

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 HONG XIAO, DANIEL P. SOPHIEA, and JOHN M. DUMAS

Appeal No. 2005-0836
Application No. 09/880,292

ON BRIEF

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

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1, 3-6, 19-21, 23, 24, 27-29, 31, and 32, which are all of the claims pending in this application. We have jurisdiction over the appeal pursuant to 35 U.S.C.

§ 134.

INTRODUCTION

The claims are directed to a composition which can be spray, stream, or swirl coated onto a vehicle surface to provide noise and vibration damping (specification, p. 2, ll. 7-25). The composition comprises an asphalt-in-water emulsion (specification, p. 2, ll. 8-10 and 27-28). Clay is used as an emulsifier (specification, p. 3, ll. 1-2). A filler such as calcium carbonate, calcium magnesium carbonate, or barium sulfate is added to enhance the damping performance of the asphalt composition and the rheology of the uncured asphalt composition (specification, p. 3, ll. 8-20). The composition also includes a surfactant added to improve the rheology and bakeability of the composition (specification, p. 4, ll. 5-7). While the specification indicates that any surfactant can be used (specification, p. 4, ll. 11-12), the claims are limited to the use of nonionic surfactants. Claim 1 is illustrative of the invention on appeal:

1. A composition comprising an asphalt in water emulsion; wherein the emulsifier is a clay and one or more fillers comprising an alkali metal carbonate, alkaline earth metal carbonate, sulfate or a mixture thereof and about 0.1 percent by weight or greater of a nonionic surfactant.

The claims are rejected under 35 U.S.C. § 103(a). As evidence of unpatentability, the

Examiner relies upon the following prior art references:

Drieskens et al. (Drieskens)	5,601,642	Feb. 11, 1997
Melvold	3,883,989	May 20, 1975
Elste Jr.	3,867,162	Feb. 18, 1975
Woodruff	3,615,798	Oct. 26, 1971
Torri	2,221,499	Nov.12, 1940

The specific rejections are as follows:

1. Claims 1, 3-5, 19-21, 23, 27-29, 31, and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Torri in view of (a) Drieskens and (b) Melvold or Woodruff.
2. Claims 6 and 24 stand rejected under 35 U.S.C. § 103 as being unpatentable over Torri in view of (a) Drieskens and (b) Melvold or Woodruff and further in view of Elste.

Appellants state that the claims do not stand or fall together and list six groupings of claims (Brief, p. 3). To the extent that the various groupings are argued separately in conformance with 37 CFR § 1.192(c)(8), the rule in force at the time the Brief was filed, we will consider them separately.¹

We affirm substantially for the reasons advanced by the Examiner in the Answer and add the following primarily for emphasis.

OPINION

As claim 1 is the broadest claim, our analysis begins there.

Claim 1

Claim 1 is directed to a composition containing an asphalt-in-water emulsion wherein clay is used as an emulsifier. The composition further includes a filler, which can be a sulfate, and about 0.01 percent by weight or greater of a nonionic surfactant.

¹Effective September 13, 2004, 37 CFR § 1.192 was replaced by 37 CFR § 41.37(c)(69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sept. 7, 2004)).

Appellants open their arguments by stating that the combined references, i.e., Torri, Driesken, Woodruff, and Melvold, do not teach or suggest the claimed composition (Brief, p. 3). In particular, according to Appellants, the references do not teach or motivate one skilled in the art to form a composition by selecting clay as the emulsifier and selecting a nonionic surfactant in the amount of 0.1 or greater for use in the composition (Brief, p. 3). Appellants also argue that the references do not teach or motivate one skilled in the art to make such selections in a composition which includes the claimed fillers or that by making such selections a composition would result that is capable of being sprayed onto a substrate and after exposure to the conditions of an automobile primer and paint oven, the composition being capable of forming crack and void free coatings (Brief, pp. 3-4). Later in the Brief, Appellants review the “deficiencies” in the teachings of each of the references and examine the motivation to combine the teachings of the references (Brief, p. 5, ll. 6-11). In examining the motivation to combine, Appellants focus on what the prior art patentees describe as their own inventions and argue against the combination of those inventions (Brief, pp. 7-10; Reply Brief, pp. 4-6).

Appellants’ analysis is flawed from the standpoint that it does not sufficiently recognize the true basis of the Examiner’s rejection. The Examiner has not attempted to bodily combine what each of the prior art patentees disclose as their own invention, rather the Examiner has approached the prior art from the standpoint of how it reflects what was known in the prior art. That is a correct lens through which to evaluate the prior art in this case. The purpose of the inclusion of prior art in an obviousness rejection is to provide evidence of what those of ordinary

skill in the art knew at the time the invention was made. The references serve as a spring board from which the decision maker can use to step back in time and into the shoes of one of ordinary skill in the art at the time of the invention. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566-67, 1 USPQ2d 1593, 1595-96 (Fed. Cir.), *cert. denied*, 481 U.S. 1052 (1987). From the prior art a certain amount of knowledge can be imputed to one of ordinary skill in the art. How that knowledge is stated is of no matter: It need not be conveyed directly nor must it be the main topic of discussion within a particular prior art reference. *See Merck & Co v. Biocraft Laboratories*, 874 F.2d 804, 807, 10 USPQ2d 1843, 1847 (Fed. Cir. 1989) (A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including non-preferred embodiments); *In re Heck*, 699 F.2d 1331, 1333, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (*quoting In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968))(Use of a patent as a reference is not limited to what the patentee describes as their own invention.). What is important is that the prior art establishes that there was a reason, suggestion or motivation to make what is claimed and that one of ordinary skill in the art would have had a reasonable expectation of success in so carrying it out. *See In re Dow Chem.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988).

At the outset, we determine that the Examiner's rejection is well supported by factual evidence. The Examiner relies upon Torri for the description of an asphalt-in-water emulsion containing clay (Answer, p. 4 as supported by Torri, p. 1, col. 2, ll. 20-26) and high specific gravity fillers (Answer, p. 4 as supported by Torri, p. 1, col. 1, ll. 32-39). In relying upon

Drieskens, the Examiner, in fact, relies upon even more evidence than necessary with regard to the fillers one of ordinary skill in the would have found to be obvious for use in the composition of Torri. Appellants point out that “barytes”, one of the fillers listed as useful by Torri (Torri, p. 1, col. 1, ll. 32-33), is, in fact, barium sulfate (Brief, p. 5, ll. 16-17). The only ingredient of the claimed composition not suggested by Torri, therefore, is the nonionic surfactant. As found by the Examiner, Melvold and Woodruff establish that it was known in the art to use nonionic surfactants as emulsifiers in asphalt-in-water emulsions (Answer, p. 5; *see also* Woodruff, col. 2, ll. 51-55; Melvold, col. 2, ll. 56-62).

We also determine that the Examiner’s conclusion is in conformance with the law. The Examiner did not rely upon Woodruff and Melvold for the disclosures therein of specific emulsion compositions. Rather, what the Examiner relied upon, and what these references evince, is a *general knowledge* in the art that nonionic surfactants were conventionally utilized as emulsifiers in asphalt-in-water emulsion compositions (Woodruff, col. 2, ll. 51-55; Melvold, col. 2, ll. 56-62). As we determined above, the Examiner’s finding with regard to the use of nonionic emulsifiers is supported by disclosures in Woodruff and Melvold. It follows, therefore, that those of ordinary skill in the art would have found it obvious to use nonionic emulsifiers for their known purpose in the asphalt emulsion of Torri. We find neither a lack of factual support nor a reversible error in the application of the law here.

Appellants argue that the Examiner has confused the fact that, in the claims of the instant invention, the asphalt emulsion is emulsified using a clay emulsifier rather than a nonionic

surfactant (Brief, p. 8). Appellants also argue that the terms “emulsifier” and “surfactant” are not equivalent and that the use of the two terms can indicate different functions in a composition (Reply Brief, pp. 1-2). But, as evidenced by the definition of “surfactant” advanced by Appellants (Reply Brief, pp. 1-2), an emulsifier is a type of surfactant. Appellants’ definition, in fact, supports the Examiner’s finding that the broader term “surfactant” used in the claim encompasses the chemical entities described in Torri. Nor do we think the Examiner erred in concluding that it would have been obvious to use both clay and nonionic surfactants in the composition of Torri as emulsifiers. When the prior art teaches several compositions useful for the same purpose, it is *prima facie* obvious to combine two or more of those compositions for use for the very same purpose. *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). That Appellants have articulated a different purpose for the nonionic surfactant does not somehow negate the suggestion or motivation shown to be present in the prior art. *In re Kemps*, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996).

We also agree with the Examiner that Melvold and Woodruff suggest the use of nonionic surfactants in concentrations overlapping those claimed (Answer, p. 5). The optimal amount would have been obtained by one of ordinary skill in the art through routine experimentation.

We conclude that the Examiner has established a *prima facie* case of obviousness with respect to the subject matter of claim 1 which has not been rebutted by Appellants.

Claims 4, 5, 23

With regard to claims 4, 5, and 23, Appellants argue that the references fail to teach or motivate a skilled artisan to select a composition with the ingredients in the concentrations of the claims (Brief, p. 4). But once one of ordinary skill in the art understands from the disclosure of Torri and Drieskens that barium sulfate is a useful filler for sound-deadening asphalt emulsion compositions, one of ordinary skill in the art would have performed routine experimentation to obtain the workable or optimum concentrations of emulsion and filler for the very same application of sound-deadening. *See In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). Note also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The same holds for concentrations of the known emulsifiers, i.e., clay and nonionic surfactants, as well as solids content.

We conclude that the Examiner established a *prima facie* case of obviousness with respect to the subject matter of claims 4, 5, and 23 which has not been sufficiently rebutted by Appellants.

Claims 27, 28, 31, and 32

Appellants also argue that the references do not teach or motivate one skilled in the art to select the nonionic surfactant subspecies of claims 27, 28, 31, and 32 (Brief, p. 4). But Appellants do not address the Examiner's specific finding that Melvold and Woodruff disclose that such nonionic surfactants were known in art nor do Appellants address the Examiner's

specific conclusion of obviousness based on the finding (Answer, p. 5). We, therefore, conclude that the Examiner established a *prima facie* case of obviousness with respect to the subject matter of claims 27, 28, 31, and 32 which has not been sufficiently rebutted by Appellants.

Claim 29

Appellants argue that the references do not teach or motivate one skilled in the art to select the components of the described compositions such that the viscosity of the composition allows the composition to be applied by spray, stream, or swirl applications as claimed in claim 29 (Brief, pp. 4-5). This argument is without merit in view of the disclosure in Torri that the composition “may be made of such consistency that it may be applied by means of a ... spray gun.” (Torri, p. 1, col. 1, ll. 11-13; *see also* p. 2, col. 1, ll. 26-31).

We conclude that the Examiner established a *prima facie* case of obviousness with respect to claim 29 which has not been sufficiently rebutted by Appellants.

Claims 6 and 24

To reject claims 6 and 24, the Examiner added Elste to show that it was known in the art to add a solvent to increase the low temperature properties of an asphalt-in-water emulsion (Answer, pp. 5-6).

Appellants argue with respect to claims 6 and 24 that they add solvent for a different reason than Elste (Brief, p. 10). In reality, it is not clear that the reason for adding solvent is entirely different, but more importantly, even if the reason is different, that fact does not somehow result in the nonobviousness of adding solvent. The Examiner has established through

Elste that there was a reason or motivation to use a solvent in asphalt-in-water emulsions (Answer, pp. 5-6). That is enough to establish a *prima facie* case of obviousness in this case. See *In re Beattie*, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992); *In re Kemps*, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996).

We conclude that the Examiner established a *prima facie* case of obviousness with respect to claims 6 and 24 which has not been sufficiently rebutted by Appellants.

Xiao Declaration

Appellants argue that even if a case of *prima facie* obviousness was made out, the Xiao Declaration rebuts it (Brief, p. 10). Appellants state that the Xiao Declaration shows by selection of clay as the emulsifier for the asphalt-in-water emulsion and the selection of nonionic surfactant in amounts of 0.1 wt.% or greater, there is a significant impact on the ability of Appellants' invention to solve the problem of how to make a sound dampening coating that survives intact in automobile paint and primer ovens (Brief, p. 10). Appellants point out that the prior art relied upon by the Examiner does not indicate that the presence or amount of surfactant has the impact shown by the data on the properties of the coating (Brief, p. 11). Appellants further point out that there is no teaching that the selection of clay emulsified systems has a positive impact on the ability of the coating to withstand the conditions of paint and primer ovens (Brief, p. 11). Appellants then state that “[a]bsent a teaching in the art of the selection of these parameters and the specific impact [of] such selections on the properties of the coatings,

this data establishes unexpected results which rebut any case of *prima facie* obviousness which may be made out by the rejections.” (Brief, p. 11).

Once a *prima facie* case of obviousness is established, the burden of coming forward with evidence and argument in rebuttal is shifted to Appellants. See *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). “It is well established that the objective evidence of nonobviousness must be commensurate in scope with the claims.” *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972). As the Examiner points out, the showing presents data for only one nonionic surfactant, i.e., Triton X45[®], an octyl phenoxy ethanol (Answer, p. 12). The Examiner notes that nonionic surfactants are a broad group of materials that exhibit a wide spectrum of properties. Appellants provide no convincing basis to conclude that the great number of surfactants encompassed by the claims would exhibit the result that Appellants state in their Brief to be unexpected. The evidence is insufficient because it is not commensurate in scope with the claims.

Further, we note that nowhere in the specification or in the Xiao Declaration does it state that the results are indeed unexpected. In order to establish unexpected results “it is not enough to show that results are obtained which differ from those obtained in the prior art: that difference must be shown to be an *unexpected* difference”, *In re Klosak*, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). Of course, the mere statement in the Brief that the results are unexpected is not enough as attorney arguments are not evidence. *In re Lindner*, 457 F.2d 506, 508,

173 USPQ 356, 358 (CCPA 1972). Nor can we agree that the absence in the references of a discussion of a correlation between the bakeability properties and the ingredients (Brief, p. 11) provides the level of factual support necessary to support the conclusion that the data evinces unexpected results. There may be other reasons why the specific prior art references are silent. The evidence, therefore, insufficiently indicates that the result would have been unexpected to those of ordinary skill in the art.

After reviewing the totality of the evidence before us, it is our conclusion that, on balance, the evidence of nonobviousness fails to outweigh the evidence of obviousness discussed above and, accordingly, we conclude that a preponderance of the evidence supports a legal conclusion of obviousness within the meaning of 35 U.S.C. § 103(a).

CONCLUSION

To summarize, the decision of the Examiner to reject claims 1, 3-6, 19-21, 23, 24, 27-29, 31, and 32 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 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHUNG K. PAK)	APPEALS
Administrative Patent Judge)	AND
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Appeal No. 2005-0836
Application No. 09/880,292

Page 14

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