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(54) Coaxial cable connector

(57) A coaxial cable connector (1) for a coaxial cable comprising a body (2). Said body (2) comprises an outer body surface (8) an inner body surface (9) a nut (10) arranged at the second end (4) of the body (2), a post (11). The post (11) is arranged substantially coaxially with the central axis (7) in the central bore (6) of the body (2) at the second body end (4) extending into the first body end (3). The said post (11) is adapted to be inserted between the dielectric material (40) and the jacket (44) of a cable. Further, the body (2) comprises a compression means (15) arranged at the first end (3) of the body (2), the compression means (15) comprising a substantially cylindrical compression sleeve (16) having a first sleeve end (17) and a second sleeve end (18), an inner sleeve surface (19) and an outer sleeve surface (20). The compression sleeve (16) is slidably arranged substantially coaxially with the central axis (7) of the body (2) so as to slide in a direction parallel to the central axis (7). Further, the compression means (15) comprises a substantially cylindrical compression ring (22) having an inner compression surface (24) slidably mounted onto the outer surface (8) of the body (2), said inner surface (24) of the compression ring (22) adapted to receive the compression sleeve (16).

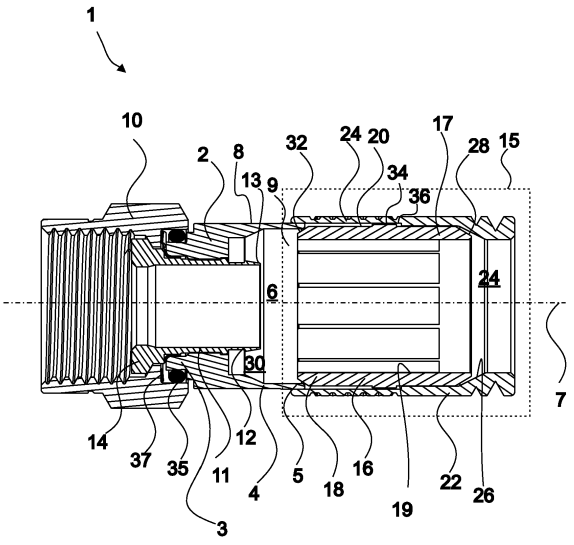

Fig. 1

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Description

[0001] The present invention relates to a coaxial cable connector comprising:

- a body having a first end and a second end with a rim and having a central bore defining a central axis, said body comprises:
  - an outer body surface,
  - an inner body surface,
- a nut arranged at the second end of the body,
- a post having a first post end with a post rim and a second post end, said post arranged substantially coaxially with the central axis in the central bore of the body at the second body end extending into the first body end, where said post is adapted to be inserted between the dielectric material and the jacket of a cable, and
- a compression means arranged at the first end of the body, the compression means comprising:
- a substantially cylindrical compression sleeve having
  - a first sleeve end and a second sleeve end,
  - an inner sleeve surface and an outer sleeve surface, the compression sleeve being slidably arranged substantially coaxially with the central axis of the body so as to slide in a direction parallel to the central axis,
- a substantially cylindrical compression ring having an inner compression surface slidably mounted onto the outer surface of the body, said inner surface of the compression ring adapted to receive the compression sleeve.

[0002] In the field of connectors for TV-cables, data cables and the like, it is important that the connector is firmly and correctly installed in order to ensure that the connection complies with specification. Typically, compression connectors for coaxial cables comprise a compression ring. The compression ring either compresses directly on the jacket of the cable or it forces a compression sleeve or similar to compress on the cable. In order to affix the connector firmly to the cable, it must be achieved that a firm contact between the connector and the cable is provided. Furthermore, it must be achieved that the connector is tight in order to ensure that the signal is not disturbed. Sometimes, cables, e.g. coaxial cables, use PE material for the jacket of the cable. PE-jackets are more sustainable and less likely to disrupt compared to other widely used and softer materials. However, during installation it is an unfortunate feature that the PE material is hard and difficult to expand. Furthermore, the PE-jacket is often thick, which results in good sustainability towards wear and tear but unfortunately causes the jacket to be even more difficult to work with. Thus, the workers mounting the connector on the cable need to use either special tools and/or very strong effort in order to mount the connector. Often, the workers need to cut the jacket along the longitudinal direction of the cable or heat the jacket in order to be able to mount the connector. By these unauthorised operations, there is a high risk of a poor connection.

[0003] Thus, there is a need for a coaxial cable connector that does not require special effort for the operator when affixing the connector to the cable.

[0004] It is an aspect of the present invention to provide a connector that facilitates mounting of the connector on a coaxial cable having a hard/stiff jacket without cutting or heating the jacket.

[0005] It is a further aspect of the invention to provide a connector for a PE-jacket cable that is easy to mount.

[0006] According to the present invention, these aspects are obtained by providing a coaxial cable connector for a coaxial cable comprising:

- a body having a first end and a second end with a rim and having a central bore defining a central axis, said body comprises:
  - an outer body surface,
  - an inner body surface,
- a nut arranged at the second end of the body,
- a post having a first post end with a post rim and a second post end, said post arranged substantially coaxially with the central axis in the central bore of the body at the second body end extending into the first body end, where said post is adapted to be inserted between the dielectric material and the jacket of a cable, and
- a compression means arranged at the first end of the body, the compression means comprising:
- a substantially cylindrical compression sleeve having
  - a first sleeve end and a second sleeve end,
  - an inner sleeve surface and an outer sleeve surface, the compression sleeve being slidably arranged substantially coaxially with the central axis of the body so as to slide in a direction parallel to the central axis,
- a substantially cylindrical compression ring having an inner compression surface slidably mounted onto the outer surface of the body, said inner surface of the compression ring adapted to receive the compression sleeve. Further, said compression ring may be slidably arranged to receive and co-operate with the compression sleeve in such way that it compresses both the first sleeve end of the compression sleeve and the second sleeve end of the compression sleeve radially towards the central axis of the

body.

[0007] In this way, it is achieved that at one location the compression sleeve serves to seal against disturbing signals and at another location serves to affix the connector firmly to the cable, i.e. in such way that it is difficult to pull off during use. In an uncompressed state, the compression sleeve has a diameter substantially equal to the diameter of the central bore of the body at the first end of the body. In this way, it is achieved that the cable to be inserted in the connector is easily inserted. The compression sleeve may be made of polyacetal or polyformaldehyde (POM). The sleeve ends may be compressed further radially inwardly than the rest of the compression sleeve.

[0008] In another embodiment of the invention, the first end of the compression sleeve may press against the jacket of the cable at a distance from the post, and the second end of the compression sleeve compresses the jacket towards the post.

[0009] In this way, it is achieved that the first sleeve end of the compression sleeve compresses at an area of the jacket that is located a distance from the braid, which is folded back during the preparation of the cable. Thereby, it is achieved that the risk of braid being located between the compression sleeve and the jacket is minimised. Thus, the connector is made tight in order to protect the signal in the cable from disturbance from other signals or radiation coming from outside of the cable.

[0010] In another embodiment of the invention, the inner surface of the first end of the body may comprise a wedged section i.e. a tapered area arranged to co-operate with the compression sleeve.

[0011] In this way, upon sliding the compression sleeve in the direction of the second end of the body, the compression sleeve is forced radially inwardly, i.e. towards the central axis and hence compressing a cable inserted in the connector. The wedge section of the first end of the body may have an incline of 10° - 70°, 15° - 50° or 20° - 30°. The wedge section may connect two areas of the inner surface of the first end of the body, said two areas having different diameters. In the compressed state of the connector, the cylindrical (in its uncompressed state) compression sleeve may be arranged to compress around the cable at two areas spaced at a distance from each other.

[0012] In another embodiment of the invention, the compression sleeve may be 1 - 15 mm, 2 -12.5mmor3-l0mm.

[0013] In another embodiment of the invention, the post may extend under the jacket at a distance of 0.5 - 10 mm, 1 - 7.5 mm or 1.5 - 5 mm.

[0014] When having a short post, it is possible this way for the operator to mount the connector onto a cable with the use of ordinary tools and effort. By using a short post, only a small section of the jacket of the cable is to be expanded in order to receive the post between the dielectric material and the jacket/braid. The post may have an outwardly extending tapering protrusion (a wedge-shaped protrusion). Such protrusion serves as a gripping means for fixing the connector to the cable in compressed state. Furthermore, in the process of forcing the post under the jacket, the tapering protrusion leaves a part of the jacket behind the protrusion in no contact with the post. Hence, this part does not provide any resistance towards pushing the post under the jacket, thus making the insertion process easier.

[0015] In another embodiment of the invention, the first sleeve end of the compression sleeve and the second sleeve end of the compression sleeve may press on the jacket with a force different from each other.

[0016] In this way, it is achieved that the compression means serves both to make a watertight connection as well as fixating the connector to the cable. When the compression sleeve presses on the jacket having an insertion section of the post between the jacket and the dielectric material, it is achieved that the connector is firmly fixed to the cable. At a distance from the rim of the post, the pressure from the first sleeve end of the compression sleeve should be sufficient to achieve a tight connection, thereby avoiding disturbance of the signal. However, the pressure needed for obtaining a tight connection may be smaller than the pressure needed in order to firmly affix the connector to the cable.

[0017] In another embodiment of the invention, the compression ring may be press fitted onto the first end of the body.

[0018] The press fit results in the compression ring being firmly connected to the body without the risk of being compressed at an undesired time. During use, an ordinary compression tool may compress the compression ring in the direction of the second end of the body.

[0019] In another embodiment of the invention, the compression sleeve may comprise an outwardly extending protrusion adapted to co-operate with an inwardly extending ledge on the compression ring.

[0020] In this way, it is possible for the compression ring to draw/carry the compression sleeve towards the second body end of the connector.

[0021] In another embodiment of the invention, the inner surface of the compression sleeve may be concave in compressed state.

[0022] In this way, the compression sleeve is not in contact with the cable in the full longitudinal extend of the compression ring. In this way, it is possible to save material during the production of the sleeve. However, in certain embodiments, the compression sleeve may have a shape that causes it to be in contact with the jacket of the cable along the full longitudinal extend of the compression sleeve.

[0023] In another embodiment of the invention, the inner surface of the compression sleeve may comprise gripping means, e.g. ratchet gripping means.

[0024] The gripping means enables that the compression sleeve achieves a firm grip on the jacket of the cable, whereby the cable is firmly fixed to the connector.

[0025] In another embodiment of the invention, the inner surface of the first end of the body may comprise a tapering section/area arranged to co-operate with a tapering sleeve area of the outer surface of the second end of the compression sleeve.

[0026] In this way, it is achieved that the compression sleeve is directed in an inwardly radial direction upon advancing the compression sleeve towards the second end of the body.

[0027] In another embodiment of the invention, the inner bore of the first end of the body may comprise a plurality of diameters.

[0028] The change in diameters serves, in an uncompressed state, to facilitate easy insertion of the cable whereas the change to a smaller diameter facilitates the compression when co-operating with the compression sleeve. Furthermore, in this way, the compression from the compression sleeve is adjusted so as to compress the most in the area of the post.

[0029] In another embodiment of the invention, the compression sleeve may comprise a number of slits.

[0030] A number of slits extending along the longitudinal axis of the cylindrical sleeve, e.g. from the middle of the sleeve through the rim of the second sleeve end, results in the second sleeve end of the compression sleeve comprising a number of flexible fingers. In this way, it is achieved that the compression sleeve is easily compressed. When compressing the connector, i.e. forcing the compression ring towards the second end of the body, the compression sleeve is also forced towards the second end of the body. Thereby, the compression sleeve is forced radially inwardly in the body. In this operation, a part of the material of the compression sleeve needs to be displaced and having fingers spaced apart by the slits since it is a matter of reducing the space between the fingers, i.e. reducing the width of the slits.

[0031] In another embodiment of the invention, the inner surface of the compression sleeve may comprise a number of inwardly extending protrusions.

[0032] In this way, it is achieved that the sleeve allows for material, either jacket material or sleeve material, to be allocated. This is particularly advantageous in order for the connector to be able to obtain cables of various diameters. The connector may be connected to cables having a diameter from 6.4 mm - 7.6 mm.

[0033] In another embodiment of the invention, the inner surface of the compression ring may comprise a tapered surface co-operating with a tapered area of the outside surface of the first sleeve end. The angle of taper of the tapered/wedge-shaped surface(s) may be (are) in the range of 15-90°.

Brief description of the drawings:

[0034]

Fig. 1 shows the uncompressed connector of the present invention in a cross sectional view having no cable inserted,

Fig. 2 shows the connector of Fig. 1 having a cable inserted,

Fig. 3 shows the connector of Fig. 2 partly compressed,

Fig. 4 shows the connector of Fig. 2 in a fully compressed state, and

Figs. 5A - 5C show an embodiment of the compression sleeve of Figs. 1-4.

Detailed description of the drawings:

[0035] Fig. 1 shows a coaxial cable connector 1 for a coaxial cable (not shown, see Fig 2). The connector 1 comprises a body 2 having a first body end 3 and a second body end 4 with a rim 5 and having a central bore 6 defining a central axis 7. The body 2 comprises an outer body surface 8 and an inner body surface 9. A nut 10 is arranged at the second end 3 of the body 2. A post 11 has a first post end 12 with a post rim 13 and a second post end 14, said post 11 arranged substantially coaxially with the central axis 7 in the central bore 6 of the body 2 at the second body end 4 extending into the first body end 3. A part of the post 11 is adapted to be inserted between the dielectric material (see Fig. 2) and the jacket of a cable (see Fig. 2). A compression means 15 is arranged at the first end of the body 4. The compression means 15 comprises a substantially cylindrical compression sleeve 16 having a first sleeve end 17 and a second sleeve end 18 and an inner sleeve surface 19 and an outer sleeve surface 20. The compression sleeve 16 is slidably arranged substantially coaxially with the central axis 7 of the body 2 so as to be able to slide in a direction parallel to the central axis 7. A substantially cylindrical compression ring 22 having an inner compression surface 24 is slidably mounted onto the outer surface 8 of the body 2, said inner surface 24 of the compression ring 22 being adapted to receive the compression sleeve 16. The compression ring 22 is slidably arranged to co-operate with and receive the compression sleeve 16 in such way that the compression ring 22 compresses the first sleeve end 17 of the compression sleeve 16 and causes the second sleeve end 18 of the compression sleeve to co-operate with the inner body surface 9 so as to be radially forced towards the central axis 7 of the body 2.

[0036] The inner surface 24 of the compression ring 16 comprises a wedge-shaped area, i.e. an annular tapering area 26 arranged to co-operate with a first tapering sleeve area 28 at the first sleeve end 17 of the compression sleeve 16. The inner body surface 9 of the first body end 3 comprises a tapering body area 30 arranged to co-operate with a second tapering sleeve area 32 of the outer sleeve surface 20. The words tapering and wedge-shaped are used in the general context of ramping

means.

[0037] The outer sleeve surface 20 comprises a protrusion 34 arranged to co-operate with a ledge 36 of the inner surface 24 of the compression ring 22. When advancing the compression ring 22 towards the second body end 3, the protrusion 34 results in the compression sleeve 16 being carried along with the compression ring 22 (this will be showed in detail in the following drawings) thereby advancing the compression sleeve 16 into the inner bore 6 of the body 2. The inner surface 24 of the compression ring 22 slides on the outer surface 8 of the body 2. It is seen that the compression sleeve 16 is substantially cylindrical in an uncompressed state.

[0038] The connector 1 further comprises an O-ring 35 in order to seal between the nut 10 and the body 2. A spring 37 (substantially a washer) ensures a firm electrical connection between the body 2 and the nut 11.

[0039] Fig. 2 shows the connector 1 of Fig. 1 having a coaxial cable 38 inserted. The coaxial cable 38 comprises an inner conductor 39, i.e. a centre conductor, a dielectric material 40 and an outer conductor 42 substantially being a braid (42). Furthermore, the cable 38 comprises a jacket 44. It is seen that the cable 38 has been prepared in an ordinary manner, i.e. by removing a part of the jacket 44 and folding back the exposed braid 46 before insertion in the connector 1. The cable 38 has been forced into the connector 1 in such way that a part of the post 11 is inserted under the jacket 44 and under the braid 44. The post 11 being of an electrical conductive material results in the post 11 serving as the outer conductor. It is seen that the insertion part 48 of the post 11 is relatively short, in particular compared to other compression connectors. Due to this relatively short insertion, part 48 of the post 11 of the connector 1 is easy to mount on cables having thick and/or stiff jackets 44. The short insertion part 48 of the post results in only a small section of the jacket/braid 44, 42 having to be expanded during the insertion process. In this, way the operator only needs little effort to insert the cable in the connector. It is seen that the insertion part 48 of the post 11 comprises a tapering part resulting in a wedge-shaped section 49 of the insertion part 48. Although, the diameter of the jacket 44 and the braid 42 must be expanded when forcing the cable towards the second body end 3, an area behind the wedge-shaped section 49 of the insertion part 48 is in no contact with the jacket 44, which eases the insertion of the cable. Furthermore, in a compressed state (shown in a later drawing) jacket 44 is compressed behind said wedge-shaped section 49 hence providing a firm inside grip in the jacket. However, in an embodiment not shown it will be understood by the person skilled in the art that the insertion part of the post 11 may be left without the wedge-shaped section 49. It is seen that the central bore 6 of the body 2 comprises a number of diameters. The large diameter near the body rim 5 provides for an easy insertion of the cable 38 in the connector 1. Over the tapering body area 30, the diameter of the central bore 6 is decreased. Thereby, when forcing the compression sleeve 16 towards the second body end 4, the second sleeve end 18 co-operates with the tapering body area 30, thereby compressing the jacket against the insertion part 48 of the post 11.

[0040] Fig. 3 shows the connector 1 being partly compressed, i.e. the compression ring 22 is forced towards the second body end 4 of the body 2. The compression sleeve 16 is carried towards the second body end 4 by the protrusion 34 of the outer sleeve surface 20 co-operating with the ledge 36 of the inner compression surface 24. The second tapering sleeve area 32 causes the second sleeve end 18 of the compression sleeve 16 to be forced radially inwardly upon contact with the post rim 13 and the movement towards the second body end 4. It is seen that the exposed braid 46 is forced towards the second body end 4 by the compression sleeve 16. The inner surface 24 of the compression ring 22 is sliding on the outer surface 8 of the body 2 during their relative movement. Typically, a compression tool (not shown) is used, said tool gripping in the recess between the body 2 and the nut 10 and applying a force directly on the end surface of the compression ring 22. It is seen that the first sleeve end 17 is not yet compressed radially inwardly at this stage in the compression process. It is seen that the second sleeve end 18 compresses on the jacket 44 at an area of the jacket having the insertion part 48 of the post 11 under it. Hence, it is possible to apply a strong pressure without changing distance between the centre conductor 39 and the outer conductor 42, i.e. without creating disturbance of the signal in the cable 38.

[0041] Fig. 4 shows that the connector is fully compressed. The compression ring 22 is brought to a positive stop between the body rim 5 and the ledge 36 of the inner surface 24 of the compression ring 22. This is possible because the ledge 36 has surpassed the protrusion 34 of the compression sleeve 16 seen in Fig. 3. This is due to the fact that the second sleeve end 18 has reached a wall 50 of the body whereby the compression sleeve 16 cannot move any further in the longitudinal direction of the connector 1, i.e. parallel to the central axis. 7. When the compression sleeve 16 is brought into contact with the wall 50, the ledge 36 simply slips beyond the protrusion 34 when a certain force is exerted. Due to the ledge 36 passing the protrusion 34 and still forcing the compression ring 22 towards the second body end 4, the wedge-shaped area 26 of the compression ring 22 is brought into contact with the first tapering sleeve area 28. Thereby, the first sleeve end 17 is forced radially towards the jacket 44 of the cable. In this embodiment the inclination angle of the wedge-shaped area 26 is 26,6° co-operating with the first tapering sleeve area 28 having an inclination angle of 31°. Furthermore, in this embodiment the second tapering sleeve area 32 has an inclination angle of 32,7° co-operating with the tapering body area 30 having an inclination angle of 24,6°. It will be understood by the person skilled in the art that the inclination angles may be different for different embodiments and hence within the scope of protection for the present

invention. Due to the possibility of changing the angles, the pressure applied from the co-operation of the compression means 15 with the body 2 may be changed accordingly. Thus, it is possible to adjust the pressure to specific cable diameters as well as different types of e.g. jacket material. Furthermore, it is possible to change the applied compression so as to achieve a different compression at the first sleeve end 17 compared to the second sleeve end 18. Due to the first sleeve end 17 being spaced apart from the second sleeve end 18, there is no risk of having exposed braid 46 located between the first sleeve end 17 and the jacket 44. Thereby, it is achieved that the compression obtained at the first sleeve end 17 creates a tight connection which minimises the risk of disturbing signals entering the connection.

[0042] Figs. 5A- 5C show a detailed view of the compression sleeve 16. In this embodiment, the compression sleeve comprises a number of inwardly extending protrusions 52. In the situation that a cable having a large diameter, e.g. 7,5 mm, additional jacket material needs to be displaced compared to a cable having a diameter of e.g. 6,5 mm. The jacket material (not shown) displaced due to pressure from the protrusions 52 will be able to be displace into the areas 54 between the protrusions 52. In another embodiment (not shown) the second sleeve end 18 may comprise a number of slits. Due to the slits, a number of flexible fingers is provided. The fingers similar to the protrusions 52 may be used to adjust the span of cable diameters possible to use in the connector of the present invention. In an embodiment of the compression sleeve the inner sleeve surface may comprise gripping means such as annular recesses. In this way jacket material may be allowed to float into these annular recesses upon compression providing a firm grip of the jacket.

[0043] While specific embodiments of the invention have been described in detail it will be appreciated by those skilled in the art that various modifications and alternatives to the details disclosed herein could be developed, while the particular arrangements disclosed are meant to be illustrative only and not as limiting the scope of the invention, which is defined in the appending claims and equivalence thereof.

List of reference numbers

[0044]

1	Connector
2	Body
3	First (ledge) end
4	Second (ledge) end
5	Body rim
6	Central bore
7	Central axis
8	Outer body surface
9	Inner body surface
10	Nut
11	Post
12	First post end
13	Post rim
14	Second post end
15	Compression means
16	Compression sleeve
17	First sleeve end
18	Second sleeve end
19	Inner sleeve surface
20	Outer sleeve surface
22	Compression ring
24	Inner compression surface
26	Wedge-shaped area
28	First tapering sleeve area
30	Tapering body area
32	Second tapering sleeve area
34	Protrusions
35	O-ring
36	Ledge
37	Spring
38	Coaxial cable
39	Inner conductor
40	Dielectric material
42	Outer conductor/braid

44 Jacket

46 Exposed braid

48 Insertion part (of post)

49 Wedge-shaped insertion section

50 Wall of the body

Claims

1. A coaxial cable connector (1) for a coaxial cable comprising:

- a body (2) having a first end (3) and a second end (4) with a rim (5) and having a central bore (6) defining a central axis (7), said body (2) comprises:
  - an outer body surface (8),
  - an inner body surface (9),
- a nut (10) arranged at the second end (4) of the body (2),
- a post (11) having a first post end (12) with a post rim (13) and a second post end (14), said post (11) arranged substantially coaxially with the central axis (7) in the central bore (6) of the body (2) at the second body end (4) extending into the first body end (3), where said post (11) is adapted to be inserted between the dielectric material (40) and the jacket (44) of a cable, and
- a compression means (15) arranged at the first end (3) of the body (2), the compression means (15) comprising:
- a substantially cylindrical compression sleeve (16) having
  - a first sleeve end (17) and a second sleeve end (18),
  - an inner sleeve surface (19) and an outer sleeve surface (20), the compression sleeve (16) being slidably arranged substantially coaxially with the central axis (7) of the body (2) so as to slide in a direction parallel to the central axis (7),
- a substantially cylindrical compression ring (22) having an inner compression surface (24) slidably mounted onto the outer surface (8) of the body (2), said inner surface (24) of the compression ring (22) adapted to receive the compression sleeve (16), **characterised in that** said compression ring (22) being slidably arranged to receive and co-operate with the compression sleeve (16) in such way that it compresses both the first sleeve end (17) of the compression sleeve (16) and the second sleeve end (18) of the compression sleeve (16) radially towards the central axis (7) of the body (2).

2. A cable connector (1) according to claim 1, wherein the first end (17) of the compression sleeve (16) presses against the jacket (44) of the cable at a distance from the post (11), and the second end (18) of the compression sleeve (16) compresses the jacket (44) towards the post (11).

3. A cable connector (1) according to claim 1 or 2, wherein the inner surface (9) of the first end (3) of the body (2) comprises a wedged section arranged to co-operate with the compression sleeve (16).

4. A cable connector (1) according to claim 1 - 3, wherein the compression sleeve (16) is 1 - 15 mm, 2 - 12.5 mm or 3 - 10 mm.

5. A cable connector (1) according to claim 1 - 4, wherein the post (11) extends under the jacket (44) at a distance of 0.5 - 10 mm, 1 - 7.5 mm or 1.5 - 5 mm.

6. A cable connector (1) according to claim 1 - 5, wherein the first sleeve end (17) of the compression sleeve (16) and the second sleeve end (18) of the compression sleeve (16) press on the jacket (44) with a force different from each other.

7. A cable connector (1) according to claim 1 - 6, wherein the compression ring (22) is press fitted onto the first end (3) of the body (4).

8. A cable connector (1) according to claim 1 - 7, wherein the compression sleeve (16) comprises an outwardly extending protrusion (34) adapted to co-operate with an inwardly extending ledge (36) on the compression ring (22).

9. A cable connector (1) according to claim 1 - 8, wherein the inner surface (24) of the compression sleeve (16) is concave in compressed state.

10. A cable connector (1) according to claim 1 - 9, wherein the inner surface (24) of the compression sleeve (16) comprises gripping means, e.g. ratchet gripping means.

11. A cable connector (1) according to claim 1 - 10, wherein the inner surface (9) of the first end (3) of the body (2) comprises a tapering section (30) arranged to co-operate with a tapering sleeve area (32) of the outer surface (20) of the second end (18) of the compression sleeve (16).

12. A cable connector (1) according to claim 1 - 11,

wherein the inner bore (6) of the first end (3) of the body (2) comprises a plurality of diameters.

13. A cable connector (1) according to claim 1 - 12, wherein the compression sleeve (16) comprises a number of slits.

14. A cable connector (1) according to claim 1 - 13, wherein the inner surface (19) of the compression sleeve (16) comprises a number of inwardly extending protrusions (34).

15. A cable connector (1) according to claim 1 - 14, wherein the inner surface (24) of the compression ring (22) comprises a tapered surface co-operating with a tapered area (30) of the outside surface (20) of the first sleeve end (17).

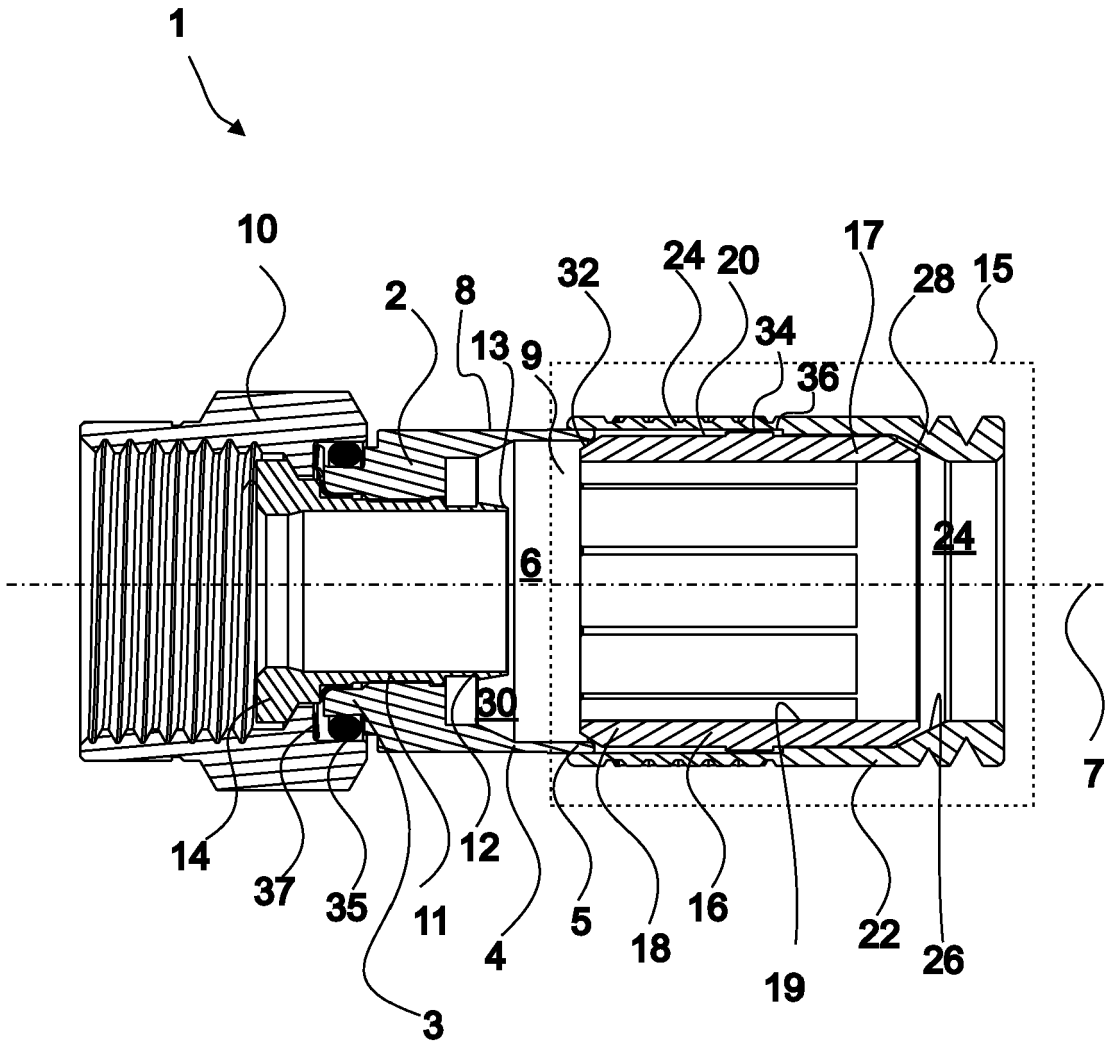
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Fig. 1

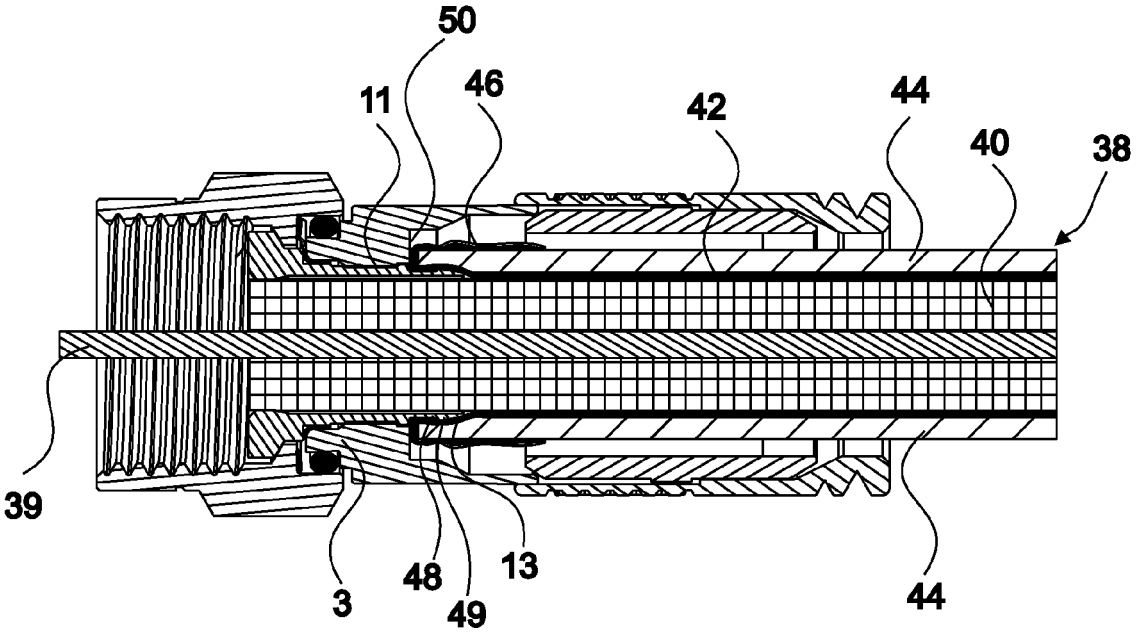

Fig. 2

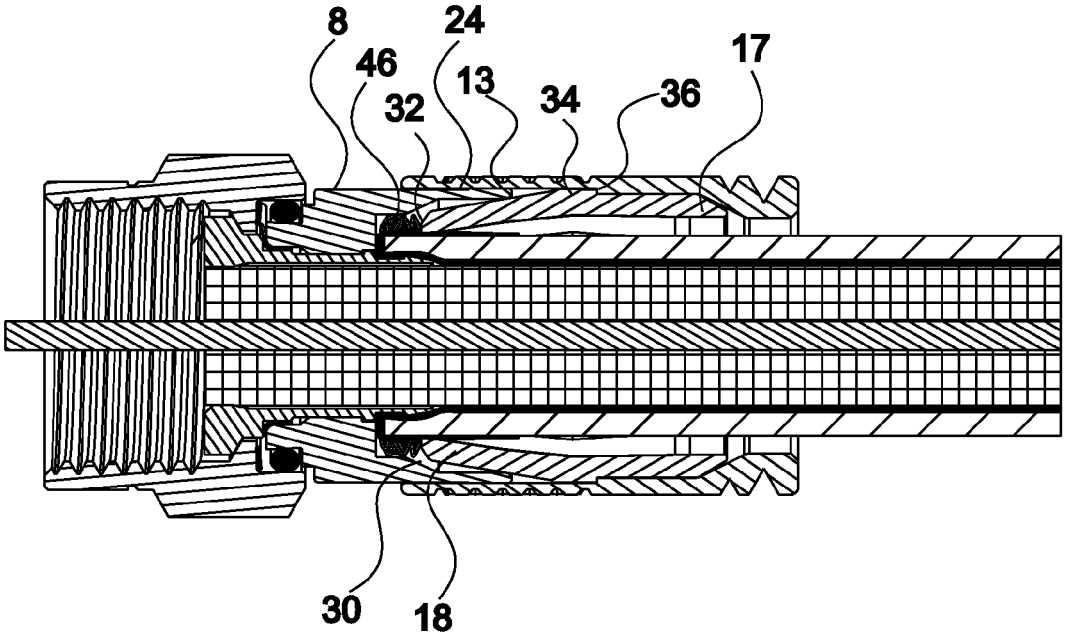

Fig. 3

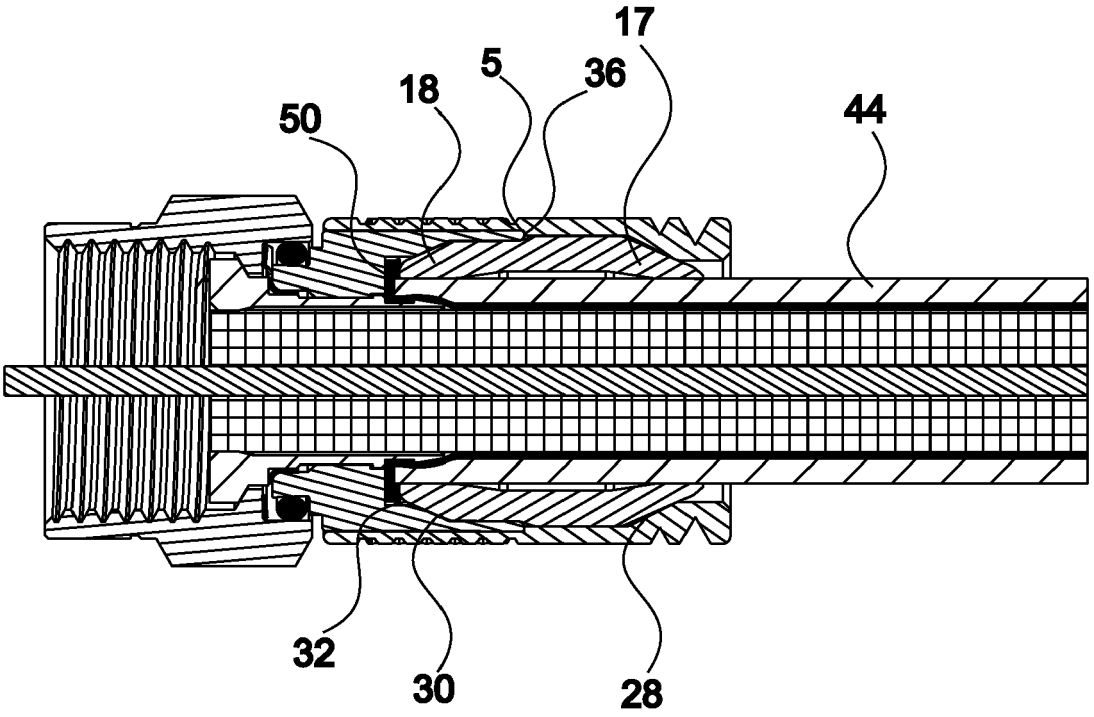

Fig. 4

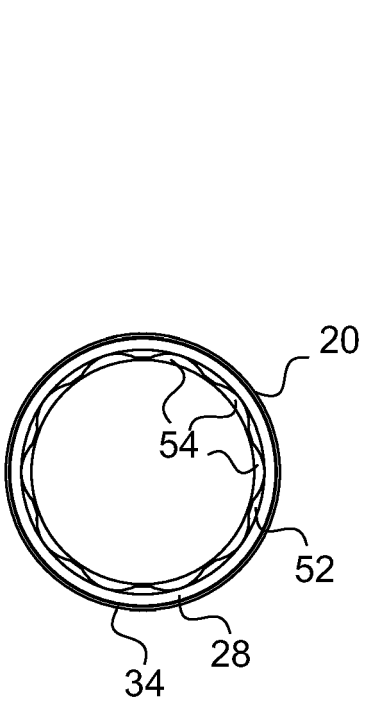

Fig. 5A

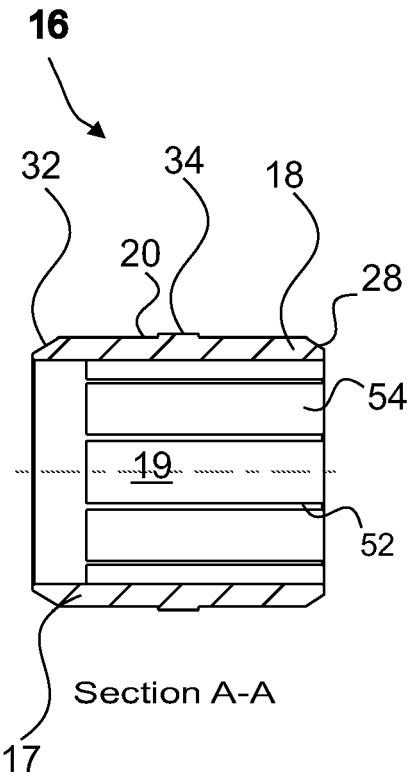

Fig. 5B

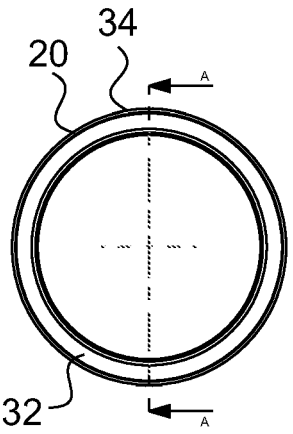

Fig. 5C

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EUROPEAN SEARCH REPORT

Application Number
EP 10 16 7407

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	30 September 2010	Salojärvi, Kristiina

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