

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PHILIPPE-GUILHAUME GOTTIS

Appeal No. 2001-0008
Application 09/298,572

ON BRIEF

Before WILLIAM SMITH, Administrative Patent Judge, McKELVEY, Senior Administrative Patent Judge, and POTEATE, Administrative Patent Judge.

POTEATE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C.
§ 134 from the examiner's final rejection of claims 1-3, 5 and

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6, which are all of the claims pending in the application.

Claim 4 is cancelled.

Claim 1 is illustrative of the subject matter on appeal and is reproduced below:

1. An improved powder coating composition suitable for use in automotive lacquer, which is free of carboxyl-functional polyesters, comprising a binder consisting of one or more than one poly(meth)acrylic resin having free carboxyl groups and, as hardener for the poly(meth)acrylic resin, one or more than one epoxy resin having a molecular weight of up to 1500, wherein the epoxy resin is a cycloaliphatic polyglycidyl polycarboxylate or mixtures thereof, the cycloaliphatic polyglycidyl polycarboxylate being selected from the group consisting of diglycidyl hexahydro- phthalate, diglycidyl hexahydroterephthalate, triglycidyl 1,2,4-cyclohexanetricarboxylate and triglycidyl 1,3,5-cyclohexanetri- carboxylate, wherein the coating composition flows and cures at temperatures in the range of about 100EC to about 150EC to a smooth form.

The references relied upon by the examiner are:

Mizumura et al. (Mizumura) 1981	4,255,553	Mar. 10,
Cotting et al. (Cotting) 1994	5,294,683	Mar. 15,
Japan Synthetic Chemical Industry Co., Ltd. 1978 (Japanese Kokai)	53-140395	Dec. 7,

Grounds of Rejection

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In the Examiner's Answer (Paper No. 13), the examiner withdrew Great Britain Patent No. 1,542,709 from the obviousness-type double patenting and 35 U.S.C. § 103 rejections on the basis that it did not further add to the teachings of Cotting. In addition, since the close of the briefing period, copending Application No. 09/016,619 issued as U.S. Patent No. 6,265,487 on July 24, 2001, thereby converting the provisional obviousness-type double patenting rejection to an actual rejection. Thus, the claims currently stand rejected as follows:

1. Claims 1-3 and 6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,265,487 in view of Cotting; and

2. Claims 1-3, 5 and 6 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Mizumura and the Japanese patent in view of Cotting.

Appellant has failed to present arguments traversing the double patenting rejection. Therefore, this rejection is affirmed.¹

For the reasons discussed below, the rejection of the claims under 35 U.S.C. § 103(a) is reversed.

Background

Powder coating compositions are resinous materials which primarily consist of a binder and a hardener. The binder component is generally a compound having carboxyl groups such as a polyester or acrylic resin. The claims in the present application are directed to a powder coating composition in which the binder consists of one or more than one poly(meth)acrylic resin having free carboxyl groups. The claims further require that the composition is free of carboxyl-functional polyesters.

¹ We note that in the amendment mailed January 6, 2000 (Paper No. 9, page 2) Appellant stated that a terminal disclaimer would be timely filed upon the Examiner's acknowledgment that the present application was otherwise in condition for allowance.

The hardener component in conventional powder coating compositions is typically a compound having epoxy groups. Claim 1 specifies that the hardener component is one or more than one epoxy resin with a molecular weight of up to 1500. Claim 1 further requires that the epoxy resin is a cycloaliphatic polyglycidyl polycarboxylate or a mixture thereof and that the cyclo- aliphatic polyglycidyl polycarboxylate is selected from the group consisting of diglycidyl hexahydrophthalate, diglycidyl hexahydroterephthalate, triglycidyl 1,2,4-cyclohexanetricarboxylate and triglycidyl 1,3,5-cyclohexanetricarboxylate. According to the inventor, the claimed powder coating compositions harden quickly and completely and have good flow properties at low temperatures comparative to prior art coating compositions. (Specification, page 1.) Claim 1 requires that "the coating composition flows and cures at temperatures in the range of about 100EC to about 150EC to a smooth form." In contrast, conventional prior art powder coatings are typically used at temperatures above 160EC because of poor flow characteristics

at lower temperatures which result in an orange peel effect.

Id.

Discussion

The initial burden of presenting a prima facie case of obviousness rests on the examiner. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). To establish a prima facie case of obviousness, there must be:

1. some suggestion or motivation to modify a reference or combine reference teachings;
2. a reasonable expectation of success; and
3. a teaching or suggestion of all of the claim limitations in the prior art reference or combined references.

See, generally, Manual of Patent Examining Procedure (MPEP) §§ 2142-2143.

The wording of the Examiner's rejection is ambiguous and we find it unclear as to precisely how the references are combined. Therefore, we interpret the Examiner's rejection based on what we consider the strongest arguments against patentability given the teachings of the cited references,

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namely, Mizumura in view of Cotting or the Japanese patent in view of Cotting. We reference the Examiner's Answer² for the Examiner's reasoning in support of the rejections and Appellant's Brief³ and Reply Brief⁴ for Appellant's arguments in favor of patentability

Mizumura teaches a powder coating composition containing (a) a compound having at least two epoxy groups in the molecule, (b) a polyester or acrylic resin having a molecular weight of 1,000 to 7,000 and an acid value of not less than 20 having at least two carboxyl groups, and (c) a specific quaternary nitrogen-containing compound as catalyst for a reaction of the epoxy and carboxyl groups. (Brief on Appeal, page 6.) Mizumura states that "[t]he main object of the present invention is to provide a powder coating composition which can be thermoset at a low temperature and form a paint film having excellent surface smoothness." (Mizumura, column 2, lines 10-

²Paper No. 13, mailed July 21, 2000.

³Paper No. 12, received June 29, 2000.

⁴Paper No. 14, received September 21, 2000.

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13.) Mizumura utilizes a minimum temperature of 180°C for curing. (See col. 8, l. 30-34.)

The Japanese patent discloses a process for preparation of acrylic resins which are suitable for use in powder coating compositions. The Japanese patent utilizes standard epoxy compounds such as triglycidyl isocyanurate as hardeners. (Page 7.) No indication of curing temperature is given other than in the examples wherein the compositions are cured at 180°C. (See pages 9-15.)

Cotting is directed to formulating polyglycidyl compounds which may be used in powder coating compositions to replace triglycidyl isocyanurate without essential changes in the other components of the compositions or production of the finishes. (Col. 10, l. 36-45.) Cotting states that the powder coating compositions are cured at a temperature of not less than 100°C and preferably at a temperature of 150-250°C. (Col. 11, l. 43-45.)

According to the Examiner:

It would have been obvious to employ the diglycidyl hexahydroterephthalate disclosed

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in Mizumura et al and Cotting et al in the curing of the carboxyl groups-containing acrylic resin of Mizumura et al and the Japanese patent in order to 1) eliminate the toxicity endemic to the more commonly utilized triglycidyl isocyanurate (Cotting et al, col. 10, lines 36-45) and 2) use a polyglycidyl compound in solid form without resorting to complicated and expensive purification operations to produce a solid polyglycidyl compound for powder coatings (Cotting et al, col. 1, lines 36-45).

. . . .

It would have been obvious to conduct the curing of the powder coatings of Mizumura et al and the Japanese patent at a temperature of as low as 100EC as per Cotting et al in order to reduce the energy expenditure required of a higher curing temperature.

(Examiner's Answer, page 5.)

Where an obviousness determination is based on a combination of prior art references, there must be some "teaching, suggestion or incentive supporting the combination." In re Geiger, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987). The motivation for one of ordinary skill in the art to have combined the references need not be the same as that of the inventor. See In re Dillon, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990)(en banc) cert.

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denied, 500 U.S. 904 (1991). Fine, 837 F.2d at 1075, 5 USPQ2d at 1599 (citations omitted). However, "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

Although we find tenuous the Examiner's reasoning for picking and choosing amongst the numerous components disclosed in the cited references, even assuming, arguendo, that the references were properly combined, the Examiner has failed to establish a prima facie case of obviousness. The Examiner has not provided any support for his conclusion that the coating composition obtained by his proposed combination would flow and cure at temperatures in the range of about 100EC to 150EC to a smooth form as required by the present claims.

Both Mizumura and the Japanese patent disclose coating compositions which are curable at 180EC. Cotting teaches that powder coating compositions may be cured at temperatures as low as 100EC, but indicates that temperatures

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of 150EC to 250EC are preferred. Mizumura teaches that it is known in the art to lower curing temperatures by accelerating the thermo-setting reaction rate. However, Mizumura notes that "fluidity of the composition in a molten state is reduced and it becomes difficult to form a smooth film." (Mizumura, col. 1, l. 26-31.) The Examiner opines that it would have been obvious to have cured the powder coatings of Mizumura and the Japanese patent at a temperature of as low as 100EC as per Cotting in order to reduce the energy expenditure required at a higher temperatures. See supra, p.7. Given the teachings of the references to the contrary and the Examiner's failure to provide support for his position, we find that the Examiner's obviousness determination can only be based upon improper hindsight reasoning. See W. L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1550, 220 USPQ 303, 311 (Fed. Cir. 1983)(it is error to find obviousness where references "diverge from and teach away from the invention at hand "). "To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to

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fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." W. L. Gore, 721 F.2d at 1553, 220 USPQ at 312-13.

Because we reverse for failure to establish a prima facie case of obviousness, we need not reach the issue of whether Appellant's experimental evidence provides a comparison with the closest prior art. See Fine, 837 F.2d at 1076, 5 USPQ2d at 1600.

Time Period for Response

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

AFFIRMED-IN-PART

WILLIAM F. SMITH
Administrative Patent Judge

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