

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* THOMAS A. STEVENSON, RAMESH SUBRAMANIAN, RICK  
V. STARCHER, LARRY SMEDLEY and HOMER H. DOVE

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Appeal 2008-2180  
Application 10/962,800  
Technology Center 1700

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Decided: September 11, 2008

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Before EDWARD C. KIMLIN, LINDA M. GAUDETTE, and  
KAREN M. HASTINGS *Administrative Patent Judges.*

GAUDETTE, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-16, the only claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Independent claim 1 is illustrative of the invention and is reproduced below:

1. A thermosetting, flexible, super durable powder coating composition comprising
    - a) a binder comprising
      - (1) an amorphous polyester polyol having an average hydroxyl functionality of from 1.9 to 2.4 which is a reaction product of
        - (i) an acid comprising at least 75% by weight of isophthalic acid,
        - (ii) at least one diol,
        - (iii) optionally, a polyol having a hydroxyl functionality greater than 2, and
        - (iv) a catalyst
    - and
    - b) an isocyanate-based curing agent
- in which the average of the functionalities of a) and b) is greater than 2.2 and less than 2.375.

The Examiner relies on the following prior art references to show unpatentability:

Passmore	US 4,387,214	Jun. 7, 1983
Matsumoto	US 2002/0156226 A1	Oct. 24, 2002
Moens	US 6,635,721 B1	Oct. 21, 2003

Appellants request review of the following grounds of rejection (App. Br. 3):

1. claims 1-10 and 15-16 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Moens, and
2. claims 11-14 under 35 U.S.C. § 103(a) as obvious over Moens in view of Passmore and further in view of Matsumoto.

*Rejection of claims 1-10 and 15-16 under 35 U.S.C. § 102(e)  
as anticipated by or, in the alternative, under  
35 U.S.C. § 103(a) as obvious over Moens*

Anticipation Rejection

The Examiner's anticipation rejection is based in part on a finding that Moens discloses an amorphous polyester which is the reaction product of an esterification catalyst (Ans. 3 (citing Moens, col. 7, ll. 20-25)), "(a) 70-100 mol% isophthalic acid (b) 0-30 mol% one other polycarboxylic acid (c) 70-100 mol% neopentyl glycol and (d) 0-30 mol% polyol" (Ans. 3 (citing Moens, Abstract)).

When a claim recites a composition in terms of ranges of elements, "any single prior art reference that falls within each of the ranges anticipates the claim." *Atlas Powder Co. v. Ireco, Inc.*, 190 F.3d 1342, 1346 (Fed. Cir. 1999). *See also, Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 775, 782 (Fed.Cir.1985) ("It is also an elementary principle of patent law that when, as by a recitation of ranges or otherwise, a claim covers several compositions, the claim is 'anticipated' if one of them is in the prior art."); *In re Scheiber*, 587 F.2d 59, 62 (CCPA 1978) ("[T]he description of a single embodiment of broadly claimed subject matter constitutes a description of the invention for anticipation purposes.") (citations omitted). However, the disclosure of a range does not constitute the disclosure of the endpoints of the range or of any intermediate point within the range. *Atofina v. Great Lakes Chemical Corp.*, 441 F.3d 991, 1000 (Fed. Cir. 2006).

The Examiner has not established that Moens' disclosure of 70-100 mol% isophthalic acid describes Appellants' claimed range of "at least 75% by weight of isophthalic acid" with sufficient specificity to anticipate this

claim limitation. Therefore, we determine that the Examiner reversibly erred in rejecting claims 1-10 and 15-16 under 35 U.S.C. § 102(e) as anticipated by Moens.

Obviousness Rejection

The Examiner finds that Moens discloses a powder coating composition comprising an amorphous polyester (*see page 2, supra*) and an isocyanate based curing agent as claimed, with the exception of a specific disclosure of the claimed functionalities. (Ans. 3.) However, the Examiner maintains that Moens amorphous polyester inherently possesses an average hydroxyl functionality of from 1.9 to 2.4 as claimed based on the following findings (Ans. 3):

1. both the polycarboxylic acid and polyol (components b and d, page 2, *supra*) can have functionalities of 3 or greater;
2. “[w]hen 0 mol% of the polycarboxylic acid and polyol are used, the overall functionality is 2.0”<sup>1</sup>; and
3. “[w]hen more than 0 mol% of triacid or triol is used, the functionality will be greater than 2.0.”<sup>2</sup>

The Examiner further contends that the average of the functionalities of Moens’ amorphous polyester and isocyanate based curing agent “is

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<sup>1</sup> “The functionality is the average number of reactive groups on the polymer. Thusly, a polyester which is formed from monomers which only had 2 functionality groups would inherently have a functionality of 2.0 since the end-groups of the resultant polyester are the only groups capable of further reaction.” (Ans. 6.)

<sup>2</sup> “A polyester which further comprises a trifunctional alcohol in the backbone (as is disclosed by Moens with the use of 0-30% polyol, or trifunctional alcohol) will have a functionality of greater than 2 since it will have a small percentage of pendant alcohol groups.” (Ans. 6.)

greater than 2.2 and less than 2.375” as claimed for at least one of the following reasons:

1. “[t]he curing agent is used to react the functional groups of the polyester, thus the functionality of the curing agent should be about the same as the functionality of the functional groups” (Ans. 3); or
2. “because one would want a completely crosslinked product, it would have been obvious to one of ordinary skill in the art at the time of the invention to choose a curing agent which had a functionality equivalent or close to equivalent to the functionality of the composition to be crosslinked, in order to ensure proper crosslinking” (Ans. 4).

(*See Ans. 7 (“Since 0-30% trifunctional alcohol is disclosed by Moens to be used in the polyester, the overall functionality it [sic] is expected to be around 2.3.”)).*

Appellants contend that the Examiner has not established a *prima facie* case of obviousness because “Moens et al does not teach or suggest: (1) selection of an amorphous polyester polyol on the basis of its functionality; (2) that the binder and curing agent should each have an average functionality of greater than 2.2 but less than 2.375; or (3) any way to produce a thermosettable, high durability powder coating composition using a binder made with only amorphous polyester polyol.” (App. Br. 5-6.)

Based on the contentions of the Examiner and the Appellants, the issue presented is: have Appellants shown that the facts and reasons relied on by the Examiner are insufficient to establish that Moens’ powder coating composition inherently possesses the claimed functionalities and properties of flexibility and super durability? We answer this question in the negative.

In making a patentability determination, analysis must begin with the question, "what is the invention claimed?" since "[c]laim interpretation, . . . will normally control the remainder of the decisional process." *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567-68 (Fed. Cir. 1987). "If . . . the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention's limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999).

When the PTO establishes that a claimed product appears to be substantially identical to a product disclosed by the prior art, the burden is on the Applicants to prove that the product of the prior art does not necessarily or inherently possess characteristics or properties attributed to the claimed product. *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990); *see also, In re Best*, 562 F.2d 1252, 1255-56 (CCPA 1977) (noting that the burden is the same regardless of whether the rejection is based obviousness or anticipation). "[T]he existence of overlapping or encompassing ranges shifts the burden to the applicant to show that his invention would not have been obvious." *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003).

In our view, the facts and reasons relied on by the Examiner (Ans. 3-4; *supra* p. 3-4) provide a reasonable basis to conclude that Appellants' claimed composition appears to be substantially identical to Moens' composition. Appellants' arguments fail to persuade us of reversible error on the part of the Examiner in rejecting the claims under 35 U.S.C. § 103(a)

as obvious over Moens. We address each of Appellants' arguments in greater detail below.

Appellants argue that "Moens et al does not teach or suggest . . . selection of an amorphous polyester polyol on the basis of its functionality." However, Appellants have not addressed the Examiner's detailed explanation in support of her finding that Moens discloses powder coating compositions comprising amorphous polyester polyols which inherently possess the claimed functionality (Ans. 3 and 6). *See Spada and Best, supra* p. 6.

Appellants also argue that "Moens et al does not teach or suggest . . . that the binder and curing agent should each have an average functionality of greater than 2.2 but less than 2.375." This argument likewise lacks persuasive merit because Appellants have not addressed the Examiner's contention that "it would have been obvious to one of ordinary skill in the art at the time of the invention to choose a curing agent which had a functionality equivalent or close to equivalent to the functionality of the composition to be crosslinked, in order to ensure proper crosslinking" (Ans. 4).<sup>3</sup> (*See Reply Br. 3 B.*) This argument is also unpersuasive because it is directed to limitations which are not present in the claims, i.e., there is no claim recitation requiring that *each* of the binder and curing agent have an

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<sup>3</sup> We note that in reaching the conclusion of obviousness, the Examiner properly took account of Appellants' evidence of nonobviousness, i.e., the examples in the Specification (Ans. 8). *See In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995) (noting that all evidence of nonobviousness, including data in the specification, must be considered when assessing patentability).

average functionality of greater than 2.2 and less than 2.375.<sup>4</sup> See *Panduit*, *supra* p. 6.

Appellants additionally argue that “Moens et al does not teach or suggest . . . any way to produce a thermosettable, high durability powder coating composition using a binder made with only amorphous polyester polyol.” As indicated above, arguments directed to limitations which are not present in the claims, are not persuasive in establishing nonobviousness. As previously explained by the Examiner, the claimed binder is not limited to an *amorphous* polyester polyol (see App. Br. 5 discussing Examiner’s position on Appellants’ use of comprising language). See *In re Crish*, 393 F.3d 1253, 1257 (Fed. Cir. 2004) (quoting *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997) (“[c]omprising' is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim”). Moreover, because the Examiner has established that the claimed coating composition and that of Moens are substantially the same, the burden is on Appellants to present arguments or evidence establishing that Moens’ composition would not necessarily or inherently possess the same flexibility and super durability as the claimed composition. (See Ans. 7.)

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<sup>4</sup> We have considered Appellants’ argument that the Examiner, in calculating the average of the functionalities of Moens’ polyester polyol and isocyanate-based curing agent, did not properly factor in the functionality of the isocyanate (Reply Br. 2). However, because we conclude that the Examiner’s obviousness determination is properly based on the findings set forth on pages 3-4 of the Examiner’s Answer, we view any error in the Examiner’s calculation (see Ans. 6-7), as harmless error.

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In sum, we find that a preponderance of the evidence favors the Examiner's conclusion of obviousness. Therefore, we sustain the Examiner's rejection of claims 1-10, 15 and 16 under 35 U.S.C. § 103(a).

*Rejection of claims 11-14 under 35 U.S.C. § 103(a) as obvious over Moens in view of Passmore and further in view of Matsumoto*

Appellants argue that the secondary references fail to cure the deficiencies of Moens with respect to the limitations recited in independent claim 1. (*See* App. Br. 9; Reply Br. 3.) Appellants do not, however, traverse the Examiner's reliance on the secondary references for a disclosure of features recited in dependent claims 11-14. Nor do Appellants attempt to refute the Examiner's proposed motivation for combining the references in the manner claimed. (*See generally*, App. Br. 6-9 and Reply Br. 3.) Because we perceive no error in the Examiner's obviousness determination as to claim 1, we likewise sustain the rejection of claims 11-14 under 35 U.S.C. § 103.

## CONCLUSION

The Examiner's decision rejecting claims 1-10, 15 and 16 under 35 U.S.C. § 102(e) is reversed. The decision of the Examiner rejecting claims 1-16 under 35 U.S.C. § 103(a) 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)(1)(iv).

AFFIRMED

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