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The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DIETER SCHWEIZER and CLAUDIA SORG

Appeal No. 96-2810
Application 08/017,086¹

ON BRIEF

Before DOWNEY, GRON, and WALTZ, Administrative Patent Judges.
GRON, Administrative Patent Judge.

DECISION ON APPEAL UNDER 35 U.S.C. § 134

This is an appeal under 35 U.S.C. § 134 from an
examiner's rejections of Claims 1-4 and 6-9, all claims
pending in this application.

¹ Application for patent filed February 12, 1993.

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Introduction

Claims 1-4 and 6-8 stand finally rejected under 35 U.S.C.

§ 103 as unpatentable in view of the combined prior art teachings of Norris, U.S. Patent 5,238,881, patented Aug. 24, 1993 (prior art under 35 U.S.C. § 102(e) based on a filing date of Nov. 9, 1988), and Lo, U.S. Patent 4,845,175, patented July 4, 1989, and U.S. Patent Reexamination Certificate B1 4,845,175, issued July 30, 1991. Claim 9 stands finally rejected under 35 U.S.C.

§ 102(e) as described by Norris. Absent the requisite statement in their Amended Brief For Appellants "that the claims of the group do not stand or fall together" (37 CFR § 1.192(c)(7)

(March 17, 1995)),² Claims 1-4 and 6-8 will stand or fall together as stated in the Examiner's Answer (Ans., p. 2). However, since the rejection of Claim 9 has a different

² The examiner incorrectly directs our attention to 37 CFR § 1.162(c)(5)(nonexistent).

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statutory basis, it stands alone. We elect to decide the merits of the appealed rejections on the basis of Claims 1, 7, and 9 which are reproduced below:

1. A ceramic glaze comprising 20 to 60% by weight of water, 40 to 80% by weight of ceramic raw materials selected from the group consisting of feldspars, clays, kaolin, quartz, metal oxides, and frits and a thickening amount of a hydrophobically modified cellulose ether having a weight percent hydrophobic modification between 0.1 and 2.0.

7. A process for glazing sanitary ceramic articles selected from the group consisting of toilets, sinks and bathtubs comprising the steps

a. spraying an unglazed ceramic article with an aqueous glaze of (i) 40 to 80% by weight of ceramic raw materials selected from the group consisting of feldspars, clays, kaolin, quartz, metal oxides, and frits, (ii) a thickening amount of a hydrophobically modified hydroxyethylcellulose, and (iii) optional sodium polyphosphate,

b. drying until the article can be handled without marring the surface glaze, and

c. firing to produce a glazed sanitary ceramic article.

9. The glazed ceramic article prepared by the process of claim 7.^[3]

Discussion

1. Section 103 Rejection

³ In appellants' Appendix, Claim 9 is incorrectly transcribed. Pending Claim 9 depends from process Claim 7, not ceramic glaze Claim 6.

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Whether or not Norris and Lo are analogous prior art is a question of fact. In re Clay, 966 F.2d 656, 658, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992). We have reviewed the examiner's finding that Norris and Lo are analogous prior art (Ans, pp. 5-6) by the criteria established in In re Dewinski, 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986); and In re Wood, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979). We see no clear error in the examiner's finding. However, even assuming that Norris and Lo (1) relate to the same field of endeavor, or (2) are reasonably pertinent to the particular problem with which the inventor is involved, we nevertheless hold that Claims 1-4 and 6-8 would not have been obvious to a person having ordinary skill in the art under 35 U.S.C. § 103 in view of the combined prior art teachings.

In re Dow Chemical Co., 837 F.2d 469, 5 USPQ2d 1529 (Fed. Cir. 1988), instructs at 473, 5 USPQ2d at 1531 (citations omitted):

The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art. Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's

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disclosure.

The court reemphasized at 473, 5 USPQ2d at 1531:

There must be a reason or suggestion in the art for selecting the procedure used, other than the knowledge learned from the applicant's disclosure.

It is precisely that requisite reason or suggestion to employ a hydrophobically modified cellulose ether in a ceramic glaze for use in a process for glazing sanitary ceramic articles which the combined prior art teachings lack.

Norris adds a small amount of a naturally occurring or synthetic water-soluble polymer gum as a thickener to form stable dispersions of up to 70% colored ceramic pigments for ceramic glazes (Norris, Abstract and col. 7, l. 18-20).

Xanthan gum appears to be the preferred thickener (Norris, Abstract and

col. 7, l. 22-24). Norris teaches (Norris, col. 7, l. 28-38):

Modified cellulose ether gums such as hydroxy cellulose, methyl cellulose, hydroxy propylmethyl cellulose and sodium carboxymethyl cellulose may be used. . . . Because of a greater tendency of . . . synthetic polymers to cause undesirable gelling of the dispersion, they are less preferred than the gums. The optimum levels of these thickeners in the slurries can be readily determined by routine experimentation.

On the other hand, Lo recognizes that water soluble cellulose ethers, particularly hydroxyethyl cellulose (HEC),

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have been found useful in forming protective colloids for the production of stable aqueous polymer emulsions of vinyl monomers, i.e., latexes, for use in paints, floor polishes, and the

like (Lo, col. 1, l. 1-13 and 40-51). Lo states (Lo, col. 1, l. 52-68):

In the emulsion polymerization of ethylenically unsaturated monomers, the presence of an effective amount of HEC is known to produce latexes of submicron particle size having improved stability and performance. Although hydroxyethylcellulose is widely used as the protective colloid to make polymer emulsions, it does feature certain deficiencies. A high level of hydroxyethylcellulose normally is needed in order to prevent agglomeration of the emulsion during polymerization and to maintain mechanical stability against shear force during the mixing of polymer emulsion with paint ingredients. Typically, for effective use as a protective colloid for vinyl monomers, HEC is employed in a proportion ranging from about one percent or more by weight of the total monomer content. A dried film of polymer emulsion containing this high level of hydroxyethylcellulose, however, becomes water sensitive.

Lo states that water-soluble hydrophobically modified hydroxyethylcellulose having an amount of hydrophobic modification in an amount of between 0.2 to 1% have been efficiently utilized as thickeners in aqueous paint systems (Lo, col. 2, l. 7-30). Lo discovered that (Lo, col. 2,

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1. 32-39):

. . . hydrophobically modified hydroxyethylcelluloses (HMHEC) function as an effective protective colloid for the preparation of aqueous polymer emulsions of vinyl monomers. Further, it has been found that such hydrophobically modified cellulose ethers function as effective protective colloids at levels significantly lower than levels required when utilizing standard HEC.

The combined teachings of Norris and Lo provide no reason or suggestion to substitute hydrophobically modified cellulose ethers for either the xanthan gum Norris prefers or the nonpreferred modified cellulose ethers which Norris may use as a thickener in ceramic glazes. Lo teaches that hydrophobically modified cellulose ethers are useful in the preparation of aqueous polymer emulsions of vinyl monomers at levels significantly lower than levels required when utilizing standard HEC. The ceramic glazes Norris describes are not aqueous polymer emulsions of vinyl monomers or polymer latexes. The utility of hydrophobically modified cellulose ethers as thickeners in ceramic glazes for any reason is speculative. At best, Lo's teaching might invite persons having ordinary skill in the art to try hydrophobically modified cellulose ethers as thickeners in ceramic glazes. However, "obvious to try" is not the standard for unpatentability under 35 U.S.C. § 103. In re

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O'Farrell,

853 F.2d 894, 903, 7 USPQ2d 1673, 1680 (Fed Cir. 1988); In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1599 (1988). We find that the only incentive to use hydrophobically modified cellulose ethers as thickeners in ceramic glazes in this case is provided by appellants' disclosure. Accordingly, we reverse the examiner's rejection of Claims 1-4 and 6-8 under 35 U.S.C. § 103 as being unpatentable in view of the combined prior art teachings of Norris and Lo.

2. Section 102 Rejection

The issue presented by the examiner's rejection of product-by-process Claim 9 under 35 U.S.C. § 102(e) over the disclosure of Norris is an entirely different matter. We affirm the rejection of Claim 9 under section 102(e) as described by Norris.

To sustain the examiner's rejection under 35 U.S.C. § 102, we must first find that the product made by the process of appellants' Claim 7 prima facie reasonably appears to be the same as a product made by a process Norris describes. In re Thorpe,

777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985); In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977).

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We so find.

According to appellants' process Claim 7, glazed sanitary ceramic articles are produced by (a) spraying the unglazed ceramic article with an aqueous glaze comprising 40 to 60% by weight of ceramic raw materials selected from feldspars, clays, kaolin, quartz, metal oxides, and frits, and a hydrophobically modified hydroxyethylcellulose; (b) drying the article; and

(c) firing the dry article. Norris produces his glazed sanitary ceramic articles (Norris, col. 3, l. 51-55) by (a) spraying the unglazed ceramic article with an aqueous glaze comprising a stable aqueous dispersion of 20 to 70% of one or more inorganic ceramic pigments and up to about 1.5% of a thickening agent; and (b) firing the sprayed article (Norris, col. 3, l. 8-43; see also Norris's Claim 26). Norris's inorganic ceramic pigments include frit, china clay, feldspar, silica and kaolin (Norris, col. 5, l. 7-9). Norris's thickening agent may be xanthan gum or a modified cellulose ether gum such as hydroxy cellulose, methyl cellulose, hydroxypropylmethyl cellulose, etc. (Norris, col. 7, l. 22-31). The examiner finds (Examiner's Answer, p. 5):

Once fired, any differences in the glaze based upon the

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organic thickener are no longer apparent. The final

glazed article will be indistinguishable from the prior art glazed article of Norris and is thus anticipated.

Norris typically fires his glazed sanitary ceramic articles at temperatures in the range of 1000° to 1300° C.

(Norris,

col. 3, l. 21-24). Appellants' glazes were fired at 1000° to 1400° C. (Specification (Spec.), p. 6, Example 2). Moreover, appellants' specification teaches that cellulose ether and xanthan gum thickeners decompose upon firing (Spec., p. 1):

Cellulose ethers and xanthan gums have been used as thickeners and binders for such sanitary ceramic glazes. Upon firing, these polysaccharides decompose and form the glaze glass and metal oxide deposit on the ceramic article.

We see no clear error in the examiner's finding that firing caused the thickeners of the sanitary ceramic articles sprayed with glaze in accordance with Norris's teaching and in accordance with appellants' teaching both to decompose, leaving glazed sanitary ceramic articles of identical composition. The products made by the two processes reasonably appear to be the same regardless of the thickeners employed in the respective aqueous glazes. In our view, the examiner has made out a prima facie case of

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unpatentability of appellants' product by process claims under section 102 over the products produced by Norris's process.

Appellants have two responses to the examiner's findings. First, appellants argue, "Norris does not anticipate appellants' invention under 35 USC 102(e) because Norris does not disclose appellants' thickener of a hydrophobically modified hydroxyethyl- cellulose" (Amended Brief For Appellants, p. 6). This argument does not respond to what appears to be a reasonable finding by the examiner that the thickeners of appellants' and Norris's glazed sanitary ceramic articles are not apparent once the glaze has been fired (Examiner's Answer, p. 5).

Second, appellants argue (Amended Brief For Appellants, p. 6):

Moreover, Examples 1 and 2 on page 6 of the application clearly demonstrates that the resulting glaze articles using appellants' novel formulation gave superior unexpected results over the prior art glaze. Norris uses xanthan gum as the thickener which is what appellants use as the prior art control of these experiments. Appellants invention [sic, Appellants'] provided a faster drying time and thicker glaze coating which displayed a lower tendency to run or sag as well as containing fewer foam bubbles (see lines 8 to 11 of page 6). Similar results were also noted in Example 2. Therefore, Norris clearly does not anticipate appellants' invention.

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We are not convinced by the evidence in appellants' specification that the glazed ceramic articles Norris describes "do not necessarily or inherently possess the characteristics" of the glazed ceramic articles appellants claim. See In re Thorpe, at 698, 227 USPQ at 966.

Appellants' exemplified Prior Art Preparation (control) employs 0.2g of xanthan gum as the thickener. The exemplified Invention Preparation employs 0.21g of an HMHEC (Spec., pp. 5-6). While Norris prefers to use xanthan gum as the thickener, the modified cellulose ethers that Norris also describes for use as the thickener more closely resembles the thickeners utilized in the method appellants claim. The comparative differences between glazed articles may be attributable to viscosity and molecular composition differences between xanthan gum and modified cellulose ether gum, both of which are described by Norris. Moreover, the "ceramic raw material" of the Prior Art Preparation and the "ceramic raw materials" of the Invention Preparation are not defined in the specification (Spec., p. 5).

Appellants' statement that "[a] visual comparison of these tests revealed that the experimental materials dried

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faster and provided a thicker glaze coating which displayed a lower tendency to run or sag as well as containing fewer foam bubbles" (Spec., p. 6) is conclusory in nature. Conclusory statements in the specification which are not supported by factual evidence are entitled to little weight. In re Lindner, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972).

Finally, while appellants argue that the results in the specification show that appellants' "Invention Preparation . . . displayed . . . fewer foam bubbles" (Spec., p. 6), lawyer's arguments which are not supported by factual evidence of record also are entitled to very little weight. In re Lindner, supra. The specification more correctly teaches (Spec., p. 6):

. . . [F]ewer fired articles sprayed with the Invention Preparation contained objectional pinholes or runs such that rework was required

. . . .

Visual inspection of both the control and experimental tiles revealed overall superior quality for the glaze containing hydrophobically modified hydroxyethylcellulose associative thickener.

Based on the evidence in the specification, we find that somewhat less than 50% of the articles appellants produced by

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their method of producing glazed sanitary ceramic articles appear to be the same or substantially identical to articles produced by a method Norris describes. In light of appellants' statements in the specification, we find that there is no patentable distinction between many articles produced by the method Norris describes and articles produced by the process appellants claim. Accordingly, we affirm the examiner's rejection of the products of Claim 9 made by the processes of Claim 7 under 35 U.S.C. § 102(e) as drawn to products made by a process Norris describes.

Conclusion

1. We reverse the examiner's rejection of Claims 1-4 and 6-8 under 35 U.S.C. § 103 in view of the combined teachings of Norris and Lo.
2. We affirm the examiner's rejection of Claim 9 under 35 U.S.C. § 102(e) as anticipated by Norris.

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

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