

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FRIEDHELM BECKMANN

Appeal No. 2004-1133
Application No. 09/796,253

ON BRIEF

Before KIMLIN, WARREN, and WALTZ, Administrative Patent Judges.
WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's final rejection of claims 1 through 19, which are the only claims pending in this application. We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellant, the invention is directed to a method of producing a composite component with a foamed surface, where a substrate is placed in a mold and the top surface of the substrate has deposited thereon a layer of unfoamed or only partly prefoamed material, and this foamable material is expanded by heating until

Appeal No. 2004-1133
Application No. 09/796,253

it touches the mold to form a mold shape that corresponds to the final foamed surface structure (Brief, pages 2-3).

Appellant states that claims 1 and 2 are separately argued but the remaining claims 3-19 stand or fall with claim 1 (Brief, page 7). Therefore we limit our consideration to claims 1 and 2. See 37 CFR § 1.192(c)(7)(2000). A copy of claim 1 is attached as an Appendix to this decision.

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

Masui et al. (Masui)	4,623,584	Nov. 18, 1986
Hara et al. (Hara)	5,281,376	Jan. 25, 1994

Claims 1-12, 14 and 19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Masui (Answer, page 3). Claims 13 and 15-18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Masui in view of Hara (Answer, page 4). We *affirm* both of the rejections on appeal essentially for the reasons stated by the examiner in the Answer. We add the following comments primarily for emphasis.

OPINION

The examiner finds that Masui discloses a method of producing a composite component with a foamed surface including (1) placing a substrate part having a surface to be coated into a mold; (2) applying a layer of unfoamed foamable material to the surface of

the substrate part at a first temperature; and (3) expanding the foamable material at a second temperature higher than the first temperature with at least one expanding aid such that the foamed material in an expanded state fills an intermediate space between the surface of the substrate part and the molding surface of the mold and bonds with the surface of the substrate part (Answer, pages 3-4). The examiner recognizes that Masui does not explicitly disclose that the foamed material comes "to bear" against the molding surface but concludes that this occurrence would have been obvious to one of ordinary skill in this art in order to produce a final article which assumes the shape of the mold cavity (Answer, page 4).¹ With regard to claim 2 on appeal, the examiner finds that Masui effectively teaches the "succession of temperatures" recited in claim 2 by the disclosure of heating to within a range of temperatures (*id.*).² We agree. We take note that the function

¹The examiner also finds that Masui discloses complete expansion of the foamable material to fill the voids between the spheres, thus supporting the obviousness of producing an article which assumes the shape of the mold cavity (Answer, page 4). We also note that Masui repeatedly teaches that it is preferred to fill the mold with the composite beads in a bulk volume of 100% (e.g., see col. 6, ll. 26-28 and 53-57).

²The examiner also makes findings and conclusions of law regarding the rejection of claims 13 and 15-18 under section 103(a) over Masui in view of Hart (Answer, pages 4-5). However,
(continued...)

of a mold is to help form a structure identical in shape to the mold and thus an expanded foam material composite would have to touch or "bear against" the molding surface to fill the mold and form the desired final molded structure. Additionally, we note that appellants do not contest this position as set forth in the Answer (page 4).

Appellant argues that Masui does not disclose "applying a layer of an unfoamed or merely pre-foamed, foamable material to the surface of the substrate part at a first temperature," as recited in claim 1 on appeal (Brief, page 8). Appellant argues that the expandable beads of Masui are filled directly into the mold, in contrast to appellant's invention where the foamable material is deposited on the surface of the substrate (*id.*).

Appellant's arguments are not persuasive. As correctly stated by the examiner (Answer, page 5), Masui discloses face plate 3 is deposited on the expandable composite beads (col. 6, ll. 57-58).

²(...continued)
as noted above, appellant does not specifically argue the separate patentability of claims 13 and 15-18 (Brief, page 7). Additionally, appellant does not argue or contest any of the examiner's findings from Hart (see the Brief in its entirety). Accordingly, we adopt the examiner's findings and conclusions of law regarding this rejection and a further discussion of Hart is unnecessary to this decision. See *In re McDaniel*, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002).

Appeal No. 2004-1133
Application No. 09/796,253

During prosecution before the examiner, the claim language must be given the broadest reasonable meaning as ordinarily used, as it would have been understood by one of ordinary skill in this art, when read in light of the specification. See *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). The examiner has construed the term "applying" to include any order of contact, i.e., placing the foamable material on the substrate or placing the substrate on the foamable material (Answer, page 5). Appellant has not pointed to, and we do not find, any teaching or guidelines in the specification which restrict the meaning and scope of "applying" the material and substrate together, and thus agree with the examiner that the broadest reasonable interpretation of the claimed language includes the step of applying the face plate (substrate) of Masui to the foamable beads.

Appellant argues that Masui requires that pressure is used to produce the composite molding while appellant's invention does not require pressure to be used (Brief, pages 8-9). As noted by the examiner (Answer, page 5), this argument is not well taken since the claims are not limited by any recitation of pressure.

Appellant argues that Masui does not show "expanding the foamable material at a second temperature higher than the first temperature, with at least one expanding aid selected from the

Appeal No. 2004-1133
Application No. 09/796,253

group consisting of a chemical blowing agent, a blowing agent mixture, and microspheres," as recited in claim 1 on appeal (Brief, page 9). This argument is not well taken since the examiner specifically cites the portion of Masui that discloses such an expanding step, as well as the citation to the portion of Masui teaching the use of chemical foaming (blowing) agents (Answer, paragraph bridging pages 5-6, citing col. 6, ll. 60-64, and col. 3, ll. 42-56, respectively).

Appellant argues that Masui discloses a temperature range of 120 to 200°C. but does not disclose that the foamable material should be heated to a series of different increasing temperatures as recited in claim 2 on appeal (Brief, paragraph bridging pages 9-10). This argument is not well taken since, as noted by the examiner (Answer, page 6), the foamable material of Masui would have to be subjected to a succession of higher temperatures as it was being heated from an initial lower temperature to reach the higher temperature range specified by Masui. We note that claim 2 does not limit or specify the time for heating at each different temperature.

For the foregoing reasons and those stated in the Answer, we determine that the examiner has established a *prima facie* case of obviousness in view of the reference evidence. Based on the

Appeal No. 2004-1133
Application No. 09/796,253

totality of the record, including due consideration of appellant's arguments, we determine that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of section 103(a). Accordingly, we affirm both rejections on appeal.

Appeal No. 2004-1133
Application No. 09/796,253

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

AFFIRMED

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

TAW/jrg

Appeal No. 2004-1133
Application No. 09/796,253

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APPENDIX

1. A method of producing a composite component with a foamed surface, which comprises the steps of:

placing a substrate part having a surface to be coated into a mold;

applying a layer of an unfoamed or merely pre-foamed, foamable material to the surface of the substrate part at a first temperature; and

expanding the foamable material at a second temperature higher than the first temperature, with at least one expanding aid selected from the group consisting of a chemical blowing agent, a blowing agent mixture, and microspheres, such that the

foamed material in an expanded state fills an intermediate space between the surface of the substrate part and a molding surface of the mold and, on the one hand, bonds with the surface of the substrate part and, on the other hand, comes to bear against the molding surface.