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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEVIN I. SEGALL, MARTIN SCHWEIZER,
BRENT E. GREEN, SARAH MEDINA, and
BRANDY GOSNELL

Appeal 2018-000115
Application 12/703,996
Technology Center 1700

Before ROMULO H. DELMENDO, MICHAEL P. COLAIANNI, and
DEBRA L. DENNETT, *Administrative Patent Judges*.

DENNETT, *Administrative Patent Judge*.

DECISION ON APPEAL¹

STATEMENT OF THE CASE

Appellants² appeal under 35 U.S.C. § 134(a) from a final rejection of
claims 1–36, 38, 40, and 42–72. We have jurisdiction under 35 U.S.C.

§ 6(b).

We AFFIRM.

¹ In our Opinion, we refer to the Specification filed February 11, 2010 (“Spec.”); the Final Office Action mailed June 30, 2016 (“Final Act.”); the Advisory Action mailed November 18, 2016 (“Advis. Act.”); the Appeal Brief filed March 17, 2017 (“Br.”); and the Examiner’s Answer mailed July 14, 2017 (“Ans.”). Appellants did not file a Reply Brief.

² Appellants identify Burcon Nutrascience (MB) Corp. as the real party in interest. Br. 1.

The claims are directed to a method of producing a soy protein product. Claim 1, reproduced below from the Claims Appendix of the Appeal Brief, is illustrative of the claimed subject matter:

1. A method of producing a soy protein product having a soy protein content of at least about 60 wt% (N x 6.25), dry weight basis, which comprises:
 - (a) extracting a soy protein source with an aqueous calcium salt solution to cause solubilization of soy protein from the protein source and to form an aqueous soy protein solution,
 - (b) separating the aqueous soy protein solution from residual soy protein source,
 - (c) concentrating the aqueous soy protein solution while maintaining the ionic strength substantially constant by using a selective membrane technique to form a concentrated soy protein solution,
 - (d) optionally diafiltering the concentrated soy protein solution to form a concentrated and optionally diafiltered soy protein solution,
 - (e) diluting the concentrated and optionally diafiltered soy protein solution into water to cause the formation of a soy protein precipitate,
 - (f) separating the precipitate from the diluting water, termed the supernatant to form a separated soy protein precipitate,
 - (g) washing the separated soy protein precipitate with about 1 to about 10 volumes of water to remove residual supernatant and to form a washed and separated soy protein precipitate,
 - (h) drying the washed and separated soy protein precipitate to form a dried precipitate,
 - (i) solubilizing the dried precipitate in water at a pH of about 1.5 to about 4.4 to form a clear protein solution, and
 - (j) drying the clear soy protein solution to form the soy protein product.

REFERENCES

The Examiner relies on the following prior art in rejecting the claims on appeal:

Brown et al. ("Brown")	US 1,836,897	Dec. 15, 1931
Magnino et al. ("Magnino")	US 3,853,839	Dec. 10, 1974
Akashe et al. ("Akashe")	US 2004/0161514 A1	Aug. 19, 2004
Schweizer et al. ("Schweizer")	WO 2005/107492 A1	Nov. 17, 2005

REJECTIONS

The Examiner maintains and Appellants seek review of the following rejections under 35 U.S.C. § 103(a): (1) claims 1–36, 38, 40, 42–49, 67, and 70–72 over Schweizer in view of Magnino; (2) claims 50–66 and 68 over Schweizer in view of Magnino and further in view of Akashe; and (3) claim 69 over Schweizer in view of Magnino and further in view of Brown. Final Act. 3–15; Br. 3–7.

OPINION

Appellants argue the claims rejected over only Schweizer in view of Magnino as a group. Br. 3–7. Appellants rely on the same arguments for the other two rejections, which include additional art. *See id.* at 7. Therefore, we select claim 1 as representative of all of the pending claims. Claims 2–36, 38, 40, and 42–72 will stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds that Schweizer teaches steps (a) through (f) of claim 1. Final Act. 3–4. The Examiner finds that Magnino teaches steps (g)

through (j). *Id.* at 4–5. The Examiner concludes that it would have been obvious to combine the teachings of Schweizer and Magnino with the expectation of yielding predictable results. *Id.* at 5.

Appellants argue that Magnino does not teach drying step (h). Br. 4. Appellants contend that, rather than drying the precipitate (obtained in step (g)), Magnino teaches making the precipitate into an aqueous slurry by adding water, and it is the slurry that is dried. *Id.*

Appellants also argue that Magnino does not teach step (i) of claim 1 (solubilizing the dried precipitate in water at a pH of about 1.5 to about 4.4 to form a clear protein solution) because the reference discloses heat treatment of the slurry. *Id.* at 5. Appellants contend that Magnino’s Example 1 indicates that the heat treatment step at a pH range of 2.0 to 4.2 is essential to Magnino’s procedure, and this somehow nullifies Magnino’s broader teaching. *See id.*

We disagree with Appellants’ positions.

Claim 1 contains the open transitional term “comprising,” which permits elements or steps in addition to those specified to be included in the claim. *In re Crush*, 393 F.3d 1253, 1257 (Fed. Cir. 2004). That Magnino discloses adding water to make the precipitate an aqueous slurry before drying it does not mean that Magnino fails to teach drying step (h) of claim 1. Formation of a slurry before drying is merely an extra step that is not excluded as a result of Appellants’ use of “comprising.” Indeed, the Specification describes re-suspending the “separated soy protein precipitate” in water and then drying as an alternative to direct drying (Spec. ¶ 72). Nothing in the claim requires direct drying of the “separated soy protein precipitate.” Magnino discloses drying the aqueous slurry containing

isolated soy protein corresponding to the “separated soy protein precipitate” specified in claim 1, step (f), resulting in a dried precipitate formed from washed and separated soy protein precipitate, as required by claim 1. *See* Magnino col. 3, ll. 13–17.

Magnino discloses solubilizing the reslurried soy protein precipitate at a pH of about 2.0 to about 4.2, a range that falls within the claimed pH range of about 1.5 to about 4.4 in step (i) of claim 1. *See* Magnino col. 3, ll. 29–33; *see also In re Harris*, 409 F.3d 1339, 1341 (Fed. Cir. 2005) (a prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art); *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003) (same). Contrary to Appellants’ argument, Magnino’s disclosure of heat treatment of the slurry in Example 1 does not eliminate Magnino’s teaching of solubilizing the soy protein precipitate at a pH within the claimed pH range. For purposes of § 103, a reference is prior art for all that it discloses. *Symbol Techs., Inc. v. Opticon, Inc.*, 935 F.2d 1569, 1578 (Fed. Cir. 1991). Magnino teaches superior results with heat treatment, but does not teach away from the method without heat treatment. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (Teaching away requires that a reference “criticize, discredit, or otherwise discourage the solution claimed” by Appellants.). The improvement in Magnino’s results appears to be based on controlling the pH of the isolate protein material to between 2.0 to 4.2—as claimed in claim 1. One of ordinary skill in the art at the time of the invention would have combined the prior art elements in the methods of Schweizer and Magnino to yield predictable results. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 401 (2007).

Appellants contend that the product resulting from the combination of Schweizer and Magnino would not be clear, because Example 1 in Magnino had 0.5 ml of residue remaining undissolved. Br. 5. Appellants draw conclusions regarding how one of ordinary skill in the art at the time of the invention would interpret the “solubility index” results disclosed in Magnino. *See* Br. 5–6. However, arguments of counsel cannot take the place of factually supported objective evidence. *See, e.g., In re Huang*, 100 F.3d 135, 139–40 (Fed. Cir. 1996); *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). Appellants provide no evidence that the skilled artisan would view the results of Magnino’s solubility index test as indicating that a solution made according to the process for Example 1 would not be clear. Magnino describes the product of the disclosed process as having “excellent” solubility. Magnino col. 5, ll. 44–46.

Appellants have not shown that the Examiner reversibly erred in determining that claim 1 is obvious over Schweizer in view of Magnino. We sustain the rejection of claim 1. Because the remaining claims fall with claim 1, we sustain the rejection of claims 2–36, 38, 40, and 42–72. 37 C.F.R. § 41.37(c)(1)(iv).

DECISION

The rejection of claims 1–36, 38, 40, and 42–70 is affirmed.

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

AFFIRMED