

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* VERONIQUE GUILLOU  
and ISABELLE CARTON

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Appeal 2007-4231  
Application 10/181,981<sup>1</sup>  
Technology Center 1700

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Decided: 11 June 2008

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Before BRADLEY R. GARRIS, ADRIENE LEPIANE HANLON, and  
CAROL A. SPIEGEL, *Administrative Patent Judges*.

HANLON, *Administrative Patent Judge*.

DECISION ON APPEAL

A. STATEMENT OF THE CASE

The Appellants appeal from the final rejection of claims 1-11, 14-47, 49-51, and 56-69.<sup>2</sup> 35 U.S.C. § 134. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

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<sup>1</sup> Application for patent filed on July 24, 2002.

<sup>2</sup> Claims 53 and 70-72 are also pending in the application but have been withdrawn from consideration. Final Office Action mailed January 18, 2006 ("Final"), at 1.

The Examiner finally rejected claims 1-11, 14-47, 49-51, and 56-69 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Morschhäuser.<sup>3</sup> Final 3.

#### B. ISSUE

The sole issue on appeal is whether the Appellants have shown that the Examiner erred in rejecting claims 1-11, 14-47, 49-51, and 56-69 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Morschhäuser.<sup>4</sup>

#### C. FINDINGS OF FACT

The following findings of fact are believed to be supported by a preponderance of the evidence. Additional findings of fact as necessary appear in the Analysis portion of the opinion.

##### 1. Claimed invention

Claim 1 is the only independent claim on appeal, and it reads as follows:

1. A composition comprising a (1) physiologically acceptable aqueous medium, (2) at least one surfactant chosen from the group consisting of alkylpolyglycosides, maltose esters, glycerolated fatty alcohols, N-alkylglucamine derivatives, amido ether carboxylates, acetates, alaninates, aspartates, glycinates, citrates, galacturonates, fatty acid salts constituting soaps, phosphates, amphoteric surfactants, and zwitterionic surfactants, and (3) at least one crosslinked amphiphilic polymer present in an amount sufficient to increase a volume of foam of the composition, said amphiphilic polymer

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<sup>3</sup> Patent 6,645,476 B1 issued on November 11, 2003 to Morschhäuser et al. (“Morschhäuser”).

<sup>4</sup> In the Final Office Action, claims 14, 16, and 49 were rejected under 35 U.S.C. § 112, second paragraph. Final 3. The Examiner has not maintained this rejection in the Answer. Therefore, the rejection is considered withdrawn. *See* MPEP § 1207.02 (8<sup>th</sup> ed., Rev. 6, Sept. 2007).

comprising polymerized units of at least one ethylenically unsaturated monomer comprising a sulphonic group in a free form, a partially neutralized form or a totally neutralized form and at least one hydrophobic part.

## 2. Appellants' Specification

According to the Appellants' Specification, a preferred ethylenically unsaturated monomer containing a sulphonic group is 2-acrylamido-2-methylpropanesulphonic acid (AMPS) and its partially or totally neutralized forms. Specification 7:22-24.

The Appellants disclose that the preferred polymers of the invention are chosen from amphiphilic copolymers of AMPS and at least one ethylenically unsaturated hydrophobic monomer. These copolymers may also contain one or more ethylenically unsaturated monomers not comprising a fatty chain, such as (meth)acrylic acids. Specification 8:12-21.

According to the Appellants' Specification, AMPS or a sodium or ammonium salt thereof is especially polymerized with a (meth)acrylic acid ester and, for example,

- a C<sub>16</sub>-C<sub>18</sub> alcohol oxyethylenated with 25 mol of ethylene oxide (Genapol<sup>®</sup> T-250 from Hoechst/Clariant).

Specification 14:17-16:6.

The Appellants disclose that preferred amphiphilic polymers may be obtained according to standard free-radical polymerization processes in the presence of one or more initiators, including azobisisobutyronitrile (AIBN). Specification 13:12-16.

The Appellants also disclose that the amphiphilic polymers are obtained especially by free-radical polymerization in tert-butanol medium in which they precipitate. Specification 13:24-27.

3. Morschhäuser

The invention disclosed in Morschhäuser relates to water-soluble polymers prepared by copolymerization of macromonomers and their use in cosmetic and pharmaceutical compositions. Morschhäuser 1:7-9.

Morschhäuser discloses that the water-soluble polymers may be prepared by free-radical copolymerization of:

A) one or more macromonomers chosen from the group of esters of (meth)acrylic acid with alkyl ethoxylates which include 5 to 80 ethylene oxide units and/or (C<sub>10</sub>-C<sub>22</sub>)-alkyl radicals, and

B) one or more olefinically unsaturated comonomers, such as AMPS. Morschhäuser 3:23-35.

Suitable macromonomers A) are, in particular, esters of (meth)acrylic acid with, for example,

- (C<sub>16</sub>-C<sub>18</sub>)-fatty alcohol polyglycol ethers with 25 ethylene oxide units (Genapol<sup>®</sup> T-250).

Morschhäuser 3:36-64.

Morschhäuser discloses that particular preference is given to precipitation polymerization in tert-butanol. Morschhäuser 4:63-65.

Further, in a preferred embodiment, Morschhäuser discloses that the polymers are crosslinked. Morschhäuser 4:16-17.

A general polymerization procedure is provided in Example 3:

Example 3

Reaction in Accordance with the General  
Polymerization Procedure

Reactant	Amount (g)
Macromonomer Variant 3 - Genapol ® T-250 type	30
NH <sub>3</sub> -neutralized AMPS	90
Methylenebisacrylamide (crosslinker)	1.5
t-Butanol	300
AIBN (initiator)	1

Morschhäuser 12:1-15.

Variant 3 is said to be a halogen derivative of (meth)acrylic acid.

Morschhäuser 10:58.

According to Morschhäuser, the disclosed polymers are suitable as thickeners, dispersing agents, and bodying agents for aqueous/surface-active preparations, for example shampoos, shower preparations, shower gels, foam baths, and the like. Morschhäuser 5:59-63.

Morschhäuser discloses that the compositions can comprise all customary anionic, cationic, zwitterionic, nonionic, and amphoteric surfactants. Morschhäuser 6:8-11.

Morschhäuser discloses examples of anionic, cationic, nonionic, and amphoteric surfactants. Morschhäuser 6:27-7:43.

The total amount of the surfactants used in the disclosed compositions can, based on the finished composition, be between 5 and 70% by weight, preferably between 10 and 40% by weight, particularly preferably between 12 and 35% by weight. Morschhäuser 6:23-27.

D. PRINCIPLES OF LAW

“For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference.” *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 677 (Fed. Cir. 1988). These elements must be arranged as in the claim under review. *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

E. ANALYSIS

1. Claim 1

There appears to be no dispute that Morschhäuser discloses a crosslinked polymer within the scope of claim 1. *See* App. Br. 5<sup>5</sup> (referring to column 3, lines 23-64 of Morschhäuser); App. Br. 6 (referring to Morschhäuser Example 3).

Rather, the Appellants argue that Morschhäuser does not sufficiently disclose combining such a crosslinked polymer with the specific types of surfactants recited in the claims. The Appellants argue that the broad disclosure of Morschhäuser would lead to thousands of possible combinations. Thus, the Appellants argue that the claimed invention is not anticipated by Morschhäuser. App. Br. 6.

Claim 1 recites a Markush listing of surfactants that includes “amphoteric surfactants” and “zwitterionic surfactants.” According to Morschhäuser, the disclosed compositions can comprise all customary anionic, cationic, zwitterionic, nonionic, and amphoteric surfactants. Morschhäuser 6:8-11. Thus, in its broadest terms, Morschhäuser expressly discloses five groups of surfactants, two of which are expressly recited in

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<sup>5</sup> Appeal Brief dated February 20, 2007.

Appellants' claim 1, i.e., amphoteric and zwitterionic surfactants. *See Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 1346 (Fed. Cir. 1999) (a single prior art species within a claimed genus reads on the generic claim and anticipates). We find that the amphoteric and zwitterionic surfactants disclosed in Morschhäuser have the same scope as the “amphoteric surfactants” and “zwitterionic surfactants” recited in Appellants' claim 1.

Referring to Examples 46-49, the Appellants also argue that Morschhäuser does not disclose a specific example of a crosslinked polymer and a foaming surfactant. App. Br. 6.

This argument is not persuasive. It is clear from the Morschhäuser disclosure that all customary anionic, cationic, zwitterionic, nonionic and amphoteric surfactants are intended for use with the disclosed polymers, including the polymer disclosed in Morschhäuser Example 3. *See* Morschhäuser 6:8-11. Thus, we find that one of ordinary skill in the art would at once envisage the claimed invention from the Morschhäuser disclosure.

For the reasons set forth above, the Appellants have failed to show that the Examiner erred in rejecting claim 1 under 35 U.S.C. § 102(e) as anticipated by Morschhäuser.<sup>6</sup>

## 2. Dependent claims

With respect to claims 2-5 and 23-26, the Appellants argue that there is nothing in Morschhäuser establishing that one would have employed an

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<sup>6</sup>The Appellants rely on declaration evidence to establish that the claimed composition exhibits unexpected results. However, evidence of secondary considerations, such as unexpected results, is not relevant to a rejection based on §102. *In re Wiggins*, 488 F.2d 538, 543 (CCPA 1973).

amphiphilic polymer having a hydrophobic part containing from 6-50, 6-22, 6-18, and/or 12-18 carbon atoms. App. Br. 10.

The Examiner found that the amphiphilic polymer disclosed in Morschhäuser has a hydrocarbon radical containing 12-18 carbon atoms. Ans. 6; Morschhäuser 2:43-45, 3:25-28, Example 3. The Appellants have failed to point to any error in this finding. Further, the Appellants have failed to establish that this range does not fall within the ranges recited in claims 2-5 and 23-26.

As to claim 6, the Appellants argue that there is nothing in Morschhäuser establishing that one would have employed an amphiphilic polymer that is neutralized with a mineral or organic base. App. Br. 10.

The Examiner found that the amphiphilic polymer disclosed in Morschhäuser is neutralized with a sodium or ammonium base wherein the degree of neutralization is 70-100 mole percent. Ans. 6-7; Morschhäuser 3:9-22, Example 3. The Appellants have failed to point to any error in this finding.

As to claims 7-9, the Appellants argue that there is nothing in Morschhäuser establishing that one would have employed an amphiphilic polymer having a number-average molecular weight of from 1,000 to 20,000,000 g/mol, 20,000 to 5,000,000 g/mol, and/or 100,000 to 1,500,000 g/mol. App. Br. 10.

The Examiner found that the polymers disclosed in Morschhäuser have a number-average molecular weight of 100,000 to 1,500,000 g/mol. Ans. 7; Morschhäuser 4:1-15. The Appellants have failed to point to any error in this finding. Further, the Appellants have failed to establish that this range does not fall within the ranges recited in claims 7-9.

The Appellants also argue that there is nothing in Morschhäuser establishing that one would have employed an aqueous solution comprising 1% by weight of the polymer wherein the viscosity of the solution is from 20,000 mPa·s to 100,000 mPa·s as recited in claim 10. App. Br. 10.

The Examiner found that Morschhäuser discloses that the viscosity of a 1% strength aqueous solution of the polymer has a viscosity of 20,000-100,000 mPa·s. Ans. 7; Morschhäuser 4:51-59. The Appellants have failed to point to any error in this finding.

Finally, the Appellants argue that there is nothing in Morschhäuser establishing that one would have employed an amphiphilic polymer and/or surfactant in the amounts recited in claims 64-66, 68, and 69. App. Br. 11.

The Examiner found that Morschhäuser discloses a composition containing 0.1-5% by weight of the amphiphilic polymer and 10-40% by weight of a surfactant. Ans. 7; Morschhäuser 5:52-56, 6:23-27. The Appellants have failed to point to any error in this finding. Further, the Appellants have failed to establish that these ranges do not fall within or overlap the ranges recited in claims 64-66, 68, and 69.

The Appellants have failed to establish that the Examiner erred in rejecting claims 2-11, 14-47, 49-51, and 56-69 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Morschhäuser.

#### E. DECISION

The rejection of claims 1-11, 14-47, 49-51, and 56-69 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Morschhäuser is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2007).

AFFIRMED

cc (via U.S. Mail):

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