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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/377,952	08/11/2014	Hiroshi Harada	74887	6236
23872	7590	10/13/2020	EXAMINER	
MCGLEW & TUTTLE, PC P.O. BOX 9227 SCARBOROUGH STATION SCARBOROUGH, NY 10510-9227			YOO, HONG THI	
			ART UNIT	PAPER NUMBER
			1792	
			MAIL DATE	DELIVERY MODE
			10/13/2020	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HIROSHI HARADA and AKINORI HIRAMATSU

Appeal 2020-000879
Application 14/377,952
Technology Center 1700

Before ROMULO H. DELMENDO, MICHAEL P. COLAIANNI, and
MICHAEL G. McMANUS, *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 1–19, and 21. We have jurisdiction under 35 U.S.C. § 6(b). Oral arguments were heard in this appeal on October 1, 2020.

We AFFIRM IN PART.

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 Pelican Co., LTD. Appeal Br. 1.

Appellant's invention is directed to a production method for a fermented dairy product using, as a raw material, sterile full fat soy flour obtained by pulverizing a whole soybean and to a fermented dairy product produced by the method (Spec. ¶ 1; Claim 1).

Claim 1 is representative of the subject matter on appeal:

1. A method, comprising the steps of:

providing sterile dehulled soybeans having a bacterial count of 300 cells/g or less by at completely removing contaminated soybean hulls;

producing sterile full fat soy flour having a grain size of from 100 to 1,000 meshes by pulverizing the sterile dehulled soybeans;

adding water to the sterile full fat soy flour to form a hydrated powdered soy juice mixture, followed by heat sterilizing the hydrated powdered soy juice mixture to form a hydrated powdered soy juice, the hydrated powdered soy juice containing the sterile full fat soy flour at a solid concentration from 10 to 25 weight percentage relative to the hydrated powdered soy juice mixture;

homogenizing the hydrated powdered soy juice to form a homogenized hydrated powdered soy juice, wherein the hydrated powdered soy juice is cooled to 30°C to 37°C after the hydrated powdered soy juice is sterilized; and

adding a lactic acid bacterium to the homogenized hydrated powdered soy juice, wherein a medium for lactic acid bacterium starter comprises the homogenized hydrated powdered soy juice;

fermenting the homogenized hydrated powdered soy juice with the lactic acid bacterium to prepare fermented soy milk, the fermented soy milk having a lactic degree of 0.5% to 1.0%.

Appellant appeals the following rejections:

1. Claims 12–16 are rejected under 35 U.S.C. § 101 as failing to recite statutory subject matter.

2. Claims 12–19, and 21 are rejected under 35 U.S.C. § 112, ¶ 2 as being indefinite.
3. Claims 1, 2, 5, 7, and 9–18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nadland (US 2002/0012719 A1, pub. Jan. 31, 2002) in view of Harada (US 2005/0281938 A1, pub. Dec. 22, 2005) and Boufassa (US 6,699,517 B2, iss. Mar. 2, 2004).
4. Claims 3, 4, 6, and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nadland in view of Harada, Boufassa, and Evidence Taken Before the Joint Committee on Tuberculin 1911 (Vol II, Illinois State Journal Co., State Printers, 1912).
5. Claim 8 is rejected under 35 U.S.C. § 103(a) as unpatentable over Nadland in view of Harada, Boufassa, and Katz (“*The Art of Fermentation*”, 2012, p. 201N2).
6. Claim 19 is rejected under 35 U.S.C. § 103 as unpatentable over Nadland in view of Harada, Boufassa, Katz and Evidence Taken before the Joint Committee on Tuberculin 1911.

FINDINGS OF FACT & ANALYSIS

Rejection (1)

The Examiner’s findings and conclusions regarding the rejection of claims 12–16 under § 101 are located on page 2 of the Final Office Action. The basis for the § 101 rejection is the failure of these claims to recite

positive process steps used to achieve the particular product recited (e.g., yogurt, cheese, fermented beverage) (Final Act. 2).

Appellant argues that there is no requirement that every step used to make yogurt, cheese, or fermented beverage be set forth in the claims (Appeal Br. 9–11).

Claims 12–16 either depend from or ultimately depend from claim 1. Claim 1 recites a method used to make fermented soy milk. The series of steps includes adding a lactic acid bacterium to homogenized hydrated powdered soy juice and fermenting the homogenized hydrated powdered soy juice with the lactic acid bacterium to prepare fermented soy milk having a lactic degree of 0.5 to 1.0% (claim 1). Claims 12–14 and 16 further the process of claim 1 by reciting that yogurt, cheese, or lactic acid bacteria beverage is produced comprising at least the fermented soy milk.

The Specification describes that yogurt forms after fermenting the homogenized hydrated powdered soy juice with the lactic acid bacterium (Spec. 15:12–25; 19:10–11; 22:22–25). The Specification further discloses that the fermented soy milk may be processed by routine procedures to obtain many kinds of products such as dairy product lactic acid beverages (sterilized), lactic acid bacteria beverages, yogurts and cheeses (Spec. 23:4–9). The Examiner does not find that non-conventional processes are required to make these products. Rather, the Examiner's finds that claims 12–16 are not considered a process because they fail to recite steps to achieve a particular product (Final Act. 2). Contrary to the Examiner's finding, the Specification's disclosure indicates that the steps in claim 1 result in forming a yogurt. In other words, the method steps in claim 1 yield the desired yogurt product. *See e.g.*, Spec. 15:12–25. The method used to

make the cheese and beverage are disclosed as conventional such that a person of ordinary skill in the art would have understood the process used make these products from the fermented soy juice (Spec. 23:4–9). In other words, we find that a person of ordinary skill in the art would have understood that claims 12–16 are directed to a process.

The Examiner has not shown that claims 12–16 fail to fall within one of the statutory categories of the invention recited in 35 U.S.C. § 101. We reverse the § 101 rejection.

Rejection (2)

The Examiner’s indefiniteness conclusions for claims 12–19 and 21 under § 112, ¶ 2 are located on pages 3 to 4 of the Final Office Action. The basis for the § 112 rejection is the failure of these claims to recite positive process steps used to achieve the particular product recited (e.g., yogurt, cheese, fermented beverage) (Final Act. 3–4).

Appellant contends that the claims are clear that the particular product recited (i.e., yogurt, cheese, or beverage) is produced and includes at least fermented soy milk (Appeal Br. 12–17). With regard to the § 112 rejection of claim 15, Appellant contends that the claim clearly states that a sterilized dairy lactic beverage comprises at least fermented soy milk (Appeal Br. 14).

The test for definiteness is whether one of ordinary skill in the art would understand what is being claimed when the claim is read in light of the Specification. *Orthokinetics, Inc. v. Safety Travel Chair, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986). In the present case, the Specification describes that conventional processes are used to make the cheese or lactic acid beverage in claims 14 and 16 (Spec. 23:4–9). The Specification further

describes that the method steps recited in claim 1 result in forming yogurt (Spec. 15:12–25; 19:10-11; 22:22–25). The Examiner’s only determination with claim 12–16 is that the claims do not recite positive steps to form the cheese, yogurt or beverage (Final Act. 3–4). The Examiner does not address the disclosure in the Specification regarding using conventional processes to form the products or that yogurt results from practicing the steps of claim 1. We find that the Examiner has not established that the preponderance of the evidence supports that claims 12–14, 16–19, and 21 are indefinite.

Claim 15 is on a different footing than claims 12–14, 16–19, and 21. Claim 15 depends from claim 1 and recites: “wherein a sterilized dairy product lactic acid bacteria beverage, the sterilized dairy [sic, dairy] product lactic acid beverage comprising at least the fermented soy milk.” Claim 15 differs from claims 12, 14 and 16 in that each of these claims recites that the product “is produced” whereas claim 15 does not include such language. Because it is unclear from claim 15 how the sterilized lactic acid bacteria beverage relates to the method of claim 1, we determine that the Examiner has established that claim 15 is indefinite. We affirm the Examiner’s § 112, ¶ 2 rejection of claim 15.

Rejections (3) to (6)

The Examiner’s findings and conclusions regarding the § 103(a) rejection over Nadland in view of Harada and Boufassa are located on pages 5 to 8 of the Final Office Action. The Examiner finds, *inter alia*, that because Nadland as modified uses the same materials in the same process the fermented soy milk would have been expected to have the same

characteristics including the recited lactic degree of 0.5 to 1.0% (Final Act. 7–8; Ans. 5–6).

Appellant argues that the Examiner reversibly errs in finding that Nadland, Harada, and Boufassa use like material in a like manner as recited in claim 1 (Appeal Br. 20; Reply Br. 10). Appellant contends that the prior art references as a whole do not disclose features of the present invention, so it unclear how the modified cultured soy milk product of Nadland would have the same lactic degree as recited in claim 1 (Appeal Br. 21).

We agree that the preponderance of the evidence favors Appellant’s argument of non-obviousness. The Examiner finds that Nadland as modified by Harada and Boufassa use the same material in the same manner in determining that the recited lactic degree of 0.5 to 1.0% would have resulted (Final Act. 7–8). Nadland’s process, however, includes the steps of (1) hydrating a protein source that may include soy flour, (2) adding the hydrated protein source to a milk composition, (3) adding fermentation culture to the protein/milk mixture, (4) fermenting to form a dairy product, and (5) cooling the fermented product (Nadland ¶¶ 47–58, 67). In contrast, claim 1 recites adding the lactic acid bacterium to a homogenized hydrated powered soy juice and fermenting to form a prepared fermented soy milk. Nadland includes the additional process step of adding the hydrated protein source to a milk composition before adding the fermenting agent (¶¶ 49, 55). Although claim 1 includes the open-ended transitional claim language “comprising”, it is not clear how the addition of Nadland’s milk composition to the hydrated protein source (e.g., soy flour) before fermentation would affect the lactic degree. The Examiner does not address this difference between Nadland’s process and the steps recited in claim 1.

For the above reasons, we find that the Examiner has not established that Nadland as modified by Harada, and Boufassa teaches using the same materials in the same manner/method as claimed. Accordingly, the Examiner has not established that the claimed lactic degree from 0.5 to 1.0% would have resulted from practicing Nadland's method, which is different than the claimed invention. The Examiner, in this case, has not dispensed with the initial burden of showing that similar materials in a similar process was used by Nadland as modified in order to shift the burden of production to Appellant to show that Nadland's product does not possess the claimed lactic degree. *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977).

On this record, we reverse the §103(a) rejection over Nadland in view of Harada and Boufassa. The § 103(a) rejections of the dependent claims over Nadland in view of Harada, Boufassa, and further in view of either Joint Committee on Tuberculin and Katz are reversed for the same reasons as claim 1.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
12-16	101	Eligibility		12-16
12-19, 21	112	Indefiniteness	15	12-14, 16-19, 21
1, 2, 5, 7, 9-18	103(a)	Nadland, Harada, Boufassa		1, 2, 5, 7, 9-18
3, 4, 6, 21	103(a)	Nadland, Harada, Boufassa, Joint		3, 4, 6, 21

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
		Committee on Tuberculin 1911		
8	103(a)	Nadland, Harada, Boufassa, Katz		8
19	103(a)	Nadland, Harada, Boufassa, Joint Committee on Tuberculin 1911, Katz		19
Outcome			15	1-14, 16-19, 21

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 IN PART