United States District Court,
M.D. Pennsylvania.

ARLINGTON INDUSTRIES, INC,
Plaintiff.
v.
BRIDGEPORT FITTINGS, INC,
Defendant.

Dec. 4, 2007.

Auzville Jackson, Jr., Richmond, VA, Kathryn L. Clune, Crowell & Moring, Katie A. Jefcoat, Mark L. Hogge, Shailendra K. Maheshwari, Greenberg Traurig, LLP, Washington, DC, Robert J. Tribeck, Rhoads & Sinon LLP, Harrisburg, PA, for Plaintiff.

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MEMORANDUM

A. RICHARD CAPUTO**, District Judge.**

I. FACTS

A. Introduction

Plaintiff Arlington Industries, Inc. ("Arlington") and Defendant Bridgeport Fittings, Inc. ("Bridgeport") are competitors in the field of electrical connectors. Arlington and Bridgeport were previously involved in litigation concerning allegations that certain Bridgeport connectors infringed two of Arlington's patents, U.S. Patent Nos. 5,171,164 ("the '164 Patent") and 5,266,050 ("the '050 Patent"). Arlington and Bridgeport settled this litigation in March of 2004. Bridgeport ceased selling the allegedly infringing electrical connectors and designed a new line of electrical connectors so as to not infringe Arlington's patents. Bridgeport has obtained its own patents for this new line of electrical connectors. Bridgeport began marketing this new line of connectors in 2005.

Thereafter, Arlington contacted Bridgeport, alleging that Bridgeport's new connectors infringed claim 8 of the '050 Patent and that Bridgeport had violated the terms of the settlement. Bridgeport then filed an action seeking a declaratory judgment that its new electrical connectors do not infringe the ' 050 Patent. This action was consolidated with the original litigation and is now pending before Judge Conner.

On May 31, 2006, Arlington filed this action, alleging that Bridgeport's new electrical connectors infringe

claim 1 of a third patent held by Arlington, U.S. Patent No. 6,521,831 ("the '831 Patent"), as well as claim 8 of the ' 050 Patent. A *Markman* hearing was held on July 6, 2007, at which intrinsic and extrinsic evidence were presented and arguments were made.

B. The Patents

1. The '050 Patent

The '050 Patent is entitled "Quick-Connect Fitting for Electrical Junction Box." (U.S. Patent No. 5,266,050 (filed Sept. 11, 1992), Pl.'s Ex. B, Doc. 3-3.) The '050 Patent is an invention which relates to connectors for electrical junction boxes, specifically to an improved connector that can be easily attached to an anchored junction box by pushing with one hand. Id. FN1 Claim 8 of Arlington's ' 050 Patent is alleged to be infringed. Claim 8 provides:

FN1. Prior to the '050 Patent, the most common form of attaching cable and electrical metal tubing to electrical junction boxes was by using an interior-threaded lock nut which is screwed onto the exterior-threaded electrical fitting that extends into the junction box. The disadvantage of this was that the process of attachment required one to use both of his hands. Moreover, matching the threads can be very difficult, especially when the junction box is in a hard to reach place. The '050 Patent makes the attachment process easier and quicker, yet still provides good electrical continuity. Id.

A quick connect fitting for an electrical junction box comprising:

a hollow electrical connector through which an electrical conductor may be inserted having a leading end thereof for insertion in a hole in an electrical junction box;

a ***circular spring metal adaptor*** surrounding said leading end of said electrical connector which has a leading end, a trailing end, and an intermediate body;

at least two ***outwardly sprung*** members ***carried by said metal adaptor near said trailing end of said adaptor*** which engage the side walls of the hole in the junction box into which said adaptor is inserted;

at least two spring locking members carried by said metal adaptor that spring inward to a retracted position to permit said adaptor and locking members to be inserted in a hole in an electrical junction box and spring outward to lock said electrical connector from being withdrawn through the hole; and

an arrangement on said connector for limiting the distance said connector can be inserted into the hole in the junction box. (Id. (emphasis added)).

2. The '831 Patent

The '831 Patent is entitled "Duplex Electrical Connector with Spring Steel Cable Retainer." (U.S. Patent No. 6,521,831 B1 (filed Aug. 29, 2001), Pl.'s Ex. A, Doc. 3-2.) The '831 Patent is an invention which relates to cable terminations and more particularly to duplex or two-wire cable terminations that snap into place and include snap-on cable retainers, neither of which requires twisting for locking.FN2 Id. Claim 1o f Arlington's ' 831 Patent is alleged to be infringed. Claim 1 provides:

FN2. The '831 Patent simplifies a piece of the U.S. Patent No. 6,194,661 ("the '661 Patent"). The '661 Patent improved U.S. Patent No. 6,080,933 ("the "3 Patent"). The "3 Patent describes a locking cable connector composed of three mating pieces that snap together and provide a connector for connecting helically wound armored or metal clad electrical conductors to junction boxes or electrical panels. One of these three mating pieces is a spring steel adaptor. Another is a spring steel locking ring. The '661 Patent described a duplex connector that combines the spring steel adaptor and spring steel locking ring of the "3 Patent with a novel connector to connect two helically wound armored or metal clad electrical conductors to a junction box or electrical panel through a single access hole or knockout. The '831 Patent is a duplex connector that is simpler than the duplex connector of the '661 Patent. Id.

A duplex electrical connector comprising:

a) a ***housing*** having a ***cylindrical*** outbound end, a generally oval inbound end, and an interior channel linking said inbound and said outbound end;

b) a ***pair of parallel openings*** in said inbound end;

c) a ***tubular*** spring steel cable retainer secured in each of said openings in said inbound end for accepting separate cables, said retainers including a set of ***inwardly extending tangs to receive and engage said separate cables inserted from said inbound end and guide said separate cables toward said cylindrical outbound end in a manner that said separate cables are advanced to said outbound end,*** said inwardly extending tangs restricting removal of said separate cables by force applied on said separate cables from said inbound end; and

d) a ***tubular spring steel adaptor*** secured to said cylindrical outbound end of said housing, said adaptor having ***outwardly*** extending tangs.

Id. (emphasis added).

II. LEGAL STANDARD

The "meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art ... at the time of the invention .... " (Phillips v. AWH Corporation, 415 F.3d 1303, 1313 (Fed.Cir.2005) (en banc), *cert. denied,* 546 U.S. 1170, 126 S.Ct. 1332, 164 L.Ed.2d 49 (2006)). The starting point for determining how a person of ordinary skill in the art would understand a claim term "is based on the well-settled understanding that inventors are typically persons skilled in the field of the invention and that patents are addressed to and intended to be read by others of skill in the pertinent art." *Id.*

In *Phillips v. AWH Corporation,*FN3 415 F.3d 1303 (Fed.Cir.2005) (en banc), *cert. denied,* 546 U.S. 1170, 126 S.Ct. 1332, 164 L.Ed.2d 49 (2006), the United States Court of Appeals for the Federal Circuit delineated the general principles of claim construction, stressing the importance of intrinsic evidence-i.e., the patent's claims, specification and prosecution history-and severely curtailing the role of extrinsic evidence-i.e., expert and investor testimony, general and technological dictionaries, and learned treatises. *Id.* In so doing, the court renounced the approach to claim construction used in Texas Digital Systems, Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed.Cir.2002), where the dictionary meaning of a claim term was heavily relied upon so as to not import a limitation from the specification into the claim. Id. at 1202.

FN3. In *Phillips,* the main issue before the court was whether the patent claim was to be limited to the embodiments disclosed in the specification-i.e., whether the fact that the only embodiments disclosed in the specification illustrated baffles at angles other than ninety degrees (90 (deg.)) meant that the claim did not include baffles oriented at ninety degree (90 (deg.)) angles. The court used "claim differentiation" to resolve this issue, concluding that the claim included baffles at all angles.

In holding that intrinsic evidence serves as the best guide for construing a patent claim term, the court stated that "the claims themselves provide substantial guidance as to the meaning of a particular claim term." *Id.* at 1314. "It is a bedrock principle of patent law that the claims of a patent define the innovation to which the patentee is entitled the right to exclude." *Id.* at 1312 (citation and quotation marks omitted). The context in which the claim term is used,FN4 the other claims of the patent,FN5 and the differences among the claims FN6 can all help a court discern the meaning of a disputed claim term. *Id.*

FN4. As an example of how context can be used to construe the meaning of a claim term, the court posited that the reference to "steel baffles" in claim 1 implies that "baffles" are not inherently made of steel. *Id.*

FN5. The court asserted that "because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Id.*

FN6. As an example of claim differentiation, the court explained that "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* As noted, *supra,* this doctrine was used by the court to construe the claim as including baffles oriented at all angles, including ninety degree (90 (deg.)) angles.

The court reaffirmed prior holdings that the specification is "the single best guide to the meaning of a disputed term." *Id.* at 1315 (*quoting* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996)). The court explained that there are several reasons why the specification must play an important role in the interpretation of a disputed claim term. *Id* . at 1315-17. First, the claims and the specification are part of a single "fully integrated" instrument. *Id.* at 1315 (citing Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995) (en banc), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996)). Therefore, the claims "must be read in view of the specification." *Id.* Second, the specification must, by law, describe the claimed invention in "full, clear, concise, and exact terms." *Id.* at 1316 (quoting 35 U.S.C. s. 112 para. 1). Third, the Patent and Trademark Office determines the scope of the claims in light of the specification and requires that the meaning of the terms in the claims be ascertainable by reference to the specification. *Id.* at 1316-17 (citing 37 C.F.R. s. 1.75(d)(1)). However, the court did emphasize that the scope of claims should not be limited to the embodiments disclosed in the specification. *Id.* at 1323-24. The court stated that district courts should "avoid importing limitations from the specification into the claims." *Id.* at 1323.

The prosecution history should also be looked to in construing a claim because it "was created by the patentee in attempting to explain and obtain the patent." *Id.* at 1317. While it "often lacks the clarity of the specification," the prosecution history file can be useful in excluding any construction of a claim or term

that was disclaimed during prosecution. *Id*. However, a court's reliance on prosecution history must be tempered with the recognition that a "prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation." *Id*. As such, the prosecution history "often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id*.

The court reaffirmed that a district court may, in its discretion, use extrinsic evidence-i.e., expert and inventor testimony, dictionaries and treatises-to construe patent claims. *Id*. at 1319. The court observed that such evidence can be useful to educate the court in the field of art and may also help the court determine what one skilled in the art would understand the claim term to mean. *Id*. However, because it is "general[ly] ... less reliable than the patent and its prosecution history," the court cautioned that extrinsic evidence should be accorded less weight than intrinsic evidence. *Id*. at 1317-18.FN7

FN7. The court noted several reasons why extrinsic evidence is less reliable than intrinsic evidence. First, extrinsic evidence is not part of the patent and so was not created for the purpose of disclosing and teaching the invention. Second, extrinsic evidence may not be written by or for one skilled in the art, and, therefore, may not reflect the understanding one skilled in the art would have. Third, expert reports and testimony are biased because they "are generated at the time of and for the purposes of litigation." Fourth, "there is a virtually unbounded universe of potential extrinsic evidence of ... marginal relevance that could be brought to bear on any claim construction question." Lastly, if relied upon too heavily, extrinsic evidence can change the meaning of claims and undermine the public notice function of the patent. *Id*. at 1318-19.

The court renounced the approach to claim construction taken by the court in Texas Digital Systems, Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed.Cir.2002). There, the court looked at the dictionary definition of the disputed claim term first to ascertain its meanings and then looked at the specification and the prosecution history simply to check to see if the inventor limited the claim to only certain of the meanings rather than the full range of dictionary meanings. (Phillips, 415 F.3d at 1319-20.) This was done so as not to read a limitation from the specification into the patent claim. Id. at 1319.

While acknowledging that the *Texas Digital* court's concern was valid, the *Phillips* court rejected this approach as improperly restricting the role of the specification, which, as mentioned above, the court stated is "the single best guide to the meaning of a disputed term. *Id*. at 1321 (quoting Vitronics, 90 F.3d at 1582). The *Phillips* court reasoned that dictionaries focus on abstract meanings of a term rather than the context in which the term is used. *Id*. Significantly, starting with the many meanings included in the dictionary definition and then only eliminating those meanings disclaimed in the claims, specification and prosecution history, makes the claim overbroad. *Id*. This "risks transforming the meaning of the claim term." *Id*. Instead, the court suggested that it is better to first look to the specification and prosecution history to see how the inventor used the term in the context of the description and then use the dictionary to confirm this meaning. *Id*.FN8

FN8. The court cautioned that technical dictionaries and treatises suffer from the same deficiencies as general dictionaries. First, the inventor is necessarily describing a novel and non-obvious advancement in the art and so treatises and technical dictionaries might not have ever described it. Second, the inventor may have used the disputed term differently than the way it is used in the treatise or dictionary. Third, learned treatises and technical dictionaries may be "dumbed down" and so they do not demonstrate what one skilled in the art understands the term to mean. Finally, there are many different treatises and dictionaries which will likely have different definitions of the same term. *Id*. at 1322-24.

While the court did not go so far as to limit the use of extrinsic evidence in claim construction or require that intrinsic evidence be looked to first, the court did stress that more weight should be given to intrinsic evidence and that a court could never use extrinsic evidence to contradict the meaning of a claim term that is clear upon considering the intrinsic evidence. *Id*. at 1324.

III. DISCUSSION

The parties dispute the meaning of several terms contained within the '050 and '831 Patents. The constructions of these terms, including those constructions submitted by the parties, will be addressed in turn.

A. The '050 Patent

1. "Circular"

As noted above, the second paragraph of claim 8 of the '050 Patent requires an adaptor that is "circular." Bridgeport contends that "circular" should be construed to mean "cylindrical" or "tubular," such that the adaptor has a constant diameter at both the leading and trailing ends. Essentially, Bridgeport argues that "circular" cannot mean "conical." Arlington, on the other hand, argues that "circular" means "circular cross-sections," whether or not the adaptor has a constant diameter along its axial length.

a. How "circular" should be construed based on the language and context of the claims

Looking first to the plain and ordinary meaning of the language of the claims, "circular" is used several times, each time to refer to the spring metal adaptor which is at the leading end of the electrical connector, as the "circular spring metal adaptor" is the part that attaches to the electrical junction box via the outwardly sprung members. As such, "circular" appears to mean "round," so that the spring metal adaptor can fit into a round hole in the electrical junction box. Whether the spring metal adaptor needs to be of a constant diameter along its axial length is not addressed in the claims.

Also, in the fifth paragraph of claim 1, the circular spring metal adaptor is said to be less than a complete "circle." This lends further support to the interpretation that "circular" simply means its ordinary definition of "in the form of a circle." The term "circle" refers to the curve of the spring metal adaptor. This term does not seem to be relate at all to the measurements of the diameter along the axial plane of the spring metal adaptor.

b. How "circular" should be construed based on the specification

The specification supports Arlington's interpretation of "circular"-i.e., that the spring metal adaptor is shaped in the form of a circle, including in the form of a cone.

Bridgeport points to specification figures which portray the spring metal adaptor as essentially a cylindrical ring with a constant diameter. Bridgeport also points to a specification figure depicting the spring metal adaptor in its flat form, which looks like a piece of metal in the form of a rectangle. Rolling a rectangle creates a cylinder, Bridgeport asserts.

Bridgeport's argument is misplaced. Its argument essentially limits the scope of claim 8 to the embodiments disclosed in the specification. This is something the *Phillips* court stated should not be done. 415 F.3d at 1323 (stating that the claims should not be confined by the embodiments disclosed in the specification). "The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication." Vitronics, 90 F.3d at 1582. However, the specific embodiments of an invention described in the specification do not limit the scope of the language used in the claims, unless the specification makes it clear that it is coextensive with the claims. (JVW Enterprises, Inc. v. Interact Accessories, Inc., 424 F.3d 1324, 1335 (Fed.Cir.2005). Thus, Bridgeport's argument that "[t]he specification of the '050 Patent repeatedly, consistently, and exclusively depicts and describes the 'circular' adaptor as a cylindrical ring" will be rejected as too narrow a construction.

c. How "circular" should be construed based on the prosecution history

Turning to the prosecution history, Bridgeport points to the response by the patentee following the United States Patent and Trademark Office's rejection of the application for the parent patent to the '050 Patent, U.S. Patent No. 5,171,164 ("the '164 Patent"). Arlington responded as follows:

Both claims 1 and 13 have been amended in a manner to distinguish them from Recker. Recker discloses a connector for attaching electrical cables to outlet boxes that utilizes a ***tubular*** shell member 16 .... ***The shell member 16 is a tube that forms a complete undivided circle so there can be no springing apart of the periphery of the tube as provided for in Applicants' broad claims 1 and 13.*** The versatility of Applicants' circular spring metal adaptor permits it to be used with a variety of connectors.

(*See* Pl.'s Br. In Opp. at 14, Doc. 65 at 20; Def.'s Br. at 13, Doc. 53 at 22 (emphasis added)).

Bridgeport contends that, because the term "circular spring metal adaptor" is common to both the '164 Patent and the '050 Patent, it is proper to construe this term in light of these statements in the '164 Patent file history. Arlington's statement that the shell member 16 is "tubular" and that "there can be no springing apart of the periphery of the tube as provided for in Applicants' broad claims 1 and 13" imply that the circular spring metal adaptor is a tube.

Arlington argues that the terms "tube" and "tubular" refer to the Recker device, and not the '164 Patent or '050 Patent. Arlington explains that the applicant distinguished the circular spring metal adaptor disclosed in the '164 Patent from the Recker device on the basis that the Recker tube could not spring apart-i.e ., the shell member 16 is a tube that does not allow the tube to spring apart, whereas springing apart is provided for by the circular spring metal adaptor disclosed in the '164 Patent, because it was split.

d. Extrinsic evidence

Bridgeport's expert, in the field of the design and manufacture of electrical connectors, Dr. Brian Williamson, testified that because the description of circular was two dimensional and the invention was three dimensional, one should go to the specifications. He testified that Figs. 1, 2 and 5 showed a cylindrical figure. With respect to the figures in the specification depicting the rectangular metal strip prior to its being formed, Dr. Williamson stated that if bent it forms a cylinder that has a constant cross-section. Dr. Williamson concluded that there was nothing in the specification that suggests any adaptor other than one that had a constant cross-section along its axial length.

Conversely, Arlington points out that Dr. Williamson admitted that a flat rectangular strip of metal could be

shaped into the form of a cone. (Pl.'s Br. In Opp. at 17, Doc. 65 at 23.) Arlington also submits that Bridgeport is trying to limit the claim to the embodiments disclosed in the specification, which is rejected by *Phillips*.

e. Conclusion

"Circular" should be interpreted to mean "round," thus including conical shaped adaptors. This construction is based on the language of the claims, particularly: (1) the adaptor is described as fitting into a round hole in the electrical junction box and (2) the the adaptor is described as being less than a complete circle. These descriptions support the conclusion that "circular" simply means "round," and does not limit the claim to only adaptors with a constant diameter along the axial plane. In short, circular is not the equivalent of a circle.

2. "Spring Metal Adaptor"

Bridgeport next argues that the term "spring metal adaptor" should be read to mean a split ring such that the diameter of the adaptor can be easily changed. Bridgeport relies on the specification which consistently shows a split ring. Bridgeport also points to the description which states that the "circular metal spring adaptor has an opening that results from not forming a complete circle". (Lines 20-22, Column 3 of the '050 Patent.) Moreover the tangs along with the reduction of the diameter of the adaptor provide the springing action which allows the fit. Arlington counters that Bridgeport is again attempting to limit the claim to the specification.

a. The language of the claims

Based on the doctrine of claim differentiation, Arlington argues that the term "spring metal adaptor" should not be read to mean a "split spring metal adaptor." The fifth paragraph of claim 1 includes the language "said circular spring metal adaptor ***being less than a complete circle*** ...." (The ' 050 Patent at col. 9, lines 26-27, Doc. 3-3 at 14 (emphasis added)). Such language is not included in claim 8. Because the spring metal adaptor is not described as being less than a complete circle in claim 8, as it is in claim 1, it stands to reason that claim 8 should include spring metal adaptors that are complete circles. (*See* Phillips, 415 F.3d at 1312.)

Bridgeport argues that, notwithstanding the general principle of claim differentiation, "[i]t is not unusual that separate claims may define the invention using different terminology, especially where (as here) independent claims are involved." (Def.'s Br. at 30, Doc. 53 at 39 (citing Mycogen Plant Sci., Inc. v. Monsanto Co., 243 F.3d 1316, 1329 (Fed.Cir.2001)). As such, the doctrine of claim differentiation does not apply because claims 1 and 8 have different scope regardless of whether "spring metal adaptor" is construed as requiring a split-ring configuration. (*See* Telemac Cellular Corp. v. Topp Telecom, Inc., 247 F.3d 1316, 1325-26 (Fed.Cir.2001) (claim differentiation did not apply because "claim 3 embraces additional limitations not encompassed within claim 1")).

b. The specification

While it is true that the specification does not disclose the spring metal adaptor in a form other than as a split ring or incomplete circle, this fact is not determinative. As mentioned above, a claim should not be limited to the embodiments in the specification.

Bridgeport's most compelling argument, however, is the specification's description of the spring metal

adaptor. "The circular metal spring adaptor has an opening that results from not forming a complete circle. When the outward-bent tangs or spring locking members are bent inward to permit the adaptor to be inserted into a hole, there is also a slight reduction in the diameter by the opening narrowing, therefore, there are two spring actions involved during insertion." (The '050 Patent at col. 3, lines 20-27.) One of the spring actions is the tangs. The other spring action is the spring metal adaptor-the space created by the incomplete circle narrows, reducing the diameter of the spring metal adaptor. Thus, a necessary feature of the "spring" metal adaptor is that it is "split." Without the split, it would not spring.

Arlington does not directly respond to this argument.

c. Prosecution history

Bridgeport argues that, during the prosecution of the '164 Patent, the parent patent to the '050 Patent, the patentees distinguished their invention from Recker by explaining that "[t]he shell member 16 [of Recker] is a tube that forms ***a complete undivided circle*** so there can be no springing apart of the periphery of the tube as provided for in Applicants' broad claims 1 and 13." (Def.'s Br. at 26, Doc. 53 at 35) (emphasis added). Bridgeport states "the patentees expressly informed the examiner-and the world-that their 'circular spring metal adaptor' was different from Recker because it was *not* a 'complete undivided circle' and therefore permitted 'springing apart of the periphery of the tube.' " Id. at 26-27, Doc. 53 at 35-36 (emphasis in original).

Conversely, Arlington argues that the PTO examiner allowed claims 1 and 2 of the '164 Patent as they were originally filed without requiring that they be limited to "less than a complete circle. (Pl's Br. In Opp. at 21, Doc. 65 at 27.) Arlington did not inform the PTO examiner and the world that the circular spring metal adaptor was less than a complete circle except when it is stated as such in the claims. Without such language, "spring metal adaptor" should be given "its plan and ordinary meaning; a device which connects two objects, often of different diameters, that is made of elastic resilient material. (Id. at 22, Doc. 65 at 28.)

d. Extrinsic evidence

Bridgeport again offers the testimony of Dr. Williamson, who pointed to the following facts as supporting Bridgeport's argument that "spring metal adaptor" should be construed as meaning "split spring metal adaptor." First, every figure in the patent shows that the circular spring metal adaptor has a "slot or opening in the circumference." Again, this argument is misplaced as the claims should not be limited to only those embodiments disclosed in the specification. Second, the patentees clearly stated in the '050 specification that "[t]he circular spring metal adaptor 20 has an opening that results from not forming a complete circle." Third, the '050 specification states that, when the adaptor is passed through the hole in the junction box, "there is also a slight reduction in the diameter by the opening narrowing." These two contentions echo Bridgeport's argument that the spring metal adaptor cannot be a complete circle or else there would not be the springing action from the narrowing of the opening. Fourth, Dr. Williamson contends that, in his opinion, the prosecution history of the '164 Patent makes clear that claim 8 of the ' 050 Patent covers only adaptors with an opening in their circumference.

Dr. Williamson also notes that the specification states "[t]he spring steel adaptor 20 typically has an outer diameter of 0.845 inches in its relaxed state. A *slight force* is required to push the spring steel adaptor 20 over the raised shoulder 30 which is typically 0.848 inches in diameter." (Lines 37-38, Column 5, '050 Patent). Accordingly, if only a slight force is required, to push the adaptor over the shoulder, then the adaptor must have to be split. If the spring metal adaptor were not split, great force would be needed, and

inserting it into the junction box hole would permanently deform the adaptor.

Arlington's expert, Dr. Rahn, contends that a continuous adaptor could be "press-fit" onto the connector. He also points to the prior art of the '164 Patent, which shows an unsplit ring fitting over a connector body.

e. Conclusion

"Spring metal adaptor" should be construed to require a "split ." This construction is based on the fact that, without a split in the adaptor, there would be no second spring action from the narrowing of the space in the incomplete circle of metal that is the adaptor. Moreover, prior art disclosed an unsplit ring, and this prior art was distinguished by Arlington in the prosecution of the '164 Patent-i.e., that the Recker invention was a complete undivided circle that did not allow for springing apart of the periphery of the tube as provided for in the '164 Patent claims. As such, "spring metal adaptor" should be construed to mean "split spring metal adaptor," as Bridgeport argues. This is supported by the description of the operation and the fact that only "slight force" is required to put the adaptor in place in the junction box. It is also supported by the language in the specifications.

3. "Outwardly Sprung"

Claim 8 of the '050 Patent requires an adaptor with "at least two **outwardly sprung members** carried by said metal adaptor near said trailing end of said adaptor which engage the side walls of the hole in the junction box into which said adaptor is inserted." (Lines 38-42, Column 10, '050 Patent.) Bridgeport contends that the intrinsic evidence makes clear that "outwardly sprung" refers to the members being bent away from the plane of the main body of the adaptor. Arlington proposes that "outwardly sprung" means "members that are made of a resilient material and positioned on the adaptor such that when inserted into the hole of the junction box, they are capable of touching the side walls of the hole in a junction box."

a. The specification

Bridgeport states that, because the terms "sprung" or "outwardly sprung members" do not appear in the '050 Patent specification, that "outwardly" must mean "bent outward" to comply with the embodiments in the specification. Also, this interpretation is consistent with the figures of the '050 Patent, all of which show the tensioner tangs 23 as having a diameter greater than the body of the adaptor.

Arlington contends that Bridgeport ignores the longstanding principle that the originally filed claims are deemed to be a part of the original specification. Because claim 2 of the '164 Patent contains the disputed limitation "outwardly sprung members," there is written disclosure in the '050 Patent specification. (Pl.'s Br. In Opp. at 28-29, Doc. 65 at 34-35.) As such, the term "outwardly sprung members" is not limited to the diameters of the tensioning tangs in the embodiments, or how the sprung members of the adaptors are formed. While Arlington objects to the concept that the tangs are bent, the patent refers to them being bent. (Description of Figs. 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17.)

b. Extrinsic evidence

Bridgeport offers the testimony of Dr. Williamson, who opined that the specification uses the terms 'outwardly' and its antonym 'inwardly,' and this means 'away from' and 'toward' the axis of the adaptor. "Sprung members" should be construed to mean "members that have been bent out of the direction of that part of the metal adaptor to which they are attached, i.e., sprung members do not lie in the plane or curve of

the surface from which they have been sprung.

Bridgeport also criticizes Arlington's proposed interpretation of "sprung" as meaning "made of a resilient material," contending that such an interpretation relies too heavily on the general purpose dictionary definition and is divorced from the true meaning as evidenced by the intrinsic record. Rather, the word "sprung" in claim 8 does not refer to a temporary deflection, but to the permanent bending of the metal to a particular configuration. "Sprung" means "to become warped."

Arlington disputes Dr. Williamson's interpretation, arguing that it is not supported anywhere in the '050 Patent. Arlington contends that "sprung" means "resilient" because the members need to be resilient to deflect inwards as they are inserted into the hole and then push outwards to provide tension against the hole in the side walls of the junction box. (Pl.s Br. In Opp. at 32, Doc. 65 at 38.) "No one of ordinary skill in the art would reasonably construe the term 'sprung members' as the bending or the warping of the metal during the manufacture of the spring metal adaptor as Bridgeport contends." (Id. at 33, Doc. 65 at 39.) Bridgeport's construction of "sprung" "incorrectly describes the formation of the sprung members of the adaptors, wherein claim 8 pertains to a fully assembled quick connect fitting for use and insertion in a junction box. Id. As such, Arlington submits that it should be entitled to the plain meaning of "outwardly sprung members"-resilient members carried by the adaptor toward the outside of the adaptor. (Id. at 34, Doc. 65 at 40.)

c. Conclusion

"Outwardly sprung" should be interpreted to mean "resilient members which are toward the outside of the adaptor." The language of the claim supports this interpretation. First, Arlington's contention, that "outwardly" does not mean "toward the outside," but, rather, includes members that can touch the side walls of the hole of the junction box, should be rejected. If the patentee meant to include members that can touch the side walls of the hole of the junction box, it would not have used a word so limiting as "outwardly." "Outwardly" must relate to the adaptor, not the junction box. As such, Bridgeport's interpretation that "outwardly" means "toward the outside of the adaptor" should be adopted.

Second, Bridgeport's argument, that "sprung" means "to become warped" should be rejected. There is simply no support for such an interpretation. This goes against the plain and ordinary meaning of "sprung," which means "resilient" or "elastic." While a dictionary definition should not be relied upon to distort the language of the claim, there is nothing in the language of the claims to suggest that "sprung" means anything but "resilient" or "elastic." Indeed, the use of the description "tensioner tangs" for the "outwardly sprung members" supports the interpretation that "sprung" means a resilient force that places tension on the side walls of the junction box hole. This is consistent with the generous use of the reference to bent tensioner tangs. The construction is not so narrow as to limit it to tensioner tangs that are bent as opposed to others which are not bent but simply resilient.

4. "Carried By Said Metal Adaptor Near Said Trailing End of Said Adaptor"

Claim 8 requires that the two or more outwardly sprung members be "carried by said metal adaptor near said trailing end of said adaptor." Bridgeport contends that "carried by" means "attached to." Bridgeport further argues that "near said trailing end of said adaptor" means that the members are attached to the adaptor at a point that is between the trailing end and the mid-point of the adaptor. (Def.'s Br. at 45, Doc. 53 at 54.)

a. The specification

Bridgeport points to the specification, which only discloses embodiments in which the outwardly sprung members are attached in close proximity to the trailing end, or near the mid-point, of the adaptor. No embodiment shows outwardly sprung members near the leading end of the adaptor.

Conversely, Arlington asserts that "carried by" means that the sprung members are "part of" the adaptor, rather than referring to the point where the members are "attached or joined."

Arlington also disputes Bridgeport's proposed construction of "near said trailing end of said adaptor," contending that claim 8 has nothing to do with sprung members being attached at a range of places extending from the trailing end to the mid-point of the adaptor. Arlington also argues that res judicata applies to the construction of this language in claim 8.

b. Extrinsic evidence

Bridgeport offers the opinion of Dr. Williamson, who opined that the place where they are 'carried by said adaptor' is the place where they are joined to it; not where they engage the side walls of the hole in the junction box. The plain meaning of this language is that the sprung members are joined to the adaptor at places which are near its trailing end. While the word 'near' is not precisely defined, it is clear that the requirement 'near the trailing end' is recited to at least distinguish the claimed structure from one in which the members were joined to the adaptor near its leading end."

Conversely, Arlington's expert, Dr. Rahn, stated that the phrase "carried by said metal adaptor near said trailing end of said adaptor" means they are part of the adaptor; not attached to it and they extend near the trailing end of the adaptor so they can engage the side walls of the hole in the junction box.

c. Conclusion

There are two issues here, *viz* whether the members are attached or are a part of the adaptor and their location in relation to the trailing end of the adaptor.

It is difficult to find that the members are "attached." Rather, the members appear to be "part of" the metal adaptor. While there has been no description of the manufacturing process, the description of the specifications and the drawings make no reference that the members are attached in any way. They could be, but I do not find that to be an exclusive feature of the claim. They are, in my view, a part of the adaptor in the broadest sense. The embodiments all support this construction as well.

The location of the members which serve the function of engaging the side walls of the junction box so as to serve as a ground, are said to be at the "trailing end" of the adaptor. This means that the end of the member is near the trailing end of the adaptor so as to properly engage the junction box and serve as a ground. Bridgeport's position that it describes where they are "attached" has no meaning in relation to their function. First of all, they are not attached, but rather are a part of the adaptor, and secondly their dimensional length determines where they engage. Therefore, the members could run from near the midpoint or even the leading end of the adaptor and extend to near the trailing end so as to perform their function.

d. *Res Judicata*

Arlington contends that Bridgeport's confession of judgment and injunction, entered by Judge Conner on

June 30, 2006, wherein Bridgeport admitted that it infringed claim 8 of the '050 Patent, determines this issue in its favor. As such, Arlington argues that Bridgeport had the opportunity to litigate all aspects of the '050 Patent but did not. If Bridgeport's proposed construction of "carried by ... near said trailing end" were adopted by the Court, such construction would be inconsistent with the previous ruling because claim 8 would no longer be read onto the adjudged infringing devices. (Pl.'s Br. In Opp. at 38, Doc. 65 at 44.) The prior Bridgeport infringing products had outwardly sprung members that were attached to the adaptor approximately two-thirds of the way up the adaptor and nearer to the leading end than the trailing end. Bridgeport did not dispute this limitation in the previous case. As such, Arlington asserts that Bridgeport is precluded from submitting this argument.

Bridgeport argues that it took no position in the prior action regarding the proper construction of "carried by said metal adaptor near said trailing end of said adaptor". Therefore, Bridgeport says its current position of the subject is the only time it took a position and therefore there is no position on the subject in the prior case with respect to which its current position can be inconsistent.

Frankly, I am at a disadvantage because I am unaware of what issues were litigated or could have been litigated in the prior case. Moreover, how the settlement reached resolved issues in that case are not known to me. If the parties wish to supplement arguments on the issues of *res judicata* or judicial estoppel, one or both should notify the court and the court will schedule a further hearing on these issues. That said, the court will not consider whether this case is governed by *res judicata* or judicial estoppel.

B. The '831 Patent

1. "Housing"

Claim 1 of the '831 Patent requires a "housing." The parties agree that the term "housing" must be construed to mean "the body of the connector." Accordingly, there is no longer a dispute between the parties as to the term "housing."

2. "Cylindrical"

Claim 1 requires an outbound end of the housing that is "cylindrical." Bridgeport argues that the term "cylindrical" must be construed to mean "shaped like a cylinder, with a cross-section that is constant along its length." (Def.'s Br. at 57, Doc. 53 at 66.) This, Bridgeport asserts, is the plain and ordinary meaning of "cylindrical." Arlington, conversely, contends that the ' 831 Patent plainly states that the cylindrical outbound end contains flanges, which are part of the cylindrical outbound end of the connector. (Pl.'s Br. In Opp. at 40, Doc. 65 at 46.) Arlington further urges this Court to adopt a construction that allows the cylindrical outbound end to have varying cross-sections. "A proper interpretation of the claim term 'cylindrical' in light of the specification must include variation from a perfect cylinder." (Id. at 41, Doc. 65 at 47.) Arlington argues it means the approximate form of a cylinder.

Bridgeport heavily relies on the fact that all of the embodiments in the specification disclose a uniform diameter along the length of the cylinder.

Arlington points to Dr. Williamson's testimony that the cylindrical outbound end of the '831 Patent incorporated flanges that would cause a variation in the diameter of the outbound end. As such, Arlington asserts that Bridgeport therefore agrees that some variation from a perfect cylinder is contemplated by the claim term "cylindrical." Accordingly, Arlington submits that "cylindrical" should be given the plain and

ordinary meaning as "having the approximate form of a cylinder."

This is not unlike the construction for circular. The description encompasses something other than a cylinder, i.e., a cylinder with a consistent cross section along its length as proffered by Bridgeport.

Bridgeport points out that in prior patents, Arlington has equated "non-cylindrical" with conical, i.e., something round not of equidistant diameter throughout its length, and that the inventor of the earlier patents, the '801 Patent and the "095 Patent, who is also the inventor of the '831 Patent, "responded twice that conical and having an angle that deviated from the longitudinal axis was not cylindrical." (Bridgeport Fittings, Inc.'s *Markman* Claim Construction Brief, Doc. 53, at 62-63.)

Statements made in the prosecution history of previous patents can be relevant to construing the patent at issue, but only if the previous patent and the one being construed are "familial patent[s]," meaning, they "derive from the same initial application" or the later patent is a "continuation-in-part" of the earlier patent. *See* Ormco Corp. v. Align Tech., Inc., 498 F.3d 1307, 1314 (Fed.Cir.2007); Watts v. XL Sys., Inc., 232 F.3d 877, 884 (Fed.Cir.2000).

Here, the '831 Patent at issue did not derive from the same application number as the prior patents, the '095 Patent and the '801 Patent, whose prosecution history Bridgeport cites. Therefore, the rule that statements made in the prosecution history of prior familial patents does not apply, and the earlier references to "cylindrical" in other Patents are irrelevant.

I conclude the proper construction is "having the approximate form of a cylinder."

3. "Pair of Parallel Openings"

Claim 1 of the '831 Patent requires that the "generally oval inbound end" from clause a) have a "have a "pair of parallel openings." Bridgeport contends that "pair of parallel openings," means "two openings that give access to passageways that continue into the housing at a constant distance apart." Arlington essentially does not dispute this interpretation contending they are "a pair of openings that have depth and are parallel at least for the length of the cable retainer".

The parties are close to agreeing on the construction of this phrase. Bridgeport contends they are two openings that give access to passageways that continue into the housing at a constant distance apart. Arlington proffers they are two openings that have depth and are parallel for at least the length of the cable retainers. With the exception of Bridgeport's use of the term "passageways" the constructions are essentially the same.

Labeling the areas beyond the parallel openings as a passageway seems to describe the enclosure beyond the opening as does the concept of depth which is parallel for the length of the cable retainers. The word "passageway" is unnecessary and causes some confusion. Its presence is nowhere in the patent.

4. "Tubular spring steel cable retainers"

The term "tubular" is used twice in the claims of the '831 Patent. Clause c) of claim 1 requires that the spring steel cable retainer be "tubular." In clause d) the spring steel adaptor is required to be "tubular." Bridgeport contends that "tubular" should be construed to mean "having the form of a tube, with a circular cross-section." (Def.'s Br. at 68, Doc. 53 at 77.) Arlington asserts that "tubular" should be construed to mean

"a hollow elongated body" and does not require a circular cross-section. (Pl.'s Br. in Opp. at 43, Doc. 65 at 49.)

Again, Bridgeport points to the drawings contained in the specification, all of which have a circular cross-section. Arlington submits that Bridgeport's expert, Dr. Williamson, admitted that the term "tubular" outside of the context of the '831 Patent, merely means a "hollow elongated body with no special requirement as to cross-section." Dr. Williamson, however, refused to apply this meaning to the '831 Patent, contending that the ' 831 Patent requires "tubular" to mean "cylindrical" or "circular tube."

Here the dispute is whether something which is tubular must have a constant diameter along its length. Bridgeport contends it does; Arlington contends it does not. All tubes are not necessarily equidistant in their diameter through their length. Moreover, as with circular and cylindrical, tubular describes something like a tube, i.e. a hollow elongated body. Bridgeport relies on the embodiments to suggest that it means something symmetrical. Even the embodiments, Fig. 3 and Fig. 5, show different diameters. I do not agree and find for Arlington on this phrase.

Whether there is still a dispute about the "spring steel cable retainer" phrase is unclear. Bridgeport says it is sprung steel cable retainer; Arlington says it is a retainer made of resilient steel. Given that "resilient" further defines "spring" the Arlington proffer makes sense, and I find it the proper construction.

5. "Inwardly extending tangs to receive and engage said separate cables inserted from said inbound end and guide said separate cables toward said cylindrical outbound end in a manner that said separate cables are advanced to said outbound end"

Clause c) of claim 1 also requires "inwardly extending tangs to receive and engage said separate cables inserted from said inbound end and guide said separate cables toward said cylindrical outbound end in a manner that said separate cables are advanced to said outbound end." This phrase, Bridgeport submits, should be construed to mean "inwardly extending tangs which receive and engage the cables, and are positioned and oriented in the retainers so as to be able to ***deflect and guide*** each cable toward the single, central, opening at the outbound end." (Def.'s Br. at 70, Doc. 53 at 79) (emphasis added.))

Arlington agrees with this interpretation for the most part, but would replace "deflect and guide" with "guide or permit." (Pl.'s Br. In Opp. at 47, Doc. 65 at 53.)

Bridgeport says "guide" means "deflect"-i.e., change the direction of motion. Arlington argues that this definition is too narrow and is merely an attempt to avoid infringement. Rather, "guide" should be construed to mean "permit"; not deflect or change direction.

The dispute here centers on whether the word "guide" can stand alone or whether, as Bridgeport proffers, the concept is that the tangs guide and "deflect" the cables as they are inserted from the inbound end of the retainers to travel to the outbound end.

I view the construction proffered by Arlington as sound. The cables are sent through the retainer and the tangs assure they go where they are supposed to go, i.e. the outbound end. The tangs assure their path of travel and do so by guiding them to the end. Deflection implies a directional change, a concept not applicable in this invention. Deflection implies a directional change, a concept not applicable in this invention.

To the extent the number of tangs is still at issue, tangs means two or more.

6. "Spring Steel Adaptor"

Bridgeport makes the same arguments here for the "spring steel adaptor" as it does for the "spring metal adaptor" described in the '050 Patent. Bridgeport contends that "spring steel adaptor" means "a split ring with a gap that permits the diameter of the adaptor to be changed." (Def's Br. at 73, Doc. 53 at 82.) Arlington disputes this construction, again arguing that it would improperly import limitations from the specification into the claims. (Pl.'s Br. In Opp. at 50, Doc. 65 at 56.)

Spring steel adaptor is subject to the same analysis as (spring metal adaptor) in Patent '050.

7. "Outwardly"

Bridgeport contends that this term should be construed consistently with the ' 050 Patent to mean "bent outward relative to the plane of the adaptor from which they are formed." (Def.'s Rebuttal Br. at 51, Doc. 66 at 57.) Arlington contends that "outwardly" means towards the outside." (Pl.'s Br. In Opp. at 50, Doc. 65 at 56.) These interpretations do not seem to be that far apart. In fact, Bridgeport has offered an affidavit attesting that "the word 'outwardly' simply means that the members are toward the outside of the adaptor." (Def.'s Rebuttal Br. at 51, Doc. 66 at 57 (citing Borst Aff. Ex. 32 at 108-09)).

I determined that Bridgeport's position on the tangs being bent had merit regarding the '050 Patent because there were numerous references to bent tangs in the specifications, however, I did not limit the construction there to only bent tangs, but rather concluded that "resilient" was a more inclusive term. Here the language of the patent includes the word "tangs" whereas the ' 050 patent referred to "members." It is difficult to ignore the use of the word "tangs" in the patent.

I conclude that outwardly extending tangs means tangs extending toward the outside of the adaptor.

An appropriate order follows.

ORDER

NOW, this 4th day of December, 2007, **IT IS HEREBY ORDERED** as follows:

A. The '050 Patent

The claim construction adopted by the Court regarding the disputed language in the patent is as follows:

(1) ***Disputed Language:*** ... a **circular spring metal adaptor** surrounding said leading end of said electrical connector which has a leading end, a trailing end, and an intermediate body;

Construction: "An adaptor which is circular or round and has circular cross sections. A spring metal adaptor is a split ring or split spring metal adaptor so as to allow the diameter to easily change."

(2) ***Disputed Language:*** ... (iii) at least two **outwardly sprung members carried by said metal adaptor near said trailing end of said adaptor which engage the side walls of the hole in the junction box into**

which said adaptor is inserted.

Construction: "Resilient members which are toward the outside of the adaptor and positioned on the adaptor such that when inserted into the hole of the junction box, at least a portion of the members are capable of touching the side walls of the hole in a junction box near the trailing end of the adaptor."

B. The '831 Patent

The claims construction adopted by the Court regarding the disputed language in the patent is as follows:

(1) ***Disputed Language:*** ... a housing having a **cylindrical** outbound end, a generally oval inbound end, and an interior channel linking said inbound and said outbound end;

Construction: A "housing" is the "body of the connector." "Cylindrical" means "the approximate form of a cylinder."

(2) ***Disputed Language:*** ... a **pair of parallel openings** in said inbound end ...

Construction: "A pair of parallel openings are a pair of openings that have depth and are parallel for at least the length of the cable retainers."

(3) ***Disputed Language:*** ... a **tubular spring steel cable retainer** secured in each of said openings in said inbound end for accepting separate cables, ...

Construction: "A retainer that is made of resilient steel and has the form of a tube, which is a hollow elongated body."

(4) ***Disputed Language:*** ... said retainers including a set of **inwardly extending tangs to receive and engage said separate cables inserted from said inbound end and guide said separate cables toward said cylindrical outbound end in a manner that said separate cables are advanced to said outbound end,**

Construction: "More than one inwardly extending tang positioned in the retainers to guide or permit the forward movement of the cables toward the outbound end."

(5) ***Disputed Language:*** ... a **tubular spring steel adaptor** secured to said cylindrical outbound end of said housing, said adaptor having outwardly extending tangs.

Construction: "A tubular adaptor which has the form of a tube, which is a hollow elongated body. The adaptor is spring steel which is a split ring which in turn permits the diameter of the adaptor to be easily changed. It contains outwardly extending tangs which extend towards the outside of the adaptor."

M.D.Pa.,2007.
Arlington Industries, Inc. v. Bridgeport Fittings, Inc.