

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. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROLF SCHUMACHER

Appeal No. 1998-3278
Application No. 08/647,881

HEARD: May 24, 2001

Before WALTZ, TIMM, and DELMENDO, *Administrative Patent Judges*.
TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-6 and 8-12. Claim 7, the only other claim pending in this application, is not currently rejected and thus not on appeal.

BACKGROUND

Appellant's invention relates to a molding process for the face-side coating of motor vehicle trim parts. Claim 1 is illustrative:

1. A molding process for face-side coating of an interior trim part of motor vehicles, comprising the steps of:

- (a) arranging an uncoated interior trim part in a defined position with respect to a mold tool;
- (b) supplying a volume of an initially liquid crosslinkable composition constituting one of a resin (3) and a lacquer to a portion of the mold tool having a polished surface configured to permit the composition to sequentially come into contact with the interior trim part;
- (c) operating the mold tool to wet a face-side surface of the interior trim part now located within the mold tool with a predetermined thickness of the liquid composition;
- (d) closing the mold tool and heating the liquid composition so that the composition is applied to the face-side surface in the closed mold tool with the predetermined thickness in a single operation; and
- (e) subjecting the liquid composition to an elevated uniform pressure during curing of the composition in which the composition undergoes a reduction in volume such that formation of visible bubbles in the liquid composition is prevented by dissolving air within the initially liquid composition during curing of the composition in the mold tool.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Haines, Jr.
Howell et al. (Howell)

3,247,550
5,256,235

Apr. 26, 1966
Oct. 26, 1993

Claims 1-6 and 8-12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Haines in view of Howell. We reverse.

OPINION

“In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness.” *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). “When the references cited by the examiner fail to establish a *prima facie* case of obviousness, the rejection is improper and will be overturned.” *In re Deuel*, 51 F.3d 1552, 1557, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995); *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

In the present case, the teachings of Haines and Howell would not have taught or suggested all of the steps of the method set forth by claim 1, the broadest claim, even if one of ordinary skill in the art were to combine their teachings as suggested by the Examiner. The Examiner concludes that it would have been obvious to include the elastic seals and movable mold members taught by Howell in the process of Haines for maintaining a desired pressure within the mold cavity (Answer, page 4). However, even if elastic seals and movable mold members were included in the process of Haines, there would still be no suggestion of subjecting an initially liquid cross-linkable composition to an elevated uniform pressure during curing, the composition undergoing a reduction in volume such that

formation of visible bubbles in the composition is prevented by dissolving air within the composition during curing in the mold tool. As pointed out by the Appellant (Brief, page 9), Haines is directed to a process of molding thermoplastic, not multi-component cross-linking compositions. Looking to the specification, it is clear that “liquid cross-linkable composition” is to encompass an incipiently mixed reactive resin such as a two-component polyester resin (page 7, last line to page 8, line 3). “During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.” *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). However, the language cannot be interpreted as encompassing thermoplastic compositions which harden by cooling. Such a broad reading of “liquid cross-linkable compositions” is inconsistent with the broadest reasonable meaning of the words “liquid cross-linkable composition” in their ordinary usage as they would be understood by one of ordinary skill in the art. *See In re Morris*, 127 F.3d 1048, 1054-1055, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). As understood by those of ordinary skill in the art of molding, a cross-linking composition hardens due to a cross-linking reaction. We note that, in the process of Haines, molten thermoplastic material is injected into a mold (col. 3, lines 17-18) and the thermoplastic solidifies within the mold cavity (col. 3, line 64). There is no description of cross-linking, and the thermoplastic simply hardens by solidifying presumably upon cooling.

Furthermore, noticeably missing from the rejection is any finding that Haines teaches or suggests molding at an elevated uniform pressure as required by step (e) of claim 1. The Examiner finds that

Haines teaches a process of injection molding thermoplastic against one side of a preform within a mold cavity (Answer, pages 3-4). We note that Haines describes evacuating the mold cavity (col. 2, lines 7-12) and that air is not compressed within the mold cavity (col. 2, lines 15-16). The Examiner does not point to any description of the thermoplastic molding pressure. The Examiner advances no evidence or reasoning tending to show that the pressure one of ordinary skill in the injection molding art would have used would be the same or substantially the same as the pressure required to dissolve air in a liquid cross-linkable composition. Therefore, we agree with the Appellant (Brief, page 10) that Haines does not describe or suggest a molding process including a step of subjecting a liquid cross-linkable composition to an elevated uniform pressure during curing, the pressure being such that air is dissolved within the liquid composition and visible bubbles prevented.

Howell does not fill the void left by Haines. Howell is directed to a process of laminating preformed layers of metal, adhesive and thermoplastic by bonding them together using heat and pressure (col. 1, lines 7-12). Howell does not supply a volume of initially liquid cross-linkable composition to the mold, and all the layers are solid preformed sheets. Furthermore, Howell describes drawing out any air bubbles from the resin in the laminate by evacuating the air from the mold cavity (col. 3, lines 34-37). There is no description in Howell of dissolving air within a liquid cross-linkable composition by uniform pressure application during curing in the mold.

Even if the disparate teachings of Haines and Howell were to be combined by one of ordinary skill in the art, the invention as claimed would not have been suggested. Neither reference describes a process of molding a liquid cross-linkable composition. In addition, neither reference describes applying uniform elevated pressure at the level required to dissolve air in a liquid cross-linkable composition. Thus, the combination of references lacks the required teachings or suggestions to render the process of the claims obvious to one of ordinary skill in the molding art at the time of invention.

The Examiner indicates that “the functional recitations as argued have not been given patentable weight because it is [sic: they are] narrative in form.” (Answer, page 5). We agree with the Appellant’s comment in the Reply Brief that “[r]ecognizing that the claims in issue are process claims and hence necessarily functional in nature and that there is no rejection of the claims as being indefinite, the basis for the Examiner’s rejection under Section 103 is unsupportable in law or in fact.” (Reply Brief, page 1). The claims are limited to a process including a step of “subjecting the liquid composition to an elevated uniform pressure during curing of the composition.” (claim 1). The pressure applied must be such that “the composition undergoes a reduction in volume such that formation of visible bubbles in the liquid composition is prevented by dissolving air within the initially liquid composition.” (claim 1). This recitation requires that the mode of pressure application be such that the pressure is of a level and duration that dissolves air and prevents bubbles as well as results in a reduction of composition volume. The Examiner is not free to disregard the pressure limitation.

The Examiner has not established that the combination of Haines and Howell teaches or suggests every limitation of the invention as claimed. Therefore, the Examiner has failed to establish a *prima facie* case of obviousness.

CONCLUSION

To summarize, the decision of the Examiner to reject claims 1-6 and 8-12 under 35 U.S.C. § 103 is reversed.

REVERSED

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| THOMAS A. WALTZ |) | |
| Administrative Patent Judge |) | |
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| |) | BOARD OF PATENT |
| CATHERINE TIMM |) | APPEALS |
| Administrative Patent Judge |) | AND |
| |) | INTERFERENCES |
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| ROMULO H. DELMENDO |) | |
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