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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ATSUSHI ONISHI, YOSHIFUMI MIYAZAKI,  
and MITSURU TANAKA

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Appeal 2019-003921  
Application 14/387,341  
Technology Center 1700

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Before JEFFREY T. SMITH, BEVERLY A. FRANKLIN, 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<sup>1</sup> appeals from the Examiner's decision to reject claims 1, 3–5, and 7. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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<sup>1</sup> 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 Nissin Foods Holdings Co., Ltd. Appeal Br. 3.

The invention relates to non-fried potato chips. Spec. ¶ 5. Claim 1 illustrates the subject matter claimed and is reproduced below:

1. Non-fried potato chips having a length along a longitudinal direction, a width perpendicular to the length, and a thickness; said potato chips being heated and dried potato slices; said potato chips comprising interior voids, wherein:
  - in a sectional cut of the potato chip through its thickness and along its longitudinal direction, the interior voids are exhibited as holes,
    - each of the holes having, in the plane of the sectional cut, a longest diameter and a short diameter orthogonal to the longest diameter,
      - the short diameter is 20  $\mu\text{m}$  or more, the holes are exhibited in a density of 10 to 20 holes per  $\text{mm}^2$ , and the potato chips exhibit porosity due to the holes of 35% to 65%;
      - and wherein an average of values of (the longest diameter + the short diameter)/2 of the holes is 300  $\mu\text{m}$  or less.

The Examiner maintains the following rejections from the Examiner's Final Office Action dated June 28, 2018 (Final Act. 2–4; Ans. 4–6):

- I. Claims 1, 3–5, and 7 rejected under pre-AIA 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.
- II. Claims 1, 3–5, and 7 rejected under pre-AIA 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.
- III. Claims 1, 3–5, and 7 rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Dayley (US 6,149,959, issued November 21, 2000), Pronyk (Superheated Steam: It's Not Just About Drying, Paper No. 05-009, Written for presentation at the CSAE/SCGR 2005 Meeting Winnipeg, Manitoba on June 26–29, 2005), Dreher (US 4,756,916, issued July 12, 1988), Segnini (Volume Measurement Method of Potato Chips, 2004, *International Journal of Food Properties*, 7:1,37–44, DOI: 10.1081/JFP-

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120022494), Schroeder (US 4,272,554, issued June 9, 1981), Garmakhany (Study of oil uptake and some quality attributes of potato chips affected by hydrocolloids, *Eur. J. Lipid Sci. Technol.* 2008,110,1045-1049), and Loebenstein (The sweet potato, *Springer Science & Business Media*, Mar 21, 2009 -Technology & Engineering - 522 pages).

## OPINION

### *Rejections under 35 U.S.C. § 112, 1<sup>st</sup> and 2<sup>nd</sup> paragraphs*

The rejections of claims 1, 3–5, and 7 under 35 U.S.C. § 112, first and second paragraphs, are both based on the language “enclosed interior void” recited in Claim 1, which the Examiner finds as lacking written descriptive support (§ 112, first paragraph) and creating an indefiniteness in the claim (§ 112, second paragraph). Final Act. 2–3. In the Answer, the Examiner maintains both rejections for the reasons presented in the Final Office Action. Ans. 4–5.

Appellant filed an amendment on October 29, 2018, after the Final Office Action, to amend the claims by removing “enclosed” to resolve the issues regarding the disputed language. The amendment was entered by the Examiner in the Advisory Action dated November 9, 2018. As Appellant notes (Reply Br. 2), and we agree, the amendment to the claims addresses the rejections the Examiner presents with respect to for the disputed language.

Given that the Examiner does not present an alternative basis for the rejections under 35 U.S.C. § 112, first and second paragraphs, we REVERSE the rejections of claims 1, 3–5, and 7 under 35 U.S.C. § 112, first and second paragraphs.

After review of the respective positions that Appellant presents in the Appeal and Reply Briefs and Examiner presents in the Final Office Action and the Answer, we REVERSE the Examiner's prior art rejection of claims 1, 3–5, and 7 under 35 U.S.C. § 103(a) for the reasons the Appellant presents. We add the following for emphasis.

Independent claim 1 is directed to non-fried potato chips comprising interior voids exhibited as holes, where the presence of the holes results in the product characteristics of a hole density of 10 to 20 holes per square millimeter, a porosity of 35% to 65%, and an average of values of (the longest diameter + the short diameter)/2 of the holes is 300 μm or less.

The Examiner finds Dayley discloses non-fried potato chips having holes with diameters of 2.5 cm or less that differ from the claimed subject matter in that Dayley does not teach the recited characteristics of hole density and average values of the longest diameter + the short diameter. Final Act. 4–5; Dayley col. 2, ll. 66–67, col. 9, l. 50–col. 10, l. 39. The Examiner finds that Segnini, Schroeder, Garmakhany and Loebenstein recite methods of making potato chips having desired characteristics by controlling process parameters, including parameters such as cooking temperature, slice thickness, coating, and type of coating. Final Act. 8–9. According to the Examiner, the methods of the additional secondary references address characteristics such as hole (blister) size and hole density. *Id.* The Examiner further finds that Dayley's Tables 2 and 3 would lead one skilled in the art to the claimed porosity characteristic. Final Act. 10; Dayley col.

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<sup>2</sup> We limit our discussion to independent claim 1.

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10, ll. 15–39 (Table 2), col. 11, ll. 20-45 (Table 3). Based on these disclosures, the Examiner determines that it would have been obvious to one of ordinary skill to arrive at the claimed invention by determining the optimal value for the recited characteristics through routine experimentation. Final Act. 9.

Appellant argues that the Examiner has not explained how the teachings of the secondary references would be combined with Dayley to arrive at the characteristics of the claimed product. Appeal Br. 12. According to Appellant, Dayley does not teach the hole density, porosity, and average values of  $(\text{the longest diameter} + \text{the short diameter})/2$  characteristics of claim 1. *Id.* Thus, Appellant argues that one of skill in the art would not have been motivated by the teachings of the cited art to arrive at the claimed invention. *Id.* at 11.

We agree with Appellant that there is 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 Examiner acknowledges that Dayley does not teach a potato chip product exhibiting the recited characteristics of hole density and average values of  $(\text{longest diameter} + \text{short diameter})/2$ . Final Act. 4–5. The premise of the Examiner’s rejection is that methods of making potato chips

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having these characteristics are known and one skilled in the art, in applying these methods to Dayley's teachings, would arrive at the claimed characteristics. However, the Examiner has not explained adequately how one skilled in the art would have combined the teachings of the cited art to arrive at the claimed characteristics, much less at the claimed combination of characteristics.

With respect to the claimed porosity characteristic, the Examiner's reliance on Dayley as teaching this characteristic is misguided. The Specification defines porosity as

the average of porosities of arbitrarily-selected 20 non-fried potato chips. The porosity of one non-fried potato chip is determined by dividing the sum of areas of holes observed in the vertical section with a certain length of the non-fried potato chip by the area of the vertical section with a certain length.

Spec. ¶ 13.

While Dayley's Tables 2 and 3 shows the number of holes (bubbles) and sizes of the holes formed in a sample, the Examiner does not explain how one skilled in the art would arrive at the porosity of 35% to 65% from this disclosure as required by the claimed invention.

Thus, the Examiner has not provided an adequate technical explanation with the requisite rational underpinning of why or how one skilled in the art, absent impermissible hindsight, would have arrived at the claimed potato chip having the recited characteristics from the combined teachings of the cited art.

Accordingly, we REVERSE the Examiner's prior art rejection of claims 1, 3-5, and 7 under 35 U.S.C. § 103(a) for the reasons the Appellant presents and we give above.

CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 3-5, 7	112 first paragraph	Written Description		1, 3-5, 7
1, 3-5, 7	112 second paragraph	Indefiniteness		1, 3-5, 7
1, 3-5, 7	103(a)	Dayley, Pronyk, Dreher, Segnini, Schroeder, Garmakhany, and Loebenstein		1, 3-5, 7
<b>Overall Outcome</b>				<b>1, 3-5, 7</b>

REVERSED