

The opinion in support of the decision being entered today is
not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KLAUS MUELLER
and KLAUS KLEMM

Appeal 2007-1482
Application 10/484,149
Technology Center 1700

Decided: July 23, 2007

Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and CATHERINE
Q. TIMM, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-3, 5-10, and 15-21. Claims 11-14 stand withdrawn from consideration. Claim 1 is illustrative:

1. A layered composite material, which encompasses at least
 - a) a polyolefin back layer,

b) an intermediate ply arranged on the backing layer and comprising a thermoplastic polymer material,

c) a heat-cured layer arranged on the intermediate ply, and

d) an outer layer arranged on the heat-cured layer and composed of thermoplastic,

wherein the thermoplastic in the outer layer is selected from the group consisting of polycarbonates, acrylonitrile-butadiene-styrene copolymers, and mixtures of the abovementioned materials, and

wherein the thermoplastic polymer material of the intermediate ply is selected from the group consisting of polypropylene, polyethylene, polymers of styrene, polyoxymethylene, and polybutylene terephthalate.

The Examiner relies upon the following references as evidence of obviousness:

Taubitz	US 4,774,286	Sep. 27, 1988
Otawa	EP 0371743	Nov. 28, 1989

Appellants' claimed invention is directed to a layered composite material comprising a polyolefin backing layer, a thermoplastic intermediate ply on the backing layer, a heat-cured layer on the intermediate ply and an outer layer composed of polycarbonates, acrylonitrile-butadiene-styrene copolymers, or mixtures thereof. Appellants' Specification states that it was known in the prior art to use such polycarbonate outer films, as well as polycarbonate backing layers. We are told, however, that polycarbonate backing layers have disadvantages, such as their weight in automotive applications and their relatively high price. Appellants, therefore, utilize a lighter, less expensive backing layer of polyolefin in combination with a

polycarbonate outer layer. Also, the Specification states that for purposes of the present invention, polycarbonates "may form the outer layer alone or in a mixture with other plastics compatible therewith...[such as] certain polyesters" (para. bridging pages 4-5).

Appealed claims 1-3, 5-10 and 15-21 stand rejected under 35 U.S.C. § 103(e) as being unpatentable over Ottawa in view of Taubitz.

Appellants have not set forth an argument that is reasonably specific to any particular claim on appeal. Accordingly, all the appealed claims stand or fall together with claim 1.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejection for the reasons set forth in the Answer and we add the following primarily for emphasis.

There is no dispute that Ottawa, like Appellants, discloses a layered composite material comprising the presently claimed polyolefin backing layer, intermediate ply layer and heat-cured layer on the intermediate ply, but does not teach polycarbonates as the outer layer. Instead, Ottawa teaches polyesters for the outer layer. However, as explained by the Examiner, Taubitz discloses that it was known in the art that mixing polycarbonates with polyesters provides "improved mechanical properties, in particular an improved impact strength" (col. 1, ll. 13-14). Consequently, we find no error in the Examiner's reasoning that it would have been obvious for one of ordinary skill in the art to incorporate a polycarbonate in the polyester outer

layer of Ottawa for the purpose of improving its mechanical properties with the reasonable expectation that a viable outer layer would result having improved impact resistance, etc. The obviousness of doing so is underscored by the acknowledgement in Appellants' Specification that the use of polycarbonates as an outer layer for layered composite materials was well known in the art.

Appellants maintain that "a person of ordinary skill in the art who adopted the Examiner's rationale could not reasonably expect to arrive at a useful composite when the material of the surface skin of Ottawa et al.'s layered composite was replaced by the molding material addressed in the disclosure of Taubitz et al." (Principal Br. 6, last para., emphasis added). As noted by the Examiner, however, Appellants' argument misses the thrust of the Examiner's rejection. The Examiner does not propose replacing the polyester outer layer of Ottawa with the composition of Taubitz but, rather, adding polycarbonate to the polyester outer layer of Ottawa to achieve the known benefits of the mixture.

Appellants respond in their Reply Brief that an outer layer comprising a mixture of polyester and polycarbonate "is outside the scope of the claim [and that] [w]hat is claimed is: a layered composite material, wherein the thermoplastic in the outer layer is selected from the group consisting of polycarbonates, acrylonitrile-butadiene-styrene copolymers, and mixtures of the above-mentioned materials" (Reply Br. 5, last para.). However, as alluded to by the Examiner, Appellants' claim language "an outer layer ... composed of thermoplastic" is "open" to the outer layer comprising the recited thermoplastics as well as other materials, such as, polyesters. Indeed,

as noted above, Appellants' very Specification clearly states that polycarbonates of the present invention encompass mixtures of polycarbonates and polyesters. Consequently, Appellants' argument that "the resultant 'blend' of polyesters and polycarbonates is outside the scope of the claimed invention" is totally without merit (*see* Reply Br. 7, second para.).

As a final point, we note that Appellants base no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the inference of obviousness established by the Examiner.

In conclusion, based on the foregoing and the reasons well-stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(iv)(effective Sept. 13, 2004).

AFFIRMED

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