

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. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex Parte ROBERT J. MODAHL

Appeal No. 1997-2099
Application 08/233,468

ON BRIEF

Before WARREN, DELMENDO and JEFFREY T. SMITH, Administrative Patent Judges.

JEFFREY T. SMITH, Administrative Patent Judge.

Decision on appeal under 35 U.S.C. § 134

Applicant appeals the decision of the Primary Examiner finally rejecting claims 1 through 20. We have jurisdiction under 35 U.S.C. § 134.¹

¹ The rejection of claim 20 under 35 U.S.C. § 112, fourth paragraph and the rejection of claims 1 to 10, 17 and 18 under 35 U.S.C. § 103 over the combination of Itoh and Adegoke has been withdrawn by the Examiner. (Examiner's Answer, pages 6 and 8).

BACKGROUND

The claimed invention is directed to absorbent refrigerant composition comprising an aqueous solution of zinc bromide, lithium bromide and hydroxide ions. The absorbent composition is said to be used in the high temperature circuit of a dual circuit triple effect heat exchange apparatus. (Specification, pg. 1). According to Appellant, the invention is directed to an improved absorbent refrigerant composition which can meet the solubility, temperature, and pressure requirements of the high temperature circuit, but which does not corrode the high temperature circuit components. (Brief, pg. 4). Claim 1 which is representative of the invention is reproduced below:

1. An absorbent refrigerant composition comprising an aqueous solution of zinc bromide and lithium bromide with an added amount of hydroxide, wherein the weight ratio of zinc bromide to lithium bromide in said solution is from about 1.6 to about 1.9, the amount of hydroxide added ranges from about .0015 to about .015 gram per gram of total contained salt, and the composition is essentially free of calcium.

THE REJECTION

The Examiner entered the following grounds of rejection:

Claims 11 and 17 to 20 are rejected as being unpatentable under 35 U.S.C.

§ 112, first paragraph, "as the specification does not contain a written description

Appeal No. 1997-2099
Application No. 08/233,468

of the claimed invention, in that the disclosure does not reasonably convey to one skilled in the relevant art that the inventor had possession of the claimed invention at the time the application was filed,” i.e., failure to fulfill the written description requirement.² (Examiner’s Answer, pg. 7).

Claims 1 to 10, 17 and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Nonaka and Ohuchi. (Examiner’s Answer, page 3).

Claims 1 to 20 are rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Nonaka, Rockefeller and Ohuchi. (Examiner’s Answer, page 5).

Claims 1 to 10, 17 and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Itoh and either Ohuchi or Aronson. (Examiner’s Answer, page 6).

OPINION

A. The Rejection under Section 112, ¶1

In order for a claim to satisfy the written description requirement, the original application must reasonably convey to those skilled in the relevant art that the applicant, as of the filing date of the application, had possession of the claimed invention. ***In re***

² See ***Vas-Cath Inc. v. Mahurkar***, 935 F.2d 1555, 1560, 19 USPQ2d 1111, 1114 (Fed. Cir. 1991).

Appeal No. 1997-2099
Application No. 08/233,468

Alton, 76 F.3d 1168, 1172, 37 USPQ2d 1578, 1581 (Fed. Cir. 1996); *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)). However, the written description requirement does not require the applicant to describe exactly the subject matter claimed in the original application. Instead, the description must clearly allow persons of ordinary skill in the art to recognize that the applicants invented what is claimed. *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989).

The Examiner has rejected claim 11 because he finds that the original specification does not support the limitation “an absorber operating at a working temperature range of from about 190°F to about 240°F.”

As pointed out by the Appellant on page 8 of the principal brief, the specification discloses the absorber of the high-temperature circuit of a dual loop absorption refrigeration system operates at temperature of about 190°F to about 240°F. (Brief, pg. 8; specification, pg. 2). The Examiner, in the answer, does not address the portion of the specification cited by the Appellant. According to the specification, page 1, the absorbent composition are used in the high temperature circuit of a dual circuit triple effect heat exchange apparatus. The specification describes the disadvantages of the prior art and absorbent composition which are capable of over coming the disclosed disadvantages. We determine, the Examiner has

Appeal No. 1997-2099
Application No. 08/233,468

not met the initial burden of proof by failing to provide reasons why one of ordinary skill in the art would not consider the description sufficient to reasonably convey that Appellant was in possession of the subject matter in question. *See In re Alton*, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996).

The Examiner has rejected claims 17-19 because he finds that the original specification does not support the “working fluid has a specific vapor pressure in a specific temperature range.” (Answer, pg 7). The Examiner has rejected claim 20 because he finds that the original specification does not support the “working fluid is capable of withstanding a temperature within the range of about 480°F to about 500°F in the high temperature loop.” (Answer, pg 8). The Examiner notes the limitations of these claims appear on page 3 of the specification as description of the prior art. To fulfill the written description requirement, the specification must clearly allow a person having ordinary skill in the art to recognize that the inventor has invented what is claimed. In the present case, the specification discloses the problems associated with prior art absorber compositions and their use in high-temperature circuit of a dual loop absorption refrigeration system. (See specification, pages. 2-4). Appellant asserts on pages 8 and 9 of the principal brief, the specification discloses his composition solves the problems of the prior art and is suitable for use within the high-temperature circuit of a dual loop absorption

Appeal No. 1997-2099
Application No. 08/233,468

refrigeration system. We agree. The Examiner has failed to provide sufficient reasons why one of ordinary skill in the art would not consider the description sufficient to reasonably convey that Appellant was in possession of the subject matter in question.

See In re Alton, supra.

The rejection of claims 11 and 17 to 20 is reversed.

B. The Rejections under § 103

It is well established that the examiner has the initial burden under § 103 to establish a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). To that end, the examiner must show that some objective teaching or suggestion in the applied prior art, or knowledge generally available in the art would have led one of ordinary skill in the art to arrive at the claimed invention. *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996).

Claims 1 to 10, 17 and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Nonaka and Ohuchi. (Examiner's Answer, page 3).³

³ We note Appellant considers the Examiner's citation to the full text translation of the Nonaka reference as a new ground of rejection. (Reply Brief, pages. 1-5). Questions regarding actions taken by

Nonaka discloses ternary absorption agent for air-conditioning devices which comprise lithium bromide, zinc chloride and water. To improve heat pump capacity, the inventors added lithium hydroxide and lithium molybdenum to the absorption composition. (Pg. 2). Nonaka discloses the described absorption composition is “an attempt to sufficiently prevent the corrosion[s] of device materials by chlorine ions.” (Pg. 3). Nonaka discloses the anticorrosive effects chlorine ions, resulting from zinc chloride, was lowered by the addition of lithium hydroxide and lithium molybdenum. (Paragraph bridging pages 3 to 4).

Ohuchi discloses an absorbent compositions for air conditioners comprising aqueous lithium bromide and either zinc chloride or zinc bromide. (Page 1). The Examiner asserts it would have been obvious to substitute zinc bromide for zinc chloride in absorbent compositions because Ohuchi teaches the equivalence of zinc chloride and zinc bromide. (Examiner’s Answer, pg. 4). We disagree.

Nonaka recognizes absorption compositions containing zinc chloride tend to corrode the air conditioning devices. To solve the corrosion problem, Nonaka adds lithium hydroxide and lithium molybdenum absorption compositions. (See pages. 3 to 4). If one of ordinary skill were to substitute zinc bromide for zinc chloride in

the Examiner, such as the insertion of a new ground of rejection, is petitionable under 37 CFR § 1.181 to the Commissioner. Since Appellant has failed to timely file a petition, we will address the rejection using the translation of Nonaka provided in the record.

Appeal No. 1997-2099
Application No. 08/233,468

absorbent compositions of Nonaka as asserted by the Examiner, the need for the composition to contain lithium hydroxide and lithium molybdenum, as presented by Nonaka, would have been eliminated. The Examiner has not provided an explanation of the effect of lithium hydroxide and lithium molybdenum on an absorbent composition which does not contain zinc chloride. The mere fact that the prior art could be modified as proposed by the Examiner is not sufficient to establish a *prima facie* case of obviousness. *See In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The Examiner must explain why the prior art would have suggested to one of ordinary skill in the art the desirability of the modification. *See Fritch*, 972 F.2d at 1266, 23 USPQ2d at 1783-84. The Examiner has not provided such an explanation. The rejection of claims 1 to 10, 17 and 18 is reversed.

Claims 1 to 20 are rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Nonaka, Rockenfeller and Ohuchi. (Examiner's Answer, page 5). The Examiner relies on Ohuchi and Nonaka for the reasons presented in the rejection of claims 1 to 10, 17 and 18. The Examiner acknowledges Rockenfeller does not disclose the absorption composition required by the claims. (Answer, page 5). The Examiner adds Rockenfeller to the combination of Ohuchi and Nonaka for the disclosure of triple effect absorption cycle apparatus which contains an aqueous absorption fluid. The disclosure of a triple effect absorption cycle apparatus which

contains an aqueous absorption fluid does not address the effect of lithium hydroxide and lithium molybdenum on an absorbent composition which does not contain zinc chloride as discussed above. Thus, the addition of Rockenfeller does not remedy deficiencies of Ohuchi and Nonaka described above. The rejection of claims 1 to 20 is reversed.

Claims 1 to 10, 17 and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Itoh and either Ohuchi or Aronson. (Examiner's Answer, page 6).

According to the Examiner, Itoh discloses an absorbing solution comprising lithium bromide and lithium hydroxide. The Examiner also states Aronson teaches that absorbent compositions containing zinc bromide and lithium bromide have greater solubility limits. The Examiner relies on Ohuchi for reasons stated in the previous rejections. The Examiner concludes the addition of zinc bromide to absorbent compositions containing lithium bromide and lithium hydroxide would have been obvious to obtain the benefits described by Ohuchi or Aronson. (Answer, page 6).

Claim 1 requires the weight ratio of zinc bromide to lithium bromide in the solution to be from about 1.6 to about 1.9. The Examiner has not cited the portion of either Ohuchi or Aronson which discloses the appropriate amount of zinc bromide which should be incorporated into the composition of Itoh. The Examiner has also not

Appeal No. 1997-2099
Application No. 08/233,468

provided motivation for the formation of an absorbent composition containing the weight ratio of zinc bromide to lithium bromide to be from about 1.6 to about 1.9, as required by claim 1. In the absence of sufficient factual evidence or scientific rationale on the part of the Examiner to establish why and how a skilled artisan would have arrived at the subject matter of claim 1 from the applied references, we find that the Examiner has failed to meet the initial burden of establishing the *prima facie* obviousness of the claimed subject matter. Accordingly, we are constrained to reverse the Examiner's rejection of claims 1 to 10, 17 and 18.

Appeal No. 1997-2099
Application No. 08/233,468

REVERSED

CHARLES F. WARREN)	
Administrative Patent Judge)	
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ROMULO H. DELMENDO)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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Appeal No. 1997-2099
Application No. 08/233,468

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