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Attorneys for Defendants BizLink Technology, Inc., BizLink Holding Inc., and BizLink International Corp.

UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

ANDERSON POWER PRODUCTS, INC.,

Plaintiff,

v.

BIZLINK TECHNOLOGY, INC., BIZLINK HOLDING INC., and BIZLINK INTERNATIONAL CORP.,

Defendants.

CASE NO. 3:23-cv-05436-AMO

DEFENDANTS' PRELIMINARY INVALIDITY CONTENTIONS UNDER PATENT LOCAL RULE 3-3

Anderson Exhibit 2006, Page 1 of 90
Bizlink Technology, Inc. v. Anderson Power Products, Inc., IPR2024-00687

Pursuant to Patent L.R. 3-3 and 3-4, Defendants BizLink Technology, Inc., BizLink Holding Inc., and BizLink International Corp. (collectively, "BizLink" or "Defendants") hereby discloses its Preliminary Invalidity Contentions for U.S. Patent No. 8,808,017 ("the '017 patent" or "Asserted Patent").

I. INTRODUCTION

In its Preliminary Disclosure of Infringement Contentions, Plaintiff Anderson Power Products, Inc. ("Anderson") asserts claims 1-4, 7, and 9 (collectively, the "Asserted Claims") of the Asserted Patent. For at least the reasons outlined below, each of those claims are invalid and/or unenforceable. Pursuant to Patent L.R. 3-3, these Invalidity Contentions include: (a) the identity of prior art that anticipates each Asserted Claim or renders it obvious; (b) a statement specifying whether each item of prior art anticipates each Asserted Claim or renders it obvious; (c) a chart that identifies where in each item of prior art each limitation of each Asserted Claim is found; and (d) grounds for invalidity of the Asserted Claims based on indefiniteness, enablement, or written description under 35 U.S.C. § 112.

II. CLAIM CONSTRUCTION

BizLink's Preliminary Invalidity Contentions are based on its present understanding of the scope of Plaintiff's infringement contentions and/or the apparent claim constructions BizLink believes Plaintiff to be asserting based on its infringement contentions, whether or not BizLink agrees with such claim constructions. To the extent that BizLink's Preliminary Invalidity Contentions reflect constructions of claim limitations consistent with or implicit in Plaintiff's infringement contentions, that is not an admission that BizLink agrees with Plaintiff's claim constructions (nor should any such inference be drawn), and BizLink expressly reserves its right to put forth its own claim constructions and contest Plaintiff's implicit or explicit constructions in its infringement contentions. BizLink's Preliminary Invalidity Contentions may be in the alternative to any position it may ultimately take as to any claim construction issues, or any position it has taken in its Preliminary Invalidity Contentions. In the absence of a claim construction ruling, BizLink's claim construction positions in the Preliminary Invalidity Contentions are taken in the alternative to any

position BizLink has taken or will take, and are not necessarily intended to be consistent with each other, and should not be otherwise construed.

III. RIGHT TO SUPPLEMENT

BizLink's Preliminary Invalidity Contentions set forth below and in the attached exhibits are subject to supplementation and amendment, including but not limited to when additional information becomes available, when the Court issues its claim construction ruling, if and when Plaintiff provides additional discovery, takes a different position, supplements its infringement contentions, or as otherwise provided for under the Patent Local Rules.

In addition, BizLink's investigation regarding the invalidity of the Asserted Patent, including but not limited to invalidity based on prior publication, public use, or on sale bar under pre-AIA 35 U.S.C. § 102(b), obviousness under pre-AIA 35 U.S.C. § 103(a), improper inventorship and derivation, prior invention, and failure to comply with pre-AIA 35 U.S.C. § 112 is ongoing. Accordingly, the following contentions are subject to revision and amendment pursuant to Federal Rule of Civil Procedure 26(e) to the extent appropriate in light of BizLink's further investigation and discovery and the opinions of expert witnesses (for either side). BizLink further reserves the right to introduce and use such supplemental materials at trial.

Moreover, BizLink is currently unaware of the extent to which, if any, Plaintiff will contend that limitations of the Asserted Claims are not disclosed in the art identified by BizLink. To the extent that an issue arises with respect to any such limitation, BizLink reserves the right to identify references and combinations, which may render obvious the addition of the allegedly missing limitation to the disclosed method or apparatus.

IV. IDENTIFICATION OF PRIOR ART

Pursuant to Patent L.R. 3-3(a), BizLink contends that the following prior art anticipate and/or render obvious each asserted claim:

A. Patents and Publication

Prior Art	Country of Origin	Filing Date (if applicable)	Date of Issue /Publication
US 2,838,739 ("*Winkler*")	US	1953-01-13	1958-06-10
US 8,182,278 ("*Kataoka*")	US	2011-02-17	2011-10-13

US 3,909,099 ("*Winkler2*")	US	1974-06-14	1975-09-30
US 4,634,211 ("*Poliak*")	US	1982-09-30	1987-01-06
Mroczkowski, Robert S., Electronic Connector Handbook (1998) ("*the Handbook*")	US		1997-12
Graf, Rudolf F., *Modern Dictionary of Electronics, Seventh Edition* (1999)	US		1999-12
US 5,785,557 ("*Davis*")	US	1993-02-08	1998-07-28
US 6,585,536 B1 ("*Wu*")	US	2002-09-11	2003-07-01
GB 2,359,940 A	GB	2001-02-28	2001-04-18
US 3,691,511	US	1970-10-05	1972-09-12
US 6,491,532	US	2001-06-29	2002-12-10
US 2,329,793	US	1941-12-31	1943-09-21
US 3,648,219 A	US	1970-01-15	1972-03-07
US 8,182,278 B2	US	2011-02-17	2012-05-22
US D628,158 S	US	2009-02-05	2010-11-30
US 6,997,730 B2	US	2003-05-12	2006-02-14
US 3,794,957 A	US	1973-01-22	1974-02-26
US 7,153,152 B1	US	1997-08-08	2006-12-26
US 3,909,099 A	US	1974-06-14	1975-09-30
US 7,955,110 B1	US	2010-08-12	2011-06-07
TW 224546 B	TW	1993-09-06	1994-06-01
US 3,474,386 A	US	1968-06-10	1969-10-21

US 3,534,322 A	US	1968-08-01	1970-10-13
US 3,539,972 A	US	1968-05-21	1970-11-10
US 3,542,986 A	US	1968-02-23	1970-11-24
US 3,586,802 A	US	1968-10-03	1971-06-22
US 3,720,904 A	US	1971-02-04	1973-03-13
US 3,747,048 A	US	1971-08-19	1973-07-17
US 3,835,439 A	US	1972-03-15	1974-09-10
US 3,945,699 A	US	1974-09-27	1976-03-23
US 3,949,343 A	US	1971-08-03	1976-04-06
US 3,957,332 A	US	1975-05-02	1976-05-18
US 4,113,339 A	US	1977-08-29	1978-09-12
US 4,131,329 A	US	1976-11-10	1978-12-26
US 4,192,572 A	US	1978-11-13	1980-03-11
US 4,387,947 A	US	1981-06-29	1983-06-14
US 4,684,189 A	US	1985-08-22	1987-08-04
US 4,713,018 A	US	1987-04-24	1987-12-15
US 4,863,392 A	US	1988-10-07	1989-09-05
US 4,963,102 A	US	1990-01-30	1990-10-16
US 4,986,764 A	US	1989-10-31	1991-01-22
US 5,041,027 A	US	1989-07-21	1991-08-20
US 5,146,678 A	US	1991-07-01	1992-09-15

US 5,213,517 A	US	1992-02-10	1993-05-25
US 5,316,492 A	US	1990-05-02	1994-05-31
US 5,433,622 A	US	1994-07-07	1995-07-18
US 5,445,533 A	US	1993-10-01	1995-08-29
US 5,641,308 A	US	1995-04-28	1997-06-24
US 6,097,789 A	US	1998-07-20	2000-08-01
US 6,247,943 B1	US	1999-08-31	2001-06-19
US 6,485,318 B1	US	2001-11-13	2002-11-26
US 6,488,549 B1	US	2001-06-06	2002-12-03
US 6,537,092 B2	US	2002-01-31	2003-03-25
US 6,555,751 B1	US	2000-04-07	2003-04-29
US 6,753,624 B2	US	2001-03-01	2004-06-22
US 7,031,875 B2	US	2001-01-24	2006-04-18
US 7,163,753 B2	US	2003-04-15	2007-01-16
US 7,670,162 B2	US	2008-02-25	2010-03-02
US 7,723,611 B2	US	2009-06-09	2010-05-25
US 7,731,514 B2	US	2008-11-20	2010-06-08
US 7,905,735 B2	US	2008-02-25	2011-03-15
US 7,946,871 B2	US	2010-07-08	2011-05-24
US 7,950,940 B2	US	2008-02-25	2011-05-31
US 7,963,782 B2	US	2008-12-19	2011-06-21

US 8,096,814 B2	US	2008-03-19	2012-01-17
US 8,328,569 B2	US	2011-05-20	2012-12-11
US 2001/0024895 A1	US	2001-03-23	2001-09-27
US 2001/0031572 A1	US	2001-03-02	2001-10-18
US 2002/0064986 A1	US	2001-11-26	2002-05-30
US 2003/0194893 A1	US	2003-04-15	2003-10-16
US 2004/0137772 A1	US	2003-10-31	2004-07-15
US 2009/0318026 A1	US	2009-07-13	2009-12-24
US 2011/0250769 A1	US	2010-12-06	2011-10-13
KR 20010078101 A	KR	2001-01-27	2001-08-20
KR 19980080901 A	KR	1998-03-31	1998-11-25
DE 10149201 C1	DE	2001-05-10	2003-06-15
FR 2634952 B1	FR	1988-08-01	1990-09-21
JP 2011-113805 A	JP	2009-11-26	2011-06-09
JP 2004-158244 A	JP	2002-11-05	2004-06-03
JP H08306422 A	JP	1996-04-19	1996-11-22
JP S48103889 U	JP	1972-03-09	1973-12-04
JP 4190822 B2	JP	2002-08-01	2008-12-03
EP 0354074 A1	EP	1989-06-22	1990-02-07
CA 2396082 A1	CA	2022-07-31	2003-02-01
WO 03032445 A1	WO	2001-10-11	2003-04-17

WO 2004/107506 A1	WO	2004-05-24	2004-12-09

B. Prior Art Systems

1. Saf-D-Grid® Power Connectors. On information and belief, Saf-D-Grid® Power Connectors have been publicly sold, offered for sale, known, used, and/or publicly available at least as early as January 2009. The components and operations of Saf-D-Grid® Power Connectors are evidenced by at least:

- Anderson Power Products, *Saf-D-Grid Datasheet*, https://www.andersonpower.com/content/dam/app/ecommerce/product-pdfs/misc12052018/ds-sdg.pdf (last visited July 22, 2024);
- Anderson Power Products, *Saf-D-Grid PDU Application Focus*, https://www.andersonpower.com/content/dam/app/site/resources/SafDGrid_PDU_Application_Focus.pdf (last visited July 22, 2024);
- Anderson Power Products, *Datacenter Application Guide*, https://www.andersonpower.com/content/dam/app/site/resources/AG-SDGDC.pdf (last visited July 22, 2024);
- Anderson Power Products, *Saf-D-Grid® Press Release*, Anderson Power Products (April 7, 2012), https://web.archive.org/web/20120407092057/http://andersonpower.com/files.php?file=SDGwebpr.pdf
- Anderson Power Products, *Saf-D-Grid®*, Anderson Power Products (November 1, 2012), https://web.archive.org/web/20121101001801/http://andersonpower.com/products/sdg.html
- Anderson Power Products, *Family Data Sheet (PDF)*, Anderson Power Products (May 7, 2011), https://web.archive.org/web/20110507013430/http://www.andersonpower.com/files.php?file=DS-SDGFMLY(2).pdf

- 1bfdavies, *Saf-D-Grid Arc Suppression.mpg*, YouTube (February 1, 2012), https://www.youtube.com/watch?v=ZOrAUxG1F1M.

Despite identifying its "Saf-D-Grid®" plug and receptacle as practicing one or more of the Asserted Claims of the Asserted Patent (*see* Plaintiff's First Corrected and Supplemental Disclosure of Asserted Claims and Infringement Contentions (dated June 28, 2024), Plaintiff's production of documents and information related to the "Saf-D-Grid®" is incomplete. Defendants have requested product and sales information related to "Saf-D-Grid®" and other products and reserve the right to raise invalidity of the Asserted Patent based on such products.

V. STATEMENT OF WHETHER PRIOR ART ANTICIPATES OR RENDERS OBVIOUS THE ASSERTED CLAIMS

Pursuant to Patent L.R. 3-3(b), in the tables below, BizLink contends that the following identified prior art anticipate and/or render obvious each of the asserted claims. The exemplary claim charts in Exhibits A-D identify as non-limiting examples how the prior art listed above correlates with the limitations in each of the asserted claims. The charts cite exemplary portions of the prior-art references that disclose particular limitations of the asserted claims; the citations are illustrative and informative, not exhaustive, and should not be construed as limiting. BizLink intends to rely on each reference in its entirety, including uncited portions. One of ordinary skill in the art would read the prior art references as a whole and in the context of the state of the art. Therefore, BizLink may rely on uncited portions of the prior art references, other publications, and the general state of the art to aid the understanding of the cited portions of the prior art references and to establish the motivation to modify or combine the cited references.

Moreover, the charts are based on BizLink's present understanding of the meaning and scope of the claims and Plaintiff's apparent interpretation of claim element (which BizLink does not necessarily agree with). As discussed below, several claim terms/limitations of the asserted claims are indefinite, and BizLink's mapping of prior art to the asserted claims does not admit or suggest that the claim limitations are not indefinite (nor should any such inference be drawn). Nor does BizLink's mapping of prior art to the asserted claims imply that BizLink should be able to determine

infringement/non-infringement of indefinite claims by accused BizLink instrumentalities (nor should any such inference be drawn).

A.

Asserted Claims	Grounds for Invalidity	Exhibit No.
1-4, and 9	Anticipated by *Winkler*	A
7	Obvious over *Winkler* in view of *Winkler 2*	A

B.

Asserted Claims	Grounds for Invalidity	Exhibit No.
1-4	Anticipated by *Kataoka*	B
7 and 9	Obvious over *Kataoka* in view of *the Handbook*	B

C.

Asserted Claims	Grounds for Invalidity	Exhibit No.
1-4, 7 and 9	Anticipated by, and obvious over *Saf-D-Grid Power Connectors*	C

D.

Asserted Claims	Grounds for Invalidity	Exhibit No.
1-4	Anticipated by *Davis*	D
3	Obvious over *Davis* in view of *Winkler*	D
7 and 9	Obvious over *Davis* in view of *the Handbook*	D

VI. EXEMPLARY INVALIDITY CHARTS

The exemplary claim charts in Exhibits A-D identify as non-limiting examples how the prior art listed above correlates with the limitations in each of the Asserted Claims. The charts cite exemplary portions of the prior-art references that disclose particular limitations of the Asserted Claims; the citations are illustrative and informative, not exhaustive, and should not be construed as limiting. BizLink intends to rely on each reference in its entirety, including uncited portions. One of

ordinary skill in the art would read a prior art reference as a whole and in the context of the state of the art. Therefore, BizLink may rely on uncited portions of the prior art references, other publications, and the general state of the art to aid the understanding of the cited portions of the prior art references and to establish the motivation to modify or combine the cited references.

Moreover, the charts are based on BizLink's present understanding of the meaning and scope of the claims and Plaintiff's apparent interpretation of claim element (which BizLink does not necessarily agree with). As discussed below, several claim terms/limitations of the Asserted Claims lack sufficient written description and/or are indefinite, and BizLink's mapping of prior art to the Asserted Claims does not admit or suggest that the claim limitations are not indefinite (nor should any such inference be drawn). Nor does BizLink's mapping of prior art to the Asserted Claims imply that BizLink should be able to determine infringement/non-infringement of indefinite claims by accused BizLink instrumentalities (nor should any such inference be drawn).

To the extent the prior art, alone or in the combinations indicated in the charts, lack any specific limitation exactly, the claims are obvious over the prior art under the following standard from the Supreme Court:

> When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.

KSR International Co. v. Teleflex Inc., 550 U.S. 398, 421 (2007).

With regard to the proposed combinations, the following standard applies:

> When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 417.

All of the combinations set forth above involve references in the same field attempting to solve the same problems. In addition, a person of ordinary skill in the art would have been motivated

to combine various elements of the cited references because the combination would have involved known methods and would have yielded predictable results. As another example, combining the disclosed prior art would have involved simple substitution of one known element. The creation of such a combination would have been well within the skillset of a person of skill in the art at the time of the invention and would require no undue experimentation, and such a combination would have an easily predictable result. Combining the teachings of these cited references would have involved the use of known technique to improve similar connectors in the same way, or applying a known technique to a known connector ready for improvement to yield predictable results. Accordingly, a person of skill in the art would have had a reasonable expectation of success.

VII. IDENTIFICATION OF GROUNDS FOR INVALIDITY BASED ON 35 U.S.C. § 112

To meet the written description requirement under 35 U.S.C. § 112(a) and 35 U.S.C. § 112, ¶1 (pre-AIA), the specification must "convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession of the invention." *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991); *Ariad Pharm., Inc. v. Eli Lilly & Co*., 598 F.3d 1336, 1351–52 (Fed. Cir. 2010) (citations omitted). The Federal Circuit has also explained that a specification cannot support expansive claim language and satisfy the §112 written description requirement "merely by clearly describing one embodiment of the thing claimed." *LizardTech v. Earth Res. Mapping, Inc*., 424 F.3d 1336, 1346 (Fed. Cir. 2005) (claims to a generic method of making a seamless discrete wavelet transformation (DWT) were held invalid under §112, ¶1 because the specification taught only one particular method for making a seamless DWT and there was no evidence that the specification contemplated a more generic method).

Several claim limitations of the Asserted Patent fail to meet these standards, thereby rendering the claims (and the claims that depend therefrom) invalid for lack of written description under § 112(a) or §112, ¶1 (pre-AIA).

At least the following Asserted Claims are invalid for lack of written description under § 112(a) or §112, ¶1 (pre-AIA), in particular with regard to the limitations identified in parentheses:

- Claim 7 ("a terminal for crimping to a wire")
- Claim 9 ("a terminal for soldering a wire or and electrical component to the contact")

VIII. ACCOMPANYING DOCUMENT PRODUCTION

Pursuant to Patent L.R. 3-4, BizLink has produced documents bates numbered: BIZLINK_APP_00001837 - BIZLINK_APP_00002497. The production of documents is being served concurrently with this Preliminary Invalidity Contentions, which includes the documents identified above, and invalidity claim charts Exhibits A through D.

Dated: July 29, 2024

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP

By: */s/ Ming-Tao Yang*
Ming-Tao Yang
Attorneys for Defendants BizLink Technology, Inc., BizLink Holding Inc., and BizLink International Corp.

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Bizlink Technology, Inc. v. Anderson Power Products, Inc., IPR2024-00687

CERTIFICATE OF SERVICE

I, Maria Butler, hereby certify that on July 29, 2024, a true and correct copy of the following document:

- **DEFENDANTS' PRELIMINARY INVALIDITY CONTENTIONS UNDER PATENT LOCAL RULE 3-3**

was served by the indicated means to the person(s) at the address listed below:

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Attorneys for Plaintiff Anderson Power Products, Inc.

I declare under penalty of perjury under the laws of the United States that the above is true and correct. Executed July 29, 2024, at Palo Alto, California.

/s/ Maria Butler
Maria Butler
Litigation Legal Assistant

Exhibit A—Invalidity of U.S. Patent No. 8,808,017 (the ’017 Patent) Based on *Winkler*

The following illustrates certain grounds for invalidity based on U.S. Patent No. 2,838,739, titled “Electrical connector” (“*Winkler*”), which was filed on January 30, 1953, and issued on June 10, 1958. As such, *Winkler* is prior art to the ’017 Patent under at least pre-AIA 35 U.S.C. §§102(a), (b), and (e).

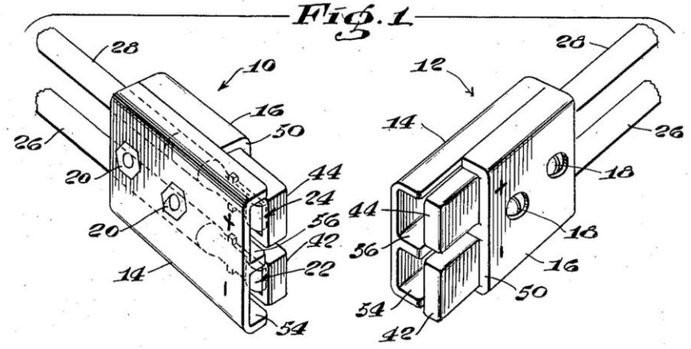
As illustrated below, one or more claims of the ’017 Patent are invalid as expressly and/or inherently anticipated by *Winkler* under Plaintiffs’ own interpretation of claim terms. Additionally, to the extent that *Winkler* is found not to anticipate, expressly or inherently, one or more of the asserted claims of the ’017 Patent, each of asserted claims 1-4, 7 and 9 is invalid as obvious in view of *Winkler* alone or in combination with other prior art references, including, but not limited to, the prior art discussed below, the prior art identified in Defendants’ Invalidity Contentions, and the prior art described in additional claim charts attached as Exhibits B-D. The fact that these cited references are from the same technology area provides motivation for a person of skill in the art to combine their teachings together. *Winkler, Kataoka, Davis* and other prior art identified in Defendants’ Invalidity Contentions all discuss the electrical connector design, and thus provide teaching, suggestion, or motivation that would have led one of ordinary skill to modify *Winkler* based on one of the other references disclosed herein, or to combine teachings of these secondary references, and would not have been discouraged from making the combinations. For example, a person of ordinary skill in the art would have been motivated to combine various elements of the cited references because the combination would have involved known methods and would have yielded predictable results. As another example, combining the disclosed prior art would have involved simple substitution of one known element. The creation of such a combination would have been well within the skillset of a person of skill in the art at the time of the invention and would require no undue experimentation, and such a combination would have an easily predictable result. Combining the teachings of these cited references would have involved the use of known technique to improve similar connectors in the same way, or applying a known technique to a known connector ready for improvement to yield predictable results. Accordingly, a person of skill in the art would have had a reasonable expectation of success. By submitting these invalidity contentions, Defendants do not waive and hereby expressly reserve their rights to raise other invalidity defenses, including but not limited to defenses under Sections 101 and 112.

The citations included in the table below are exemplary only and are not intended to be limiting or exhaustive. Additional portions of these references other than the exemplary examples provided herein may also disclose the indicated limitation(s) and Defendants contend that the asserted claims are invalid in light of the charted reference(s) as a whole. Defendants reserve the right to cite additional disclosures and sources of evidence in support of its positions that also may be applicable, or that may become applicable in light of claim construction, changes in Plaintiff’s infringement contentions, and/or information obtained during discovery as the case progresses.

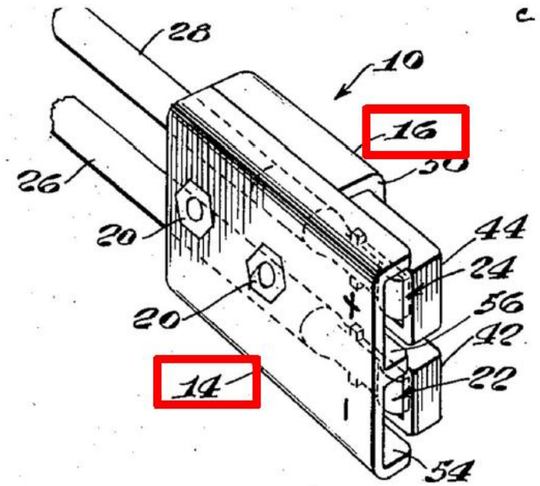
Additionally, Defendants have conducted the invalidity analysis herein and may be basing the arguments below on claim interpretations at least in part and in some instances entirely upon Plaintiffs’ own interpretation of claim terms of the ’017 Patent. By applying the prior art in this way, Defendants do not concede to Plaintiffs’ positions, nor do these Invalidity Contentions constitute any admission regarding claim scope. Nor are Defendants asserting any claim construction positions through these charts. Moreover, preambles generally are not limiting, and nothing in these contentions should be deemed an admission that the preamble in the asserted claims is limiting.

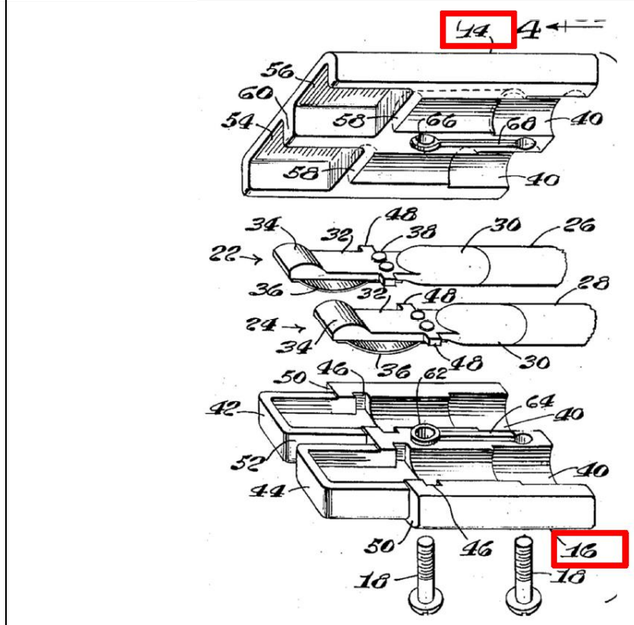
As these proceedings further develop, Defendants reserve the right to amend or supplement this claim chart and any related contentions at a later date, in accordance with the Court’s Scheduling Order, including after the Court’s order construing disputed claim terms. In particular, Defendants reserve the right to rely on (1) uncited portions of the identified prior art; (2) other prior art not identified herein; (3) references that show the state of the art (irrespective of whether such references themselves qualify as prior art to the asserted patents); (4) factual testimony from the inventors or authors of the prior art references; and/or (5) expert testimony, to provide context to or aid in understanding the prior art and the state of the art at the time of the alleged inventions.

U.S. Patent No. ’017	**Exemplary Disclosures Based on *Winkler***
Claim 1	
1[pre] An electrical connector pair, comprising:	To the extent that the preamble is limiting, *Winkler* discloses a pair of electrical connectors with insulating sections. Column 1, Lines 67-70 of *Winkler* discloses “a pair of two-pole electrical cable connectors indicated at 10, 12” Fig. 1 illustrates connectors 10 and 12. Fig. 1:

U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	 Fig. 1 of *Winkler* shows a pair of connectors 10 at the left and connector 12 at the right.
1[a] a first connector having a first insulating housing;	*Winkler* discloses this limitation. *See* Column 1, Lines 47-50, Column 1, Line 68 to Column 2, Line 2, Column 3, Lines 7-13, Fig. 1 and Fig. 3 of *Winkler*. Column 1, Lines 47-50: “The present connector is provided with an insulating housing surrounding and enclosing the terminals for maximum insulating protection” Column 1, Line 68 to Column 2, Line 2: “a pair of two-pole electrical cable connectors indicated at 10, 12 comprising exact counterparts adapted for longitudinal telescoping engagement to form an electrical connection. As herein shown, each connector includes an insulating housing split longitudinally to form two half sections comprising an upper half section 14 and a lower half section 16, as viewed in Fig. 3” Column 3, Lines 7-13: “It will also be observed that the terminals of each connector are enclosed in the pockets 42, 44 with only the upper contacting portions exposed, and that the socket-forming portions extending over the exposed portions of the terminals also provide a protective insulating wall above the terminals.”

A portion of Fig. 1 (annotated circling insulating housing sections 14 and 16)	Fig. 3 (annotated circling insulating housing sections 14 and 16)

<table>
<tr><th>U.S. Patent No. ’017</th><th>Exemplary Disclosures Based on Winkler</th></tr>
<tr><td></td><td>




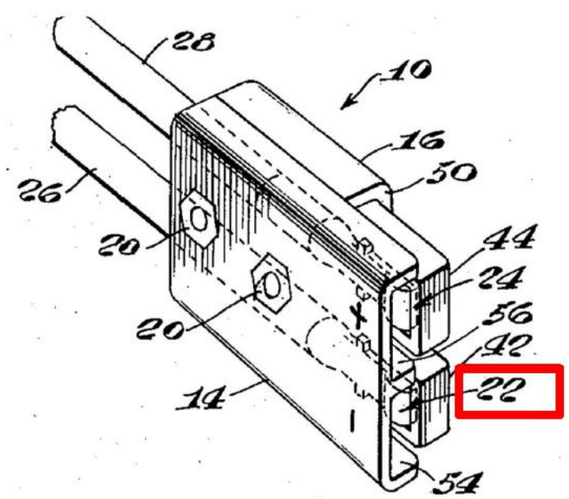
Winkler discloses a first connector 10 having “an insulating housing split longitudinally to form two half sections comprising an upper half section 14 and a lower half section 16, as viewed in Fig. 3”</td></tr>
<tr><td>1[b] a first electrical contact supported within the first insulating housing,</td><td>Winkler discloses this limitation.

Winkler discloses a contact member 22 that forms a terminal for electrical cable 26. The contact member 22 and the electrical cable 26 are disclosed at Column 2, Lines 4-7, Fig. 1, and Fig. 3 of Winkler.

Column 2, Lines 4-7:

“In the embodiment of the invention illustrated in Figs. 1 to 4, each insulating housing is arranged to support two identical contact members 22, 24 forming the terminals of electrical cables 26, 28 respectively”

<table>
<tr><td>A portion of Fig. 1 (annotated circling contact member 22)</td><td>Fig. 3 (annotated circling contact member 22)</td></tr>
</table>
</td></tr>
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<table>
<tr><th>U.S. Patent No. ’017</th><th>Exemplary Disclosures Based on Winkler</th></tr>
<tr><td></td><td>

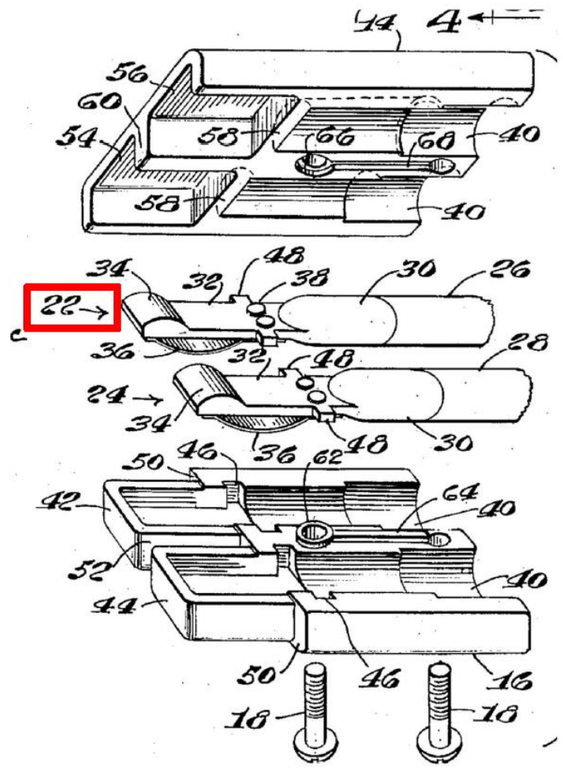


Fig. 1 of Winkler above shows that contact member 22 is supported by the insulated housing half sections 14 and 16. Therefore, the contact member 22 is a “first electrical contact supported within the first insulated housing” as claimed.</td></tr>
<tr><td>1[c] the first electrical contact having a connecting surface that is substantially parallel with a longitudinal axis of the insulating housing and terminates in a leading end of the first electrical contact;</td><td>Winkler discloses this limitation.

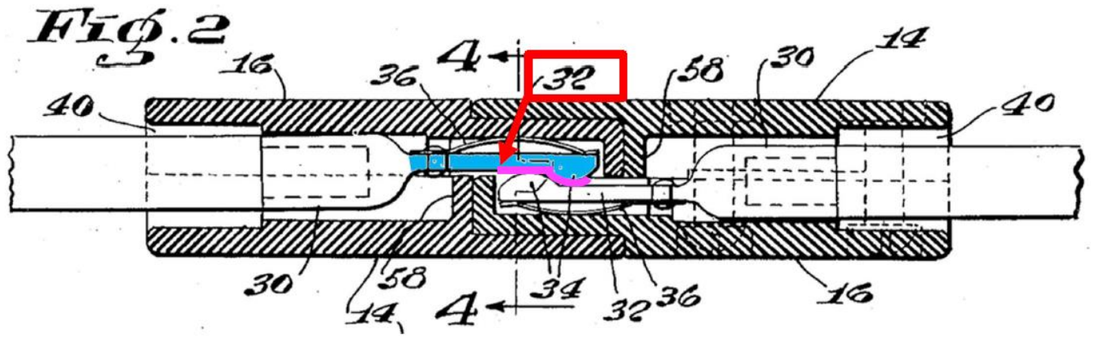
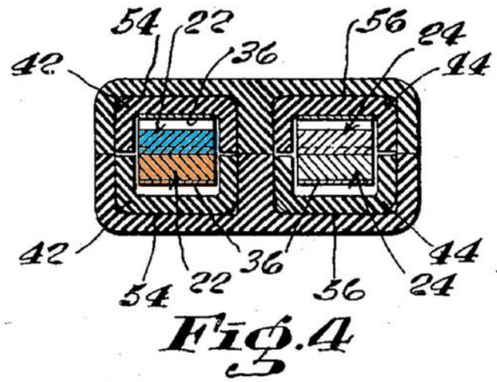
The contact member 22 (“first electrical contact”) of Winkler has a contacting end with an “elongated flat portion 32.”

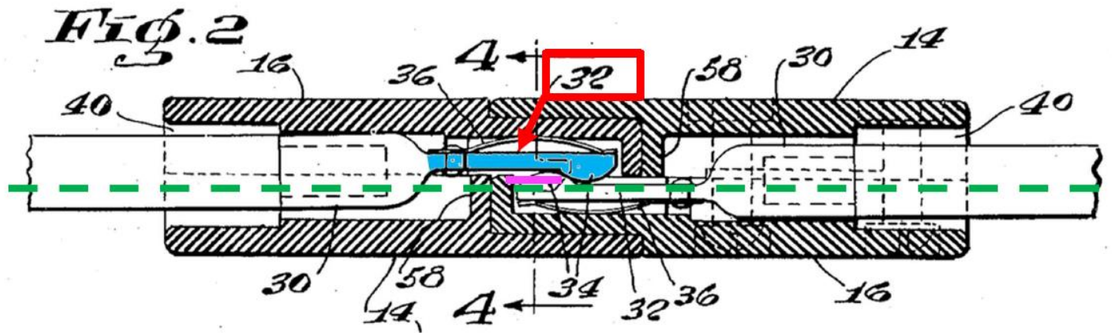
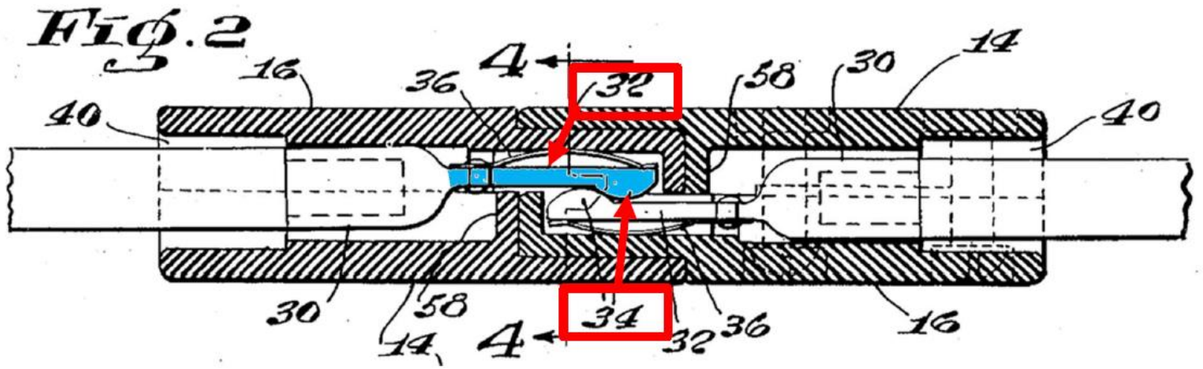
The elongated portion 32 is disclosed at Column 2, Lines 10-14 and Fig. 2 of Winkler.

Column 2, Lines 10-14:

“The contacting end of each terminal comprises an elongated flat portion 32 substantially rectangular in cross section provided with a rounded or convex end portion 34 protecting from one surface thereof.”

Fig. 2 (annotated highlighting contact member 22 in blue, circling elongated flat portion 32, and identifying a connecting surface in pink)</td></tr>
</table>

U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	
	As shown in Fig. 2 of *Winkler*, above, contact member 22 (highlighted in blue above) includes elongated flat portion 32 that is a “connecting surface” as claimed, because a contact member (which is a terminal) from a mated connector establishes an electrical connection with elongated flat portion 32.
	Fig. 4 (highlighting a second contact member 22 in orange, and first contact member 22 in blue)
	
	Fig. 4 shows a cross-sectional view of Fig. 2, with *second contact member 22* connecting to the flat elongated portion 32 of *first contact member 22*. The cross-sectional view shown in Fig. 4 shows a connection with flat elongated portion 32. Therefore, at least the flat elongated portion 32 of contact member 22 is a “connecting surface” as claimed. *See* Fig. 2 of *Winkler* below.
	Fig. 2 (annotated highlighting *contact member 22* in *blue*, adding a *longitudinal axis* in *green*, circling elongated flat portion 32, and identifying a *connecting surface* in *pink*)

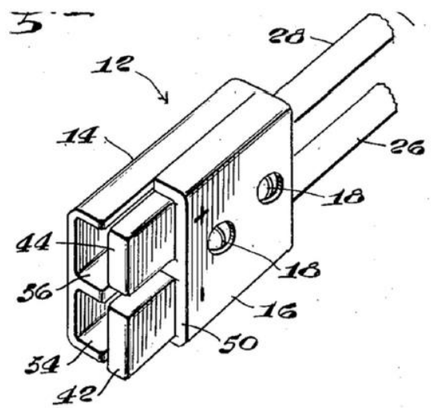
U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	
	The elongated flat portion 32 is parallel with a longitudinal axis of the insulating housing sections 14 and 16. Furthermore, the connecting surface of the contact member 22 “terminates in a leading end of the first electrical contact,” as claimed. As shown in Fig. 2 of *Winkler* below and according to Column 2, Lines 10-14 of *Winkler*, contact member 22 with a leading end called a “convex end portion 34.”
	Fig. 2 (annotated highlighting *contact member 22* in *blue*, and circling elongated flat portion 32 and convex end portion 34)
	
	The flat elongated portion 32 of contact member 22 ends at convex end portion 34, which is the leading end. For the reasons above, Winkler discloses 1[c].
1[d] a second connector having a second insulating housing;	*Winkler* discloses this limitation. *Winkler* discloses identical connectors 10 and 12 at Column 1, Lines 27-28, Column 2, Lines, 4-10, and Fig. 1. Just as the connector 10 of *Winkler* constitutes the “first connector” of 1[b], connector 12 constitutes the “second connector” of 1[d]. Column 1, Lines 27-28:

<table>
<tr><th>U.S. Patent No. ’017</th><th>Exemplary Disclosures Based on Winkler</th></tr>
<tr><td></td><td>“Fig. 1 is a perspective view of a pair of identical two-pole connectors”

Column 2, Lines, 4-10:

“In the embodiment of the invention illustrated in Figs. 1to 4, each insulating housing is arranged to support two identical contact members 22, 24 forming the terminals of electrical cables 26, 28 respectively, and as herein shown, each terminal is provided with a cylindrical end portion 30 bored to receive the end of the cable into which it may be soldered.”

Portion of Fig. 1



Insulated housing halves 14 and 16 of connector 12 form the claimed “second insulating housing”.

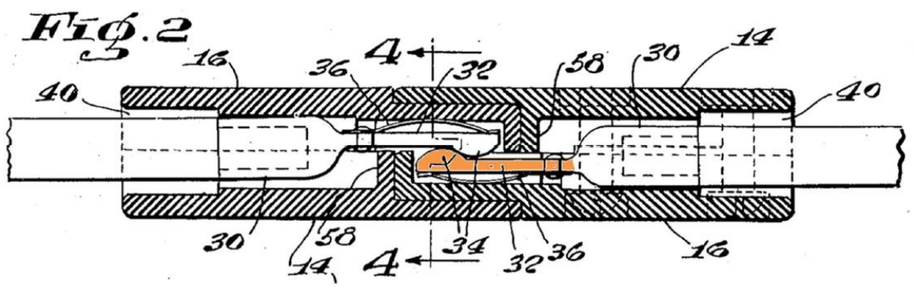
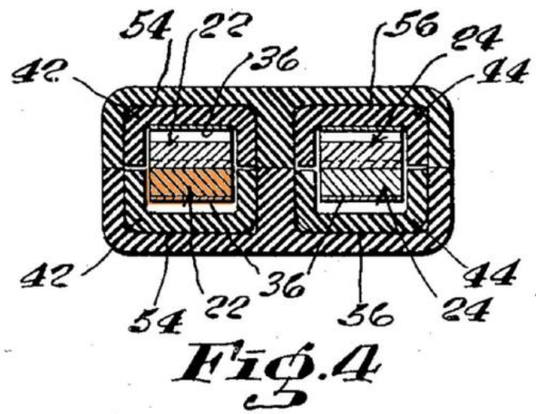
For these reasons and the reasons discussed in 1[b] regarding connector 10, Winkler meets 1[d], and discloses “a second connector having a second insulating housing” as claimed.</td></tr>
<tr><td>1[e] a second electrical contact supported within the second insulating housing,</td><td>Winkler discloses this limitation.

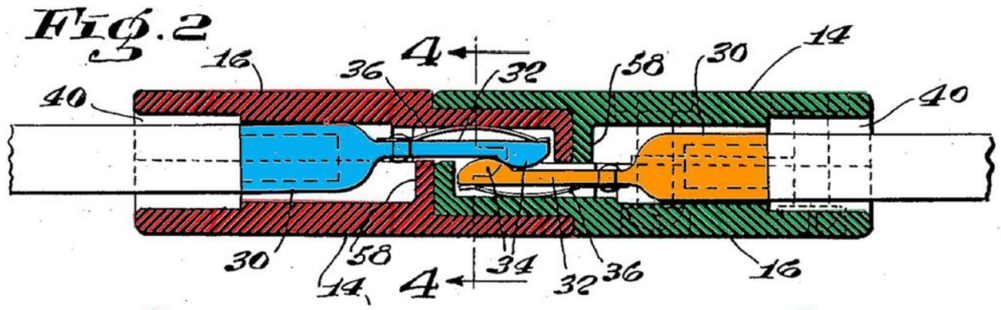
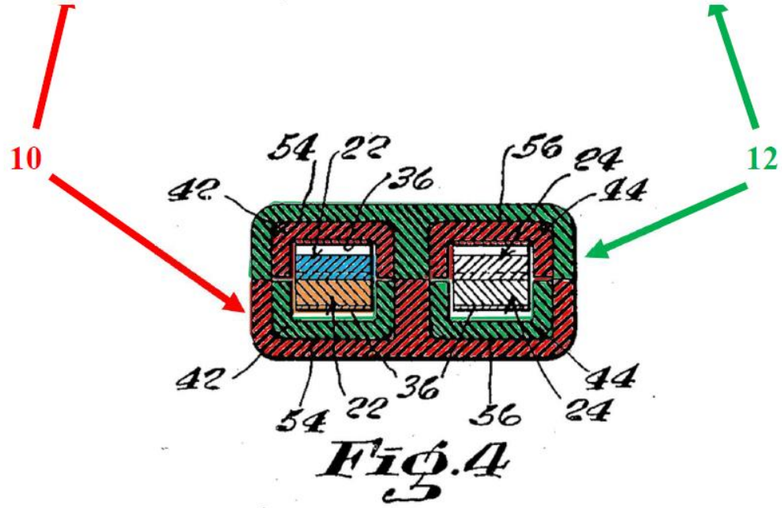
Winkler discloses that “each insulated housing is arranged to support two identical contact members 22, 24.” at Column 2, Lines 4-6.

Figs. 2 and 4 of Winkler show a second electrical contact 22 supported within the second insulating housing.

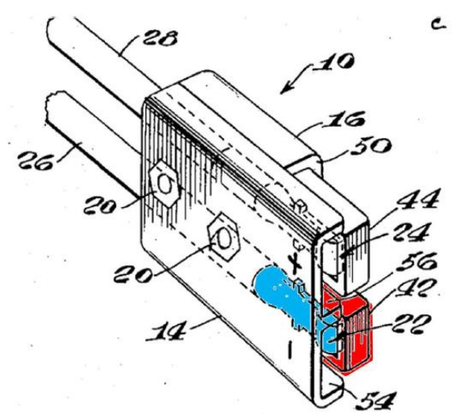
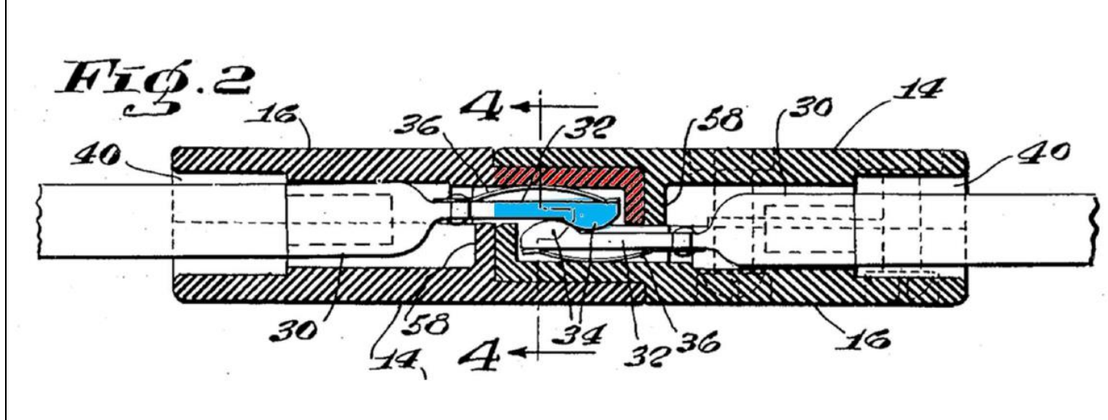
Fig. 2 (annotated highlighting a second contact member 22 in orange)

Fig. 4 (annotated highlighting a second contact member 22 in orange)</td></tr>
</table>

U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	  FIG. 4 Column 2, Lines 4-7 of *Winkler* discloses “each insulating housing is arranged to support two identical contact members 22, 24 forming the terminals of electrical cables 26, 28”. Therefore, *Winkler* discloses that contact member 22 is a terminal for electrical cable 26, and thus is an “electrical contact”. For these reasons and those in 1[b] regarding contact member 22 in the identical connector 10, *Winkler* meets 1[e].
1[f] the second electrical contact being configured to laterally engage with the connecting surface of the first electrical contact when the first connector is mated with the second connector;	*Winkler* discloses this limitation. *Winkler* discloses connectors 10 and 12 that, when mated, have contact members 22 (“electrical contacts”) that laterally engage. Figs. 2 and 4 of *Winkler* show the mated connectors and lateral engagement of the electrical contacts: Fig. 2 and Fig. 4 (annotated highlighting first connector 10 in red mated with second connector 12 in green, the first connector having a first electrical contact in blue that laterally engages with a second electrical contact in orange)

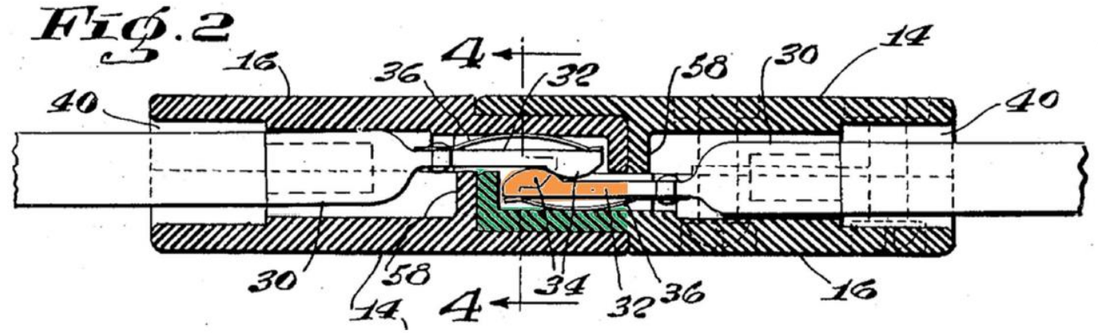
U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	 
	Column 4, Lines 50-56 of *Winkler*: “said rigid terminal being mounted to yield laterally when slidingly engaged with an identical terminal in the a second connector, said resiliently supported terminal being shaped to effect lateral depression of each other into their respective pockets during initial engagement and to effect interlocking engagement with each other when fully engaged.” Contact members 22 in *Winkler* (first and second electrical contacts) “laterally engage” with one another as claimed because they are in “interlocking engagement with each other when fully engaged.” Column 3, Lines 18-27 of *Winkler*: “the rounded contacting faces 34 of each spring-pressed terminal are slidingly engaged by each other, initial inward movement of the connectors effecting downward movement of the terminals in their respective pockets against the springs 36. Upon continued inward movement the high points of the curved portions pass by each other, and as the connectors approach full engagement, the springs 36 effect upward movement of the terminals in their pockets to present the curved portions 34 in

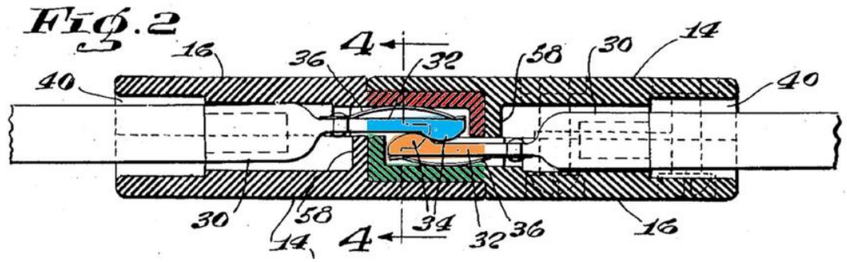
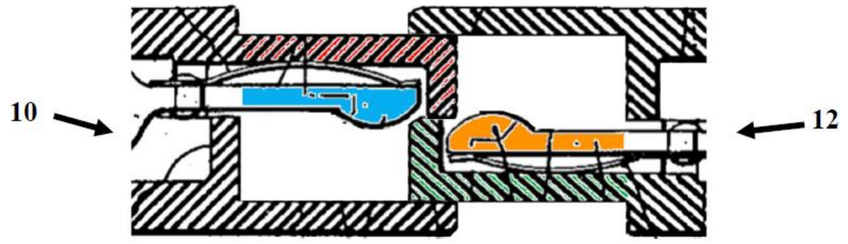
U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	hooked or interlocked relation to each other” The two spring-pressed contact members 22 slidingly engage with one another, and “as the connectors approach full engagement, the springs 36 effect upward movement of the terminals in their pockets to present the curved portions 34 in hooked or interlocked relation to each other.” For these reasons, *Winkler* discloses 1[f].
1[g] a first insulating barrier within the first connector extending beyond and covering the leading end of the electrical contact; and	*Winkler* discloses this limitation. *Winkler* discloses connector 10 includes a terminal receiving pockets 42 and 44 in the lower half section 16 of the insulated housing at Column 2, Lines 23-25. Column 2, Lines 23-25: “The lower half section 16 of the housing is provided with two spaced forwardly extended terminal-receiving pockets 42, 44” Column 2, Lines 25-26 of *Winkler* discloses “terminal-receiving pockets 42, 44 substantially U-shaped in cross section and closed at their outer ends” . Receiving pocket 42 of *Winkler* is a “first insulating barrier” that “cover[s] the leading end of the first electrical contact” as claimed because receiving pocket 42 is “substantially U-shaped in cross section and closed at [its] outer end[].”

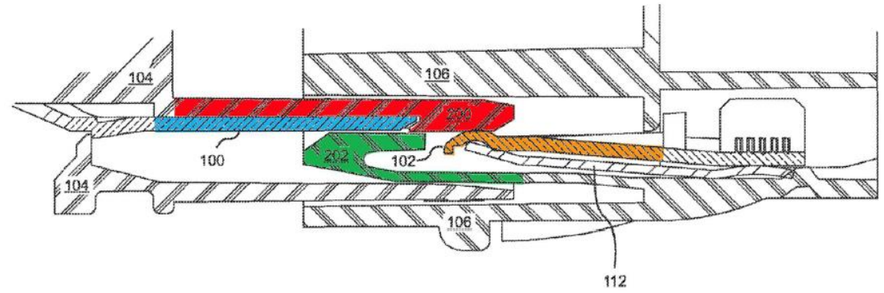
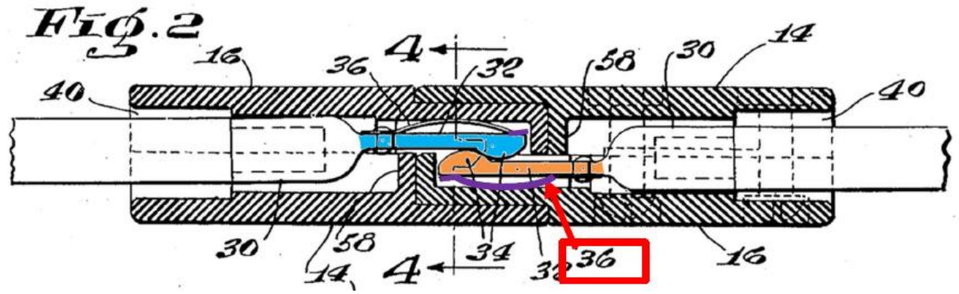
Portion of Fig. 1 (annotated highlighting contact member 22 in blue, and receiving pocket 42 in red)	Fig. 2 (annotated highlighting contact member 22 in blue, and receiving pocket 42 in red)
	

Winkler states that contact member 22 is “enclosed in the pocket[] 42.” *See* Column 3, Lines 7-9 of *Winkler*:

“It will also be observed that the terminals of each connector are enclosed in the pockets 42, 44”, and Column 2, Lines 39-40 of *Winkler* which discloses “it will be seen that the contacting end of each terminal is enclosed in its respective pocket.”

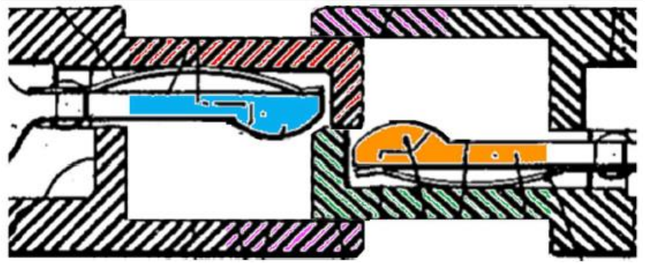
U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	Receiving pocket 42 is thus a first insulating barrier that extends beyond and covers a leading end of contact member 22 and constitutes the claimed “first insulating barrier” of 1[g]. Column 1, Lines 42-44 of the ’017 patent discloses “an insulating barrier that covers the leading end of one of the electrical contacts and blocks the direct through-air path between the contacts”. Therefore, the ’017 patent also admits an insulating barrier that “blocks the direct through-air path between the contacts” was known.
1[h] a second insulating barrier extending beyond the second electrical contact within the second connector,	*Winkler* discloses this limitation. *Winkler* discloses identical connectors 10 and 12 having the same structure at Column 1, Lines 27-28 and Column 2, Lines 4-10. Column 1, Lines 27-28 of *Winkler* discloses “Fig. 1 is a perspective view of a pair of identical two-pole connectors”. Column 2, Lines 4-10 of *Winkler* discloses “in Figs. 1 to 4, each insulating housing is arranged to support two identical contact members 22, 24 forming the terminals of electrical cables 26, 28 respectively, and as herein shown, each terminal is provided with a cylindrical end portion 30 bored to receive the end of the cable into which it may be soldered”. Second connector 12 includes terminal receiving pocket 42 that is a “second insulating barrier extending beyond the second electrical contact” for the reasons above with respect to connector 10. *See also 1[g].* The “second insulating barrier” of the second connector is highlighted in green in Fig. 2 of *Winkler*  Fig. 2 (annotated highlighting contact member 22 of a second connector in orange, and receiving pocket 42 of the second connector in green) Therefore, *Winkler* discloses 1[h].
1[i] the second insulating barrier being configured so as to be in close proximity with the first insulating barrier when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance, thereby blocking substantially all through-air arcing	*Winkler* discloses this limitation. *Winkler* discloses a first connector having a first insulating barrier and first electrical contact, and a second electrical connector having a second insulating barrier and second electrical contact:

U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
paths between the first and second electrical contacts	
	Fig. 2 of *Winkler* (annotated highlighting a first electrical contact in blue and a first insulating barrier in red of a first connector, and a second electrical contact in orange and a second insulating barrier in green of a second connector)
	
	The first insulating barrier and the second insulating barrier are configured to be in close proximity when the first and second connectors are partially disconnected. A diagram created based on *Winkler*’s Fig. 2 is provided below, showing connectors 10 and 12 partially disconnected.
	Created based on *Winkler* Fig. 2 (modified to show connector 10 and connector 12 partially disconnected)
	
	As illustrated in the diagram above, when connector 10 and connector 12 are partially disconnected, the first contact member (in blue) is separated from the second contact member (in orange) by a short distance, and the closed ends of the first insulation barrier (in red) and the second insulation barrier (in green) are in close proximity to one another. In the diagram above, the first and second insulation barriers block substantially all through-air arcing paths between the first contact member and the second contact member. Therefore, *Winkler* meets 1[i]. *Winkler* exhibits the same arcing path-blocking functionality that the ’017 patent depicts in Fig. 2B.
	Fig. 2B of ’017 Patent (highlighting first barrier structure 200 in red, second barrier structure 202 in green, first contact 100 in blue, and second contact 102 in orange)

U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	
Claim 2	
2. The connector pair of claim 1, further comprising a contact tensioning mechanism that presses the second electrical contact against the engaging surface of the first electrical contact when the first and second connectors are connected.	*Winkler* discloses a contact tensioning mechanism that presses the second electrical contact against the engaging surface of the first electrical contact when the first and second connectors are connected. *Winkler* discloses a leaf spring 36 that is a “contact tensioning mechanism.” Leaf spring 36 is shown in Fig. 2 below. Fig. 2 of Winkler (annotated highlighting leaf spring 36 in purple, first electrical contact in blue, and second electrical contact in orange)  Fig. 2 shows the first and second connectors being connected. Leaf spring 36 (outlined in purple above) presses the second electrical contact (in orange above) against the engaging surface of the first electrical contact (in blue above) when the first and second connectors are connected. In particular, the leaf spring 36 presses curved portion 34 of the second electrical contact against the curved portion 34 and the flat elongated portion 32 of the first electrical contact. Column 2, Lines 39-43 of *Winkler* discloses “it will be seen that the contacting end of each terminal is enclosed in its respective pocket except for the engaging face thereof which is resiliently urged by the leaf spring 36 toward the cooperating terminal”. Accordingly, *Winkler* states that “the contacting end of each terminal is enclosed in its respective pocket except for the engaging face thereof which *is resiliently urged by the leaf spring 36 toward the cooperating terminal*.” (emphasis added). Column 2, Lines 10-14 of *Winkler* discloses:

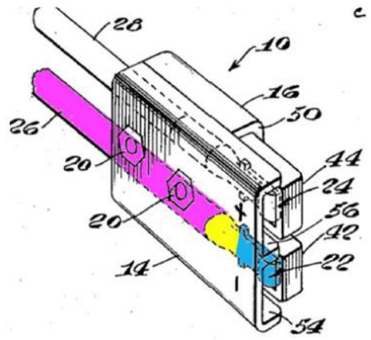
U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	“The contacting end of each terminal comprises an elongated flat portion 32 substantially rectangular in cross section provided with a rounded or convex end portion 34 projecting from one surface thereof.” Column 4, Lines 41-43 of *Winkler* discloses: “a rigid terminal member provided with a substantially flat contacting portion.” According to *Winkler*, flat elongated portion 32 is part of the “contacting end” of the terminal, and therefore elongated portion 32 of each electrical contact is also pressed against one another by leaf spring 36. *Winkler* further states that “springs 36 effect upward movement of the terminals in their pockets to present the curved portions 34 in hooked or interlocked relation to each other” at Column 3, Lines 24-27. For the reasons above, leaf spring 36 constitutes the claimed “contact tensioning mechanism,” and *Winkler* anticipates claim 2.
Claim 3	
3. The connector pair of claim 2, wherein the contact tensioning mechanism includes a spring.	*Winkler* discloses the connector pair of claim 2, wherein the contact tensioning mechanism includes a spring. As discussed in claim 2, *Winkler* discloses the contact tensioning mechanism. *Winkler* discloses leaf spring 36 as the contact tensioning mechanism. *See* Column 2, Lines 14-17, Column 2, Lines 28-32, Column 2, Lines 39-43, Column 3, Lines 23-27, Column 3, Lines 31-34 of *Winkler*. In addition, the ’017 patent does not exclude or teach away from leaf springs. Therefore, Winkler anticipates claim 3. *See Also* Claim 2.
Claim 4	
4. The connector pair of claim 1, further comprising a barrier tensioning mechanism that presses the first and second insulating barriers against each other when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance.	*Winkler* discloses the connector pair of claim 4, and that further comprises a barrier tensioning mechanism that presses the first and second insulating barriers against each other when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance. *Winkler* discloses the first and second insulating barriers of 1[g] and 1[h]. *See* 1[g] and 1[h]. The first and second insulating barriers of *Winkler* are configured to be in close proximity when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance, as explained above with respect to 1[i] and illustrated in a diagram created based on Fig. 2 of *Winkler*. *See* 1[i], *Winkler* discloses the “barrier tensioning mechanism” of claim 4. As shown in the diagram below, outer portions of each connector housing in *Winkler* form narrow openings in the connectors, such that the first and second insulating barriers are pressed together when the connectors are partially disconnected. Fig. 2 of Winkler (showing connectors 10 and 12 partially disconnected, with barrier tensioning mechanisms in pink, first insulating barrier in red, and second insulating barrier in green)

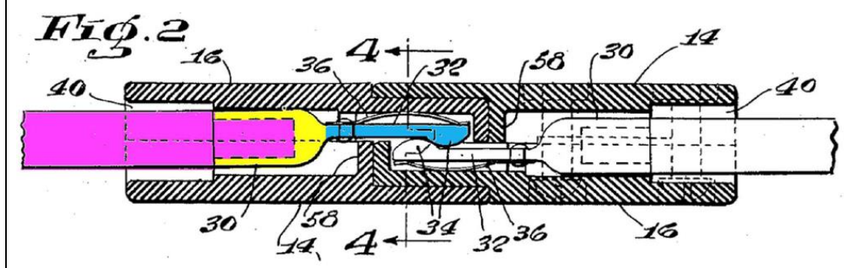
Anderson Exhibit 2006, Page 28 of 90
Bizlink Technology, Inc. v. Anderson Power Products, Inc., IPR2024-00687

U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*
	 The pink highlighted portions of each connector housing are barrier tensioning mechanisms because they cause the first insulating barrier and the second insulating barrier to press against each other. The ’017 patent does not say anything about the claimed “barrier tensioning mechanism” other than stating “[s]ome embodiments include a spring or other tensioning mechanism that presses the male and female insulating barriers against each other when the connectors are partially disconnected.” *See* Column 3, Lines 37-40 of the ’017 patent. The ’017 patent does not appear to require anything more than what *Winkler* discloses. Therefore, *Winkler* anticipates claim 4.
Claim 7	
7. The connector pair of claim 1, wherein at least one of the first and second electrical contacts includes a terminal for crimping to a wire.	*Winkler*, in combination with one or more other references, discloses that at least one of the first and second electrical contacts includes a terminal for crimping to a wire. To the extent Plaintiff alleges *Winkler* does not disclose “a terminal for crimping to a wire” expressly or inherently, it would have been obvious to modify *Winkler* by using a terminal for crimping to a wire and/or to combine *Winkler* with one or more other references as identified in Defendants’ Invalidity Contentions. For example, the combination of *Winkler* and *Winkler2* (US 2,838,739) renders claim 7 obvious. *Winkler*’s electrical connectors have contact members 22 that are the first and second electrical contacts of claim 1. *See* 1[b] and 1[d]. Column 2, Lines 8-10, and Figs. 1 and 2 of *Winkler* further discloses attaching an end of cable 26 to **cylindrical end portion 30** of **contact member 22** by soldering.

Portion of Fig. 1	Fig. 2
(annotated highlighting ***first connector terminal 22*** in blue, ***cylindrical end portion 30*** of the terminal in ***yellow***, and ***cable 26*** in ***pink***)	(annotated highlighting ***first connector terminal 22*** in blue, ***cylindrical end portion 30*** of the terminal in ***yellow***, and ***cable 26*** in ***pink***)

U.S. Patent No. ’017	Exemplary Disclosures Based on *Winkler*





Winkler’s cable 26 differs from the claimed “wire” in nomenclature only, not in substance. For example, *the Handbook* (Mroczkowski, Robert S., Electronic Connector Handbook (1997)) recites “wire/cable” interchangeably.

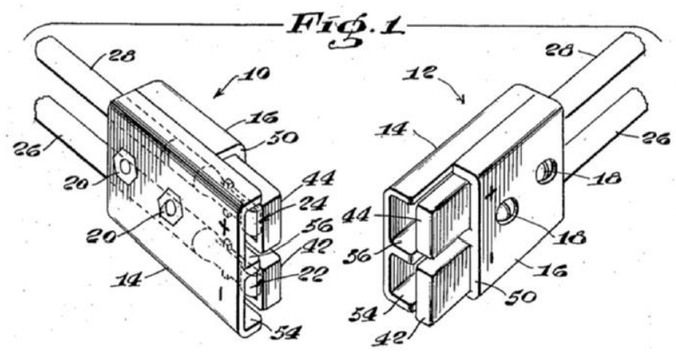
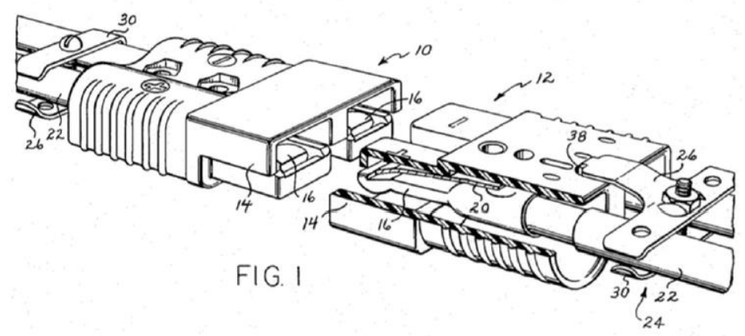
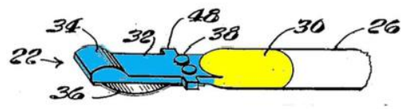
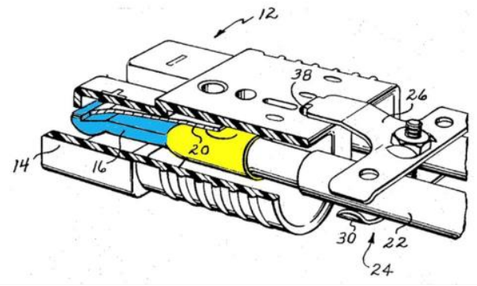
To the extent Plaintiff alleges *Winkler* does not disclose “a terminal for crimping to a wire” expressly or inherently, it would have been obvious to modify *Winkler* by using a terminal for crimping to a wire.

For example, Chapter 1, Section 1.4 (Page 13) of *the Handbook* discloses crimping to connect to a wire or cable, regarding it as among “the oldest of the technologies” “dating back to the 1940s.” (*See* Chapter 9, Section 9.1 (Page 32))

For example, *Winkler2* discloses a similar connector, having terminals for attaching wires using soldering and/or crimping. *Winkler2* is analogous art to *Winkler*, and both are analogous art to the ’017 patent. *See* cover and Column 1, Line 15 of *Winkler*, and cover and Column 1, Lines 5-8 of *Winkler2*, *Winkler2* and *Winkler* are by the same inventor, and both are in the same technical field of electrical connectors as the ’017 patent.

Winkler2 discloses the same style of electrical connector as *Winkler*, with similar insulated housings and connector terminals, as can be seen by Fig. 1 of each reference below.

Fig. 1 of *Winkler*	Fig. 1 of *Winkler 2*

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	  FIG. 1
	Like *Winkler*, *Winkler2* discloses an electrical contact called a “terminal member 16,” and shows terminal member 16 having cylindrical end portion like *Winkler*’s cylindrical end portion 30.
	Portion of Fig. 3 of *Winkler* (annotated highlighting ***electrical contacts*** in ***blue***, and ***cylindrical end portions*** in ***yellow***)
	
	Portion of Fig. 1 of *Winkler2* (annotated highlighting ***electrical contacts*** in ***blue***, and ***cylindrical end portions*** in ***yellow***)
	
	In addition to disclosing the same general electrical connector as *Winkler*, *Winkler2* discloses a terminal for crimping to a wire. Column 2, Lines 12-14 of *Winkler2* discloses that “[a]n electrical cable 22 is mechanically and electrically secured to the rigid terminal member 16 by conventional means, such as, by crimping and/or soldering.” It would have been obvious to a POSITA by January 4, 2013 – the filing date of the ’017 patent – to modify *Winkler*’s contact member 22 to include a terminal for crimping a wire disclosed in *Winkler2*, to yield an electrical connector that attaches to wires using soldering and/or crimping, as disclosed in *Winkler2*. The modification would have involved the application of the known wire crimping technique or *Winkler2* to *Winkler*’s known electrical connector, to yield predictable results of rigidly securing a cable to the contact member, ensuring a reliable and physical electrical connection.

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	Furthermore, modifying *Winkler* based on *Winkler2* would have involved applying known wire crimping techniques disclosed in *Winkler2*, to improve *Winkler*’s similar connectors with a strong mechanical connection. Even though *Winkler* discloses soldering a cable to a terminal, Column 2, Lines 12-14 of *Winkler2* discloses attaching a wire by crimping either in addition to soldering or instead of soldering. *Winkler2* discloses both techniques as being “conventional” nearly forty years before the ’017 patent. POSITAs would have expected success in modifying *Winkler* to include *Winkler2*’s crimping terminal. As explained above, *Winkler* and *Winkler2* disclose very similar connector hardware, and thus *Winkler2* additional disclosure of a crimping terminal would have informed a POSITA that little or no connector component modification would have been needed, beyond modifying cylindrical end portion 30 to solder and/or crimp a wire such as cable 26. Any necessary modifications to *Winkler*’s components would have been within a POSITA’s capabilities. For example, a POSITA would have been able to modify cylindrical end portion 30 of *Winkler*, if necessary, to allow the cylindrical walls to crimp a wire inserted into the cylindrical portion 30. For these reasons, claim 7 would have been obvious based on *Winkler* in view of *Winkler2* and/or ***the Handbook***.
Claim 9	
9. The connector pair of claim 1, wherein at least one of the first and second electrical contacts includes a terminal for soldering a wire or and electrical component to the contact.	*Winkler*, in combination with one or more other references, discloses at least one of the first and second electrical contacts includes a terminal for soldering a wire or and electrical component to the contact. As a preliminary matter, and solely for the purposes of this proceeding, “a wire or and electrical component” in claim 9 is understood to mean “a wire or an electrical component.” *Winkler*’s contact members 22 are terminals formed as first and second electrical contacts. *See* 1[b] and 1[e]. Column 2, Lines 8-10 of *Winkler* discloses that “each terminal is provided with cylindrical end portion 30 bored to receive the end of the cable into which it may be soldered.” *Winkler*’s cable is thus a “wire” and an “electric component.” The ’017 patent does not distinguish claim 9 from *Winkler* because “soldering,” “wire,” and “electrical component” do not appear anywhere in the ’017 patent besides the claims. Therefore, *Winkler* anticipates claim 9.

Exhibit B—Invalidity of U.S. Patent No. 8,808,017 (the ’017 Patent) Based on *Kataoka*

The following illustrates certain grounds for invalidity based on U.S. Patent No. 8,182,278, titled “Connector” (“*Kataoka*”), which was filed on February 17, 2011, and issued on May 22, 2012. As such, *Kataoka* is prior art to the ’017 Patent under at least pre-AIA 35 U.S.C. §§102(a) and (e).

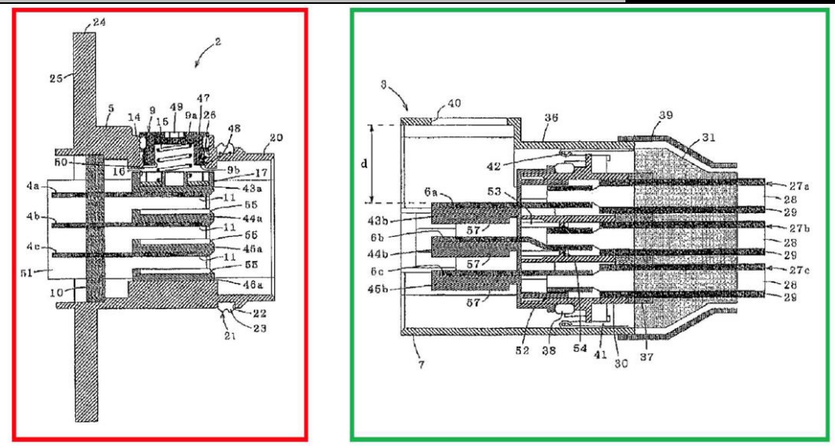
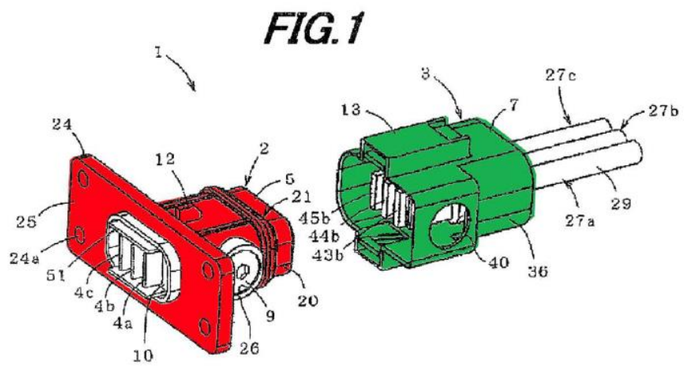
As illustrated below, one or more claims of the ’017 Patent are invalid as expressly and/or inherently anticipated by *Kataoka* under Plaintiff’s own interpretation of claim terms. Additionally, to the extent that *Kataoka* is found not to anticipate, expressly or inherently, one or more of the asserted claims of the ’017 Patent, such claims are invalid as obvious in view of *Kataoka* alone or in combination with other prior art references, including, but not limited to, the prior art discussed below, the prior art identified in Defendants’ Invalidity Contentions, and the prior art described in additional claim charts attached as Exhibits A, C, and D. The fact that these cited references are from the same technology area provides motivation for a person of skill in the art to combine their teachings together. *Winkler*, *Kataoka*, *Davis* and other prior art identified in Defendants’ Invalidity Contentions all discuss the electrical connector design, and thus provide teaching, suggestion, or motivation that would have led one of ordinary skill to modify *Kataoka* based on one of the other references disclosed herein, or to combine teachings of these secondary references, and would not have been discouraged from making the combinations. For example, a person of ordinary skill in the art would have been motivated to combine various elements of the cited references because the combination would have involved known methods and would have yielded predictable results. As another example, combining the disclosed prior art would have involved simple substitution of one known element. The creation of such a combination would have been well within the skillset of a person of skill in the art at the time of the invention and would require no undue experimentation, and such a combination would have an easily predictable result. Combining the teachings of these cited references would have involved the use of known technique to improve similar connectors in the same way, or applying a known technique to a known connector ready for improvement to yield predictable results. Accordingly, a person of skill in the art would have had a reasonable expectation of success. By submitting these invalidity contentions, Defendants do not waive and hereby expressly reserve their rights to raise other invalidity defenses, including but not limited to defenses under Sections 101 and 112.

The citations included in the table below are exemplary only and are not intended to be limiting or exhaustive. Additional portions of these references other than the exemplary examples provided herein may also disclose the indicated limitation(s) and Defendants contend that the asserted claims are invalid in light of the charted reference(s) as a whole. Defendants reserve the right to cite additional disclosures and sources of evidence in support of its positions that also may be applicable, or that may become applicable in light of claim construction, changes in Plaintiff’s infringement contentions, and/or information obtained during discovery as the case progresses.

Additionally, Defendants have conducted the invalidity analysis herein and may be basing the arguments below on claim interpretations at least in part and in some instances entirely upon Plaintiff’s own interpretation of claim terms of the ’017 Patent. By applying the prior art in this way, Defendants do not concede to Plaintiff’s positions, nor do these Invalidity Contentions constitute any admission regarding claim scope. Nor are Defendants asserting any claim construction positions through these charts. Moreover, preambles generally are not limiting, and nothing in these contentions should be deemed an admission that the preamble in the asserted claims is limiting.

As these proceedings further develop, Defendants reserve the right to amend or supplement this claim chart and any related contentions at a later date, in accordance with the Court’s Scheduling Order, including after the Court’s order construing disputed claim terms. In particular, Defendants reserve the right to rely on (1) uncited portions of the identified prior art; (2) other prior art not identified herein; (3) references that show the state of the art (irrespective of whether such references themselves qualify as prior art to the asserted patents); (4) factual testimony from the inventors or authors of the prior art references; and/or (5) expert testimony, to provide context to or aid in understanding the prior art and the state of the art at the time of the alleged inventions.

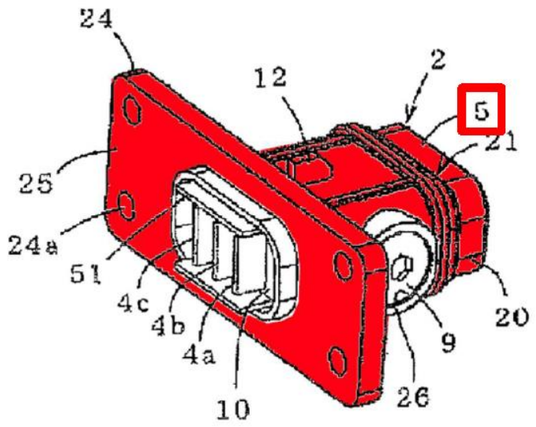
U.S. Patent No. ’017	**Exemplary Disclosures Based on *Kataoka***
Claim 1	
1[pre] An electrical connector pair, comprising:	To the extent that the preamble is limiting, *Kataoka* discloses an electrical connector 1 including a pair of a first connector portion 2 and a second connector portion 3. *See* Column 4, Lines 43-52, cover, and Fig. 1 of *Kataoka*. Column 4, Lines 43-52 of *Kataoka*: FIG. 1 is a perspective view showing first and second connector portions of a connector in the present embodiment, FIG. 2 is a perspective view showing the connector when the first connector portion is fitted to the second connector, and FIG. 3 is a cross sectional view thereof. As shown in FIGS. 1-3, a connector **1** of the present embodiment is composed of a first connector portion **2** and a second connector portion **3**, and plural power lines are connected at a time by fitting the connector portions **2** and **3** together. Annotated Representative Drawings on the front page of *Kataoka* (annotated showing a ***first connector portion 2*** in ***red*** and a ***second connector portion 3*** in ***green***):

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	 Annotated Fig. 1 of *Kataoka* (annotated showing a ***first connector portion 2*** in ***red*** and a ***second connector portion 3*** in ***green***): 
1[a] a first connector having a first insulating housing;	*Kataoka* discloses a first connector having a first insulating housing. *See* Column 4, Lines 53-54 and Column 8, Lines 50-67 of *Kataoka.* *Kataoka* at Column 4, Lines 53-54 discloses: “the connector 1 is provided with the first connector portion 2 having a first terminal housing 5.” *Kataoka* at Column 8, Lines 50-67 discloses: “The first terminal housing 5 is formed of a hollow cylindrical body 20 having a substantially rectangular shaped horizontal cross-section. An outer periphery of one side (on the right side in the drawing) of the cylindrical body 20 which is fitted to the second terminal housing 7 is formed in a tapered shape in light of fitting properties to the second connector portion 3. Meanwhile, a rib 12 for stabilizing the fitting direction when fitted to the second terminal housing 7 as well as for fixation and stabilization after fitting is formed on the outer peripheral portion of the cylindrical body 20. In addition, a terminal housing waterproof structure 21 for sealing between the first connector portion 2 and the second connector portion 3 is provided on the outer peripheral

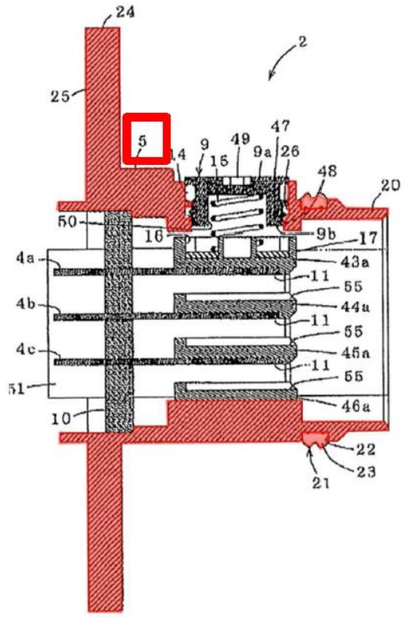
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portion of the one side of the cylindrical body 20. The terminal housing waterproof structure 21 is composed of a concave portion 22 formed on the outer peripheral portion of the cylindrical body 20 on the opening side and a packing 23 such as an O-ring provided on the concave portion 22.”

Portion of Fig. 1 of *Kataoka* (annotated showing ***housing 5*** in ***red***)



Portion of Fig. 4A of *Kataoka* (annotated showing ***housing 5*** in ***red***)



Kataoka discloses, at Column 9, Lines 38-45, that: “[w]hen the first terminal housing 5 is **formed of a non-conductive resin**, the first insulating member 46a and the first terminal housing 5 may be integrally molded by the non-conductive resin.” Therefore, *Kataoka* discloses housing 5 being an “insulating housing” because it is formed of non-conductive resin.

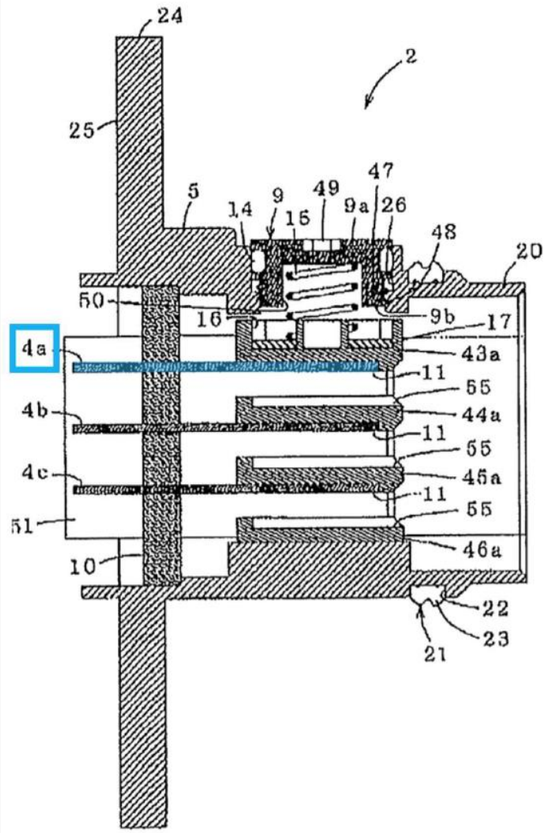
Kataoka further discloses, at Column 12, Lines 34-43:

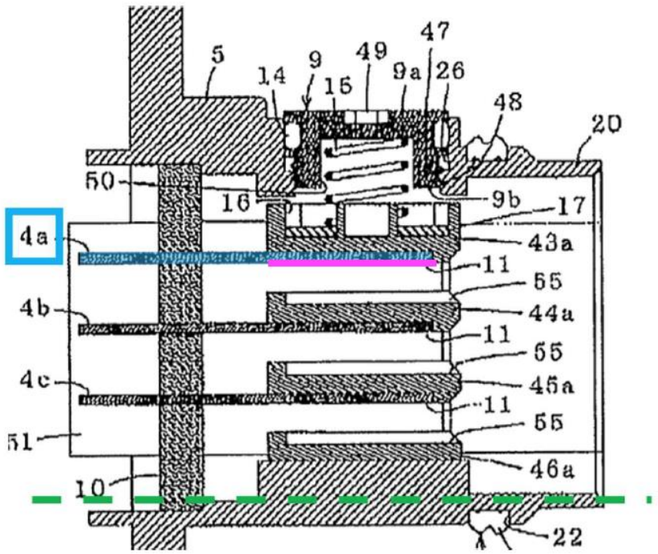
> Alternatively, the second terminal housing **7** may be configured to be fixed in the first terminal housing **5** in an opposite manner. In this case, the inner peripheral portion of one end of the cylindrical body **20** composing the first terminal housing **5** is formed in a tapered shape, the outer peripheral portion of one end of the cylindrical body **36** composing the second terminal housing **7** is formed in a tapered shape, and the terminal housing waterproof structure **21** is formed on the outer peripheral portion of the one end of the cylindrical body **36**.

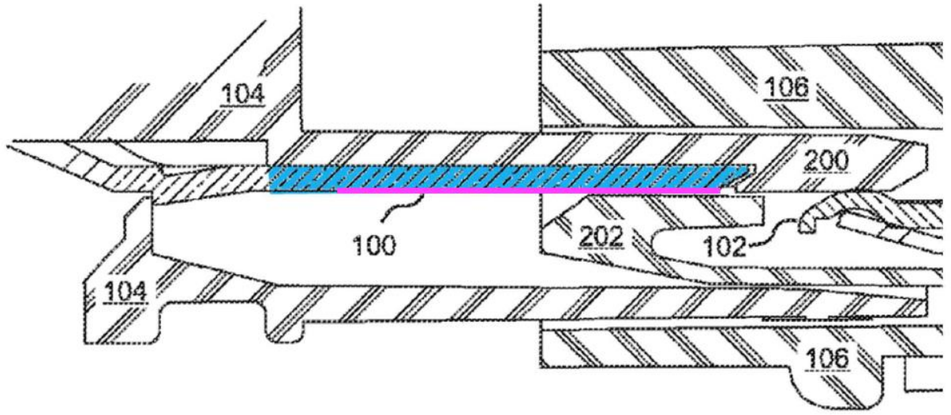
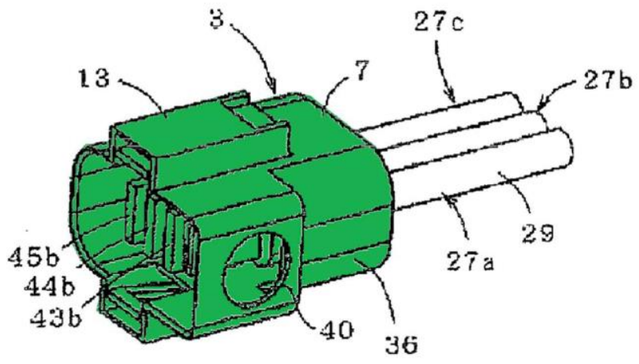
As shown above, housing 5 surrounds components of the connector. Housing 5 of first connector portion 2 surrounds and protects the internal contacts from the environment: Housing 5 includes cylindrical body 20 and a terminal housing waterproof structure 21 that protect the electrical terminals from elements such as water.

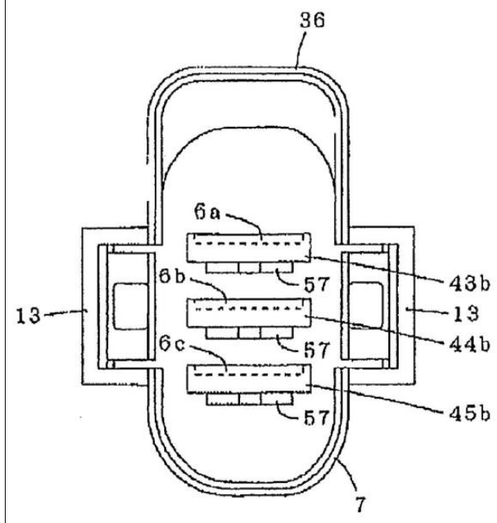
In the ’017 patent, “insulated housings” have the same functionality and purpose as in *Kataoka*. The ’017 patent states that “[i]nsulated housings 104, 106 surround the male and female contacts, and shield the contacts from environmental hazards, as well as providing some protection to a user in case arcing occurs when the user

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	is handling the connector pair.” *See* Column 3, Lines 2-6 of ’017 patent. Housing 5 of *Kataoka* serves the same purposes, and thus *Kataoka* discloses 1[a].
1[b] a first electrical contact supported within the first insulating housing,	*Kataoka* discloses a first electrical contact supported within the first insulating housing. *Kataoka* discloses that the first connector portion 2 includes a first connecting terminal 4a, which is a “first electrical contact” because it electrically connects the first connector portion 2 to terminal 6a of second connector portion 3. *See* Column 6, Lines 6-14 and Column 8, Lines 38-49 of *Kataoka*. *Kataoka* at Column 6, Lines 6-14 discloses: > As shown in FIG. 4, in the first connector portion 2, three first connecting terminals 4a-4c are aligned and held at predetermined intervals, and the first terminal housing 5 housing the three aligned first connecting terminals 4a-4c and the connecting member 9 for collectively fixing and electrically connecting the plural first connecting terminals 4a-4c to the plural second connecting terminals 6a-6c at each contact point by pressing the adjacent insulator 8a are provided. *Kataoka* at Column 8, Lines 38-49 discloses: > The connecting member 9 is inserted into the first terminal housing 5 from a side of the surfaces of the first connecting terminals 4a-4c on which the first insulating members 43a-45a are fixed (from an upper side in FIG. 4) and the male screw 48 formed on the small diameter portion 9b is then joined together with the female screw 47 formed on the connecting member insertion hole 26, which results in that the plural first connecting terminals 4a-4c and the plural second connecting terminals 6a-6c are collectively fixed and electrically connected at each contact point by pressure in an insertion direction of the connecting member 9 (from the upper side to the lower side in FIG. 4). *Kataoka* further discloses that “electricity of different voltage and/or current is fed to each of the first connecting terminals 4a-4c” and that “[e]ach of the first connecting terminals 4a-4c should be formed of a highly conductive metal.” *See Kataoka* at Column 6, Line 60 to Column 7, Line 3. *Kataoka* at Column 6, Line 60 to Column 7, Line 3 discloses: > Electricity of different voltage and/or current is fed to each of the first connecting terminals 4a-4c. For example, the present invention assumes the use of a three-phase AC power line between a motor and an inverter, and alternate current different by 120 degrees in phase is fed to each of the first connecting terminals 4a-4c. Each of the first connecting terminals 4a-4c should be formed of a highly conductive metal such as silver, copper or aluminum for reducing the electric power transmission loss, etc., in the connector 1. In addition, each of the first connecting terminals 4a-4c has little flexibility. First connecting terminal 4a is also “supported within the first insulating housing,” as shown in Fig. 4A of *Kataoka*. Annotated Fig. 4A (annotated showing ***first connection terminal 4a*** in ***blue***):

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	 As shown in Fig. 4A of *Kataoka*, the first connecting terminal 4a is a “first electrical contact” that is supported within housing 5 (the “first insulated housing”). Therefore, *Kataoka* meets 1[b].
1[c] the first electrical contact having a connecting surface that is substantially parallel with a longitudinal axis of the insulating housing and terminates in a leading end of the first electrical contact;	*Kataoka* discloses the first electrical contact having a connecting surface that is substantially parallel with a longitudinal axis of the insulating housing and terminates in a leading end of the first electrical contact. First connecting terminal 4a (the “first electrical contact”) has a connecting surface that is substantially parallel with a longitudinal axis of housing 5 (“the insulated housing”). *See* Fig. 4A of *Kataoka*. Portion of annotated Fig. 4A of *Kataoka* (annotated highlighting ***first connection terminal 4a*** in ***blue***, indicating a ***bottom surface*** in ***pink***, and indicating a ***longitudinal axis of housing 5*** as a ***dashed green line***)

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	 The ***bottom surface*** (in ***pink***, above) of ***first connection terminal 4a*** is substantially parallel with the ***longitudinal axis of housing 5***, represented by a dashed green line. The ***bottom surface*** is a “connecting surface” as claimed, because it connects with a second connection terminal 6a. *See also* Figs. 3 and 10 of *Kataoka*. Furthermore, the connecting surface of first connection terminal 4a terminates at the right-hand side of first connection terminal 4a, which is a leading end of this electrical contact. The ’017 patent illustrates the same structure for male contact 100 in Fig. 2A. The ’017 Patent, portion of Fig. 2A (annotated highlighting ***first male contact 100*** in ***blue***, and indicating a ***connecting surface*** in ***pink***):

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	 The first connection terminal 4a of *Kataoka* has the same structure as first male contact 100 in the ’017 patent; thus, *Kataoka* meets 1[c].
1[d] a second connector having a second insulating housing;	*Kataoka* discloses a second connector having a second insulating housing. *Kataoka* discloses a second connector portion 3 having housing 7. Portion of annotated Fig. 1 of *Kataoka* (annotated highlighting ***second connector portion 3*** in ***green***):  *Kataoka* at Column 12, Lines 17-64, Fig. 1, and Fig. 6B discloses housing 7 includes cylindrical body 36 that surrounds second connecting terminals 6a-6c. *Kataoka* at Column 12, Lines 17-64 discloses:

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	“Referring once again to FIG. 6, the second terminal housing 7 is composed of a hollow cylindrical body 36 having a substantially rectangular horizontal cross section. Since the first terminal housing 5 is fitted in the second terminal housing 7, an inner peripheral portion of the cylindrical body 36 on one side (on the left side in the drawing) to be fitted to the first terminal housing 5 is formed in a tapered shape in light of fitting properties to the first terminal housing 5. Meanwhile, a fixing guide portion 13, by which the rib 12 formed on the cylindrical body 20 composing the first terminal housing 5 is received and guided to be fitted and fixed, is formed on the outer peripheral portion of the cylindrical body 36. The first terminal housing 5 is housed in and fitted to the second terminal housing 7 while the rib 12 is guided by the fixing guide portion 13, which allows smooth fitting, firm fixation after the fitting and prevention of looseness in fitting due to vibration. Alternatively, the second terminal housing 7 may be configured to be fixed in the first terminal housing 5 in an opposite manner. In this case, the inner peripheral portion of one end of the cylindrical body 20 composing the first terminal housing 5 is formed in a tapered shape, the outer peripheral portion of one end of the cylindrical body 36 composing the second terminal housing 7 is formed in a tapered shape, and the terminal housing waterproof structure 21 is formed on the outer peripheral portion of the one end of the cylindrical body 36. The cable supporting member 30 having cables 27a-27c aligned and held therein is housed in the cylindrical body 36 on the other end side (on the right side in the drawing). A non-packing airtight portion 37 is formed on the cable supporting member 30 on a cable insertion side to prevent water from trickling down through the cables 27a-27c and entering into the second terminal housing 7. A packing 38 in contact with an inner peripheral surface of the first terminal housing 5 is provided between the cable supporting member 30 and the second inner housing 52 on the outer peripheral portion of the cable supporting member 30. That is, the connector 1 has a double waterproof structure composed of the packing 23 of the terminal housing waterproof structure 21 and the packing 38 provided on the outer peripheral portion of the cable supporting member 30. Furthermore, the outer periphery of the cylindrical body 36 on the other end side from where the cables 27a-27c are led out is covered by a rubber boot 39 for preventing water from entering into the cylindrical body 36. It should be noted that the rubber boot 39 is not shown in FIGS. 1 and 2 for simplification.” Portion of Fig. 6B of *Kataoka*: 

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	Like housing 5 discussed above, second terminal housing 7 of second connector portion 3 surrounds the contact members and protects them from the environment. *See Kataoka* at Column 4, Lines 56-66, Column 10, Lines 19-29, Column 12, Lines 17-43, Fig. 6A, and Fig. 6B. *Kataoka* at Column 4, Lines 56-66 discloses: “the second connector portion 3 having a second terminal housing 7 which houses plural (three) aligned second connecting terminals (female terminals) 6*a*-6*c*, plural insulators 8*a*-8 *d* for insulating between contact points, and a connecting member 9 for collectively fixing and electrically connecting the plural first connecting terminals 4*a*-4*c* to the plural second connecting terminals 6*a*-6*c* at each contact point by pressing the insulator 8*a* adjacent thereto. In the connector 1, when the first terminal housing 5 of the first connector portion 2 is fitted to the second terminal housing 7 of the second connector portion 3…” *Kataoka* at Column 10, Lines 19-29 discloses: “As shown in FIG. 6, the second connector portion 3 has the second terminal housing 7 in which plural (three) aligned second connecting terminals (female terminals) 6*a*-6*c* are housed. Here, a connector portion on a side having female terminals is referred to as the second connector portion 3. In other words, as a terminal housing, the second terminal housing 7 may be either male (a male terminal housing) or female (a female terminal housing). The case where the second terminal housing 7 is a female terminal housing which corresponds to the first terminal housing 5 as a male terminal housing will be explained here.” *Kataoka* at Column 12, Lines 17-43 discloses: “Referring once again to FIG. 6, the second terminal housing 7 is composed of a hollow cylindrical body 36 having a substantially rectangular horizontal cross section. Since the first terminal housing 5 is fitted in the second terminal housing 7, an inner peripheral portion of the cylindrical body 36 on one side (on the left side in the drawing) to be fitted to the first terminal housing 5 is formed in a tapered shape in light of fitting properties to the first terminal housing 5. Meanwhile, a fixing guide portion 13, by which the rib 12 formed on the cylindrical body 20 composing the first terminal housing 5 is received and guided to be fitted and fixed, is formed on the outer peripheral portion of the cylindrical body 36. The first terminal housing 5 is housed in and fitted to the second terminal housing 7 while the rib 12 is guided by the fixing guide portion 13, which allows smooth fitting, firm fixation after the fitting and prevention of looseness in fitting due to vibration. Alternatively, the second terminal housing 7 may be configured to be fixed in the first terminal housing 5 in an opposite manner. In this case, the inner peripheral portion of one end of the cylindrical body 20 composing the first terminal housing 5 is formed in a tapered shape, the outer peripheral portion of one end of the cylindrical body 36 composing the second terminal housing 7 is formed in a tapered shape, and the terminal housing waterproof structure 21 is formed on the outer peripheral portion of the one end of the cylindrical body 36.” Therefore, housing 7 constitutes the claimed “insulating housing.”
1[e] a second electrical contact supported within the second insulating housing,	*Kataoka* discloses a second electrical contact supported within the second insulating housing. *Kataoka* discloses that the second connector portion 3 includes a second connecting terminal 6a. *See Kataoka* at Column 4, Line 5 to Column 5, Line 9, Column 5, Lines 27-33, and Fig. 6A. *Kataoka* at Column 4, Line 56 to Column 5, Line 9 discloses: “the second connector portion 3 having a second terminal housing 7 which houses plural (three) aligned second connecting terminals (female terminals) 6*a*-6*c*, plural insulators 8*a*-8*d* for insulating between contact points, and a connecting member 9 for collectively fixing and electrically connecting the plural first connecting terminals 4*a*-4*c* to the plural second connecting terminals 6*a*-6*c* at each contact point by pressing the insulator 8 *a* adjacent thereto. In the connector 1, when the first terminal housing 5 of the first connector portion 2 is fitted to the second terminal housing 7 of the second connector portion 3, one surface of each of the plural first connecting terminals 4*a*-4*c* is paired with one surface of each of the plural second connecting terminals 6*a*-6*c* (a pair of the first connecting terminal 4*a* and the second connecting terminal 6*a*, that of the first connecting terminal 4*b* and the second connecting terminal 6*b*, and that the

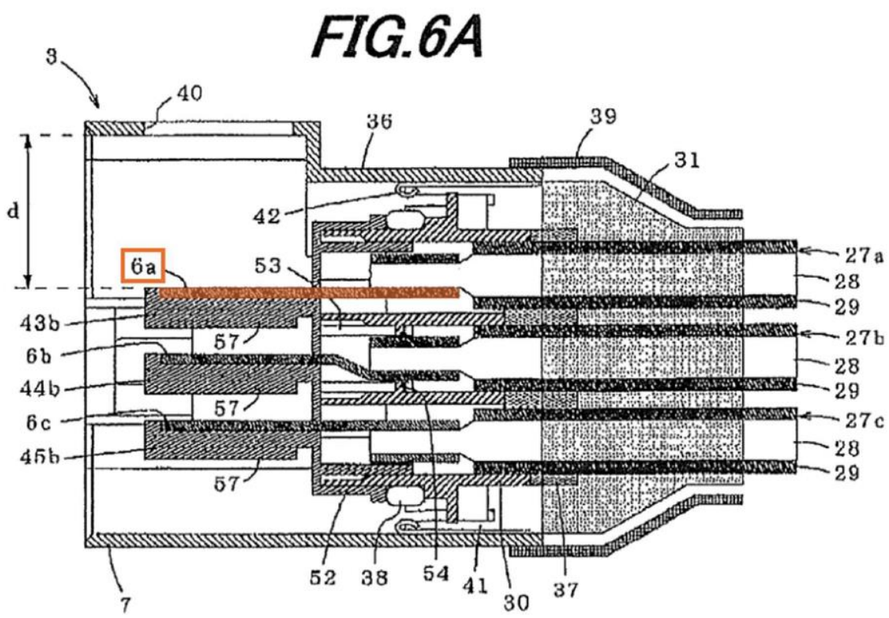
U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*

first connecting terminal 4*c* and the second connecting terminal 6*c*) to compose plural contact points and each contact point is arranged so as to be sandwiched by the insulators 8*a*-8*d* formed of a non-conductive resin with a predetermined thickness, thereby forming a laminated structure.”

Kataoka at Column 5, Lines 27-33 discloses:

> “The second insulating members 43*b*-45*b* are another of the divided insulators. When the second connecting terminal 6*a* (or 6*b* or 6*c*) is adjacent thereto, the second insulating members 43*b*-45*b* are fixed to another surface of the adjacent second connecting terminal 6*a* (or 6*b* or 6*c*) so as to cover at least an end surface thereof on a front end side in a fitting direction.”

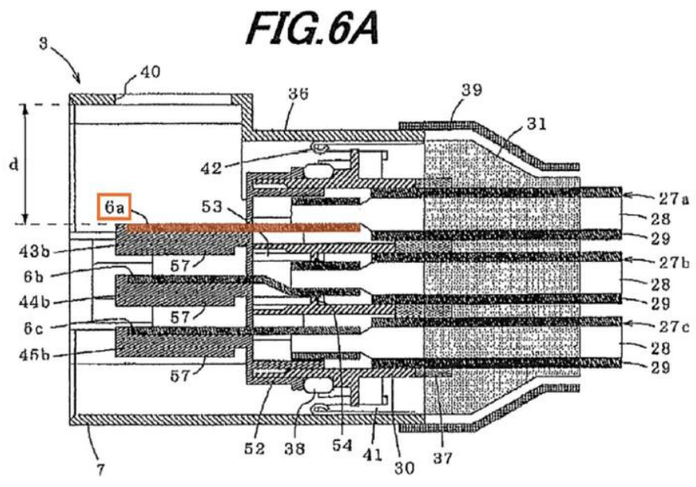
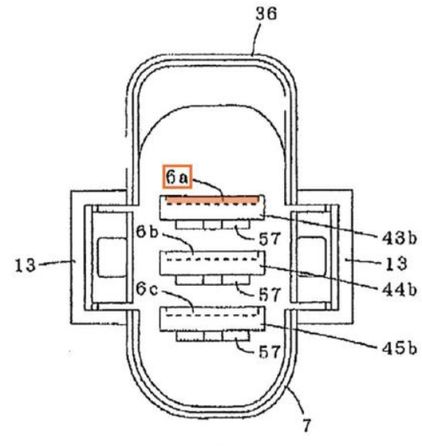
Annotated Fig. 6A of *Kataoka* (annotated highlighting ***second connecting terminal 6a*** in ***orange***)

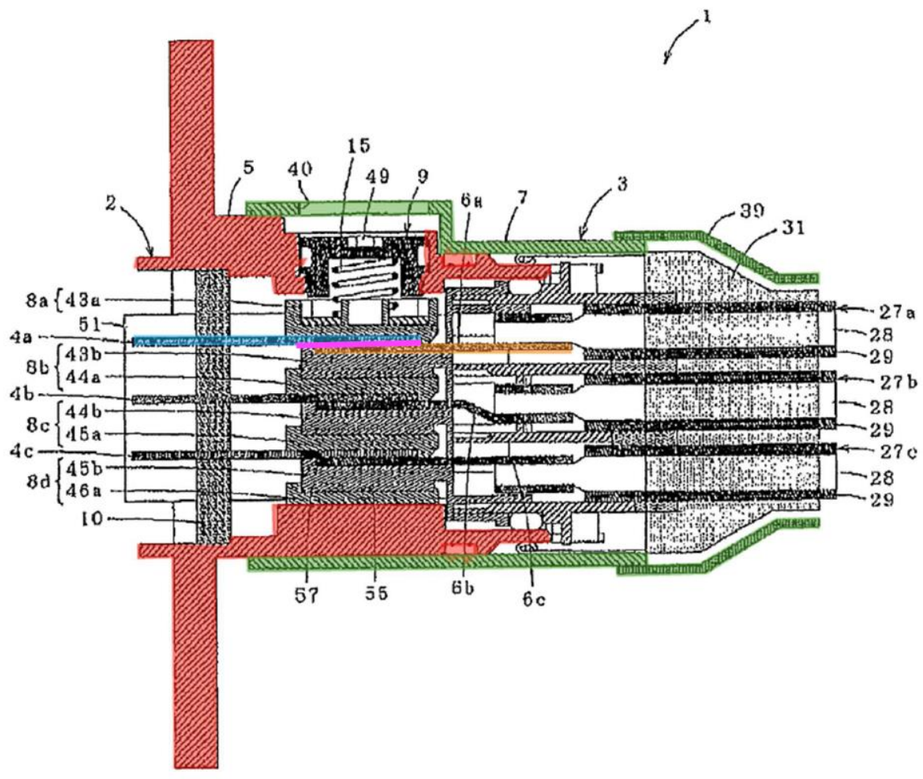


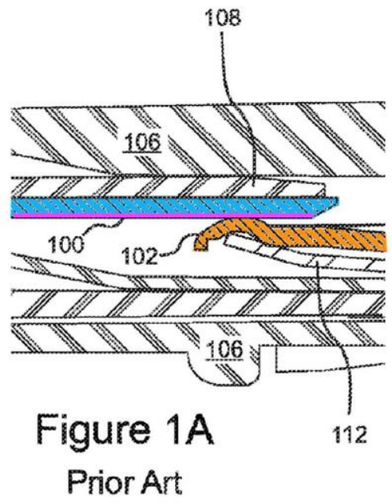
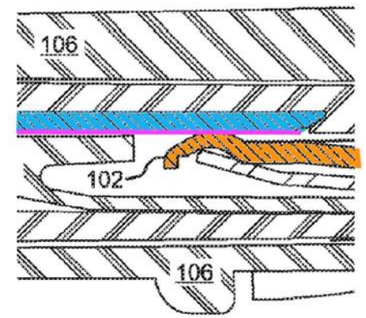
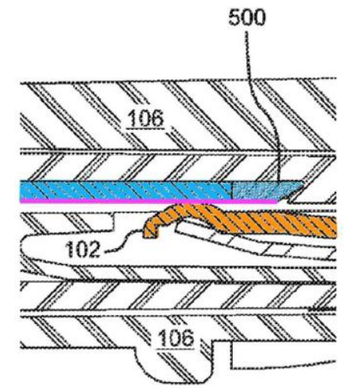
Based on Column 10, Lines 44-59 of *Kataoka,* second connecting terminals 6a-6c are “formed of a highly conductive material” and transmit “electricity of different voltage and/or current.”

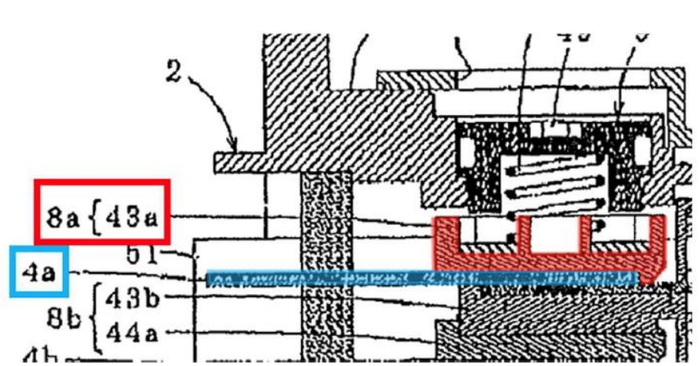
Kataoka at Column 10, Lines 44-59 discloses:

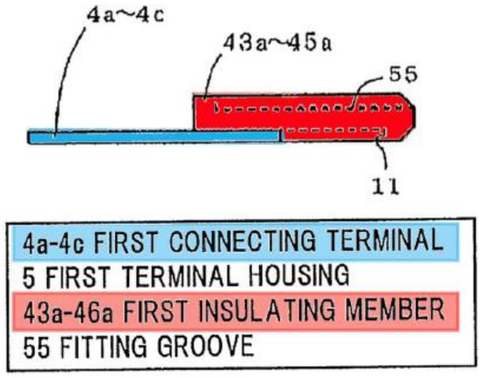
> Each of the second connecting terminals 6a-6c should be formed of a highly conductive metal such as silver, copper or aluminum for transmission loss reduction, etc., in the connector 1. In addition, each of the second connecting terminals 6*a*-6*c* has little flexibility.
>
> The cables 27a-27c extending from the inverter side are respectively connected to edges of the second connecting terminals 6a-6c. The cables 27a-27c are respectively electrically connected to the first connecting terminals 4a-4c via the second connecting terminals 6a-6c, and electricity of different voltage and/or

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	current corresponding to each of the first connecting terminals 4a-4c is transmitted. The cables 27a-27c are each composed of the conductor 28 and an insulation layer 29 formed on the outer periphery thereof. The conductor 28 having a cross-sectional area of 20 mm^2 is used in the present embodiment. Therefore, second connecting terminal 6a is a “second electrical contact” as claimed. Second connecting terminal 6a of *Kataoka* is “supported within the second insulating housing,” as claimed. *Kataoka* states “the second connector portion 3 has the second terminal housing 7 in which plural (three) aligned second connecting terminals (female terminals) 6a-6c are housed.” *See* Column 10, Lines 19-22 of *Kataoka*. Figs. 6A and 6B of *Kataoka* show that second connecting terminal 6a is supported within housing 7, which surrounds the second connecting terminals 6a-6c. *See also* Column 12, Lines 17-43 of *Kataoka*. Annotated Fig. 6A of *Kataoka* (annotated highlighting ***second connecting terminal 6a*** in ***orange***) FIG.6A  Portion of Annotated Fig. 6B of *Kataoka* (annotated highlighting ***second connecting terminal 6a*** in ***orange***)  Because the second connecting terminal 6a is located inside housing 7, which includes cylindrical body 36, second connecting terminal 6a is a “second electrical contact supported within the second insulating housing” as claimed.
1[f] the second electrical contact being configured to laterally engage with the connecting surface of the first electrical contact when the first connector is mated with the second connector;	*Kataoka* discloses the second electrical contact being configured to laterally engage with the connecting surface of the first electrical contact when the first connector is mated with the second connector. Second connecting terminal 6a in *Kataoka* is a “second electrical contact,” and first connecting terminal 4a is a “first electrical contact.” *See* above sections 1[b] and

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	1[e]. These first and second electrical contacts (e.g., connecting terminals 4a and 6a) are “in surface-to-surface contact” with one another. *See* Column 16, Lines 15-17 and Fig. 3 of *Kataoka*. *Kataoka* at Column 16, Lines 15-17 discloses: “the first connecting terminals 4*a*-4*c* are respectively in surface-to-surface contact with the second connecting terminals 6*a*-6*c* in the present embodiment.” Annotated Fig. 3 of *Kataoka* (annotated highlighting a ***first connector*** in ***red***, a ***first electrical contact*** in ***blue***, a ***second connector*** in ***green***, a ***second electrical contact*** in ***orange***, and indicating a ***connecting surface*** in ***pink***):  Fig. 3 of *Kataoka* shows a first connector mated to a second connector because the figure illustrates “the connector after the first connector portion [2] is fitted to the second connector [3].” *See* also *Kataoka* at Column 4, Lines 6-7. Fig. 3 of *Kataoka* also shows a second connection terminal 6a (the second electrical contact) laterally engaging the bottom surface (the connecting surface) of first

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	connection terminal 4a (the first electrical contact). Therefore, *Kataoka* meets 1[f]. *Kataoka* further discloses a connecting member 9 “collectively fixing and electrically connecting the plural first connecting terminals 4a-4c to the plural second connecting terminals 6a-6c at each contact point by pressing the insulator 8a adjacent thereto.” *See* Column 4, Lines 60-63; *see also* Column 8, Lines 38-49. First connecting terminals 4a-4c are pressed laterally against connecting terminals 6a-6c by a connecting member 9. For this additional reason, Kataoka meets 1[f]. Notably, “laterally engage” does not appear anywhere in the ’017 patent other than in claim 1. The ’017 patent illustrates a top side surface of the second connector (e.g., female contact 102 annotated in orange) touching a bottom surface (e.g., connecting surface annotated in pink) of the first connector (e.g., male contact 100 annotated in blue): Annotated Fig. 1A of ’017 patent  Figure 1A Prior Art Annotated Fig. 2A of ’017 patent  Figure 2A Annotated Fig. 5A of ’017 patent  Figure 5A In the ’017 patent embodiments shown in Figs. 2A and 5A, a bottom surface of the first electrical contact is a connecting surface that engages a top surface of the second electrical contact, in the exact same manner as the prior art shown in Fig. 1A. *Kataoka* discloses the same engagement between first connecting terminal 4a and second connecting terminal 6a. Therefore, *Kataoka* meets 1[f].
1[g] a first insulating barrier within the first connector extending beyond and covering the leading end of the electrical contact; and	*Kataoka* discloses a first insulating barrier within the first connector extending beyond and covering the leading end of the electrical contact. According to the disclosure from Column 4, Line 64 to Column 5, Line 9 of *Kataoka*, first connector portion 2 includes first connecting terminals 4a-4c “sandwiched by the insulators 8a-8d formed of a non-conductive resin with a predetermined thickness, thereby forming a laminated structure.” *Kataoka* at Column 4, Line 64 to Column 5, Line 9 discloses: > …the first connector portion 2 is fitted to the second terminal housing 7 of the second connector portion 3, one surface of each of the plural first connecting terminals 4a-4c is paired with one surface of each of the plural second connecting terminals 6a-6c (a pair of the first connecting terminal 4a and the second connecting terminal 6a, that of the first connecting terminal 4b and the second connecting terminal 6b, and that the first connecting terminal 4c and

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	the second connecting terminal 6c) to compose plural contact points and each contact point is arranged so as to be sandwiched by the insulators 8a-8d formed of a non-conductive resin with a predetermined thickness, thereby forming a laminated structure. According to the disclosure at Column 5, Lines 10-16 and Fig. 3 of *Kataoka*, insulator 8a includes first insulating member 43a. *Kataoka* at Column 5, Lines 10-16 discloses: The insulators 8a-8d are composed of two divided insulators, first insulating members 43a-46a and second insulating members 43b-45b. More precisely, the insulator 8a has the same thickness as the first insulating member 43a and is not divided in the present embodiment, but may have a thickness of the first insulating members 44a-46a which are divided. The insulator 8a as a divided insulator is explained below. According to the disclosure at Column 14, Lines 23-26 of *Kataoka*, first insulating member 43a is fixed to the end of first connecting terminal 4a (the first electrical contact). *Kataoka* at Column 14, Lines 23-26 discloses: …in the first connector portion 2, the first insulating members 43a-46a and the second insulating members 43b-45b which compose the insulators 8a-8d are respectively fixed to the ends of the first connecting terminals 4a-4c… Portion of Annotated Fig. 3 (annotated highlighting ***insulator 8a*** and ***first insulating member 43a*** in ***red***, and ***first connecting terminal 4a*** in ***blue***):  According to the disclosure at Column 5, Lines 37-38 and Column 6, Lines 42-45 of *Kataoka*, insulating member 43a of insulator 8a is an “insulating barrier” because it is formed of non-conductive material and because it “ensure[s] insulation between the contact points (or between a contact point and the first terminal housing).” *Kataoka* at Column 5, Lines 37-38 discloses “insulation between the contact points (or between a contact point and the first terminal housing).” *Kataoka* at Column 6, Lines 42-45 discloses: “the first insulating members 43*a*-45*a* are also aligned at predetermined intervals. Such a configuration ensures insulation between each contact point and insertability of the second connecting terminals.” According to the disclosure at Column 7, Lines 4-6 and Fig. 5A of *Kataoka*, insulating member 43a is a first insulating barrier “extending beyond and covering the

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	leading end of the first electrical contact” as claimed. *Kataoka* discloses that “first insulating members 43a–45a are positioned and fixed so as to protrude on the front-end side of the first connecting terminals 4a-4c.” Annotated Fig. 5A (legend repositioned, and annotated highlighting ***first connecting terminal 4a*** in ***blue***, and ***first insulating member 43a*** in ***red***)  In Fig. 5A of *Kataoka*, the first insulating member 43a (annotated in red) extends to the right beyond the end of first connecting terminal 4a (annotated in blue). The first insulating member 43a also covers the righthand end of first connecting terminal 4a – the “leading end” of the first electrical contact – when the connectors are mated. *See also* Fig. 3 of *Kataoka*. *Kataoka* explains that “second connecting terminals 6a-6c do not contact with the end surface of the first connecting terminals 4a-4c when the first connector portion 2 is fitted to the second connector portion 3.” Column 7, Lines 24-26 of *Kataoka*. For the reasons above, Kataoka discloses 1[g].
1[h] a second insulating barrier extending beyond the second electrical contact within the second connector,	*Kataoka* discloses a second insulating barrier extending beyond the second electrical contact within the second connector. According to the disclosure of Figs. 1, 3, 6A of *Kataoka*, second connector portion 3 (the second connector) includes a second insulating member 43b. Portion of annotated Fig. 1 (annotated highlighting ***second insulating member 43b*** in ***green***, of second connector portion 3)

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*

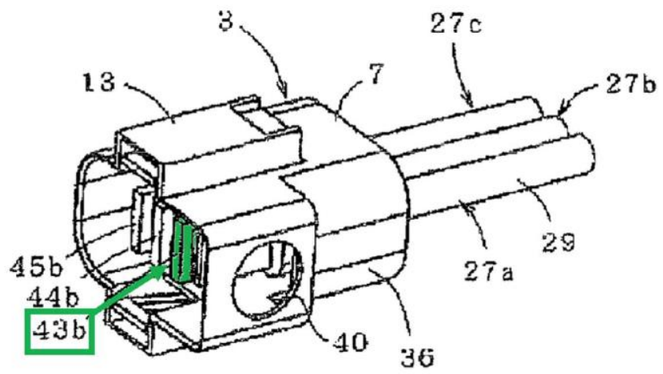


Fig. 1 of *Kataoka* above shows second insulating member 43b (annotated in green) is within the second connector portion 3. *See also* Fig. 6A of *Kataoka* (reproduced below with annotations). Therefore, second insulating member 43b is “a second insulating member . . . within the second connector” as claimed.

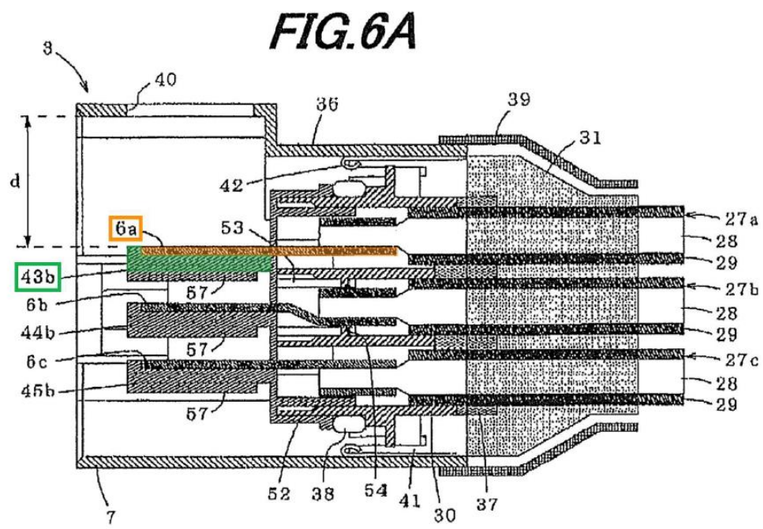
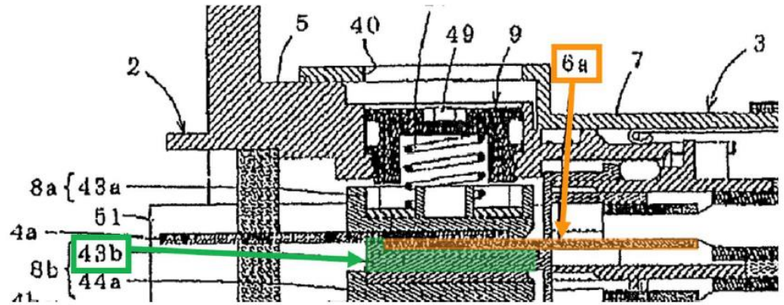
Second insulating member 43b is a “second insulating barrier extending beyond the second electrical contact” as claimed. Second connecting terminal 6a is a “second electrical contact.” *See* limitation 1[e] above.

Kataoka at Column 5, Lines 28-33 discloses that “[w]hen the second connecting terminal 6a (or 6b or 6c) is adjacent thereto, the second insulating members 43b-45b are fixed to another surface of the adjacent second connecting terminal 6a (or 6b or 6c) so as to cover at least an end surface thereof on a front-end side in a fitting direction.”

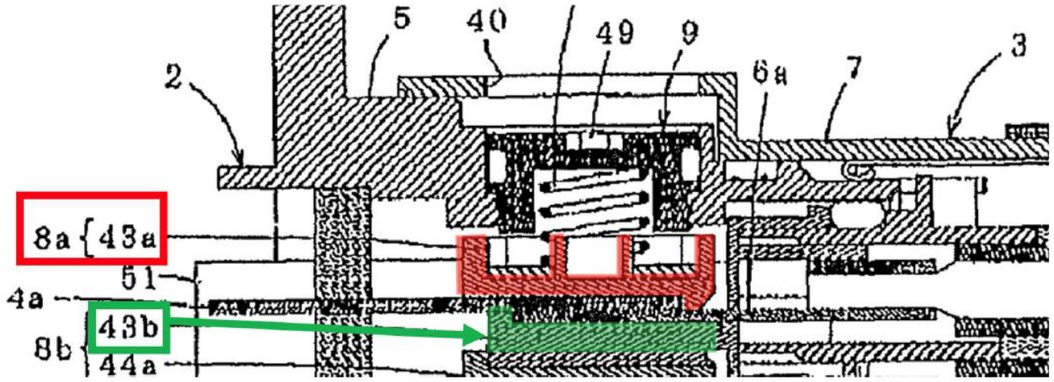
Figs. 6A and 3 of *Kataoka* (reproduced below with annotations) show second insulating member 43b (annotated in green) extending beyond the left end of second connecting terminal 6a (annotated in orange).

Annotated Fig. 6A (annotated ***highlighting second connecting terminal 6a*** in ***orange***, and ***second insulating member 43b*** in ***green***)

Portion of annotated Fig. 3 (annotated ***highlighting second connecting terminal 6a*** in ***orange***, and ***second insulating member 43b*** in ***green***)

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	  For the reasons above, *Kataoka* discloses 1[h].
1[i] the second insulating barrier being configured so as to be in close proximity with the first insulating barrier when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance, thereby blocking substantially all through-air arcing paths between the first and second electrical contacts	*Kataoka* discloses the second insulating barrier being configured so as to be in close proximity with the first insulating barrier when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance, thereby blocking substantially all through-air arcing paths between the first and second electrical contacts. As shown in Fig. 3 of *Kataoka*, second insulating member 43b (the second insulating barrier) of second connector portion 3 (the second connector) is “configured to as to be in close proximity” with first insulating member 43a (the first insulating barrier) of the first connector portion 2 (the first connector). Portion of annotated Fig. 3 (annotated highlighting ***first insulating member 43a*** in ***red*** and ***second insulating member 43b*** in ***green***):

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*



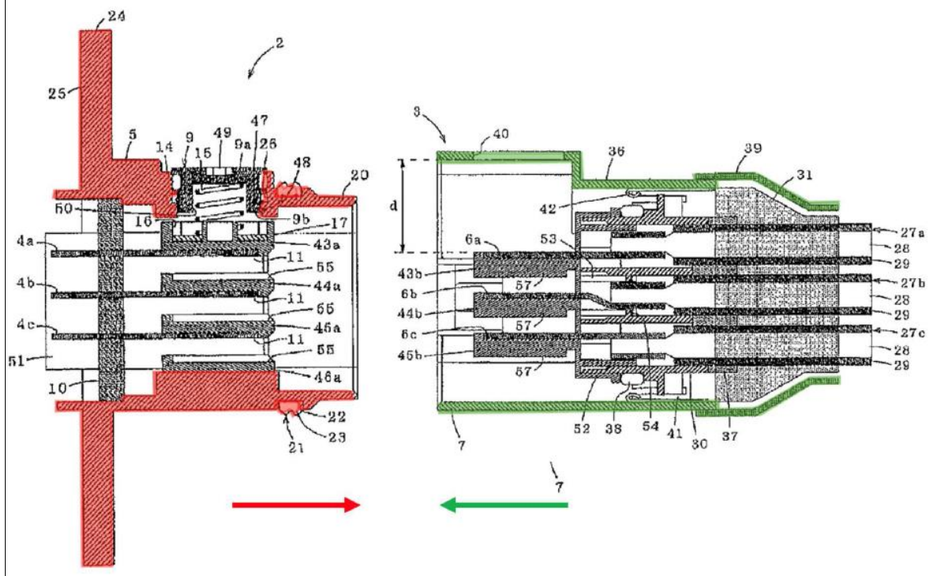
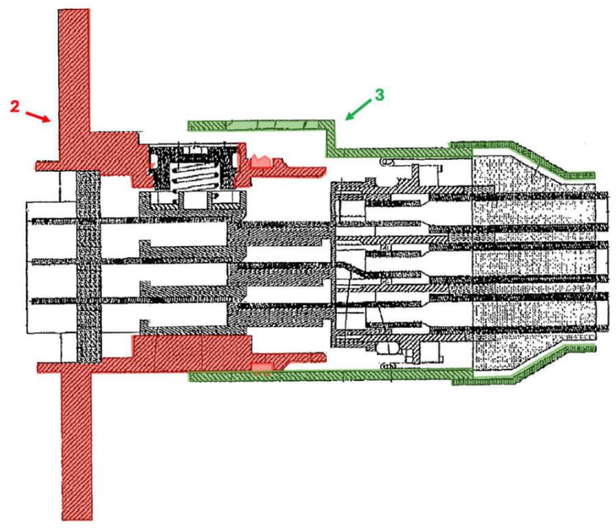
Kataoka at Column 13, Lines 50-52 and Fig. 3 discloses that the first insulating member 43 overlaps with second insulating member 43b.

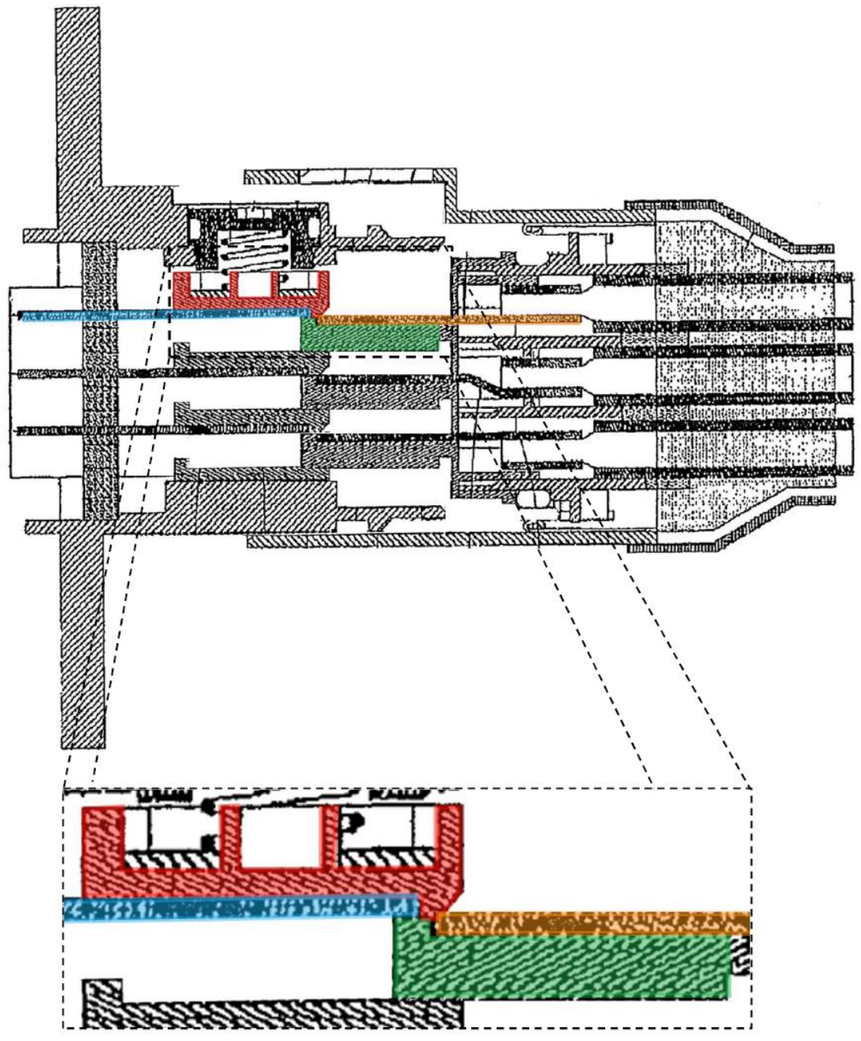
Kataoka at Column 14, Lines 50-65 and Fig. 3 also discloses connecting member 9 that presses insulator 8a (having first insulating member 43a) against insulator 8b (having second insulating member 43b), to sandwich the electrical contacts together.

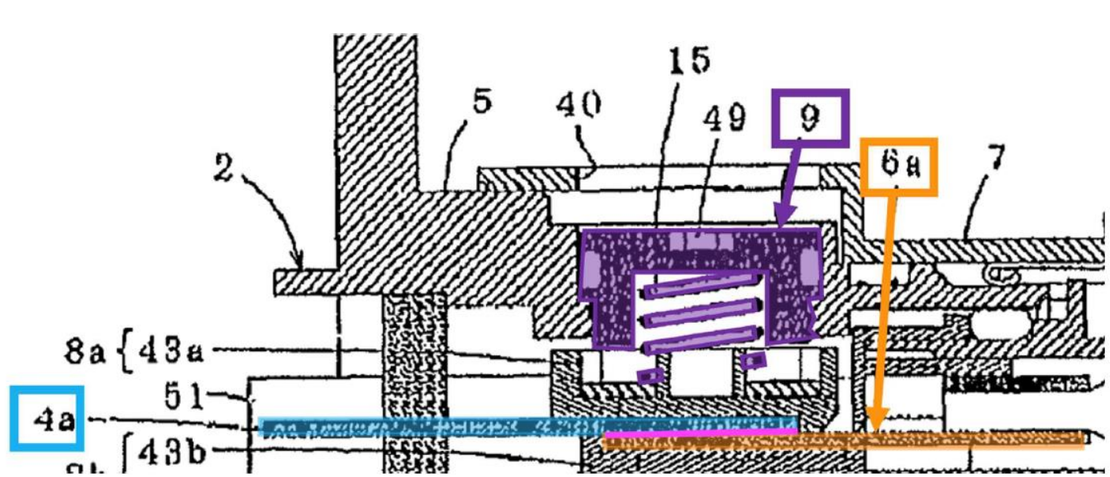
Therefore, *Kataoka*’s second insulating barrier (second insulating member 43b) is configured to be in close proximity to the first insulating barrier (first insulating member 43a) when the first and second connector portions are connected.

Kataoka’s second insulating barrier is also “configured to be in close proximity with the first insulating barrier when the first and second connectors are *partially disconnected*,” as claimed. A diagram based on the cover image of *Kataoka* shows how the first connector (annotated in red) and second connector (annotated in green) are connected to one another.

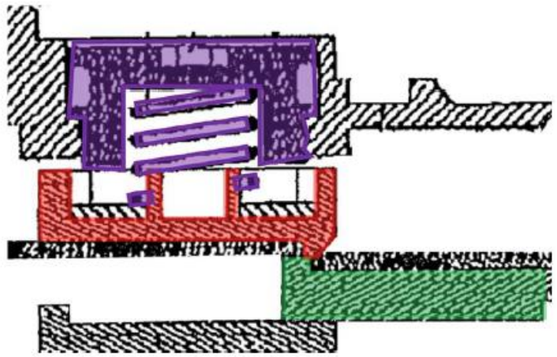
Diagram created based on *Kataoka*, Cover (showing a cross section of a ***first connector*** in ***red*** and a ***second connector*** in ***green***, with arrows indicating the direction of fitting the first and second connector):

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	 Diagram created based on *Kataoka*, Fig. 3 (showing a ***first connector*** in ***red*** and a ***second connector*** in ***green*** in a partially disconnected configuration) 

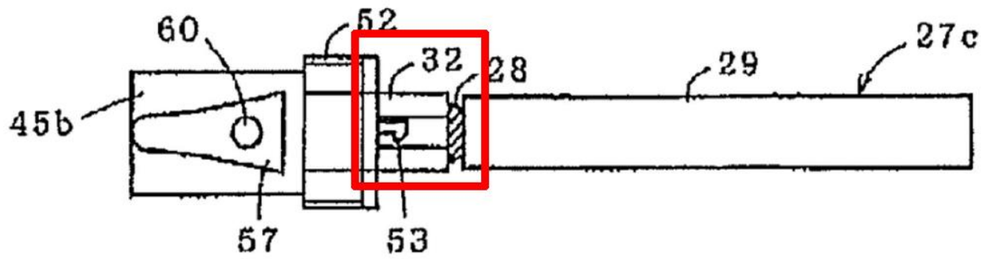
U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	When first connector portion 2 (the first connector) and second connector portion 3 (the second connector) of *Kataoka* are partially disconnected, and the first and second electrical contacts are separated by a short distance, the first and second insulating barriers of *Kataoka* are in close proximity, as illustrated below. Diagram created based on *Kataoka*, Fig. 3 (top), and enlarged portion (bottom) (showing a ***first insulating barrier*** in ***red*** and a ***second insulating barrier*** in ***green*** of a connector pair in a partially disconnected configuration, a ***first electrical contact*** in ***blue***, and a ***second electrical contact*** in ***orange***)  When *Kataoka*’s connectors are partially disconnected, the first electrical contact (annotated in blue) and the second electrical contact (annotated in orange) are separated by a short distance. In this configuration, the leading portion of both the first insulating barrier (annotated in red) and the second insulating barrier

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	(annotated in green) are in close proximity. As shown above, the first insulating barrier and the second insulating barrier “block[] substantially all through-air arcing paths between the first and second electrical contacts,” as claimed. This is apparent because there is no air gap or other through-air arcing path between the first insulating barrier and the second insulating barrier. According to the disclosure at Column 15, Lines 12-22 of *Kataoka*, the diagram above is consistent with *Kataoka*’s disclosure of preventing electric shock by fixing first insulating members 43a and second insulating member 43b to the surfaces of first connecting terminal 4a and second connecting terminal 6a, respectively, so that the terminals are “not exposed in the non-fitted state.” Therefore, Kataoka discloses 1[i]. For the reasons above, *Kataoka* discloses every limitation of independent claim 1, and anticipates claim 1.
Claim 2	
2. The connector pair of claim 1, further comprising a contact tensioning mechanism that presses the second electrical contact against the engaging surface of the first electrical contact when the first and second connectors are connected.	*Kataoka* discloses a contact tensioning mechanism that presses the second electrical contact against the engaging surface of the first electrical contact when the first and second connectors are connected. Accordingly, *Kataoka* anticipates claim 2. *Kataoka* at Column 4, Lines 60-63 discloses connecting member 9 “collectively fixing and electrically connecting the plural first connecting terminals 4a-4c to the plural second connecting terminals 6a-6c at each contact point by pressing the insulator 8a adjacent thereto.” *See also*, *Kataoka* at Column 8, Lines 13-19, Column 8, Lines 38-49, Column 14, Lines 50-65, and Fig. 3. Portion of annotated Fig. 3 of *Kataoka* (annotated highlighting ***connecting member 9*** in ***purple***, ***first connecting terminal 4a*** in ***blue***, and ***second connecting terminal 6a*** in ***orange***, and indicating a ***connecting surface*** in ***pink***)  Fig. 3 of *Kataoka* shows first connector portion 2 and second connector portion 3 in a “fitted” or connected configuration. Connecting member 9 includes elastic member 15, such as a spring, that presses on insulator 8a which, in turn, presses the second connecting terminal 6a against the connecting surface of the first connecting terminal 4a. Even if Fig. 3 above was interpreted as showing connecting member 9 pressing the first connecting terminal 4a against second connecting terminal 4b, a POSITA would have understood that under Newtons 3rd law, when one object exerts a force on a second object, the second object exerts an equal and

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	opposite force on the first. For these reasons, connecting member 9 of *Kataoka* constitutes the “contact tensioning mechanism” of claim 2.
Claim 3	
3. The connector pair of claim 2, wherein the contact tensioning mechanism includes a spring.	*Kataoka* discloses that the contact tensioning mechanism includes a spring. *Kataoka*’s connecting member 9 meets claim 2. *See* claim 2. According to the disclosure at Column 8, Lines 13-19 of *Kataoka*, connecting member 9 includes elastic member 15 such as a spring. *Kataoka* at Column 8, Lines 13-19 discloses: > In addition, the connecting member 9 has a hollow portion 50 which opens in the first terminal housing 5 and houses an elastic member 15 for imparting a predetermined pressing force to the insulator 8 *a*. The elastic member 15 is composed of, e.g., a spring formed of metal (e.g., SUS, etc.). The elastic member 15 is regarded as a portion of the connecting member 9 in the present embodiment. Furthermore, Figs. 3, 4A, and 10 of *Kataoka* illustrate a cross-sectional view of elastic member 15 being a coil or helical spring. *See also* Claim 2. For these reasons, *Kataoka* anticipates claim 3.
Claim 4	
4. The connector pair of claim 1, further comprising a barrier tensioning mechanism that presses the first and second insulating barriers against each other when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance.	*Kataoka* discloses a barrier tensioning mechanism that presses the first and second insulating barriers against each other when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance. According to the disclosure at Column 6, Lines 10-13, *Kataoka* discloses connecting member 9 that “press[es] the adjacent insulator 8a” which includes first insulating member 43a (the first insulating barrier of claim 1). *See also* Column 5, Lines 10-16, Column 5, Lines 51-57, and Figs. 3, 4A, and 10. A diagram created based on *Kataoka*’s Fig. 3 illustrates how the connecting member would press insulating member 43a (the first insulating barrier) of insulator 8a against the second insulating barrier, when the connectors are partially disconnected. Diagram created based on Fig. 3 of *Kataoka* (showing a ***first insulating barrier*** in ***red*** and a ***second insulating barrier*** in ***green*** of a connector pair in a partially disconnected configuration, and a ***connecting member 9*** in ***purple***):

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	 The diagram above shows part of the first connector portion 2 (the first connector) and part of the second connector portion 3 (the second connector) of *Kataoka* in a partially-disconnected configuration. The first and second electrical contacts (not highlighted above) are separated by a short distance in this configuration. As shown, first insulating barrier 43a (annotated in red) of insulator 8a is pressed against the second insulating barrier 43b (annotated in green) by connecting member 9 (annotated in purple). For these reasons, connecting member 9 constitutes the “barrier tensioning mechanism” of claim 4. *Kataoka* anticipates claim 4.
Claim 7	
7. The connector pair of claim 1, wherein at least one of the first and second electrical contacts includes a terminal for crimping to a wire.	*Kataoka*, in combination with one or more other references, discloses that at least one of the first and second electrical contacts includes a terminal for crimping to a wire. *Kataoka* discloses first and second electrical contacts. *See* Claim 1[c] and Claim 1[e], Figs. 6A, 6B and Column 10, Lines 30-59 of *Kataoka* further disclose second connecting terminal 6a that connects to a cable and is thus “a terminal for [connecting] to a wire” as claimed. *Kataoka* at Column 10, Lines 30-59 and Figs. 7-8 further discloses second connecting terminal 6a has a “caulking portion 32” for attaching an exposed conductor at a cable end. Additionally, Figs. 7A, 7B, 8A, 8B, 11A, 11B, 12A, and 12B of *Kataoka* illustrate a terminal connecting to a wire, and show a crimping-like terminal in Fig. 12B. Annotated Fig. 12B. of *Kataoka* (annotated circling caulking portion 32 which appears as a crimping terminal):

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*



To the extent Plaintiff alleges *Kataoka* does not disclose “a terminal for crimping to a wire” expressly or inherently, it would have been obvious to modify *Kataoka* by using a terminal for crimping to a wire in view of the teachings of *the Handbook* (Mroczkowski, Robert S., Electronic Connector Handbook (1997)).

Pages 13 and 32 of *the Handbook* disclose crimping as a known type of connection to a wire or cable, and disclose crimped wire connections as among “the oldest of the technologies” for connecting a wire or cable, “dating back to the 1940s.”

The Handbook illustrates crimp terminals like the “caulking portion 32” in Fig. 12B of *Kataoka*, above.

Fig. 9.8 in Page 37 of *the Handbook*

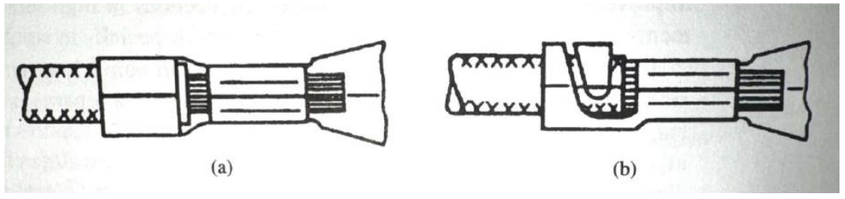
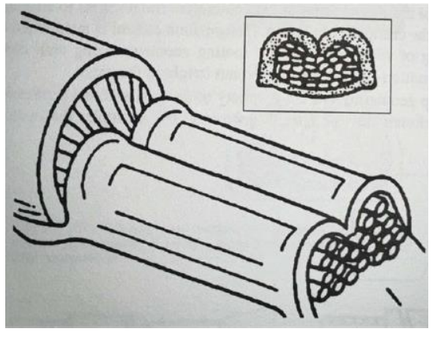


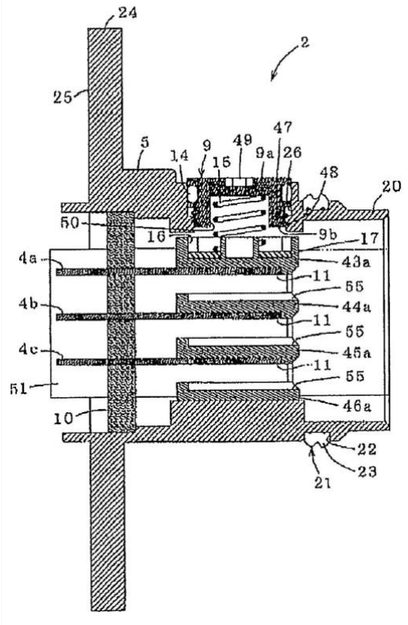
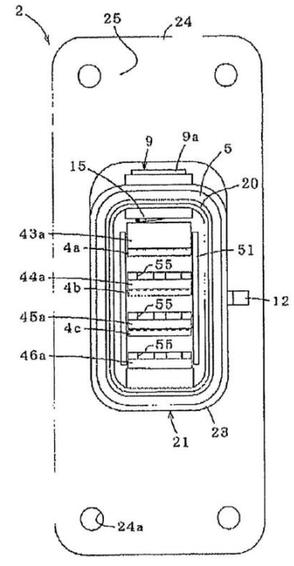
Fig. 9.10 in Page 39 of *the Handbook*



Therefore, *the Handbook* discloses a terminal for crimping to a wire.

It would have been obvious to a POSITA to implement *Kataoka*’s caulking portion 32 with a terminal for crimping to a wire as disclosed in *the Handbook*. *The Handbook* is analogous art to *Kataoka*, and both are analogous art to the ’017 patent, as all three are in the same field of endeavor of electrical connectors. Modifying *Kataoka* based on *the Handbook* would have involved simple substitution of *Kataoka*’s caulking portion 32 for *the Handbook*’s known crimping terminal, to obtain the predictable results of making a permanent connection to a wire/cable using a well-known crimping technique. *See* Pages 32-33 of *the Handbook*.

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Bizlink Technology, Inc. v. Anderson Power Products, Inc., IPR2024-00687

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	The modification would have also involved applying *the Handbook*’s known crimping technique to *Kataoka*’s known “caulking portion 32.” *Kataoka*’s connector was ready for improvement, because *Kataoka* does not describe how wires are connected to caulking portion 32. However, both *Kataoka* and *the Handbook* have similar hardware for connecting wires. *See* Pages 32-33 of *the Handbook*, Column 10, Lines 30-59, Figs. 7, 8, 12B of *Kataoka*. A POSITA would have expected success in modifying *Kataoka*’s caulking portion 32 (*Kataoka*’s terminal) for crimping to a wire, as disclosed in *the Handbook*. As explained above, Kataoka's caulking portion 32 looks like the crimping terminals in *the Handbook*. There would be few, if any, changes needed to *Kataoka*’s hardware to crimp caulking portion 32 to a wire. Instead, a POSITA would only need to deform caulking portion 32 to form a permanent connection with a wire, guided by *the Handbook*’s disclosure of known crimping techniques. *See* Pages 32-55 of *the Handbook*. For the reasons above, claim 7 would have been obvious based on *Kataoka* in view of *the Handbook*.
Claim 9	
9. The connector pair of claim 1, wherein at least one of the first and second electrical contacts includes a terminal for soldering a wire or and electrical component to the contact.	*Kataoka*, in combination with one or more other references, discloses at least one of the first and second electrical contacts includes a terminal for soldering a wire or and electrical component to the contact. *Kataoka* discloses first and second electrical contacts. *See* Claim 1[c] and Claim 1[e], Fig. 4A and Fig. 4B of *Kataoka* further disclose first connector portion 2 having a first connecting terminal 4a. Fig. 4A of *Kataoka*  Fig. 4B of *Kataoka* 

U.S. Patent No. ’017	Exemplary Disclosures Based on *Kataoka*
	Column 6, Lines 65-67 of *Kataoka* disclose the first connecting terminals 4a-4c are formed of “highly conductive metal such as silver, copper or aluminum.”. Column 5, Lines 60-65 of *Kataoka* disclose first connector portion 2 (shown above) is “fitted to a shield case of [a] motor, and portions of the first connecting terminals 4a-4c exposed from the first terminal housing 5 are connected to each terminal of a terminal block which is installed in the shield case of the motor.”. Therefore, *Kataoka* discloses an exposed terminal that can be connected to an electronic device such as a motor. Indeed, any conductive metal component can be soldered to a printed circuit or wiring board, with enough heat depending on the type of solder used. To the extent Plaintiff alleges *Kataoka* does not disclose “a terminal for soldering a wire or an electrical component to the contact” expressly or inherently, it would have been obvious to modify *Kataoka* by using a terminal for soldering a wire or and electrical component to the contact in view of the teachings of *the Handbook.* *The Handbook* discloses soldering to a printed wiring board. *See* Page 21 of *the Handbook*. According to *the Handbook*, “[t]here are two major media through which [permanent] connections are established: (a) wires or cables and (b) printed wiring boards (PWBs).” PWBs have been used and known since at least the 1950s. *The Handbook* further discloses that “[s]oldering is the dominant metallurgical technology used in PWB applications” and discloses surface mount technology (SMT) as one of the two prevalent connection techniques for attaching electronics to a printed wiring board, *see* also Pages 774-77 of *the Handbook.* It would have been obvious to a POSITA to use the first connecting terminal 4a of *Kataoka*’s first connector portion 2 as a terminal for soldering a wire or an electrical component to the contact. The combination would have involved combining *Kataoka*’s known terminal with the known board of *the Handbook*, using known surface mount soldering techniques disclosed in *the Handbook.* For example, a POSITA would have found it obvious to solder the exposed end of connecting terminal 4a (i.e., the left side of 4a, in *Kataoka*’s Fig. 4A above) to a board of a device such as an electric motor, using *the Handbook*’s surface mount soldering technique. The combination would have yielded predictable results of providing a permanent electrical connection between *Kataoka*’s first connector portion that is intended for use in an electric motor (Column 5, Line 60 to Column 6, Line 3 of *Kataoka*) and a power supply or control board of the motor that is a wire or electrical component. A POSITA would have expected success in combining *Kataoka* with *the Handbook*’s teaching of soldering a wire or electrical component. *Kataoka*’s metallic connecting terminal 4a has an exposed end that would not require any physical modification to solder to a wire or electrical component. A POSITA would have been guided by *the Handbook*’s disclosure about how to solder the exposed end of connecting terminal 4a to a wire or electrical component using surface mount technology. Additionally, the combination of *Kataoka* and *the Handbook* includes a terminal for soldering to a printed wiring board. A printed wiring board is an “electrical component,” and the ’017 patent does not define “electrical component” in a manner that distinguishes a printed wiring board. Column 5, Lines 60-65 of *Kataoka* discloses connecting an exposed end of connecting terminal 4a to “a terminal block which is installed in the shield case of the motor.” A POSITA would have understood that an electrical terminal block is another example of an “electrical component.” It would have been obvious to a POSITA to solder *Kataoka*’s connecting terminal 4a to permanently connect with an electrical component, such as a printed wiring board. Therefore, claim 9 would have been obvious based on *Kataoka* in view of *the Handbook.*

Exhibit C—Invalidity of U.S. Patent No. 8,808,017 (the ’017 Patent) Based on Saf-D

The following illustrates certain grounds for invalidity based on Saf-D-Grid Connector System (“Saf-D”) for Higher Voltage Power Distribution, a product line offered by Anderson Power Products Ltd. (“APP”). Saf-D appeared to be available from APP as early as May 7, 2011. In its own Saf-D-Grid Connector System datasheet, APP states that “APP® introduced the Saf-D-Grid® connector system in January 2009 as a safe appliance power connector.” As such, Saf-D is prior art to the ’017 Patent under at least pre-AIA 35 U.S.C. §§102(a) and §102(b).

As illustrated below, one or more claims of the ’017 Patent are invalid as expressly and/or inherently anticipated by Saf-D under Plaintiff’s own interpretation of claim terms. Additionally, to the extent that Saf-D is found not to anticipate, expressly or inherently, one or more of the asserted claims of the ’017 Patent, such claims are invalid as obvious in view of Saf-D alone or in combination with other prior art references, including, but not limited to, the prior art discussed below, the prior art identified in Defendants’ Invalidity Contentions, and the prior art described in additional claim charts attached as Exhibits A, B, and D. The fact that these cited references are from the same technology area provides motivation for a person of skill in the art to combine their teachings together. *Winkler*, *Kataoka*, *Davis* and other prior art identified in Defendants’ Invalidity Contentions all discuss the electrical connector design, and thus provide teaching, suggestion, or motivation that would have led one of ordinary skill to modify Saf-D based on one of the other references disclosed herein, or to combine teachings of these secondary references, and would not have been discouraged from making the combinations. For example, a person of ordinary skill in the art would have been motivated to combine various elements of the cited references because the combination would have involved known methods and would have yielded predictable results. As another example, combining the disclosed prior art would have involved simple substitution of one known element. The creation of such a combination would have been well within the skillset of a person of skill in the art at the time of the invention and would require no undue experimentation, and such a combination would have an easily predictable result. Combining the teachings of these cited references would have involved the use of known technique to improve similar connectors in the same way, or applying a known technique to a known connector ready for improvement to yield predictable results. Accordingly, a person of skill in the art would have had a reasonable expectation of success. By submitting these invalidity contentions, Defendants do not waive and hereby expressly reserve their rights to raise other invalidity defenses, including but not limited to defenses under Sections 101 and 112.

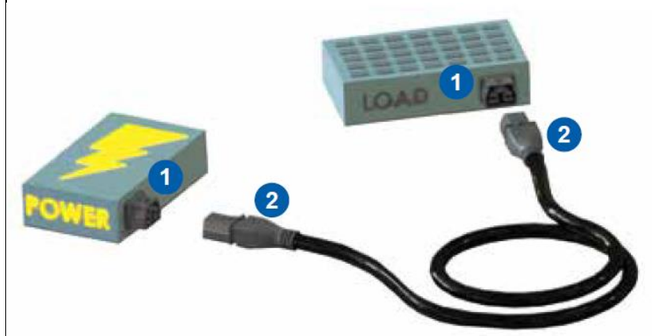
Further, APP itself admitted that “Plaintiff’s Saf-D-Grid® plug and receptacle practices one or more of the Asserted Claims of the Asserted Patent.” *See* Plaintiff’s First Corrected and Supplemental Disclosure of Asserted Claims and Infringement Contentions (dated June 28, 2024); Plaintiff’s Objections and Responses to Defendants’ First Set of Interrogatories (Nos. 1-5).

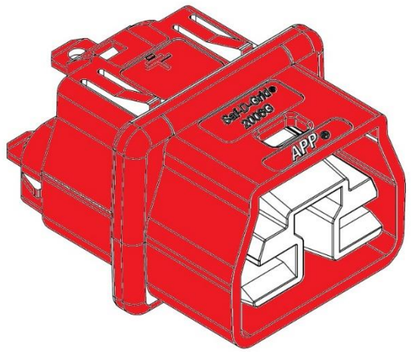
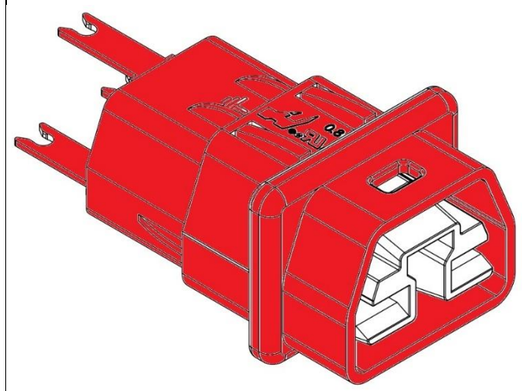
The citations included in the table below are exemplary only and are not intended to be limiting or exhaustive. Additional portions of these references other than the exemplary examples provided herein may also disclose the indicated limitation(s) and Defendants contend that the asserted claims are invalid in light of the charted reference(s) as a whole. Defendants reserve the right to cite additional disclosures and sources of evidence in support of its positions that also may be applicable, or that may become applicable in light of claim construction, changes in Plaintiff’s infringement contentions, and/or information obtained during discovery as the case progresses.

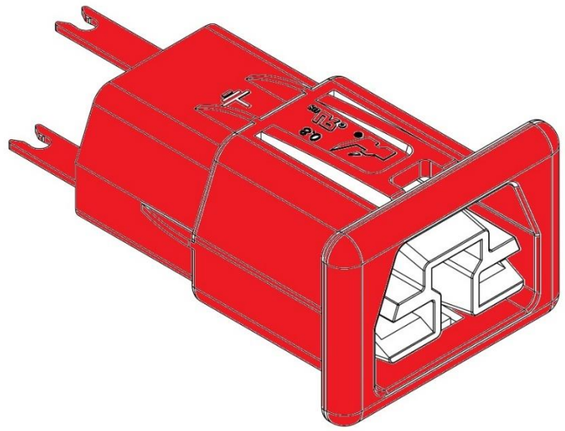
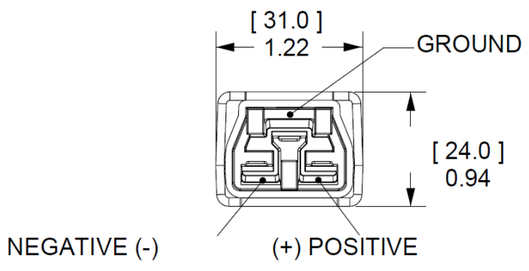
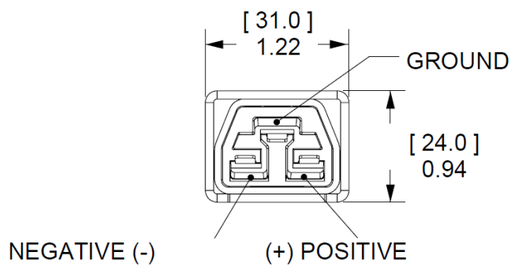
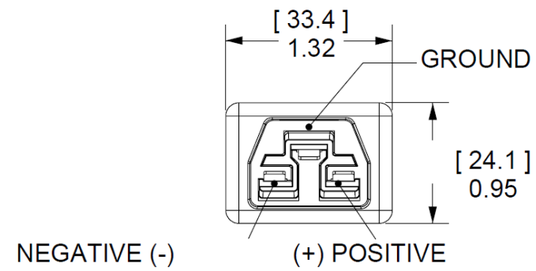
Additionally, Defendants have conducted the invalidity analysis herein and may be basing the arguments below on claim interpretations at least in part and in some instances entirely upon Plaintiff’s own interpretation of claim terms of the ’017 Patent. By applying the prior art in this way, Defendants do not concede to Plaintiff’s positions, nor do these Invalidity Contentions constitute any admission regarding claim scope. Nor are Defendants asserting any claim construction positions through these charts. Moreover, preambles generally are not limiting, and nothing in these contentions should be deemed an admission that the preamble in the asserted claims is limiting.

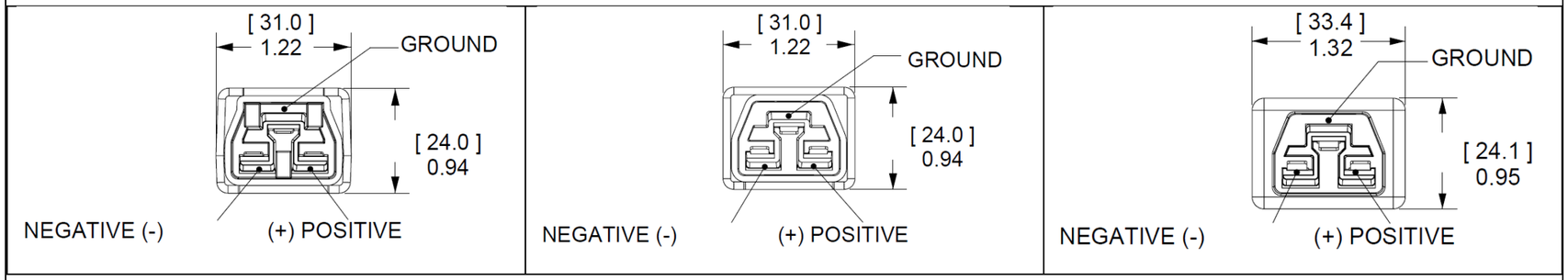
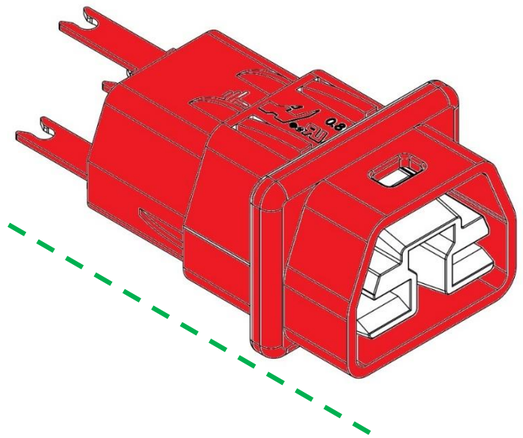
As these proceedings further develop, Defendants reserve the right to amend or supplement this claim chart and any related contentions at a later date, in accordance with the Court’s Scheduling Order, including after the Court’s order construing disputed claim terms. In particular, Defendants reserve the right to rely on (1) uncited portions of the identified prior art; (2) other prior art not identified herein; (3) references that show the state of the art (irrespective of whether such references themselves qualify as prior art to the asserted patents); (4) factual testimony from the inventors or authors of the prior art references; and/or (5) expert testimony, to provide context to or aid in understanding the prior art and the state of the art at the time of the alleged inventions.

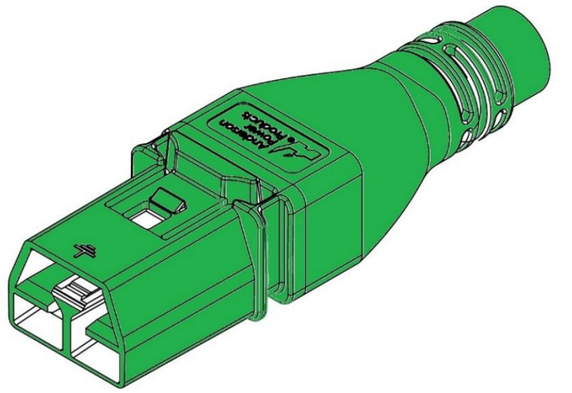
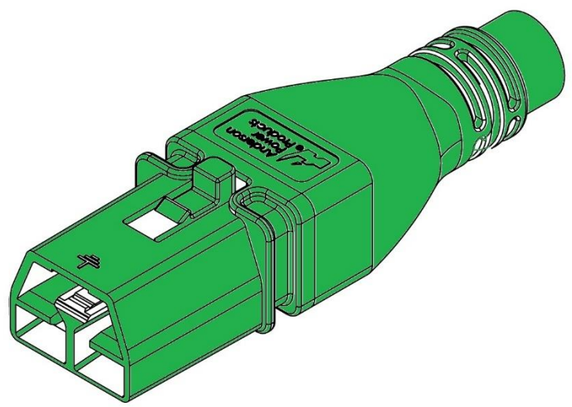
U.S. Patent No. ’017	**Exemplary Disclosures Based on Saf-D**
Claim 1	
1[pre] An electrical connector pair, comprising:	To the extent that the preamble is limiting, Saf-D discloses an electrical connector 1 including a pair of a first connector portion 2 and a second connector portion 3. *See* Pages 2, 7 of Saf-D datasheet. The left Column in Page 2: “The APP® Saf-D-Grid® plug and receptacle provide for the direct connection of DC electronic devices to a DC micro-grid powered by renewable energy or high efficiency DC sources. The connector meets international safety requirements for hazardous applications.” The right Column in Page 2:

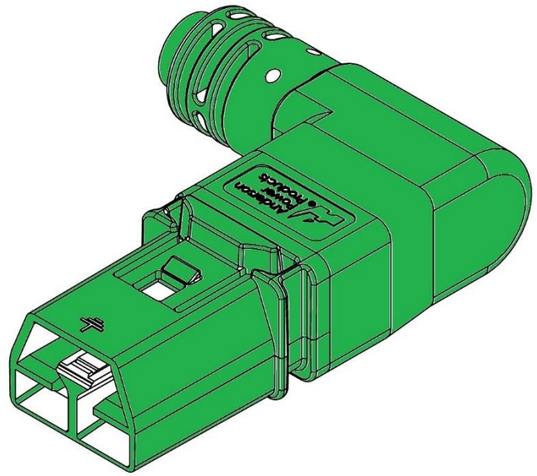
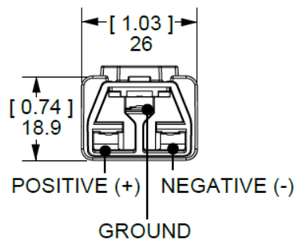
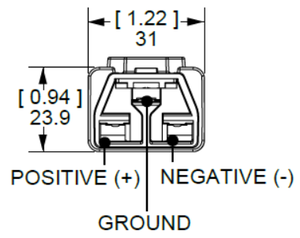
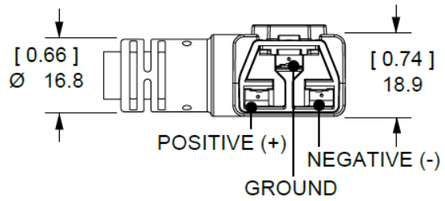
U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
	“**Ground Contact** provides the safety of an earthing path before engagement of the power contacts. **Integral Latch** connectors cannot be accidentally unmated, preventing unwanted power loss to critical equipment.” Figures in Page 2 of Saf-D datasheet (annotated showing a ***ground contact*** in ***red*** and a ***integral latch*** in ***green***):  Simplified power connection design in Page 7:   Description of simplified power connection design: “1. The Same Receptacle is Used on Both the Power & Load Sides. 2. The Same Plug is Used on Both Sides of the Power Cord. 3. Both Plug & Receptacle Connectors are Touch Safe.”
1[a] a first connector having a first insulating housing;	Saf-D, alone or in combination with one or more other references, discloses a first connector having a first insulating housing. *See* Pages 2, 4, 5, 7, 12 of Saf-D datasheet. Saf-D datasheet at Page 2 discloses: “Arcing Protection • Housings contain the arc if connectors are mated or unmated while under load minimizing risk to personnel.”

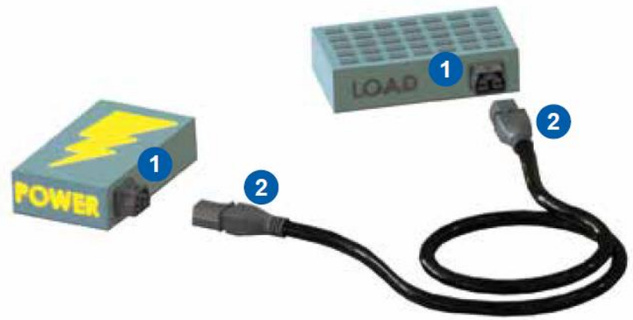
U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
	Receptacle in Page 5 and Latch plug in Page 7 of Saf-D datasheet (annotated showing ***insulating housing*** in ***red***): Receptacle in Page 5 of Saf-D datasheet (annotated showing ***insulating housing*** in ***red***):  

U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
	 Saf-D datasheet at Page 12 discloses: “Saf-D-Grid® also has adequate voltage isolation to contain arcing from disconnection within the insulating housings.” As shown above, insulating housing surrounds components of the connector. In the ’017 patent, “insulated housings” have the same functionality and purpose as in Saf-D. The ’017 patent states that “[i]nsulated housings 104, 106 surround the male and female contacts, and shield the contacts from environmental hazards, as well as providing some protection to a user in case arcing occurs when the user is handling the connector pair.” *See* Column 3, Lines 2-6 of ’017 patent. Housing 5 of Saf-D serves the same purposes.
1[b] a first electrical contact supported within the first insulating housing,	Saf-D, alone or in combination with one or more other references, discloses a first electrical contact supported within the first insulating housing. Saf-D datasheet at Page 12 discloses: “Saf-D-Grid® has undamaged electrical contact surfaces” Saf-D datasheet at Pages 6, 7 show front views of different receptacles:    As shown above, each of the receptacles includes a positive contact and a negative contact.

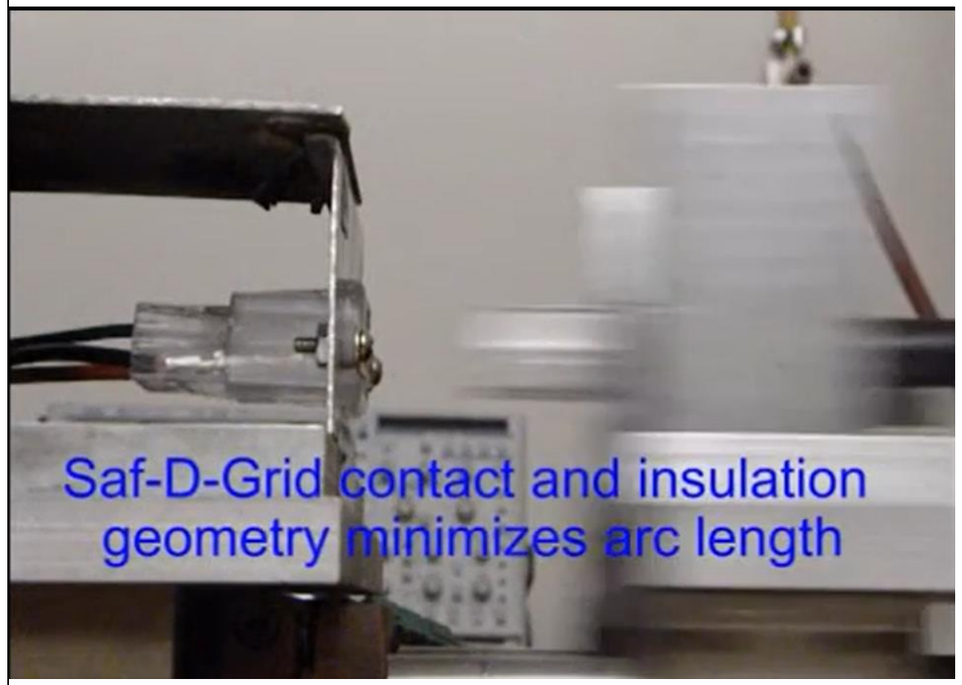
U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
	The lower right form at Page 2 of Saf-D datasheet discloses that materials of contacts are copper or silver plate.
1[c] the first electrical contact having a connecting surface that is substantially parallel with a longitudinal axis of the insulating housing and terminates in a leading end of the first electrical contact;	Saf-D, alone or in combination with one or more other references, discloses the first electrical contact having a connecting surface that is substantially parallel with a longitudinal axis of the insulating housing and terminates in a leading end of the first electrical contact. Saf-D datasheet at Pages 6, 7 show front views of different receptacles, in which the longitudinal axis would run from one end to the other end of the connector:  Page 5 also shows a perspective view of a first connector that is annotated to show an example of a ***longitudinal axis*** in ***green***: 
1[d] a second connector having a second insulating housing;	Saf-D, alone or in combination with one or more other references, discloses a second connector having a second insulating housing. Latch plug in Page 7 of Saf-D datasheet (annotated showing ***insulating housing*** in ***green***):

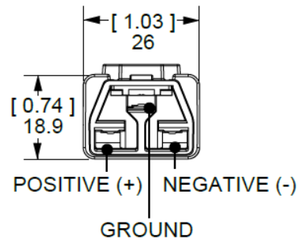
U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
	 

U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
	 Therefore, housing 7 constitutes the claimed “insulating housing.”
1[e] a second electrical contact supported within the second insulating housing,	Saf-D, alone or in combination with one or more other references, discloses a second electrical contact supported within the second insulating housing. Saf-D datasheet at Page 7 discloses: “Saf-D-Grid® has undamaged electrical contact surfaces” Saf-D datasheet at Page 7 show front views of different receptacles having electrical contacts, each of which may constitute the claimed “second electrical contact”:   
1[f] the second electrical contact being configured to laterally engage with the connecting surface of the first electrical contact when the first connector is mated with the second connector;	Saf-D, alone or in combination with one or more other references, discloses the second electrical contact being configured to laterally engage with the connecting surface of the first electrical contact when the first connector is mated with the second connector. Saf-D discloses an electrical connector 1 including a pair of a first connector portion 2 and a second connector portion 3. *See* Pages 2, 7 of Saf-D datasheet.

U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
	The left Column in Page 2: “The APP® Saf-D-Grid® plug and receptacle provide for the direct connection of DC electronic devices to a DC micro-grid powered by renewable energy or high efficiency DC sources. The connector meets international safety requirements for hazardous applications.” The right Column in Page 2: “**Ground Contact** provides the safety of an earthing path before engagement of the power contacts. **Integral Latch** connectors cannot be accidentally unmated, preventing unwanted power loss to critical equipment.” Description of simplified power connection design: “1. The Same Receptacle is Used on Both the Power & Load Sides.  2. The Same Plug is Used on Both Sides of the Power Cord.” 
1[g] a first insulating barrier within the first connector extending beyond and covering the leading end of the electrical contact; and	Saf-D, alone or in combination with one or more other references, discloses a first insulating barrier within the first connector extending beyond and covering the leading end of the electrical contact. Page 12 of Saf-D datasheet: “DC arcing is more destructive to contact systems due to the lack of phasing to a zero voltage point. The APP Saf-D-Grid connector overcame this technical challenge by using adequate contact mass, arc reducing geometry, and a sacrificial contact tip. Saf-D-Grid® has undamaged electrical contact surfaces after 250 DC arcing cycles.

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	Saf-D-Grid also has adequate voltage isolation to contain arcing from disconnection within the insulating housings. Video of the disconnection of APP Saf-D-Grid connectors under load shows extinguishing of the internal arc well in advance of the connector separation and potential exposure to the user.” In other words, APP’s own descriptions of Saf-D Grid, as noted above, demonstrates that the electrical contact of Saf-D-Grid is covered. Further, APP contends that a product “is unsafe” if it has “a through-air arcing path between two conductors,” which does not “block substantially all through-air arcing paths.” APP’s Letter to BizLink dated December 1, 2023. Because APP itself describes the Saf-D Grid as safe and as “meet[ing] international safety requirements” as noted above, Saf-D meets the claim limitations. Saf-D datasheet also emphasizes the importance of safety of Saf-D-Grid connector in several other places, *see* Pages 2, 3, 12 of Saf-D datasheet. Page 2 of Saf-D datasheet: “**Safe** Connections for Higher Voltage Power Distribution Systems” “APP® introduced the Saf-D-Grid® connector system in January 2009 as a **safe** appliance power connector for server” “The connector meets international **safety** requirements” “Provides the **safety** of an earthing path before engagement of the power contacts” Page 3 of Saf-D datasheet: “APP assembly tooling is required for UL, CSA & other **safety** agency compliance. Use of unapproved tooling will void connector warranty.” Page 12 of Saf-D datasheet: “Saf-D-Grid® meets or exceeds all relevant industry **safety** standards.” “The system can additionally be made **safe** by using connectors such as Saf-D-Grid®, which meet IEC and UL finger probe requirements for touch **safety**”
1[h] a second insulating barrier extending beyond the second electrical contact within the second connector,	Saf-D, alone or in combination with one or more other references, discloses a second insulating barrier extending beyond the second electrical contact within the second connector. Page 12 of Saf-D datasheet: “DC arcing is more destructive to contact systems due to the lack of phasing to a zero voltage point. The APP® Saf-D-Grid® connector overcame this technical challenge by using adequate contact mass, arc reducing geometry, and a sacrificial contact tip. Saf-D-Grid® has undamaged electrical contact surfaces after 250 DC arcing cycles. Saf-D-Grid® also has adequate voltage isolation to contain arcing from disconnection within the insulating housings. Video of the disconnection of APP® Saf-D-Grid® connectors under load shows extinguishing of the internal arc well in advance of the connector separation and potential exposure to the user.”
1[i] the second insulating barrier being configured so as to be in close proximity with the first insulating barrier	Saf-D, alone or in combination with one or more other references, discloses the second insulating barrier being configured so as to be in close proximity with the first insulating barrier when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance,

U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance, thereby blocking substantially all through-air arcing paths between the first and second electrical contacts	thereby blocking substantially all through-air arcing paths between the first and second electrical contacts. Upon information and belief, Saf-D discloses 1[i]. A screenshot of Saf-D-Grid suppression video is shown below. “Saf-D-Grid contact and insulation geometry minimizes arc length” in blue in this video explains and discloses the claim limitation of “the second insulating barrier being configured so as to be in close proximity with the first insulating barrier when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance.”.  In addition, based on APP’s letter sent on December 1, 2023, APP contends that a product “is unsafe” if it has “a through-air arcing path between two conductors,” which does not “block substantially all through-air arcing paths.” APP Letter to BizLink dated December 1, 2023. Because APP itself describes the *Saf-D* as safe and as “meet[ing] international safety requirements” as noted above, Saf-D meets the claim limitations. Indeed, applying Anderson Power’s what-is-safe-must-be-infringing theory, Anderson Power’s own electrical connectors that predated the ’017 patent, either are unsafe or must fall within the scope of the patent claims.
Claim 2	
2. The connector pair of claim 1, further comprising a contact tensioning mechanism that presses the second electrical contact against the engaging surface of the first electrical contact when the first and second connectors are connected.	Saf-D, alone or in combination with one or more other references, discloses a contact tensioning mechanism that presses the second electrical contact against the engaging surface of the first electrical contact when the first and second connectors are connected. The Material form at Page 2 of Saf-D datasheet shows that the material of the spring is stainless steel.

U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
	This discloses that the Saf-D-Grid includes a spring.
Claim 3	
3. The connector pair of claim 2, wherein the contact tensioning mechanism includes a spring.	Saf-D, alone or in combination with one or more other references, discloses that the contact tensioning mechanism includes a spring. *See* claim 2. According to the disclosure at Page 2 of Saf-D datasheet, the Material form discloses that the Saf-D-Grid includes a spring.
Claim 4	
4. The connector pair of claim 1, further comprising a barrier tensioning mechanism that presses the first and second insulating barriers against each other when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance.	Saf-D, alone or in combination with one or more other references, discloses a barrier tensioning mechanism that presses the first and second insulating barriers against each other when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance. For example, images of Saf-D show rigid housings that appear to have portions shaped to press the first and second insulating barriers against each other when connecting or disconnecting the first and second connectors. For example, Saf-D datasheet at page 7 shows the following:  The interior structure of the Saf-D connector appears to create a narrow space for mating with another connector, such that the insulating barriers of the first and second connectors are pressed against each other when connecting and disconnecting the first and second connector. In addition, based on limitations of 1[i], the second insulating barrier being configured so as to be in close proximity with the first insulating barrier to block when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance. POSITAs would have expected success in pressing the first insulating barrier and the second insulating barrier by a barrier tensioning mechanism to block substantially all through-air arcing paths between the first and second electrical contacts and to prevent arcing when the first and second connectors are partially disconnected, based on Saf-D because APP keeps emphasizing importance of safety of Saf-D-Grid connector, *see* Pages 2, 3, 12 of Saf-D datasheet. Page 2 of Saf-D datasheet: “**Safe** Connections for Higher Voltage Power Distribution Systems” “APP® introduced the Saf-D-Grid® connector system in January 2009 as a **safe** appliance power connector for server” “The connector meets international **safety** requirements” “Provides the **safety** of an earthing path before engagement of the power contacts”

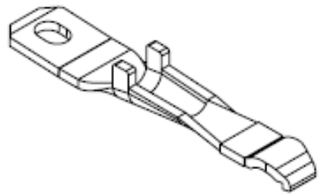
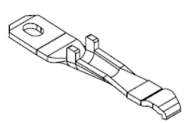
U.S. Patent No. ’017	Exemplary Disclosures Based on Saf-D
	Page 3 of Saf-D datasheet: “APP assembly tooling is required for UL, CSA & other **safety** agency compliance. Use of unapproved tooling will void connector warranty.” Page 12 of Saf-D datasheet: “Saf-D-Grid® meets or exceeds all relevant industry **safety** standards.” “The system can additionally be made **safe** by using connectors such as Saf-D-Grid®, which meet IEC and UL finger probe requirements for touch **safety**.”
Claim 7	
7. The connector pair of claim 1, wherein at least one of the first and second electrical contacts includes a terminal for crimping to a wire.	Saf-D, in combination with one or more other references, discloses that at least one of the first and second electrical contacts includes a terminal for crimping to a wire. Saf-D discloses first and second electrical contacts. *See* Claim 1[c] and Claim 1[e]. Page 5 of Saf-D datasheet discloses “Ultra short contacts are to be used with ultra short depth housings only, for soldering to stranded copper wire.” The contacts appear as follows:  As shown above, the contact includes arms that form a terminal for crimping to a wire.
Claim 9	
9. The connector pair of claim 1, wherein at least one of the first and second electrical contacts includes a terminal for soldering a wire or and electrical component to the contact.	Saf-D, in combination with one or more other references, discloses at least one of the first and second electrical contacts includes a terminal for soldering a wire or and electrical component to the contact. Saf-D discloses first and second electrical contacts. *See* Claim 1[c] and Claim 1[e], Page 5 of Saf-D datasheet discloses “Ultra short contacts are to be used with ultra short depth housings only, for soldering to stranded copper wire.” 

Exhibit D—Invalidity of U.S. Patent No. 8,808,017 (the ’017 Patent) Based on *Davis*

The following illustrates certain grounds for invalidity based on U.S. Patent No. 5,785,557, titled “Electrical Connector With Protection For Electrical Contacts” (“*Davis*”), which was filed on February 8, 1993, and issued on July 28, 1998. As such, *Davis* is prior art to the ’017 Patent under at least pre-AIA 35 U.S.C. §§102(a), (b), and (e).

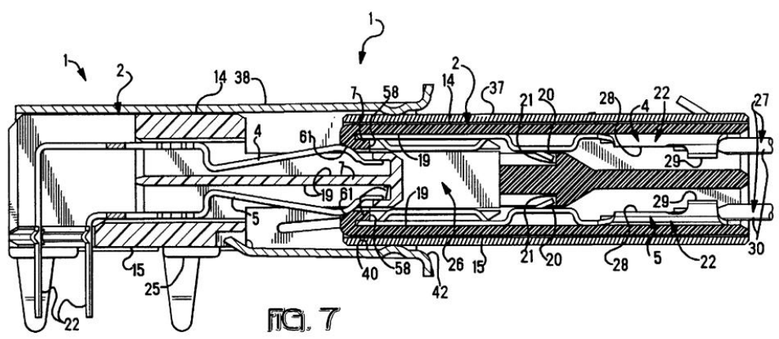
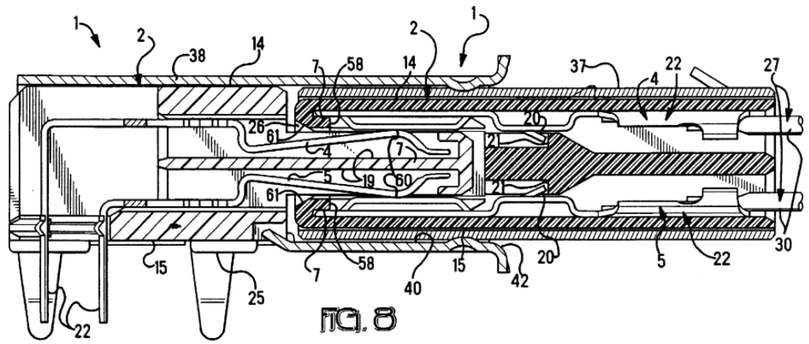
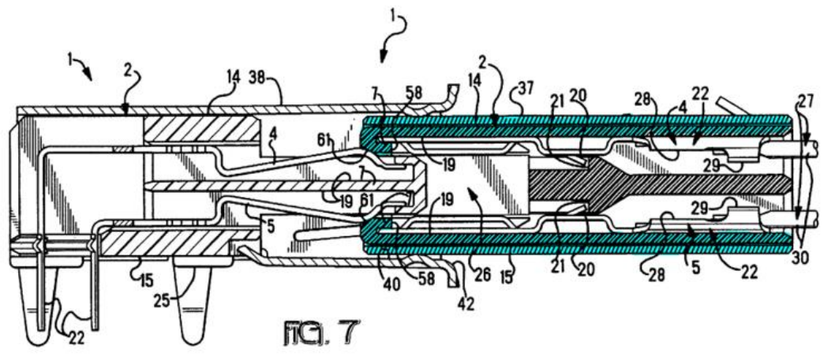
As illustrated below, one or more claims of the ’017 Patent are invalid as expressly and/or inherently anticipated by *Davis* under Plaintiff’s own interpretation of claim terms. Additionally, to the extent that *Davis* is found not to anticipate, expressly or inherently, one or more of the asserted claims of the ’017 Patent, such claims are invalid as obvious in view of *Davis* alone or in combination with other prior art references, including, but not limited to, the prior art discussed below, the prior art identified in Defendants’ Invalidity Contentions, and the prior art described in additional claim charts attached as Exhibits A-C. The fact that these cited references are from the same technology area provides motivation for a person of skill in the art to combine their teachings together. *Winkler*, *Kataoka*, *Davis* and other prior art identified in Defendants’ Invalidity Contentions all discuss the electrical connector design, and thus provide teaching, suggestion, or motivation that would have led one of ordinary skill to modify *Davis* based on one of the other references disclosed herein, or to combine teachings of these secondary references, and would not have been discouraged from making the combinations. For example, a person of ordinary skill in the art would have been motivated to combine various elements of the cited references because the combination would have involved known methods and would have yielded predictable results. As another example, combining the disclosed prior art would have involved simple substitution of one known element. The creation of such a combination would have been well within the skillset of a person of skill in the art at the time of the invention and would require no undue experimentation, and such a combination would have an easily predictable result. Combining the teachings of these cited references would have involved the use of known technique to improve similar connectors in the same way, or applying a known technique to a known connector ready for improvement to yield predictable results. Accordingly, a person of skill in the art would have had a reasonable expectation of success. By submitting these invalidity contentions, Defendants do not waive and hereby expressly reserve their rights to raise other invalidity defenses, including but not limited to defenses under Sections 101 and 112.

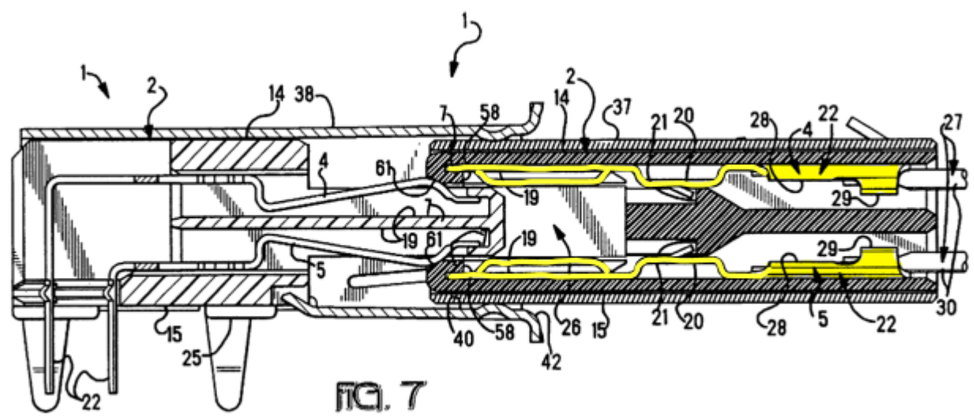
The citations included in the table below are exemplary only and are not intended to be limiting or exhaustive. Additional portions of these references other than the exemplary examples provided herein may also disclose the indicated limitation(s) and Defendants contend that the asserted claims are invalid in light of the charted reference(s) as a whole. Defendants reserve the right to cite additional disclosures and sources of evidence in support of its positions that also may be applicable, or that may become applicable in light of claim construction, changes in Plaintiff’s infringement contentions, and/or information obtained during discovery as the case progresses.

Additionally, Defendants have conducted the invalidity analysis herein and may be basing the arguments below on claim interpretations at least in part and in some instances entirely upon Plaintiff’s own interpretation of claim terms of the ’017 Patent. By applying the prior art in this way, Defendants do not concede to Plaintiff’s positions, nor do these Invalidity Contentions constitute any admission regarding claim scope. Nor are Defendants asserting any claim construction positions through these charts. Moreover, preambles generally are not limiting, and nothing in these contentions should be deemed an admission that the preamble in the asserted claims is limiting.

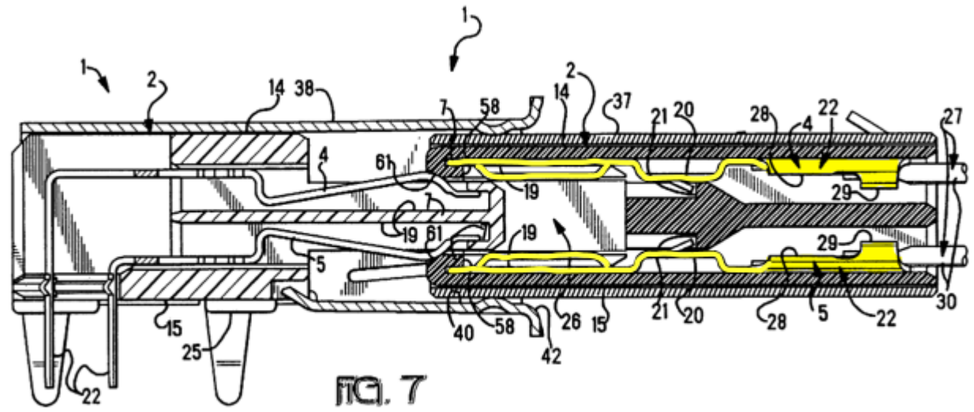
As these proceedings further develop, Defendants reserve the right to amend or supplement this claim chart and any related contentions at a later date, in accordance with the Court’s Scheduling Order, including after the Court’s order construing disputed claim terms. In particular, Defendants reserve the right to rely on (1) uncited portions of the identified prior art; (2) other prior art not identified herein; (3) references that show the state of the art (irrespective of whether such references themselves qualify as prior art to the asserted patents); (4) factual testimony from the inventors or authors of the prior art references; and/or (5) expert testimony, to provide context to or aid in understanding the prior art and the state of the art at the time of the alleged inventions.

U.S. Patent No. ’017	**Exemplary Disclosures Based on *Davis***
Claim 1	
1[pre] An electrical connector pair, comprising:	To the extent that the preamble is limiting, *Davis* discloses an electrical connector pair (e.g., connectors shown in Figs. 1 and 3). *See* Figs. 7 and 8 of *Davis*. Fig. 7 of *Davis* is an elevation view in section of the connectors (e.g., cable connector 1 at the righthand side and circuit board connector 1 at the lefthand side) shown in Figs. 1 and 3 prior to mating engagement with each other, and Fig. 8 of *Davis* is a view similar to Fig. 7, illustrating the connectors in mating engagement with each other.

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*
	Figs. 7 and 8 of *Davis*:  FIG. 7  FIG. 8 *Davis* discloses at Col. 4, Lines 53-67: With reference to the circuit board connector 1 shown in FIGS. 3 and 4, each of the contacts 4, 5, and the contact fingers 9, are inclined and bowed along their lengths to project outwardly bowed from the grooves 19. The bowed contacts 4, 5, and the bowed contact fingers 9, are resiliently deflectable by flattening their bowed configurations. For example, during mating connection of the connectors 1, one to the other, FIG. 8, the contacts 4, 5 and the contact fingers 9, of one connector 1, are matingly inserted into the other, mating connector 1. The bowed contacts 4, 5, and the bowed contact fingers 9, of the circuit board connector 1 engage respective contacts 4, 5, and contact fingers 9, of the cable connector 1, and are flattened somewhat to exert pressure engagement with the contacts 4, 5, and the contact finger 9, of the cable connector 1.
1[a] a first connector having a first insulating housing;	*Davis* discloses a first connector having a first insulating housing. *See* Fig. 7 of *Davis.* Fig. 7 of *Davis* shows a righthand connector (e.g., cable connector) having an insulative housing 2 (annotated in blue):  FIG. 7 *Davis* discloses at Col. 3, Lines 43-65:

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*
	With reference to FIGS. 1, 2 and 7-9, a cable connector 1, meaning a connector 1 for connection to an electrical cable, not shown, will be described. The cable connector 1 is adapted for mated connection with the version of the connector 1, FIGS. 3 and 4, for mounting on a circuit board, not shown. The divider 7 of the cable connector 1 is bifurcated by a passage 26 at the front mating end 12 for receiving the divider 7 of the version of the connector 1 for mounting on a circuit board, not shown. The grooves 19 face toward the passage 26, such that the contacts 4, 5 on opposite sides of the divider 7 face toward the passage 26. The pairs 3 of signal contacts 4, 5 are adapted to be connected to respective pairs 3 of signal wires 27 of a single electrical cable, not shown, or of multiple electrical cables, not shown. The signal wires 27 can be a twisted pair of signal wires 27. In FIG. 7, each of the signal contacts 4, 5 further comprises a termination 22 having arms 28 that extend outward laterally of each other, the arms being bendable into an open barrel configuration to encircle and connect with the signal wire 27. Another set of arms 29 extend laterally of each other, the arms 29 being bendable into an open barrel configuration to encircle and connect with insulation 30, FIG. 8, encircling the signal wire 27. *Davis* discloses at Col. 2, Lines 15-36: With reference to FIGS. 1 through 6, each of two mating embodiments of **an electrical connector 1 comprises, an insulative housing 2, multiple pairs 3 of conductive signal contacts 4, 5, accompanied by at least one power contact 6, in the housing 2**. The pairs 3 of the signal contacts 4, 5 are distributed along an insulative divider 7 in an interior 8 of the housing 2. The signal contacts 4, 5 of each pair 3 are on opposite sides of the divider 7 that separates the signal contacts 4, 5 of each pair 3. The signal contacts 4, 5 are in rows, and are parallel to one another. A pair of contact fingers 9 on the power contact 6 are on opposite sides of the divider 7, and extend parallel to the signal contacts 4, 5. The surface area of each of the fingers 9 is larger than that of each of the signal contacts 4, 5, and is sufficiently broad to radiate heat from electrical power dissipation. In addition, each of the fingers 9 is of greater mass than each of the signal contacts 4, 5 to carry electrical current. When electrical current is transmitted by the power contact 6, dissipation of electrical power generates heat. The heat is radiated from the surface area of the power contact 6. A larger surface area and a higher mass of the power contact 6 will limit the temperature attained by the power contact 6.
1[b] a first electrical contact supported within the first insulating housing,	*Davis* discloses a first electrical contact supported within the first insulating housing. *See* Fig. 7 of *Davis.* Fig. 7 of *Davis* shows a righthand connector (e.g., cable connector 1) having signal contact 4 or 5 (annotated in yellow) supported within the insulative housing 2:  FIG. 7 *Davis* discloses at Col. 3, Lines 43-65:

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*
	With reference to FIGS. 1, 2 and 7-9, a cable connector 1, meaning a connector 1 for connection to an electrical cable, not shown, will be described. The cable connector 1 is adapted for mated connection with the version of the connector 1, FIGS. 3 and 4, for mounting on a circuit board, not shown. The divider 7 of the cable connector 1 is bifurcated by a passage 26 at the front mating end 12 for receiving the divider 7 of the version of the connector 1 for mounting on a circuit board, not shown. The grooves 19 face toward the passage 26, such that **the contacts 4, 5 on opposite sides of the divider 7 face toward the passage 26. The pairs 3 of signal contacts 4, 5 are adapted to be connected to respective pairs 3 of signal wires 27 of a single electrical cable**, not shown, or of multiple electrical cables, not shown. The signal wires 27 can be a twisted pair of signal wires 27. In FIG. 7, each of the signal contacts 4, 5 further comprises a termination 22 having arms 28 that extend outward laterally of each other, the arms being bendable into an open barrel configuration to encircle and connect with the signal wire 27. Another set of arms 29 extend laterally of each other, the arms 29 being bendable into an open barrel configuration to encircle and connect with insulation 30, FIG. 8, encircling the signal wire 27. *Davis* discloses at Col. 2, Lines 15-36: With reference to FIGS. 1 through 6, each of two mating embodiments of **an electrical connector 1 comprises, an insulative housing 2, multiple pairs 3 of conductive signal contacts 4, 5, accompanied by at least one power contact 6, in the housing 2**. The pairs 3 of the signal contacts 4, 5 are distributed along an insulative divider 7 in an interior 8 of the housing 2. The signal contacts 4, 5 of each pair 3 are on opposite sides of the divider 7 that separates the signal contacts 4, 5 of each pair 3. The signal contacts 4, 5 are in rows, and are parallel to one another. A pair of contact fingers 9 on the power contact 6 are on opposite sides of the divider 7, and extend parallel to the signal contacts 4, 5. The surface area of each of the fingers 9 is larger than that of each of the signal contacts 4, 5, and is sufficiently broad to radiate heat from electrical power dissipation. In addition, each of the fingers 9 is of greater mass than each of the signal contacts 4, 5 to carry electrical current. When electrical current is transmitted by the power contact 6, dissipation of electrical power generates heat. The heat is radiated from the surface area of the power contact 6. A larger surface area and a higher mass of the power contact 6 will limit the temperature attained by the power contact 6. Therefore, *Davis* meets 1[b].
1[c] the first electrical contact having a connecting surface that is substantially parallel with a longitudinal axis of the insulating housing and terminates in a leading end of the first electrical contact;	*Davis*, alone or in combination with one or more other references, discloses the first electrical contact having a connecting surface that is substantially parallel with a longitudinal axis of the insulating housing and terminates in a leading end of the first electrical contact. Fig. 7 of *Davis* shows signal contact 4 or 5 (in the righthand connector (e.g., cable connector 1), annotated in yellow) having a connecting surface parallel with a longitudinal axis of the insulative housing 2 and terminates in a leading end of the signal contact 4 or 5.

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*
	 FIG. 7 *Davis* discloses at Col. 3, Lines 43-65: With reference to FIGS. 1, 2 and 7-9, a cable connector 1, meaning a connector 1 for connection to an electrical cable, not shown, will be described. The cable connector 1 is adapted for mated connection with the version of the connector 1, FIGS. 3 and 4, for mounting on a circuit board, not shown. The divider 7 of the cable connector 1 is bifurcated by a passage 26 at the front mating end 12 for receiving the divider 7 of the version of the connector 1 for mounting on a circuit board, not shown. The grooves 19 face toward the passage 26, such that **the contacts 4, 5 on opposite sides of the divider 7 face toward the passage 26. The pairs 3 of signal contacts 4, 5 are adapted to be connected to respective pairs 3 of signal wires 27 of a single electrical cable**, not shown, or of multiple electrical cables, not shown. The signal wires 27 can be a twisted pair of signal wires 27. In FIG. 7, each of the signal contacts 4, 5 further comprises a termination 22 having arms 28 that extend outward laterally of each other, the arms being bendable into an open barrel configuration to encircle and connect with the signal wire 27. Another set of arms 29 extend laterally of each other, the arms 29 being bendable into an open barrel configuration to encircle and connect with insulation 30, FIG. 8, encircling the signal wire 27. *Davis* discloses at Col. 2, Lines 15-36: With reference to FIGS. 1 through 6, each of two mating embodiments of **an electrical connector 1 comprises, an insulative housing 2, multiple pairs 3 of conductive signal contacts 4, 5, accompanied by at least one power contact 6, in the housing 2**. The pairs 3 of the signal contacts 4, 5 are distributed along an insulative divider 7 in an interior 8 of the housing 2. The signal contacts 4, 5 of each pair 3 are on opposite sides of the divider 7 that separates the signal contacts 4, 5 of each pair 3. The signal contacts 4, 5 are in rows, and are parallel to one another. A pair of contact fingers 9 on the power contact 6 are on opposite sides of the divider 7, and extend parallel to the signal contacts 4, 5. The surface area of each of the fingers 9 is larger than that of each of the signal contacts 4, 5, and is sufficiently broad to radiate heat from electrical power dissipation. In addition, each of the fingers 9 is of greater mass than each of the signal contacts 4, 5 to carry electrical current. When electrical current is transmitted by the power contact 6, dissipation of electrical power generates heat. The heat is radiated from the surface area of the power contact 6. A larger surface area and a higher mass of the power contact 6 will limit the temperature attained by the power contact 6. Thus, *Davis* meets 1[c].
1[d] a second connector having a second insulating housing;	*Davis*, alone or in combination with one or more other references, discloses a second connector having a second insulating housing. Fig. 7 of *Davis* shows a lefthand connector (e.g., circuit board connector 1) having an insulative housing 2 (annotated in green):

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*

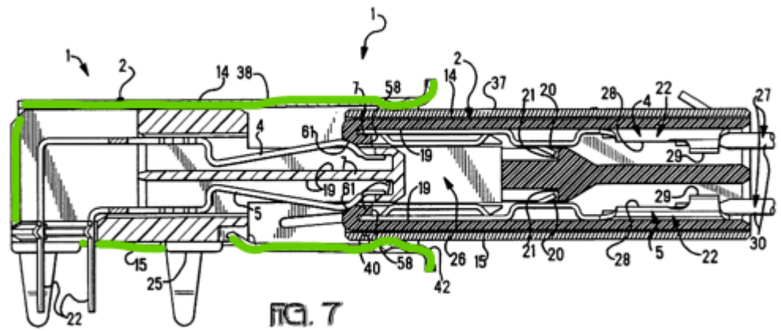


FIG. 7

Davis discloses at Col. 3, Lines 4-17:

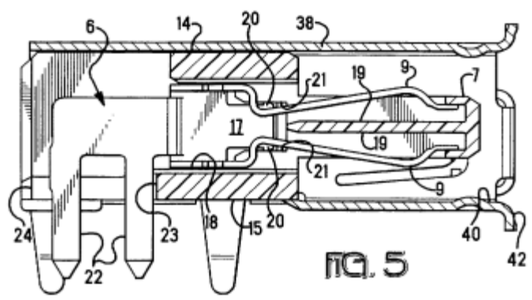
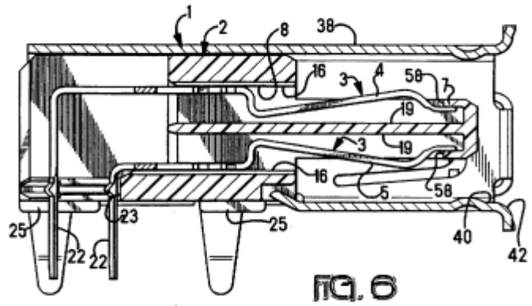
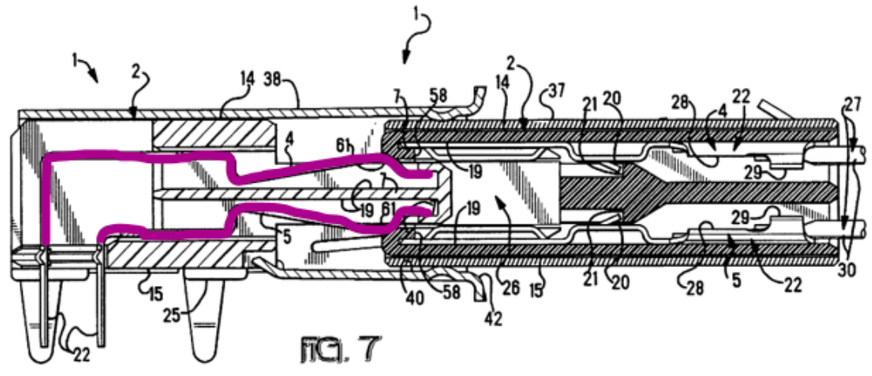
> With respect to FIGS. 3-7, a circuit board connector 1, meaning a version of the connector 1 for mounting on a circuit board, not shown, will be described. The divider 7 is spaced apart from the top and bottom walls 14, 15 of the housing 2. The grooves 19 face toward the top and bottom walls 14, 15. The pairs 3 of signal contacts 4, 5 are adapted to be connected to a circuit board, not shown. An electrical termination 22 in the form of a post extends laterally downward from each of the signal contacts 4, 5 for connection to a circuit board, not shown, and more particularly, to a plated aperture, not shown of the circuit board. The terminations 22 extend laterally downward by bending the signal contacts 4, 5 along their lengths, the signal contact 4 being longer in length than the signal contact 5.

Davis discloses at Col. 2, Lines 15-36:

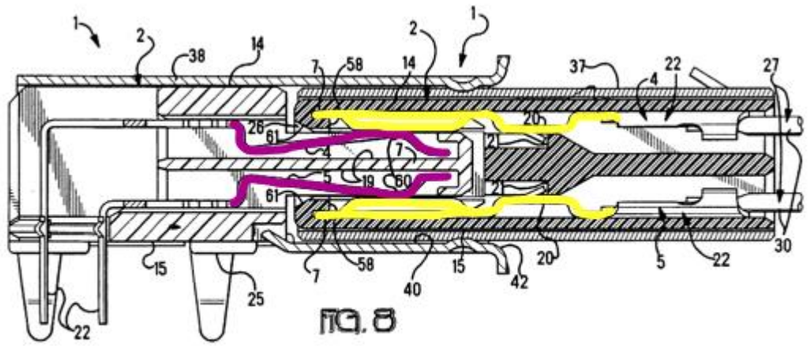
> With reference to FIGS. 1 through 6, each of two mating embodiments of **an electrical connector 1 comprises, an insulative housing 2, multiple pairs 3 of conductive signal contacts 4, 5, accompanied by at least one power contact 6, in the housing 2**. The pairs 3 of the signal contacts 4, 5 are distributed along an insulative divider 7 in an interior 8 of the housing 2. The signal contacts 4, 5 of each pair 3 are on opposite sides of the divider 7 that separates the signal contacts 4, 5 of each pair 3. The signal contacts 4, 5 are in rows, and are parallel to one another. A pair of contact fingers 9 on the power contact 6 are on opposite sides of the divider 7, and extend parallel to the signal contacts 4, 5. The surface area of each of the fingers 9 is larger than that of each of the signal contacts 4, 5, and is sufficiently broad to radiate heat from electrical power dissipation. In addition, each of the fingers 9 is of greater mass than each of the signal contacts 4, 5 to carry electrical current. When electrical current is transmitted by the power contact 6, dissipation of electrical power generates heat. The heat is radiated from the surface area of the power contact 6. A larger surface area and a higher mass of the power contact 6 will limit the temperature attained by the power contact 6.

See Also Figs. 5 and 6 of *Davis*.

Fig. 5 of *Davis* is an elevation view in section of a circuit board connector shown in Fig. 3, and Fig. 6 is a view illustrating signal contacts in the circuit board connector shown in Fig. 3.

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	Figs. 5 and 6 of *Davis*:  FIG. 5  FIG. 6 Therefore, *Davis* meets 1[d].
1[e] a second electrical contact supported within the second insulating housing,	*Davis*, alone or in combination with one or more other references, discloses a second electrical contact supported within the second insulating housing. Fig. 7 of *Davis* shows a lefthand connector (e.g., circuit board connector 1) having signal contact 4 or 5 (annotated in purple) supported within the insulative housing 2.  FIG. 7 *Davis* discloses at Col. 3, Lines 4-17: With respect to FIGS. 3-7, a circuit board connector 1, meaning a version of the connector 1 for mounting on a circuit board, not shown, will be described. The divider 7 is spaced apart from the top and bottom walls 14, 15 of the housing 2. The grooves 19 face toward the top and bottom walls 14, 15. **The pairs 3**

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	of signal contacts 4, 5 are adapted to be connected to a circuit board, not shown. An electrical termination 22 in the form of a post extends laterally downward from each of the signal contacts 4, 5 for connection to a circuit board, not shown, and more particularly, to a plated aperture, not shown of the circuit board. The terminations 22 extend laterally downward by bending the signal contacts 4, 5 along their lengths, the signal contact 4 being longer in length than the signal contact 5. *Davis* discloses at Col. 2, Lines 15-36: With reference to FIGS. 1 through 6, each of two mating embodiments of **an electrical connector 1 comprises, an insulative housing 2, multiple pairs 3 of conductive signal contacts 4, 5, accompanied by at least one power contact 6, in the housing 2**. The pairs 3 of the signal contacts 4, 5 are distributed along an insulative divider 7 in an interior 8 of the housing 2. The signal contacts 4, 5 of each pair 3 are on opposite sides of the divider 7 that separates the signal contacts 4, 5 of each pair 3. The signal contacts 4, 5 are in rows, and are parallel to one another. A pair of contact fingers 9 on the power contact 6 are on opposite sides of the divider 7, and extend parallel to the signal contacts 4, 5. The surface area of each of the fingers 9 is larger than that of each of the signal contacts 4, 5, and is sufficiently broad to radiate heat from electrical power dissipation. In addition, each of the fingers 9 is of greater mass than each of the signal contacts 4, 5 to carry electrical current. When electrical current is transmitted by the power contact 6, dissipation of electrical power generates heat. The heat is radiated from the surface area of the power contact 6. A larger surface area and a higher mass of the power contact 6 will limit the temperature attained by the power contact 6. Therefore, *Davis* meets 1[e].
1[f] the second electrical contact being configured to laterally engage with the connecting surface of the first electrical contact when the first connector is mated with the second connector;	*Davis*, alone or in combination with one or more other references, discloses the second electrical contact being configured to laterally engage with the connecting surface of the first electrical contact when the first connector is mated with the second connector. Fig. 8 of *Davis* shows the lefthand contacts 4 and 5 (annotated in purple) engage with the righthand contacts 4 and 5 (annotated in yellow). *See* Column 4, Lines 53-67 and Fig. 8 of *Davis*. *Davis* at Column 4, Lines 53-67 discloses: With reference to the circuit board connector 1 shown in FIGS. 3 and 4, each of the contacts 4, 5, and the contact fingers 9, are inclined and bowed along their lengths to project outwardly bowed from the grooves 19. The bowed contacts 4, 5, and the bowed contact fingers 9, are resiliently deflectable by flattening their bowed configurations. For example, during mating connection of the connectors 1, one to the other, FIG. 8, the contacts 4, 5 and the contact fingers 9, of one connector 1, are matingly inserted into the other, mating connector 1. The bowed contacts 4, 5, and the bowed contact fingers 9, of the circuit board connector 1 engage respective contacts 4, 5, and contact fingers 9, of the cable connector 1, and are flattened somewhat to exert pressure engagement with the contacts 4, 5, and the contact finger 9, of the cable connector 1. Annotated Fig. 8 of *Davis*:

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	 FIG. 8 *Davis* discloses at Col. 4, Lines 53-67: With reference to the circuit board connector 1 shown in FIGS. 3 and 4, each of the contacts 4, 5, and the contact fingers 9, are inclined and bowed along their lengths to project outwardly bowed from the grooves 19. The bowed contacts 4, 5, and the bowed contact fingers 9, are resiliently deflectable by flattening their bowed configurations. For example, during mating connection of the connectors 1, one to the other, FIG. 8, the contacts 4, 5 and the contact fingers 9, of one connector 1, are matingly inserted into the other, mating connector 1. The bowed contacts 4, 5, and the bowed contact fingers 9, of the circuit board connector 1 engage respective contacts 4, 5, and contact fingers 9, of the cable connector 1, and are flattened somewhat to exert pressure engagement with the contacts 4, 5, and the contact finger 9, of the cable connector 1. Therefore, *Davis* meets 1[f].
1[g] a first insulating barrier within the first connector extending beyond and covering the leading end of the electrical contact; and	*Davis* discloses a first insulating barrier within the first connector extending beyond and covering the leading end of the electrical contact. According to the disclosure from Column 4, Lines 45-52 of *Davis*, flanges 58 (annotated in blue) of righthand housing 2 overlap front tips of contacts 4 and 5. *Davis* at Column 4, Lines 45-52 discloses: With reference to FIGS. 2 and 5-9 both connectors 1 will be described further. Flanges 58 on the divider 7 of the housing 2 overhang the front ends of the grooves 19 and overhang both lateral sides of each of the grooves 19. The flanges 58 overlap front tips on the contacts 4, 5 and front tips of the contact fingers 9 that are in respective grooves 19. The front tips of the contacts 4, 5 and of the contact fingers 9 are recessed from the mating end 12 of the housing 2. Annotated Fig. 8 of *Davis*:

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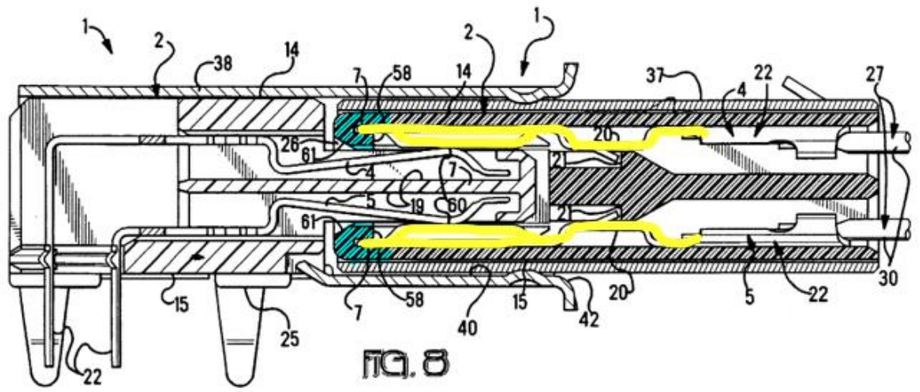


FIG. 8

See Also Fig. 1 and Fig. 2 of *Davis* showing wiping surfaces 61 and flanges 58.

Fig. 1 of *Davis*:

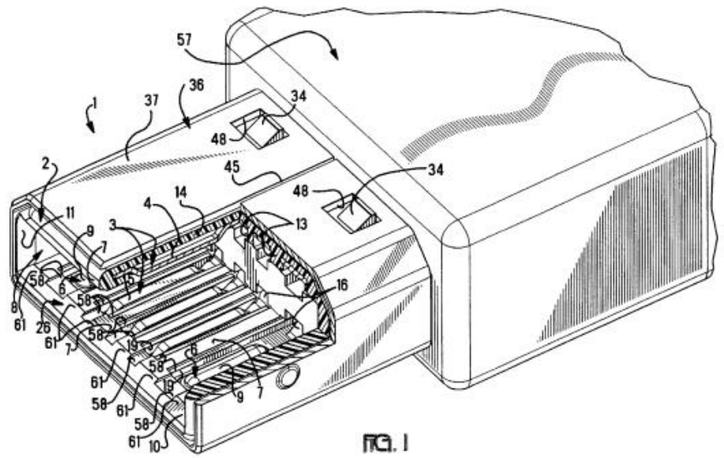
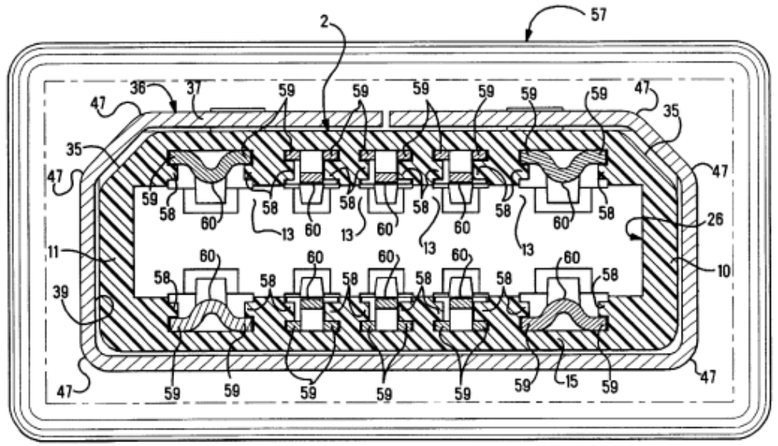
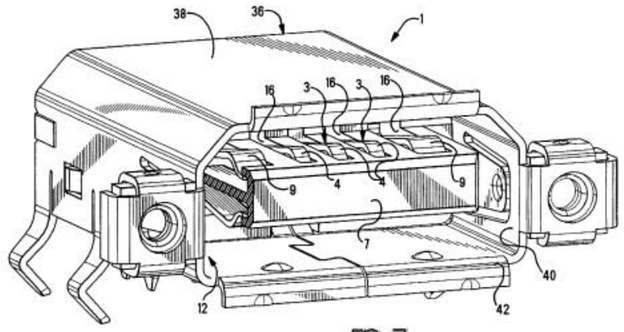
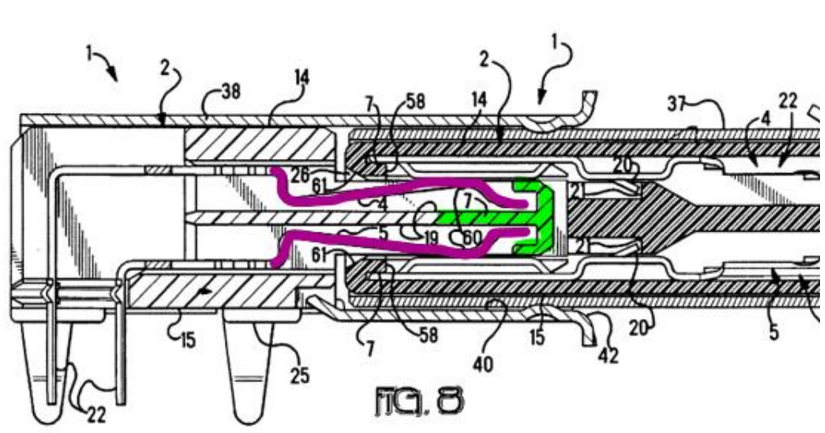
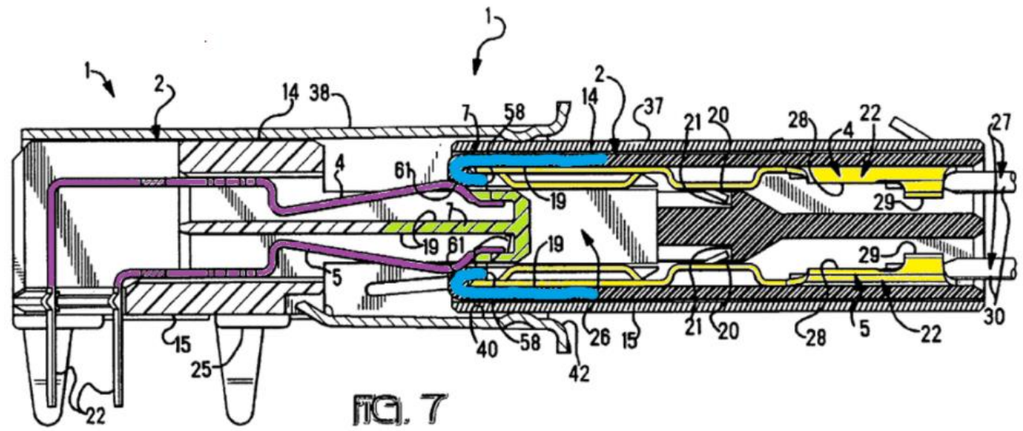


FIG. 1

Fig. 2 of *Davis*:

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	 FIG. 2 For the reasons above, Davis discloses 1[g].
1[h] a second insulating barrier extending beyond the second electrical contact within the second connector,	*Davis* discloses a second insulating barrier extending beyond the second electrical contact within the second connector. According to the disclosure from Column 3, Lines 4-17 of *Davis*, the divider 7 (annotated in green) of lefthand housing 2 extends beyond the contacts 4 and 5. *Davis* discloses at Col. 3, Lines 4-17: > With respect to FIGS. 3-7, a circuit board connector 1, meaning a version of the connector 1 for mounting on a circuit board, not shown, will be described. **The divider 7 is spaced apart from the top and bottom walls 14, 15 of the housing 2. The grooves 19 face toward the top and bottom walls 14, 15.** The pairs 3 of signal contacts 4, 5 are adapted to be connected to a circuit board, not shown. An electrical termination 22 in the form of a post extends laterally downward from each of the signal contacts 4, 5 for connection to a circuit board, not shown, and more particularly, to a plated aperture, not shown of the circuit board. The terminations 22 extend laterally downward by bending the signal contacts 4, 5 along their lengths, the signal contact 4 being longer in length than the signal contact 5. *See* Fig. 3 of *Davis* showing the divider 7. Fig. 3 of *Davis*:

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*
	 FIG. 3 *Davis* at Column 4, Lines 45-52 discloses: With reference to FIGS. 2 and 5-9 both connectors 1 will be described further. Flanges 58 on the divider 7 of the housing 2 overhang the front ends of the grooves 19 and overhang both lateral sides of each of the grooves 19. The flanges 58 overlap front tips on the contacts 4, 5 and front tips of the contact fingers 9 that are in respective grooves 19. The front tips of the contacts 4, 5 and of the contact fingers 9 are recessed from the mating end 12 of the housing 2. Annotated Fig. 8 of *Davis*:  FIG. 8 For the reasons above, *Davis* discloses 1[h].
1[i] the second insulating barrier being configured so as to be in close proximity with the first insulating barrier when the first and second connectors are partially disconnected and the first and second	*Davis* discloses the second insulating barrier being configured so as to be in close proximity with the first insulating barrier when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance, thereby blocking substantially all through-air arcing paths between the first and second electrical contacts.

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*
electrical contacts are separated by a short distance, thereby blocking substantially all through-air arcing paths between the first and second electrical contacts	As shown in Fig. 7 of *Davis*, flanges on the dividers 7 (annotated in green and blue) of both housings are close together when the plugs are partially connected. Annotated Fig. 7 of *Davis*:  FIG. 7 Therefore, Davis discloses 1[i]. For the reasons above, *Davis* discloses every limitation of independent claim 1, and anticipates claim 1.
Claim 2	
2. The connector pair of claim 1, further comprising a contact tensioning mechanism that presses the second electrical contact against the engaging surface of the first electrical contact when the first and second connectors are connected.	*Davis*, alone or in combination with one or more other references, discloses a contact tensioning mechanism that presses the second electrical contact against the engaging surface of the first electrical contact when the first and second connectors are connected. Accordingly, *Davis* anticipates claim 2. *Davis* at Column 4, Lines 53-67 discloses: > With reference to the circuit board connector 1 shown in FIGS. 3 and 4, each of the contacts 4, 5, and the contact fingers 9, are inclined and bowed along their lengths to project outwardly bowed from the grooves 19. The bowed contacts 4, 5, and the bowed contact fingers 9, are resiliently deflectable by flattening their bowed configurations. For example, during mating connection of the connectors 1, one to the other, FIG. 8, the contacts 4, 5 and the contact fingers 9, of one connector 1, are matingly inserted into the other, mating connector 1. The bowed contacts 4, 5, and the bowed contact fingers 9, of the circuit board connector 1 engage respective contacts 4, 5, and contact fingers 9, of the cable connector 1, and are flattened somewhat to exert pressure engagement with the contacts 4, 5, and the contact finger 9, of the cable connector 1. Fig. 7 of *Davis* shows a lefthand connector (e.g., circuit board connector 1) having signal contact 4 or 5 (annotated in purple) supported within the insulative housing 2.

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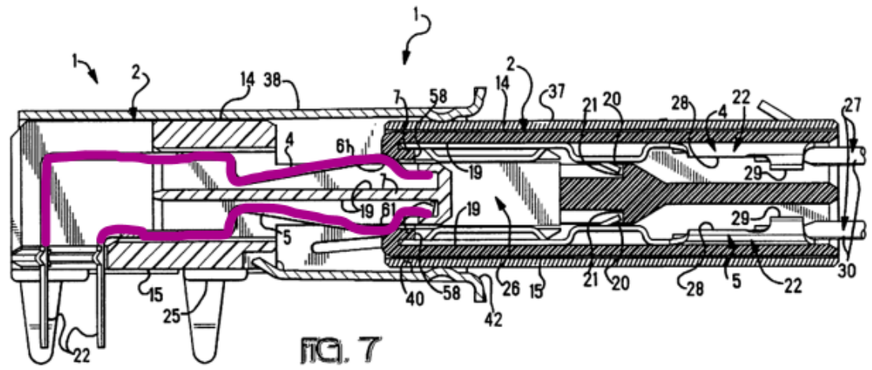


FIG. 7

As shown in Figs.7 and 8 of *Davis*, bowed contacts 4 and 5 in the lefthand connector (e.g., circuit board connector 1) press against contacts 4 and 5 in the righthand connector (e.g., cable connector 1), and thus discloses the “contact tensioning mechanism” of claim 2.

See Also Figs. 5 and 6 of *Davis*.

Fig. 5 of *Davis* is an elevation view in section of a circuit board connector shown in Fig. 3, and Fig. 6 is a view illustrating signal contacts in the circuit board connector shown in Fig. 3.

Figs. 5 and 6 of *Davis*:

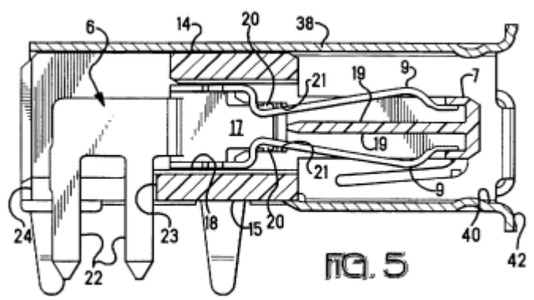


FIG. 5

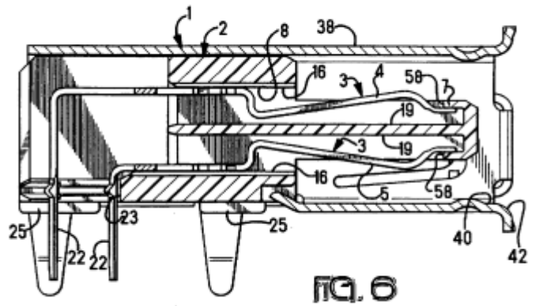
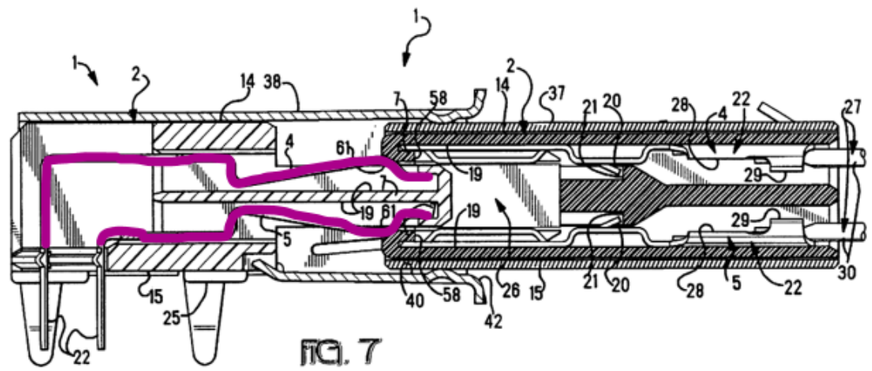
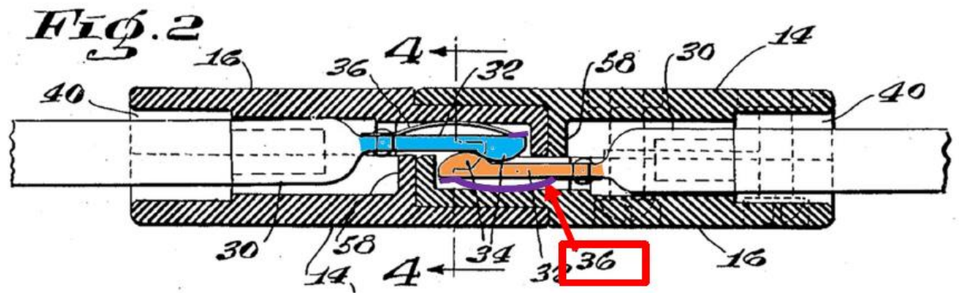
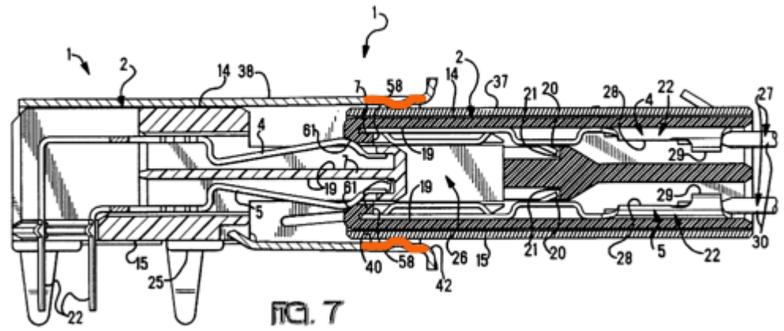


FIG. 6

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Claim 3	
3. The connector pair of claim 2, wherein the contact tensioning mechanism includes a spring.	*Davis*, alone or in combination with one or more other references, discloses that the contact tensioning mechanism includes a spring. *Davis* at Column 4, Lines 53-67 discloses: > With reference to the circuit board connector 1 shown in FIGS. 3 and 4, each of the contacts 4, 5, and the contact fingers 9, are inclined and bowed along their lengths to project outwardly bowed from the grooves 19. The bowed contacts 4, 5, and the bowed contact fingers 9, are resiliently deflectable by flattening their bowed configurations. For example, during mating connection of the connectors 1, one to the other, FIG. 8, the contacts 4, 5 and the contact fingers 9, of one connector 1, are matingly inserted into the other, mating connector 1. The bowed contacts 4, 5, and the bowed contact fingers 9, of the circuit board connector 1 engage respective contacts 4, 5, and contact fingers 9, of the cable connector 1, and are flattened somewhat to exert pressure engagement with the contacts 4, 5, and the contact finger 9, of the cable connector 1. As shown in Figs.7 and 8 of *Davis*, *Davis*’s bowed contacts 4 and 5 in the lefthand connector (e.g., circuit board connector 1) provide spring mechanisms and thus meets claim 3. *See* claim 2. Fig. 7 of *Davis* shows a lefthand connector (e.g., circuit board connector 1) having signal contact 4 or 5 (annotated in purple) supported within the insulative housing 2.  FIG. 7 For these reasons, *Davis* anticipates claim 3. To the extent Plaintiff alleges *Davis* does not disclose “the contact tensioning mechanism includes a spring” expressly or inherently, it would have been obvious to modify *Davis* by using a spring as the contact tensioning mechanism. For example, U.S. Patent No. 2,838,739 (“*Winkler*”) discloses using leaf spring 36 as the contact tensioning mechanism. Leaf spring 36 is shown in Fig. 2 below. Fig. 2 of Winkler (annotated highlighting leaf spring 36 in purple, first electrical contact in blue, and second electrical contact in orange)

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*
	 Fig. 2 shows the first and second connectors being connected. Leaf spring 36 (outlined in purple above) presses the second electrical contact (in orange above) against the engaging surface of the first electrical contact (in blue above) when the first and second connectors are connected. In particular, the leaf spring 36 presses curved portion 34 of the second electrical contact against the curved portion 34 and the flat elongated portion 32 of the first electrical contact. Column 2, Lines 39-43 of *Winkler* discloses “it will be seen that the contacting end of each terminal is enclosed in its respective pocket except for the engaging face thereof which is resiliently urged by the leaf spring 36 toward the cooperating terminal”. Accordingly, *Winkler* states that “the contacting end of each terminal is enclosed in its respective pocket except for the engaging face thereof which *is resiliently urged by the leaf spring 36 toward the cooperating terminal*.” (emphasis added). Column 2, Lines 10-14 of *Winkler* discloses: “The contacting end of each terminal comprises an elongated flat portion 32 substantially rectangular in cross section provided with a rounded or convex end portion 34 projecting from one surface thereof.” Column 4, Lines 41-43 of *Winkler* discloses: “a rigid terminal member provided with a substantially flat contacting portion.” According to *Winkler*, flat elongated portion 32 is part of the “contacting end” of the terminal, and therefore elongated portion 32 of each electrical contact is also pressed against one another by leaf spring 36. *Winkler* further states that “springs 36 effect upward movement of the terminals in their pockets to present the curved portions 34 in hooked or interlocked relation to each other” at Column 3, Lines 24-27. *See Also* Column 2, Lines 14-17, Column 2, Lines 28-32, Column 2, Lines 39-43, Column 3, Lines 23-27, Column 3, Lines 31-34 of *Winkler*. A POSITA would have expected success in modifying *Davis*’s contactors , as disclosed in *Winkler*, to use springs as the contact tensioning mechanism. For the reasons above, claim 3 would have been obvious based on *Davis* in view of *Winkler*.
Claim 4	
4. The connector pair of claim 1, further comprising a barrier tensioning mechanism that presses the first and second insulating barriers against each other when the	*Davis*, alone or in combination with one or more other references, discloses a barrier tensioning mechanism that presses the first and second insulating barriers against each other when the first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance.

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first and second connectors are partially disconnected and the first and second electrical contacts are separated by a short distance.	As shown in Figs. 7 and 8 of *Davis*, the shell 38 includes a concave portion (annotated in orange) at the top and bottom that presses shell 37 and the flanges 58 of housing 2 toward the flanges 58 of the lefthand connector (e.g., circuit board connector 1). Annotated Fig. 7 of *Davis*:  For these reasons, *Davis* anticipates claim 4.
Claim 7	
7. The connector pair of claim 1, wherein at least one of the first and second electrical contacts includes a terminal for crimping to a wire.	*Davis*, in combination with one or more other references, discloses that at least one of the first and second electrical contacts includes a terminal for crimping to a wire. *Davis* discloses first and second electrical contacts. *See* Claim 1[c] and Claim 1[e]. *Davis* discloses a terminal for crimping to a wire. For example, *Davis* at Column 3, Lines 43-64 discloses: > With reference to FIGS. 1, 2 and 7-9, a cable connector 1, meaning a connector 1 for connection to an electrical cable, not shown, will be described. The cable connector 1 is adapted for mated connection with the version of the connector 1, FIGS. 3 and 4, for mounting on a circuit board, not shown. The divider 7 of the cable connector 1 is bifurcated by a passage 26 at the front mating end 12 for receiving the divider 7 of the version of the connector 1 for mounting on a circuit board, not shown. The grooves 19 face toward the passage 26, such that the contacts 4, 5 on opposite sides of the divider 7 face toward the passage 26. The pairs 3 of signal contacts 4, 5 are adapted to be connected to respective pairs 3 of signal wires 27 of a single electrical cable, not shown, or of multiple electrical cables, not shown. The signal wires 27 can be a twisted pair of signal wires 27. In FIG. 7, each of the signal contacts 4, 5 further comprises a termination 22 having arms 28 that extend outward laterally of each other, the arms being bendable into an open barrel configuration to encircle and connect with the signal wire 27. Another set of arms 29 extend laterally of each other, the arms 29 being bendable into an open barrel configuration to encircle and connect with insulation 30, FIG. 8, encircling the signal wire 27. Figs. 7 and 8 of *Davis*:

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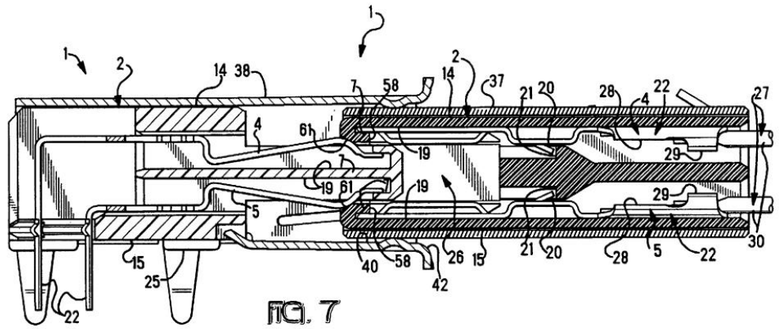


FIG. 7

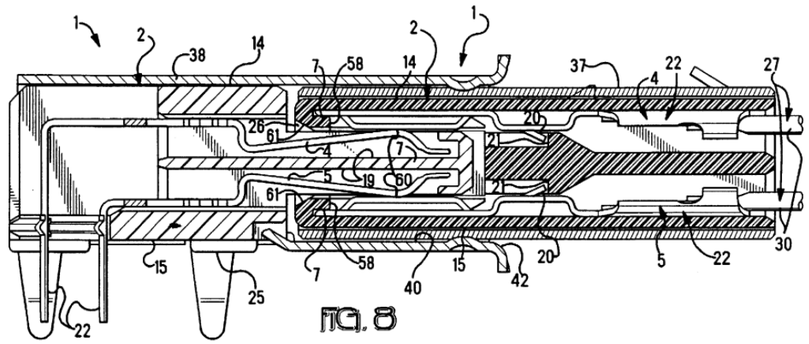


FIG. 8

Fig. 9 of *Davis*:

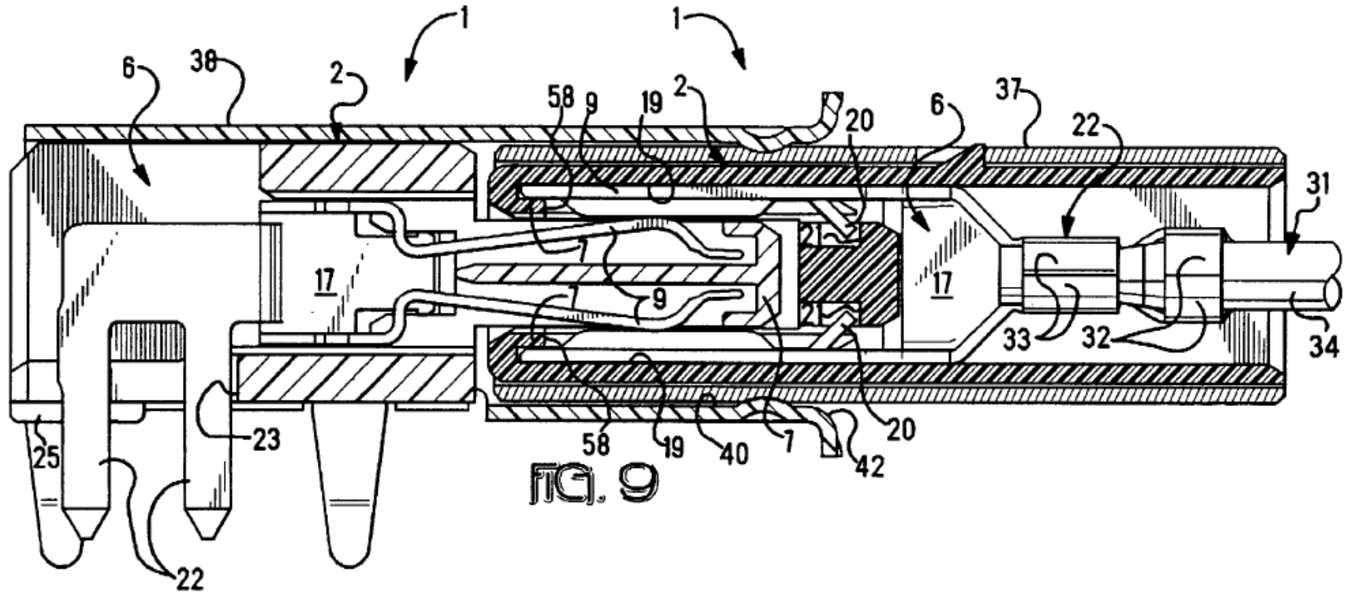
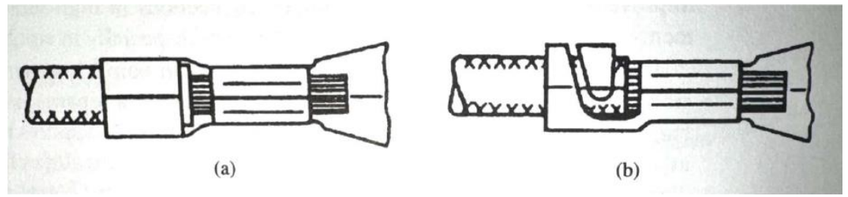
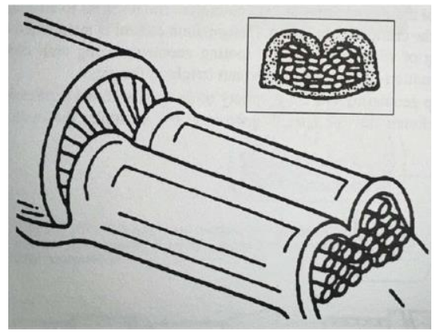


FIG. 9

To the extent Plaintiff alleges *Davis* does not disclose “a terminal for crimping to a wire” expressly or inherently, it would have been obvious to modify *Davis* by using a terminal for crimping to a wire in view of the teachings of *the Handbook* (Mroczkowski, Robert S., Electronic Connector Handbook (1997)).

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*
	Pages 13 and 32 of *the Handbook* disclose crimping as a known type of connection to a wire or cable, and disclose crimped wire connections as among “the oldest of the technologies” for connecting a wire or cable, “dating back to the 1940s.” Fig. 9.8 in Page 37 of *the Handbook*  Fig. 9.10 in Page 39 of *the Handbook*  Therefore, *the Handbook* discloses a terminal for crimping to a wire. It would have been obvious to a POSITA to implement *Davis*’s connectors with a terminal for crimping to a wire as disclosed in *the Handbook*. *The Handbook* is analogous art to *Davis*, and both are analogous art to the ’017 patent, as all three are in the same field of endeavor of electrical connectors. Modifying *Davis* based on *the Handbook* would have involved simple substitution of *Davis*’s contacts for *the Handbook*’s known crimping terminal, to obtain the predictable results of making a permanent connection to a wire/cable using a well-known crimping technique. *See* Pages 32-33 of *the Handbook*. The modification would have also involved applying *the Handbook*’s known crimping technique to *Davis*’s known termination 22. *Davis*’s connector was ready for improvement, because *Davis* does not describe how wires are connected to contacts. However, both *Davis* and *the Handbook* have similar hardware for connecting wires. *See* Pages 32-33 of *the Handbook*, Figs. 7-8 of *Davis*. A POSITA would have expected success in modifying *Davis*’s terminal for crimping to a wire, as disclosed in *the Handbook*. There would be few, if any, changes needed to *Davis*’s hardware to crimp the terminal to a wire. Instead, a POSITA would only need to deform the terminal to form a permanent connection with a wire, guided by *the Handbook*’s disclosure of known crimping techniques. *See* Pages 32-55 of *the Handbook*. For the reasons above, claim 7 would have been obvious based on *Davis* in view of *the Handbook*.
Claim 9	
9. The connector pair of claim 1, wherein at least one of the first and second electrical contacts includes a terminal for soldering a wire or and electrical component to the contact.	*Davis*, in combination with one or more other references, discloses at least one of the first and second electrical contacts includes a terminal for soldering a wire or and electrical component to the contact. *Davis* discloses first and second electrical contacts. *See* Claim 1[c] and Claim 1[e], *Davis* at Column 3, Lines 58-62 discloses: > In FIG. 7, each of the signal contacts 4, 5 further comprises a termination 22 having arms 28 that extend outward laterally of each other, the arms being bendable into an open barrel configuration to encircle and connect with the signal wire 27. To the extent Plaintiff alleges *Davis* does not disclose “a terminal for soldering a wire or an electrical component to the contact” expressly or inherently, it would have

U.S. Patent No. ’017	Exemplary Disclosures Based on *Davis*
	been obvious to modify *Davis* by using a terminal for soldering a wire or and electrical component to the contact in view of the teachings of *the Handbook*. *The Handbook* discloses soldering to a printed wiring board. *See* Page 21 of *the Handbook*. According to *the Handbook*, “[t]here are two major media through which [permanent] connections are established: (a) wires or cables and (b) printed wiring boards (PWBs).” PWBs have been used and known since at least the 1950s. *The Handbook* further discloses that “[s]oldering is the dominant metallurgical technology used in PWB applications” and discloses surface mount technology (SMT) as one of the two prevalent connection techniques for attaching electronics to a printed wiring board, *see* also Pages 774-77 of *the Handbook*. It would have been obvious to a POSITA to use the termination 22 having arms 28 of *Davis*’s contact as a terminal for soldering a wire or an electrical component to the contact. The combination would have involved combining *Davis*’s known terminal with the known board of *the Handbook*, using known surface mount soldering techniques disclosed in *the Handbook*. For example, a POSITA would have found it obvious to solder the exposed end of the termination 22 having arms 28 to a board of a device, using *the Handbook*’s surface mount soldering technique. The combination would have yielded predictable results of providing a permanent electrical connection between *Davis*’s termination 22 and a wire or electrical component. A POSITA would have expected success in combining *Davis* with *the Handbook*’s teaching of soldering a wire or electrical component. A POSITA would have been guided by *the Handbook*’s disclosure about how to solder the exposed end of the termination 22 to a wire or electrical component using surface mount technology. Therefore, claim 9 would have been obvious based on *Davis* in view of *the Handbook*.