United States District Court
District of Massachusetts

KONINKLIJKE PHILIPS, N.V. and PHILIPS ELECTRONICS NORTH AMERICA CORPORATION,	)	
Plaintiffs,	)	**Civil Action No. 12-12255-NMG**
v.	)	
ZOLL MEDICAL CORPORATION,	)	
Defendant.	)	

MEMORANDUM AND ORDER

GORTON, J.

Philips Electronics North America Corporation and its parent company Koninklijke Philips, N.V. (collectively, "Philips") brought suit against defendant ZOLL Medical Corporation ("ZOLL") in December, 2012, alleging infringement of six patents relating to cardiac defibrillation technology. Two patents remain at issue and trial is scheduled to begin in March, 2015.

Pending before the Court is defendant's motion for summary judgment of non-infringement and limitation on damages on U.S. Patent Nos. 7,463,922 ("the '922 patent") and 5,441,520 ("the '520 patent"). For the reasons that follow, the motion will be allowed, in part, and denied, in part.

I. Background

A. Overview of the technology

The patents-in-suit are directed to external cardiac defibrillators, which are medical devices that can deliver an electrical shock through electrodes placed on the torso of a patient who is experiencing ventricular fibrillation ("VF"), i.e. a rapid, erratic heartbeat. The electrodes sense the patient's heart rhythm to determine if it is "shockable," i.e. susceptible to correction with a defibrillator. The heart rhythm may be displayed on an electrocardiogram ("ECG").

ZOLL's defibrillators have two different modes for analyzing a patient's ECG signal: 1) the background mode ("BG mode") or "continuous analysis mode" is designed for use when the patient may be in motion and 2) the foreground mode ("FG mode") or "single analysis mode" is designed for use when the patient is still. Only the BG mode in ZOLL's devices is accused of infringing the '922 patent.

When VF is detected in BG mode, ZOLL's defibrillators inform the user through a "CHECK PATIENT" prompt. At such time, the operator has at least two options for delivering the shock. First, she can press the "Charge" button to charge the capacitor and then the "Shock" button to deliver the shock to the patient. Alternatively, the operator can press the "Analyze" button which will activate FG mode and automatically charge the capacitor if

a shockable rhythm is confirmed. The shock can then be delivered by pushing the "Shock" button. Both options can deliver a shock within 10 seconds of seeing the CHECK PATIENT message.

B. Patents-in-suit

The '922 patent describes an automatic external defibrillator ("AED") for use by persons with minimal medical training.

The '520 patent discloses a defibrillator system that uses an analog-to-digital converter in the defibrillator base unit to identify automatically the attached electrode type (external paddles, internal paddle or pads).

Philips accuses ZOLL's AED Pro, AED Plus, E, M, R and X series products of infringing the '922 patent and ZOLL's E, M, R and X series products of infringing the '520 patent.

II. Defendant's motion for summary judgment

A. Legal standard for resolving summary judgment motions

The role of summary judgment is "to pierce the pleadings and to assess the proof in order to see whether there is a genuine need for trial." Mesnick v. Gen. Elec. Co., 950 F.2d 816, 822 (1st Cir. 1991) (quoting Garside v. Osco Drug, Inc., 895 F.2d 46, 50 (1st Cir. 1990)). The burden is on the moving party to show, through the pleadings, discovery and affidavits, "that there is no genuine issue as to any material fact and that

the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c).

A fact is material if it "might affect the outcome of the suit under the governing law." Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). "Factual disputes that are irrelevant or unnecessary will not be counted." Id. A genuine issue of material fact exists where the evidence with respect to the material fact in dispute "is such that a reasonable jury could return a verdict for the nonmoving party." Id.

Once the moving party has satisfied its burden, the burden shifts to the non-moving party to set forth specific facts showing that there is a genuine, triable issue. Celotex Corp. v. Catrett, 477 U.S. 317, 324 (1986). The Court must view the entire record in the light most favorable to the non-moving party and make all reasonable inferences in that party's favor. O'Connor v. Steeves, 994 F.2d 905, 907 (1st Cir. 1993). Summary judgment is appropriate if, after viewing the record in the non-moving party's favor, the Court determines that no genuine issue of material fact exists and that the moving party is entitled to judgment as a matter of law.

B. Non-infringement

1. Legal standard

An infringement analysis requires 1) the Court to determine, as a matter of law, the meaning and scope of the

patent claims asserted to be infringed and 2) the trier of fact to compare the properly construed claims to the device accused of infringing. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). Summary judgment of non-infringement is appropriate where, "on the correct claim construction, no reasonable jury could have found infringement" on the undisputed facts or when all reasonable factual inferences are drawn in favor of the patentee." Netword, LLC v. Centraal Corp., 242 F.3d 1347, 1353 (Fed. Cir. 2001).

2. The '922 patent

i. Claims 1-5

Claim 1 and dependent claims 2 through 5 of the '922 patent are directed to "[a]n external defibrillator which analyzes an ECG signal for an indication of ventricular fibrillation (VF)." Claim 1 includes a limitation for "a shock delivery circuit responsive to the indication of VF to deliver a shock."

Defendant argues that its devices do not infringe claims 1 through 5 of the '922 patent because there is no evidence showing that the shock delivery circuit responds at all in the BG mode. ZOLL explains that the shock delivery circuitry does not automatically charge when the ZOLL devices are operating in the BG mode because, upon receiving a CHECK PATIENT prompt, a trained medical operator using the ZOLL devices in the BG mode

must make an independent assessment of the patient and determine whether to deliver a shock either by evaluating the patient's ECG or by switching to the FG mode of the device.

Philips responds that ZOLL has interpreted the claim 1 limitation too narrowly because the term "responsive" does not necessarily mean "automatic" engagememt of the shock delivery circuitry. It contends that ZOLL's interpretation of the shock delivery circuit conflicts with one of the '922 patent's specifications, which allows a user to assist in engaging the shock delivery circuitry and delivering a shock after the indication of VF. Philips avers that the plain and ordinary meaning of the limitation in claim 1, in light of the specification, suggests that the shock delivery circuit is responsive to an indication of VF because of the speed at which the circuit can be activated.

The Court concludes that there is a genuine dispute of material fact with respect to the limitation in claim 1 because a jury could reasonably conclude that the CHECK PATIENT advisory constitutes an indication of VF and that the shock delivery circuitry is responsive to such indication. Defendant's motion for summary judgment of non-infringement on claims 1-5 of the '922 patent will therefore be denied.

ZOLL contends that it is entitled to summary judgment for non-infringement of claims 1-5 by the AED Plus for the

additional reason that the accused BG mode is not enabled in that product. It notes that even though the BG mode software is loaded on the device, BG mode cannot be invoked under the current design of the device.

Philips disputes ZOLL's arguments by pointing to evidence that the BG mode in the AED Plus can be unlocked with a simple software update. It cites the Finjan, Inc. case, which affirmed an infringement verdict even though the infringing software module was "locked" because the module was present in the accused products at the time of sale and because customers did not need to modify the underlying code to unlock any software modules. Finjan, Inc. v. Secure Computing Corp., 626 F.3d 1197, 1205 (Fed. Cir. 2011).

The Court concludes that plaintiffs' arguments raise additional issues of material fact and will therefore deny summary judgment with respect to the AED Plus.

ii. Claims 6-9

Claims 6 through 9 of the '922 patent are directed to

> [a] method for using an external defibrillator to analyze an ECG segment for an indication of ventricular fibrillation (VF).

Independent claim 6 includes a limitation requiring "determining whether to deliver a shock to treat the VF based on the analysis results."

Defendant contends that the accused BG Mode does not "determine" whether to deliver a shock based on analysis results because any determination to deliver a shock is made outside of the BG mode, by the independent assessment of either the medical professional or the non-infringing FG mode. It emphasizes that the CHECK PATIENT alert is not a conclusive determination of whether a shock should be given.

Philips responds that ZOLL's documents contradict its current argument by referring to various ZOLL documents which explain the ECG comparison and analysis process to determine whether the patient's heart rhythm is shockable. Plaintiffs contend that ZOLL's defibrillators in BG mode decide, without a user, whether a patient has a shockable rhythm such as VF, thus prompting the CHECK PATIENT advisory.

The Court concludes that ZOLL's non-infringement argument turns on the disputed fact of whether the BG mode in ZOLL's defibrillators determines whether to deliver a shock to treat the VF based on the analysis results or the discretion of a human being. Summary judgment with respect to claims 6-9 of the '922 patent will therefore be denied. Moreover, the Court rejects ZOLL's argument that it does not practice all the steps of method claims 6-9 because evidence suggests that it has at least tested the BG mode in its products with ECGs from humans. Accordingly, the Court declines to enter summary judgment in

favor of ZOLL with respect to direct infringement of the method claims of the ’922 patent.

3. The ’520 patent

i. Claims 1-8 and 10

ZOLL’s X series is accused of infringing independent claim 1 and dependent claims 2 through 8 and 10 of the ’520 patent which is directed to “[a] defibrillator system”. Independent claim 1 includes a limitation stating that

> for each type of administering means [for sending electrical energy to a patient], a respective identifying means disposed in the corresponding type of administering means or in the corresponding cable assembly for providing a corresponding analog voltage level to the base unit for identification...

ZOLL contends that because its devices do not use corresponding “analog voltage levels” for various attachments, its attachments do not contain the kind of circuitry disclosed in the ’520 patent for generating or sending an analog voltage. It acknowledges that the current-draw measured in the defibrillator is later translated into a voltage signal but asserts that such translation occurs within the base unit and therefore the signal cannot be sent <u>to</u> the base unit.

Philips responds that claim 1 does not specify where the identifying voltage must first be formed and that so long as the indentifying means ultimately provides a corresponding voltage

to the base unit, the functional component of the means-plus-function claim term is satisfied.

The Court declines to proffer further claim construction at this stage and concludes that a reasonable juror could find infringement under the plain meaning of the claim language. Summary judgment of non-infringement will be denied with respect to claim 1 and its dependent claims of the '520 patent.

ii. Claim 15

The X, R, E and M series are accused of infringing claim 15, which is a method claim dependent upon independent claim 12 directed to "[a] method of automatically identifying a type of pads or paddles connected to a defibrillator base unit." Independent claim 12 includes the following limitations:

> providing a signal line in the cable assembly;
>
> for each of the available types of pads or paddles, applying a corresponding analog voltage level to the signal line;...

ZOLL contends that its products do not literally infringe claim 15 because that claim requires application of an analog voltage level to the signal line in the cable assembly, before reaching the base unit. ZOLL's signal line, ACCESS_DRV, instead uses a fixed voltage and the translation of the current-draw to a voltage signal occurs within the base unit. ZOLL asserts that the analog voltage level cannot therefore be applied in the cable assembly.

Philips responds that the claim limitation requires only that the corresponding analog voltage be applied to the signal line and that ZOLL impermissibly rewrote claim 12 to require that the analog voltage level be applied in the cable assembly. It explains that even though claim 12 requires "a signal line in the cable assembly," that is fulfilled in ZOLL's defibrillator systems because the ACCESS_DRV signal line runs through the cable assembly and into the base unit.

The Court concludes that plaintiffs have raised a genuine issue of material fact and therefore will deny summary judgment with respect to claim 15 of the '520 patent.

iii. Doctrine of equivalents

A patentee may establish infringement under the doctrine of equivalents if an element of the accused device

> performs substantially the same function in substantially the same way to obtain the same result as the claim limitation.

AquaTex Indus., Inc. v. Techniche Solutions, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (internal quotations omitted).

Although the parties dispute the scope of the limitations in claims 1 and 12 of the '520 patent, Philips contends that ZOLL's products infringe the patent under the doctrine of equivalents even if ZOLL's construction is accepted.

Whether ZOLL's defibrillators perform substantially the same way as the asserted claims is a factual question for the

jury. Graver Tank & Mfg. v. Linde Air Products Co., 339 U.S. 605, 609 (1950) ("A finding of equivalence is a determination of fact."). The Court concludes that ZOLL is not therefore entitled to summary judgment of non-infringement under the doctrine of equivalents.

C. Limitation on damages

1. Legal standard

The patent marking statute requires a patentee to provide actual or constructive notice to the public and potential infringers of its patent rights before it can collect damages in a patent litigation. See 35 U.S.C. § 287(a); Am. Med. Sys., Inc. v. Med. Eng'g Corp., 6 F.3d 1523, 1538 (Fed. Cir. 1993). The patentee provides actual notice through "the affirmative communication of a specific charge of infringement by a specific accused product or device." Amsted Indus. Inc. v. Buckeye Steel Castings Co., 24 F.3d 178, 187 (Fed. Cir. 1994). Alternatively, it can provide constructive notice "by fixing [] the word 'patent' or the abbreviation 'pat.', together with the number of the patent" on the patented articles. 35 U.S.C. § 287(a). Effective constructive notice requires both the patentee and any of its licensees to "consistently mark[] substantially all of [the] patented products" and thereafter to distribute no unmarked products. Am. Med. Sys., 6 F.3d at 1537. The patentee

has the burden of proving compliance with Section 287(a). Maxwell v. J. Baker, Inc., 86 F.3d 1098, 1111 (Fed. Cir. 1996).

2. Application

ZOLL contends that Philips has failed to comply with the marking requirements of 35 U.S.C. § 287(a) for both patents because Philips cannot identify any practicing products actually marked with the '520 and '922 patent numbers. Defendant asserts that Philips cannot collect damages prior to the time it provided actual notice of infringement in a letter dated February 26, 2010. ZOLL claims furthermore that it was not notified of infringement of the '922 patent by the R series or of both patents by the AED products until January 5, 2012.

With respect to the '520 patent, Philips responds that it has not failed to comply with the marking statute because none of its products practices the '520 patent. It claims that none of its defibrillators uses a single charge-done signal line 1) to detect the attached accessory type or 2) to actuate a charge-done signal light as required by the asserted claims. The Court concludes that there is a factual dispute as to whether any of Philips's defibrillators actually practice the '520 patent and consequently, whether it has complied with Section 287(a). Defendant's motion for summary judgment to limit damages with respect to the '520 patent will therefore be denied.

Philips, however, does not contest ZOLL's argument regarding the '922 patent. Accordingly, Philips will be precluded from collecting damages on the '922 patent prior to 1) January 5, 2012 with respect to the AED and R series products and 2) February 26, 2010 with respect to all other accused products.

ORDER

For the forgoing reasons,

1) defendant's motion for summary judgment of non-infringement of U.S. Patent Nos. 7,463,922 and 5,441,520 and limitation on damages due to failure to mark (Docket No. 241) is, with respect to limiting damages on U.S. Patent No. 7,463,922, **ALLOWED**. Philips is precluded from collecting damages on U.S. Patent No. 7,463,922 prior to 1) January 5, 2012 with respect to the AED and R series products and 2) February 26, 2010 with respect to all other accused products;

2) defendant's motion for summary judgment of non-infringement of U.S. Patent Nos. 7,463,922 and 5,441,520 and limitation on damages due to failure to mark (Docket No. 241) is otherwise **DENIED**.

So ordered.

/s/ Nathaniel M. Gorton
Nathaniel M. Gorton
United States District Judge

Dated January 30, 2015