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(56) Fremdragne publikationer:
GB-A- 2 448 595
US-A- 6 089 912
US-A1- 2010 178 799
US-B1- 7 857 661

DESCRIPTION

RELATED APPLICATIONS

[0001] This application is related to U.S. Application No. 13/198,765, filed August 5, 2011.

[0002] This application is related to U.S. Application No. 13/653,095, filed October 16, 2012.

[0003] This application is related to U.S. Application No. 13/652,969, filed October 16, 2012.

BACKGROUND

Field of the Disclosure

[0004] The disclosure relates generally to coaxial cable connectors, and particularly to a coaxial cable connector having a compressible.

Technical Background

[0005] Coaxial cable connectors such as F-connectors are used to attach coaxial cables to another object such as an appliance or junction having a terminal adapted to engage the connector. Coaxial cable F-connectors are often used to terminate a drop cable in a cable television system. The coaxial cable typically includes a center conductor surrounded by a dielectric, in turn surrounded by a conductive grounding foil and/or braid (hereinafter referred to as a conductive grounding sheath); the conductive grounding sheath is itself surrounded by a protective outer jacket. The F-connector is typically secured over the prepared end of the jacketed coaxial cable, allowing the end of the coaxial cable to be connected with a terminal block, such as by a threaded connection with a threaded terminal of a terminal block.

[0006] Crimp style F-connectors are known wherein a crimp sleeve is included as part of the connector body. A special radial crimping tool, having jaws that form a hexagon, is used to radially crimp the crimp sleeve around the outer jacket of the coaxial cable to secure such a crimp style F-connector over the prepared end of the coaxial cable.

[0007] Still another form of F-connector is known wherein an annular compression sleeve is used to secure the F-connector over the prepared end of the cable. Rather than crimping a crimp sleeve radially toward the jacket of the coaxial cable, these F-connectors employ a plastic annular compression sleeve that is initially attached to the F-connector, but which is

detached therefrom prior to installation of the F-connector. The compression sleeve includes an inner bore for following such compression sleeve to be passed over the end of the coaxial cable prior to installation of the F-connector. The end of the coaxial cable must be prepared by removing a portion of the outer braid and/or folding the outer braid back over the cable jacket. The F-connector itself is then inserted over the prepared end of the coaxial cable. Next, the compression sleeve is compressed axially along the longitudinal axis of the connector into the body of the connector, simultaneously compressing the jacket of the coaxial cable between the compression sleeve and the tubular post of the connector. An example of such a compression sleeve F-connector is shown in U.S. Pat. No. 4,834,675 to Samchisen A number of commercial tool manufacturers provide compression tools for axially compressing the compression sleeve into such connectors.

[0008] Collars or sleeves within a coaxial cable connector can be compressed inwardly against the outer surface of a coaxial cable to secure a coaxial cable connector thereto. For example, in U.S. Pat. No. 4,575,274 to Hayward, a connector assembly for a signal transmission system is disclosed wherein a body portion threadedly engages a nut portion. The nut portion includes an internal bore in which a ferrule is disposed, the ferrule having an internal bore through which the outer conductor of a coaxial cable is passed. As the nut portion is threaded over the body portion, the ferrule is wedged inwardly to constrict the inner diameter of the ferrule, thereby tightening the ferrule about the outer surface of the cable. However, the connector shown in the Hayward '274 patent cannot be installed by a simple crimp or compression tool; rather, the mating threads of such connector must be tightened, as by using a pair of wrenches. Additionally, the end of the coaxial cable must be prepared by stripping back the outer jacket to expose the conductive grounding sheath and center conductor, then further requires that the conducting grounding sheath be folded back, or everted, all of which takes time, tools, and patience.

[0009] US 2010/178799 A1 discloses a connector according to the preamble of claim 1. Other prior art is disclosed by GB 2 448 595 A and by US 7 857 661 B1.

[0010] US 6 089 912 A discloses a post-less coaxial cable connector having a collar, a sleeve, a retaining ring, a coupler and a nut. The sleeve is press fit into the collar.

[0011] Figure 1 illustrates connector **1000** having coupler **2000,** separate post **3000,** separate continuity member **4000,** and body **5000.** In connector **1000,** continuity member **4000** is captured between post **3000** and body **5000** and contacts at least a portion of coupler **2000.** Coupler **2000** is preferably made of metal, such as brass and plated with a conductive material such as nickel. Post **3000** is preferably made of metal, such as brass, and plated with a conductive material such as tin. Continuity member **4000** is preferably made of metal such as phosphor bronze and plated with a conductive material such as tin. Body **5000** is preferably made of metal such as brass and plated with a conductive material such as nickel.

SUMMARY OF THE DETAILED DESCRIPTION

[0012] A coaxial connector according to the invention is defined in claim 1.

[0013] The coaxial connector may further comprise a retainer that has an external surface and engages the body and rotatably engages the coupler. The retainer further has an internal surface in mechanical and electrical communication with a ferrule. A shell has an outer surface and an internal surface, with the internal surface defining an opening through the shell. The internal surface slidingly engages at least a portion of the rear end of the body. A sealing ring is disposed within the shell and engages the rear end of the body. The sealing ring has an internal surface. Upon compression of the coaxial cable connector the sealing ring engages the jacket of the coaxial cable.

[0014] Alternatively, upon compression of the coaxial cable connector, the shell may push the sealing ring against the rear end of the body, causing the sealing ring to be compressed both axially and radially and a portion thereof to engage the outer jacket of the coaxial cable. The coaxial cable connector may include a coupling portion rotatably engaging the front end of the retainer. The coaxial cable connector may include a coupling portion rotatably engaging the front end of the body. The shell radially compresses the rear end of the coaxial cable connector body. The coaxial cable connector is post-less.

[0015] Additional features and advantages are set out in the detailed description which follows, and in part will be readily apparent to those skilled in the art from that description or recognized by practicing the embodiments as described herein, including the detailed description, the claims, as well as the appended drawings.

[0016] It is to be understood that both the foregoing general description and the following detailed description are merely exemplary, and are intended to provide an overview or framework to understanding the nature and character of the claims. The accompanying drawings are included to provide a further understanding, and are incorporated in and constitute a part of this specification. The drawings illustrate one or more embodiment(s), and together with the description serve to explain principles and operation of the various embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017]

Figure 1 is a side cross sectional view of a coaxial cable connector;

Figure 2 is a partial cross section of a coaxial cable useful for description of the various cable components;

Figure 2A is a partial cross section of a partially prepared coaxial cable;

Figure 2B is a partial cross section of a prepared coaxial cable;

Figure 3 is a partial cross section of acoaxial connector utilizing a post with a coaxial cable partially installed;

Figure 3A is a partial cross section of a coaxial connector utilizing a post with a coaxial cable further partially installed;

Figure 4 is a cross sectional view of one embodiment of a coaxial cable connector according to an exemplary embodiment;

Figure 5 is a partial cross section of a partially installed prepared coaxial cable using one method of preparation according to an exemplary embodiment;

Figure 5A is a partial cross section of a further partially installed prepared coaxial cable using one method of preparation according to an exemplary embodiment;

Figure 6 is a partial cross section of the coaxial cable connector of **Figure 4** in an uncompressed or open condition with the prepared coaxial cable of **Figure 2A** inserted therein;

Figures 6A is a partial cross section of the coaxial cable connector and prepared coaxial cable of **Figure 2A** in a final stage of compression.

Figure 7 is a cross section of a ferrule component;

Figure 7A is an end schematic view of the ferrule component of **Figure** 7 useful for description of the various component constituents;

Figure 7B is an isometric view of the ferrule component of **Figure** 7 useful for description of the various component constituents

Figure 8 is a cross section of a ferrule component according to an exemplary embodiment;

Figure 8A is an end schematic view of the ferrule component of **Figure 8** useful for description of the various component constituents;

Figure 9 is a cross section view of an embodiment of a coaxial cable connector an uncompressed state with the cable shown partially inserted wherein the ferrule alternatively engages the cable jacket;

Figure 10 is a cross section view of an alternate embodiment of a coaxial cable connector in an uncompressed state wherein a compression ring forms the body radially inwardly;

Figure 10A is a cross section view of an alternate embodiment of a coaxial cable connector in an compressed state having a cable installed wherein a compression ring forms the body radially inwardly

Figure 11 is a cross section view of an alternate embodiment of a coaxial cable connector;

Figure 12 is a schematic end view of a component of the connector of **Figure 11;**

Figure 12A is a cross section view of a component of the connector of **Figure 11;**

Figure 13 is a cross section view of an alternate embodiment of a coaxial cable connector that does not require a compression tool to close the connector; and

Figure 13 A is a schematic end view of a component of the connector of **Figure 13.**

DETAILED DESCRIPTION

[0018] Reference will now be made in detail to the embodiments, examples of which are illustrated in the accompanying drawings, in which some, but not all embodiments are shown. Indeed, the concepts may be embodied in many different forms and should not be construed as limiting herein. Rather, these embodiments are provided so that this disclosure will satisfy applicable legal requirements. Whenever possible, like reference numbers will be used to refer to like components or parts.

[0019] Coaxial cable connectors are used to couple a prepared end of a coaxial cable to a threaded female equipment connection port of an appliance. The coaxial cable connector may have a post, a moveable post or be postless. In each case, though, in addition to providing an electrical and mechanical connection between the conductor of the coaxial connector and the conductor of the female equipment connection port, the coaxial cable connector provides a ground path from an outer conductor of the coaxial cable to the equipment connection port. The outer conductor may be, as examples, a conductive foil or a braided sheath. Maintaining a stable ground path protects against the ingress of undesired radio frequency ("RF") signals which may degrade performance of the appliance. This is especially applicable when the coaxial cable connector is not fully tightened to the equipment connection port, either due to not being tightened upon initial installation or due to becoming loose after installation.

[0020] For purposes of this description, the term "forward" will be used to refer to a direction toward the portion of the coaxial cable connector that attaches to a terminal, such as an appliance equipment port. The term "rearward" will be used to refer to a direction that is toward the portion of the coaxial cable connector that receives the coaxial cable. The term "terminal" will be used to refer to any type of connection medium to which the coaxial cable connector may be coupled, as examples, an appliance equipment port, any other type of connection port, or an intermediate termination device.

[0021] Figures 2, 2A and 2B, illustrate a coaxial cable **8000** and the method in which the end of coaxial cable **8000** is prepared for use with coaxial cable connectors. Referring to **Figure 2,** coaxial cable **8000** has center conductor **8010** surrounded by a dielectric layer **8020.** Dielectric layer (or dielectric) **8020** may also have a foil or other metallic covering **8030.** Coaxial cable

8000 has a braided outer conductor **8040** which is covered and protected by jacket **8050.** Typically, to prepare coaxial cable **8000** for attachment to a coaxial cable connector, a portion of center conductor **8010** is exposed as illustrated in **Figure 2A.** Jacket **8050** is trimmed back so that a portion of dielectric **8020** (and metallic covering **8030)** and braided outer conductor **8040** are exposed. Braided outer conductor **8040** is then folded back over jacket **8050** to expose dielectric (and the metallic covering **8030** if present) as shown in **Figure 2B.**

[0022] Figure 3 illustrates prepared coaxial cable of **Figure 2B** partially inserted into coaxial connector **1000.** Inside, body portion **5000** is a post **3000,** which is used to secure coaxial cable **8000** relative to coaxial connector **1000.** As can be seen in **Figure 3,** dielectric **8020** and metallic covering **8030** are inserted into post **3000.** Post **3000** can cause problems for the coaxial connector **1000** as well as the installer. First, coaxial cable **8000** must be prepared and dielectric **8020** and metallic covering **8030** aligned with and inserted into post **3000.** Second, the post **3000** can skive the dielectric **8020** and metallic covering **8030,** tear the braided outer conductor **8040** or the jacket **8050.** Additionally, it can be difficult to insert the dielectric **8020** and metallic covering **8030** onto post **3000** due to diametral tolerances of both post 3000 and cable. Further, manufacturing burrs or other damage may be present on the cable insertion end of post **3000** causing further difficulty inserting cable dielectric **8020** and metallic covering **8030** into the post.

[0023] Figure 3A illustrates prepared coaxial cable of **Figure 2B** further partially inserted into a coaxial connector **1000** wherein braided outer conductor **8040** and jacket **8050** must pass over post **3000** and through gripping member **6000** during further insertion of cable **8000** into connector **1000.** With braided outer conductor **8040** folded back over jacket **8050** the outermost dimension of the prepared cable can become relatively large compared to the passageway provided in gripping member **6000.** Additionally, if jacket **8050** is thicker than allowed specification, the outermost dimension of the prepared cable can become relatively even larger compared to passageway provided in gripping member **6000.** All this can make it difficult to insert cable **8000** into connector **1000.**

[0024] Coaxial cable connector **100** is illustrated in **Figure 4.** oaxial cable connector **100** has coupling portion **200,** retainer **300,** body **400,** ferrule **500,** sealing member **600,** and a shell **700.** It should be noted that coaxial cable connector **100** does not have a post that engages coaxial cable between the dielectric and the outer conductor as illustrated above. Additionally, sealing member **600** may be a separate and distinct component from the other components of coaxial cable connector **100.** In the embodiment illustrated in **Figure 4,** coaxial cable connector **100** is post-less.

[0025] Coupling portion **200** has front end **220,** back end **225,** and opening **230** extending therebetween. Opening **230** of coupling portion **200** has internal surface **235.** Internal surface **235** includes threaded portion **240** and channel **245,** which is configured to receive elastic ring **250** to seal coaxial cable connector **100.** Coupling portion **200** also has inwardly projecting ring **255** to engage rearward facing shoulder **335** of retainer **300,smooth** outer surface **260** adjacent front end **220** and hexagonal configuration **265** adjacent back end **225.** Coupling

portion **200** may be made from any appropriate material, for example, metallic material, such as brass, and may be plated with a conductive, corrosion-resistant material, such as nickel.

[0026] Retainer **300** has front end **310** and back end **320** with internal surface **330** extending therebetween. Rearward facing annular surface **335** serves to rotatably retain coupling portion **200.** Barb **340** engages body **400** at step **341**to facilitate locating retainer **300** with respect to body **400.** Retainer **300** may or may not have optional monolithic grounding flange **345.** Retainer **300** may be made from any appropriate material, for example, metallic material, such as brass, and may be plated with a conductive, corrosion-resistant material, such as nickel.

[0027] Body **400** has internal surface **415** extending between front end **410** and rear end **420** and defining longitudinal opening **425.** Body **400** also has outer surface **432** disposed proximate back end **420** to engage and retain shell **700,** inner surface **435** to engage retainer **300,** annular groove **440** to retain shell **700,** and internal groove **430** to engage ferrule **500.** Additionally, body **400** has tapered surface **450** proximate rear end **420** serving to shape or form separate and distinct sealing member **600** when shell **700** is advanced over body **400** forcing sealing member **600** under or into the body **400.** Body **400** may be made from any appropriate material, such as, for example, plastic such as acetal.

[0028] Sealing member **600** may have front end **610,** rear end **620,** interior passage **625** and an external shape **630** and be disposed within opening **730** of shell **700.** Front end **610** is preferably disposed against rear end **420** of body **400** and rear end **620** is preferably disposed against surface **735** of the shell **700.** Sealing member **600** may be made of any appropriate material, for example, a rubber-like plastic material such as silicone or ethylene propylenediene monomer (EPDM).

[0029] Shell **700** has front end **710** and back end **720** with annular ring **740** proximate front end **710** to engage and be retained on body **400** by the annular groove **440.** Shell **700** has outer surface **750** and internal surface **730** defining an opening **755** therethrough. As can be seen in **Figure 4,** opening **755** is larger at front end **710** than at back end **720** due to forward and inward facing surface **735.** Shell **700** may be made from any appropriate material, for example, plastic.

[0030] Returning to **Figures 2A** and **2B,** coaxial cable **8000** is in a prepared state for use with coaxial cable connector 100. Center conductor **8010** is exposed by removing jacket **8050,** braided outer conductor **8040,** foil or other metallic covering **8030,** and dielectric layer **8020.** A second portion of jacket **8050** may be removed leaving dielectric layer **8020,** foil or other metallic covering **8030,** and braided outer conductor **8040** intact. As discussed above with regard to **Figure 2A** and **2B,** connector **1000** requires braided outer conductor **8040** be folded back over jacket **8050.**

[0031] The assembly of coaxial cable connector **100** will now be discussed with reference to **Figures 5-5A.** As can be seen in **Figure 5,** prepared coaxial cable **8000** of **Figure 2A** is inserted through opening **755** of shell **700,** sealing member **600,** and partially into the ferrule

500. Clearance between cable **8000** and connector components is provided to facilitate the cable entering connector **100.** In **Figure 5A,** cable **8000** and, more specifically, cable dielectric layer **8020,** foil or other metallic covering **8030,** and braided outer conductor **8040** are fully inserted into ferrule **500.**

[0032] Turning to **Figure 6** and also referencing **Figure 7,** cable **8000** is further advanced urging ferrule **500** to move forward while causing ferrule beams **515** to be closed radially inwardly about braided outer conductor **8040** forcing internal surface **538** to contact braided outer conductor **8040** while external surface **539** remains in mechanical and electrical communication with retainer **300.** During the closing action, one or more pawls or teeth **520** of ferrule **500** are driven into intimate contact with braided outer conductor **8040** providing both mechanical retention and electrical communication between teeth **520** and braided outer conductor **8040.** Additionally, teeth **520** may be forced through braided outer conductor **8040** and contact the foil or other metallic covering **8030.**

[0033] In **Figure 6A,** axial compression of coaxial cable connector **100** has been completed. As can be seen, shell **700** has been moved axially forward and sealing member **600** has been forced into body **400** and further into shell **700** moving sealing member **600** to a compressed state around cable jacket **8050** both sealing body, shell, and cable junction and gripping cable **8000.**

[0034] Turning to **Figures 7** through **7B,** a detailed description of the constituent features of ferrule **500** provided. Ferrule **500** has front end **510,** back end **530,** and opening **535** extending therebetween. Opening **535** of ferrule **500** has internal surface **538,** which includes teeth **520,** vertical face **545** and through bore **550.** Ferrule **500** also has a multiplicity of slots **525** that permit flaring resulting in flexible beams **515.** Lip **540** engages body groove **430** in shipping position and retainer **300** in closed position. Ferrule **500** may be made from any appropriate material, for example, metallic material, such as brass, and may be plated with a conductive, corrosion-resistant material, such as nickel.

[0035] Figures 8 and **8A** illustrate an alternate embodiment involving ferrule **500'.** Ferrule **500'** differs from the ferrule **500** in that ferrule **500'** has extended portion **560** and inner surface **519** to encompass cable jacket **8050.** Ferrule **500'** has teeth **521** that capture and grip cable jacket **8050** as illustrated in **Figure 9.**

[0036] Figure 9 depicts connector 100 having ferrule **500',** as described above, and having cable **8000** inserted to urge ferrule **500'** to move forward while causing ferrule beams **515** to close radially inwardly about braided outer conductor **8040** which causes internal surface **538** to contact braided outer conductor **8040** while external surface **539** remains in mechanical and electrical communication with retainer **300.** During the aforementioned closing action, teeth **520** of ferrule **500'** are driven into intimate contact with braided outer conductor **8040** providing both mechanical retention and electrical communication between teeth **520** and braided outer conductor **8040.** Additionally, teeth **520** may be forced through braided outer conductor **8040** and contact foil or other metallic covering **8030.** Extended portion **560** of ferrule **500'** and inner

portion **519** engage cable jacket **8050** with teeth **521** capturing and gripping cable jacket **8050**

[0037] Figure 10 illustrates coaxial cable connector **100** that eliminates sealing member **600** and employs shell **700'** to compress or radially inwardly form body **400'** around cable **8000** as shown in **Figure 10A.**

[0038] Figure 10A illustrates connector **100** with cable **8000** fully inserted and shell **700'** moved forward to compress or radially inwardly form body **400'** around cable **8000.**

[0039] Figure 11 is a cross section view of a coaxial cable connector **100'** which has splines **765** in the shell **700"** to limit rotational movement of the cable **8000** within the connector **100'.** Slots **766** are illustrated and discussed below.

[0040] Figure 12 and **12A** illustrate views of shell **700". Figure 12** is a schematic end view of shell **700"** and **Figure 12A** is a cross sectional view of shell **700".** Shell **700"** comprises internal splines **765** and slots **766.** Slots **766** permit flexible beams **767** to conform to contours of body **400** while maintaining a tight gripping action.

[0041] Figure 13 is a cross sectional view of coaxial cable connector **800** that does not require a compression tool to close connector **800.** Connector **800** has body **805** and shell **850.** Body **805** comprises gripping ribs **810** and external helical inclined plane **870.** Shell **850** comprises gripping ribs **860** and internal helical inclined plane **880** designed to engage and co-act with external helical inclined plane **870** to advance shell **850** over body **805** when shell **850** and body **805** are radially moved relative to one another. The corresponding external helical inclined plane **870** and internal helical inclined plane **880** may be similar to a standardized thread system such as an SAE thread, or an Acme thread requiring multiple revolutions to achieve complete advancement of shell **850** over body **805** or, alternatively, may be more of an elongated spiral in nature requiring less than one full revolution for complete advancement of shell **850** over body **805.**

[0042] Alternatively, helical inclined plane system may consist of an external helical inclined plane on body **805** with a single tooth or peg as a follower as part of shell **850.** The inverse is possible as well, where helical inclined plane system may consist of an internal helical inclined plane on shell **850** with a single tooth or peg as a follower as part of body **805.** Gripping ribs **810** and **860** serve for applying hand-torque to the connector **800** during installation onto a coaxial cable and may be in any number of configurations that provides an improved grippable surface, such as a knurl, diamond or other suitable pattern. **Figure 13A** is a schematic end view of a component of connector **800** of **Figure 13** illustrating the plurality gripping ribs **860.**

[0043] Many modifications and other embodiments set forth herein will come to mind to one skilled in the art to which the embodiments pertain having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the description and claims are not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the

scope of the appended claims.

[0044] It is intended that the embodiments cover the modifications and variations of the embodiments. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

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- US65309512 **[0002]**
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Patentkrav

1. Koaksialkabelstik (100, 100', 800) til at koble en ende af et koaksialkabel (8000) til en terminalenhed, hvor koaksialkablet (8000) omfatter en indvendig leder (8010), et dielektrikum (8020), der omgiver den indvendige leder (8010), en udvendig leder (8040), der omgiver dielektrikummet (8020), og en indkapsling (8050), der omgiver den udvendige leder (8040), hvor koaksialkabelstikket (100, 100', 800) omfatter:
et legeme (400, 400'), der har en indvendig flade (415), som strækker sig mellem forreste og bageste ender (410, 420) af legemet (400, 400'), hvor den indvendige flade (415) definerer en langsgående åbning (425);
en holder (300);
en samlering (500, 500');
kendetegnet ved, at
samleringen (500, 500') har en udvendig flade (539), der går i glidende indgreb med i det mindste en del af holderen (300) og i det mindste en del af legemet (400, 400'), hvor samleringen (500, 500') har i det mindste en bjælke (515) og en indvendig flade (538), der er indrettet til at modtage et koaksialkabel (8000), som er indsat i koaksialkabelstikket (100, 100', 800) og indgriber i det mindste en del af den udvendige leder (8040) af koaksialkablet (8000), hvor samleringen (500, 500') er konfigureret til at bevæge sig fremad, og den i det mindste ene bjælke (515) af samleringen (500, 500') er konfigureret til radialt at lukke omkring den udvendige leder (8040) af koaksialkablet (8000), medens den udvendige flade (539) af samleringen (500, 500') forbliver i mekanisk og elektrisk forbindelse med holderen (300), når koaksialkablet (8000) modtages af samleringen (500, 500'),
koaksialkabelstikket (100, 100', 800) er uden stolpe (”post-less”).

2. Koaksialkabelstik ifølge krav 1, hvor den i det mindste ene bjælke (515) indbefatter en første pal, der strækker sig fra den indvendige flade (538) af samleringen (500) og har en første tand (520), hvor den første tand (520) er indrettet til at blive

drevet ind i kontakt med den udvendige leder (8040) af koaksialkablet (8000), når den i det mindste ene bjælke (515) lukker omkring koaksialkablet (8000), der tilvejebringer mekanisk fastholdelse og elektrisk forbindelse mellem den første tand (520) og den udvendige leder (8040).

3. Koaksialkabelstik ifølge krav 2, hvor den i det mindste ene bjælke (515) omfatter en forlænget del, og hvor den forlængede del indbefatter en anden tand (520), der strækker sig fra den indvendige flade (538) af samleringen (500), og hvor den anden tand (520) er indrettet til at fange og gribe koaksialkabelindkapslingen (8050), når den i det mindste ene bjælke (515) lukker omkring koaksialkablet (8000).

4. Koaksialkabelstik ifølge hvilke som helst af kravene 1-3, hvor den i det mindste ene bjælke (515) omfatter en flerhed af bjælker.

5. Koaksialkabelstik ifølge hvilke som helst af kravene 1-4, hvor holderen (300) omfatter en monolitisk jordflange (345).

6. Koaksialkabelstik ifølge hvilke som helst af kravene 1-5, der yderligere omfatter et hylster (700, 700', 700"), der har en udvendig flade (750) og en indvendig flade (730), hvor den indvendige flade (730) definerer en åbning (755) gennem hylsteret (700, 700', 700"), hvor den indvendige flade går i glidende indgreb med i det mindste en del af den bageste ende af legemet (400, 400').

7. Koaksialkabelstik ifølge krav 6, der yderligere omfatter en tætningsring (600), der er anbragt inden i hylsteret (700, 700', 700") og indgriber den bageste ende af legemet (400, 400'), hvor tætningsringen (600) har en indvendig flade, og hvor tætningsringen (600) ved komprimering af koaksialkabelstikket er indrettet til at indgribe indkapslingen af koaksialkablet.

8. Koaksialkabelstik ifølge krav 7, hvor hylsteret (700, 700', 700") omfatter noter, der er indrettet til at gribe

indkapslingen af koaksialkablet, og en flerhed af fleksible bjælker, som er adskilt af slidser, hvor bjælkerne er indrettet til at tilvejebringe en gribende handling på indkapslingen af koaksialkablet, medens de tillader hylsteret (700, 700', 700") at danne konturerne af legemet (400, 400').

DRAWINGS

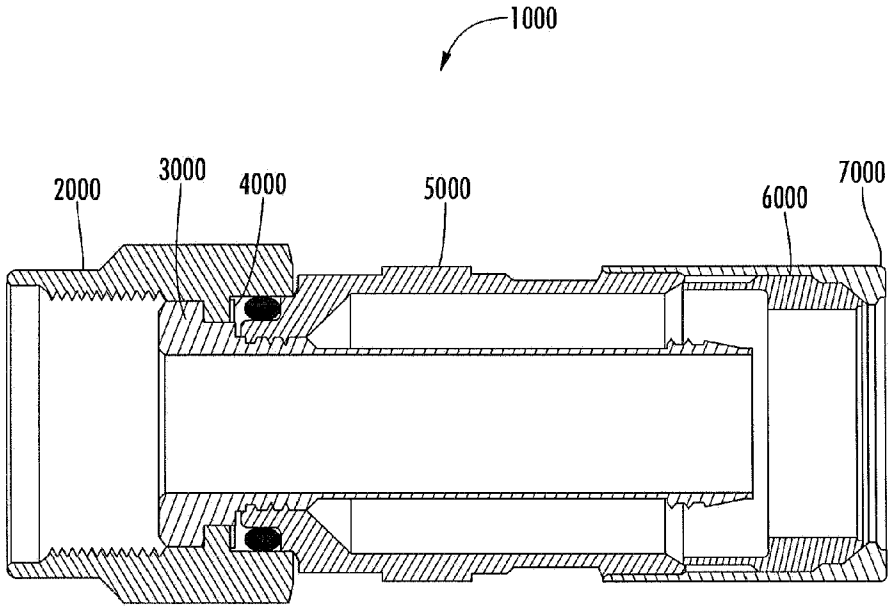


FIG. 1

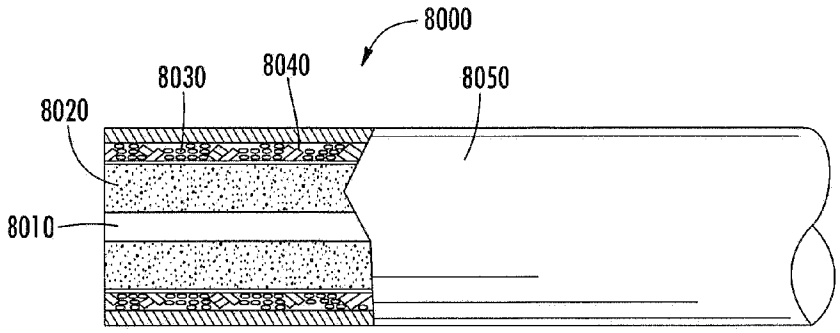


FIG. 2

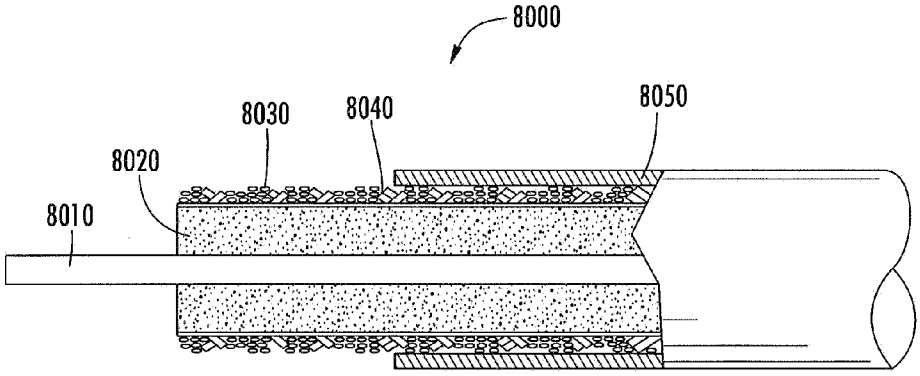


FIG. 2A

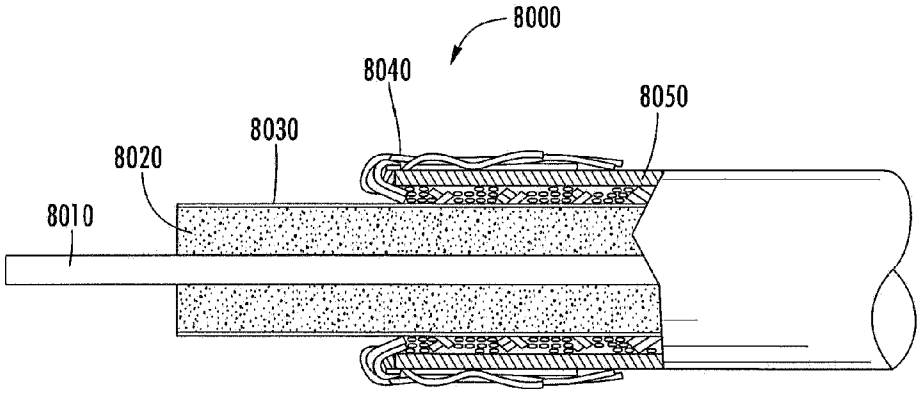
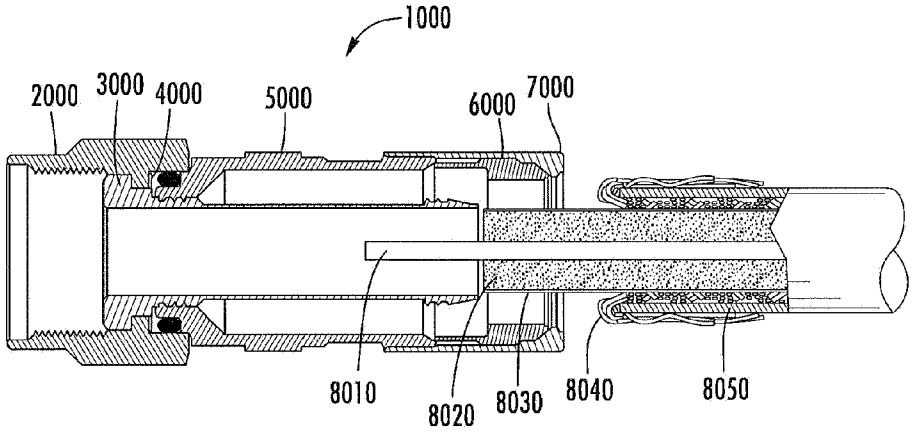


FIG. 2B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6000
7000
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8050

FIG. 3

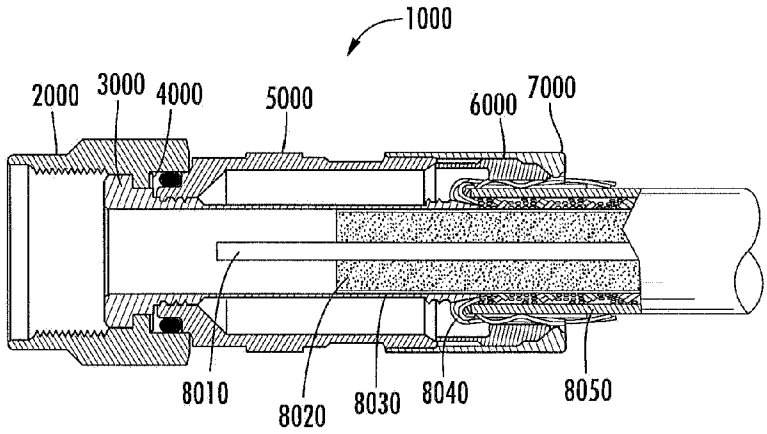
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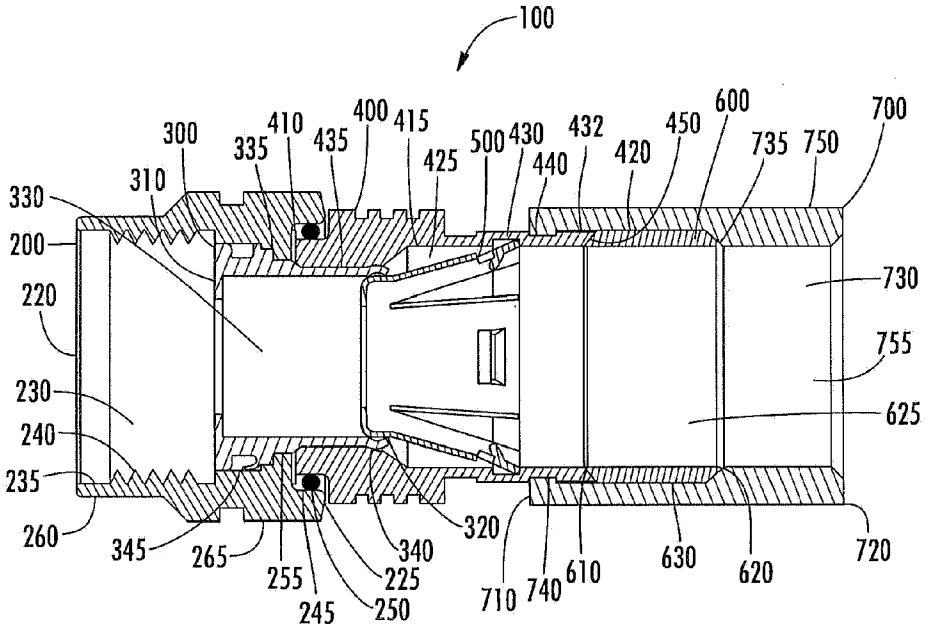
FIG. 3A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740
710

FIG. 4

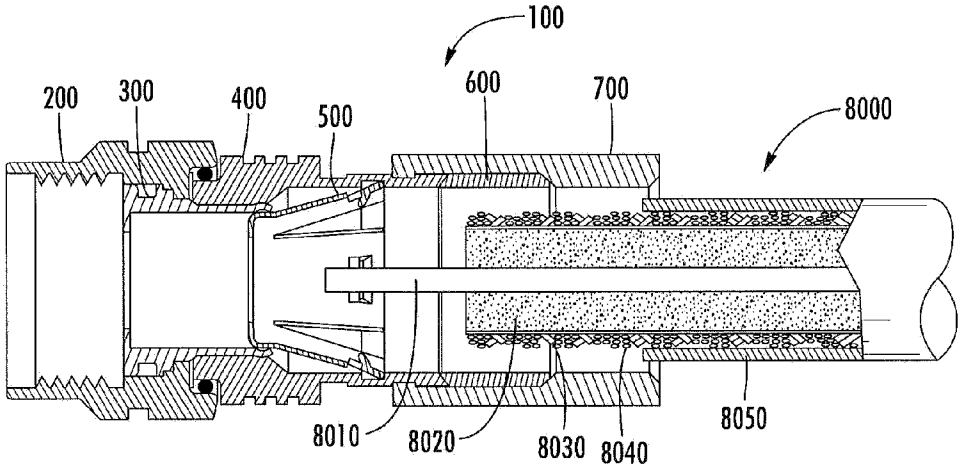
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FIG. 5

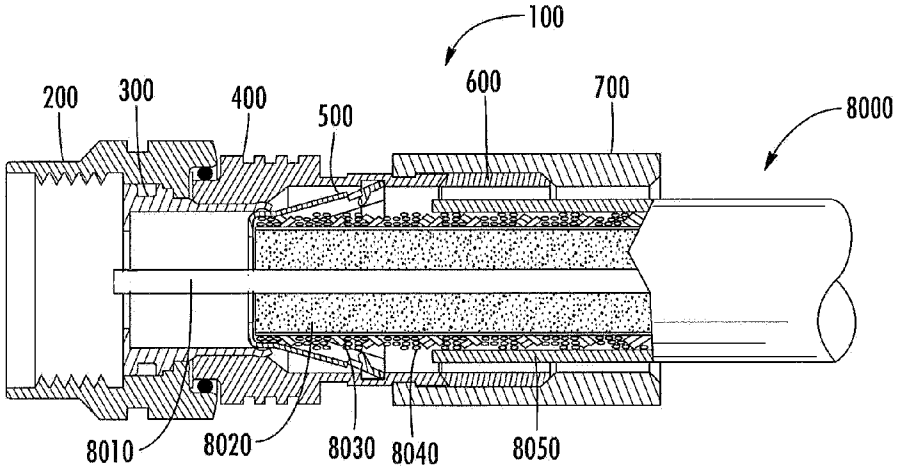
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FIG. 5A

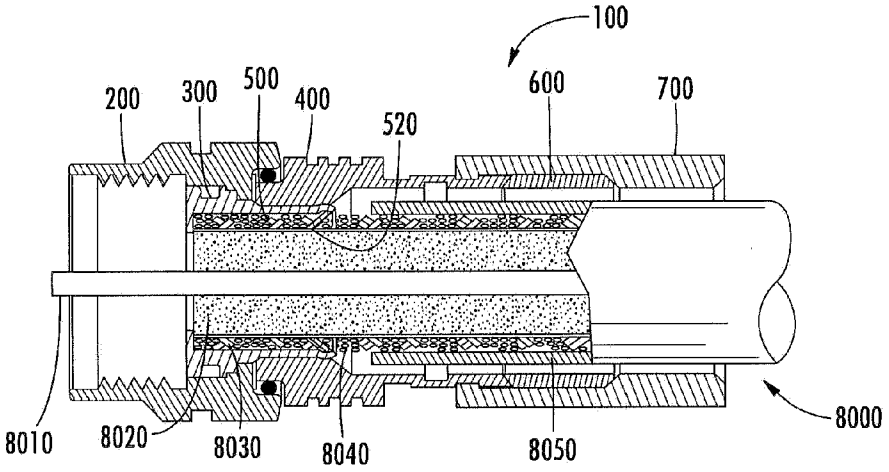
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FIG. 6

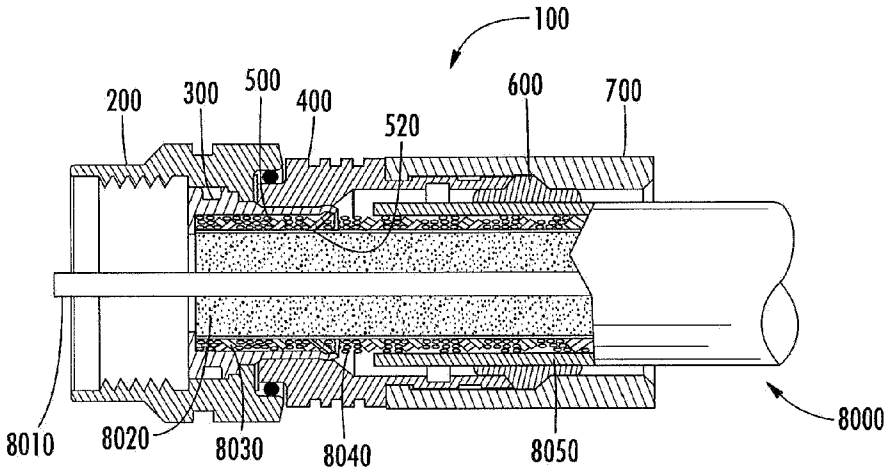
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FIG. 6A

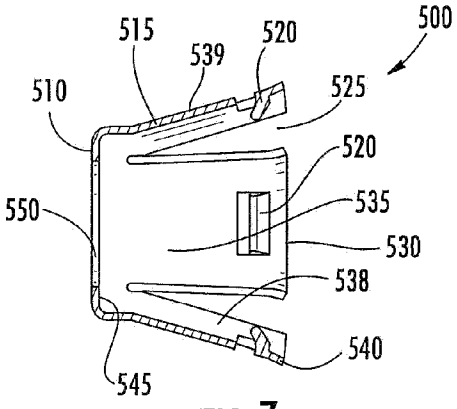

FIG. 7

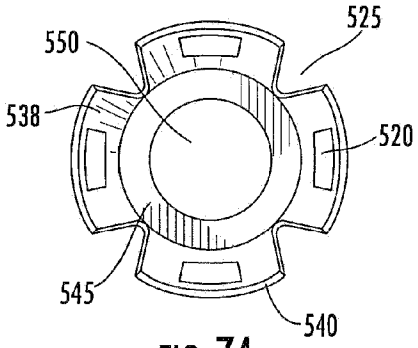

FIG. 7A

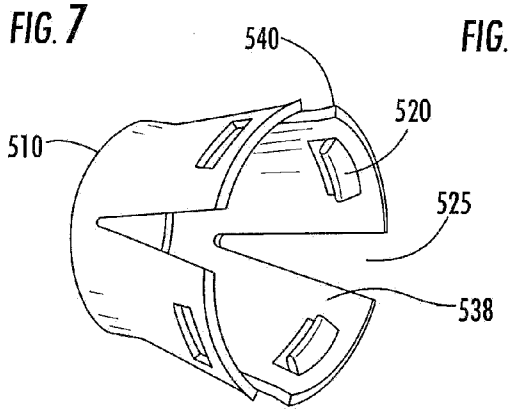

FIG. 7B

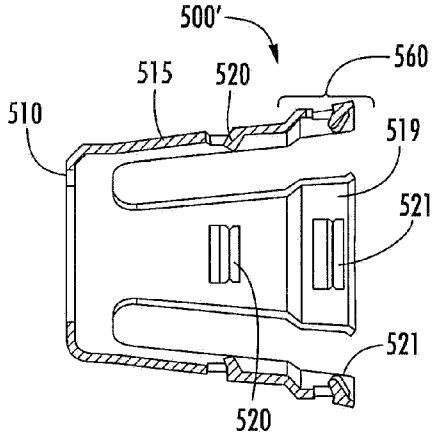

FIG. 8

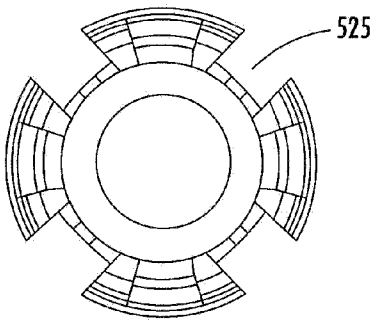

FIG. 8A

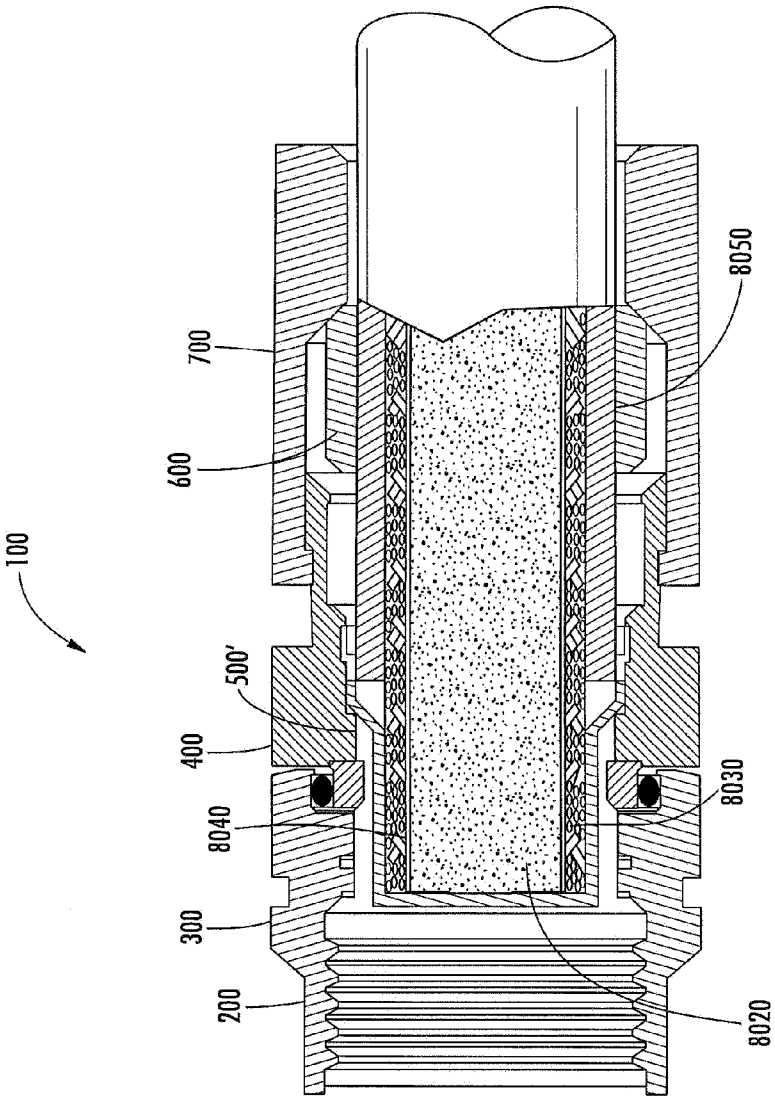

FIG. 9

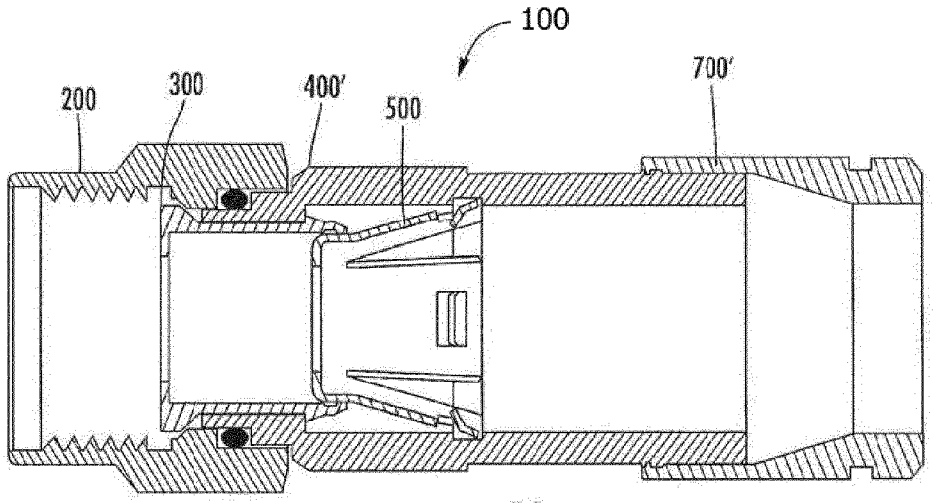

FIG. 10

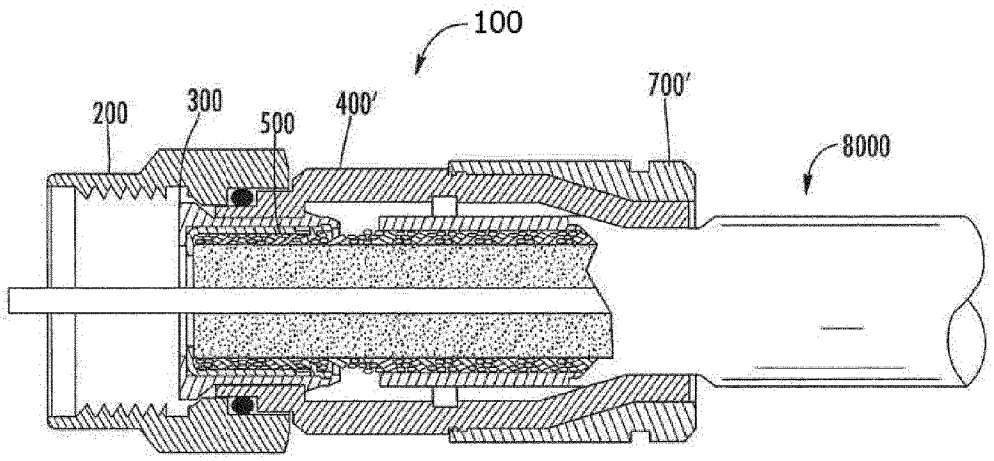

FIG. 10A

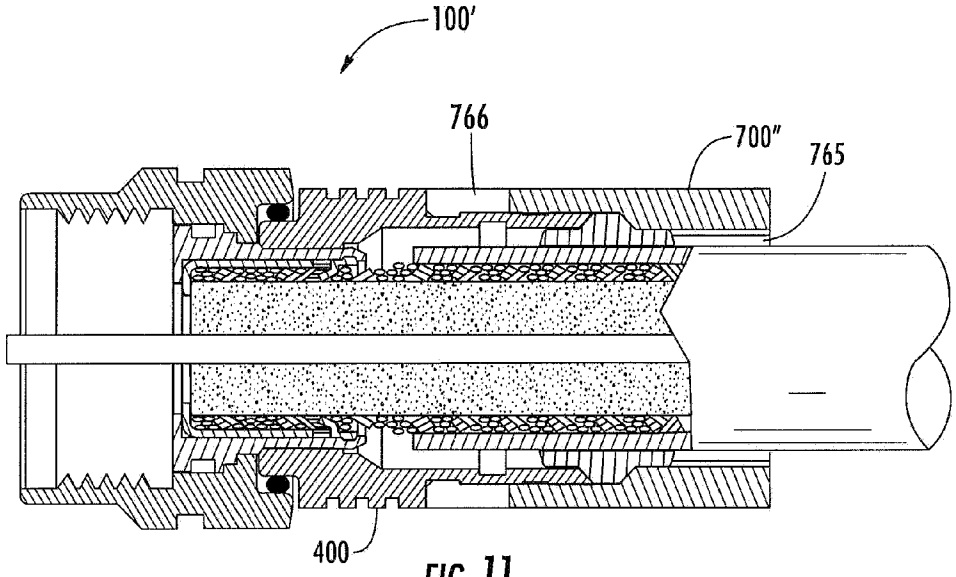

FIG. 11

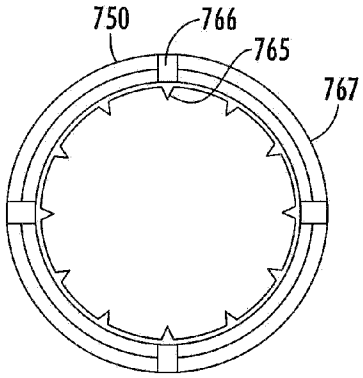

FIG. 12

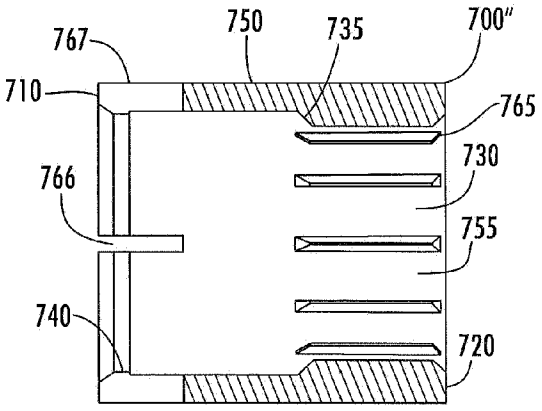

FIG. 12A

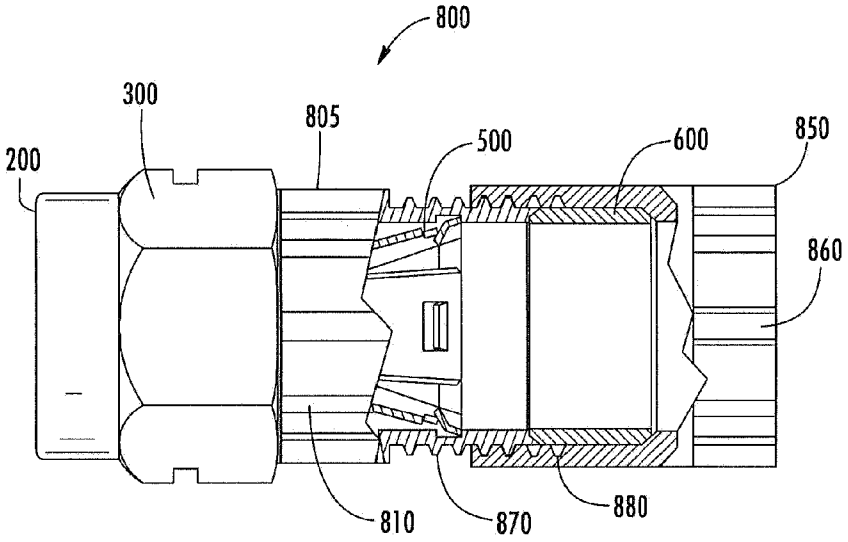

FIG. 13

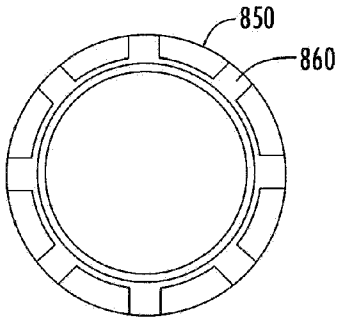

FIG. 13A