NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

IN RE JAMES HOYT CLARK

2010-1456

Appeal from the United States Patent and Trademark Office, Board of Patent Appeals and Interferences in Reexamination No. 90/008,777.

Decided: May 20, 2011

J. DAVID NELSON, Nelson, Snuffer, Dahle & Poulsen, P.C., of Sandy, Utah, for appellant.

RAYMOND T. CHEN, Solicitor, Office of the Solicitor, United States Patent and Trademark Office, of Alexandria, Virginia, for the Director of the United States Patent and Trademark Office. With him on the brief were NATHAN K. KELLEY and SCOTT C. WEIDENFELLER, Associate Solicitors.

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

LOURIE, *Circuit Judge*.

James Hoyt Clark appeals the decision of the Board of Patent Appeals and Interferences ("the Board") affirming the examiner's rejections of claims 1–8, 13–25, 30–43, 48–55, 60–72, and 77–86 of U.S. Patent 6,142,927 ("the '927 patent") for lack of written description under 35 U.S.C. § 112 and obviousness under 35 U.S.C. § 103(a). *See Ex Parte James Hoyt Clark*, No. 2010-001688 (B.P.A.I. April 30, 2010) ("*Board Decision*"). Because the Board correctly determined that these claims would have been obvious to one of skill in the art, we *affirm*.

BACKGROUND

The '927 patent is titled "Method and Apparatus for Treatment with Resonant Signals," and relates to "providing therapeutic treatment and promoting health of the body or for treating food, chemical, vitamin, mineral, metal, and biological sensitivities, through the application of electromagnetic radiation to the body in the form of signals of nonionizing, nonthermal, low energy, frequency specific electromagnetic radiation or low voltage alternating or direct current." '927 patent col.1 ll.9–15.

The specification generally refers to the applied electromagnetic radiation as "product signals," *id.* col. 3 l.59–col.4 l.56, which may be any signal within the electromagnetic spectrum up to the infrared band, *id.* col.3 l.65–col.4 l.18. In addition to a square wave, a product signal may be a triangular wave, sine wave, or other waveform, and the specification indicates that the operator of the patented system may vary the amplitudes of the waveforms that comprise the product signal as well as the frequency of the product signal. *Id.* col. 6 ll.27–34. The patented system transmits the product signals to the patient's body using an RF transmitter, a wire, or an infrared transmitter. *Id.* col.8 l.64–col.9 l.13.

The specification teaches that the product signal stimulates an electrical response in the patient's body that equals or approximates the body's response to the introduction of a "product," such as a food, vitamin, or mineral. *Id*. col.3 ll. 27–34, col. 6 ll. 3–20. This goal is achieved when the product signal causes the electrical impedance in an area of the patient's body to approximate the electrical impedance in that area as a result of introducing the product to the patient's body. *Id.* col.7 ll.15–32. This change in impedance occurs when the product signal "resonate[s] with the body at the cellular level." *Id*. col.4 ll. 19–20; *see also id.* col.7 l.66–col.8 l.8.

The '927 patent issued from an application that Clark filed in September of 1998, and the patent has been subject to multiple reexamination proceedings since it issued in 2000. As a result of the first reexamination proceedings, Clark amended the claims to recite a "radio frequency transmitter" that transmits the therapeutic electromagnetic signals to an area of the human body.

Shortly after the reexamination certificate issued, the PTO ordered the instant reexamination. In the first office action of this proceeding, the PTO rejected the reexamined claims as obvious in light of documents that describe the LISTEN system that Clark developed in the early 1990s.

For the issues raised in this appeal, the LISTEN system is primarily disclosed in two references: the 1994 LISTEN manual and the C.E.D.S. News Section of the Spring 1996 Issue of Vibrant Health ("the CEDS96 publication"). The LISTEN manual states that LISTEN is "a data acquisition system and a skin conductance screening system," J.A. 169, and that the system stimulates the patient's body by applying "selected EM fields to change the conductance until the stimulation produces the bal-

anced conductance," *Id.* at 201. The manual states that LISTEN also includes "a library of nonionizing nonthermal pulsed square wave electromagnetic (EM) frequencies," and the system applies electromagnetic radiation at different frequencies to cause the balanced conductance. *Id.*

The CEDS96 publication describes various electromagnetic therapy systems developed by Clark, including LISTEN. The publication identifies the Accupath, Interro, and LISTEN systems, *id.* at 272, and states that "[t]he systems that Jim Clark produces have the ability to send out an electro magnetic (ie FM) signal." *Id.* at 273.

The CEDS96 publication also indicates that the transmitter that applies the electromagnetic signal in at least some LISTEN and Interro systems is an FM transmitter. The publication describes a "basic process" for determining the electromagnetic signal to apply to a patient. *Id.* at 273. After describing this process, the publication states that the technology "requires an FM transmitter," and that LISTEN and some Interro models utilize an FM transmitter. *Id.* at 273–74.

In response to the obviousness rejection based on LISTEN, Clark amended the "radio frequency transmitter" limitation to recite that the "radio frequency transmitter" comprises a "modulation transmitter." Claim 1, reproduced below, is representative of the claims that Clark amended, the underlined portion indicating material added by the amendment:

> 1. Apparatus for administering, to a desired area of application on a human body of a treatment subject, one or more therapeutic electromagnetic signals of electromagnetic waves or electric currents, each said signal stimulating a response in said human body

> which equals or approximates a response stimulated by a product corresponding to said signal, said apparatus comprising:
>
> a) generating means for generating said electromagnetic signals, each said signal being a function of a sequence of binary numbers representing a corresponding product;
>
> b) radio and frequency transmitter and antenna for applying said electromagnetic signals to said area of application, *the radio transmitter comprising a modulation transmitter*.

Board Decision, at 5 (emphases in original). In addition to amending the claims, Clark presented evidence that, contrary to the CEDS96 publication, LISTEN did not use an FM transmitter or radiate an FM signal. In particular, Clark presented the affidavit of Dr. Metin Gunsay, which states that, after a review of LISTEN documents and schematics, the system did not include an FM transmitter or any other modulation circuit. J.A. 146. Instead, Dr. Gunsay concluded that LISTEN supplied a wire antenna with a series of square waves that varied in frequency. *Id.* at 147. Dr. Gunsay testified that although the electromagnetic signal radiated by the antenna varied in frequency, the radiation would not constitute an FM signal. *Id.*

In the same affidavit, Dr. Gunsay provided testimony that the original specification of the '927 patent filed in 1998 provided written support for the newly claimed "modulation transmitter." Dr. Gunsay testified in particular that those of skill in the art would have primarily understood the term "radio frequency transmitter" to mean "a traditional radio frequency transmitter, such as an AM transmitter, FM transmitter or a PM transmitter." *Id.* at 146.

After considering the amendments, Clark's arguments, and the evidence Clark presented, the examiner issued a final office action concluding that claims 1–8, 13–25, 30–43, 60–72, and 77–86 were not patentable for failure to provide written support for the "modulation transmitter" limitation under 35 U.S.C. § 112, ¶ 1 and as obvious under 35 U.S.C. § 103(a) in light of the LISTEN manual in view of the CEDS96 publication. *Board Decision*, at 1–4.

Clark appealed the rejections to the Board, and the Board affirmed. With regard to written description, the Board found that the specification failed to disclose to those skilled in the art that Clark possessed a "modulation transmitter" when he filed the original specification in 1998. *Id.* at 8–13.

The Board also concluded that the claims on appeal were obvious in light of the LISTEN manual and the CEDS96 publication. The Board found that, in 1998, an ordinary skilled worker knew of modulation transmitters, such as FM transmitters, and considered modulation transmitters to be conventional technology. *Id.* at 18, 20. The Board found that both LISTEN and the claimed invention involved the delivery of electromagnetic signals and that persons of ordinary skill would have considered modulation transmitters reasonably pertinent to the LISTEN system because those transmitters, like transmitters that do not use modulation, relate to the transmission of electromagnetic signals. *Id.* at 18. The Board also found that while Clark had established that LISTEN did not disclose a "modulation transmitter," there was no evidence that equipping the LISTEN system with an FM transmitter, as disclosed in the CEDS96 publication, would render the modified system inoperable or could not be completed with a reasonable expectation of success. *Id.* at 19–21.

Clark timely appealed from the decision of the Board. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

Clark appeals the Board's determination that claims 1–8, 13–25, 30–43, 60–72, and 77–86 were not patentable under 35 U.S.C. § 112, ¶ 1 for lack of written description and 35 U.S.C. §§ 103(a) as obvious. Because we conclude that the Board correctly determined that the reexamined claims would have been obvious to those of ordinary skill in the art, we do not address Clark's written description argument.

The scope of our review in an appeal from a Board decision is limited. We review the Board's factual findings for substantial evidence and review the Board's legal conclusions *de novo*. *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000). A finding is supported by substantial evidence if a reasonable mind might accept the evidence to support the finding. *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938).

Under the Patent Act, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a) (2006). Although the ultimate determination of obviousness under § 103 is a question of law, it is based on several underlying factual findings, including (1) the scope and content of the prior art; (2) the level of ordinary skill in the pertinent art; (3) the differences between the claimed invention and the prior art; and (4) evidence of secondary factors, such as commercial success, long-felt need, and the failure of others. *Graham v. John*

Deere Co., 383 U.S. 1, 17–18 (1966). Given the mixed nature of the obviousness determination, we review the Board's ultimate conclusion of obviousness *de novo*, but review the Board's underlying factual determinations for substantial evidence. *Kotzab*, 217 F.3d at 1369.

Clark argues that it would not have been obvious to modify the LISTEN system to include a modulation transmitter because, while modulation transmitters were well known in the communications field in 1998, it would not have been obvious to use a modulation transmitter to apply electromagnetic signals to a patient's body for therapeutic purposes. To support this argument, Clark points to testimony from Clark's expert on the ultimate obviousness conclusion and evidence that the CEDS96 publication incorrectly stated that LISTEN used an FM transmitter and transmitted an FM signal.

We disagree. As an initial matter, Clark does not dispute the Board's finding that the only limitation the LISTEN manual does not disclose is the "modulation transmitter" limitation. Similarly, while Clark argues that modulation transmitters would not have been considered analogous art, Clark does not dispute the Board's finding that the LISTEN manual and the CEDS96 publication are analogous art.

Instead, Clark primarily argues that the CEDS96 publication does not teach a modulation transmitter because the reference incorrectly states that the LISTEN system employed an FM transmitter and transmitted an FM signal. However, absent an obvious error on the face of the reference, a reference is prior art for what it discloses, even if the commercial system that the reference describes operated differently than disclosed in the reference. *See In re Garfinkel*, 437 F.3d 1005, 1008 (C.C.P.A 1971). Here, nothing in the CEDS96 publication indicates

that the statements regarding FM transmissions were in error, and the Board therefore properly considered the reference. And, in any event, the statements regarding FM transmissions were also directed at other electromagnetic therapy systems that Clark developed in addition to LISTEN, specifically the Accupath and Interro systems. Notably, Clark did not dispute that at least some models of these systems utilized FM transmitters or applied FM signals to a patient's body for therapeutic purposes.

In light of the Board's proper consideration of the CEDS96 publication, Clark's argument that a modulation transmitter would not have been considered pertinent to electromagnetic therapy systems is without merit. The CEDS96 publication equates an "electro magnetic" signal with an "FM" signal and states that the described electromagnetic therapy technology "requires an FM transmitter." *Id.* at 273–74. In addition to the CEDS96 publication, Dr. Gunsay's affidavit establishes that one of ordinary skill in the art would have understood in 1998 that radio frequency transmissions, which include the electromagnetic transmissions disclosed in the LISTEN manual, could be transmitted using a "conventional radio frequency transmitter, such as an AM transmitter, an FM transmitter, or a PM transmitter." J.A. at 146. In sum, substantial evidence supports the Board's underlying factual findings on the scope and content of the prior art and the differences between the prior art and the reexamined claims.

In light of these factual findings, we conclude that the reexamined claims would have been obvious to one of skill in the art when Clark filed the patent application that issued as the '927 patent. Conventional modulation transmitters were known in the art in 1998, and nothing in the LISTEN manual precludes the use of a conventional modulation transmitter or indicates that the use of

a modulation transmitter would render the LISTEN system inoperable. In addition, the CEDS96 publication motivated those of skill in the art to use an FM transmitter with the LISTEN system because the article states that an FM transmitter is required "[i]n order for this technology to work" and expressly states that the LISTEN system employed an FM transmitter and transmitted an FM signal. *Id.* Finally, the CEDS96 publication states that, in addition to the LISTEN system, other electromagnetic therapy systems developed by Clark used an FM transmitter and transmitted FM signals. *Id.* at 272–74. In total, the evidence shows that equipping the LISTEN system disclosed in the LISTEN manual with an FM transmitter in 1998 involved the combination of familiar elements according to known methods and would yield predictable results. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

CONCLUSION

Accordingly, we *affirm* the Board's determination that claims 1–8, 13–25, 30–43, 48–55, 60–72, and 77–86 were not patentable.

AFFIRMED