compacts into an integrated form having at least one hole by cold isostatic pressing; and

firing the integrated compact.

The examiner has relied upon the following references as evidence of obviousness:

Hattori et al. (Hattori)	4,248,813	Feb. 3, 1981
Conder et al. (Conder)	4,662,958	May 5, 1987
Yogo et al. (Yogo)	5,106,550	Apr. 21, 1992

Claims 1 through 4 stand rejected under 35 U.S.C. § 103 as unpatentable over Conder in view of Hattori or Yogo (answer, page 3). We reverse the examiner's rejection for reasons which follow.

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### OPINION

The method of appealed claim 1 recites three steps, namely, forming at least two ceramic compacts with their shapes corresponding to the divided parts of one integrated body having at least one hole along which the integrated body is divided, joining the ceramic compacts into an integrated form having at least one hole by CIP, and firing the integrated compact.

The examiner finds that Conder discloses a method of manufacturing a ceramic having at least one hole (answer, page 3). The only difference found by the examiner between the process of Conder and the claimed method is that Conder discloses the compacts are bonded by "thermo compression" while the claimed method recites cold isostatic pressing followed by firing (answer, page 3). The examiner characterizes the "thermo compression" of Conder as a "simultaneous step of firing and compressing" (answer, page 4).

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The examiner applies Hattori or Yogi to show the well known method of joining two ceramic compacts by cold isostatic pressing followed by firing (answer, paragraph bridging pages 3-4). The examiner then concludes that "[i]t would have been obvious for one of ordinary skill in the art to have used CIP and subsequent firing to join the bodies of Conder et al since this method is an art recognized alternative for joining ceramic compacts." (answer, sentence bridging pages 3-4).

"It is well-established that before a conclusion of obviousness may be made based on a combination of references, there must have been a reason, suggestion, or motivation to lead an inventor to combine those references." *Pro-Mold and Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629 (Fed. Cir. 1996). The examiner has failed to advanced any cogent reasoning that would have led one of ordinary skill in the art to substitute the CIP and firing of the secondary references for the "thermo-compression" of Conder (see the brief, page 4).

As argued by appellants on page 7 of the brief, Conder teaches against the use of high temperatures and high

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pressures, i.e., hot isostatic pressing (see Conder, column 6, lines 14-21). Conders also teaches that "[a]cceptable bonding is unlikely to take place below 1200EC." (column 5, lines 27-28). In fact, Conders defines "thermo-compression" as bonding at a temperature in the range 1200EC. to 1750EC under a few tens of grams weight to achieve light compression (column 3, lines 1-3; column 4, lines 5-8; brief, sentence bridging pages 3-4).

There is no evidence in this record that CIP followed by firing would have been suggested to the artisan as a substitute for the "thermo-compression" as defined and limited by Conder. There also is no evidence in this record that CIP and firing would have been suggested to the artisan in view of the limitations for bonding disclosed and taught by Conder. The mere recognition in the secondary references that CIP followed by firing can be used to join two ceramic compacts provides no reason or suggestion for using this process in place of the "thermo-compression" as defined and limited by Conder. See *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998).

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For the foregoing reasons, we determine that there is no reason, suggestion, or motivation to combine the references in the manner proposed by the examiner. Accordingly, the examiner has not established a *prima facie* case of obviousness and the examiner's rejection of claims 1 through 4 under 35 U.S.C. § 103 as unpatentable over Conder in view of Hattori or Yogi is reversed. *In re Rouffet*, 149 F.3d at 1358, 47 USPQ2d at 1458 (Fed. Cir. 1998).

The decision of the examiner is reversed.

**REVERSED**

CHARLES F. WARREN	)	
Administrative Patent Judge	)	
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	)	
	)	
	)	BOARD OF PATENT
THOMAS A. WALTZ	)	APPEALS
Administrative Patent Judge	)	AND



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APJ WALTZ

APJ WARREN

APJ LEIBERMAN

DECISION: REVERSED  
Send Reference(s): Yes No  
or Translation (s)  
Panel Change: Yes No  
Index Sheet-2901 Rejection(s):103

Prepared: April 12, 2000

Draft      Final

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PALM / ACTS 2 / BOOK  
DISK (FOIA) / REPORT