NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

IN RE KEVIN P. EATON

2013-1104

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Serial No. 11/145,716.

Decided: November 22, 2013

CASEY L. GRIFFITH, Klemchuk Kubasta, LLP, of Dallas, Texas, for appellant.

NATHAN K. KELLEY, Deputy Solicitor, United States Patent and Trademark Office, of Alexandria, Virginia, for appellee. With him on the brief were MARY L. KELLY and JOSEPH G. PICCOLO, Associate Solicitors.

Before RADER, *Chief Judge,* LOURIE, and MOORE, *Circuit Judges.*

PER CURIAM

The U.S. Patent and Trademark Office, Patent Trial and Appeal Board (Board), affirmed the examiner's rejection of all claims in U.S. Patent Application No.

11/145,716 ('716 application). This court reverses the Board's anticipation and obviousness determinations and remands.

I.

On June 6, 2005, Kevin Eaton filed the '716 application, entitled "Treatment of Dermatological Conditions." The '716 application claims a method of treating psoriasis by administering a multiple vitamin supplement composition. J.A. 55, 284. The claims-at-issue on appeal—claims 1, 8, 9, and 10—specifically recite a vitamin supplement composition of folic acid, vitamin B_{12}, and vitamin B_6. J.A. 55.

The claims-at-issue further recite that the composition is "essentially free of anti-oxidants." J.A. 55. The Summary of the Invention states:

> By "essentially free" it is meant that the vitamin composition should not contain an amount of antioxidants which would tend to damage and inactivate some of the vitamin B_{12} and/or folic acid of the vitamin supplement. The presence of lower amounts of antioxidants would not render the vitamin composition of the present invention ineffective or of reduced effectiveness.

J.A. 286. The specification notes that "among the antioxidants especially to be avoided is added vitamin C." J.A. 288. Although the specification acknowledges that "antioxidants may be present during the preparation" of the vitamin supplements, the antioxidants should be "removed after[] [the preparation], either completely or at least to a level where they have virtually no effect on the vitamin components of the present invention." J.A. 288. Because the specification acknowledges that antioxidants may be present during preparation, it teaches "processes wherein the folic acid, vitamin B_{12}, and/or vitamin B_6 ha[ve] been tested for the presence of antioxidant and

shown to be free of antioxidant." J.A. 288. Similarly, the specification teaches that because the "vitamin supplement compound [] is meant to be essentially free of antioxidants, any carrier, [or] filler . . . used to prepare a tablet, [or] capsule . . . should also be essentially free of anti-oxidants." J.A. 288.

Independent claim 1 is representative:

> 1. A method of treating psoriasis by administering to a person a vitamin supplement composition comprising at least about 25 micrograms to about 2,200 micrograms of folic acid, at least about 25 micrograms to about 2,500 micrograms of vitamin B_{12}, and at least about 0.5 milligrams to about 20 milligrams of vitamin B_6, wherein said composition is essentially free of anti-oxidants.

J.A. 55. Claim 9 teaches the method of claim 1 wherein the multiple components are in different concentrations: 800 micrograms (μg) of folic acid, 115 micrograms of vitamin B_{12}, and 10 milligrams (mg) of vitamin B_6. J.A. 55. Claims 8 and 10 teach the methods of claims 1 and 9 in tablet form, respectively. J.A. 55.

The examiner rejected the '716 application's claims as anticipated or obvious in view of five prior art references. J.A. 64–72. Relevant to the claims-at-issue, the examiner rejected claim 1 under 35 U.S.C. § 102(b) as anticipated by DE Patent No. 10053155 A1 (Jungkeit). J.A. 64–72, 298–305. The examiner rejected claims 1 and 8–10 under 35 U.S.C. § 103(a) as obvious in view of Jungkeit and U.S. Patent No. 6,107,349 (Mantynen or the '349 patent). J.A. 64–72, 322–26.

Jungkeit was filed in 2000 and discloses the use of a multivitamin preparation for the treatment of psoriasis. J.A. 300. The preparation specifically contains vitamin B_1, vitamin B_2, nicotine amide, dexpanthenol, biotin, folic

acid, vitamin B_6, vitamin B_{12}, and two known antioxidants: vitamin C and vitamin E. J.A 300. Because psoriasis is not considered to be the result of vitamin deficiencies, Jungkeit notes that that "effectiveness of the multivitamin preparation identified . . . is therefore not explainable with conventional theories." J.A. 302. Specifically, Jungkeit teaches 500 μg of folic acid, 20 mg of vitamin B_6, 150 μg of vitamin B_{12}, 200 mg of vitamin C, and 50 mg of vitamin E. Thus, Jungkeit teaches 250 mg of antioxidants in combination with approximately 20 mg of B-complex vitamins and 0.5 mg of folic acid.

Mantynen was filed in 1998 and discloses the "use of a novel composition comprising Vitamin E, evening primrose oil and B-complex vitamins." '349 patent, col. 1 ll. 6–8. Mantynen teaches that the "compounds act synergistically" because "[w]hen administered alone, the compounds do not produce significant improvements in psoriasis." '349 patent, col. 3 ll. 35–38. Specifically, Mantynen teaches that "Vitamin E is postulated to have synergistic effect when added to [evening primrose oil] . . . by stabilizing the cell membrane." '349 patent, col. 4 ll. 50–54. Thus, all of Mantynen's claims include folic acid, vitamin E, vitamin B_6, and vitamin B_{12}. '349 patent, claims 1–11. And, the preferred dosages teach a greater amount of vitamin E than B-complex vitamins or folic acid.

Based, in part, on Jungkeit and Mantynen, the examiner issued a Final Office Action on May 21, 2010, rejecting claims 1, 8–11, and 14 of the '716 application. The Board affirmed the rejections.

The Board found that the specification defines the phrase "essentially free of anti-oxidants" to "allow antioxidants as long as they do not damage or inactivate the B_{12} or folic acid." J.A. 4. Thus, the Board agreed with the examiner that claim 1 of the '716 application could be "reasonably interpreted to allow for 200 μg of vitamin C" because "Jungkeit's composition containing 200 μg of

vitamin C was effective [at] treat[ing] psoriasis." J.A. 4–5. However, Jungkeit actually discloses 200 *mg* of Vitamin C. J.A. 305. Similarly, because the applicant's arguments concerning the obviousness rejections relied on the same "essentially free of anti-oxidants" arguments, the Board found them unpersuasive. J.A 9.

Mr. Eaton appeals the Board's anticipation rejection of claim 1 because "Jungkeit does not describe a vitamin composition that is essentially free of anti-oxidants" and thus cannot anticipate claim 1. Appellant's Br. at 5. Similarly, Mr. Eaton appeals the Board's obviousness rejection of claims 1 and 8–10 over Jungkeit and Mantynen because "Mantynen fails to rectify the deficiencies of Jungkeit." Appellant's Br. at 8. This court has jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II.

This court reviews claim construction without deference. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455–56 (Fed. Cir. 1998) (en banc).

Anticipation is a question of fact. *Rapoport v. Dement*, 254 F.3d 1053, 1058 (Fed. Cir. 2001). This court reviews the Board's factual findings for substantial evidence. *In re Mouttet*, 686 F.3d 1322, 1330 (Fed. Cir. 2012).

Obviousness is a question of law based on underlying facts:

> An analysis of obviousness must be based on several factual inquiries: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art at the time the invention was made; and (4) objective evidence of nonobviousness, if any.

In re Kubin, 561 F.3d 1351, 1355 (Fed. Cir. 2009); *see also Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

In the present case, the Board's affirmance—and the examiner's rejections—turn on the meaning of the claim limitation "essentially free of antioxidants." The parties dispute the construction of this phrase. However, both parties acknowledge that the specification defines "essentially free of antioxidants" functionally to mean that the claimed composition "should not contain an amount of antioxidants which would tend to damage and inactivate some of the vitamin B_{12} and/or folic acid of the vitamin supplement." J.A. 286; Appellant's Br. at 5; Appellee's Br. at 14. The specification goes on to state that "lower amounts of antioxidants" may be present if they do not render the claimed composition "ineffective or [] reduce[] effectiveness." J.A. 286. The parties' disagreement stems from the fact that the specification does not, however, quantify what is a "lower amount[]" or what "amount of antioxidants [] would tend to damage or inactivate" the vitamin B_{12} or folic acid, but instead relies on functionality.

Referring to the specification, the Board correctly determined that "essentially free" of antioxidants means a composition that "should not contain an amount of antioxidants which would tend to damage and inactivate *some* of the vitamin B_{12} and/or folic acid of the vitamin supplement." J.A. 3 (emphasis added). The Office appears to agree that the construction further requires that the amount of antioxidant "would not render the vitamin composition of the present invention ineffective *or of reduced effectiveness*," as clarified in the specification. Appellee's Brief 11, 14 (emphasis added). For this reason, the construction does not require "no" added vitamin C, vitamin E, or the like. Rather, the correct construction requires that "lower amounts" of antioxidants may be present, but the effectiveness of the composition must not be reduced.

A review of the Board's decision reveals that the Board was not faithful to this construction. Anticipation requires "that the four corners of a single, prior art document describe every element of the claimed invention." *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). To anticipate, it is not enough for the prior art composition to have an amount of antioxidant that merely allows the composition to be "effective." To anticipate, the prior art compositions must have an amount of antioxidant that does not result in "reduced effectiveness." Substantial evidence supports the Board's finding that "Jungkeit treated psoriasis with a composition comprising B_6, B_{12}, and folic acid in the requisite amounts." J.A. 3; *see* J.A. 304–305. However, substantial evidence does not support the Board's finding that Jungkeit's composition is "essentially free of antioxidants." The Board and the examiner have not analyzed the prior art for reduced effectiveness.

The Office argues that "the Board correctly found that claim 1 permits antioxidants in amounts that do not render the vitamin supplement of the claimed methods *ineffective*." Appellee's Br. 18 (emphasis added). The Board and examiner assumed, without any rationale, that because Jungkeit states that its composition was effective at treating psoriasis, Jungkeit's use of 200 mg of vitamin C would meet the applicant's definition of "essentially free of antioxidants." *See* J.A. 4–5. Jungkeit's disclosed compositions may be effective, but still have an amount of antioxidant that "inactivate[s] some of the vitamin B_{12} and/or folic acid." J.A. 286. In short, the fact that Jungkeit's composition is not "ineffective" does not mean that it reads on the "essentially free of antioxidants" limitation. To fall within the scope of the claims, the prior art composition must also not have a *reduced* effectiveness due to the presence of antioxidants. The Office has not established that the cited references disclose composi-

tions whose effectiveness is not reduced at all due to the presence of the antioxidants.

The Board's decision is particularly problematic given a clear factual error appearing in both the examiner's and the Board's analysis of Jungkeit. Specifically, Jungkeit discloses 200 *milligrams* of vitamin C—not 200 *micrograms*, as stated by the examiner. J.A. 305. The Office's analyses repeatedly relied on the understanding that "Jungkeit's composition contain[ed] 200 μg of vitamin C." J.A. 4, 65 (emphasis added). In truth, Jungkeit discloses 1000 times that much vitamin C—200 mg. J.A. 305. This error is not harmless. Indeed, Jungkeit teaches the use of vitamin C in a significantly greater quantity than any of the other nine components in Jungkeit's claimed composition. J.A. 304–05.

For example, the examiner's rejection stated:

> "It is not clear from [the definition in the specification] what amount [of antioxidant] would 'damage or inactivate' some of the vitamin B_{12} and/or folic acid. However, it is clear from Jungkeit that the *amount of vitamin C present in the composition (200μg)* does not damage and inactivate the vitamin B_{12} and/or folic acid."

J.A. 65 (emphasis added). The Board adopted the examiner's explanation. J.A. 4. This error further undermines the Board's conclusion that the prior art discloses compositions that are "essentially free" of antioxidants. When the reasoning repeatedly adopts such a misstatement, substantial evidence cannot support a finding that Jungkeit met the "essentially free of antioxidants" element.

Turning to obviousness, the Board adopted the examiner's reasoning that it would have been obvious for one of ordinary skill to "adjust the concentrations of folic acid, vitamin B_6, and vitamin B_{12} to arrive at an optimum

workable range." J.A. 67. However, this finding does not provide a rationale for adjusting the concentrations of *antioxidants* in Jungkeit or Mantynen to be "essentially free of antioxidants." Here, the Board's factual error regarding the amount of antioxidant present in Jungkeit taints its obviousness conclusion. In fact, both Jungkeit and Mantynen disclose compounds where the concentration of antioxidants is greater than the concentrations of either folic acid or the B-vitamins.

The Office has not established on this record that a motivation exists to modify Jungkeit or Mantynen to be essentially free of antioxidants. The '716 application not only teaches a compound "essentially free of antioxidants," but specifically teaches that "the antioxidant[] especially to be avoided is added vitamin C." J.A. 288. In comparison, the amount of vitamin C in Jungkeit's claimed composition is over three times greater than the next-most prevalent component. J.A. 304–05. And Jungkeit notes that the effectiveness of this specific concentration of components is "not explainable with conventional theories." J.A. 302.

Similarly, Mantynen discloses a "novel composition" comprising a known antioxidant—vitamin E—evening primrose oil, and B-complex vitamins. Together, this "specific combination" of compounds "act[s] synergistically" to produce improvements in psoriasis that does not occur when the compounds are administered alone. '349 patent, col. 3 ll. 32–38. "[I]n the face of such divergent compositions with express disclaimers of the other's contents," the record demonstrates neither a motivation to "adjust" those synergistic concentrations nor a motivation to combine them. *See Leo Pharm. Prods., Ltd. v. Rea*, 726 F.3d 1346, 1356 (Fed. Cir. 2013). Therefore, this court reverses the Board's obviousness determination.

IV.

For the foregoing reasons, this court reverses the Board's anticipation and obviousness determinations. The case is remanded for further proceedings consistent with this opinion.

REVERSED AND REMANDED