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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERTAN ERGYUNOV HYUSEINOV and
WOLFGANG PETER LUDWIG

Appeal 2019-004898
Application 15/177,408
Technology Center 1700

Before KAREN M. HASTINGS, MICHAEL P. COLAIANNI, and
JULIA HEANEY, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as World Technology Ingredients, Incorporated. Appeal Br. 3.

Appellant's invention is directed to methods of preparing concentrated natural acetate food additives from vinegar as well as compositions containing the concentrated naturally-derived acetate (Spec. ¶2; Claim 1).

Claim 1 is representative of the subject matter on appeal:

1. A method of preparing a concentrated food additive comprising:
 - (a) treating vinegar with a basic neutralizing agent to partially neutralize the vinegar to a pH in the range of about 4.0 to less than 5.5; and
 - (b) evaporating water from and drying the product of step (a) to produce the concentrated food additive having an acetate and an acid in the form of a dry powder.

Appellant appeals the following rejection:

Claims 1–20 are rejected under 35 U.S.C. § 103 as unpatentable over Ludwig (US 2010/0310738 A1, pub. Dec. 9, 2010) in view of Toledo (US 2007/0059423 A1, pub. Mar. 15, 2007).

Appellant argues claims 1 and 10 only (Appeal Br. 12). Appellant untimely argues the subject matter of dependent claims 5, 6, 16, and 17 on page 11 of the Reply Brief. We will not consider such untimely arguments. 37 C.F.R. § 41.41(b)(2). Therefore, any claim not argued separately will stand or fall with our analysis of the rejection of claims 1 and 10.

FINDINGS OF FACT & ANALYSIS

The Examiner's findings and conclusions regarding the rejection of claims 1 and 10 over Ludwig in view of Toledo are located on pages 3–5 of the Final Action.

Appellant argues that the Examiner has not shown where each and every feature is taught or suggested by the prior art (Appeal Br. 12). Appellant contends that the combination of Ludwig and Toledo fails to teach treating vinegar with a basic neutralizing agent to partially neutralize the vinegar to a pH range of 4.0 to 5.5 and evaporating water to produce a concentrated food additive having an acetate and an acid in dry powder form (Appeal Br. 13). Appellant argues that Toledo fails to render obvious treating vinegar with a basic neutralizing agent to partially neutralize the vinegar to a pH of 4.0 to 5.5 (Appeal Br. 13). Appellant contends that Toledo fails to teach forming a concentrated food additive having an acetate and an acid in dry powder form (Appeal Br. 13). Appellant argues that Toledo's teaching to completely neutralize the acid in the vinegar teaches away from partially neutralizing the vinegar with basic neutralizing agent to a pH of 4.0 to 5.5 (Appeal Br. 13–14). Appellant contends that Toledo does not teach using a basic neutralizing agent to partially neutralize the acid in the vinegar and achieve a pH of 4.76 (Appeal Br. 14). Appellant contends that Toledo's teaching regarding the pH involves adding untreated vinegar to the neutralized vinegar to achieve the desired pH (Appeal Br. 15). Appellant contends that Toledo's complete neutralization of the acid in the vinegar would have achieved a pH of 7 (Appeal Br. 15). Appellant argues that the teachings of Ludwig and Toledo as a whole would have suggested complete neutralization of the acid in the vinegar, not partial neutralization as required by the claim (Appeal Br. 15–16). Appellant contends that Ludwig does not teach the step of evaporating water from the treated vinegar would result in a concentrated food additive having an acid, but would only include an acetate in Ludwig's concentrated product (Appeal Br. 16). Appellant argues that

neither Ludwig nor Toledo teaches producing a concentrated food additive having an acetate and an acid in the form of a dry powder (Appeal Br. 16).

We have considered Appellant's arguments and find them unpersuasive for the following reasons. The Examiner finds that Ludwig alone teaches the subject matter of claims 1 and 10 except for an explicit recitation of the claimed pH range (Final Act. 3–5). The Examiner finds that Ludwig discloses that the vinegar is partially neutralized to a pH of “below about 7” (Final Act. 3, 5). The Examiner finds that Ludwig's teaching that the pH of the partially neutralized vinegar is “below about 7” does not constitute a teaching away from the claimed pH range of 4.0 to 5.5 (Ans. 7). In other words, the Examiner finds that Ludwig's disclosed pH range of “below about 7” overlaps with the pH range recited in claims 1 and 10. Because the pH ranges overlap, the Examiner has established a *prima facie* case of obviousness. *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003) (“A *prima facie* case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art.”).

We find that the Examiner relies on Toledo as merely a teaching reference of typical pH values for treated vinegar (Final Act. 4, Ans. 7). Accordingly, Appellant's arguments about Toledo's complete vinegar neutralization teaching away from the claimed invention are not persuasive because Ludwig teaches partial neutralization of the vinegar (Ans. 9; Ludwig ¶ 56). The Examiner finds and we agree that because Ludwig only partially neutralizes the vinegar in the initial step, some residual acid must remain after evaporating the treated vinegar to form a dry powder (Ludwig ¶¶ 56, 59–62; Ans. 10). Ludwig discloses adding vinegar (i.e., a liquid) to the acetate achieved by the drying process in step (b) to produce a vinegar-

acetate dry powder (§ 62, claim 10). We find that such disclosure indicates that the acetate formed by evaporating the water is a dried powder to which is added liquid vinegar because if liquid vinegar were added to liquid acetate then no dry powder would have resulted in Ludwig.

Appellant's argument that Toledo's complete neutralization teaches away from the claimed method focuses on the teachings of the references individually and fails to appreciate that Ludwig teaches to neutralize partially the vinegar. Rather, as the Examiner finds, Ludwig teaches all the requirements of claims 1 and 10, including a pH range that overlaps with that recited in the claims (Ans. 6). The Examiner relies on Toledo as teaching that a mixture of acetic acid and acetate has a pH of 4.76 (Ans. 7; Final Act. 3-4, 5). The Examiner is not suggesting the bodily incorporation of Toledo's method into Ludwig's method as Appellant appears to argue. *In re Wood*, 599 F.2d 1032, 1037 (CCPA 1979) ("The test for obviousness is not whether the features of one reference may be bodily incorporated into another reference."). Rather, the Examiner relies on Toledo as a reference to teach the typical pH for an acetate/acetic acid mixture (Final Act. 3-5).

Appellant's argument that Ludwig and Toledo use untreated vinegar to acidify the treated vinegar instead of partially neutralizing the vinegar to a pH of 4.0 to 5.5 is not persuasive for three reasons. First, claim 1 uses the open ended transitional claim language comprising which does not exclude additional steps to achieve a pH range of 4.0 to 5.5 as part of the neutralizing process. For example, the Examiner finds that a partial neutralization of the vinegar may include adding additional acid to reach a pH in the range of 4.0 to 5.5 and acid in the dry powder (Ans. 10). Secondly, Ludwig teaches the partially neutralized vinegar has a pH range (i.e., below about 7) that

overlaps with that recited in claim 1 (i.e., 4.0 to 5.5). Third, claim 10 is a product-by-process claim and as such, the process used to achieve the pH in the end-product is not material. *In re Thorpe*, 777 F.2d 695, 697 (Fed. Cir. 1985) (“The patentability of a product does not depend on its method of production.”).

Moreover, Appellant has not proffered any evidence of criticality in pH range recited in claims 1 and 10. On this record, we affirm the Examiner’s § 103 rejection of claims 1–20 over Ludwig and Toledo.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–20	103	Ludwig, Toledo	1–20	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED