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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/493,081	06/26/2009	Frederick W. Holzauer	METHP001	8619
28875	7590	03/04/2013	EXAMINER	
Zilka-Kotab, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			HAMMER, KATIE L	
			ART UNIT	PAPER NUMBER
			1761	
			NOTIFICATION DATE	DELIVERY MODE
			03/04/2013	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte FREDERICK W. HOLZHAUER and KAJ JOHNSON

Appeal 2011-010645
Application 12/493,081
Technology Center 1700

Before TERRY J. OWENS, HUBERT C. LORIN, and CATHERINE Q.
TIMM, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision to reject claims 1-4, 7, 9, 33, 36, 40, 43, 55, and 58-66. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Appellants' invention relates to liquid cleaning compositions (Spec. ¹ ¶ [0002]). These compositions are used to pretreat and clean laundry and non-textile surfaces (Spec. ¶ [0009]). Claim 1 is illustrative:

1. A cleaning composition, comprising:

a surfactant system comprising a nonionic surfactant in combination with an anionic surfactant;

water present in an amount from greater than 0 to about 40 wt% based on a total weight of the cleaning composition;

a solvent system comprising a polyalcohol, the solvent system being present in an amount effective to solubilize the surfactant system in the water; and

an enzyme present in an amount of less than about 15 wt%;

wherein the cleaning composition is in a form of a continuous phase,

wherein the cleaning composition is characterized as exhibiting about a *constant cleaning efficacy* as measured using test procedure ASTM D4265 when the cleaning composition is added to 69 liters of exterior water in amounts ranging from about 9 to about 22 grams of cleaning composition.

(Claims App'x. at Br. 23, emphasis added.)

The Examiner rejects the claims as follows:²

¹ References to the Specification (Spec.) are to the original Specification filed June 26, 2009.

² The Examiner also objects to claim 58 because of an informality (Ans. 3). We have no jurisdiction to decide the objection, it is a petitionable matter. 35 U.S.C. §§ 6(b) and 134(a) (2005); *In re Hengehold*, 440 F.2d 1395, 1404 (CCPA 1971); MPEP § 706.01 (8th ed. Rev. 8, Jul. 2010).

A. Claims 1-4, 7, 9, 33, 36, 40, 43, 55, 58-62, 64, and 66 under 35 U.S.C. §103(a) as obvious over Hughes³ in view of Bijl⁴ and Sidoti^{5,6};

B. Claims 43 and 63 under 35 U.S.C. § 103(a) as obvious over Hughes, Bijl, and Sidoti further in view of Tcheou⁷; and

C. Claims 55 and 65 under 35 U.S.C. § 103(a) as obvious over Hughes, Bijl, and Sidoti, further in view of Schmolka⁸.

OPINION

While Appellants discuss the rejections separately and organize their arguments under separate headings for various claim groups, the issues for all of the rejections and claims are the same and focus on the constant cleaning efficacy limitation found in all of the independent claims (Br. 9-22; *see also* Claims 1, 55, and 58). While we consider a single claim as representative for each rejection in accordance with 37 C.F.R. § 41.37(c)(1) (vii), because the issues are the same for all the claims, it will suffice for us to discuss the issues in reference to claim 1.

There is some disagreement over how the cleaning efficacy property recited in the claims should be interpreted (Br. 14; Ans. 19). Claim interpretation is a matter of law and will normally control the remainder of the decisional process. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561,

³ Hughes, US 4,507,219, patented Mar. 26, 1985.

⁴ Bijl et al., WO 00/18868, pub. Apr. 6, 2000.

⁵ Sidoti et al., US 6,670,316 B2, patented Dec. 30, 2003.

⁶ The Examiner lists two rejections over Hughes in view of Bijl and Sidoti. Because the two rejections rely upon the same prior art references, we combine the rejections and list them as one.

⁷ Tcheou, US 2004/0167054 A1, pub. Aug. 26, 2004.

⁸ Schmolka et al., US 3,829,506, patented Aug. 13, 1974.

1567-68 (Fed. Cir. 1987). Therefore, we first determine the correct interpretation of the claim before resolving the other issues on appeal.

The limitation in question reads, “wherein the cleaning composition is characterized as exhibiting about a constant cleaning efficacy as measured using test procedure ASTM D4265 when the cleaning composition is added to 69 liters of exterior water in amounts ranging from about 9 to about 22 grams of cleaning composition” (Claims 1, 55, and 58 as reproduced in the Claims App’x. of the Br.).

This claim limitation recites a property of the cleaning composition; namely, a cleaning efficacy property. Appellants use the ASTM D4265 test procedure to determine stain removal levels for particular dosages of the cleaning composition in 69 liters of water, and to plot points in a graph of % stain removal versus dosages as shown in the graphs of Figures 1-3. The flatter lines of the graph are “about a constant cleaning efficacy” as claimed. Therefore, the “cleaning efficacy” is a profile of % stain removal levels over the dosage range. The dosage range only serves to define the measurement extent for the line % stain removal values.

Figure 2 is illustrative of the cleaning efficacy lines and reproduced below:

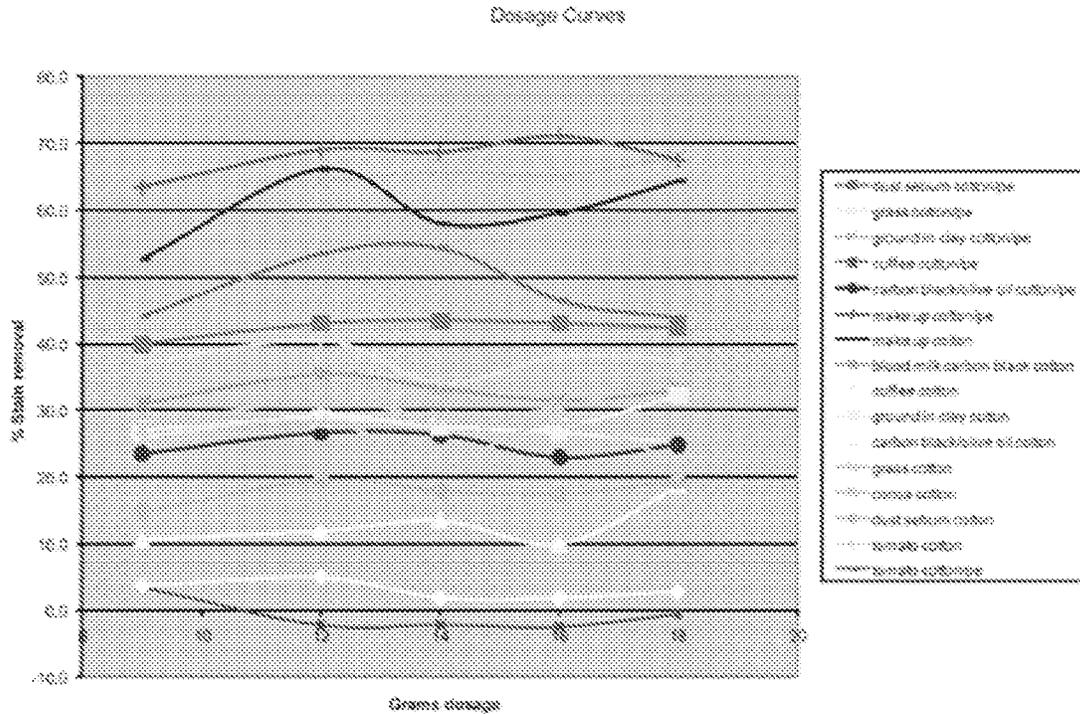


Fig. 2

Fig. 2 is a graph of % stain removal versus grams dosage for various stains and soils on various fabrics and materials

The cleaning efficacy lines need not be completely constant or flat. The claimed range of “about a constant” includes stain removal values that vary as much as 10% in the y-axis (Spec. ¶ [0043]). As shown by the graphs, the lines vary with stain or soil and clothing type. The claims encompass lines that vary as much as 10% for any soil or stain on any fabric or material.

Having interpreted the claim limitation that is the focus of the appeal, we turn to the argued rejection, i.e., the Examiner’s rejection over Hughes in view of Bijl and Sidoti.

Hughes, as found by the Examiner, teaches a cleaning composition including the surfactant system, water, and solvent system including polyalcohol as recited in claim 1 (Hughes, col. 3, ll. 8-15), and further teaches adding an enzyme as an optional ingredient (Hughes, col. 8, ll. 8-9)(Ans. 3-4). The amount of water is within the claimed range (Hughes, col. 7, ll. 36-38), as is the amount of enzyme (Hughes, col. 8, ll. 14-17). Hughes adds a solvent system including polyalcohol in amounts effectively the same or similar to those of claim 1 (Hughes, col 3, ll. 41-42). The polyol helps keep surfactants in solution (Hughes, col. 3, ll. 44-50).

Appellants' Specification states that “[t]he term ‘continuous phase’ denotes a liquid wherein a dispersant or cleaning system (e.g. surfactant system) is suspended (Spec. ¶ [0045]). “Preferably, the continuous phase is a water-in-oil emulsion, i.e., an ‘invert emulsion’” (*id.*).

Hughes talks of preventing phase separation (Hughes, col. 3, ll. 41-50), therefore, Hughes implies that the cleaning composition has a continuous phase as required by claim 1. Nevertheless, the Examiner cites Bijl as evidence that one of ordinary skill in the art would have formulated the liquid detergent of Hughes to form an inverted emulsion continuous phase (Ans. 4-5).

Sidoti provides evidence that the ASTM D4265 test was known in the art (Ans. 5).

Hughes suggests the composition of claim 1. Given that the liquid laundry detergent of Hughes is for the same use as Appellants' composition, it reasonable to conclude that routine optimization of, for instance, the amount of polyalcohol, would result in the claimed cleaning composition.

Appellants open their arguments with the contention that the claimed invention would not have been predictable from the bare teachings of the prior art itself, or in the knowledge generally known to those skilled in the art, citing *KSR* for the proposition that “there is no obviousness where the end result is unpredictable.” (Br. 9, citing *KSR Int’l v. Teleflex*, 127 S. Ct. 1727 (2007).) To support their unpredictability contention, Appellants state that they have surprisingly and unexpectedly found that the disclosed cleaning composition provides excellent, stable, cleaning efficacy across the claimed range of about 9 to about 22 grams (Br. 9-10, citing Spec. ¶ [0037]). They also state that, “[a]lso surprisingly, the cleaning efficacy of some embodiments is relatively flat across a variety of concentrations.” (Br. 10, quoting Spec. ¶ [0037]). They contend that Figures 1-3 show the about flat cleaning efficacy across the range of dosages for a variety of soils (Br. 10 and 12), and further reference the comparative examples of paragraph [00109] of their Specification (Br. 12).

Appellants further argue, among other things, that the properties of the composition were not known at the time of the invention, and could not have been predicted (Br. 11); that the Examiner has not shown that the combination would have the claimed cleaning efficacy; and that the rejection is based on an improper obvious to try rationale (Br. 12-13).

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). In order to establish a prima facie case of obviousness, the Examiner must show that each and every limitation of the claim is described or suggested by the prior art or would have been obvious based on the knowledge of those of

ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). But, of course, if the result at issue is a property of the composition not discussed in the prior art, the Examiner has no means to find it.

“On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of prima facie obviousness or by rebutting the prima facie case with evidence of secondary indicia of nonobviousness.” *In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) (emphasis omitted). A showing of unpredictability can be accomplished by showing unexpected results. *In re Dillon*, 919 F.2d 688, 692-93 (Fed. Cir. 1990) (internal citations omitted). Such a showing must be based on evidence, not argument or speculation. *In re Mayne*, 104 F.3d 1339, 1343-44 (Fed. Cir. 1997); *In re Schulze*, 346 F.2d 600, 602 (CCPA 1965).

The evidence as a whole supports the Examiner’s finding that Hughes suggests formulating compositions having the components and concentrations of claim 1. Hughes provides substantial guidance to those of ordinary skill in the art for arriving at a cleaning composition formulated as claimed.

The nonanionic surfactants taught by Hughes are of a type disclosed by Appellants (*compare* Hughes, col. 4, ll. 38-54 with Spec. ¶ [0056]).

The anionic surfactants of Hughes are also of the same type as those used by Appellants (*compare* Hughes, col. 3, l. 53 to col. 4, l. 16 to Spec. ¶¶ [0059-62]).

The solvent system of Hughes, includes water and polyalcohol (Hughes, col. 3, ll. 14-15).

Appellants disclose the enzyme as optional just as does Hughes (*compare* Spec. ¶ [0068] *with* Hughes, col. 8, ll. 8-10).

Given the similarity of the components of the Hughes composition to the claimed composition and the breath of the cleaning efficacy property recited in the claims, i.e., it covers any composition that inherently would possess a cleaning efficacy varying no greater than 10% across an about 9 to about 22 gram dosage in 69 liters of water for just one type of stain or soil on any type of fabric or material, it is reasonable to conclude that Hughes teaches a liquid detergent or genus of liquid detergents having the property of the claim or, at the very least, that optimizing the composition of Hughes would have resulted in such a composition. Under the circumstances, the burden was shifted to Appellants to show a different and unexpected result.

Appellants contend that paragraph [0037] of the Specification details results that were not expected and were contrary to what one would have predicted, thus rendering the claimed invention unpredictable (Br. 9-10). Appellants cite to the graphs of Figures 1-3 and to paragraph [00109] as providing supporting evidence (Br. 10-12)

Appellants' paragraphs [0037] and [00109] and Figures 1-3 do not provide any comparative data showing that the cleaning efficacy over the dosages provides a different result or unexpected result as compared to the compositions of Hughes. Paragraph [0037] only generally states that "several embodiments" provide unexpected results. Figures 1-3 only graph the cleaning efficacy for inventive compositions. Figure 2 shows the

cleaning efficacy for the Table 4 cleaning composition for dosages of 9 to 18 grams in 69 liters of water (Spec. [00103]; Fig. 3). There is no comparative data. Paragraph [00109] is not relevant because it discusses a nonlinear data relationship for a different test, i.e., a concentrated pre-treatment test, not a constant data relationship for the 9 to 22 gram dosage test in 69 liters of water.

After weighing all of the evidence anew in light of Appellants' evidence of unexpected results, we determine that the evidence weighs in favor of the Examiner's conclusion of obviousness.

CONCLUSION

We sustain the Examiner's rejections.

DECISION

The Examiner's decision is affirmed.

TIME PERIOD FOR RESPONSE

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).

AFFIRMED

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