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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID M. LOVELESS, PHILLIP C. HARRIS,
RAJESH K. SAINI, NARONGSAK TONMUKAYAKUL,
and FENG LIANG

Appeal 2014-007933
Application 12/718,382
Technology Center 3600

Before LYNNE H. BROWNE, ANNETTE R. REIMERS, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

REIMERS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

David M. Loveless et al. (Appellants) appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject under 35 U.S.C. § 103(a): (1) claims 1–5 and 7–16 as unpatentable over Feraud (US 6,613,720 B1; iss. Sept. 2, 2003); and (2) claims 6 and 17–20 as unpatentable over Feraud and Smith (US 5,224,546; iss. July 6, 1993). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

CLAIMED SUBJECT MATTER

The claimed subject matter relates “to treatment fluids comprising a compliant cellulosic viscosifying agent having at least one ligand complex crosslink, and methods of use employing such treatment fluids to treat subterranean formations.” Spec. para 1. Claims 1, 10, and 17 are independent.

Claims 1 and 17 are illustrative of the claimed subject matter and recite:

1. A method comprising:
 - providing a treatment fluid having a first viscosity comprising:
 - an aqueous base fluid,
 - a compliant cellulosic viscosifying agent,
 - a crosslinking agent, and
 - a protective ligand; and
 - placing the treatment fluid in a subterranean formation.

17. A method comprising:
 - providing a treatment fluid having a pH in the range of about 3.5 to about 5 comprising:
 - an aqueous base fluid,
 - a cellulosic, carboxylated viscosifying agent,
 - an aluminum crosslinking agent, and
 - a protective ligand; and
 - placing the treatment fluid in a subterranean formation.

ANALYSIS

Obviousness over Feraud

Claims 1–5 and 7–16

Independent claim 1 calls for a method including the step of providing a treatment fluid having a first viscosity including “a *compliant* cellulosic viscosifying agent.” Appeal Br., Appendix A: Claims App. (emphasis added). The Examiner finds that Feraud discloses the method of claim 1 including a treatment fluid having a first viscosity including “a cellulosic viscosifying agent, (Col. 7 lines 59-63; specifically carboxymethylhydroxyethyl cellulose (CMHEC)).” Final Act. 2 (emphasis omitted).¹ The Examiner determines:

[T]he cellulosic viscosifying agent [of Feraud] would obviously be a compliant [sic] as explained in the specification. If there is any difference between the treating fluid of Feraud and that of the instant claims, the difference would have been minor and obvious. “Products of identical chemical composition cannot have mutually exclusive properties”. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses [sic] and/or claims are necessarily present.

Id. at 2–3; *see also* Ans. 11.

Appellants contend that the Examiner’s “assertion attempts to read out the limitation of ‘compliant’ and is factually incorrect.” Appeal Br. 8.

Specifically, Appellants contend:

By definition, “compliant” materials [as defined in the Specification] meet much stricter safety and purity protocols than

¹ Feraud discloses: “Certain polyvinyl alcohol polymers can be prepared by hydrolyzing vinyl acetate polymers. Preferably the polymer is water-soluble. Specific examples of polymers that can be used include: . . . carboxymethylhydroxyethyl cellulose.” Feraud, 7:57–63.

the non-compliant (bulk or chemical grade) materials. Certainly no one would suggest that “complaint” chemicals used, for example, to purify municipal water could simply be replaced with non-compliant versions of those chemicals with impunity. Rather, a reasonable person would have arrived at the conclusion that there is a chemically important distinction between the complaint and non-compliant versions of the ‘same’ chemicals that causes one to be safe for human contact while the other is not. Thus, the prior art does not “teach the identical chemical structure.” And the claimed materials are not “identical” to those disclosed in *Feraud*, thus *Feraud* does not teach the claimed **compliant** cellulosic viscosifying agent.

Appeal Br. 8; *see also id.* at 7; Spec. para. 30.

At the outset, the Specification describes: “As used herein, the term ‘compliant’ refers to materials described in 21 CFR §§ 170-199 (substances approved as food items, approved for contact for food, or approved for use as an additive to food) and that are prepared from food-grade materials.” Spec. para 30.² The Specification further describes that (1) “the compliant cellulosic viscosifying agents of the invention, as defined above potentially eliminates the need for costly procedures needed to dispose of the treatment fluids containing non-compliant viscosifying agents and may help reduce negative impacts on the marine environment and groundwater”; and (2) “the compliant viscosifying agent may provide effective treatment of the formation without excessive damage caused by the use of multiple or non-compliant viscosifiers.” *Id.* at para. 31; *see also* Appeal Br. 7; Reply Br. 3. Where an explicit definition is provided by the applicant for a term, the definition will control interpretation of the term as it is used in the claim.

² Appellants state that “the Specification is clear on its face . . . that ‘compliant’ refers to (‘means’) materials described in 21 CFR §§ 170-199.” Reply Br. 2.

Toro Co. v. White Consolid. Industries, Inc., 199 F.3d 1295, 1301 (Fed. Cir. 1999). Further, claims are construed with an eye toward giving effect to all terms in the claim. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006).

In this case, the Examiner’s interpretation of the “carboxymethylhydroxyethyl cellulose” of Feraud as “obviously [being] compliant,” essentially reads the term “compliant” out of the claims. *See* Appeal Br. 8. The Examiner fails to establish, by evidence or technical reasoning, that “the cellulosic viscosifying agent” of Feraud necessarily has the “identical chemical structure” to the claimed “*compliant* cellulosic viscosifying agent.” *See* Final Act. 2–3; *see also* Appeal Br. 8; Spec. para. 30; Appeal Br., Appendix A: Claims App. (emphasis added). Although food grade carboxymethylhydroxyethyl cellulose is well-known, the Examiner fails to establish, by evidence or technical reasoning, that the “carboxymethylhydroxyethyl cellulose” of Feraud is a “compliant” carboxymethylhydroxyethyl cellulose (i.e., “a *compliant* cellulosic viscosifying agent,” as claimed). *See* Ans. 12, 15; *see also* Reply Br. 3; Spec. para. 30; Appeal Br., Appendix A: Claims App. (emphasis added).

Similar to claim 1, independent claim 10 is directed to a method including the step of providing a fracturing fluid having a first viscosity including “a compliant cellulosic viscosifying agent” (Appeal Br., Appendix A: Claims App.), and thus, the Examiner’s findings with respect to Feraud are deficient for claim 10 as well. *See* Final Act. 5–6.

Accordingly, for the foregoing reasons, we do not sustain the Examiner’s rejection of independent claims 1 and 10 and their respective dependent claims 2–5, 7–9, and 11–16 as unpatentable over Feraud.

Obviousness over Feraud and Smith

Claim 6

The Examiner's rejection of claim 6 as unpatentable over Feraud and Smith is based on the same unsupported findings discussed above with respect to independent claim 1. *See* Final Act. 7. The Examiner does not rely on Smith to remedy the deficiency of Feraud. Accordingly, for similar reasons, we do not sustain the Examiner's rejection of claim 6 as unpatentable over Feraud and Smith.

*Claims 17–20*³

Appellants argue claims 17 and 20 as a group. Appeal Br. 9. We select claim 17 as representative of the group. *See* 37 C.F.R. § 41.37(c)(1)(iv). Claim 20 stands or falls with claim 17.⁴

As noted *supra*, claim 1 recites “a *compliant* cellulosic viscosifying agent.” Appeal Br., Appendix A: Claims App. In contrast, claim 17 merely recites “a cellulosic, carboxylated viscosifying agent.” *Id.*

Appellants contend that “*Feraud* does not teach or suggest ‘a compliant cellulosic viscosifying agent.’ Moreover, *Smith* does not remedy

³ Appellants amended claim 18 to depend from claim 17 to overcome a double patenting rejection by the Examiner. *See* Amendment 4, 5 (filed June 12, 2013); *see also* Final Act. 10; Non-Final Act. 8 (mailed Mar. 13, 2013). Claim 18 recites “the compliant cellulosic viscosifying agent.” Because claim 17 merely recites “a cellulosic, carboxylated viscosifying agent” (Appeal Br., Appendix A: Claims App.), “*the compliant* cellulosic viscosifying agent” of claim 18 lacks antecedent basis. *Id.* (emphasis added).

⁴ We note that claim 20 refers to the “protective ligand” of claim 17 and does not recite “a compliant cellulosic viscosifying agent.” Appeal Br., Appendix A: Claims App.; *see also* Appeal Br. 9. We further note that claim 20 is not numbered in the Claims Appendix. *See* Appeal Br., Appendix A: Claims App. We consider this a typographical error.

the deficiencies of *Feraud*.” Appeal Br. 9. However, claim 17 does not recite a “compliant” cellulosic, carboxylated viscosifying agent. Appeal Br., Appendix A: Claims App. Appellants do not apprise us of error in the Examiner’s findings and conclusions regarding the combined teachings of *Feraud* and Smith. Appeal Br. 9; *see also* Final Act. 8–9.

Accordingly, we sustain the Examiner’s rejection of independent claim 17 as unpatentable over *Feraud* and Smith. We further sustain the Examiner’s rejection of claim 20, which falls with claim 17. Additionally, as Appellants do not separately argue the rejection of dependent claims 18 and 19 (*see* Appeal Br. 9), we likewise sustain the Examiner’s rejection of these claims. *See* 37 C.F.R. § 41.37(c)(1)(iv).

DECISION

We REVERSE the decision of the Examiner to reject claims 1–5 and 7–16 as unpatentable over *Feraud*.

We REVERSE the decision of the Examiner to reject claim 6 as unpatentable over *Feraud* and Smith.

We AFFIRM the decision of the Examiner to reject claims 17–20 as unpatentable over *Feraud* and Smith.

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-IN-PART