

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID R. SCHEUING, ARAM GARABEDIAN, JR., SARA MORALES, PAUL PAPPALARDO and MALCOLM DELEO CASTRO

Appeal 2008-1197
Application 10/150,363
Technology Center 1700

Decided: March 11, 2008

Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and KAREN M. HASTINGS, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1-20, 22, 23, 25-35, 37-40, 42-46, and 48-50, which are the only claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

I. BACKGROUND

The invention relates to a cleaning composition and a method of cleaning household surfaces. Independent claim 1 is illustrative¹:

1. An aqueous liquid cleaning composition for hard household surfaces, which can modify the surface to yield a water contact angle of less than 10 degrees that comprises:

(a) a water-soluble or water-dispersible copolymer having:

(i) a first monomer that has a permanent cationic charge or that is capable of forming a cationic charge on protonation wherein the first monomer is selected from the group consisting of acrylamide, N, N-dimethylacrylamide, methacrylamide, N, N-dimethylmethacrylamide, N, N-di-isopropylacrylamide, dialkylaminopropylmethacrylate, dialkylaminopropylacrylate, dialkylaminoethylmethacrylamide, dialkylaminoethylacrylamide, dialkylaminopropylmethacrylamide, dialkylaminopropylacrylamide, N-alkyl, N-vinylimidazolium, N-alkyl, N-vinylpyrrolidonium, trialkylammoniummethylmethacrylate, trialkylammoniummethylacrylate, trialkylammoniumpropylmethacrylate, trialkylammoniumpropylacrylate, trialkylammoniummethylmethacrylamide, trialkylammoniummethylacrylamide, trialkylammoniumpropylmethacrylamide, trialkylammoniumpropylacrylamide, diquaternary derivatives of methacrylamide and mixtures thereof; and

(ii) at least one of a second monomer that is acidic and that is capable of forming an anionic charge in the composition wherein the second monomer is selected from the group consisting of acrylic acid, methacrylic acid, maleic anhydride, succinic anhydride, vinylsulfonate, styrene sulfonic acid, sulfoethylacrylate, and mixtures thereof; or a third monomer that has an uncharged hydrophilic group, wherein the third monomer is selected from the group consisting of vinyl alcohol, vinyl acetate, hydroxyethylacrylate, alcohol ethoxylate esters, alkylpolyglycoside esters, polyethylene glycol esters of acrylic, methacrylic acid, and mixtures thereof;

(b) optionally, an organic solvent; and

¹ Independent method claim 20 is not reproduced herein, however, note that “at least 1nm” (emphasis provided) in clause (c) of claim 20 appears to be an inadvertent mistake. Original dependent claim 24 (now canceled) recited “less than 1nm” (emphasis provided).

(c) optionally, an adjuvant.

The Examiner relies upon the following prior art as evidence of unpatentability:

Jeschke² WO 97/36046 June 12, 1997

Claims 1-20, 22, 23, 25-35, 37-40, 42-46, and 48-50 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Jeschke.

Appellants do not separately argue with any reasonable specificity any of the individual claims rejected under 35 U.S.C. § 102 over Jeschke (App. Br. 5-8; Reply Br. 5-10). Therefore, we select independent claim 1 to decide this issue on appeal.

ISSUE ON APPEAL

The issue is whether the Appellants have shown that the Examiner reversibly erred in rejecting claims 1-20, 22, 23, 25-35, 37-40, 42-46, and 48-50 as anticipated by Jeschke.

For the reasons that follow, we determine that the Examiner has established a prima facie case of anticipation of these claims based on Jeschke.

OPINION

Findings of Fact

We determine the following Factual Findings (FF) from the record in this appeal:

² We follow the convention used by Appellants in their Brief, referring to columns and lines of Jeschke's US equivalent 6,251,849.

1. Jeschke describes all the components listed in Appellant's independent claim 1. Specifically, Jeschke describes an aqueous liquid cleaning composition for hard surfaces which includes a cationic polymer containing monomer units that include methacrylamidopropyl trimethyl ammonium (i.e., a trialkylammoniumpropylmethacrylamide), as exemplified in both polymers b and c (col. 6, ll. 14-19)³. A chloride anion may be used on this monomer (abstract; col. 6, ll. 14-19). The polymer of Jeschke may also include other monomer units; *preferred* monomer units include acrylic acid and methacrylic acid (col. 2; ll. 43-44).

2. In accordance with Appellants' claim 1, the cationic monomer may be trialkylammoniumpropylmethacrylamide (see also Example 3, polymer D⁴, Spec. 29:10-11). In accordance with Appellants' Specification, the counterion of the cationic monomer can be chloride (Spec. 7:2-4), and Appellants' most preferred acid monomers include acrylic acid and methacrylic acid (Spec. 8:8-9; see also claim 1).

3. The cationic monomers of Jeschke comprise at least 40 mol%, more preferably more than 50 mol%, of the polymer (abstract; col. 2, ll. 25-27).

4. According to Appellant's Specification, Appellants' cationic monomer may be 3 to 80 mol%, and preferably 10 to 60 mol%, of the copolymer (Spec. 5:15-20).

5. The polymer of Jeschke may be used in amounts of .01 to 10% by weight, preferably .05 to 2% by weight of the cleaning composition (col. 2, ll. 45-48).

³ All column and line references are to the US equivalent 6,251,849.

6. Appellants' polymer may be used in preferable amounts of 0.5 to 10% by weight, most preferably 1 to 5% by weight of the cleaning composition (Spec. 6:6-8).

7. Jeschke describes that the polymer is a soil release compound added to cleaning compositions for hard surfaces (col. 1, ll. 5-10). These polymers are deposited on the surface and modify the surface properties (col. 1, ll. 10-33). The polymers do not form a permanent film (that is, they form a temporary film) (col. 1, ll. 33-36). Jeschke states that consumers would regard as favorable a polymer with high stability against removal (col. 1, ll. 36-43).

8. Appellants' Specification teaches that the hard surface adsorbs the copolymers such that a thickness of a monolayer, or less, modifies the properties of the surface, and results in a small water contact angle of less than 10 degrees (Spec. 20:1-23).

9. Jeschke describes that tests to demonstrate the soil release effect of the cleaning solutions containing various polymers were carried out on PVC (i.e., polyvinyl chloride), a plastic surface (col. 7, ll. 4-7, 43-50).

10. Appellants' Specification describes tests on "enamel coupons" (Spec. 20:16-23) and "glossy black tile coupons" (Spec. 21:1-3). Appellants also describe tests using germanium, a material Appellants describe as having a surface energy similar to "glass, porcelain, ceramic tile, steel and aluminum" (Spec. 22:15-20).

Principles of Law

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior

art reference.” *Verdegaal Bros., Inc v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 827 (1987).

Further, where patentability rests upon a property (or function) of the claimed invention not disclosed within the art, the PTO often has no reasonable method of determining whether there is, in fact, a patentable difference between the prior art and the claimed invention. Therefore, where the claimed and prior art products are identical or substantially identical, the PTO can require an applicant to prove that the prior art products do not necessarily possess the characteristics of his claimed product. *In re Best*, 562 F.2d 1252, 1255, (CCPA 1977); *see also In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990).

Analysis

Applying the preceding legal principles to the factual findings in the record of this appeal, we determine that the Examiner has properly identified factual findings and reasoning for establishing a *prima facie* case of anticipation based on Jeschke which Appellant has not adequately rebutted by the arguments and evidence of record.

We agree with the Examiner that Jeschke describes all the elements listed in claim 1 (Ans. 4-6; FF 1). We determine that Jeschke describes a cleaning composition containing a polymer including a trialkylammoniumpropylmethacrylamide cationic monomer along with preferred comonomers of acrylic acid or methacrylic acid as included in claim 1 on appeal (FF 1, 2). However, Appellants contend that the claimed subject matter “employs a copolymer that does not require the cationic monomer of Jeschke” (App. Br. 7). We disagree.

We determine that Appellants have not shown that the claim excludes the cationic monomers of Jeschke. To the contrary, Appellants specifically claim that “trialkylammoniumpropylmethacrylamide” may be included in the copolymer (FF 2). Likewise, as the Examiner established, Jeschke describes a trialkylammoniumpropylmethacrylamide monomer in a copolymer (Ans. 6; FF 1, 3). That is, the copolymer of Appellants’ invention may indeed comprise the cationic monomer that Appellants allege the claim “does not require”. Indeed, this is a preferred cationic copolymer according to Jeschke, as described by formula I in which n is preferably 3 (col. 2, ll. 1-20). Therefore, Appellant’s argument is not well taken.

Appellants also contend that the polymer of Jeschke does not have the claimed capability of modifying the surface (namely, the hard surface to be cleaned) to yield a water contact angle of less than 10 degrees⁴. However, the claim includes the same cationic and acid monomers as Jeschke describes as preferred monomers, substantially the same relative mole percentages of each monomer may be used, and the resulting copolymer is used in substantially the same amounts and for the same purpose as the copolymer of Jeschke (FF 1-8). It is therefore reasonable to assume that the copolymer containing the preferred cationic and acid monomers described in Jeschke will possess this claimed capability.

For these reasons and those stated in the Answer, we determine that the Examiner has established that the product of the prior art (i.e., Jeschke)

⁴ Appellants state the low water contact angle is a “requirement” in independent method claim 20 (Reply Br. 9). However, the issue remains the same as for claim 1, namely, whether the copolymer described in Jeschke inherently functions as claimed.

reasonably appears to be substantially the same as that claimed. Thus, the burden shifts to Appellants to prove that the claimed products are not the same as the prior art (e.g., establish with evidence that Jeschke's copolymer will not inherently function as claimed in claims 1 and 20). *See In re Best*, 562 F.2d at 1255.

Appellants contend that the David R. Scheuing Declaration⁵ presents evidence that the example "polymer b"⁶ of Jeschke does not have the claimed capability of modifying the surface to yield a water contact angle of less than 10 degrees (App. Br. 5-6; Reply Br. 9-10). This evidence is not persuasive. In particular, Appellants admit that the surface used is a factor in whether the claimed water contact angle will result (Reply Br. 7-8). The surface used in the tests of Jeschke upon which Appellants base their calculations is different than the surface used in Appellants' tests (FF 9, 10). Appellants have not shown that the preferred copolymer described in Jeschke (namely, trialkylammonium propylmethacrylamide with acrylic acid or methacrylic acid) would not have the required capability of forming a water contact angle of less than 10 degrees when used on the same hard surfaces.

Further, Appellants have not explained how such evidence could establish different water contact angles, since the claim includes the same cationic and acid monomers as Jeschke describes, substantially the same relative mole percentages of each monomer may be used, and the resulting

⁵ Filed September 19, 2005 pursuant to 37 CFR § 1.132

⁶ Example "polymer b" does not include the preferred comonomers of acrylic acid or methacrylic acid described in Jeschke.

copolymer is used in substantially the same amounts and for the same purpose as the copolymer of Jeschke (FF 1-8).

In this regard, we again emphasize that it is Appellants' burden to establish that the copolymer described in the prior art does not inherently possess the capability of modifying a surface to yield a water contact angle of less than 10 degrees. The Appellant has not met this burden in this case for the reasons discussed above.

For the above stated reasons and those stated in the Answer, we affirm the rejection of claims 1-20, 22, 23, 25-35, 37-40, 42-46, and 48-50 under § 102 based on Jeschke.

SUMMARY

The decision of the Examiner 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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