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 ANTHONY C. GAETA, GWO SHIN SWEI
and EDMUND F. BUTRYN

Appeal No. 2005-2231
Application No. 09/952,931

ON BRIEF

Before KIMLIN, KRATZ and TIMM, *Administrative Patent Judges*.

Timm, *Administrative Patent Judge*.

DECISION ON APPEAL

Claims 1-16 are pending in this application. This appeal involves claims 1-13, 15, and 16. The Examiner has withdrawn claim 14 from consideration. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 134.

Based on our review of the issues on appeal as presented in the Brief and Answer, we affirm.

INTRODUCTION

The claims are directed to a coating composition. Claim 1 is illustrative:

> 1. A coating composition comprising an ultraviolet-polymerizable formulation and from 5 to 50% by volume of an aluminum trihydrate filler with a particle size from 1 to 10 mircometers, wherein said composition can allow a cure of greater thickness compared to a composition that is the same except that the filler is formed of calcium carbonate or silica.

The Examiner rejects the claims under 35 U.S.C. § 103(a). As evidence of unpatentability, the Examiner relies upon the following prior art references:

Caul et al. (Caul)	4,588,419	May 13, 1986
Tumey et al. (Tumey)	4,836,832	Jun. 06, 1989
Buchanan et al. (Buchanan)	4,927,431	May 23, 1990
Kirk et al. (Kirk)	5,236,472	Aug. 17, 1993
Culler	5,368,619	Nov. 29, 1994

Claims 1-13, 15, and 16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kirk, Buchanan, Caul, or Tumey each in view of Culler.

Appellants state that the claims do not stand or fall together and group claims 6-13, and 15 separately from claims 1-5 and 16 (Brief, § VII). To the extent that the groups are argued separately, we will consider them separately. We select claim 6 to represent the issues on appeal with regard to the first group and claim 1 to represent the issues on appeal with regard to the second group.

OPINION

Claims 1 and 6 are directed to a coating composition comprising an ultraviolet-polymerizable formulation in combination with a filler. Claim 1 limits the filler to aluminum trihydrate while claim 6 requires the filler to be transparent to ultraviolet light. The specification

identifies aluminum trihydrate as a UV-transparent filler (specification, p. 6, ll. 29-30). Both claims further specify ranges of volume concentration and average particle size for the filler.

Turning to the rejection, we determine that the Examiner has established a prima facie case of obviousness. The Examiner relies upon a number of prior art references that suggest the use of an ultraviolet-polymerizable formulation together with a aluminum trihydrate filler, a filler that, according to Appellants' specification, is UV-transparent and the prior art further provides evidence that the volume concentration and average particle size are at levels one of ordinary skill in the art would have arrived at through routine experimentation. *See In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). For instance, Buchanan describes a binder for coated abrasives, the binder including radiation curable monomers that are cured via electromagnetic radiation such as ultraviolet radiation (Buchanan, col. 7, ll. 34-36). Such a binder is an "ultraviolet-polymerizable formulation" within the meaning of the claims. Buchanan further suggests the inclusion of fillers in the binder and lists alumina trihydrate as a preferred filler (Buchanan, col. 7, ll. 15-16). According to Buchanan, the filler can be used in amounts up to about 250 parts by weight, preferably from about 30 to about 150 parts by weight, per 100 parts by weight of binder (Buchanan, col. 7, ll. 28-33). As acknowledged by the Examiner, Buchanan is silent with regard to the particle size of the filler. However, Culler provides evidence that conventional fillers used in similar compositions (Culler, col. 7, l. 63 to col. 8, l. 4) have an average particle size ranging from 1 to 100 micrometers (Culler, col. 13, ll. 53-59), a range that encompasses the claimed range. Culler exemplifies aluminum trihydrate as a useful non-reactive filler (Culler, col. 14, l. 13). Not only do we agree with the Examiner's determination that it would have been obvious to one of ordinary skill in the art to have selected aluminum trihydrate filler in the size range and volume percent of claims 1 and 6 for use in the

coating compositions of, for instance, Buchanan, we also conclude that Culler itself supports a prima facie case of obviousness.

Appellants argue that Culler teaches away from the essential ultraviolet transparency of the filler of the claimed invention because Culler does not appreciate the problems posed by non-transparent fillers. To support this argument, Appellants cite column 1, lines 65-66 of Culler. This portion of Culler states that: "In some instances fillers may also be used as pigments."

We are not persuaded that Culler "teaches away" from using a transparent filler. "In general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant." *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). Culler, in fact, expressly suggests the use of aluminum trihydrate, a filler Appellants establish is a UV-transparent filler, in the coating composition (Culler, col. 14, l. 13). Moreover, the disclosure in column 1 is made in the context of a broad discussion of the prior art. A more telling disclosure is located in column 13, lines 64-68. Here Culler explains that, "when curing by use of radiation, curing appears to be faster if the refractive index of the filler matches or is close to the refractive index of the particular resin being used." In order to have a refractive index, a material must allow light to pass through it. Not only does Culler suggest including a radiation curable binder in combination with filler such as aluminum trihydrate, Culler suggests using fillers having some amount of transparency to light. Therefore, we cannot agree that Culler teaches away from using fillers that are transparent to ultraviolet light.

Appellants also argue that Tumey teaches away from the use of essential ultraviolet transparency of the fillers (Brief, p. 8). But the disclosure in Tumey that curing will take place even in areas where abrasive granules screen out radiation is not a teaching away from the

selection of aluminum trihydrate as a filler. Tumey specifically discloses aluminum trihydrate as a useful filler. Aluminum trihydate is ultraviolet transparent filler.

Appellants further argue that Caul does not teach the ultraviolet polymerizable formulation. Even if that is the case, there is no reversible error because such is taught in other relied upon prior art.

Appellants argue that Kirk and Buchanan each require two resins, including a thermally curable resin not required by the claimed invention. But the claims do not exclude the presence of a thermally curable resin, the claims use the transitional phrase "comprising." The transitional phrase "comprising" opens the claim to the inclusion of other components.

Appellants also argue that the prior art as a whole fails to suggest the desirability of selecting ultraviolet transparent fillers, fails to appreciate its advantages and fails to teach Appellants' solution. These arguments are not persuasive because a prima facie case of obviousness does not require that the applied prior art recognize and address the specidfic problem upon which the inventor was working. *In re Dillon*, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901-1902 (Fed. Cir. 1990)(*en banc*), *cert denied*, 500 U.S. 904 (1991). The discovery of an additional advantage by applicant does not make the claims patentable. *See In re Kronig*, 539 F. 2d 1300, 1304, 190 USPQ 425, 427 (CCPA 1976) and *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039-40 (Fed. Cir. 1983).

Appellants argue that the combination is made based on impressible hindsight. Namely, Appellants assert that "to support a determination of obviousness, it is essential that the prior art teach the selection characteristics of the claimed invention, e.g., ultraviolet transparency, otherwise one of ordinary skill in the art would not have known to make the selection of the claimed invention." (Brief, page 9) On the contrary, the prior art need not teach Appellants'

specific selection characteristic as long as there is some basis for making the selection. In the present case, there is basis to make the selection of aluminum trihydrate because such is listed as a useful filler.

We conclude that the Examiner has established a prima facie case of obviousness with respect to the subject matter of claims 1-13, 15, and 16 and that this prima facie case has not been sufficiently rebutted by Appellants.

In order to overcome the prima facie case of obviousness, Appellants rely upon a showing of unexpected results. The burden is on Appellants to show unexpected results. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed, Cir. 1984). To reach the ultimate conclusion of obviousness, we set aside the initial conclusion of prima facie obviousness and reevaluate all the evidence anew under the requirements of 35 U.S.C. § 103(3). *In re Johnson*, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984).

We cannot say here that Appellants have met their burden. This is because the evidence is not commensurate in scope with the claims. *See In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA)("It is well established that the objective evidence of nonobviousness must be commensurate in scope with the claims."). Appellants' claims are not limited to any particular ultraviolet-polymerizable formulation, yet Appellants present test results for only an epoxy-acrylate (70%)/N-vinyl pyrrolidone (30%) mixture. Appellants provide no evidence or convincing reasoning indicating that analogous results will be obtained with other formulations. Furthermore, Culler indicates that there was a known link between curing the rate and the refractive indices of the resin and filler (Culler, col. 13, ll. 64-68). Therefore, there is evidence that the selection of the resin is an important selection in terms of curing rate. We further note that claim 6 is not limited to any particular transparent filler, yet Appellants provide results for

only one transparent filler, aluminum trihydrate. While Appellants make a conclusory statement that the results are commensurate in scope with the claims, they clearly are not.

Having considered all the evidence of record in this appeal, we conclude that the totality of the evidence supports a legal conclusion of obviousness under 35 U.S.C. § 103(a).

CONCLUSION

In summary, we affirm the Examiner's decision to reject claims 1-13, 15, and 16 under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED

EDWARD C. KIMLIN Administrative Patent Judge	)
PETER F. KRATZ Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
CATHERINE TIMM Administrative Patent Judge	)

CT/sld

SAINT-GOBAIN CORPORATION
1 NEW BOND STREET
BOX NUMBER 15138
WORCESTER, MA 01615-0138