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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GEORG STEIGER

Appeal 2019-000376
Application 13/985,775
Technology Center 1700

Before MICHAEL P. COLAIANNI, GEORGE C. BEST, and
DEBRA L. DENNETT, *Administrative Patent Judges*.

DENNETT, *Administrative Patent Judge*.

DECISION ON APPEAL¹

STATEMENT OF THE CASE

Appellant² appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–5 and 12–14. Claims 6–11 and 15 have been canceled. Br. 16. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ In our Decision, we refer to the Specification filed August 15, 2013 (“Spec.”); the Final Office Action dated September 28, 2017 (“Final Act.”); the Appeal Brief filed March 21, 2018 (“Br.”); and the Examiner's Answer dated August 16, 2018 (“Ans.”).

² 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 DSM IP Assets BV. Br. 3.

The claims are directed to a process for supplementation of beverages with soluble and bio-available iron in the form of ferric pyrophosphate. Claim 1, which is reproduced below from the Claims Appendix of the Appeal Brief, illustrates the claimed subject matter with disputed terms emphasized:

1. A process for the preparation of **an aqueous soluble ferric pyrophosphate concentrate solution**, wherein the process comprises the steps of:
 - (a) forming an aqueous dispersion of **insoluble ferric pyrophosphate by adding 0.1 to 5 weight / volume % of the insoluble ferric pyrophosphate** to water,
 - (b) adding 0.15 to 50 weight / volume % of trisodium citrate to the aqueous dispersion obtained from (a) to form an aqueous ferric pyrophosphate and trisodium citrate solution, and
 - (c) boiling the resulting aqueous ferric pyrophosphate and trisodium citrate solution from step (b) by heating the aqueous ferric pyrophosphate and trisodium citrate solution at a temperature of 100 to 120 °C and a pH of between 4 to 8 for a time of 10 to 120 minutes until complete dissolution of ferric pyrophosphate occurs to thereby obtain an aqueous soluble ferric pyrophosphate concentrate solution.

REFERENCES

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

Ozeki et al. (“Ozeki”)	US 2004/0171624 A1	Sept. 2, 2004
McCall, Jr. (“McCall”)	US 2009/0023686 A1	Jan. 22, 2009
Bortz	US 2009/0035385 A1	Feb. 5, 2009
Nelson et al. (“Nelson”)	US 2011/0021629 A1	Jan. 27, 2011

REJECTION

The Examiner maintains—and Appellant appeals—the rejection under 35 U.S.C. § 103(a) of claims 1–5 and 12–14 as unpatentable over McCall, in view of Bortz, Ozeki, and further or alternatively in view of Nelson. Final Act. 2–10; Br. 6–14.

OPINION

Appellant argues, *inter alia*, that McCall fails to render independent claim 1 obvious because this primary reference requires *soluble* ferric compounds as a starting material. *See, e.g.*, Br. 7. Appellant does not make separate patentability arguments for the dependent claims. 37 C.F.R. § 41.37(c)(1)(iv).

In the Final Office Action, the Examiner finds that McCall’s process for the preparation of an aqueous soluble pyrophosphate concentrate solution discloses each limitation recited in claim 1, except for two elements: (1) the use of insoluble ferric pyrophosphate required in step (a); and (2) the heating parameters recited in step (c). Final Act. 3–7.

With respect to McCall’s missing element (1), Appellant’s challenge focuses on whether the Examiner erred in combining McCall with Bortz to render step (a) obvious.³ Br. 12–13.

The Examiner finds that Bortz teaches use of the soluble and insoluble forms of ferric pyrophosphate. Final Act. 4 (citing Bortz ¶ 33). The Examiner finds Bortz teaches that these forms are interchangeable and that

³ Regarding McCall’s missing element (2), Appellant does not contest the Examiner’s combination of modified McCall with Ozeki and/or Nelson to render the heating conditions recited in step (c) obvious. *Id.* at 13.

using insoluble ferric pyrophosphate “is advantageous for an aqueous dispersion.” Final Act. 4. The Examiner finds Bortz teaches, *inter alia*, that “[e]xamples of suitable insoluble iron salts include but are not limited to ferric sodium pyrophosphate.” *Id.* (citing Bortz ¶ 78). The Examiner determines that it would have been obvious for the ordinary skilled artisan at the time of the invention to modify McCall’s soluble “ferric pyrophosphate to the insoluble one for reasons taught above.” *Id.*

Appellant contends that one of ordinary skill in the art of preparing an aqueous soluble ferric pyrophosphate concentrate solution would not have looked to McCall’s teachings. *See generally* Br. 7–11. Specifically, Appellant argues that “McCall’s entire scheme is premised on starting with a soluble iron (III) source, such as ferric sulfate.” *Id.* at 10. Appellant argues that “Bortz does not teach or suggest [] that McCall’s process could or would [have] be[en] successfully modified from using a soluble iron salt to using an insoluble ferric pyrophosphate.” *Id.* at 13.

Appellant persuasively argues that the Examiner reversibly errs in concluding that one of ordinary skill in the art would have modified McCall’s *soluble* ferric compound to use Bortz’s *insoluble* ferric compound as a starting material to prepare *an aqueous solution*. *See* Final Act. 3–7; Br. 7–14; Ans. 11–13. We are provided no explanation of why the ordinarily skilled artisan would have been motivated to combine Bortz’s teachings with McCall’s, but told that using insoluble ferric pyrophosphate “is advantageous for an aqueous dispersion.” Final Act. 4. Furthermore, our review of the Examiner’s cited paragraph in Bortz finds that it does not

establish an equivalence between *soluble* and *insoluble* ferric compounds,⁴ nor any advantages afforded by use of the latter. *See* Bortz ¶ 33. On this record, the Examiner has not made any findings that the applied prior art teaches or suggests that such a modification would have been beneficial. *See In re Nuvasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016) (“[T]he [PTO] must make the necessary findings and have an adequate ‘evidentiary basis for its findings.’”). The Examiner’s explanation, moreover, falls short of the requirements for supporting an obviousness rejection. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”).

We do not sustain the rejection of claim 1 as obvious over McCall, in view of Bortz, Ozeki, and further or alternatively in view of Nelson. For the same reasons as for claim 1, we do not sustain the rejection of claims 2–5 and 12–14 over the same references.

⁴ According to the Examiner, Appellant admits that Bortz teaches that the form of iron is not critical. Ans. 13 (citing Br. 13). Appellant’s admission, however, is taken out of context. Appellant admits only that Bortz teaches the non-criticality of iron’s form within “the context of its disclosure,” i.e., for formulating iron-containing vitamin, multi-vitamin, and mineral preparations for use as nutritional or dietary supplements. *See* Bortz ¶¶ 2, 4, 13.

CONCLUSION

In summary:

Claims Rejected	Basis	Affirmed	Reversed
1-5 and 12-14	§ 103(a) McCall Bortz Ozeki Nelson		1-5 and 12-14

REVERSED