

**Arlington Industries, Inc.
v.
Bridgeport Fittings**

Defendant's Claim Construction Presentation

Patent No. 5,266,050

Case No. 3:CV-06-1105
United States District Court
for the Middle District of Pennsylvania

Claim 8

8. 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to be inserted in a hole in an electrical junction box and spring outward to lock said electrical connector from being withdrawn through the hole; and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.

Disputed Term

“spring metal adaptor”

Plaintiff	Defendant
adaptor made of spring metal	split spring metal adaptor

Defendant's Construction

- Conforms to the invention actually described by the inventors in the **specification**
- Preserves the validity of the claims under **§ 112**
- Conforms to the invention as described in the **prosecution history** to distinguish prior art

The Specification Requires Defendant's Construction

Claim Construction Legal Principles: Specification

“Ultimately, the interpretation to be given a term can only be determined and confirmed with a **full understanding of what the inventors actually invented** and intended to envelop with the claim. The construction that stays true to the claim language and **most naturally aligns with the patent's description of the invention** will be, in the end, the correct construction.”

“[T]he **specification** ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the **single best guide** to the meaning of a disputed term.’”

Phillips v. AWH Corp., 415 F.3d 1303, 1315-16 (Fed. Cir. 2005) (en banc)
(quoting *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998), and
Vitronics Corp. v. Conceptronic, 90 F.3d 1576, 1582 (Fed. Cir. 1996))

Claim Construction Cannot Enlarge What Is Claimed Beyond What Is Described As The Invention

“When the specification describes a single embodiment to enable the invention, this court will not limit broader claim language to that single application

Abbott Labs. v. Sandoz, Inc., 566 F.3d 1282, 1288 (Fed. Cir. 2009) (internal citations omitted)

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“When the specification describes a single embodiment to enable the invention, this court will not limit broader claim language to that single application ‘**unless the patentee has demonstrated a clear intention to limit the claim scope**’ using words or expressions of manifest exclusion or restriction.

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“When the specification describes a single embodiment to enable the invention, this court will not limit broader claim language to that single application ‘unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction. By the same token, the claims cannot enlarge what is patented beyond what the inventor has described as the invention. Thus this court may reach a narrower construction, limited to the embodiment(s) disclosed in the specification, when the claims themselves, the specification, or the prosecution history clearly indicate that the invention encompasses no more than that confined structure or method.”

Abbott Labs. v. Sandoz, Inc., 566 F.3d 1282, 1288 (Fed. Cir. 2009) (internal citations omitted)

050 Patent: Adaptor That Can Be Used With One Hand

This invention 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.

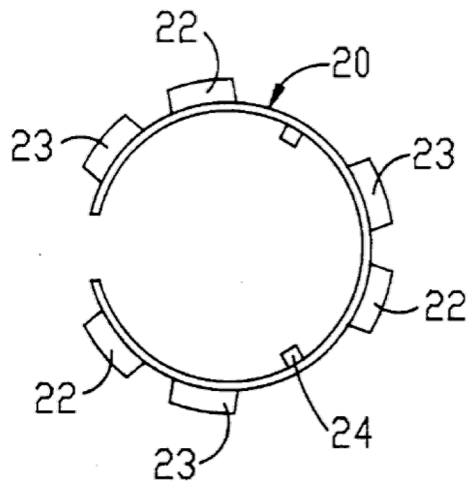


FIG. 2

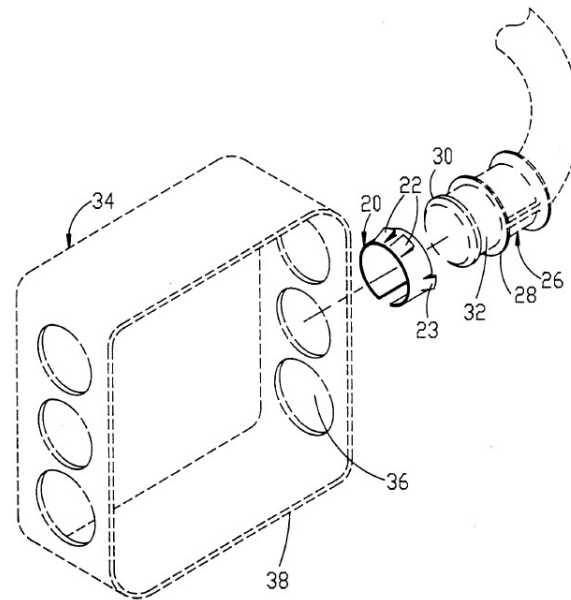


FIG. 5

050 Patent, 1:10-13, Figs. 2 & 5

No Dispute: Adaptors Must Be Made Of Spring Steel

tensioner tang 24. The **spring steel adaptor 20** is **typically** 0.024 inches thick and formed from spring steel such as **SAE 1095 tempered spring steel** or its equivalent. The adaptor has a leading end, trailing end and

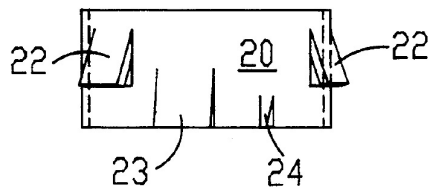


FIG. 1

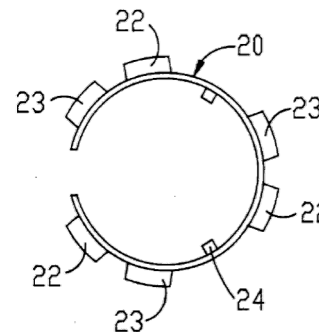


FIG. 2

050 Patent, 3:7-10, Figs. 1 & 2

The Adaptor Must Also Be Split For Insertion Into The Junction Box

side circumference of the adaptor 20. The circular metal spring adaptor 20 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 in a hole, there is also a slight reduction in the diameter by the opening narrowing, therefore, there are two spring actions involved during insertion.

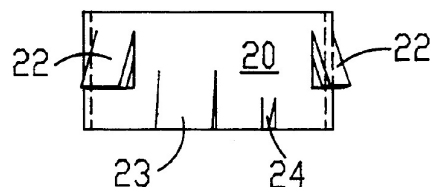


FIG. 1

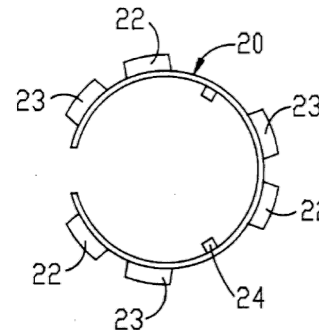


FIG. 2

050 Patent, 3:20-27, Figs. 1 & 2; see Dr. Williamson Opinions (Ex. 7), ¶¶ 22-23

The Split Is Required For The Second Spring Action

Dr. Williamson:

“In the light of this **unequivocal disclosure** given in the specification, the meaning of the language 'spring metal adaptor' is clear. Indeed, the patentee states that **'there are two spring actions** involved during insertion': 'the outward-bent tangs or spring locking members are bent inward to permit the adaptor to be inserted in a hole', and **'there is also a slight reduction in the diameter by the opening narrowing'**, see col. 3, lines 22-27.”

The Split Is Necessary To The Alleged Advantage of the Claimed Adaptor

in FIG. 4. The 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. The raised shoulder 30 is beveled

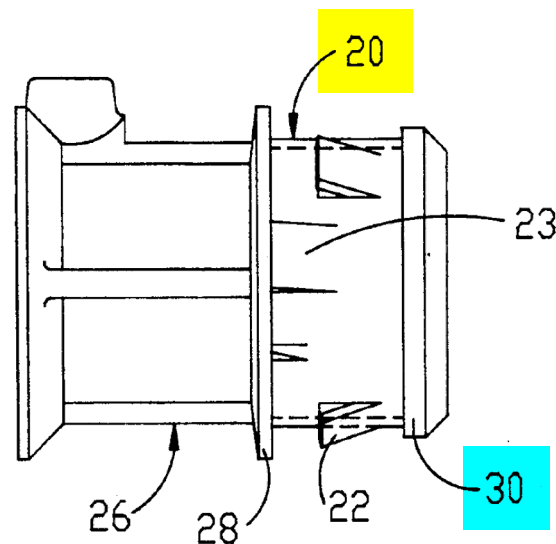


FIG. 4

050 Patent, 5:37-41, Fig. 4

Spring Steel And The Split Are Both Required For The Operation Of The Invention

Dr. Williamson explained that the “spring metal adaptor” is “made of a metal that has sufficient elasticity to permit the **two flexing actions** spelt out by the patentee in the specification”:

“It should be noted that **flexure of the type disclosed** by the patentee requires the application of only **relatively little force** and is well within the elastic limit of the metal. (The elastic limit is the largest amount of deformation that can be sustained by a metal without causing it to become permanently deformed).”

Dr. Williamson explained that a non-split ring would not flex:

“Furthermore, the **deformation created in a continuous cylinder** as it is forced over a shoulder is an **actual elongation of the spring metal** as the circumference is increased (**as opposed to the simple flexing required in a split cylinder, which is merely a bending action**, and does not increase the length of the metal). The force required to lengthen a strip of metal is enormously greater than that needed to bend it”

Dr. Williamson Opinions (Ex. 7), ¶¶ 23, 25

Plaintiff's Expert Identifies No Way To Achieve The Advantages Of The Invention Without The Split

Plaintiff's expert stated:

“‘Spring metal adaptor’ should be given its plain and ordinary [sic, meaning] which is something that connects two objects, often of different diameters, that is made of elastic resilient metal. This term is used generally; there are no limiting qualifiers in the claim language. As such, the term should be given its broad, full meaning.”

“It is my opinion that Bridgeport is attempting to have the Court import a limitation into Claim 8 from the specification. I have been advised that importing limitations from the specification is improper.”

Plaintiff's expert does not identify any technological approach disclosed in the 050 Patent to achieve the advantages of the invention without a split.

Dr. Rahn Opinions (Ex. 5), at 9, 17

Plaintiff's Expert Identifies No Disclosure Of Any Alternative To A Split Adaptor

Plaintiff's expert stated:

“[A] **press fit was well known** in the art as a method of pressing a circular ring over the shoulder of an adaptor. In fact, the prior art of Recker and Connors both disclose **unsplit rings** fitting over a connector body.”

- **Plaintiff's expert identifies no disclosure of a press fit in the specification**
- **Plaintiff's expert identifies no disclosure of the invention as the unsplit ring of the prior art in the specification**
- **Plaintiff's expert agrees that under Plaintiff's construction this key limitation would be nothing but the prior art that is not even disclosed in the 050 Patent**

The Specification Contains No Disclosure Of An Invention With An Unsplit Adaptor

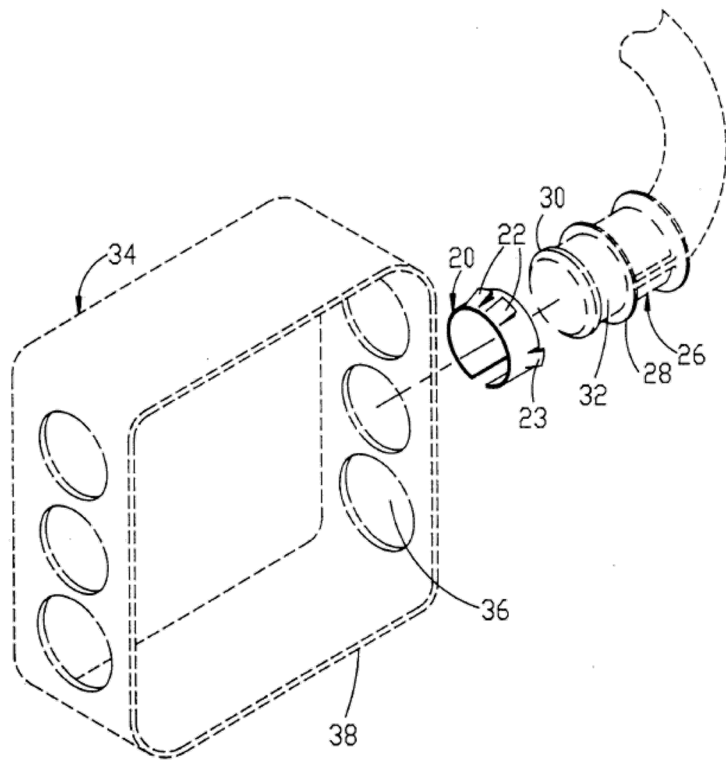


FIG. 5

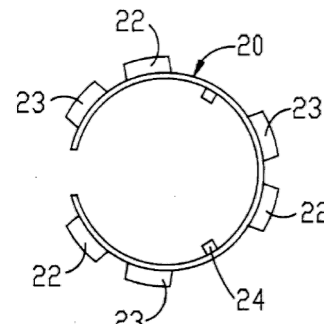


FIG. 2

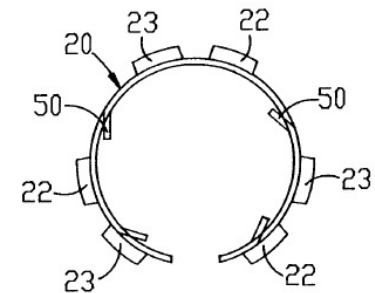


FIG. 12

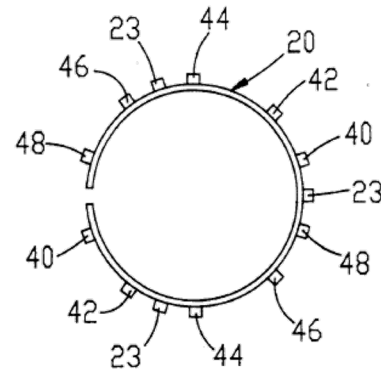


FIG. 9

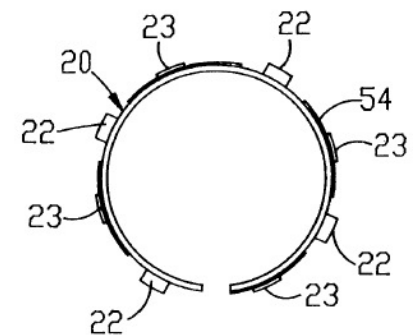


FIG. 16

050 Patent, Figs. 2, 5, 9, 12, 16; see Dr. Williamson Opinions (Ex. 7), ¶¶ 22-24

Plaintiff's Expert Agrees The Specification Discloses Only Split Rings

Plaintiff's expert testified:

“Q. And every embodiment disclosed in the patent shows a spring steel adapter that does not form a complete circle; correct?”

.....

A. These examples that are shown in the patent, **the adapters do have splits in them.**”

Plaintiff's "Claim Differentiation" Argument Fails As A Matter Of Law

“Pure’ claim differentiation refers to the situation where there is **no meaningful difference between an independent claim and its dependent claim, except for the presence of an added limitation** in the dependent claim. In that situation, the presumption is especially strong that the independent claim is not restricted by the added limitation in the dependent claim. In such situations, construing the independent claim to share that limitation would render the dependent claim superfluous.”

“In the case of **two independent claims, the doctrine of claim differentiation does not apply** because patent drafters are free to, and commonly do, claim an invention using multiple linguistic variations in multiple independent claims.”

“Given the wide variety of situations where the doctrine of claim differentiation does not apply, the Federal Circuit has cautioned that claim differentiation is a **guide, not a rigid rule.**”

Plaintiff's "Claim Differentiation" Argument Fails As A Matter Of Law

“The doctrine of claim differentiation **can not broaden claims beyond their correct scope**, determined in light of the specification and the prosecution history. . . . Claims that are written in different words may ultimately cover substantially the same subject matter.”

Seachange Int'l, Inc. v. C-COR Inc., 413 F.3d 1361, 1369 (Fed. Cir. 2005)

“It is not unusual that separate claims may define the invention **using different terminology**, especially where (as here) independent claims are involved.”

Mycogen Plant Sci., Inc. v. Monsanto Co., 243 F.3d 1316, 1329 (Fed. Cir. 2001).

Plaintiff's "Claim Differentiation" Argument Fails As A Matter Of Law

- “This presumption is especially strong where the limitation in dispute is the **only meaningful difference** between an independent and dependent claim.” *Hill-Rom Servs. v. Stryker Corp.*, 755 F.3d 1367, 1374 (Fed. Cir. 2014).
- “[W]e further note that claim 3 embraces **additional limitations** not encompassed within claim 1 Therefore, the doctrine of claim differentiation does not lead us to reach a different construction.” *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1326 (Fed. Cir. 2001).
- 050 Patent Claim 1 also requires: “that is of a **relaxed diameter less than the diameter of the hole** into which it is to be inserted with said spring locking members extending radially outward **beyond the diameter of the hole** into which they are to be inserted”
- 164 Patent Claim 12 also requires: “a series of inward tensioner/ threading tangs . . . to **permit the threading** thereon of said adaptor”

Defendant's Construction Preserves Validity Under § 112

Plaintiff's Proposed Construction Invalidates The Claims

“The canons of claim construction provide additional reason to **limit the scope of the claims** to wired communication. If, after applying all other available tools of claim construction, a claim is ambiguous, **it should be construed to preserve its validity**. Because the specification makes no mention of wireless communications, construing the instant claims to encompass that subject matter would **likely render the claims invalid for lack of written description**. The canon favoring constructions that preserve claim validity therefore counsels against construing ‘communications path’ to include wireless communications.”

Ruckus Wireless, Inc. v. Innovative Wireless Sols., LLC, 824 F.3d 999, 1004 (Fed. Cir. 2016) (internal citations omitted)

Plaintiff's Proposed Construction Invalidates The Claims

35 U.S.C. § 112 requires that the specification must “contain a **written description** of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to **enable** any person skilled in the art to which it pertains . . . **to make and use** the same”

There Must Be A Written Disclosure Of The Invention

“As this court has repeatedly stated, the purpose of the **written description** requirement is to ensure that the scope of the right to exclude, as set forth in the claims, **does not overreach the scope of the inventor's contribution** to the field of art as described in the patent specification.”

Ariad Pharm., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1353-54 (Fed. Cir. 2010) (en banc) (internal citations omitted).

The Specification Contains No Disclosure Of An Invention With An Unsplit Adaptor

Dr. Williamson:

“Nothing in the specification or intrinsic evidence demonstrates, or even suggests, that the patentees ever conceived of or disclosed any adaptor other than one that had an opening in its circumference that passed through the adaptor from side to side. Arlington's proposed construction that the claim covers a spring metal adaptor that is a complete circle with no opening in its circumference is unsupported and not enabled.”

No Disclosure Of Making An Adaptor Without A Split

Dr. Williamson:

“The patent discloses that the adaptor is created from a flat metal strip, as shown in Figs. 10 and 14, which is formed into a circle, as shown in Figs. 12 and 16 There is **no teaching that the ends of the strip are welded or otherwise joined together** after being formed into a circular shape. Indeed, the patentee declares plainly, 'The circular metal spring adaptor 20 has an opening that results from not forming a complete circle', col. 3, lines 20-22.”

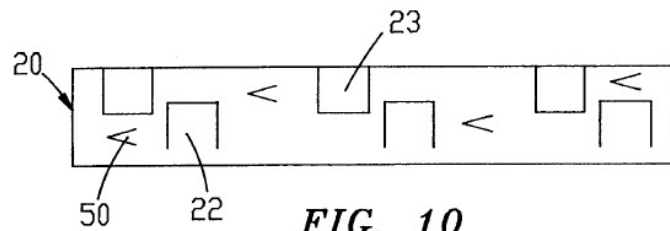


FIG. 10

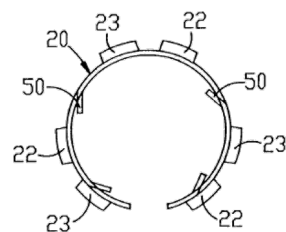


FIG. 12

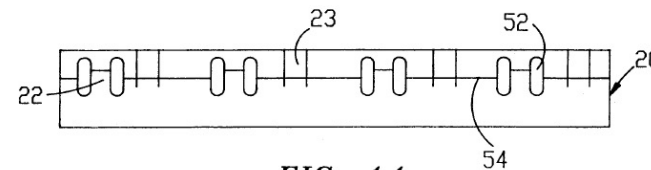


FIG. 14

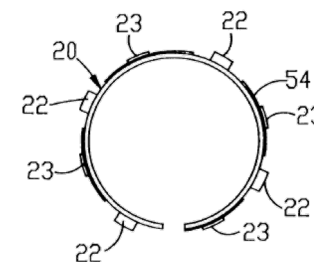


FIG. 16

050 Patent, Figs. 10, 12, 14, 16; see Dr. Williamson Opinions (Ex. 7), ¶ 22

The Split Is Required For The Adaptor To Be Pushed Over The Connector Shoulder With Slight Force

Dr. Williamson:

“[A] closed cylinder which typically has an internal diameter of 0.821 inch, see col. 5, lines 37-38 and col. 3, lines 7-8, would have to be stretched to pass over a shoulder with a diameter of 0.848 inch, see col. 5, lines 40-41. This would require great force; and, further, the strain created in the metal would be 3.25%, which is far greater than the yield strain of the spring steel, SAE 1095, advocated by the patentee. In other words, the spring metal adaptor would be stretched beyond its elastic limit, and would thus become permanently deformed. After such treatment the cylinder would be permanently enlarged and would not properly spring back onto the intermediate body 32 of the adaptor [sic, connector] as described in the patent and shown in Fig. 4. A person having ordinary skill in the art would consider the suggestion put forward by Arlington, namely that the 'spring metal adaptor' recited in the claim could be a continuous circle, to be metallurgically absurd.”

Dr. Williamson Opinions (Ex. 7), ¶ 25

The Prosecution History Confirms
Defendant's Construction Is Correct

Claim Construction Legal Principles: Prosecution History

“[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.”

Phillips v. AWH Corp., 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc).

Claim Construction Legal Principles: Prosecution History

“The prosecution history provides **additional context that is consistent with the written description**. . . . [W]hen arguing against an obviousness rejection, Nystrom stated, ‘YOSIDA [sic] is clearly not concerned with materials made from wood, and especially an elongate board for exterior use and having a convex top surface when installed that will shed water and at the same time provide a surface that is suitable for supporting furniture and comfortable to walk on.’ Id. at 4. . . . We need not decide, however, whether this statement represents a clear disavowal of claim scope because the **context reflects Nystrom's consistent use of the term board** to refer to wood decking materials cut from a log.”

Nystrom v. Trex Co., 424 F.3d 1136, 1144 (Fed. Cir. 2005).

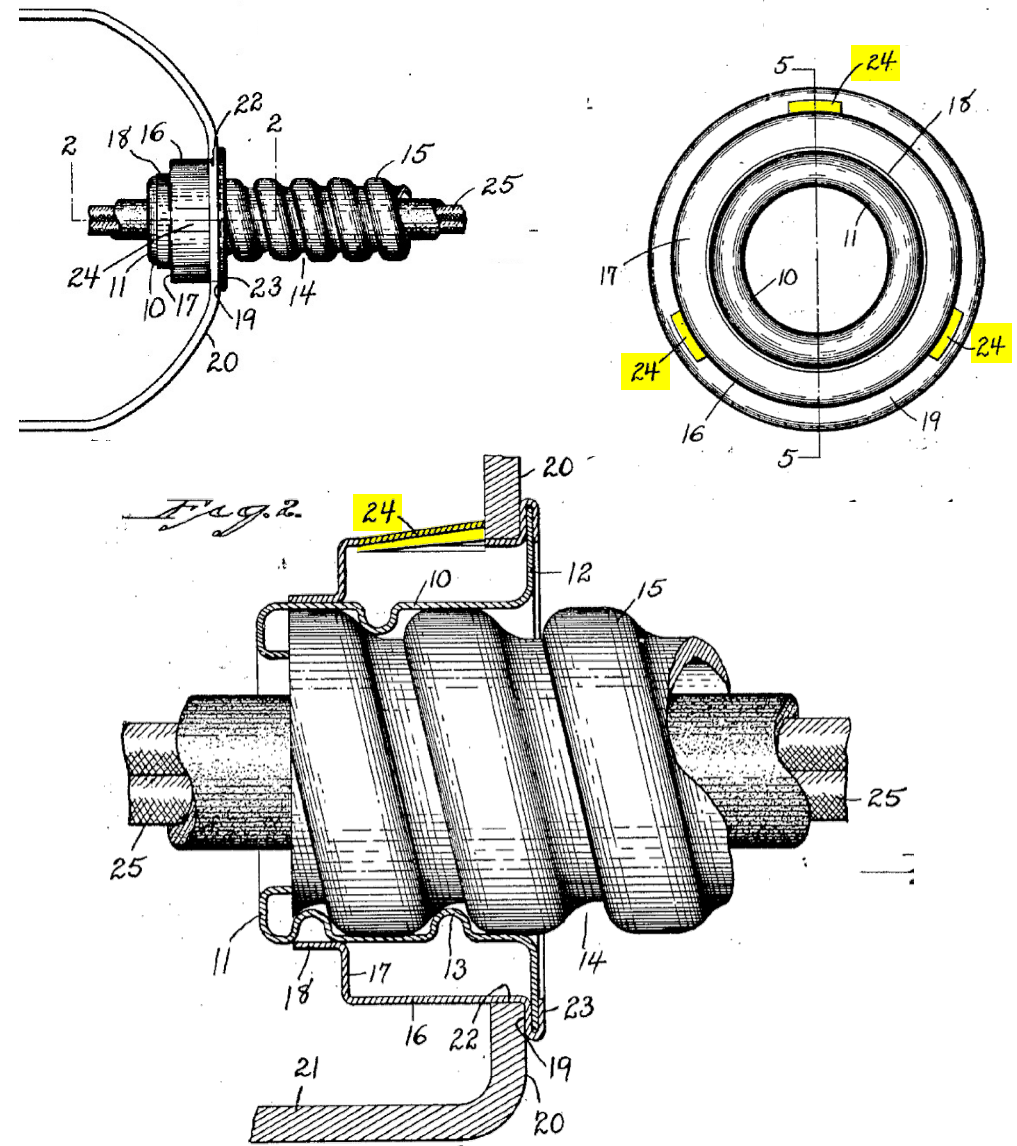
Claim Construction Legal Principles: Prosecution History

“In an Information Disclosure Statement filed by Wang during the prosecution of the **parent application**, Wang **distinguished a reference** (Fleming) describing the NAPLPS system by stating that the reference ‘encodes pictorial information . . . on the pel [picture element] level, rather than on the character level.’ Wang argues that this statement was in the parent application and does not apply to the continuation-in-part that is the '669 patent. However, **this subject matter is common** to the continuation-in-part application, and **argument concerning the Fleming reference was correctly viewed as applying to the common subject matter**. This history reinforces the conclusions that **the inventors focused their invention**, and the description and claims directed to that invention, on a character-based system, and that a person of skill in this field reading this history would so understand the explanation of the Fleming reference.”

Wang Labs., Inc. v. Am. Online, Inc., 197 F.3d 1377, 1384 (Fed. Cir. 1999) (internal citations omitted).

Adaptors With Spring Locking Members Were Known Since 1928

In the use of my improved connector, the same is preferably first secured upon the end of the flexible metallic cable or conduit 15 by turning it thereon to engage its thread-like helical ribs 13 with the helical groove 14 of the said cable or conduit and until the end of the latter has been brought into engagement with the bead-like guard-flange 11 inturned from the forward end of the socket-member aforesaid. The connector is now introduced into the opening 22 in the wall 20 of the outlet-box, with the effect of causing its spring retaining-fingers 24 to yield and to ultimately snap outward to engage with the inner face of the said wall adjacent the opening 22, therein at about the time that the stop-shoulder 19 engages with the outer face of the said wall, with the effect of firmly retaining the connector, and hence the cable or conduit, in place in the outlet-box against axial withdrawal therefrom. The stop-shoulder 19 at this time serves to prevent inward movement in the opposite direction of the connector and cable.

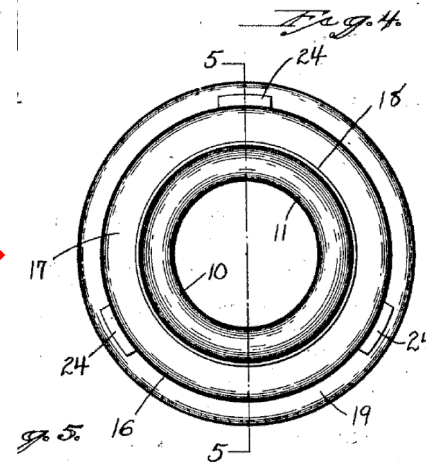
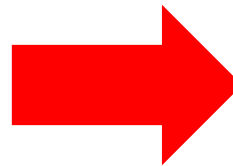


Recker 883 Patent, 1:98-2:16, Figs. 1, 2, 4 (filed Feb. 10, 1928)

Prosecution History Confirms The Invention Was A Split Adaptor, Not An Undivided Circle

the exterior of the socket member 10. 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. Its versatility, simplicity, effectiveness and economic advantages all make it an outstanding improvement in the art.

Prior Art:
Unsplit Adaptor

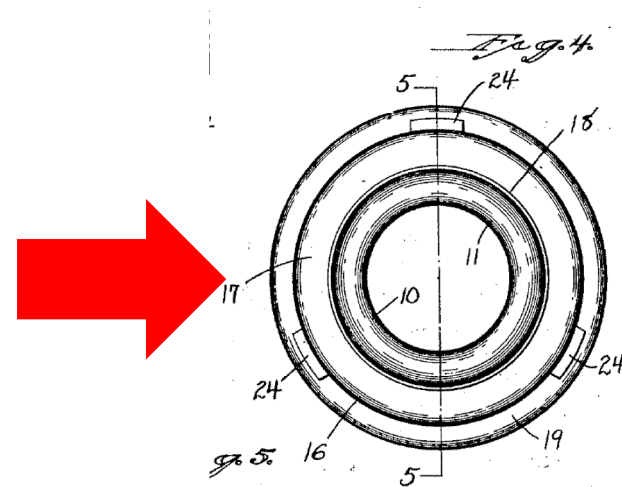


Ex. 3 (prosecution history of parent application 07/802,368) at 5

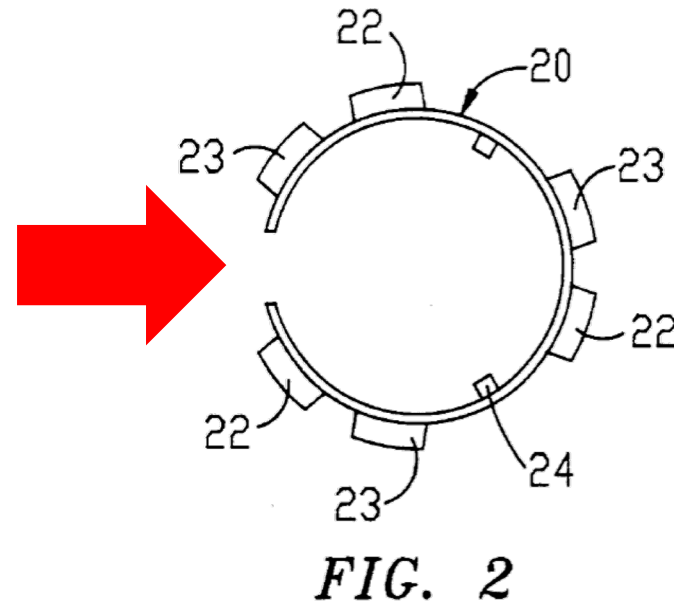
Recker 883 Patent, Fig. 4 35

Prosecution History Confirms The Invention Was A Split Adaptor, Not An Undivided Circle

Prior Art Adaptor Was Undivided Circle



Plaintiff's Alleged Invention: Split Adaptor



Recker 883 Patent, Fig. 4; 050 Patent, Fig. 2