NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

DEXCOM, INC.,
Appellant

v.

COKE MORGAN STEWART, ACTING UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND ACTING DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE,
Intervenor

2024-1291

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2022-00908.

Decided: August 19, 2025

JOHN D. VANDENBERG, Klarquist Sparkman, LLP, Portland, OR, argued for appellant. Also represented by SCOTT E. DAVIS, SARAH ELISABETH JELSEMA, ANDREW M. MASON.

MAUREEN DONOVAN QUELER, Office of the Solicitor,

United States Patent and Trademark Office, Alexandria, VA, argued for intervenor. Also represented by PETER J. AYERS, MARY L. KELLY, AMY J. NELSON.

Before MOORE, *Chief Judge*, STOLL, *Circuit Judge*, and WANG, *District Judge*.[1]

WANG, *District Judge.*

Patent owner DexCom, Inc. ("DexCom") appeals from a final written decision of the Patent Trial and Appeal Board ("Board") in an inter partes review ("IPR") initiated by Appellee Abbott Diabetes Care, Inc. ("Abbott").[2] In its decision, the Board concluded that Claims 1–3 and 11–13 of U.S. Patent No. 10,792,193 ("the '193 patent") were unpatentable as obvious over prior art of record. For the reasons below, we *affirm*.

BACKGROUND

This appeal involves implantable glucose sensors used to monitor a patient's blood glucose levels. DexCom's '193 patent discloses one such sensor, a "transcutaneous continuous glucose sensor system." J.A. 116 col. 55 l. 43. "Transcutaneous" refers to the fact that the sensor is implanted partially below the patient's skin. One difficulty encountered with implanted glucose sensors was that

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[1] Honorable Nina Y. Wang, District Judge, United States District Court for the District of Colorado, sitting by designation.

[2] Abbott withdrew from this appeal before oral argument. Pursuant to 35 U.S.C. § 143, the Acting Director of the United States Patent and Trademark Office ("Acting Director") has exercised her right to intervene in this appeal. However, the Acting Director relies on Abbott's brief, so we refer to the arguments in the response brief as made by Abbott.

many of the devices tend to lose their function with time due to the body's local inflammatory response to the implant, known as foreign body response ("FBR"). J.A. 89 col. 1 ll. 61–66, col. 2 ll. 1–16. The invention of the '193 patent seeks to address the negative effects of FBR. *Id.* at col. 2 ll. 20–23.

The sensor disclosed in the '193 patent is "amperometric," meaning it uses electrodes to measure glucose levels based on changes in electrical current. J.A. 292 ¶¶ 26–27 (citing J.A. 113 col 50 ll. 29–41). One mechanism of addressing the negative effects of FBR is a sensor configuration that makes use of the barrier cell disruptive layer that promotes tissue in-growth adjacent to the biosensor. J.A. 92 col. 7 ll. 66–67, col. 8 ll. 1–19. Different sensors may use two or three electrodes in different structural arrangements. For instance, representative Claim 1 of the '193 patent claims a sensor with a five-layer stacked arrangement, using three electrode layers separated by two layers of non-conductive material:

> 1. A transcutaneous continuous glucose sensor system comprising:
>
> a substantially planar sensor, the sensor comprising:
>
> a first conductive layer associated with a first electrode;
>
> a first non-conductive layer located at least in part over the first conductive layer;
>
> a second conductive layer associated with a second electrode, wherein the second conductive layer is located at least in part over the first non-conductive layer;

> a second non-conductive layer located at least in part over the second conductive layer;
>
> a third conductive layer associated with a third electrode, wherein the third conductive layer is located at least in part over the second non-conductive layer; and
>
> a membrane located over at least a portion of a working electrode;
>
> wherein at least one of the first electrode, the second electrode, or the third electrode is the working electrode, and wherein the working electrode is configured to measure a signal indicative of a glucose concentration.

J.A. 116 col. 55 ll. 43–65. Claim 11 specifies the order of the three electrode layers but is otherwise identical to Claim 1. *Id.* at col. 56 ll. 29–49. Claims 2–3 and 12–13 depend respectively on Claims 1 and 11. *Id.* at col. 55 ll. 66–67, col. 56 ll. 1–3, col. 56 ll. 50–54.

After DexCom sued Abbott alleging, inter alia, infringement of the '193 patent, Abbott petitioned for *inter partes* review of Claims 1–3 and 11–13 of the '193 patent. J.A. 3, 200. Relevant here, Abbott asserted that the challenged claims would have been obvious over prior art reference U.S. Patent Application Publication No. 2005/0215871 ("Feldman"). J.A. 228–46. Abbott specifically argued that Figures 4A, 4B, and 2A of Feldman would render the challenged claims obvious to a skilled artisan.

Feldman discloses various blood glucose sensors that "may be placed internally, transcutaneously, or externally, relative to a body." J.A. 3093 ¶ 0002. Feldman's Figure 4A, reproduced below, depicts a three-electrode sensor,

"with a portion of the sensor transcutaneously inserted into the subcutaneous space." J.A. 3086 fig. 4A, 3107 ¶ 0105.

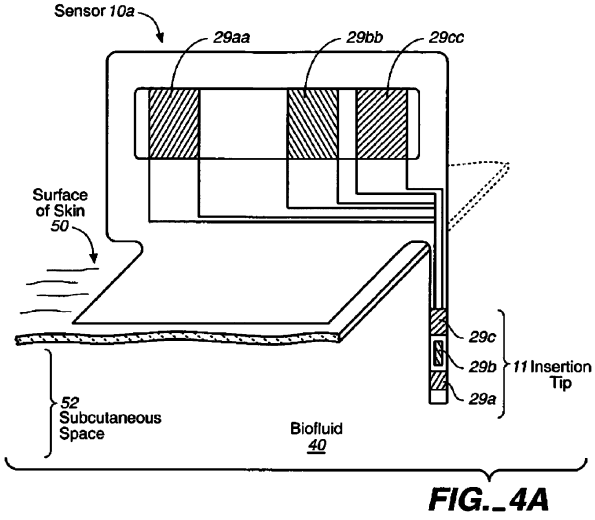

FIG._4A

Figure 4B "provides an expanded and cutaway view" of the sensor insertion tip 11 in Figure 4A. J.A. 3086 fig. 4B, 3107 ¶ 0105.

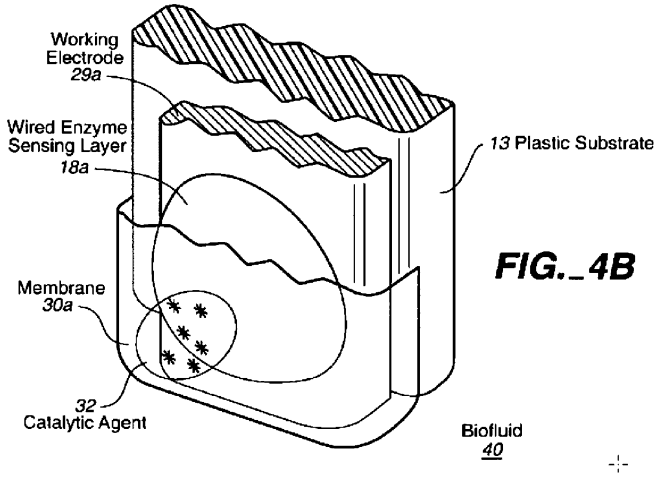

FIG._4B

And Feldman's Figure 2A shows a "two-electrode amperometric glucose sensor" with the electrode layers separated by a plastic substrate. J.A. 3083 fig. 2A, 3105 ¶ 0097.

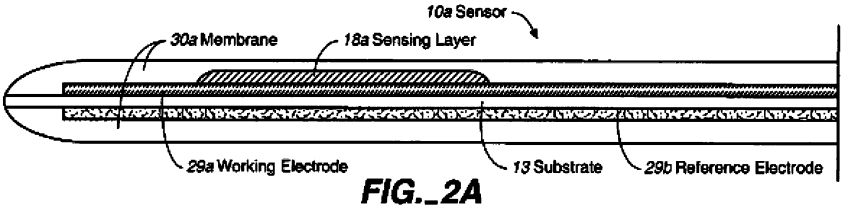

FIG._2A

Relying on its expert, Dr. Smith, Abbott argued that a skilled artisan "would have understood from the depictions in FIGS. 4A and 4B that the three conductive layers associated with the electrodes are located overtop each other in a stacked fashion (similar to FIG. 2A)." J.A. 233–34, 356 ¶ 207. Abbott reasoned that Figure 4A confirms the stacked arrangement because one of the electrode "trace" lines connecting an exterior electrode to the insertion tip covers the other two trace lines. J.A. 233. Abbott further argued that it would have been obvious to a skilled artisan to include non-conductive layers between the electrode layers to prevent a short circuit between the electrodes. J.A. 234–36.

The Board instituted the IPR and, after a hearing, issued a final decision holding the challenged claims unpatentable as obvious in view of Feldman. Considering the testimony of both sides' experts, the Board credited Dr. Smith's testimony that a skilled artisan would have understood Feldman's Figure 4A as encompassing three electrode layers "located overtop each other in a stacked fashion." J.A. 43–44. Figure 2A further corroborated the understanding of Figure 4A as using a stacked arrangement. J.A. 43. Although DexCom's expert, Dr. Tapsak, submitted alternative interpretations of Figure 4A, the Board "[did] not find the existence of these alternatives to meaningfully undermine Dr. Smith's testimony." J.A. 38. The Board concluded that "Feldman's Figures 4A–B would have been understood and interpreted by a person of ordinary skill in the art as encompassing" the claimed five-layer arrangement of stacked electrodes and non-

conductive layers. J.A. 53, 55–56. DexCom appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

Obviousness is a question of law based on underlying findings of fact. *Univ. of Strathclyde v. Clear-Vu Lighting*, 17 F.4th 155, 160 (Fed. Cir. 2021). Underlying facts include "(1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) any secondary considerations of non-obviousness." *Janssen Pharms., Inc. v. Teva Pharms. USA, Inc.*, 97 F.4th 915, 925 (Fed. Cir 2024) (quotation omitted). We review the overall obviousness determination de novo and the underlying factual findings for substantial evidence. *Univ. of Strathclyde*, 17 F.4th at 160. "A finding is supported by substantial evidence if a reasonable mind might accept the evidence as adequate to support the finding." *Pfizer, Inc. v. Sanofi Pasteur Inc.*, 94 F.4th 1341, 1347 (Fed. Cir. 2024).

I

A

We begin with DexCom's argument that the Board relied on a "non sequitur" in concluding that Feldman encompasses a three-layer stack of electrode traces. Appellant's Br. 30–31. DexCom reads the Board's decision as finding that the three electrode trace lines in Feldman's Figure 4A *must* be stacked, because one trace line covers the other two. DexCom argues that other arrangements are possible—for instance, the two covered trace lines could be side-by-side. DexCom reasons that the Board failed to account for these alternatives, and thus, did not rely on substantial evidence. We disagree.

DexCom misreads the Board's decision. The Board did not conclude that Dr. Smith's interpretation of Figure 4A as teaching a stacked electrode arrangement is the *only* way to interpret Figure 4A. Rather, the Board found that

"Feldman's Figures 4A–B would have been understood and interpreted by a person of ordinary skill in the art as encompassing" the challenged limitations. J.A. 53. In doing so, the Board reasonably credited Dr. Smith's testimony. The Board acknowledged DexCom's alternative interpretations of Feldman, but determined the existence of alternatives did not refute Dr. Smith's testimony that a skilled artisan would read Feldman to encompass a sensor with stacked electrodes separated by non-conductive layers. *E.g.*, J.A. 41, 43.

The Board's conclusion is supported by substantial evidence. Our precedents require the Board to consider Feldman "not only for what it expressly teaches, but also for what it fairly suggests" to a skilled artisan. *Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1049 (Fed. Cir. 2019) (quotation omitted). DexCom never explains how the Board erred, but instead simply insists that the Board should have interpreted Feldman differently. Here, based on the evidence before it, including the testimony of Dr. Smith, the Board found that a skilled artisan would have interpreted Feldman as encompassing the stacked electrode arrangement. J.A. 43, 53. We conclude accordingly that the Board relied on substantial evidence in determining that a skilled artisan would have understood Feldman as encompassing the claimed five-layer arrangement of stacked electrode layers and non-conductive layers.

B

DexCom's related arguments similarly misread the Board's decision. DexCom claims that the Board's decision relies on "two inconsistent theories." Appellant's Br. 41. DexCom reads the Board's finding that Figures 4A and 4B of Feldman "encompass[]" the claimed five-layer arrangement to mean "disclosure" of the arrangement. Appellant's Br. 40. But sometimes, DexCom argues, the Board acknowledges that Feldman does not actually disclose any such arrangement but renders it "obvious." *Id.* at 40–41.

In DexCom's view, an obvious but undisclosed arrangement necessarily requires modification. Yet Abbott never argued that Feldman requires modification, so DexCom contends that the Board failed to afford DexCom notice and the opportunity to respond to the modification argument, in violation of the Administrative Procedure Act ("APA"). Appellant's Br. 42. Further, because the Board failed to make the requisite fact-findings regarding a skilled artisan's modification of Feldman, DexCom argues that the Board applied the wrong standard for obviousness. Appellant's Br. 42–45. Abbott counters that there is no such "dichotomy" between disclosure and obviousness, and that the Board's decision does not rely on modifying Feldman to achieve the claimed arrangement. Appellee's Br. 49–51. We agree with Abbott.

The Board held the claims were unpatentable as obvious because it concluded, based on Dr. Smith's testimony and Figures 4A and 4B, that a skilled artisan would have "understood and interpreted" Feldman as "encompassing" an arrangement of stacked electrode layers separated by non-conductive layers. J.A. 44, 53. To the extent the Board framed the inquiry as whether Feldman "[d]iscloses" the claimed arrangement, its analysis makes plain that the Board did not use the word "disclose" in the rigid manner DexCom suggests. J.A. 34. As the Board acknowledged, obviousness involves an "expansive and flexible approach" that permits a court to "take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 415, 418 (2007); J.A. 9–10. Consistent with this standard, the Board focused its inquiry on what Feldman would teach or suggest to a person of ordinary skill in the art, rather than limiting itself to what Feldman literally says or shows. To do otherwise would have been error. *Cf. Freedman Seating Co. v. Am. Seating Co.*, 420 F.3d 1350, 1363 (Fed. Cir. 2005) (reversing district court decision that

treated obviousness as requiring prior art to be "indistinguishable" from claimed invention).

As for whether the Board's obviousness determination requires modifying Feldman, DexCom is correct that the Board did discuss "alternative" electrode arrangements that could be inferred from Feldman. Appellant's Br. 40–41. But the Board used the word "alternative" to refer to the alternative interpretations of what is shown in Feldman's Figures 4A and 4B, not alternative arrangements based on modifying Feldman. *See* J.A. 43, 53. The Board's analysis does not address modification because it did not need to—the Board concluded that Feldman "encompass[ed]" the claimed arrangement without modification.[3] And we have already concluded that the Board relied on substantial evidence in making this finding. We thus find no error in the Board's obviousness determination.

II

Finally, DexCom argues that the Board should not have considered the published version of Feldman's Figure 4A as prior art at all. According to DexCom, only the *filed* Feldman application with hand-drawn figures, as opposed to the *published* Feldman application with Figures 4A and 4B, qualified as prior art under the statute in effect when Feldman and the '193 patent were filed. *See* 35 U.S.C. § 102(e) (2004); Appellant's Br. 50–53. DexCom asserts that the difference matters, because the hand-drawn version of Figure 4A materially differs from the published version of

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[3] Because we conclude that the Board's obviousness determination does not rely on modifying Feldman, we need not address DexCom's argument that the Board improperly relied on arguments that Abbott did not raise in its Petition or at the hearing and thus deprived DexCom of notice and the opportunity to respond in violation of the APA. *See* Appellant's Br. 42.

Figure 4A that the Board relied upon for its decision. Appellant's Br. 54–56. DexCom further asks us to adopt a new evidentiary rule for cases where there is a difference between the filed and published versions of a prior art reference's patent application. Appellant's Br. 62. Abbott responds that DexCom has waived this issue by failing to raise it in its post-institution Patent Owner Response. Appellee's Br. 54–57. We agree with Abbott.

In its pre-institution response, DexCom asserted that the differences between the two versions of Figure 4A affect whether Figure 4A can be interpreted as depicting stacked electrode traces. J.A. 3531. But in its post-institution response, DexCom argued only that the "Feldman publication . . . itself is insufficient evidence of the contents of the Feldman application as filed." J.A. 3719 (citing Fed. R. Evid. 1002–03, 1005). That is insufficient to preserve the argument DexCom now presents regarding the difference between the filed and published versions of Figure 4A in Feldman. *See Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1373 (Fed. Cir. 2023) ("By raising an argument in its Preliminary Response, but not its Response, a patent owner waives said argument."). DexCom has waived this argument, and we do not reach its merits.

CONCLUSION

For the foregoing reasons, we affirm the Board's decision holding that Claims 1–3 and 11–13 of the '193 patent are unpatentable as obvious.

AFFIRMED

COSTS

No costs.