

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte IHAB M. HEKAL,
CHAO CHEN and XIAOLING DONG

Appeal No. 2006-2153
Application 10/447,199

ON BRIEF

Before PAK, WARREN and KRATZ, *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 12, 13, 16 and 17, and refusing to allow claims 1 through 11. Claims 14 and 15 are also pending and stand objected to by the examiner as dependent claims allowable in substance (see final action mailed August 2, 2004, page 5).

Claim 1 illustrates appellants' invention of a method for preserving fresh produce, and is representative of the claims on appeal:¹

1. A method for preserving fresh produce comprising the following steps:
 - a. providing a produce preservation solution comprising:
magnesium ion;

¹ We have copied claim 1 as it stands of record in the amendment filed August 30, 2004, entered by the examiner in the advisory action mailed September 17, 2004 (see answer, page 3).

and an anion selected from the group consisting of: ascorbate ions; erythorbate ions; and mixtures thereof; and

water;

wherein: the anion and magnesium are present in a mole ratio of from 0.2:1 to 8:1; and the produce preservative has less than 5% flavonid and less than [sic] 0.1% metal ion sequestrant;

b. applying said produce preservative to the produce.

The references relied on by the examiner are:

Warren (Warren '522) 29, 1991	4,988,522	Jan.
Warren (Warren '313) 1991	5,055,313	Oct. 8,
Chen	5,925,395	Jul. 20, 1999

The examiner has rejected appealed claims 1 through 13, 16 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Chen combined with Warren '522 and '313 (answer, pages 3-5).

Appellants group the claims as "Claims 1 through 9 [sic, 11]" and "Claims 12, 13 and 16-17" but rely on the same arguments for both groups (pages 1, 2-3 and 5-6). Thus, we decide this appeal based on claim 1 as representative of the ground of rejection and appellants' arguments. 37 CFR § 41.37(c)(1)(vii) (2005).

We affirm.

We refer to the answer and to the brief for a complete exposition of the positions advanced by the examiner and appellants.

Opinion

We have carefully reviewed the record on this appeal and based thereon find ourselves in agreement with the supported position advanced by the examiner that, *prima facie*, the claimed method for preserving fresh produce encompassed by appealed claim 1 would have been obvious over the combined teachings of Chen and Warren '522² to one of ordinary skill in this art at the time the claimed invention was made. Accordingly, since a *prima facie* case of obviousness has been established by the examiner, we again evaluate all of the evidence of obviousness and

² The examiner points out that the Warren references are the same (answer, page 3) and indeed, Warren '313 matured from a divisional application of the application from which Warren '522

nonobviousness based on the record as a whole, giving due consideration to the weight of appellants' arguments in the brief and reply brief. *See generally, In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

We agree with the examiner's findings of fact from the references and conclusions of law based on this substantial evidence as set forth in the answer, to which we add the following for emphasis.

There is no dispute that the claimed method differs from the method of Chen solely in that the reference would have disclosed to one of ordinary skill in this art a method in which the preservative compositions for fresh produce contain ascorbate and/or erythorbate ions and calcium ions, the latter obtained from, among others, calcium chloride, but not magnesium ions; and that Warren '522 would have disclosed to this person that preservative compositions for fresh produce contain ascorbate and/or erythorbate ions and chloride ions, the latter obtained from, among others salts, calcium chloride and/or magnesium chloride which would provide the alkaline earth metal ions calcium and/or magnesium to the composition.

Appellants submit that one of ordinary skill in this art would not have combined the teachings of Chen and Warren '522 as applied by the examiner because Chen would have taught the presence of the calcium ion only, and Warren '522 would have required that "incidental magnesium must be sequestered by an additional additive to prevent food degradation" (brief, page 7; see also page 4). Thus, appellants would have us hold that "[o]nly by reading applicant's [sic] specification would one appreciate that magnesium ion [sic] as a preservative with ascorbic acid" (brief, page 7; see also page 5). The examine responds that Warren '522 would have taught "using either calcium or magnesium in a vegetable preservative composition" and thus, would have led one of ordinary skill in this art to use magnesium ions in place of calcium ions in the preservative composition of Chen in view of the use of ascorbate or erythorbate ions in the preservative compositions for fresh produce of both references and that calcium and magnesium are both alkaline earth metals ions which would have been expected to perform in the same or similar manner with the same composition components (answer, e.g., pages 6-7).

matured. Thus, a discussion of Warren '313 is not necessary to our decision. *See In re Kronig*,

On this record, we cannot subscribe to appellants' position. Appellants have not provided a citation to supporting disclosure in Warren '522 for the contention that the reference requires sequestration of magnesium ions *per se* and we fail to find such disclosure. Indeed, Warren '522 would not have disclosed that metal ion sequestrants are used for calcium ions (e.g., col. 3, ll. 19-52), and Chen would have taught that at most, only a small amount of metal ion sequestrant is used in the preservative compositions "for best taste" purposes and not to preserve the presence of calcium ions (e.g., col. 4, ll. 27-34).

In the absence of a teaching in the references that would have led one of ordinary skill in the art away from using magnesium ions in the absence of a sequestration agent specifically therefor, we agree with the examiner that this person would have reasonably combined the teachings of Chen and Warren '522. This is because one of ordinary skill in the art routinely following the combined teachings of these references would have reasonably modified the preservative compositions of Chen by interchanging calcium ions used therein with magnesium ions in the reasonable expectation of obtaining preservative compositions for fresh produce with the same or similar properties in view of the teaching in Warren '522 that these alkaline earth metal ions can both be used in preservative compositions containing the same antioxidant ascorbate and/or erythorbate ions as Chen as the examiner points out. Thus, this person would have reasonably arrived at the claimed method encompassed by appealed claim 1, including all of the limitations thereof arranged as required therein, without recourse to appellants' specification. That appellants may have used magnesium ions for purposes not expressly stated by the references does not require a different determination. We fail to find in the brief any argument based on evidence of objective indicia of non-obviousness in the record. *See generally, In re Kahn*, 441 F.3d 977, 985-89, 78 USPQ2d 1329, 1334-38 (Fed. Cir. 2006); *In re Kemps*, 97 F.3d 1427, 1429-30, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996) (citing *In re Dillon*, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990) (*in banc*)); *In re Beattie*, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992) (citing *In re Kronig*, 539 F.2d 1300, 1304, 190 USPQ 425, 428, (CCPA 1976); *In re Lintner*, 458 F.2d 1013, 1016, 173 USPQ 560, 563 (CCPA 1972)); *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991) (citing

539 F.2d 1300, 1302-04, 190 USPQ 425, 426-28 (CCPA 1976).

In re Dow Chem. Co., 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988)); *In re Keller*, 642 F.2d 413, 425-26, 208 USPQ 871, 881-82 (CCPA 1981); *In re Corkill*, 771 F.2d 1496, 1497-1500, 226 USPQ 1005, 1006-08 (Fed. Cir. 1985); *In re Skoll*, 523 F.2d 1392, 1397-98, 187 USPQ 481, 484-85 (CCPA 1975); *see also In re O'Farrell*, 853 F.2d 894, 903-04, 7 USPQ2d 1673, 1680-81 (Fed. Cir. 1988) (“Obviousness does not require absolute predictability of success. . . . There is always at least a possibility of unexpected results, that would then provide an objective basis for showing the invention, although apparently obvious, was in law nonobvious. [Citations omitted.] For obviousness under § 103, all that is required is a reasonable expectation of success. [Citations omitted.]”).

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in the combined teachings of Chen and the Warren references with appellants’ countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1 through 13, 16 and 17 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)(1)(iv) (2005).

AFFIRMED

CHUNG K. PAK)
Administrative Patent Judge)
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CHARLES F. WARREN) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
) INTERFERENCES
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PETER F. KRATZ)
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