

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

IN RE: MARK GORRIS,
Appellant

2020-1682

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. 12/639,882.

Decided: March 11, 2021

MICHAEL JOHN HICKEY, Lewis Rice LLC, St. Louis, MO,
for appellant. Also represented by MICHAEL ARMSTRONG,
KIRK DAMMAN.

KAKOLI CAPRIHAN, Office of the Solicitor, United States
Patent and Trademark Office, Alexandria, VA, for appellee
Andrew Hirshfeld. Also represented by THOMAS W.
KRAUSE, FARHEENA YASMEEN RASHEED, MOLLY R. SILFEN.

Before O'MALLEY, MAYER, and TARANTO, *Circuit Judges*.

PER CURIAM.

Mark Gorris appeals a decision of the Patent Trial and Appeal Board (“board”) affirming an examiner’s obviousness rejections of proposed claims 21–38 of U.S. Patent Application No. 12/639,882 (the “882 application”). *See Ex parte Gorris*, No. 2018-004209, 2020 WL 601688 (P.T.A.B. Feb. 4, 2020) (“*Board Decision*”). For the reasons discussed below, we affirm.

BACKGROUND

The ’882 application describes the formulation of a “chewable consumable” that contains a “medicinal dose” of cinnamon. J.A. 9; *see also* J.A. 22–23. The application explains that “[c]innamon is believed to act as an appetite suppressant as well as providing other health benefits when taken in a sufficient dose.” J.A. 17. It further states that although cinnamon is used in a variety of foods, such as cereals and cookies, “the inclusion of cinnamon in these foods as a flavoring is in a relatively small dose.” J.A. 17–18. Because the amount of cinnamon contained in a food item is typically very small relative to the item’s total mass, ingesting that food item generally “is insufficient to provide for any meaningful benefit without undue consumption of the food item.” J.A. 18.

The ’882 application explains that a “medicinal dose” of cinnamon can be delivered by placing the cinnamon in a “chewable consumable” and using an unrefined sweetener to bind the chewable consumable’s ingredients together. J.A. 9; *see also* J.A. 36–38. Independent claim 21 is representative:

A chewable consumable comprising:

a medicinal dose of cinnamon, said medicinal dose comprising at least 1 gram and at least 2.5% of the total mass of said chewable consumable;

a fruit additive chosen from the group consisting of: fruit extract, fruit rind and combinations

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thereof, said fruit additive comprising at least 2.5% of the total mass of said chewable consumable;

a grain; and

an unrefined sweetener;

wherein said chewable consumable is formed by said unrefined sweetener binding said cinnamon, said fruit additive, and said grain together without use of additional fat or chain proteins in said binding;

wherein said chewable consumable comprises between about 16 to about 35 grams.

J.A. 9.

The board affirmed the examiner's rejection of claim 21 as obvious over U.S. Patent Application No. 2009/0004334 A1 ("Nair"), see J.A. 408–20, in combination with Lan Su et al., *Total Phenolic Contents, Chelating Capacities & Radical-Scavenging Properties of Black Peppercorn, Nutmeg, Rosehip, Cinnamon & Oregano Leaf*, 100 *Food Chemistry* 990–97 (2007) ("Su"), see J.A. 421–28, as well as a number of other references, see J.A. 429–513. The board explained that because Gorris had only presented arguments addressing the examiner's rejection of claim 21, the rejection of the dependent claims would "stand[] or fall[] with the rejection of claim 21." *Board Decision*, 2020 WL 601688, at *2.

Although Gorris contended that the cinnamon concentration recited in proposed claim 21 "would be beyond that which one skilled in the art would have considered in a nutritional product," the board rejected this argument. *Id.* In the board's view, because "Nair expressly identifies cinnamon as an ingredient intended to provide health benefits," a person "of ordinary skill in the art would have had a reason to maximize the amount of cinnamon contained in the [food] product." *Id.* The board determined, moreover, that

Gorris had failed to establish that the cinnamon concentration level recited in his claims “would have exceeded that which would have been considered with a reasonable expectation of success for the known purpose of providing maximum health benefits.” *Id.*

Gorris then filed a timely appeal with this court. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A) and 35 U.S.C. § 141(a).

DISCUSSION

This court reviews the board’s factual determinations for substantial evidence and its legal determinations de novo. *See In re Van Os*, 844 F.3d 1359, 1360 (Fed. Cir. 2017). Obviousness is a question of law based on underlying factual findings. *See Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1358 (Fed. Cir. 2017). Such factual findings include determinations as to: (1) the scope and content of the prior art; and (2) whether a person of ordinary skill in the art would have been motivated to combine or modify prior art references with a reasonable expectation of success. *See Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1366 (Fed. Cir. 2016); *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1364 (Fed. Cir. 2015).

On appeal, Gorris contends that both the board and the examiner “ignored the fact that the cited prior art references did not disclose, separately or in combination with each other, the amount or percentage of cinnamon claimed in [his] invention’s chewable consumable.” Brief of Appellant 12. In support, he contends that although Nair, the primary reference relied upon by the board and the examiner, “teaches a concentration range of cinnamon for its powdered supplement,” it “gives no indication whatsoever regarding what the amount or percentage of cinnamon would be in any chewable consumable created from Nair’s powdered supplement.” *Id.* (emphases omitted). Additionally, Gorris asserts that a person of ordinary skill in the art

would not have been motivated to “modify Nair in a way that meets” the limitations of proposed claim 21. *Id.* (emphasis omitted).

Having reviewed the record, however, we see no legal error in the board’s analysis and conclude that its factual findings are supported by substantial evidence. Nair describes a nutritional powder which contains cinnamon and which can be incorporated into a variety of chewable food products. J.A. 411–18. Nair explains, moreover, that cinnamon can have a wide range of medicinal benefits. J.A. 411. For example, cinnamon may “provide a natural remedy against adult onset type II diabetes” and may assist in “lowering ‘bad’ LDL cholesterol.” J.A. 411. Cinnamon may also act as a “mild stimulant” and can exhibit “anti-blood clotting action.” J.A. 411.*

Nair further teaches the formulation of a nutritional powder containing cinnamon in an amount as high as twenty percent, by weight, of the powder. J.A. 414. This powder can be incorporated into food products such as cookies and nutrient bars. J.A. 417–18. Other ingredients, such as spices and honey, can be combined with the powder to increase stability and to provide additional nutritional benefits. J.A. 417–18.

Gorris does not meaningfully dispute that Nair teaches the formulation of a nutritional powder with a cinnamon concentration of between approximately 0.1% and approximately 20% by weight, *see* J.A. 361–62, 414, or that this cinnamon concentration range overlaps with the cinnamon concentration recited in claim 21 of his application. He

* Su likewise teaches that cinnamon can confer significant health benefits. *See* J.A. 422. It explains that in addition to providing flavoring, cinnamon exhibits “antimicrobial activity” and can be used “for controlling glucose intolerance and diabetes.” J.A. 422.

asserts, however, that the board erred in affirming the examiner's obviousness rejections because Nair only describes the desired cinnamon concentration in a nutritional powder that is subsequently used to make a chewable consumable, rather than the cinnamon concentration in the chewable consumable itself. *See* Brief of Appellant 17–20.

We disagree. Even assuming *arguendo* that Gorris' reading of Nair is correct, substantial evidence supports the board's determination that a person of ordinary skill in the art would have been motivated to formulate a chewable food product with the claimed cinnamon concentration and that he or she would have had a reasonable expectation of success in doing so. *See Board Decision*, 2020 WL 601688, at *2.

As to motivation, this court has explained that “[t]he normal desire of artisans to improve upon what is already generally known can provide the motivation to optimize variables such as the percentage of a known [ingredient] for use in a known” product. *In re Ethicon, Inc.*, 844 F.3d 1344, 1351 (Fed. Cir. 2017); *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 401 (2007) (emphasizing that “[i]f a person of ordinary skill in the art can implement a predictable variation [of a known product], and would see the benefit of doing so, § 103 likely bars its patentability”); *Genentech, Inc. v. Hospira, Inc.*, 946 F.3d 1333, 1341–42 (Fed. Cir. 2020) (concluding that a skilled artisan would have been motivated to optimize the temperature in a claimed process and explaining that “given the ease with which temperature can be varied, finding an optimal temperature range would have been nothing more than routine experimentation”); *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1368 (Fed. Cir. 2007) (emphasizing that “the discovery of an optimum value of a variable in a known process is usually obvious”). Given that both Nair and Su tout the health benefits of cinnamon and that Nair specifically teaches that a powder containing a concentration of cinnamon as high as twenty percent by weight can be

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incorporated into various food products, J.A. 414, 417–18, substantial evidence supports the board’s determination that a person of ordinary skill in the art would have been motivated to formulate a chewable food product containing the cinnamon concentration recited in proposed claim 21. *See Board Decision*, 2020 WL 601688, at *2 (concluding that a skilled artisan, knowing of cinnamon’s health benefits, would have been motivated to maximize the cinnamon concentration in a food product); *see also KSR*, 550 U.S. at 418 (emphasizing that the obviousness inquiry must “take account of the inferences and creative steps that a person of ordinary skill in the art would employ”).

The board likewise correctly determined that a person of ordinary skill in the art would reasonably have expected to succeed in formulating a “chewable consumable” product that contained a “medicinal dose of cinnamon . . . comprising at least 1 gram and at least 2.5% of the total mass of said chewable consumable.” J.A. 9; *see Board Decision*, 2020 WL 601688, at *2. Although Gorris asserted before the board that a person of ordinary skill in the art would not have included the recited cinnamon concentration in a chewable food product because of cinnamon’s strong flavor, he failed to provide any persuasive evidence to support this contention. *See Board Decision*, 2020 WL 601688, at *2 (stating that Gorris had “not provided evidence that the recited concentration range would have exceeded that which would have been considered with a reasonable expectation of success for the known purpose of providing maximum health benefits”); *see also Pfizer*, 480 F.3d at 1365 (explaining that the prior art need only provide a reasonable expectation of success and that “absolute predictability of success is not required”).

In this regard, we note that Gorris points to no persuasive evidence indicating that a person of ordinary skill in the art would have faced any significant difficulties in creating a chewable food product containing the cinnamon concentration recited in proposed claim 21. Nor did Gorris

provide the board with any persuasive evidence that his recited cinnamon concentration produces unexpected results. *See, e.g., In re Applied Materials, Inc.*, 692 F.3d 1289, 1297 (Fed. Cir. 2012) (concluding that the board correctly rejected claims as obvious where “there was no indication that obtaining the claimed dimensions was beyond the capabilities of one of ordinary skill in the art or produced any unexpectedly beneficial properties”). We have considered Gorris’ remaining arguments but do not find them persuasive.

CONCLUSION

Accordingly, the decision of the Patent Trial and Appeal Board is affirmed.

AFFIRMED