

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

OMNI MEDSCI, INC.,
Patent Owner.

IPR2019-00914
Patent 9,861,286 B1

Before GRACE KARAFFA OBERMANN, JOHN F. HORVATH, and
SHARON FENICK, *Administrative Patent Judges*.

OBERMANN, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

Apple Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 16, 17, 19, and 20 (“the challenged claims”) of U.S. Patent No. 9,861,286 B1 (Ex. 1001, “the ’286 patent”). Paper 1 (“Pet.”), 3. Omni MedSci Inc. (“Patent Owner”), filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). With Board pre-authorization (Paper 9), Petitioner filed a Reply (Paper 10, “Reply”) and Patent Owner filed a Sur-Reply (Paper 12, “Sur-Reply”). We have jurisdiction under 35 U.S.C. § 314.

Based on the information presented, for the reasons that follow, we find that Petitioner demonstrates a reasonable likelihood that it would prevail at trial in showing the unpatentability of at least one challenged claim of the ’286 patent. Accordingly, we institute *inter partes* review of all challenged claims on all grounds of unpatentability raised in the Petition.

I. BACKGROUND

A. *Related Matters*

The parties agree that Patent Owner asserts the ’286 patent against Petitioner in two district court actions: *Omni MedSci Inc. v. Apple Inc.*, 2-18-cv-00134-RWD (E.D. Tex.); and *Omni MedSci Inc. v. Apple Inc.*, 2-18-cv-00429-RWD (E.D. Tex.).¹ See Pet. xi; Paper 3, 1–2.

¹ The district court cases recently were transferred to the Northern District of California. Paper 8, 1; see Sur-Reply 1 (citing Ex. 2013, 33; Ex. 1057, 1). The first identified action forms the basis for Patent Owner’s contention (discussed *infra* pp. 33–35) that the Board should issue a discretionary denial under 35 U.S.C. § 314(a) based on the advanced stage of a parallel district court proceeding. Prelim. Resp. 4 (citing Ex. 1004). That case has been transferred to “Judge Gonzalez Rogers,” but no “schedule for the remaining briefs or a trial date” has been set. Sur-Reply 2.

The '286 patent is the subject of a second petition in IPR2019-00911 filed by Petitioner on the same day as the instant Petition. Concurrently herewith, we file a decision denying institution of *inter partes* review in that related proceeding. We previously denied Petitioner's request for review in IPR2019-00910 (Paper 16 in that proceeding) and granted Petitioner's request in IPR2019-00917 (Paper 14 in that proceeding), both of which, according to Petitioner, relate to a patent in the same family as the '286 patent. Pet. xi.

B. Evidence Relied Upon

Reference		Date	Exhibit
Hanna	US 6,505,133 B1	Jan. 7, 2003	1007
Mannheimer	US 5,746,206	May 5, 1998	1008
Carlson	US 2005/0049468 A1	Mar. 3, 2005	1009
Lisogurski	US 9,241,676 B2	May 31, 2012 ²	1011

Petitioner also relies upon the Declaration of Brian Anthony, Ph.D., (Ex. 1003). Based on information provided in his Declaration (Ex. 1003 ¶¶ 2–9) and Curriculum Vitae (Ex. 1053), for purposes of this Decision only, we determine that Dr. Anthony is qualified to opine about the level of ordinary skill in the art. Patent Owner is free to oppose this preliminary determination in a timely filed Response.

² Petitioner relies on the filing date of Lisogurski to establish its status as prior art. See Pet. 20.

C. Asserted Grounds of Unpatentability

Claims Challenged	35 U.S.C. §	References
16, 17, 19, and 20	103	Lisogurski and Carlson
16, 17, 19, and 20	103	Lisogurski, Carlson, and Hanna
20	103	Lisogurski, Carlson, and Mannheim with or without Hanna

D. Overview of the '286 Patent

The '286 patent is titled “Short-Wave Infrared Super-Continuum Lasers for Early Detection of Dental Caries.” Ex. 1001, code (54). The invention relates to “[a] wearable device for use with a smart phone or tablet” that includes light emitting diodes (“LEDs”) “for measuring physiological parameters by modulating the LEDs and generating a near-infrared multi-wavelength optical beam.” Ex. 1001, code (57). “At least one LED emits at a first wavelength having a first penetration depth and at least another LED emits at a second wavelength having a second penetration depth into tissue.” *Id.* Lenses “deliver the optical beam to . . . tissue, which reflects the first and second wavelengths. A receiver is configured to capture light while the LEDs are off and while at least one of the LEDs is on.” *Id.* The receiver also is configured “to difference” the “corresponding signals to improve a signal-to-noise ratio of the optical beam reflected from the tissue. The signal-to-noise ratio is further increased by increasing light intensity of at least one of the LEDs.” *Id.* Further, the device may generate “an output signal representing a non-invasive measurement on blood within the tissue.” *Id.*

The Specification of the '286 patent describes a device that employs near-infrared light, that is, light in the spectrum between approximately 700 nanometers to about 2500 nanometers, to provide non-invasive and non-contact detection of dental caries in teeth. *Id.* at 2:62–3:14, 3:30–42, 6:7–9, 6:31–43. The Specification also describes the use of a light to determine blood flow and blood constituents in blood vessels. *Id.* at 8:67–9:4; *see id.* at 16:3–1 (“In one embodiment shown in FIG. 6A, the dorsal of the hand 600 may be used for measuring blood constituents or analytes.”). This light is provided in an input beam generated by a plurality of LEDs. *Id.* at code (57), 5:46–54. A sample of tissue, such as skin or teeth, reflects at least a portion of the input optical beam and a receiver receives the reflected beam to generate an output signal representing, at least in part, a non-invasive measurement on blood contained within the sample. *Id.* at code (57), 5:3–13, 39:43, 6:4–17. The Specification further describes, and the claimed invention requires, a light source that is “configured to further improve the signal-to-noise ratio of the input optical beam reflected from the tissue by increasing the light intensity relative to the initial light intensity from at least one of the LEDs.” *Id.* at 30:15–18 (claim 1); *see id.* at code (57), 5:14–18, 6:17–21 (describing that configuration). Figure 1 is illustrative and reproduced below:

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