

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 CHI HSIEN SHEU, DENISE M. SHIMAZU,
and DAVID MICHAEL KANE

Appeal 2007-0407
Application 10/243,796
Technology Center 1700

Decided: May 30, 2007

Before BRADLEY R. GARRIS, CHARLES F. WARREN, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

Statement of the Case

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 1-38. We have jurisdiction under 35 U.S.C. § 6.

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Appellants' invention relates to a co-cured vacuum assisted resin transfer molding manufacturing method. Representative independent claim 1, as presented in the Brief, appears below:

1. A co-cured vacuum-assisted resin transfer molding manufacturing method, comprising;

providing a tool base;

disposing a prepreg skin panel outwardly from the tool base;

disposing one or more tooling details outwardly from the prepreg skin panel;

disposing one or more preforms proximate the one or more tooling details, the one or more preforms being either dry or binderized;

disposing a high permeability medium between the one or more tooling details and the one or more preforms;

enclosing the prepreg skin panel, the one or more tooling details, the one or more preforms, and the high permeability medium with at least one vacuum bag;

pulling a vacuum on the vacuum bag;

infusing the one or more preforms with a resin; and

curing the one or more preforms and the prepreg skin panel.

The Examiner relies on the following references in rejecting the appealed subject matter:

Palmer	US 4,942,013	Jul. 17, 1990
Waldrop, III.....	US 2002/0022422 A1	Feb. 21, 2002
McKague, Jr.....	US 2003/0051434 A1	Mar. 20, 2003

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Claims 1, 2, 6-17, and 21-30 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Waldrop in view of Palmer; claims 3-5, 18-20, and 31-38 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Waldrop in view of Palmer and McKague; and claims 1-38 stand rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 1-17 of U.S. Patent Application No. 10/153,301 in view of Waldrop.

The § 103 Rejections

The issue presented for review is as follows:

Has the Examiner demonstrated that a person having ordinary skill in the art would have been led to place a resin distribution plate position between the mold tool and the fiber preform in the process of Waldrop within the meaning of 35 U.S.C. § 103?

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). “[A]nalysis [of whether the subject matter of a claim is obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007) quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed.

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Cir. 2006); *see also DyStar Textilfarben GmBH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1361, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006)(“The motivation need not be found in the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself.”); *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)(“Having established that this knowledge was in the art, the examiner could then properly rely, as put forth by the solicitor, on a conclusion of obviousness ‘from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference.’”); *In re Hoeschele*, 406 F.2d 1403, 1406-07, 160 USPQ 809, 811-812 (CCPA 1969) (“[I]t is proper to take into account not only specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom...”). The analysis supporting obviousness, however, should be made explicit and should “identify a reason that would have prompted a person of ordinary skill in the art to combine the elements” in the manner claimed. *KSR*, 127 S.Ct. at 1731, 81 USPQ2d at 1389.

As evidence of obviousness of the claimed subject matter under § 103, the Examiner has primarily relied on the disclosures of Waldrop and Palmer (Answer 6-10). The Examiner has found at page 6 of the Answer that Waldrop teaches a resin transfer molding process that includes providing a fiber reinforced panel on a tool. The Examiner cited various components from the figures of Waldrop. However, the Examiner did not cite to portions of the reference narrative disclosure. The Examiner has recognized that

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Waldrop does not teach employing a resin distribution plate position between the mold tool and the fiber preform as required by independent claims 1, 16, and 31 (Answer 6-10).

To remedy this deficiency, the Examiner has referred to the disclosures of Palmer.¹ The Examiner has found that Palmer teaches a vacuum resonant fusion molding process that includes a resin distribution plate (*id*). It appears to be the Examiner's position that these findings would have led one of ordinary skill in the art to place a resin distribution plate position between the mold tool and the fiber preform in the process of Waldrop (Answer 7). The Appellants do not agree with this position (Br. 5-13).

The dispositive question is, therefore, whether the Examiner has demonstrated that a person having ordinary skill in the art would have been led to place a resin distribution plate position between the mold tool and the fiber preform in the process of Waldrop within the meaning of 35 U.S.C. § 103. On this record, we answer this question in the negative.

Waldrop describes a vacuum assisted resin transfer molding process (Waldrop 0032). Waldrop discloses that the resin is infused into the molding preform by using vacuum pressure that causes the resin to travel from one side of the preform to the opposite side where excess resin is recovered (see Figure 1 and Waldrop 0188-0191). The Examiner has not adequately explained how a resin distribution plate could have been incorporated into the apparatus of Waldrop. The Examiner has not

¹ The Examiner did not rely upon the teachings of McKague for remedying the identified deficiency in the Waldrop reference.

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identified how the caul plate of Palmer would function in conjunction with the other components such as the peel ply material (59) and the flow media (60) described and Waldrop. The Examiner has failed to specifically identify the portions of the Waldrop reference that the caul plate of Palmer would have replaced. Furthermore, Appellants contend that Waldrop is directed to a slow resin and fusion process while the Palmer reference is directed towards rapid resin flow and the caul plate of Palmer is a rigid structure and not suitable for application between a tooling detail and a preform (Br. 6; Reply Br. 5). The Examiner has failed to explain why a rigid material suitable for rapid resin flow would have been suitable for use in the invention of Waldrop. Thus, contrary to the Examiner's contentions in the Answer, we determine that a person having ordinary skill in the relevant art would not have been led to the claimed subject matter within the meaning of 35 U.S.C. § 103. The Examiner's §103 rejection is reversed.

The Double Patenting Rejection

Claims 1-38 stand rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 1-17 of U.S. Patent Application No. 10/153,301 in view of Waldrop. We affirm.

Appellants do not explain the reasons why the appealed claims are patentably indistinct from the claims of Application No. 10/153,301. Appellants only state that "Appellant proposes filing a terminal disclaimer in compliance with 37 C.F.R. § 1.321(b), or otherwise addressing this obviousness-type double patenting rejection, if this rejection still stands upon issuance of a Notice of Allowability in the present case or in U.S.

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Patent Application No. 10/153,301” (Br. 5). It is not the function of this Board to examine the claims in greater detail than argued by Appellants. *In re Baxter Travenol Labs.*, 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991) (“It is not the function of this court to examine the claims in greater detail than argued by an appellant, looking for nonobvious distinctions over the prior art.”); *see also* 37 C.F.R. § 41.37(c)(1)(vii)(2006). We affirm the stated rejection because Appellants have failed to explain the reasons they believe that the rejection is inappropriate.

ORDER

The rejection of claims 1, 2, 6-17, and 21-30 under 35 U.S.C. § 103(a) as unpatentable over Waldrop in view of Palmer, and of claims 3-5, 18-20, and 31-38 under 35 U.S.C. § 103(a) as unpatentable over Waldrop in view of Palmer and McKague have been reversed.

The rejection of claims 1-38 under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 1-17 of U.S. Patent Application No. 10/153,301 in view of Waldrop has been affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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