United States District Court,
D. Delaware.

DENTSPLY INTERNATIONAL INC., Tulsa Dental Products, Inc., and Howard G. Lee,
Plaintiffs.
v.
SOFT-CORE SYSTEM, INC,
Defendant.

No. Civ.A. 97-400-SLR

Aug. 18, 1999.

James P. Hughes, Jr., of Young, Conaway, Stargatt & Taylor, Wilmington, Delaware, Dale M. Heist, and Albert J. MarCellino, of Woodcock, Washburn, Kurtz, Mackiewicz & Norris, Philadelphia, Pennsylvania, for plaintiffs, of counsel.

Frederick L. Cottrell, III, and Jennifer C. Bebko, of Richards, Layton & Finger, Wilmington, Delaware, for defendant.

MEMORANDUM OPINION

ROBINSON**, J.**

I. INTRODUCTION

On July 7, 1997, plaintiffs Dentsply International, Inc. ("Dentsply"), Tulsa Dental Products, Inc. ("Tulsa"), and Howard G. Lee filed this action against defendant Soft Core Systems, Inc. ("Soft Core") seeking money damages and an injunction for alleged infringement of U.S. Patent No. 5,118,297, entitled "Obturator Body For Use in Filling an Endodontically Prepared Root" ("the '297 patent"). FN1 (D.I.1) Specifically, plaintiffs alleged that defendant infringed the '297 patent by virtue of its manufacture, use, offer for sale, and sale in the United States of endodontic obturators sold under the name "Soft Core." (D.I.1) On January 30, 1998, the court entered a consent judgment and order which, *inter alia,* enjoined defendant "from manufacturing, using, offering for sale, selling or otherwise transferring for consideration Soft-Core obturators, or any other devices that infringe the '297 Patent ... under any section of 3[5] U.S.C. s. 271." (D.I.17)

FN1. Plaintiffs also alleged infringement of U.S. Patent No. 5,088,927 ("the '927 patent"), which was owned by Lee and licensed to Tulsa.

On May 15, 1998, plaintiffs filed a motion for an order to show cause why defendant should not be held in contempt of the court's injunction for the post-judgment sale of its "new design" obturator. (D.I.19) On November 9, 1998, the court granted plaintiffs' motion. (D.I.33) A show cause hearing was held on January

15, 1999, "to determine the consequences, if any, of defendant's abbreviated marketing of its post-judgment attempt to design around the patents at issue." (D.I.33) For the following reasons, the court shall not hold defendant in contempt for violating the consent order and judgment issued January 30, 1998.

II. BACKGROUND

Both Dentsply and Soft-Core make and sell endodontic obturators. Obturation is the procedure whereby a root canal is filled with sealer following extraction of all pupal material and contaminants. Obturators are the instruments used to perform the filling procedure . FN2 The '297 patent describes an "improved obturator body for use in filling an endodontically prepared root canal." (D.I. 20, Ex. B col. 1, Ins. 62-63) Said obturator is

FN2. In general, an obturator is a solid core, with a central carrier, coated with sealer that is heated and inserted in a root canal. (D.I. 59 at 17) The central carrier and sealer remain in the tooth when the procedure is completed. (D.I. 59 at 17)

particularly characterized by improved means of enabling a dental practitioner to accurately position the body shaft portion to the proper depth in a root canal by the provision of effective length indicators. (D.I. 20, Ex. B col. 1, Ins. 54-59) Dentsply, a Delaware corporation with its principal place of business in York, Pennsylvania, owns all right, title, and interest in the '297 patent . FN3 (D.I.1, para.para. 1, 9) Tulsa, a Delaware corporation, is a wholly owned subsidiary of Dentsply having a place of business in Tulsa, Oklahoma. (D.I.1, para.para. 2-3)
FN3. The '297 patent was issued in the name of William B. Johnson. (D.I.20, Ex. B)

Soft-Core, a Delaware corporation with its principal place of business in Hudson, Wisconsin, manufactures and sells endodontic obturators under the name "Soft-Core." The original Soft-Core obturator ("original obturator"), the subject of Dentsply's complaint, was comprised of three "body" parts: (1) an enlarged diameter, plastic handle; (2) a metal insertion pin; and (3) a plastic, tapered core designed to receive sealer material thereon. A series of raised, circumferential ridges were located 18, 19, 20, and 22 mm from the distal end of the tapered core, which had a total length of 24 mm. The proximal end of the core was hollow, in order to accommodate the distal end of the metal insertion pin. The proximal end of the stainless steel pin was embedded in the plastic handle.

After plaintiffs filed their complaint alleging patent infringement, the parties entered into negotiations. As a result of those negotiations, on January 30, 1998, the court executed a consent judgment and order whereby defendant admitted

that the '297 Patent and the '927 Patent are valid and enforceable and ... [that it] has infringed the '297 Patent and the '927 Patent as a result of its offer for sale and sale [of] endodontic obturators under the name "Soft-Core"....

(D.I. 20, Ex. A para.para. 4, 5) The consent judgment and order provided that defendant

and its officers, agents, servants, employees and attorneys ... are permanently enjoined from sale, selling or otherwise transferring for consideration Soft-Core Obturators, or any other devices that infringe the '297

Patent or the '927 Patent under any section of 3[5] U.S.C. s. 271.

(D.I. 20, Ex. A para. 6)

Starting on or about February 25, 1998, defendant began offering for sale in the United States a "new design" obturator. (D.I. 59 at 69) This obturator was a modified version of the original obturator sold by defendant, lacking the raised, circumferential ridges at 19, 20, and 22 mm from the distal end of the tapered core. These exceptions aside, the new design obturator was an exact replica of the original obturator, even retaining the raised projection at 18 mm. Sale of the new design obturator was discontinued in August 1998. FN4 (D.I. 59 at 69)

FN4. Subsequent to the filing of the motion at issue, defendant informed the court that, [w]ithout conceding that Soft-Core's obturator with a single formed length indicator was infringing the patent-in-suit, Soft-Core has again modified its obturator to remove the last formed length indicator on the shaft.

(D.I. 30 and Ex. A; *see also* D.I. 59 at 49)

III. DISCUSSION

A. Standard of Review

A party violating a consent decree is subject to the powers by which a court enforces its judgments, including the power of contempt under 18 U.S.C. s. 401. However, civil contempt "is a severe remedy, and should not be resorted to where there is a fair ground of doubt as to the wrongfulness of defendant's conduct." California Artificial Stone Paving Co. v. Molitor, 113 U.S. 609, 618 (1885). Given the severity of the remedy and the summary nature of the proceedings, courts have shown restraint in affording a patent owner the benefit of contempt proceedings where "the patent owner seeks to enforce an injunction against an enjoined infringer by reason of a manufacture which was not the subject of the original litigation." KSM Fastening Sys., Inc. v. H.A. Jones Co., 776 F.2d 1522, 1525 (Fed.Cir.1985). "[C]ontempt is a shield protecting the patentee against an infringer's flagrant disregard for court orders ... not a sword for wounding a former infringer who has made a good-faith effort to modify a previously adjudged or admitted infringing device to remain in the marketplace." Arbek Mfg., Inc. v. Moazzam, 55 F.3d 1567, 1570 (Fed.Cir.1995). "An enjoined party is entitled to design around the claims of a patent owner without the threat of contempt proceedings with respect to every modified device although he bears the risk that the enjoining court may find changes to be too insubstantial to avoid contempt." KSM, 776 F.2d at 1526.

In a civil contempt proceeding, a patent owner must demonstrate by clear and convincing evidence a violation of the consent order. *See* Amstar Corp. v. Envirotech Corp., 823 F.2d 1538, 1548 (Fed.Cir.1987). This requires a showing that the redesign is an infringement. *See id*. Therefore, although "the issue in contempt proceedings is violation *vel non* of the injunction, ... [i]nfringement is the *sine qua non* of violation of an injunction against infringement." KSM, 776 F.2d at 1528.

In order to prove infringement, a patent owner must demonstrate by a preponderance of the evidence that "the modified device falls within the admitted or adjudicated scope of the claims." Id. at 1530; *accord* Preemption Devices v. Minnesota Min. & Mfg. Co., 803 F.2d 1170, 1175 (Fed Cir.1986). Infringement may not be proved by comparison with the device admitted to infringe. *See* KSM, 776 F.2d at 1528 ("[N]o correlation between infringement by the accused device and by the adjudged device necessarily exists as a

result of their equivalence to each other."). That is particularly so where, as here, "the modified device has [ ] been changed from the adjudged device in a way which affects an element of a claim." Id. at 1528-29. Instead, a court, in making a finding of infringement, must look to the claims of the patent, construing them "in light of" the admitted infringement. FN5 Id . at 1528-29.

FN5. Plaintiffs argue that defendant's claim construction argument is barred by its prior admission that the original obturator fell within the scope of the '297 patent claims. Given that the original obturator had raised, circumferential ridges at 18, 19, 20, and 22 mm, the record does not demonstrate that defendant was conceding the presence of a length indicator at 24 mm.

A patent owner may prove infringement under either of two theories: literal infringement or the doctrine of equivalents. "To establish literal infringement, a plaintiff must demonstrate that every limitation in the claim is literally met by the accused device ." Kahn v. General Motors Corp., 135 F.3d 1472, 1476 (Fed.Cir.1998). In other words, literal infringement exists when the claim, as construed by the court, reads on the accused device exactly. *See* Engle Indus., Inc. v. Lockformer Co., 96 F.3d 1398, 1405 (Fed.Cir.1996). Infringement may not be avoided simply by adding features or components not required by the claims. *See* Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 865 (Fed.Cir.1985), *overruled on other grounds,* Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059 (Fed.Cir.1998). Plaintiffs have the burden of demonstrating by a preponderance of the evidence that "every limitation of the claim is literally met by the accused device." Kahn, 135 F.3d at 1476.

If an accused device does not literally infringe a patent claim, infringement may still be established under the doctrine of equivalents. *See* Warner-Jenkinson Co. v. Hilton Davis Chem. Co ., 520 U.S. 17, 21 (1997). Under this doctrine, infringement is established if "there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Id*. at 1045; *accord* Kahn, 135 F.3d at 1478. An accused device may infringe under the doctrine of equivalents if "the difference between the claimed invention and the accused device ... are 'insubstantial." ' Texas Instruments Inc. v. Cypress Semiconductor Corp., 90 F.3d 1558, 1563-64 (Fed.Cir.1996) (citation omitted). Thus, the analysis under the doctrine is whether the element in the accused device performs substantially the same function, in substantially the same way, to achieve substantially the same result as the claimed element. Dawn Equip. Corp. v. Kentucky Farms Inc., 140 F.3d 1009, 1016 (Fed.Cir.1996). The test for equivalence must be applied to the individual elements of the claim, not to the invention as a whole. *See* Hilton Davis, 520 U.S. at 29, 40; Kahn, 135 F.3d at 1478.

B. Infringement FN6

FN6. In its answering brief, defendant questions the validity of the '927 patent, asserting that "substantial issues of validity [exist] that also require adjudication." (D.I. 23 at 4 n. 2) Validity, however, "is the law of the case" in contempt proceedings and, therefore, is beyond the scope of the court's jurisdiction. *See* KSM, 776 F.2d at 1529.

1. Claim Construction

The Federal Circuit has set forth a two-step analysis for determining whether there is infringement under either theory:

First, the claims must be correctly construed to determine the scope of the claims. Second, the claims must be compared to the accused device.

Kahn, 135 F.3d at 1476. Claim interpretation is a question of law. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995), *aff'd,* 517 U.S. 370 (1996). Courts are directed to consider three sources to ascertain the meaning of a claim: (1) the literal language of the claim; (2) the patent specification; and (3) the prosecution history. Claim construction always begins with the claim language, which defines the scope of the claim. *See* York Prods., Inc. v. Central Tractor Farm & Family Ctr, 99 F.3d 1568, 1572 (Fed.Cir.1996). In analyzing claim language, the court must employ "normal rules of syntax," Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1553 (Fed.Cir.1997), for "[a] claim must be read in accordance with the precepts of English grammar." In re Hyatt, 708 F.2d 712, 714 (Fed.Cir.1983). When interpreting the words of the claim, the court should "ascribe [to the words] their ordinary meaning unless it appears the inventor used them otherwise." Bell Communications Research, Inc. v. Vitalink Communications Corp., 55 F.3d 615, 620 (Fed.Cir.1995). In addition, the words must be construed in the light of the specification, whose "description may act as a sort of dictionary, which explains the invention and may define terms used in the claims." Markman, 52 F.3d at 979; *see also* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996).

The last source of intrinsic evidence relevant to claim interpretation is the prosecution history of the patent, as it constitutes an "undisputed public" expression of what the patentee understood in terms of claim construction. Markman, 52 F.3d at 980. The court, in its discretion, may consider extrinsic evidence "to assist in its construction of the written document." Id. at 981. However, neither the prosecution history nor any extrinsic evidence can "enlarge, diminish, or vary" the limitation in the claims. Id. at 980.

Plaintiffs assert that defendant's modified device infringes claim 1 of the '297 patent. This independent claim is an apparatus claim and describes an obturator body consisting of

an elongated slender body having a proximal end and a distal end, the body having a handle portion at said proximal end, the body having a shaft portion from the handle portion to said distal end, such shaft portion being dimensioned so that the portion thereof adjacent said distal end may be received in an endodontically prepared root canal and such portion has a surface adapted to receive filler material thereon;

a plurality of integral spaced apart length indicators formed on the exterior surface of said body shaft portion between said handle portion and said portion adjacent said distal end to be received in an endodontically prepared root canal, the indicators serving to indicate the length of said shaft portion to said distal end; and

canal filler material formed on said body shaft portion adjacent said distal end leaving at least a substantial portion of said length indicators visually exposed.

(D.I. 20, Ex. B col. 5, Ins. 16-36) (emphasis added).

The emphasized language denotes the only disputed claim element,FN7 that of "a plurality of integral spaced apart length indicators formed on the exterior surface of said body shaft portion...." According to the '297 patent, the length indicators allow the practitioner to

FN7. The parties apparently agree that defendant's obturator is "an elongated slender body," despite the fact

that it is comprised of two separate pieces.

insert the obturator with the filler material thereon in the prepared canal to the proper depth as indicated by markers on the obturator body shaft portion, assuring complete filling of the root canal.
(D.I. 20, Ex. B col. 2, Ins. 35-39; *see also* D.I. 20, Ex. B col. 4, Ins. 9-14, 17-20) FN8 Complete filling and, thus, entombment of any remaining pupal material and contaminants, is essential to the success of endodontic therapy. (D.I. 20, Ex. B col. 1, Ins. 23-26)
FN8. Prior to obturation, the length of the root canal is determined by insertion of a "verifier." If an x-ray of the tooth reveals that the verifier has been inserted all the way to the apex, the verifier is removed and the length of the canal determined from the length of the inserted portion of the verifier. (D.I. 20, Ex. B col. 2, Ins. 20-30)

Claim 1 of the '297 patent requires "a plurality of integral spaced apart length indicators formed on the exterior surface of said body shaft portion." (D.I. 20, Ex. B col. 5, Ins. 26-28) (emphasis added). The specification further provides that the length indicators be "[i]ntegrally formed on [the] shaft portion." (D.I. 20, Ex. B col. 3, In. 33) (emphasis added). Likewise, the prosecution history speaks of "a plurality of length indicators formed on the exterior surface of the shaft between the handle portion and the portion adjacent the distal end to be received in a root canal." FN9 (D.I. 24 Ex. A5 at 4) (emphasis added). "Formed" is defined as "to give form or shape to" or "to give a particular shape to: shape, mold, or fashion into a certain shape or condition or after a particular model." *Webster's Third New Int'l Dictionary* 893 (1971). Thus, the exterior surface of the body shaft must be "give[n] a particular shape" for a particular purpose, i.e., to indicate length. By this construction, therefore, the mere presence of a physical feature on the exterior surface of the body shaft does not necessarily mean that the feature was "formed" or "give[n] a particular shape" in order to indicate length.

FN9. Initially, claim 1 of the '297 patent was rejected in light of United States Patent No. 3,919,774 ("the '774 patent") because the prior art patent "shows an obturator body 18 having a plurality of indicators." (D.I. 24, Ex. A4 at 3) The '774 patent stated in pertinent part:
Additionally, the indentations or projections could be located to form a graduation of the post for its utilization as a depth gauge. Also, numerical values could be applied for calibration in accordance with depth for facilitating proper placement of the sealer element.

(D.I. 23, Ex. A col. 4, Ins. 11-16)
2. Comparison of the Claim to the New Design Obturator

In the instant action, the parties dispute whether defendant's "new design" obturator has the length indicator claim element, that is, a "plurality of integral spaced apart length indicators formed on the exterior surface of said body shaft portion between said handle portion and said portion adjacent said distal end to be received in an endodontically prepared root canal...." Both parties agree that the increased diameter portion of the tapered core located 18 mm from the distal end is a length indicator as defined in claim 1. The parties disagree as to whether there is a second length indicator formed on the exterior surface of the shaft portion of defendant's obturator.

Plaintiffs assert that the shaft portion consists of both the tapered core and the metal insertion pin.

Consistent with this construction, plaintiffs observe that the metal insertion pin has a smaller diameter than the tapered core (an accurate observation, given that the insertion pin must be capable of being inserted in the tapered core). Plaintiffs thus characterize the change in diameter between these two components as a length indicator, the tapered core being measured at 24 mm from the distal end of the shaft portion.

Defendant argues that the insertion pin is part of the "handle portion," not the "shaft portion." Consequently, the change in diameter from the tapered core to the insertion pin does not constitute a length indicator formed on the exterior surface of the shaft portion, as required by the claim language, but simply the end of the shaft portion. The court agrees.

As an initial matter, plaintiffs have failed to demonstrate that the metal insertion pin is part of the shaft. The specification of the '297 patent provides for a shaft portion that is severed following its insertion in the root canal. Specifically, the specification states that

the endodontist can then sever the shaft portion at the proper location and remove the handle portion 16, the unused shaft portion 18 and washer 22, leaving the required length of the shaft portion 18 and filler material 26 within the root canal.

(D.I. 20, Ex. B col. 4, Ins. 21-25) Review of the prosecution history reveals that the obturator claimed in the '297 patent was distinguished from the prior art on the basis, *inter alia,* that the shaft portion was designed to remain in the root canal:

In Applicant's device the shaft portion is severed after it is inserted into a root canal, and the handle portion and the severed shaft portion are removed so that the only portion remaining in the tooth is that portion adjacent the distal end which does not include the length indicators.

(D.I. 24, Ex. A5 at 4; *see also* D.I. 20, Ex. B col. 1, Ins. 42-47) According to Dr. Jimmie Kert, the CEO of Soft-Core, the metal insertion pin of defendant's device was not designed to stay within the root canal. (D.I. 59 at 62-63, 86-87) Rather, during obturation the insertion pin and the handle are removed as a unit prior to the tapered core being severed. (D.I. 59 at 62-63, 86-87) Thus, the insertion pin acts in concert with the handle in which it is embedded. (D.I. 59 at 62-64, 86-87) The change in diameter from the tapered core to the metal insertion pin, therefore, cannot constitute a length indicator "formed on the exterior surface of said body shaft portion...."

Neither can the end of the tapered core constitute a length indicator as described in claim 1 of the '297 patent. Consistent with the court's claim construction, the length indicators must have particular shapes for the purpose of indicating length. There can be no dispute that the shaft portion of the obturator, like every object, must have an end and, therefore, a corresponding length. To read the claim so broadly as to include within its scope the end of an object would be to eliminate the limitation altogether.

After comparing the disputed language of claim 1 of the '297 patent with the modified device, the court concludes that plaintiffs have failed to prove by a preponderance of the evidence that the modified device possesses a "plurality of integral spaced apart length indicators formed on the exterior surface" of the shaft portion. Accordingly, the court finds that plaintiffs have failed to establish by clear and convincing evidence that defendant has violated the terms of the consent judgment and order.

Having so concluded, the court will address whether infringement may be established under the doctrine of

equivalents.FN10 As stated above, an accused device "that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Kahn* 135, F.3d at 1478. "Equivalence" is determined either by focusing on whether the accused device performs substantially the same function in the same way to achieve substantially the same result (the so-called "function/way/result" test), *see id.,* or by considering whether there are "insubstantial differences" between the patent claim term and the accused device, *see* Hilton Davis, 520 U.S. at 39-40. The analysis to be undertaken in determining equivalence is on an element-by-element basis, not to the invention as a whole. *See* id. at 29, 40. The fact that identical elements are absent from the accused device does not rule out the presence of equivalent elements. *See* id. at 40.

FN10. Defendant contends that the court should not consider the doctrine of equivalents because (1) it was never placed on notice of the assertion of such a contention by plaintiffs and (2) the devices must be more than colorably different if literal infringement cannot be shown. (D.I.56)

Focusing on the disputed claim language, the equivalence argument advanced by plaintiffs FN11 is the same as that advanced with respect to literal infringement and is founded upon the same construction of the term "shaft portion." In fact, plaintiff's equivalence argument is subsumed totally in their case of literal infringement. (D.I. 57 at 3: "While Dentsply believes that literal infringement is clear on the present record, the evidence and arguments advanced by Dentsply also provide ample support for a finding of infringement under the doctrine of equivalents.") Evidence and argument directed to literal infringement, that might bear on equivalence, are insufficient to establish infringement under the doctrine of equivalents. *See* Lear Siegler, Inc. v. Sealy Mattress Co. of Mich., Inc., 873 F.2d 1422, 1425 (Fed.Cir.1989). A patent owner must present both "particularized testimony and linking argument" on why the function, way, and result of each element in the accused device is substantially the same as the claimed elements. Texas Instruments, 90 F.3d at 1567; *see also* Lear Siegler, 873 F.2d at 1425 (stating that "substantial identity must be proven with regard to all three elements ... function performed, means by which function is performed, and result achieved" (emphasis in original)).

FN11. The court notes that plaintiffs did not raise specifically the issue of infringement under the doctrine of equivalents in any of their papers submitted prior to the show cause hearing or at the hearing itself, referring only to infringement generally. Rather, it was the court that questioned the doctrine's application to the case at bar. (D.I. 59 at 57-58)

The only evidence of record that plaintiffs, in hindsight, dedicate to the doctrine of equivalents concerns the function of the length indicators-to "indicate the length of said shaft portion to said distal end." (D.I. 57 at 5) Specifically, plaintiffs look to defendant's advertisements for the "new design" obturator which indicate that the end of the tapered core is 24 mm from the distal end. (DI 20, Ex. C7) Even assuming, arguendo, that such advertisements imply use of the end of the tapered core as a reference point, function is but one prong of the equivalence analysis. Plaintiffs neglect to address the other two prongs: means and result. Accordingly, the court finds that plaintiffs have failed to establish by a preponderance of the evidence that "the element of the accused device at issue performs substantially the same function, in substantially the same way, to achieve substantially the same result, as the limitation at issue in the claim." Dawn Equip., 140 F.3d at 1016. Having found that plaintiffs have failed their burden under the lesser standard, the court concludes that plaintiffs have not established by clear and convincing evidence that the modified device falls

within the admitted scope of the claims and is, therefore, an infringement.

IV. CONCLUSION

For the reasons stated above, the court finds that defendant's offer for sale and sale of the "new design" Soft-Core obturators does not violate the terms of the consent judgment and order entered on January 30, 1998. Accordingly, the court finds that defendant is not in contempt. An appropriate order shall issue.

D.Del.,1999.
Dentsply Intern. Inc. v. Soft-Core System, Inc.