

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DENNIS B. HOVATTER and MICHAEL T. LATOCHA

Appeal 2008-0158
Application 10/315,764
Technology Center 1700

Decided: March 13, 2008

Before CHUNG K. PAK, CHARLES F. WARREN, and CATHERINE Q.TIMM, Administrative *Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's refusal to allow claims 1 through 8, 11, and 12. Claim 9, the only other claim pending in the above-identified application, was objected to "as being dependent upon a rejected base claim," but was indicated to be allowable "if rewritten in independent form including all of the limitations of the base claim and any intervening claims" (Final Action dated December 14, 2005, p. 4). We have jurisdiction pursuant to 35 U.S.C. § 6.

STATEMENT OF THE CASE

The subject matter on appeal is directed to a sheet-molded article and a method of making the same (Spec. 2-3). Further details of the appealed subject matter are recited in representative claims 1, 5, 6, and 7 reproduced below:

1. A method for manufacturing a, sheet-molded article, comprising:
 - disposing a first layer of a first unpigmented thermosetting resin composition as a liquid phase onto a sheet-molded substrate;
 - disposing a second layer of a second unpigmented thermosetting resin composition onto the first layer; and
 - curing the first and second layers,wherein the said first composition forms a low gloss layer upon cure.
5. A method for manufacturing a pigmented, sheet-molded article having a textured surface, comprising:
 - spattering a first layer of a first, low gloss, unpigmented thermosetting resin composition onto a pigmented, sheet-molded substrate to form a textured surface;
 - disposing a second layer of a second, low gloss unpigmented thermosetting resin composition onto the first, uncured layer; and
 - curing the first and second layers.
6. An article, comprising:
 - a sheet-molded substrate;
 - a first layer of cured, unpigmented thermosetting resin coating disposed at least partially thereon; and
 - a second layer of a cured, unpigmented thermosetting resin coating disposed at least partially on the first layer,wherein the gloss levels of the said first and of the said second layer vary from each other.
7. An article for an automotive exterior, comprising:
 - a pigmented, sheet-molded substrate;
 - a first, textured layer of a cured, low gloss, first unpigmented thermosetting resin composition disposed thereon; and

a second layer of a cured, low gloss, second unpigmented thermosetting resin composition disposed upon the first textured layer.

The Examiner has relied upon the following references:

Wyckoff	4,536,431	Aug. 20, 1985
McComas	6,426,034 B1	Jul. 30, 2002
Czajka	2002/0119289 A1	Aug. 29, 2002

The Examiner has rejected claims 1 through 4, 6 through 8, 11, and 12 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of McComas and Czajka. The Examiner has also rejected claim 5 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of McComas, Czajka, and Wyckoff.

The Appellants appeal from the Examiner's decision rejecting the claims on appeal under 35 U.S.C. § 103(a).

FACTS, PRINCIPLES OF LAW, ISSUE, AND ANALYSIS

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 consideration (e.g., unexpected results). *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966). “[A]nalysis [of whether the subject matter of a claim would have been 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 (2007) quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006); see also *DyStar*

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Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356, 1361 (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.”).

As evidence of obviousness of the subject matter defined by claims 1 through 4, 6 through 8, 11, and 12 under 35 U.S.C. § 103(a), the Examiner relies on the combined disclosures of McComas and Czajka. The preponderance of evidence supports the Examiner’s findings at pages 4, 5, and 11 of the Answer that:

McComas et al disclose...a method for manufacturing a sheet-molded article (Abstract) comprising: disposing a first layer of a first un-pigmented resin composition (Abstract; column 10, line 50 through column 11, line 22); and curing the first layer (Abstract; column 11, lines 23-45), wherein the said first composition forms a low gloss layer upon cure (Abstract)...wherein the first layer forms a textured surface on the substrate (column 9, lines 40-58).

...
The curing steps [are known to] impart cross-linking. As opposed to thermoplastic materials, thermosetting materials are [well known to be] capable of undergoing such cross-linking- see page 11 of “Materials Science of Polymers for Engineers”. (See also McComas, col. 1, ll. 5-55, col. 2, l. 49 to col. 3, l. 57, and col. 10, l. 28 to col. 11, l. 52).

...
McComas et al disclose automotive interior panel and trim pieces, such as dash boards, doorhandles, and other trim pieces, instrument panels, etc(see column 11, lines 8-13...At very least, ...[McComas et al.] disclose a cladding, which a broad recitation that can be inherently encompassed by any sheet material capable of covering some other materials.”

We find that McComas also teaches (col. 1, ll. 27-35) that:

Thermoplastic sheet materials are particularly useful for applications where it is desired to have an aesthetically pleasing surface that can be molded or laminated onto the functional part or assembly and have a leather-like feel. These thermoplastic sheet materials are particularly useful for automotive interior panels and trim pieces...aircraft headliners, furniture armrests, appliance exteriors... and the like.

The Examiner seems to acknowledge that McComas does not specifically mention “disposing a second layer of a second unpigmented thermosetting resin composition” as required by claims 1, 6 and 7(Ans. 4-7). The Appellants contend that one of ordinary skill in the art would not have been led to employ a second layer of unpigmented thermosetting resin composition on the sheet molded article of the type described in McComas (Br. 5-6).

The dispositive question is, therefore, whether one of ordinary skill in the art would have been led to employ a second layer of unpigmented thermosetting resin composition on the sheet molded article of the type described in McComas within the meaning of 35 U.S.C. § 103. On this record, we answer this question in the affirmative.

As correctly found by the Examiner (Ans. 10)¹:

McComas et al. disclose the use of polyesters of acrylic acid or methacrylic acid (see column 3, lines 35-60), which would fall under the category of unsaturated polyester resin [defined in claim 8 as one of the claimed thermosetting resin].

¹ Appellants also do not specifically challenge this finding.

We find that this unpigmented thermosetting resin taught by McComas is used as a part of a coating composition to coat a molded article (col. 3, ll. 35-45, col. 10, ll. 29-41, and col. 11, ll. 8-55). We find that McComas teaches (col. 11, ll. 46-52):

Also provided are articles coated with from about 1 to about 60 microns of the coating composition according to the methods of the present invention. More typically, the coatings would be applied at from about 5 to about 60 microns, and preferably from about 10 to about 40 microns, and more preferably from about 20 to about 30 microns dry film thickness.

Implicit in this teaching of McComas is that its unpigmented thermosetting resin coating composition can be applied as many times as necessary on a molded article until a desired coating thickness is obtained.

Under these circumstances, we determine that one of ordinary skill in the art would have been led to employ the optimum applications (more than once) of the thermosetting resin composition taught by McComas, such as those containing polyesters of acrylic acid or methacrylic acid, with a reasonable expectation of successfully obtaining the desired optimum coating thickness for a given molded article. We note that the claims embrace employing the same unpigmented thermosetting coating composition twice or more on a given molded article and curing them either separately or simultaneously as suggested by McComas.

Even were we to conclude that the above passage of McComas would not have directed one of ordinary skill in the art to apply its thermosetting resin coating composition at least twice on a molded article, our conclusion would not be changed. As correctly found by the Examiner at pages 4 and 13 of the Answer, McComas also teaches at column 10, lines 60-65, that:

Further the coating composition of the present invention may be used as the sole film-forming composition on the substrate, or may be utilized as a primer or adhesion promoting layer for subsequent applications of organic film forming compositions.

We find that McComas' subsequently applied organic film forming compositions useful for automotive interior panels and trim pieces, as explained at paragraphs 0018, and 0025-0026 of Czajka, would have included a typical curable clear low-gloss top coat (unpigmented thermosetting resin coating composition) used for the same purpose. (See also Ans. 4-5 and 9).

Given the above findings, we concur with the Examiner that McComas, as explained by Czajka², would have led one of ordinary skill in the art to apply an organic film forming composition, such as a curable, clear low-gloss top coat, on its primer coat (the unpigmented thermosetting resin composition layer), with a reasonable expectation of successfully forming useful automobile interior panels or trim pieces. Moreover, as correctly determined by the Examiner at page 6 of the Answer, one of ordinary skill in the art would have reasonably expected that the above primer and topcoat layers made of different materials would necessarily have different gloss levels as required by claim 6. On this record, Appellants have not demonstrated that the different coating materials would not have different gloss levels.

² Czajka explains what was necessarily included by McComas' organic film forming compositions in the context of coating a molded article used in the interior of an automobile. Nowhere does Czajka discourage one of ordinary skill in the art from employing the specific method taught by McComas.

As evidence of obviousness of the subject matter defined by claim 5 under 35 U.S.C. § 103, the Examiner relies on the combined disclosures of McComas, Czaika, and Wyckoff. The disclosures of McComas and Czaika are discussed above. Although the Examiner recognizes that McComas does not explicitly mention “spattering of the first layer” as required by claim 5, the Examiner correctly finds that McComas teaches producing a leather-like feel (texture) to its coatings as indicated *supra* (Ans. 7). The Examiner also correctly finds that McComas teaches (col. 10, ll. 50-55) that:

The application of the coating may also be by any conventional coating technique including air atomized spray, high volume low pressure spray, airless spray, electrostatic bell, electrostatic disk, roll coating, reverse roll coating curtain coating, dipping or flow coating....

The Examiner finds, and the Appellants do not dispute, that the “coarse spraying” taught by Wyckoff includes at least one of these conventional coating techniques described in McComas. Compare Answer 7 with Br. 9-11. The Examiner correctly finds that Wyckoff teaches such coarse spraying of a coating composition produces spatter finishes for those surfaces, including automobile surfaces, in need of texture finishes for the protection and decoration purposes (col. 1, ll. 7-21). Although Wyckoff mentions (col. 1, ll. 48-52) that “[t]he foregoing methods are thus seen to be either expensive, or time-consuming, or not readily adapted to conformable application on non-planar surfaces having variable radius of curvature, or unpredictable as to the resulting patterns,” it does not indicate what problem, if any, is specifically attributable to the coarse spraying technique for obtaining spatter finishes included in McComas. In fact, nothing in Wyckoff

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indicates that the coarse spraying technique taught by McComas is inoperative or unsuitable for McComas' method.

Given the above teachings, we determine that one of ordinary skill in the art would have been led to employ, *inter alia*, coarse spraying McComas' coating composition to provide spatter finishes (leather-like feel), with a reasonable expectation of successfully protecting and decorating a thermoplastic sheet molded article. Accordingly, we conclude that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of 35 U.S.C. § 103.

ORDER

In view of the foregoing, the decision of the Examiner is affirmed.

TIME PERIOD

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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