United States District Court,
D. Minnesota.

NONIN MEDICAL, INC., a Minnesota corporation,
Plaintiff.
v.
BCI, INC., a Delaware corporation,
Defendant.

No. Civ. 02-668(JNE/JGL

March 8, 2004.

Richard A. Arrett, Vidas, Arrett & Steinkraus, P.A., for Plaintiff Nonin Medical, Inc.

Anthony C. Roth, Morgan, Lewis & Bockius LLP, for Defendant BCI, Inc.

ORDER

ERICKSEN**, J.**

Nonin Medical, Inc. (Nonin) claims in this case that BCI, Inc. infringed Nonin's patent rights. Both Nonin and BCI have moved for construction of disputed patent claim terms pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996).

I. BACKGROUND

Nonin owns the rights to U.S. Patent No. 5,792,052 ('052 Patent). The '052 Patent describes a finger clip pulse oximeter. Pulse oximetry is a non-invasive method of monitoring the oxygen saturation percentage of hemoglobin in the blood. A pulse oximeter typically attaches to a patient's finger and measures oxygen saturation through emitting light at different wavelengths and determining the amount of light that a patient's blood absorbs. The specifications of the '052 Patent describe the device as consisting of two housings, one of which has tabs designed to fit into indents on the other. The two housings are connected with a U-shaped spring which allows the housings to separate and pivot relative to one another and which exerts some amount of pressure to hold the device in place on a user's finger.

The '052 Patent issued on August 11, 1998, from an application Nonin filed on June 29, 1994. That application described the invention, *inter alia,* as including "a gripping means for releasably gripping a finger." (Arrett Aff. Ex. 3.) The Examiner initially rejected several claims containing that term in light of prior art. The Examiner referred specifically to an article by McDermott (Roth Aff. Ex. D), which discusses a pulse rate monitor that fits on the user's finger. Nonin argued against the Examiner's rejection in an amendment to its application filed on January 13, 1995. (Roth Aff. Ex. E.) Nonin stated that the McDermott "reference has very little if any teaching on the structure of the device or how it fits on the finger....

McDermott does not appear to disclose a gripping means, but instead a device which 'fits on a finger.' From the disclosure it is impossible to tell exactly how the McDermott device fits on the finger, it may slip on, it may be secured by a strap, but there it [sic] does not appear to disclose a gripping means." (Id. at 4-6.) After subsequent unrelated amendments, the Examiner allowed the claims on May 6, 1998, stating that "[t]he prior art of record does not teach an apparatus for measuring a blood oxygen saturation level wherein an electronic means for determining the level is completely carried by a gripping means for releasably gripping a finger." (Arrett Aff. Ex. 7.)

The disputed claim terms appear in Claims 1-4 of the '052 Patent. Those claims, stated in their entirety, read as follows:

1. Apparatus for measuring a blood oxygen saturation level of arterial blood inside a body portion, comprising:

gripping means for releasably gripping a finger, the gripping means comprising first and second housings interconnected by a pivot means which allows the first and second housings to pivot relative to one another to releasably grip a finger inserted between the first and second housings, the first and second housings being in electrical communication with each other;

electronic means for sensing and determining the blood oxygen saturation level of the arterial blood inside the gripped body portion, the electronic means being completely carried by the gripping means.

2. The apparatus of claim 1 further including a display means for displaying the sensed and determined blood oxygen saturation level, the display means being attached to the gripping means.

3. The apparatus of claim 2 wherein the gripping means is comprised of finger gripping means for releasably gripping a finger, and wherein the electronic means is a pulse oximeter means for sensing and determining the blood oxygen saturation.

4. The apparatus of claim 3 wherein the pivot means is also constructed and arranged to allow the first and second housings to separate from one another, and wherein the pivot means urges the two housings towards each other, thereby applying pressure to releasably grip a finger inserted between the first and second housings.

II. DISCUSSION

A. Claim Construction

The construction of patent claim terms is a matter of law for the Court. Liquid Dynamics Corp. v. Vaughan Co., Inc., 355 F.3d 1361, 1367 (Fed.Cir.2004). In construing patent claim terms, the Court looks to the intrinsic evidence of record, including the patent claims, specifications, and prosecution history. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). The Court begins with the language of the claim itself, using the accustomed meaning of that language as understood by one of ordinary skill in the relevant art, to define the scope of the patent. Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1267 (Fed.Cir.2001). The Court gives a claim term "the full range of its ordinary meaning" unless the evidence requires otherwise. Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1202 (Fed.Cir.2002). Dictionaries are a useful resource for the Court in determining the ordinary meaning of disputed claim terms, *id.,* although the Court must examine the intrinsic record to ensure that the

dictionary definition is consistent with the patentee's use of the words in the context of the patent. Id. at 1203-04. The Court also must examine the prosecution history of the patent to determine whether the patentee relinquished a potential claim construction in an amendment or in an argument to distinguish or overcome a reference. *Id*. at 1268. Prosecution history, however, "may not be used to infer the intentional narrowing of a claim absent the applicant's clear disavowal of claim coverage." Amgen, Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1327 (Fed.Cir.2003) (citation omitted). The Court should interpret a term or phrase used in a claim consistently within the claim and across claims of common ancestry. Epcon Gas Sys., Inc. v. Bauer Compressors, Inc., 279 F.3d 1022, 1030-31 (Fed.Cir.2002).

A patentee may express a claim term "as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specifications and equivalents thereto." 35 U.S.C. s. 112 para. 6. In other words, as the Federal Circuit has explained, "a claim will cover nothing more than the corresponding structure or step disclosed in the specification, as well as equivalents thereto, if the patentee phrased the claim in step- or means-plus-function format." *CSS* Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1367 (Fed.Cir.2002). If the inventor uses the term "means" in a claim, the construing court presumes that the inventor intended to invoke the statutory means-plus-function format. Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1375 (Fed.Cir.2003). That presumption is rebutted when the claim recites no function corresponding to the means or recites structure sufficient for performing the function. Apex Inc. v. Raritan Computer, Inc., 325 F.3d 1364, 1372 (Fed.Cir.2003). If the means-plus-function analysis applies, the Court must identify the function stated in the claim and then identify the corresponding structure in the written description that is necessary to perform that function. *Id*. "Structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed.Cir.1997).

B. Disputed Claim Terms in the '052 Patent

Nonin's and BCI's requests for construction of particular terms in the '052 Patent largely overlap. Nonin requests a construction of the terms "gripping means" and "releasably gripping," while BCI requests a construction of the phrase "gripping means for releasably gripping a finger" considered as a single claim limitation. Both parties request construction of the terms "first and second housings," "interconnected," and "pivot means." BCI also requests construction of the terms "electronic means" and "display means." The Court will consider those terms in the order in which they appear in the disputed claims of the '052 Patent. Because the Court must interpret claim terms consistently within the patent, the Court will give the disputed terms the same construction in all claims of the '052 Patent in which those terms appear.

1. Gripping means for releasably gripping

Although the use of the word "means" in the term "gripping means" presumptively invokes the means-plus-function format of 35 U .S.C. s. 112 para. 6, Nonin and BCI agree that the structure described in Claim 1 of the '052 Patent ("the gripping means comprising first and second housings interconnected by a pivot means") for performing the function is sufficient to rebut that presumption. Nonin and BCI otherwise fundamentally disagree concerning the proper construction of the phrase "gripping means for releasably gripping." Nonin argues, in essence, that the meaning of the phrase is plain, that the term "gripping means" refers to "a device which grasps and holds," and that "releasably gripping" refers to a process whereby the user may detach the device "by withdrawing or removing the gripped finger." (Pl.'s Main Brief at 2.) BCI, also relying on the plain meaning of the patent terms, argues that the phrase specifically refers to "two housings that pivot to

open and receive a finger to be inserted between the housings, then close to grasp the finger, and later open to cease grasping the finger and allow the finger to be withdrawn freely." (Def.'s Main Brief at 10.) BCI further argues, based on the prosecution history, that Nonin disclaimed any "gripping means" that slips onto a finger or that is secured to a finger by a strap.

Nonin's proposed construction is closer to the natural and usual meaning of the terms used than is BCI's. The Oxford English Dictionary (2d ed. 1989) (OED) defines "gripping" as "a taking firm grasp or hold," so in the context of the '052 Patent the "gripping means" consists of two housings connected by a pivot means that firmly grasp or hold a finger. The OED does not contain a definition of "releasably," but defines "releasable" as "admitting of release or dispensation." Adding the modifier "releasably" to the term at issue thus indicates that a "gripping means for releasably gripping a finger" consists of two housings connected by a pivot means that firmly grasp or hold a finger in such a way as to allow the user to release the finger from the housings' grasp. Contrary to BCI's suggestion, a fair reading of the phrase includes no requirement that the user must open the device as a separate act before inserting or removing a finger from the grip, and the use of the modifier "releasably" in reference to the grip in fact indicates that a user should be able to remove a finger from the device without the necessity of first opening the device to effect the release.

The prosecution history also does not clearly establish that Nonin intentionally narrowed the definition of the "gripping means for releasably gripping" claim in order to overcome a prior art rejection. Nonin's argument to the Examiner concerning the McDermott reference was that McDermott did not disclose any means, much less a gripping means, for attaching the McDermott device. Nonin's speculation as to how the McDermott device may attach is not sufficient to impose a narrowing construction on the claim term. *See* 3M Innovative Props. Co. v. Avery Dennison Corp., 350 F.3d 1365, 1373 (Fed.Cir.2003) (noting that when "remarks made to distinguish prior art are broader than necessary to distinguish the prior art, the full breadth of the remark is not a clear and unambiguous disavowal of claim scope"). The Examiner's reasoning, furthermore, is directed primarily to the completely self-contained nature of Nonin's device and says nothing substantive about the "gripping means for releasably gripping a finger." For those reasons, the Court rejects BCI's argument that Nonin's claim is limited to devices that clip on and construes the claim term "gripping means for releasably gripping a finger" in the '052 Patent as "two housings interconnected by a pivot means that firmly grasp or hold a finger in such a way as to allow a user to release the finger from the housings' grasp."

2. First and second housings

The constructions for the term "first and second housings" that Nonin and BCI proposed have only minor differences, and at oral argument the Court indicated that a fair construction of that term would be "two separate, rigid cases, each containing a mechanism or apparatus." The Court hereby adopts that construction for the term "first and second housings" in the '052 Patent.

3. Interconnected

Nonin and BCI propose nearly identical constructions for the term "interconnected." The OED, to which both parties refer, defines the verb "interconnect" as "to connect each with the other." The Court accordingly adopts that definition and construes the term "interconnected" in the '052 Patent as "connected each with the other."

4. Pivot means

With respect to the claim term "pivot means," Nonin and BCI disagree concerning the threshold question of whether the statutory "means-plus-function" analysis applies to that term. Although Nonin initially argues that the words "means for" are necessary to invoke the "means-plus-function" presumption, Federal Circuit case law clearly states that the word "means" alone invokes that presumption, Altiris, 318 F.3d at 1375, and that presumption accordingly applies to the "pivot means" term in the '052 Patent. In the alternative, Nonin argues that the presumption is rebutted because the term does not recite a function or because the term "pivot" is a structural term that in itself connotes structure sufficient to perform any recited function.

Nonin's alternative arguments are predicated on the assumption that the word "pivot" in the '052 Patent is used as a noun rather than a verb. The OED includes both noun definitions for "pivot" (e .g., "A short shaft or pin, usually of metal and pointed, forming the fulcrum and centre on which something turns or oscillates") and verb definitions for "pivot" (e.g., "to turn as on a pivot"). If the word "pivot" in the '052 Patent is a noun, Nonin's argument that the term "pivot means" does not state a function would be correct. The most natural reading of the claim language, however, uses "pivot" as a verb rather than a noun. The "pivot means," according to the '052 Patent, is something "which allows the first and second housings to pivot." The use of the infinitive "to pivot" indicates that the claim language is directed to the function of pivoting rather than to a pivot as a mechanical structure.

The '052 Patent also does not use the term "pivot" in such a way as to indicate the exact structure used to accomplish the function of pivoting. Unlike the claim language in Envirco Corp. v.. Clestra Cleanroom, Inc., 209 F.3d 1360, 1365 (Fed.Cir.2000), which used the term "baffle" to describe a specific physical structure in the device, the claim term "pivot means" in the '052 Patent "is so broad as to give little indication of the particular structure used." Altiris, 318 F.3d at 1376. Because one must look to the specification of the '052 Patent for an adequate understanding of the structure used to accomplish the function of pivoting, the means-plus-function presumption is not rebutted. Id.

In the means-plus-function analysis, after the Court identifies the function stated in the claim, here the function of pivoting, the Court must identify the corresponding structure in the written description necessary to performing that function. Apex, 325 F.3d at 1372. As BCI argues, the structures described in the '052 Patent for performing the pivoting function are the tabs and indents of the two housings along with the U-shaped spring. The Court accordingly construes the term "pivot means" in the '052 Patent to refer to that corresponding structure and its equivalents. 35 U.S.C. s. 112 para. 6.

5. Electronic means

Nonin and BCI agree that the term "electronic means" as used in the '052 Patent is subject to the statutory means-plus-function analysis. The function described in the claim is "sensing and determining the blood oxygen saturation level of the arterial blood inside the gripped body portion." The parties initially disputed the structure necessary to perform that function, but at oral argument the parties agreed that the corresponding structure in the '052 Patent included a radiation-emitting device, a photosensor to detect the emitted radiation wavelengths, and a circuit board with the electronic circuitry required to measure the blood oxygen saturation level. The Court accordingly construes the term "electronic means" in the '052 Patent to refer to that corresponding structure and its equivalents. 35 U.S.C. s. 112 para. 6.

6. Display means

Nonin and BCI agree that the term "display means" in Claim 2 of the '052 Patent is presumptively written in means-plus-function format. Nonin argues that the presumption is rebutted, however, because the '052

Patent uses "display" as a noun and the term would be so understood by one skilled in the relevant art. BCI contends that the claim does not recite sufficient structure to perform the function of "displaying the sensed and determined blood oxygen saturation level" and that the term "display means" should be construed as limited to an LED display, which is the corresponding structure in the written description.

The Court here agrees with Nonin that the word "display" as used in the '052 Patent is a structural term. The OED includes a noun definition of "display" as "a visual presentation of data from a computer," and that is the sense in which the '052 Patent uses the term "display." The Court accordingly adopts Nonin's proposed construction of the term "display means," which is "a visual presentation of the sensed and determined blood oxygen saturation level."

III. CONCLUSION

Based on the files, records, and proceedings herein, and for the reasons stated above, IT IS ORDERED THAT the '052 Patent is construed as indicated in this Order.

D.Minn.,2004.
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