

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SHINKATSU MORISAWA
and SANETAKA SHIRAHATA

Appeal No. 2000-1836
Application 08/917,336

ON BRIEF

Before KIMLIN, GARRIS and WARREN, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 1 through 8 and 19. Claims 9 through 18 are also of record and have been allowed by the examiner. Claim 1 is illustrative of the claims on appeal:

1. Electrolytic dissolved hydrogen containing purified water including dissolved hydrogen in a concentration of at least 0.1 ppm, and sodium phosphate or anode water for adjusting the pH of the water to about from 7.2 to about 7.3.

The appealed claims, as represented by claim 1, are drawn to hydrogen containing purified water having a pH of from 7.2 to about 7.3 which includes at least 0.1 ppm electrolytic dissolved hydrogen and sodium phosphate or anode water. According to appellants, the claimed purified water can be used as, for example, drinking water (specification, page 9, lines 4-5).

The reference relied on by the examiner is:

Reznik

WO 95/07857

Mar. 23, 1995

The examiner has rejected appealed claims 1 through 8 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Reznik.¹

Appellants state in their brief (page 3) that the appealed claims are “individually patentable.” Thus, we decide this appeal based on appealed claims 1 through 8 and 19. 37 CFR § 1.192(c)(7) (2000).

We affirm.

Rather than reiterate the respective positions advanced by the examiner and appellants, we refer to the examiner’s answer and to appellants’ brief for a complete exposition thereof.

Opinion

We find that, when considered in light of the written description in the specification as interpreted by one of ordinary skill in this art, *see, e.g., In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000); *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997), *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), the plain language of appealed claim 1 specifies a hydrogen containing purified water having a pH of from 7.2 to about 7.3 which includes at least 0.1 ppm electrolytic dissolved hydrogen and sodium phosphate or anode water. The claim language “hydrogen containing purified water including” opens the composition to the addition of any other ingredients in amount which do not prevent the water from being characterized as “purified,” since the term “including” has long been held to be an open-ended term synonymous with the open-ended term “comprising.” *See generally, In re Bertsch*, 132 F.2d 1014, 1019, 56 USPQ 379, 384 (CCPA 1942); *cf. 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.”). Appealed claim 2, which is in original form and originally modified original claim 1 which did not recite

¹ The examiner refers to the Office action of August 14, 1998 (Paper No. 9) for a statement of the ground of rejection (answer, page 3).

pH, is a substantial duplicate of appealed claim 1 which specifies a “neutral” pH.² Appealed claim 19, specifies that the water of appealed claim 2, and thus appealed claim 1, contains anode water. Appealed claims 3 through 5 each specify a different hydrogen concentration range, and appealed claims 6 and 7 each specify a different oxidation-reduction potential range.

To the extent that the extent that appealed claim 8, which is drawn to the *product* of appealed claim 1, is intended by appellants as a method or process of *use* limitation of that product, such a limitation has no place in a product claim. *Cf. In re Wiggins*, 397 F.2d 356, 359 n.4, 158 USPQ 199, 201-02 n.4 (CCPA 1968), and cases cited therein (“[A]ppellant’s discovery of the analgesic properties of ‘O₂’ and of a composition containing it could properly be claimed only as a method or process of using that compound or composition in accordance with the provisions of 35 U.S.C. 100(b) and 101.”).

We have carefully reviewed the record on this appeal and based thereon find ourselves in agreement with the examiner that the claimed hydrogen containing purified water encompassed by appealed claims 1 through 8 and 19 would have been obvious over Reznik to one of ordinary skill in this art at the time the claimed invention was made.

We find that, as pointed out by the examiner (e.g., answer, pages 3-5), Reznik *prima facie* would have disclosed to one of ordinary skill in this art a processed hydrogen containing water product which can be prepared by subjecting “distilled water having substantially no impurities” to an electrolysis process proceeding through a multi-cell apparatus in the direction anode to cathode, such that the water contains anode water as well as electrolytic dissolved hydrogen, and has the same range of potential as that claimed, which water can be used as drinking water. *See, e.g.*, pages 2-6, 26 and 29-33.

The only specified characteristic of the claimed hydrogen containing purified water product that is not disclosed by Reznik is the pH of from 7.2 to 7.3, required in appealed claim 1. We agree with the examiner that one of ordinary skill in this art would have employed drinking water having a pH range that would at least encompass the claimed neutral range, and would have arrived at an optimum range within that range by routine experimentation. Thus, the fact

² Since appealed claims 1 and 2 appear to be substantial duplicates, in the event that these claims are held to be allowable, see Manual of Patent Examining Procedure § 706.03(k) Duplicate

that Reznik is silent with respect to the pH range claimed as desirable by appellants for hydrogen containing purified drinking water does not patentably distinguish the appealed claims from the teachings of this reference in the absence of a showing of the criticality of the claimed pH range. *See In re Skoner*, 517 F.2d 947, 950, 186 USPQ 80, 82 (CCPA 1975) (“Appellants have chosen to describe their invention in terms of certain physical characteristics Merely choosing to describe their invention in this manner does not render patentable their method which is clearly obvious in view of [the reference]. [Citation omitted.]”); *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (“[W]here general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.”).

Accordingly, since the examiner has established a *prima facie* case of obviousness over Reznik, we have again evaluated all of the evidence of obviousness and nonobviousness based on the record as a whole, giving due consideration to the weight of appellants’ arguments. *See generally, In re Johnson*, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

We have carefully considered all of appellants’ arguments in the brief. We agree with appellants that Reznik is silent with respect to pH (brief, page 4). However, the silence of the reference in this respect does not suggest that one of ordinary skill in this art would not have arrived at the claimed range in preparing drinking water from purified water by the methods in Reznik. We find no argument in the brief, and no evidence in the record, which establishes the criticality of the claimed range. *See Skoner, supra; Aller, supra.*

With respect to appellants’ arguments of the individual appealed claims (brief, pages 5-6), we have addressed the arguments with respect to claims 2, 8 and 16, which we interpreted above to encompass the same or substantially the product as appealed claim 1, in our discussion above. While appellants contend that the hydrogen concentration and the oxidation-reduction potential ranges as specified in appealed claims 3 through 5 and appealed claims 6 and 7, respectively, are not suggested by Reznik, we find that appellants have not established the criticality of these claimed ranges. Indeed, Reznik discloses obtaining oxidation-reduction

potentials falling within the claimed ranges (e.g., claims 29-30) and teaches the electrolytic introduction of dissolved hydrogen into the water.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in Reznik with appellants' countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1 through 8 and 19 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

The examiner's decision is affirmed.

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

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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BRADLEY R. GARRIS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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