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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LEWIS MICHAEL POPPLEWELL,
KEITH THOMAS HANS, LULU HENSON,
CHRISTOPHER THOMAS LAVALLEE,
ERIC JESSE WOLFF, and MARIA WRIGHT

Appeal 2021-001996
Application 15/722,465
Technology Center 1700

Before GEORGE C. BEST, LILAN REN, and
MERRELL C. CASHION, JR., *Administrative Patent Judges*.

CASHION, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from a Final Office Action, dated February 6, 2020, rejecting claims 1–13. We have jurisdiction under 35 U.S.C. § 6(b).

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[1] "Appellant" refers to "applicant" as defined in 37 C.F.R. § 1.42 (2022). Appellant identifies International Flavors & Fragrances Inc. as the real party in interest. Appeal Br. 1.

We REVERSE.

The invention relates generally to a spray-dried flavor composition and a method of making it. Spec. ¶¶ 7–10. Claim 1 illustrates the appealed subject matter and is reproduced below (formatting added):

> 1. A method for producing a spray-dried flavor composition capable of retaining volatile compounds comprising spray drying a flavor containing volatile compounds in a spray dryer, the spray dryer having an inlet temperature of less than 100°C and an inlet air humidity of 0–4 g H_2O/kg dry air and having an outlet temperature between 35°C and 55°C and an outlet air humidity of 10–20 g H_2O/kg dry air to obtain a spray-dried flavor composition, wherein the volatile compounds are present in the spray-dried flavor composition in an amount that is at least 20% of the volatile compounds originally contained in the flavor.

Appeal Br. 16 (Claims App.).

Appellant requests review of the following rejections from the Examiner's Final Action (*see generally id.*):

I. claims 1 and 3–13 rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Saleeb (US 4,532,145, issued July 30, 1985);

II. claim 2 rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Saleeb and DeRoos (US 6,482,433 B1, issued November 19, 2002); and

III. claims 11–13 rejected under pre-AIA 35 U.S.C. § 102(b) as anticipated by Saleeb.

OPINION

After review of the respective positions Appellant provides in the Appeal and Reply Briefs and the Examiner provides in the Final Office Action and the Answer, we reverse the Examiner's prior art rejections of

claims 1–13 for the reasons Appellant provides. We add the following for emphasis.[2]

Rejection I (§ 103 rejection of Claim 1)

Claim 1 recites a method for producing a spray-dried flavor composition capable of retaining volatile compounds comprising spray drying a flavor containing volatile compounds in a spray dryer, where the spray dryer has an inlet air humidity of 0–4 g H_2O/kg dry air and an outlet air humidity of 10–20 g H_2O/kg dry air to obtain a spray-dried flavor composition.

We refer to the Examiner Final Office Action for a complete statement of rejection of claim 1. Final Act. 4–5. With respect to the claimed inlet and outlet air humidities, the Examiner finds Saleeb does not teach the inlet or outlet air humidity. *Id*. at 5. The Examiner determines that the claimed inlet and outlet air humidities are not considered to provide an unexpected result over the prior art because Saleeb's compounds are stable spray drying compounds as claimed. *Id.*

Appellant argues Saleeb, as the Examiner acknowledges, fails to teach the operating inlet or outlet air humidities. Appeal Br. 11–12. Appellant further contends that the Examiner has not shown that Saleeb describes or suggests the claimed inlet and outlet air humidities. *Id.* at 13. Appellant argues the Examiner fails to present any intrinsic or extrinsic evidence to suggest that conventional spray drying would provide the inlet and outlet air humidities presently claimed. Reply Br. 3.

[2] We limit our discussion to claims 1 and 11.

Appellant's arguments identify reversible error in the Examiner's determination of obviousness.

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). "[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." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), *quoted with approval in KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The fact finder must be aware "of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *KSR*, 550 U.S. at 421 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966) ("warning against a 'temptation to read into the prior art the teachings of the invention in issue'")).

As Appellant argues, the Examiner's rejection fails to direct us to any portion of Saleeb that teaches or suggest the claimed inlet and outlet air humidities. The Examiner also fails to direct us to objective evidence in support of the conclusion of obviousness. Nor does the Examiner provide a technical explanation of why the claimed humidities would have been obvious to one of ordinary skill in the art. Instead, the Examiner's statement regarding the claimed air humidities is nothing more than a "mere conclusory statement[]" lacking an "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Kahn*, 441 F.3d at 988, *quoted with approval in KSR,* 550 U.S. at 418. In view of this, the Examiner fails to establish a prima facie case of obviousness. As such, the Examiner's request for a showing of unexpected results is inappropriate.

Accordingly, we reverse the Examiner's prior art rejection of claim 1 as well as of claims 3–10 for the reasons Appellant presents and we give above.

Rejection II (§ 103 rejection of Claim 2)

With respect to the separate rejection of claim 2, dependent from claim 1, the additionally cited reference to DeRoos does not overcome the deficiencies noted above with respect to the teachings of Saleeb. Accordingly, we also reverse the Examiner's prior art rejection of claim 2 for the reasons Appellant presents and we give above.

Rejections I and III (§§ 102 and 103 rejections of Claim 11)

Claim 11 is a product-by-process claim and recites a spray dried flavor composition having a water activity in the range of 0.1 to 0.6. Thus, the subject matter of claim 1 is directed to an article of manufacture. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself." *In re Thorpe*, 777 F.2d 695, 698 (Fed. Cir. 1985). It is well-settled that the patentability of an apparatus or article of manufacture claim depends on the claimed structure. *See Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 809 (Fed. Cir. 2002); *see also In re Danly*, 263 F.2d 844, 848 (CCPA 1959) ("Claims drawn to an apparatus must distinguish from the prior art in terms of structure rather than function.").

We first address the Examiner's anticipation rejection (Rejection III) based on the teachings of Saleeb. Final Act. 3.

The Examiner finds Saleeb teaches a spray-dried flavor composition. *Id.* The Examiner recognizes that Saleeb does not teach the water activity of

the disclosed spray-dried composition. The Examiner finds that the claimed and prior art product are identical or substantially identical, or are produced by identical or substantially identical processes. *Id.* The Examiner finds that Saleeb anticipates the subject matter of claim 11 absent a showing that the prior art product does not necessarily or inherently possess the characteristics (water activity) of the claimed product. *Id.*

Appellant argues Saleeb does not describe any level of water activity attained by the method or compositions therein. Appeal Br. 9. Appellant also argues that the claimed product and the prior art product are not made by the same or substantially the same method because Saleeb does not describe a process operating with an inlet air humidity of 0–4 g H_2O/kg dry air and an outlet air humidity of 10–20 g H_2O/kg dry air. *Id.* at 10. Thus, Appellant contends that Saleeb's product does not necessarily or inherently possess the characteristics of the claimed product. *Id.*

Appellant's arguments identify reversible error in the Examiner's finding of anticipation.

For the Examiner to carry the burden of establishing a prima facie case of anticipation, the Examiner must establish where each and every element of the claimed invention, arranged as required by the claim, is found in a single prior art reference, either expressly or under the principles of inherency. *See generally In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997).

Recognizing that Saleeb does not teach the water activity for the disclosed spray-dried flavor composition, the Examiner fails to provide an adequate technical explanation why one skilled in the art would have found Saleeb's spray-dried flavor composition to inherently have a water activity

within the claimed range. Moreover, the Examiner provides no technical analysis of why the claimed and prior art methods of making the spray-dried flavor composition are the same or substantially the same, particularly given that Saleeb does not address the claimed inlet and outlet air humidities parameters for the spray drier. *See* our discussion above on this issue. Thus, the Examiner has not established a prima facie case of anticipation.

Accordingly, we reverse the Examiner's anticipation rejection of claim 11 as well as of claims 12 and 13 for the reasons Appellant presents and we give above.

We also reverse the obviousness rejection of claims 11–13 (Rejection I) for the reasons Appellant presents and those we provide above.

CONCLUSION

The Examiner's prior art rejections of claims 1–13 are reversed.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
11–13	102	Saleeb		11–13
1, 3–13	103	Saleeb		1, 3–13
2	103	Saleeb, DeRoos		2
Overall Outcome				1–13

REVERSED