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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte AARON A. LOCKHART, ROBERT A. WADE,
MICHAEL J. DVORCHAK, and CLIFFORD M. BRIDGES

Appeal 2015-004298
Application 12/920,840
Technology Center 1700

Before TERRY J. OWENS, N. WHITNEY WILSON, and
AVELYN M. ROSS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–13. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The Appellants claim a process for coating a wood substrate. Claim 1 is illustrative:

1. A process for coating a wood substrate, comprising applying an aqueous coating composition to the substrate, wherein the substrate comprises a previously-installed floor, and subjecting the coated floor to radiation having a wavelength of only 320 nm to 450 nm for a time sufficient to cure the composition, wherein the aqueous coating composition comprises:

- A) a polyurethane dispersion, the polyurethane being a reaction product of components comprising:
- a) from about 25 to about 89.8% by weight of one or more acrylate polymers containing hydroxyl groups and having an OH number of from about 40 to about 240,
 - b) from 0.1 to about 20% by weight of one or more compounds containing i) one and/or two functional groups reactive towards isocyanate groups and ii) groups which are cationic and/or anionic and/or have a dispersant action due to ether groups content,
 - c) from about 10 to about 50% by weight of one or more di- and/or polyisocyanates,
 - d) from 0 to about 30% by weight of a di- and/or polyol having a number average molecular weight of up to about 5000, an OH functionality of from 1.2 to 2.2, containing no groups which are cationic or anionic, containing an insufficient amount of ether groups to have a dispersant action, and containing no ethylenically unsaturated groups and
 - e) from about 0.1 to about 10% by weight of one or more di- and/or polyamines having a number average molecular weight of from about 31 to about 1000,
- wherein the percents by weight are based on the total amount of components a) through e) and total 100%,
- B) from about 0.1 to about 10% by weight of one or more photo initiators, wherein the % by weight of component B) is based on the weight of component A), and
- C) from about 20 to about 60% by weight of water or a mixture of water and solvent, wherein the % by weight of component C) is based on the solids content of component A).

The References

Gaven	US 6,207,118 B1	Mar. 27, 2001
Weikard	US 6,521,702 B1	Feb. 18, 2003
Dvorchak	US 2005/0238815 A1	Oct. 27, 2005

Beck ¹	DE 33 04 098 A1	Aug. 25, 1988
Mischke (abstract)	DE 40 40 290 A1	July 2, 1992

The Rejections

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1, 2, and 4–8 over Gaven in view of Dvorchak, claims 1, 2, 4–6, and 9–11 over Weikard in view of Dvorchak, claims 1, 2, and 4–13 over Gaven in view of Weikard and Dvorchak, claim 3 over Gaven in view of Dvorchak, and Beck and over Weikard in view of Dvorchak and Mischke, and claims 7, 8, 12, and 13 over Weikard in view of Dvorchak, and Gaven.

OPINION

The Appellants argue the claims in the following groups: 1) claims 1–8, 12, and 13, and 2) claims 9–11 (Br. 6–12). Although claims 8 and 13 are addressed under a separate heading, the Appellants do not provide a substantive argument as to the separate patentability of those claims (Br. 11–12). We therefore limit our discussion to one claim in each group, i.e., claims 1 and 9. The other claims in each group stand or fall with the claim we address. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2012).

Claim 1

Rejection over Gaven in view of Dvorchak

Gaven discloses “mobile devices which are uniquely adapted to cure substrate coatings in areas which are inaccessible, such as floor corners, walls, overhangs, edges and ceilings” (col. 1, ll. 8–11). Gaven teaches that ultraviolet curable coatings are “particularly well suited for use upon floors since they have the desirable characteristics of abrasion resistance, water and

¹ The Examiner relies upon US 5,096,938, issued Mar. 17, 1992, as an English language equivalent of Beck (Ans. 14).

chemical resistance, high gloss and so on, while likewise providing a durable coating that will require little care and upkeep” (col. 1, ll. 28–32) and that “[a] conventional linear ultraviolet lamp is typically mounted on the front of a carriage and will instantly cure the coating as the carriage is moved over the coating” (col. 1, ll. 40–43). Gaven’s devices provide to an ultraviolet vapor lamp source an electrical current which may “be automatically altered in correlation with the speed of the operation of the carriage unit in order to maintain a constant curing level” (col. 3, ll. 16–20). “A typical 15 amp, 110 volt circuit will permit about 1500 watts of lamp energy to be emitted” (col. 3, ll. 42–44). “[A] user may simultaneously coat a surface and cure that same surface completely” (col. 4, ll. 58–59).

Dvorchak discloses an aqueous polyurethane dispersion coating composition which can be applied to wood and cured using radiation having a preferred wavelength of about 320 nm to about 450 nm for a time as short as 0.1 second (Abstract; ¶¶ 5–27, 73). It is undisputed that Dvorchak’s composition would have suggested, to one of ordinary skill in the art, the composition recited in the Appellants’ claim 1.

The Appellants’ sole argument regarding the rejection over Gaven in view of Dvorchak is that Gaven is nonanalogous art (Br. 6–8). The test of whether a reference is from an analogous art is first, whether it is within the field of the inventor’s endeavor, and second, if it is not, whether it is reasonably pertinent to the particular problem with which the inventor was involved. *See In re Wood*, 599 F.2d 1032, 1036 (CCPA 1979). A reference is reasonably pertinent if, even though it may be in a different field of endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in

considering the inventor's problem. *See In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). The Appellants assert that their "field of endeavor is using a coating composition with an aqueous polyurethane dispersion to coat a previously installed floor and curing the composition using only UV-A radiation" (Br. 6) and that the problem addressed is identifying "an aqueous composition that could be used in a process for coating a previously installed floor and curing the composition using only UV-A radiation" (Br. 7). The Appellants assert that "[t]he problem was solved by identification of a composition with a rapid curing rate that made it possible to use a 'walk-behind' lamp, which allows the operator to apply the coating composition to the wood floor on-site (i.e., previously installed) and walk behind the lamp, curing the coating and immediately walking on the cured surface as the operator moves across the floor" (*id.*) and that "[t]here is no factual reason why Gaven, which is directed to a mobile curing device, would have commended itself to the attention of a resin developer or formulator, in attempting to address such a problem" (*id.*).

The Appellants too narrowly set forth their field of endeavor and what is reasonably pertinent to the problem addressed. The Appellants' field of endeavor is ultraviolet radiation curable coating compositions (Spec. 2:9–12). Gaven's "invention relates to curing substrate coatings using ultraviolet radiation" (col. 1, ll. 6–7) and, therefore, is within that field of endeavor. The problem addressed by the Appellants is safe and rapid coating composition curing (Spec. 2:9–12). Gaven, which discloses a device with which "a user may simultaneously coat a surface and cure that same surface completely" using ultraviolet light (col. 4, ll. 53–59), is reasonably pertinent to that problem. Hence, Gaven is analogous art.

*Rejections over Weikard in view of Dvorchak and over
Gaven in view of Weikard and Dvorchak*

Weikard “relates to aqueous polyurethane emulsions that cure under the influence of high energy radiation and to their use as coating compositions, especially for coating wood and furniture” (col. 1, ll. 7–10; col. 1, l. 47 – col. 2, l. 7). The emulsions are “especially suitable for primary coats, e.g. in the multilayer lacquering of prefabricated parquet flooring” (col. 5, ll. 25–28).

The Appellants assert that Weikard’s prefabricated parquet flooring to which Weikard’s coating is to be applied (col. 5, ll. 25–28) is not a previously installed floor as required by the Appellants’ claim 1 (Br. 8–9).

The Examiner finds that “prefabricated parquet flooring is also sold to consumers as *uncoated* flooring” (Ans. 21). Because that finding is reasonable and the Appellants have not challenged it, we accept it as fact. *See In re Kunzmann*, 326 F.2d 424, 425 n.3 (CCPA 1964). Also, Weikard’s claim 17 indicates that the disclosure applies to wood substrates generally.

The Appellants argue that because Dvorchak’s coating composition contains a polyester made from castor oil fatty acid (¶ 9), “the compositions disclosed in Dvorchak take a relatively long time to develop the hardness and chemical resistance needed and, as a result, they would not be desirable for use in an on-site application, *i.e.*, application to a previously installed wood floor” (Br. 9).

That argument is not well taken because it is merely unsupported attorney argument, and arguments of counsel cannot take the place of evidence. *See In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). Moreover, the argument is inconsistent with Dvorchak’s disclosure that the

coating composition can cure in as little as 0.1 second (§ 73). Furthermore, Dvorchak and the Appellants provide similar disclosures that the coating can be baked before the UV radiation is applied (Dvorchak §§ 72–73; Appellants' Spec. 11:9–27).

Claim 9

Claim 9, which depends from claim 1, recites optional additional composition components.

The Appellants appear to assert that one of ordinary skill in the art would not have had a reasonable expectation of success in using those optional components in Dvorchak's composition (Br. 10–11).

That assertion is not well taken because each of those optional components is disclosed by Dvorchak (§ 71).

For the above reasons we are not persuaded of reversible error in the rejections.

DECISION/ORDER

The rejections under 35 U.S.C. § 103 of claims 1, 2, and 4–8 over Gaven in view of Dvorchak, claims 1, 2, 4–6, and 9–11 over Weikard in view of Dvorchak, claims 1, 2, and 4–13 over Gaven in view of Weikard and Dvorchak, claim 3 over Gaven in view of Dvorchak and Beck and over Weikard in view of Dvorchak and Mischke, and claims 7, 8, 12, and 13 over Weikard in view of Dvorchak and Gaven are affirmed.

It is ordered that the Examiner's decision 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).

AFFIRMED