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(57) The invention relates to a connector holder plate for fixating a connector of a cable, such as a coaxial-cable, to a base frame fixed to a building wall, such connector and a cable holding kit comprising the connector holder plate and the connector. The connector holder plate comprising a through going aperture having a first reduced size portion configured for receiving a part of a first connection interface of the connector between a circumferential flange and a connector body, wherein the connector holder plate comprises a first flexible lock member configured for being temporarily flexed from a first configuration to a second configuration by the circumferential flange during insertion of the connector into the first reduced size portion and to return to the first configuration when the part of the connector is received by the first reduced size portion and for being manually temporarily flexed by the user from said first configuration to said second configuration to allow for removal of said connector from said first reduced size portion.

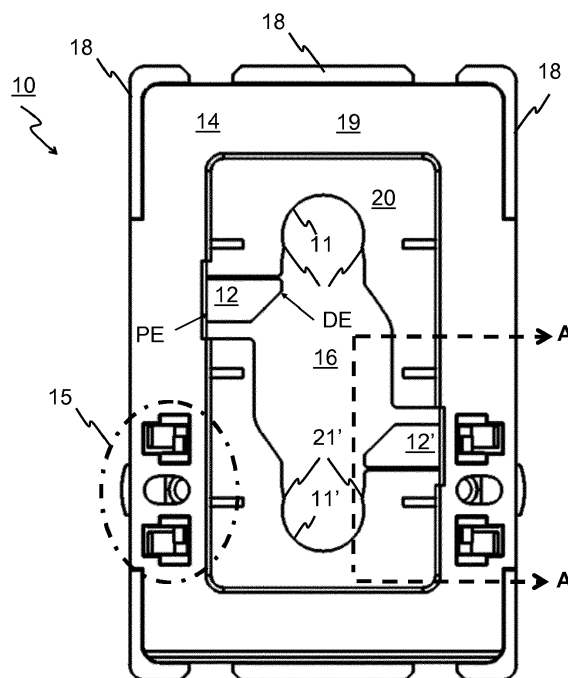


Fig. 1a

Description

TECHNICAL FIELD

[0001] The invention relates to a connector holder plate configured for fixating a connector, and to a cable holding kit comprising the connector holder plate and the connector.

BACKGROUND ART

[0002] Typically, Ethernet cables, and coaxial cables are wired into a building for feeding internet signals, television signals, radio signals, and so forth, to various rooms within the building. Coaxial cables typically are accessed in each room via holes in the building wall, whereby the cables may have connectors connected to their free ends, for connection to mating connectors of various appliances such as digital video recorders, televisions and so forth.

[0003] The connector connection interface for a coaxial cable is generally cylindrical in form, having a conductive core and a metal shell. The shell itself is connected to the shield conductor of the cable, and is known as the shield connector.

[0004] The connection between the connector on the cable and the device typically goes through amplifiers, filters, splitters and so forth in an outlet box assembly. In those cases where especially amplifiers and filters are not necessary for the installation, a mounting of the connector on the cable to a base frame of the outlet box assembly mounted to or in a building wall may be obtained otherwise than connecting the connector to the amplifier or filter.

[0005] Typically a hole is provided in for example the cover plate of the outlet box where through the typically cylindrical connector is inserted. To fasten the connector the connector may be provided with an outer thread for receiving a nut with a corresponding internal thread so that when the nut is screwed on to the connector, the nut abuts the front side of the cover plate, so that the connector is fastened to the cover plate by the nut and the connector body or alternatively a further nut abutting the rear side of the cover plate, such as in US4043629.

SUMMARY OF THE INVENTION

[0006] On this background, it is an object of the invention to provide a simpler and faster way of mounting of a connector on a cable to a base frame of an outlet box assembly.

[0007] A further object is to provide a stable and secure mounting of the connector on the cable to the base frame of the outlet box assembly, so that the connector is not displaced during use.

[0008] Yet another object of the invention is to provide a connection between the connector on the cable and the base frame of the outlet box assembly wherein the

cable is not forced to be bent with a radius below a minimum radius.

[0009] Another object of the invention is to provide an aesthetic installation where the inside components of the outlet box assembly is hidden for the user even when no appliances is coupled to the accessible connection interface of the connector.

[0010] According to the invention there is provided a connector holder plate for fixating a connector of a cable, such as a coaxial-cable, to a base frame fixed to a building wall, the connector comprising: a) a connector body, b) a first connection interface accessible for a user during everyday use and c) a second connection interface connectable to the cable, the first connection interface extending from the connector body and comprising a circumferential flange spaced apart from the connector body by a gap, the connector holder plate comprising: a front side, a rear side, and a through-going aperture sized to receive the first connection interface, the through going aperture having a first reduced size portion configured for receiving a part of the first connection interface between the circumferential flange and the connector body, wherein the connector holder plate comprises a first flexible lock member configured for being temporarily flexed from a first configuration to a second configuration by the circumferential flange during insertion of the connector into the first reduced size portion and to return to the first configuration when the part of the connector is received by the first reduced size portion and for being manually temporarily flexed by the user from said first configuration to said second configuration to allow for removal of said connector from said first reduced size portion.

[0011] The first flexible lock member provides a snap-lock function attaining the connector in a secured position between the first reduced size portion and the first flexible lock member in any direction in a plane parallel or essentially parallel with the building wall.

[0012] According to the invention there is also provided a connector comprising: a) a connector body, b) a first connection interface accessible for a user during everyday use and c) a second connection interface connectable to a cable, such as a coaxial-cable, the first connection interface comprising a circumferential flange spaced apart from the connector body by a gap.

[0013] The circumferential flange and the connector body secure the connector in the connector holder plate in a direction perpendicular to the plane parallel or essentially parallel with the building wall.

[0014] The circumferential flange may extend from an outer surface of the first connection interface spaced apart from the connector body to define the gap, preferably a circumferential gap, between the first connection interface and the connector body.

[0015] According to the invention there is also provided a cable holding kit comprising a connector holder plate as described above and a connector as described above.

[0016] The cable holding kit provides a stable mounting of the connector on the cable to the base frame of the

outlet box assembly, so that the connector is not displaced in any directions in the plane parallel to the building wall during use nor in a direction perpendicular thereto, i.e. so the connector is not displaced nor pushed into the building wall when connecting the appliances to the connector.

[0017] The connector holder plate may comprise a first plate portion surrounding a second plate portion, wherein the first plate portion extends through a first plane and the second plate portion extends through a second plane parallel or essentially parallel to the first plane. Preferably the front surface of the first plate portion may lie in the first plane and the front surface of the second plate portion may lie in the second plane. The through going aperture may be provided centrally in the second plate portion. The first and second plate portion may be connected by a third plate portion extending perpendicular or essentially perpendicular there between, i.e. perpendicular or essentially perpendicular to the first and second plate portion. Thus the second plate portion may define a recess in the connector holder plate, wherein the recess has a depth defined by a distance between the front surface of the first plate portion and the front surface of the second plate portion preferably being less than 8mm (along the entire front surface of the second plate portion). When the connector holder plate is fixated to the base frame already mounted on the building wall the first and second plate portion and thereby the first and second plane may preferably be parallel or essentially parallel with the building wall.

[0018] The first flexible lock member may be a flap extending from an edge portion of the through-going aperture in the plane parallel to the building wall, e.g. the second plane, and arranged near the first reduced size portion. The first configuration of the first flexible lock member when the connector holder plate is mounted is thus where the first flexible lock member extends in a plane parallel to the building wall, e.g. the second plane.

[0019] The first flexible lock member, e.g. the flap, may be shaped like a ramp having a ramp-surface, e.g. have an increasing wall thickness towards the first reduced size portion, so that when the connector is inserted in the first reduced size portion the first flexible lock member, e.g. the flap, is flexed or pushed into a configuration being outside the plane parallel to the building wall, e.g. the second plane.

[0020] The thickest wall thickness of the first flexible lock member due to the ramp-surface may preferably correspond to the width of the gap between the circumferential flange and the connector body.

[0021] The first reduced size portion of the connector holder plate may be provided with a peripheral flange extending perpendicularly to the plane parallel with the building wall on the rear side of the connector holder plate. The peripheral flange may provide a firm fit with the first reduced size portion of the connector, i.e. the gap between the circumferential flange and the connector body.

[0022] The ramp-surface may be provided on the front side of the connector holder plate, i.e. on the front side of the first flexible lock member, and the peripheral flange provided on the first reduced size portion on the rear side of the connector holder plate. Hereby is provided the snap-functionality of the first flexible lock member and fixation of the connector in the connection holding plate.

[0023] The circumferential flange on the connector may extend at least 1.5mm, preferably at least 2mm, perpendicularly from the first connection interface. Hereby is provided a connection between the connector and the connector holding plate wherein the first connection interface is not easily tilted form a configuration perpendicular to the building wall.

[0024] The circumferential flange may be a first circumferential flange. The first connection interface may comprise a second circumferential flange spaced from the first circumferential flange, so that the connector holder plate may receive by a part of the first connection interface between the first and second circumferential flange.

[0025] The first and second circumferential flange may extend from an outer surface of the first connection interface spaced apart from each other to define the gap, preferable a circumferential gap, between the first and second circumferential flange.

[0026] The second circumferential flange may be arranged between the first circumferential flange and the connector body.

[0027] The first and second circumferential flange on the connector, may extend at least 1.5mm, preferably at least 2mm, perpendicularly from the first connection interface. Hereby is provided a connection between the connector and the connector holding plate wherein the first connection interface is not easily tilted form a configuration perpendicular to the building wall.

[0028] The thickest wall thickness of the second flexible lock member due to the ramp-surface may preferably correspond to the width of the gap between the first and second circumferential flange.

[0029] The thinnest wall thickness of the second flexible lock member due to the ramp-surface may correspond or essentially correspond to the thickness of the second plate portion of the connector holder plate.

[0030] The connector holder plate may be configured for being mounted to a base frame of an outlet box assembly, wherein the outlet box assembly comprises a base frame, an edge frame and a cover plate. The cover plate may be provided with at least one opening opposite the first connection interface of the connector when the connector and connector holder plate is mounted in the outlet box assembly.

[0031] The base frame may be mounted to an outside surface of or in a cavity in the building wall.

[0032] The first connection interface may be a male aerial plug, such as a male TV aerial plug.

[0033] According to one embodiment, the connector holder plate comprises a first reduced size portion having a first mouth defining a snap-lock.

[0034] The first reduced size portion having a mouth provides a further snap-lock function supporting that the connector attains the secured position in all directions in the plane parallel to the building wall when the connector is received by the first reduced size portion.

[0035] According to one embodiment, the connector holder plate comprises a second reduced size portion opposite and corresponding to the first reduced size portion configured for receiving the part of the first connection interface of another one of the connector between the circumferential flange and the connector body and having a second flexible lock member configured for being temporarily flexed from a first configuration to a second configuration by the circumferential flange during insertion of the connector into the second reduced size portion and to return to the first configuration when the connector is received by the second reduced size portion and for being manually temporarily flexed by the user from said first configuration to said second configuration to allow for removal of said connector from said second reduced size portion.

[0036] Hereby two appliances may be connected to the same outlet box assembly through two individual connections. A cover plate having two openings opposite respectively the first connection interface of two attached connectors may thus be used in the outlet box assembly.

[0037] According to one embodiment, the connector holder plate comprises a second reduced size portion having a second mouth defining a snap-lock.

[0038] According to one embodiment, the connector holder plate comprises a first and/or a second flexible lock member having a ramp-surface, and wherein force applied against the ramp-surface flexes the first and/or second flexible lock member to the second configuration.

[0039] The first and/or a second flexible lock member may be temporarily flexed towards the rear side of the connector holder plate by the circumferential flange riding on the ramp-surface.

[0040] According to one embodiment, the connector is a right angled connector.

[0041] Typically the cable runs within the building wall, i.e. perpendicularly to the output interface. The second connection interface of the right angle connector thus receives the cable in the direction the cable approaches the outlet box assembly.

[0042] Hereby is provided a connection between the connector on the cable and the base frame of the outlet box assembly wherein the cable is not forced to be bent with a radius below a minimum bending radius.

[0043] In order to avoid wear of for example a coaxial cable due to bending, the coaxial cable should preferably not be bent with a radius below the minimum bending radius. The recommended minimum bending radius of a coaxial cable typically being 5 times the outer diameter.

[0044] According to one embodiment, the connector is a signal splitting connector wherein the second connection interface is connectable to two cables.

[0045] Hereby is provided the opportunity of splitting

the signal in the cable between a plurality of outlet box assemblies.

[0046] According to one embodiment, the connector is able to turn around a center axis of the first connection interface when received by the first or second reduced size portion in the connector holder plate.

[0047] Hereby is provided a connection between the connector on the cable and the base frame of the outlet box assembly wherein the cable is not forced to be bent with a radius below the minimum bending radius. Thus wear due to bending is avoided.

BRIEF DESCRIPTION OF THE FIGURES

[0048] The invention will now be explained in further details with reference to the figures showing aspects thereof.

Figure 1a illustrates a front view of a connector holder plate according to the invention,

Figure 1b illustrates a cross-sectional schematic side view A-A of the connector holder plate in figure 1a,

Figure 2 illustrates a connector according to the invention,

Figure 3 illustrates a second embodiment of a connector according to the invention,

Figure 4 illustrates a perspective view of the front side of the connector holder plate according to the invention having received a connector according to the invention,

Figure 5 illustrates a perspective view of the rear side of the connector holder plate according to the invention having received a connector according to the invention, and

Figure 6 illustrates an outlet box assembly comprising the connector holder plate and the connector according to the invention.

DETAILED DESCRIPTION OF THE INVENTION WITH REFERENCE TO THE FIGURES

[0049] Figures 1a illustrates a front view of a connector holder plate 10 according to the invention having a front side 13 and a rear side 14 (shown in figure 5). The connector holder plate 10 is molded from a plastic material and comprises a through going aperture 16 arranged centrally in the connector holder plate 10. The through going aperture 16 is configured with a first and a second reduced size portion 11, 11'. Alternatively the through going aperture 16 may be configured with only one of the first or second reduced size portions 11, 11'.

[0050] As illustrated in figures 1, 4 and 5 the connector holder plate 10 may comprise a first plate portion 19 surrounding a recess defined by a second plate portion 20, wherein the first plate portion 19 extends through a first plane and the second plate portion 20 extends through a second plane parallel or essentially parallel to the first plane. The through going aperture 16 is provided in the second plate portion 20. The first and second plate portions 19, 20 are connected by a peripheral third plate portion or wall 22 extending perpendicular or essentially perpendicular there between, i.e. perpendicular or essentially perpendicular to the first and second plate portion 19, 20.

[0051] As illustrated in figure 5 the first and/or second reduced size portion 11, 11' may be provided with respectively a first and/or second peripheral flange 17, 17' extending perpendicularly to the second plane on the rear side 14 of the connector holder plate 10.

[0052] The connector holder plate 10 may comprise a clamping system 15 configured for fixating the connector holder plate 10 to a base frame 61 (shown in figure 6), wherein the base frame 61 may be part of an outlet box assembly 60, such as a FUGA or an OPUS outlet box assembly, e.g. a FUGA 1½ module outlet box assembly. The clamping system 15 may correspond to or be similar to a standard clamping system used for fixating a conventional power socket, such as a FUGA 1½ module power socket (not shown) in such a base frame 61.

[0053] Furthermore the connector holder plate 10 may comprise outer edge portions 18 providing a snap-fit connection between the connector holder plate 10 and an edge frame 62 (shown in figure 4-6), wherein the edge frame 62 may be part of the outlet box assembly 60, such as the FUGA 1½ module outlet box assembly. When the connector holder plate 10 is fixated to the base frame 61 already mounted on a building wall the first and second plate portions 19, 20 and thereby the first and second plane may preferably be parallel or essentially parallel with the building wall.

[0054] Figure 2 illustrates a connector 40 according to the invention. The connector 40 comprises a connector body 44 and a first and a second connection interface 42, 43 extending from the connector body 44. The first connection interface 42 is configured for being accessible for a user during everyday use for connecting appliances, such as television and radio, to a cable, such as a coaxial-cable, running inside a room. The first connection interface 42 is cylindrical in form and comprises in its interior a conductive core 45 and a metal shell 46. The first connection interface 42 further comprises a circumferential flange 41 extending from an outer surface of the first connection interface 42 spaced apart from the connector body 44 to define a circumferential gap G between the circumferential flange 41 and the connector body 44. The second connection interface 43 is configured for being connectable to a cable 2 running in a building wall.

[0055] The connector 40 may be considered to be a right-angled connector in that a cable 2 extends from the

body 44 at a right angle to the first connection interface 42.

[0056] Figure 3 illustrates a second embodiment of a connector 40' according to the invention, wherein the connector is a signal splitting connector 40'. The connector 40' comprises an alternative connector body 44', the first connection interface 42 as described above and an alternative second connection interface 43' configured for being connectable to two cables 2.

[0057] The first connection interface 42 comprises the circumferential flange 41 and a second circumferential flange 48 extending from the outer surface of the first connection interface 42. In this case the circumferential flange 41 may be considered as a first circumferential flange 47. The first circumferential flange 47 and the second circumferential flange 48 are spaced apart to define a circumferential gap G there between.

[0058] Returning to figure 1a, the connector holder plate 10 comprises a first and a second flexible lock member 12, 12', each comprising a flap extending from an edge portion of the through-going aperture 16. In the presently illustrated embodiment the first and second flexible lock member 12, 12' extends from the wall 22 at an edge portion of the through going aperture 16. Alternatively the through going aperture 16 may be provided with only one of the first or second flexible lock members 12, 12'. Figure 1b illustrates the second flexible lock member 12' in a cross-sectional schematic side view A-A. The second flexible lock member 12' may be shaped like a ramp having a ramp-surface R, i.e. having an increasing wall thickness towards the second reduced size portion 11', so that when the connector 40 is inserted into the second reduced size portion 11' the second flexible lock member 12', e.g. the flap, is temporarily flexed to the left in figure 1b by the circumferential flange 41 riding on the ramp-surface R, as explained below.

[0059] In order to release the connector 40 from the second reduced size portion 11', the second flexible lock member 12' may be manually flexed to the left in figure 1b by a user.

[0060] The thinnest wall thickness T1 of the second flexible lock member 12' may correspond or essentially correspond to the thickness of the second plate portion 20.

[0061] The thickest wall thickness T2 of the first and/or second flexible lock member 12, 12' due to the ramp-surface R may preferably correspond to or essentially correspond to the width of the gap G between the circumferential flange 41 and connector body 44 and/or the gap G between the first and second circumferential flange 47, 48, wherein the width of the gap G preferably may correspond or essentially correspond to the aggregate wall thickness of the second plate portion 20 and the first and/or second peripheral flange 17, 17' of respectively the first and/or the second reduced size portion 11, 11'.

[0062] In order to provide the snap-functionality of the first and second flexible lock member 12, 12' and fixation

of the connector 40 in the connection holding plate 10, the first and/or second flexible lock member 12, 12' is provided on the front side 13 of the connector holder plate 10 and the first and/or second peripheral flange 17, 17' is provided on respectively the first and/or second reduced size portion 11, 11' on the rear side 14 of the connector holder plate 10.

[0063] Returning to figure 1a, the first and second reduced size portions 11, 11' may additionally have respectively a first and a second mouth 21, 21', each defining a snap-lock configured for fixating the first connection interface 42 of the connector 40 between the circumferential flange 41 and the connector body 44 or between the first and second circumferential flange 47, 48. This by introducing the first connection interface 42 of the connector 44 into the through going aperture 16 and sliding the first connection interface 42 into one of the first or second reduced size portions 11, 11' past respectively the first or second mouth 20, 20' that yield elastically to temporarily open up the reduced size portion 11, 11' on contact with a part B of the first connection interface 42 that defines the bottom of the gap G.

[0064] Figure 4 and 5 illustrates a perspective view of respectively the front side 13 and the rear 14 side of the connector holder plate 10 according to the invention having received one embodiment of the connector 40 according to the invention. Furthermore figure 4 and 5 shows how each reduced size portion 11, 11' in the connector holder plate 10 is configured for receiving the part B, preferably the cylindrical part, of the first connection interface 42 of the connector 40 between the circumferential flange 41 and either the connector body 44. This by introducing the first connection interface 42 of the connector 44 into the through going aperture 16 and sliding the first connection interface 42 into one of the first or second reduced size portions 11, 11'.

[0065] When the first connection interface 42 of the connector 40 is received by one of the reduced size portions 11, 11' the circumferential flange 41 of the first connection interface 42 and, hence, the connector 40, is held by the first or second reduced size portion 11, 11' and the first or second flexible lock member 12, 12' against movement in any direction in the second plane and in a direction perpendicular to the second plane. E.g. the circumferential flange 41 may when received by one of the reduced size portions 11, 11' abut the first or second flexible lock member 12, 12', so that the connector 40 is wedged between the first or second reduced size portion 11, 11' and the first or second flexible lock member 12, 12'.

[0066] In case the first and/or second reduced size portions 11, 11' has a mouth 21, 21' the first connection interface 42 additionally may be restrained by the first or second mouth 21, 21' of respectively the first or second reduced size portion 11, 11'.

[0067] The connector holder plate 10 and the connector 40 may together form a cable holding kit.

[0068] Figure 6 illustrates the outlet box assembly 60

being assembled, wherein the outlet box assembly 60 comprises the base frame 61, the edge frame 62 and the cover plate 63. The outlet box assembly 60 and the parts thereof may be or correspond to the FUGA 1½ module outlet box assembly. The connector holder plate (not shown) and the connector 40 are fixated within the outlet box assembly 60. The base frame 61 may preferably be pre-mounted, i.e. fixed, to the building wall (not shown) before fixating the connector 40 within the outlet box assembly 60 via the connector holder plate 10 having itself been secured to the base frame 61. The cover plate 63 is provided with an opening 64 arranged opposite the first connection interface 42 when the connector 40 and connector holder plate 10 is mounted to the base frame 61 of the outlet box assembly 60.

[0069] The front surface F2 of the second plate portion 20 (shown in figure 4) of the connector holder plate is retracted with a distance from the front surface F1 of the first plate portion 19 (shown in figure 4) facilitating a connection of the connector 40 in the connector holding plate, wherein the connector 40 do not protrude from the cover plate 63. This distance may be less than 8mm (along the entire front surface F2 of the second plate portion 20), such as in the order of 2-5 mm.

[0070] The circumferential flange 41 on the connector 40 may together with the cover plate 63 hide the wiring and other inside components for the user even when no appliance is coupled to the first connection interface 42 of the connector 40.

[0071] The term "comprises/comprising/comprised of" when used in this specification incl. claims is taken to specify the presence of stated features, integers, steps or components but does not preclude the presence or addition of one or more other features, integers, steps, components or groups thereof.

Claims

1. A connector holder plate (10) for fixating a connector (40) of a cable (2), such as a coaxial-cable, to a base frame (61) fixed to a building wall,

- said connector (40, 40') comprising:

- a) a connector body (44, 44'),
- b) a first connection interface (42) accessible for a user during everyday use and
- c) a second connection interface (43, 43') connectable to said cable (2),

- - said first connection interface (42) extending from said connector body (44, 44') and comprising a circumferential flange (41) spaced apart from said connector body (44, 44') by a gap (G),

- said connector holder plate (10) comprising:

- - a front side (13), a rear side (14), and
- - a through-going aperture (16) sized to receive said first connection interface (42),
- - - said through going aperture (16) having a first reduced size portion (11) configured for receiving a part (B) of said first connection interface (42) between said circumferential flange (41) and said connector body (44, 44').

characterised in said connector holder plate (10) including

a first flexible lock member (12) having a proximal end (PE) and a free distal end (DE), said distal end (DE) being located within said through-going aperture (16) in a first configuration of said first flexible lock member (12), said first flexible lock member (12) being configured for being temporarily flexed from said first configuration to a second configuration by said circumferential flange (41) during insertion of said connector (40, 40') into said first reduced size portion (11) and to return to said first configuration when said part (B) of said connector (40, 40') is received by said first reduced size portion (11) and for being manually temporarily flexed by the user from said first configuration to said second configuration to allow for removal of said connector (40, 40') from said first reduced size portion (11).

2. A connector holder plate according to claim 1, said first reduced size portion (11) having a first mouth (21) defining a snap-lock.
3. A connector holder plate according to claim 1 or 2, comprising a second reduced size portion (11') opposite said first reduced size portion (11), said second reduced size portion (11') configured for receiving said part (B) of said first connection interface (42) of another one of said connector (40) between said circumferential flange (41) and said connector body (44, 44') and having a second flexible lock member (12') having a proximal end (PE) and a free distal end (DE), said distal end (DE) being located within said through-going aperture (16) in a first configuration of said second flexible lock member (12'), said second flexible lock member (12') being configured for being temporary flexed from said first configuration of said second flexible lock member (12') to a second configuration of said second flexible lock member (12') by said circumferential flange (41) during insertion of said connector (40, 40') into said second reduced size portion (11') and to return to said first configuration of said second flexible lock member (12') when said connector (40, 40') is received by said part (B) of said second reduced size portion (11') and for being manually temporarily flexed by the user from said first configuration of said second flexible lock member (12') to said second configura-

tion of said second flexible lock member (12') to allow for removal of said connector (40, 40') from said second reduced size portion (11').

4. A connector holder plate according to claim 3, said second reduced size portion (11') having a second mouth (21') defining a snap-lock.
5. A connector holder plate according to any one or more of claims 1 to 4, said first and/or second flexible lock member (12, 12') having a ramp-surface (R), and force applied against said ramp-surface (R) flexing said first and/or second flexible lock member (12, 12') to said second configuration.
6. A connector holder plate according to any one or more of claims 1 to 5, said through-going aperture (16) being provided in a plate portion extending through a plane, such as the second plate portion (20), and the first and/or second flexible lock member (12, 12') extending from an edge portion of the through-going aperture in a plane parallel to the plate portion, such as the second plate portion (20).
7. A cable holding kit comprising a connector holder plate (10) according to any one or more of claims 1 to 6 and a connector (40, 40') comprising: a) a connector body (44, 44'), b) a first connection interface (42) accessible for a user during everyday use and c) a second connection interface (43, 43') connectable to a coaxial-cable (2), said first connection interface (42) comprising a circumferential flange (41) spaced apart from said connector body (44, 44') by a gap (G).
8. The cable holding kit according to claim 7, wherein said connector (40) is able to turn around a center axis (A) of said first connection interface (42) when received by said first reduced size portion (11, 11') of said connector holder plate (10).
9. The cable holding kit according to claim 7 or 8, wherein said connector (40, 40') is a right angled connector.
10. The cable holding kit according to claim 7 or 8 or 9, wherein said connector (40, 40') is a signal splitting connector (40') wherein said second connection interface (43') is connectable to two cables (2).

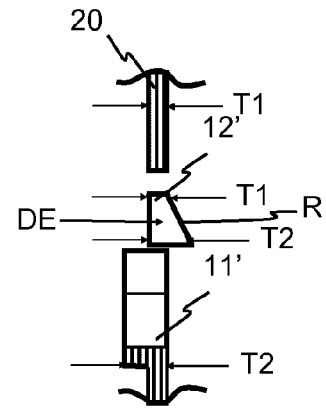
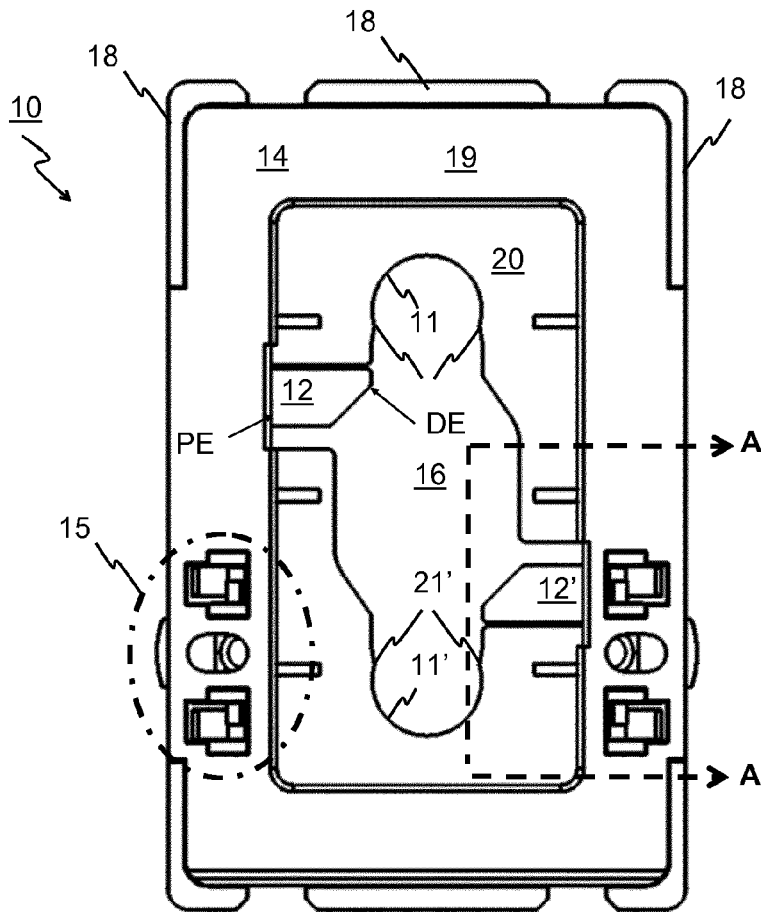


Fig. 1b (A-A)

Fig. 1a

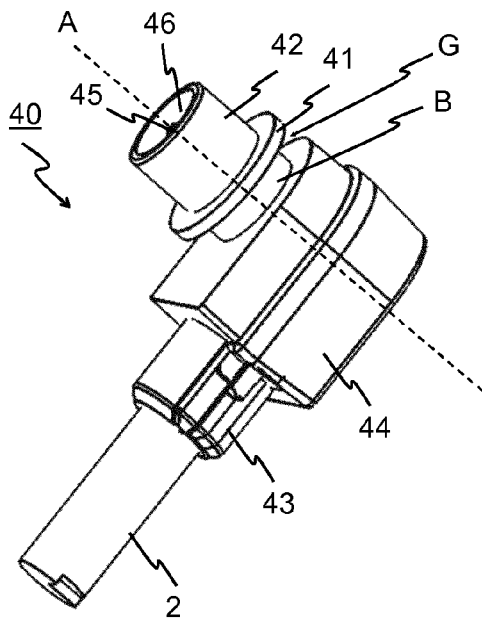


Fig. 2

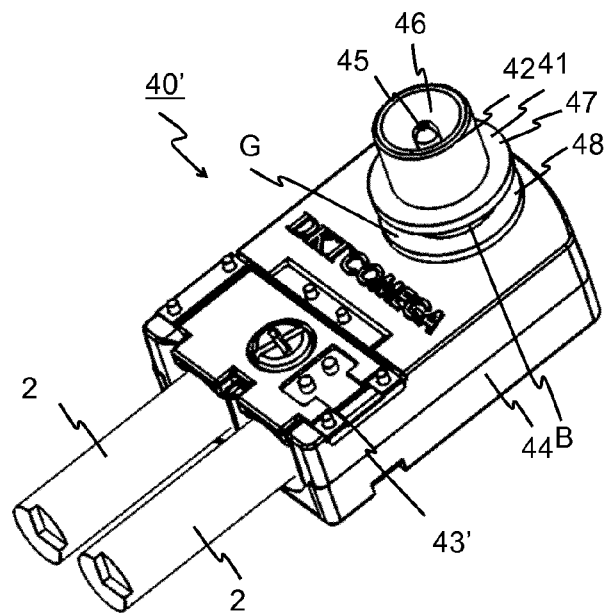


Fig. 3

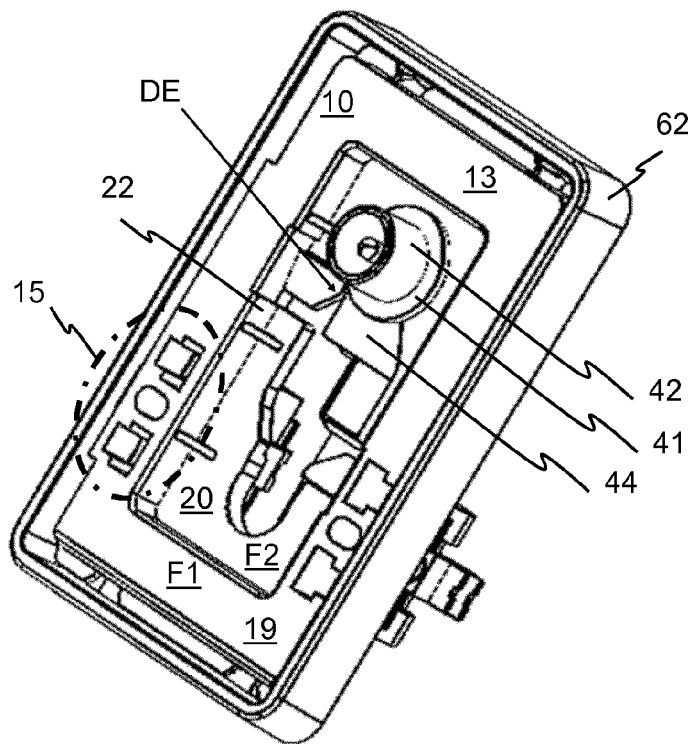


Fig. 4

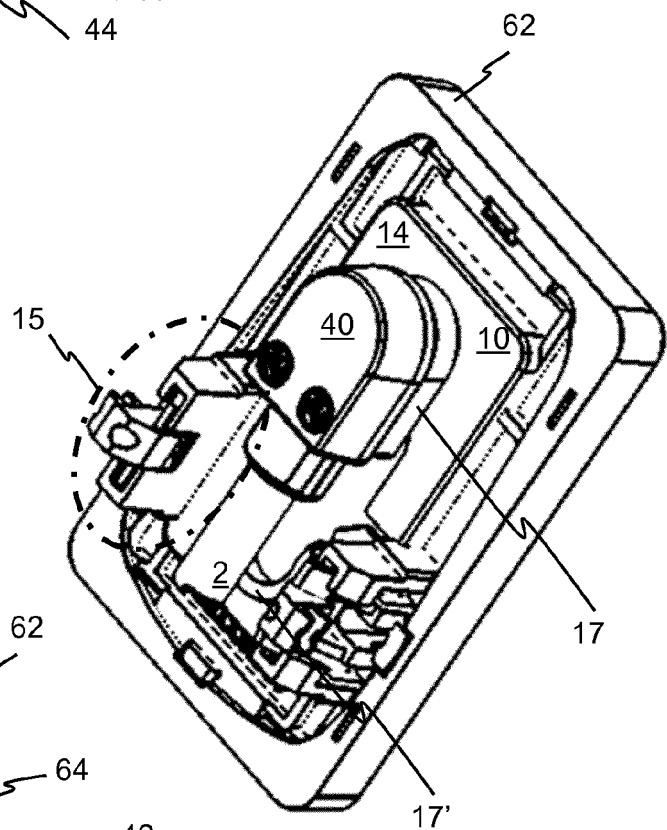


Fig. 5

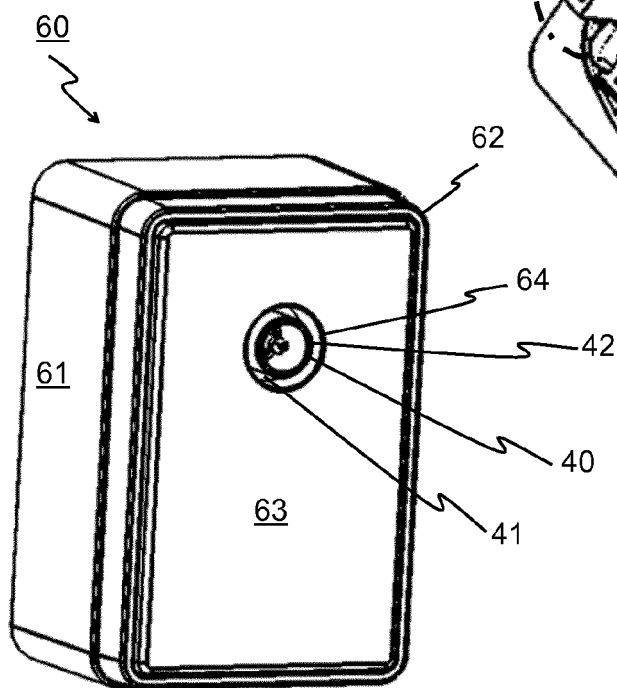


Fig. 6



EUROPEAN SEARCH REPORT

Application Number
EP 18 17 4618

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 4 738 626 A (REICHLE HANS [CH]) 19 April 1988 (1988-04-19) * column 2, line 45 - column 3, line 24; figures 1,2 *	1-4,6-10	INV. H01R13/516 H01R24/52
X	US 2010/081344 A1 (GLEISSNER BRIAN [US] ET AL) 1 April 2010 (2010-04-01) * paragraph [0036] - paragraph [0051]; figures 1,2,12-19 *	1-10	
A	DE 10 2015 105088 A1 (MITSUMI ELECTRONICS EUROPE GMBH [DE]) 6 October 2016 (2016-10-06) * paragraph [0021] - paragraph [0027]; figure 1 *	1,7,9	
			TECHNICAL FIELDS SEARCHED (IPC)
			H01R
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 2 October 2018	Examiner Bouhana, Emmanuel
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 18 17 4618

5

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The members are as contained in the European Patent Office EDP file on
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02-10-2018

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45

50

55

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4738626	A	19-04-1988	AU 591893 B2	21-12-1989
			CH 668514 A5	30-12-1988
			EP 0198424 A2	22-10-1986
			JP S61239575 A	24-10-1986
			US 4738626 A	19-04-1988

US 2010081344	A1	01-04-2010	CN 101714717 A	26-05-2010
			US 2010081344 A1	01-04-2010

DE 102015105088	A1	06-10-2016	CN 107873113 A	03-04-2018
			DE 102015105088 A1	06-10-2016
			EP 3278400 A1	07-02-2018
			US 2018097309 A1	05-04-2018
			WO 2016156385 A1	06-10-2016

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 4043629 A [0005]