NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

IN RE: COLLEEN M. KAVANAGH,
Appellant

2020-1931

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. 14/172,818.

Decided: April 13, 2021

ERIK R. PUKNYS, Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, Palo Alto, CA, for appellant.

MEREDITH HOPE SCHOENFELD, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA, for appellee Andrew Hirshfeld. Also represented by BENJAMIN T. HICKMAN, THOMAS W. KRAUSE, AMY J. NELSON, FARHEENA YASMEEN RASHEED.

Before DYK, MOORE, and O'MALLEY, *Circuit Judges*.

O'MALLEY, *Circuit Judge*.

Colleen M. Kavanagh ("Kavanagh") appeals from a decision of the Patent Trial and Appeal Board ("Board") affirming an examiner's final rejection of claims 1, 3–5, and

21–23 of U.S. Patent Application No. 14/172,818 ("the '818 application") as obvious under 35 U.S.C. § 103. *Ex parte Kavanagh*, No. 2018-008867, 2020 WL 1951833 (P.T.A.B. Apr. 17, 2020) ("*Board Decision*"). We *affirm*.

I. BACKGROUND

The '818 application, entitled "System and Method for Obtaining Batch Information about a Product," is directed to "[p]roviding test results for major food allergens at the time of purchase and/or consumption" to "help consumers with food allergies and intolerances avoid negative health consequences from cross contact." J.A. 25. As the '818 application explains, while food allergies are prevalent and potentially life-threatening, efforts to minimize cross-contact of food products are voluntary and vary by company. J.A. 18–21. And, although the Food and Drug Administration ("FDA") requires labeling for certain ingredients, "statements about potential cross contact from any of the major food allergens that are not in the ingredients are voluntary." J.A. 22. That voluntary labeling, coupled with non-standard wording among manufacturers, can lead to consumer confusion.

The '818 application states that a "superior step in consumer safety would be to test each batch of a food product for food allergens and make those test results available to consumers in a way that could help them be better informed when making immediate purchasing and consumption decisions." J.A. 24. It then describes a wide variety of data that may be provided to the consumer, including information on major allergens, uncommon allergens, ingredients, cross-contaminants, manufacturing processing agents, and information relevant to the environment in which the product was produced. J.A. 30–32. The application also describes several types of transmission methods, including quick response codes ("QR codes"), bar codes, radio-frequency identifying chips, and Bluetooth

technologies. J.A. 33. A sample data transmission system is shown in Figure 1:

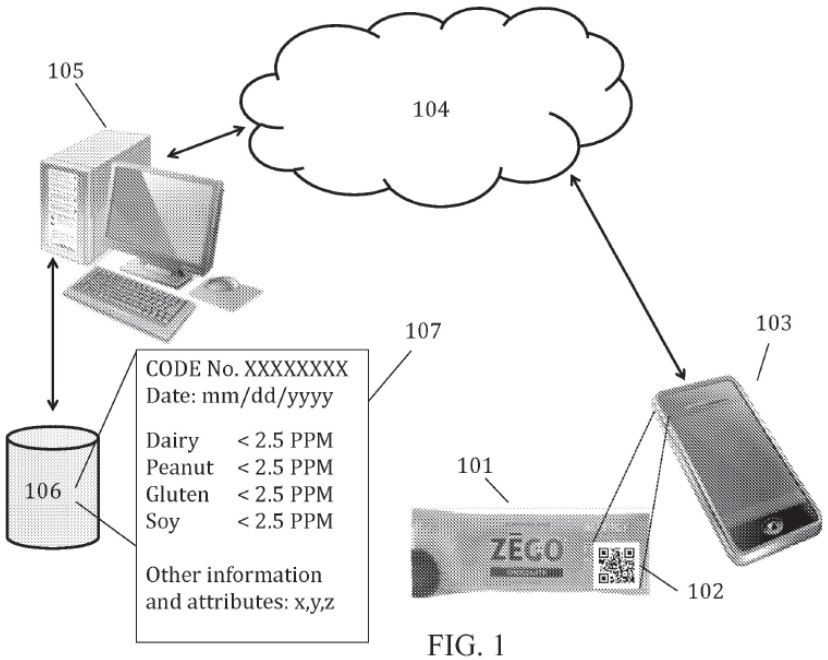

FIG. 1

Figure 1 depicts a food package (101) with a QR code (102) on the label. The consumer can scan the QR code using a smart phone (103), which then transmits the data through a network (104). J.A. 32–33. The QR data is received at a server (105). J.A. 33. The server accesses a memory (106) that contains batch data (107) for the food product. *Id.* In this example, the batch data includes the allergens dairy, peanut, gluten, and soy. The server then transmits the batch data back through the network to the consumer's smart phone.

Independent claim 1, the only claim at issue on appeal, is representative:

> A method for making a safer food product, said method comprising:
>
> selecting ingredients for said food product, said ingredients being chosen from a group of ingredients

> not known to cause an adverse reaction in a person having at least one food allergy or intolerance;
>
> manufacturing a batch of a food product, said manufacturing including combining said ingredients;
>
> packaging at least a portion of said combined ingredients into at least one package;
>
> providing an indicator for said batch on said package;
>
> testing at least a portion of said batch for cross-contact, said testing occurring during or after manufacture;
>
> storing results of said testing on a server computer;
>
> receiving an inquiry about said batch of said food product from a remote device, said inquiry including information derived, at least in part, from said indicator;
>
> obtaining the testing results of said batch in response to said inquiry; and
>
> transmitting said testing results of said batch to the device from which the inquiry was received, wherein said testing results are transmitted to the device from which the inquiry was made when the test results show that no measurable cross-contact has occurred and when the test results show that some measurable cross-contact has occurred.

Board Decision, 2020 WL 1951833, at *1; J.A. 3.

Three prior art references are relevant to this appeal: U.S. Patent Application No. 2015/0186966 ("Holman"), U.S. Patent Application No. 2013/0233919 ("van Waes"), and U.S. Patent Application No. 2008/0085343 ("Petty"). Holman teaches a method for preparing customized food products and packaging for consumers in order to meet their dietary needs and preferences. Holman's customized

food preparation system includes manufacturing, packaging, and obtaining test results for a variety of food products. J.A. 642; J.A. 648–49. Holman also discloses acquiring and storing user information, including preferences, and test results for certain ingredients. J.A. 648. In Holman's system, a consumer selects ingredients for a food product and the food product is manufactured and placed in customized packaging. The packaging provides various types of information, including a list of ingredients missing from the food product, the calorie content of the customized food item, or certain testing results. J.A. 639.

van Waes discloses use of a data matrix code, such as a barcode, to track and trace food products. J.A. 568. In van Waes, a user scans the data matrix code using a smart phone and can then access data in a database. J.A. 572. Examples of information that may be included in the database include the name of a product, the date of storage, the recipe, the ingredients, or an "indication of risk of (cross-) contamination." J.A. 572–73.

Petty discloses preparing a low allergenic food bar and testing batches of the food bar during manufacture to ensure that it substantially excludes compounds derived from the "Big 8" allergens (dairy products, eggs, shellfish, soy, fish, peanuts, tree-nuts, and wheat). J.A. 673; J.A. 678.

The examiner rejected claim 1 as unpatentable over Holman in view of van Waes and further in view of Petty.[1]

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[1] The examiner also rejected claims 3–5 and 21–23 as obvious over Holman, van Waes, and Petty, in combination with additional prior art. On appeal, Kavanagh states that she "is not separately challenging the rejections of the dependent claims" such that "the fate of those claims will be [the] same as the fate of claim 1." Appellant's Br. 20 n.2. Because Kavanagh only challenges the rejection of claim 1, we limit our analysis to that claim.

Specifically, the examiner found that Holman's disclosed method of customizing and packaging a food product encompassed most of the steps of the claimed method, including: selecting ingredients, manufacturing a batch of food product, packaging the food product, providing a label, testing a portion of the batch, and storing the test results. J.A. 312–13. The examiner relied on van Waes for the steps of receiving an inquiry about a food product from a remote device, obtaining the data, and transmitting it to the device. J.A. 313–14. And the examiner found that "Petty teaches testing at least a portion of a batch for cross-contact, said testing occurring during or after manufacture." J.A. 314.

As to motivation to combine, the examiner explained that one of ordinary skill in the art would have recognized that making information accessible to the consumer via their mobile device (as taught by van Waes) would be an obvious improvement to Holman's food product because it would allow the consumer to "track and trace" information about the product. *Id*. The examiner further found that it would have been obvious to one of skill in the art to modify the customized food batches and testing of Holman in view of van Waes to test the batches of customized food for cross-contamination during or after production (as taught by Petty) to ensure that the food product is free from allergens. J.A. 315.

During examination, Kavanagh submitted several articles praising the claimed invention. J.A. 390–93, 412. The examiner noted that the evidence had not been submitted with a declaration or affidavit, as the rules require. But the examiner explained that, even if she considered the evidence, it was insufficient to overcome the obviousness rejection. J.A. 412.

Kavanagh appealed the examiner's rejection to the Board and the Board affirmed. In doing so, the Board expressly adopted the findings and rationale provided by the

examiner. Specifically, the Board explained that Holman discloses the majority of the claimed steps for manufacturing a safer food product, van Waes discloses obtaining and transmitting data about the food product, and Petty discloses testing the batch "for cross-contact, said testing occurring during or after manufacture." *Board Decision*, 2020 WL 1951833, at *2. The Board also affirmed the examiner's rationale for combining the references, as one of ordinary skill would have recognized that: (1) the teachings of van Waes would have improved the invention of Holman "by providing a detachable printed image for track and trace purpose of a product"; and (2) the teachings of Petty would have improved Holman in view of van Waes by batch testing, during or after production of the food product. *Id.*

The Board then considered and rejected Kavanagh's arguments. First, although Kavanagh argued that van Waes does not specifically disclose transmitting test results to consumers, the Board explained that the rejection was based on a combination of references. In particular, "van Waes discloses that the data regarding the food product is transmitted to the device via an accessible web page, and Petty was relied on as disclosing 'testing for cross-contact occurring during or after manufacture of the food product.'" *Id.*at *3. The Board explained that any type of food product data, such as the specific test results of Petty, "would equally benefit from the type of data accessibility of van Waes." *Id.* And the Board agreed with the examiner that the combination of van Waes and Petty sufficiently encompasses the transmission of all test results regardless of whether there is some cross-contact detected or none.

Next, the Board rejected Kavanagh's argument that Holman does not teach or suggest testing a batch of food product for cross-contamination. Because the examiner's rejection was based on a combination of the references, such that Holman's testing of food products is modified by Petty's teaching to test for cross-contact occurring during or after manufacture of the food product, the Board found

Kavanagh's focus on individual references unpersuasive. *Id*.

Finally, the Board considered the objective evidence of non-obviousness and agreed with the examiner that the articles submitted provided, at most, "scant evidence of some industry praise." *Id.* at *4. The Board found that the articles were conclusory and that Kavanagh failed to show that providing test results to a user was a long-felt need. *Id.* at *5. Nor did Kavanagh make any showing of a nexus between the enthusiastic reactions in the articles and the claimed subject matter. *Id.* at *5–6.

The Board found no error in the examiner's rejection of claim 1 based on the combination of Holman, van Waes, and Petty.

Kavanagh timely appealed to this court. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

II. DISCUSSION

Obviousness is a question of law based on underlying factual findings relating to "the scope and content of the prior art, differences between the prior art and the claims at issue, the level of ordinary skill in the pertinent art, and any objective indicia of non-obviousness." *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013). Relevant objective indicia include, among other things, commercial success, industry praise, long-felt but unmet need, failure of others, and unexpected results. *See Apple Inc. v. Samsung Elecs. Co.,* 839 F.3d 1034, 1048, 1052–53 (Fed. Cir. 2016) (en banc) (citation omitted).

We review the Board's factual determinations for substantial evidence and its legal determinations de novo. *Celgene Corp. v. Peter*, 931 F.3d 1342, 1349 (Fed. Cir. 2019). Substantial evidence is "more than a mere scintilla and means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Id.* at 1349 (citation omitted). Given this deferential standard, even if

"two different, inconsistent conclusions may reasonably be drawn from the evidence in record, an agency's decision to favor one conclusion over the other is the epitome of a decision that must be sustained upon review for substantial evidence." *In re Jolley,* 308 F.3d 1317, 1329 (Fed. Cir. 2002).

On appeal, Kavanagh argues that the Board erred when it: (1) rejected the claims despite the lack of any prior art disclosing the key element of the claimed invention—"providing to a consumer testing results"; and (2) overlooked important objective indicia of non-obviousness, including industry praise and long-felt need. Appellant's Br. 31–35. We address each issue in turn.

A. The Prior Art Teaches the Steps of Claim 1

First, the Board made sufficient factual findings to support its obviousness conclusion, and those findings are supported by substantial evidence. An obviousness analysis must account for the teachings of the prior art as a whole in light of the common sense and creativity of a person of ordinary skill in the art. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419–21 (2007). When a patent "'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious" and unpatentable. *Id.* at 417 (quoting *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)).

The '818 application merely rearranges old methods of food manufacturing, packaging, and testing. Indeed, Kavanagh conceded during prosecution that the '818 application "does not claim to have invented new methods of food manufacturing, packaging, or testing." J.A. 287. Instead, it seeks to combine "these three known steps . . . into a new application of . . . old ideas." *Id.* As the Board explained, however, the claimed method steps are disclosed in the three prior art references of record: Holman discloses food product testing, van Waes discloses data storage and

access, and Petty discloses testing for cross-contact during or after manufacture of the food product. *Board Decision*, 2020 WL 1951833, at *4. The Board agreed with the examiner that a person of ordinary skill in the art would have been motivated to modify the food product testing of Holman to incorporate a barcode or QR code, as taught by van Waes, in order to track and trace a food product. *Id.* at *2. And the Board found that it would have been obvious to incorporate the results from cross-contact testing as disclosed in Petty into the combination of Holman and van Waes, to ensure the food product is substantially free of allergens. *Id.* Substantial evidence supports the Board's finding of motivation to combine.

Kavanagh maintains that the Board failed "to identify any reference that teaches providing to a consumer testing results—especially testing results showing cross-contact." Appellant's Br. 34–35. Kavanagh also argues that Petty cannot be relied upon to show transmitting test results that show cross-contact. *Id.* at 36. But a finding of obviousness "cannot be overcome 'by attacking references individually where the rejection is based upon the teachings of a combination of references.'" *Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1050 (Fed. Cir. 2019) (quoting *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986)).

Here, the Board explained that the obviousness rejection was based on a combination of the prior art. In particular, the prior art discloses that it was known to test a food product for cross-contact (Petty) and transmit data, including data about the risk of contamination (van Waes). As the Board explained, "any type of the stored/retrieved food product data, such as the specific test results of Petty, would equally benefit from the type of data accessibility of van Waes." *Board Decision*, 2020 WL 1951833, at *3. Accordingly, a skilled artisan would have found it obvious to transmit data about a food product, including data about cross-contact, to a consumer via a QR code.

B. Objective Indicia of Non-Obviousness

Next, Kavanagh argues that the Board failed to properly weigh the objective indicia of non-obviousness. We disagree.

Kavanagh submitted six articles praising the claimed invention as evidence of industry praise and long-felt, but unmet need. The articles included statements from "experts in the field" calling the invention the "'next generation' of food safety" and describing it as "so unique" and "Super Cool!" *Board Decision*, 2020 WL 1951833, at *4. As an initial matter, the Board noted that Kavanagh failed to properly submit the evidence to the examiner in the form of a declaration or affidavit. The Board nevertheless "fully considered the evidence" and concluded that it was insufficient to show "that the claims would have been nonobvious." *Id.* at *5. Accordingly, despite Kavanagh's argument to the contrary, the Board did not disregard the articles.

As the Board explained, objective evidence of non-obviousness must be relevant to the subject matter as claimed, and "there must be a sufficient relationship between that evidence and the patented invention." *In re Paulsen*, 30 F.3d 1475, 1482 (Fed. Cir. 1994). The Board found that nothing in the articles Kavanagh submitted tied the praise of the invention or its success to the claimed features. *Board Decision*, 2020 WL 1951833, at *5–6. And the Board agreed with the examiner that the articles contained "general comments by other entities in the field" that were both conclusory and lacked "persuasive factual support." *Id*. at *5. Substantial evidence supports the Board's findings.

The Board further found that Kavanagh failed to provide concrete evidence of a long-felt, but unmet need. *Id.* Kavanagh argues that the Board applied an incorrect standard in requiring her to prove that others attempted to create the claimed process, but failed. Appellant's Br. 48. Not so. The Board merely explained that "absence of the specific claimed process does not conclusively prove

that there was a long felt need for that method of manufacturing food products. Nor does the absence of the claimed method show that others attempted to create such a process, but failed at doing so." *Board Decision*, 2020 WL 1951833, at *5. Instead, we have said that long-felt need involves a showing of "an articulated identified problem and evidence of efforts to solve that problem." *Tex. Instruments Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993).

Kavanagh maintains that the articles describe the invention as solving long-standing food safety concerns about cross-contact. While that may be true, the Board found that the evidence failed to show that the claimed process—"testing a portion of a manufactured batch of food and providing the test results to a user"—was a long-felt need. *Board Decision*, 2020 WL 1951833, at *5. As the government points out, moreover, "there are a multitude of reasons why manufacturers might have been incentivized NOT to test their products and publicize their results, including liability for inaccurate results and the cost of testing and publicizing." Appellee's Br. 23. Accordingly, the absence of the claimed process may have had nothing to do with a long-felt, but unmet need.

We give the Board "broad deference" in its weighing of objective evidence of non-obviousness. *In re Inland Steel Co.*, 265 F.3d 1354, 1366 (Fed. Cir. 2001). On this record, we discern no error in the Board's finding that Kavanagh's limited evidence of industry praise and long-felt need was not entitled to substantial weight.

III. CONCLUSION

We have considered Kavanagh's remaining arguments and find them unpersuasive. For the reasons discussed above, we *affirm* the Board's decision rejecting claims 1, 3–5, and 21–23 of the '818 application as obvious.

AFFIRMED

COSTS

No costs.