

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

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(2) is not binding precedent of the Board.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. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JIMMIE B. LAWSON,
ROBERT J. FAIRCLOTH and GEORGE M. IKEN

Appeal No. 1996-2400
Application 08/245,145¹

ON BRIEF

Before WARREN, OWENS and WALTZ, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal and Opinion

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 14 through 16 and 18, which are all of the claims in the application.²

We have carefully considered the record before us, and based thereon find that we cannot

¹ Application for patent filed May 16, 1994. According to appellants, this application is a division of application 08/014,585, filed February 8, 1993, now United States Patent 5,346,009, issued September 13, 1994.

² See the amendment of September 26, 1994 (Paper No. 6) and specification, pages 15-16.

sustain the ground of rejection of claim 16 under § 103 over Faircloth et al. (Office action of December 13, 1994 (Paper No. 7; pages 3-4); answer, pages 3-6). It is well settled that the examiner must satisfy his burden of establishing a *prima facie* case of obviousness by showing some objective teaching or suggestion in the applied prior art taken as a whole or that knowledge generally available to one of ordinary skill in the art would have led that person to the claimed invention, including each and every limitation of the claims, without recourse to the teachings in appellants' disclosure. *See generally In re Oetiker*, 977 F.2d 1443, 1447-48, 24 USPQ2d 1443, 1446-47 (Fed. Cir. 1992) (Nies, J., concurring); *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988)

We construe claim 16 to specify a solution that comprises at least water as a solvent, an organophosphorus scale inhibitor selected from the group consisting of nitrilotri(methylene phosphonic acid), diethylenetriaminepenta(methylene phosphonic acid) and salts thereof with monovalent cations in an unspecified amount, and sodium chloride in an amount of about 12 to about 14% by weight of the scale inhibitor solution, and that can contain additional ingredients, such as the precursors of Faircloth et al. and formation brine, in view of the transitional term "comprising." *Exxon Chemical Patents Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1555, 35 USPQ2d 1801, 1802 (Fed. Cir. 1995) ("The claimed composition is defined as comprising - meaning containing at least - five specific ingredients."); *In re Baxter*, 656 F.2d 679, 686-87, 210 USPQ 795, 802-03 (CCPA 1981) ("As long as one of the monomers in the reaction is propylene, any other monomer may be present, because the term 'comprises' permits the *inclusion* of other steps, elements, or materials."). Thus, the composition as claimed exists whenever the three specified ingredients are present, regardless of the presence of other ingredients. *See Exxon Chemical Patents*, 64 F.3d at 1555-58, 35 USPQ2d at 1802-05 ("Consequently, as properly construed, Exxon's claims are to a composition that contains the specified ingredients at any time from the moment at which the ingredients are mixed together.").

The examiner contends that one of ordinary skill in this art would have known that "the more concentrated salt solutions would possess more dissolving ability with respect to dissolving the formation" (answer, page 5). Thus, the examiner alleges that Faircloth et al. would have motivated that person to employ a higher concentration of sodium chloride in the scale inhibitor solutions of the

reference than that shown in Example 1 thereof (5 percent by weight), with the expectation of obtaining “maximum scale inhibition of the formation” and an “optimum concentrated sodium chloride solutions required to carry an effective amount of inhibitor into the formation” (*id.*). Appellants point out that in the method of Faircloth et al., the “precipitation [of the inhibitor] is caused by changing the pH of the solution, and there is no suggestion that salt concentration could be adjusted . . . to obtain precipitation of the inhibitor,” and thus submit that a *prima facie* case of obviousness has not been established (brief, page 4). We agree with appellants.

We find that Faircloth et al. teaches that increase in pH to precipitate the calcium salt of the inhibitor is accomplished by the hydrolysis of a “precursor which is capable of reacting within the formation to become a basic component” (e.g., col. 2, lines 26-28, col. 2, line 64, to col. 3, line 48, and col. 4, lines 6-22 and 35-57). We further find that the formation brine used by Faircloth et al. to squeeze the acidic inhibitor solution into the formation is disclosed in the reference to be “[t]ypically . . . slightly acidic but highly buffered due to the presence of an abundance of ionic species . . . [and] will dissolve small quantities of the calcium-inhibitor salt” (col. 4, lines 22-30 and 51-52). Furthermore, Faircloth et al. discloses nitrilotri(methylene phosphonic acid) and diethylenetriaminepenta(methylene phosphonic acid) as scale inhibitors (col. 3, lines 61-67), with the latter exemplified in Faircloth et al. Example 1.

Based on this evidence, we find no suggestion in Faircloth et al. to increase the sodium chloride concentration above the 5% by weight of the scale inhibiting solution disclosed in Example 1 thereof. *In re Antonie*, 559 F.2d 618, 619-20, 195 USPQ 6, 8-9 (CCPA 1977); *see also In re O’Farrell*, 853 F.2d 894, 903-04, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988). To the extent that the examiner relies on inherency with respect to the amount of sodium chloride in formation brine, we observe that Faircloth et al. disclose that “[a]s production resumes from the wellbore, the pH of the solution will become that of the formation brine” which are “[t]ypically . . . slightly acidic” (col. 4, lines 22-25). We find no evidence in the record which establishes that the concentration of sodium chloride in “typical” formation brine is such that the solution formed after production is resumed, which would be expected to possess nitrilotri(methylene phosphonic acid) or diethylenetriaminepenta-(methylene phosphonic

acid) and salts thereof with monovalent cations, would be the same or substantially the same as the “about 12 to about 14 percent by weight” specified in claim 16. *See In re Best*, 562 F.2d 1252, 1254-56, 195 USPQ 430, 432-34 (CCPA 1977).

Accordingly, we reverse this ground of rejection because it is manifest that the only direction to appellants’ claimed invention as a whole encompassed by claim 16 on the record before us is supplied by appellants’ own specification.

Turning now to claims 14, 15 and 18, appellants have stated that while these claims remain in the application, the “[r]ejection of only one claim, claim 16, is being appealed,” but have not withdrawn the appeal as to these claims (brief, pages 2 and 3). The examiner has rejected claims 14, 15 and 18 under 35 U.S.C. § 102(e) as being anticipated by Faircloth et al. (Office action of December 13, 1994 (Paper No. 7; pages 2); answer, pages 3 and 4). Accordingly, in the absence of argument by appellants, we summarily affirm the ground of rejection of claims 14, 15 and 18.

The examiner’s decision is affirmed-in-part.

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

CHARLES F. WARREN)	
Administrative Patent Judge)	
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TERRY J. OWENS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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