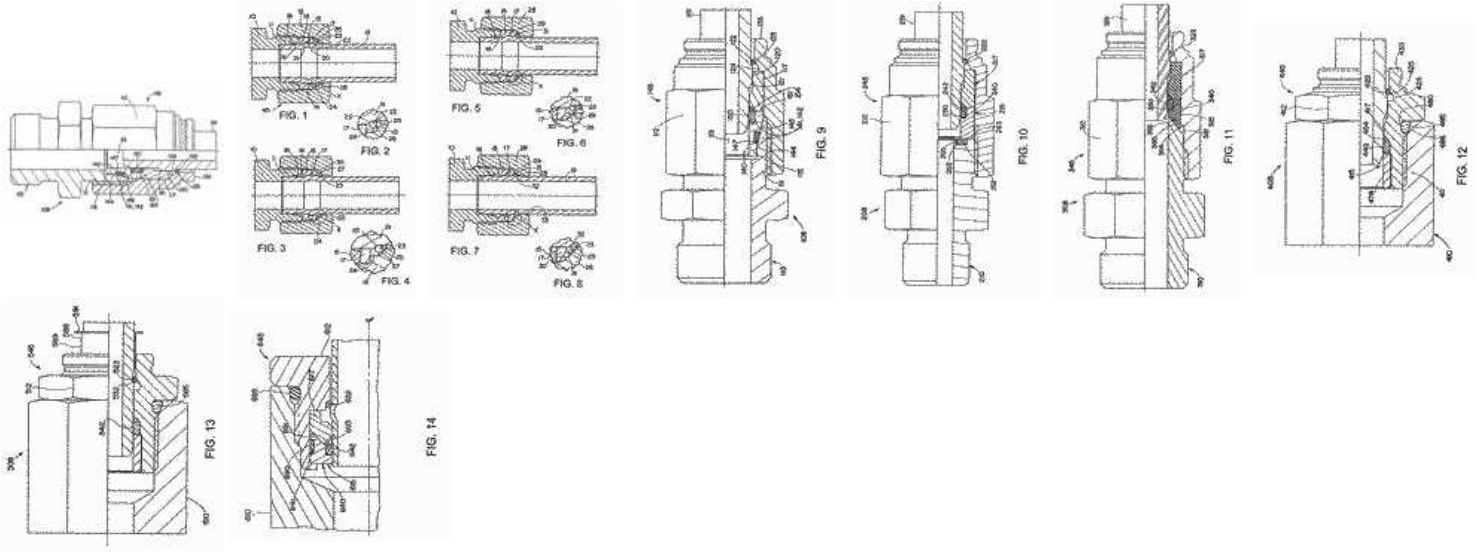
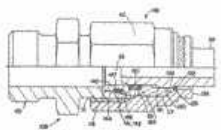


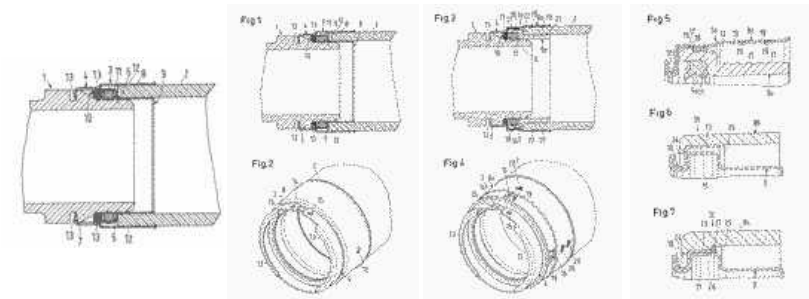
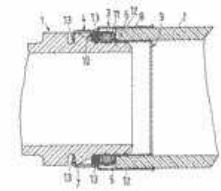
#	 Title	Publication number	1st app. date	Applicant/Assignee	1st publ. date	Publ. date
1.	Adaptor and method for converting standard tube fitting/port to push-to-connect tube fitting/port	WO2006012598	2004-07-21	PARKER HANNIFIN PARKER INTANGIBLES*	2006-02-02	2006-02-02

An **adaptor** (45) for converting to a push-to-connect **tube fitting**/port a standard **tube fitting**/port body (10, 110, 210, 310, 410, 510, 610) having a threaded portion (11) for threaded attachment of a nut/plug (12), comprises a **coupling** nut/plug (12,112, 212, 312, 412, 512, 612) having an axially inner threaded end portion for threaded attachment to the threaded portion (11) of the **fitting**/port body (10); a **tube** sealing member (15, 115, 215, 315, 415, 515, 615) contained within the nut/plug (12) for sealing to a **tube** (19) having a locking surface (22) spaced from the end of the **tube** (19) ; and a retention device (23) retained in the nut/plug (12), which nut/plug (12) has at an axially outer end thereof a central opening through which the **tube** (19) can be inserted into the **coupling** nut/plug (12), whereby the locking surface (22) can be engaged by the retention device (23) to prevent axial withdrawal of the **tube** (19) from the **coupling** nut/plug (12) once inserted; wherein sealing and retention of the **tube** (19) is effected within the confines of the **coupling** nut/plug (12) and separate from and without requiring modification of the standard **tube fitting**/port body (10).

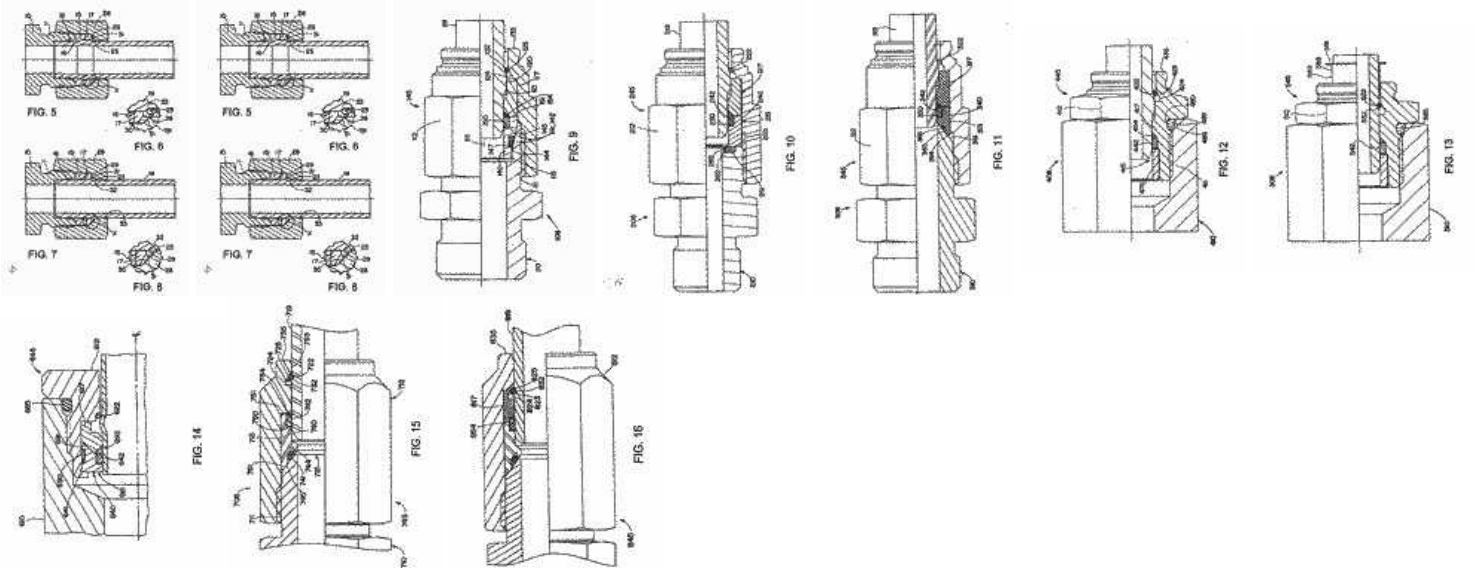


2.	Connector assembly for a hose and pipe	DE102006047882	2006-10-10	NORMA GERMANI NORMA GERMANY*	2007-08-02	2007-08-02
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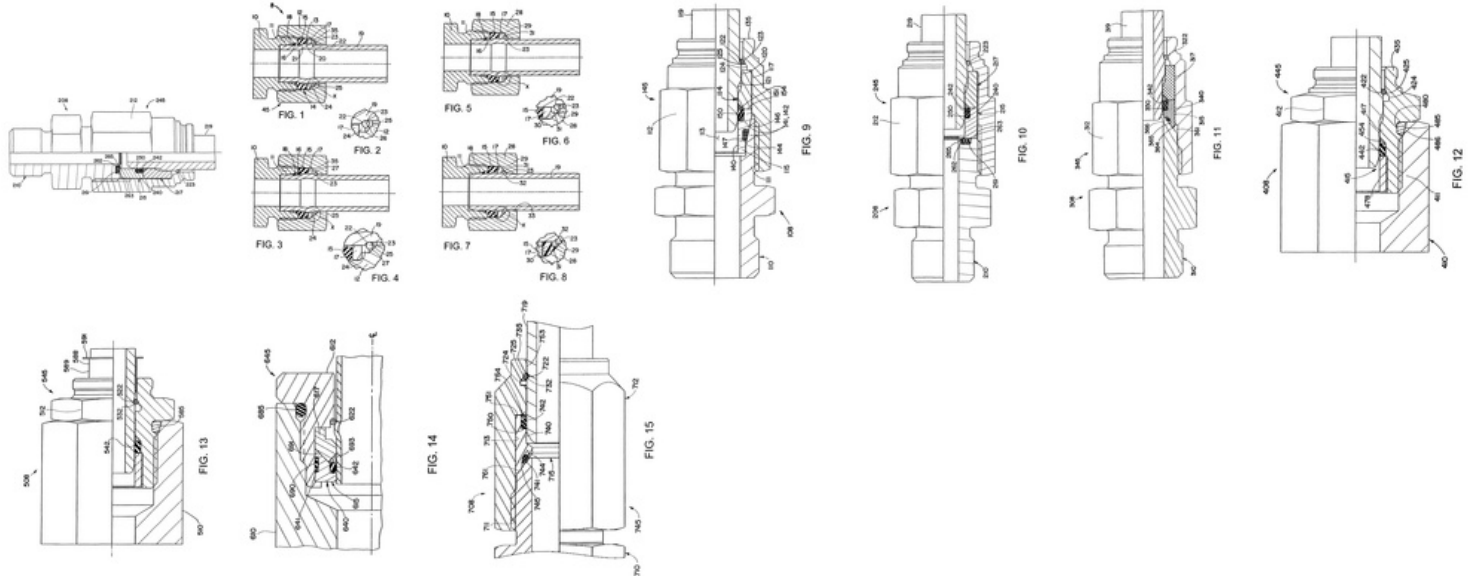
A pluggable connection arrangement has a **sleeve** (3) with an outer wall an inner wall between which the **hose** (2) can be inserted from one end of the **sleeve** (3). A springy connecting **ring** (4) for an annular groove (10) is a leaf-spring **ring** with inwards directed flanges on either of its peripheral edges, and the **flange** of one peripheral edge locks into the first annular groove (10) and that of the other peripheral edge latches behind a retention rib on the **tube** or **pipe** (1).



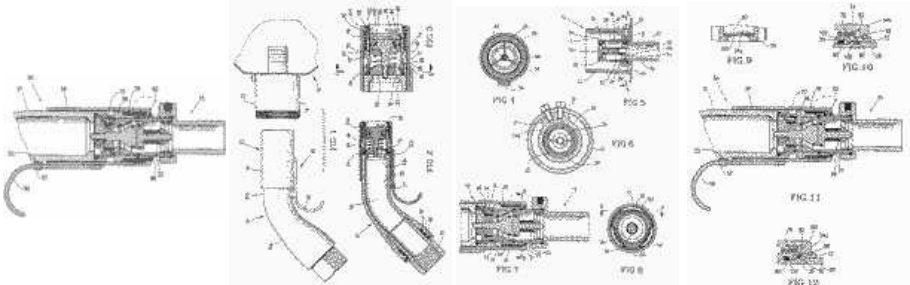
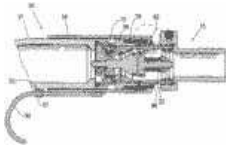
An adaptor (45) for converting to a push-to-connect tube fitting/port a standard tube fitting/port body (10) having a threaded portion (11) for threaded attachment of a nut/plug (12), comprises a coupling nut/plug (12) having an axially inner threaded end portion for threaded attachment to the threaded portion of the fitting/port body (10); a tube sealing member (15) contained within the nut/plug (12) for sealing to a tube (19) having a locking surface (22) spaced from the end of the tube (19); and a retention device (23) retained in the nut/plug (12), which nut/plug (12) has at an axially outer end thereof a central opening through which the tube (19) can be inserted into the coupling nut/plug (12), whereby the locking surface (22) can be engaged by the retention device (23) to prevent axial withdrawal of the tube (19) from the coupling nut/plug (12) once inserted; wherein sealing and retention of the tube (19) is effected within the confines of the coupling nut/plug (12) and separate from and without requiring modification of the standard tube fitting/port body (10).



An adaptor for converting to a push-to-connect tube fitting/port a standard tube fitting/port body having a threaded portion for threaded attachment of a nut/plug, comprises a coupling nut/plug having an axially inner threaded end portion for threaded attachment to the threaded portion of the fitting/port body; a tube sealing member contained within the nut/plug for sealing to a tube having a locking surface spaced from the end of the tube; and a retention device retained in the nut/plug, which nut/plug has at an axially outer end thereof a central opening through which the tube can be inserted into the coupling nut/plug, whereby the locking surface can be engaged by the retention device to prevent axial withdrawal of the tube from the coupling nut/plug once inserted; wherein sealing and retention of the tube is effected within the confines of the coupling nut/plug and separate from and without requiring modification of the standard tube fitting/port body.



A novel **hose coupling** for a liquid transfer system is provided. The **coupling** comprises a **connector** portion adapted to lockingly engage an **adapter** on a receptacle, such as a gas tank, and a handle portion. The handle is proximate to a releasing member which is oriented for manipulation by a hand holding the handle. The releasing member is moveable between a first engaged position in which the **coupling** is lockingly engaged with a receptacle **adapter** and a second disengaged position in which the **coupling** is released from locking engagement with the **adapter**. Accordingly, the **coupling** is disengaged from locking engagement with the **adapter** when the release member is displaced from the engaged position to the disengaged position. The **coupling** allows one-handed, ambidextrous use, providing a **coupling** operator with greater maneuverability which is advantageous particularly in instances where receptacle access is limited.



6.

Hose coupling

EP0879982

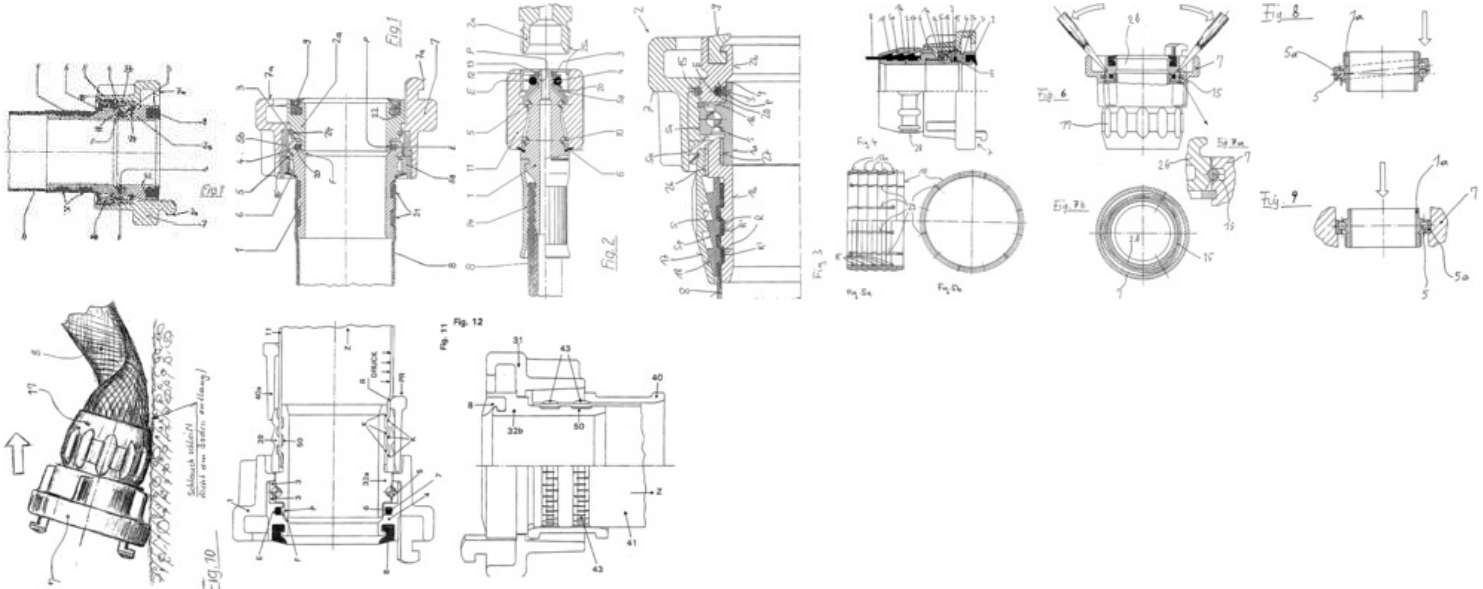
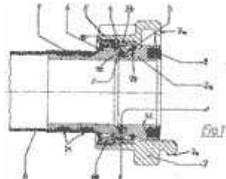
1997-12-23

INNOTRADE ENTWICKLUNGS & VER*

1998-11-25

1998-11-25

This new rotary **coupling** achieves leak-free joining of hoses (8) to a connection. It **hose** tail section (1) is connected to the rotary section (2). In the new design, one or more ball bearings (5) and a radial rotary seal intervene between these sections. The seal is a two-component **ring** (3, 4). One part is a low friction, self lubricating **ring** (3), the other is an elastic **ring** seal (4). Preferably the sliding **ring** is PTFE, especially of the Thordon sliding surface type. The seal (4) is at least part-elastomer. Other aspects including a high pressure **coupling** and **hose** clamping unit are described.



7.

Device for coupling hose or the like

JPS5993589

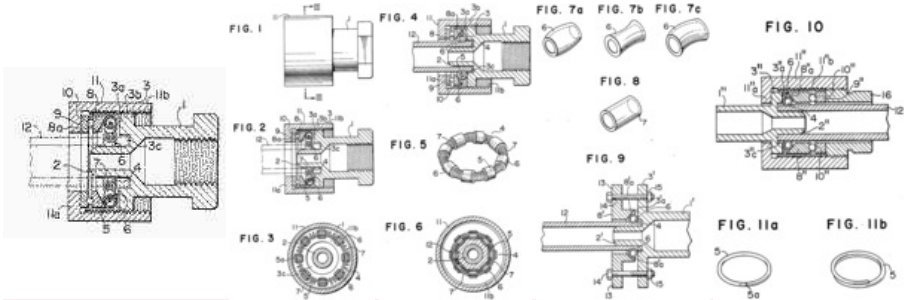
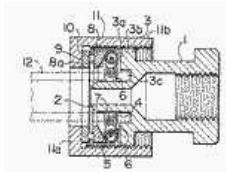
1982-11-17

KURACHI HISAHARU

1984-05-30

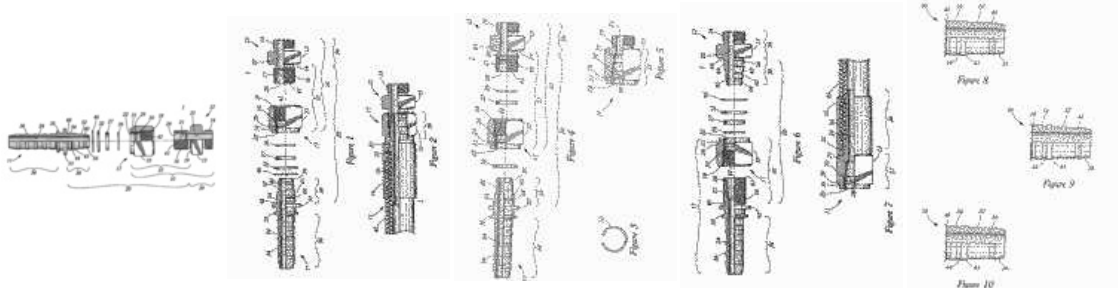
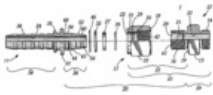
1984-05-30

A **hose coupling** device comprises a first thrust surface formed on one end of an objective member having a tubular connecting portion to which a **hose** is to be coupled, the first thrust surface extends radially outwardly around the base portion of the tubular connecting portion; a second thrust surface formed on the end surface of an annular thrusting member adjacent to the objective member, the annular thrusting member being disposed around and coaxially with the tubular connecting portion with an annular gap therebetween and movable axially relatively to the tubular connecting portion, the second thrust surface opposing to the first thrust surface such that the space defined between the thrust surfaces is converged radially outwardly; a radially contractable and expandable annular tightening member contacted at its both sides by the first thrust surface and the second thrust surface, respectively, and disposed coaxially with the tubular connecting portion, the annular tightening member including a circular core **wire ring**, a plurality of short sleeves having bores loosely receiving the core **wire ring**, and a plurality of compressive tubular resilient members having bores loosely receiving the core **wire ring** so that each compressive tubular resilient member resiliently urges the adjacent short sleeves away from each other; and a driving means for axially driving the annular thrusting member axially towards and away from the objective member.



AIR SYSTEM COMPONENTS
AQUATIC
DEXTER AXLE ELKHART
EASTERN SHEET METAL CINCINNATI
OH
EIFELER MASCHINENBAU
EPICOR INDUSTRIES
GATES*
GATES MECTROL
HART & COOLEY
RUSKIN
SCHRADER BRIDGEPORT
INTERNATIONAL
SCHRADER ELECTRONICS
SELKIRK
TOMKINS INDUSTRIES

The present invention an improved quick connect **hose coupling** for connecting a **hose** to a fixture of the type having a **hose** stem portion including a **hose** insert portion (11), having a fixture portion (10) including a fixture connection portion (39), and having a joinder portion (20). The joinder portion (20) includes a male connection portion (38) and a female connection portion (37). Each of the male connection portion (38) and the female connection portion (37) are adapted to join in a sealing and locking manner upon being pushed together. The **coupling** further includes threads (16) and wrench mating flats (13) adapted to disconnect the **hose** from the fixture. It is improved by the male connection portion (38) being a unitary structure having a leading support **cylindrical** surface (56), a following support **cylindrical** surface (54), and a transition surface (43) intermediate therein between. The leading support **cylindrical** surface (56) has a leading radius. The following support **cylindrical** surface (54) has a following radius. The following radius is larger than the leading radius.



9. Pipe coupling.

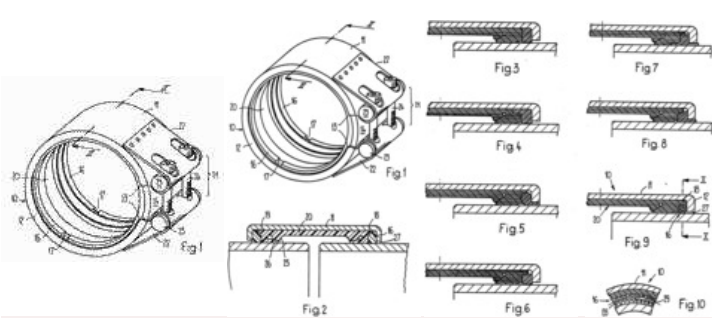
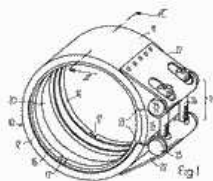
NO912289

1991-06-05

SHIYUTORAUPU
FUEDERUNFUABURITS
STRAUB FEDERNFABRIK*

1991-06-13 1991-06-13

The **pipe coupling**, having an elastomeric sealing **sleeve** (20) of approximately C-shaped cross-section, has a **cylindrical** housing (10), with a slit in the longitudinal direction, having end walls (12) bent inwards, which housing (10) can be constricted in the manner of a **pipe** clamp, with the aid of a fastener (21) having clamping bolts (24), the **sleeve** (20), which is of approximately C-shaped cross-section and is surrounded at the end and on the circumference by the housing and by a lining plate (14) bridging the housing gap, being compressed in the circumferential direction and brought into contact with the pipes to be coupled. Between the end faces of the **sleeve** and the end walls of the housing there are sliding rings (16), which can be compressed in the circumferential direction, are brought into contact with the outer walls of the pipes during assembly of the **coupling** and form a sliding seat therewith. This leads to an increase in the insensitivity to changes with respect to the relative position of the sealing parts and the parts to be sealed, the given matching capability of the **coupling** to irregular pipes being further increased at the same time. <IMAGE>



10. Hose coupling

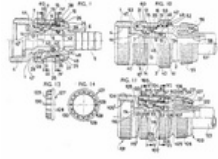
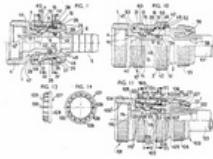
IL30453

1968-07-10

KUPEX*
KUPEX GLARUS

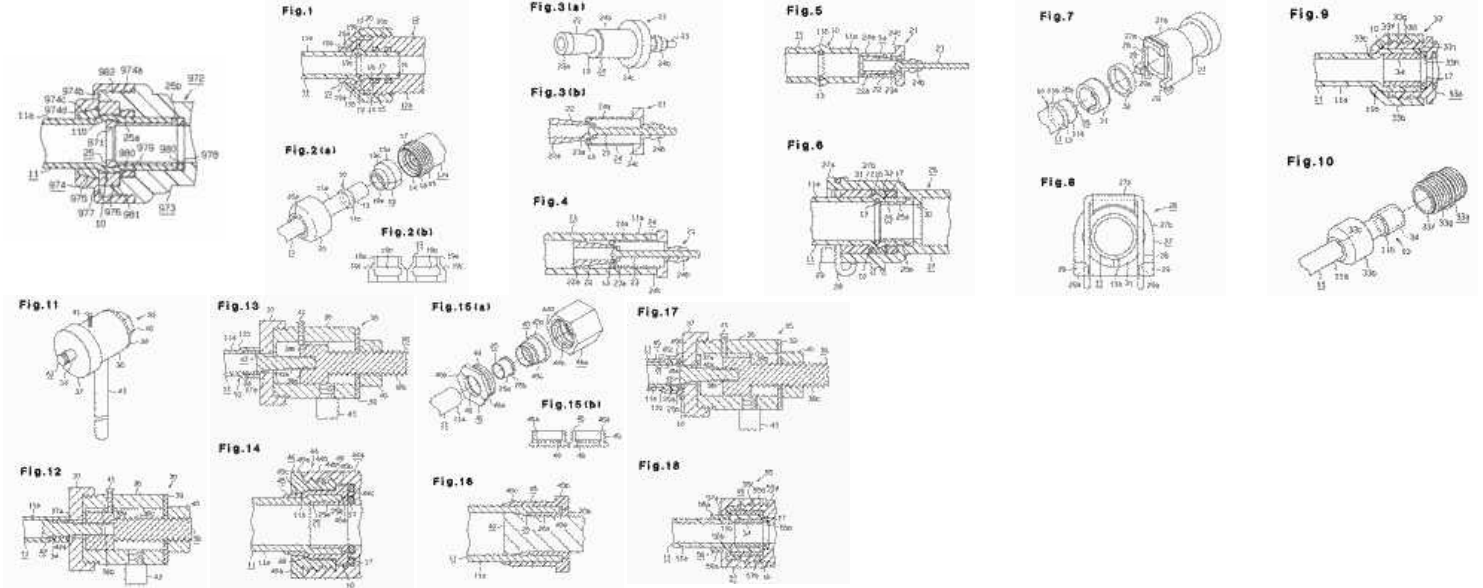
1968-09-26 1968-09-26

1,167,680. **Pipe** couplings. KUPEX A.G. 30 July, 1968 [31 July, 1967], No. 36334/68. Heading F2G. A quickly-releasable **hose-connector** of spigot- and-socket type is secured by a series of radially-moving pawls 9 which lie in slots 6 in the socket member 2 and are spring-biased to engage a circumferential groove 40 in the outer surface of the spigot but being released by the movement of an outer **sleeve** 3 on the socket so that slots in its inner surface register with and allow radial movement of the pawls. The pawls are of plastic and have inclined cam surfaces 10<SP>1</SP> which facilitate entry of the spigot 1. As shown in Fig. 1, the pawl incorporates its own spring arm 15 which presses against the inside of the **sleeve** 3 to bias the pawl inwardly. In modifications (Figs. 5-8, not shown) the pawls have lateral supporting lugs at their top surfaces, and are loaded by separate springs. These may be leaf springs (19, 20) attached to the socket 2, or a **wire ring** (22) may lie in recesses (21) in the pawls, or the **sleeve** 3 may carry spring arms (23). In the form shown in Fig. 1 the **sleeve** 3 is rotatable against spring 36 to release the pawls. The **sleeve** is prevented from coming off the socket in an axial direction by lugs 28 engaging a shoulder on the socket. When the **sleeve** is turned, the pawls register with grooves 31 in the **sleeve** so that they can rise radially out of the spigot groove 40 to free the **coupling**. A detent lip 60 on the **sleeve** prevents this being turned when the **coupling** is under pressure. In a modification. Fig. 10, the **sleeve** 3 is axially movable instead of being rotatable. The union is for **coupling** a **hose** to a tap or appliance attached by screw thread 4. As shown in Fig. 10, the **hose** is clamped on to spigot 58 by a nut 55 and clamping **ring** 56. This clamping **ring** may be of the form shown in Figs. 13 and 14, having a bead 128 and a **ring** of inwardly directed teeth 129 for gripping the **hose**. As shown in Fig. 11, the bead 128 may be integral with the end 124 of the threaded **sleeve** on which the clamping nut 126 is threaded. (From GB1167680 A)

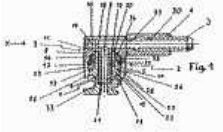
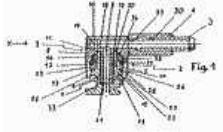


water passing tube with the end part structure, structure of connection between water passing tube and connection body, and method of forming end part structure of water passing tube

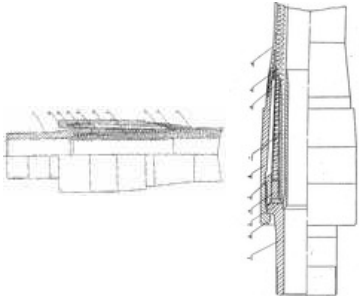
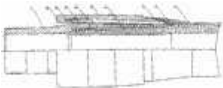
A water pipe includes a pipe main body made of a synthetic resin and an annular metal inner piece inserted into an end of the pipe main body. The inner piece has its diameter increased from the inside of the pipe main body so as to increase the diameter of at least a part of that portion of the pipe main body which corresponds to the inner piece. The inner diameter of the inner piece the diameter of which has been increased is almost the same as that of a portion of the pipe main body which is not enlarged by the inner piece. <IMAGE>



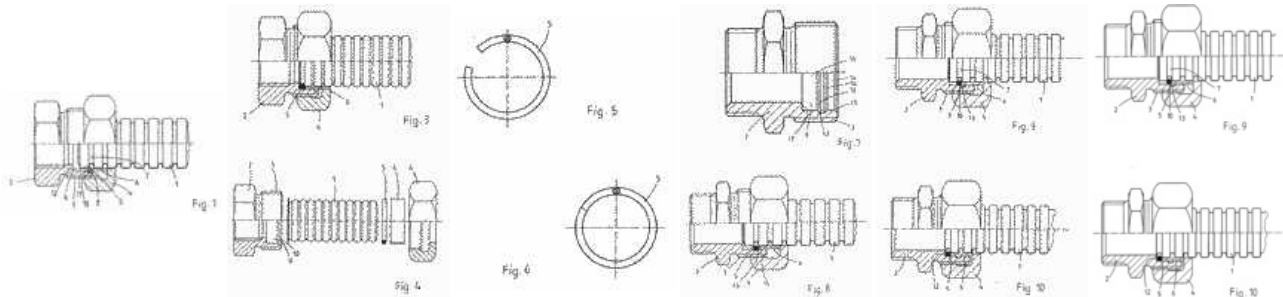
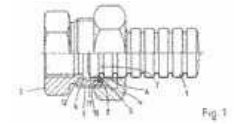
The subject matter of the invention is a plug-in coupling for hose connections, having a coupling 1 and plug connector 2 which is joined to the hose 3 which is to be connected. The sleeve 4 for receiving the hose 3 merges into a tubular part 10 which is integrally formed on the rear side of a baseplate 8. Extending from the latter is a plug-connector pin 5 which projects into a coupling bush 6. The coupling bush 6 is encircled by a spring-sleeve portion 14 which is in latching engagement with a protrusion 15 on the coupling bush 6. The sealing between the coupling bush 6 and the plug-connector 7 is achieved with the aid of a ring 16 which consists of an elastomeric material and ensures sealing between the coupling bush 6 and the plug connector 7. The plug-in coupling according to the invention thus permits the fluid-tight connection between the hose 3 and a coupling bush 6 which is, for example, fitted on a unit. <IMAGE>



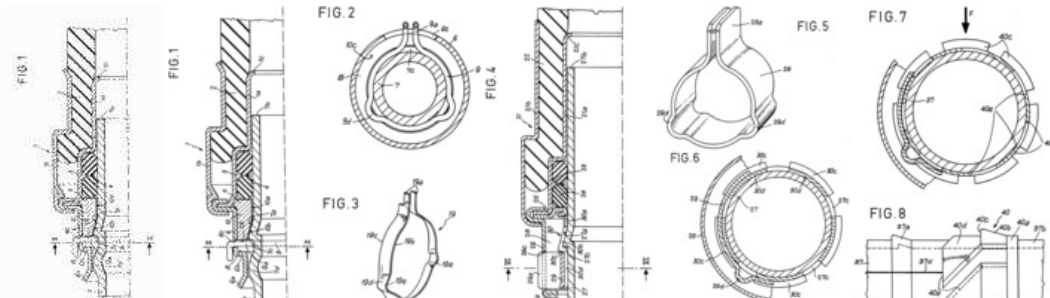
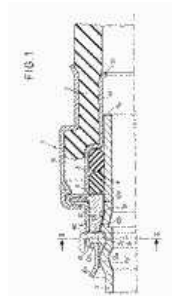
The utility model belongs to a rubber-pipe adaptor for high-pressure exploratory boring for oil drilling and exploitation industry. An inner liner (7) is arranged between inner layer rubber (8) and a steel wire layer (9); a huff sleeve (5) is arranged out of the steel wire layer; adhesives are filled between the inner liner and the steel wire layer, and between the steel wire layer and the huff sleeve. The utility model has simple and reasonable structure, and adopts the method of double connection of the mechanical buckling and the adhesives so that the anchoring effect is good; the looseness phenomenon can not happen; specially under the condition of high-pressure pulse, compared with the simple mechanical buckling type, the utility model is safer, and the service life is longer.



A metal **hose** with a corrugated profile has a push-fit **connector fitting** which is retained by an external **coupling ring** with an outer thread. The **ring** is retained by a nut that engages with a holding **ring** in the corrugation trough.

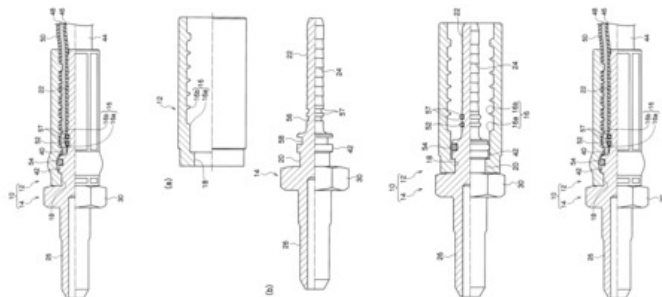
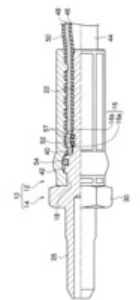


Element (1) for rapid connection between a flexible **pipe** (2), for example made of rubber, and a **tube** (7) made from a rigid material, such as metal, or a semi-rigid material such as a plastic. It consists of a set of two internal and external sockets (1a-1b) clamped around the **pipe**, whilst a housing (3) for an "O"-ring seal (4) is provided on the inside surface of the internal socket (1a) and is closed, towards the outside in the axial direction, by an annular radial wall (5) separate from the internal socket. Additional means for axially immobilising the **tube** in the element comprise a split **ring** (9) constituting a stop for a shoulder (7c) situated at the end of an annular ramp (7a) of the **tube**. The internal radial face of the annular housing (8) consists of a radial portion (10c) of a socket (10), separate from the connection element and connected into the latter. <IMAGE>

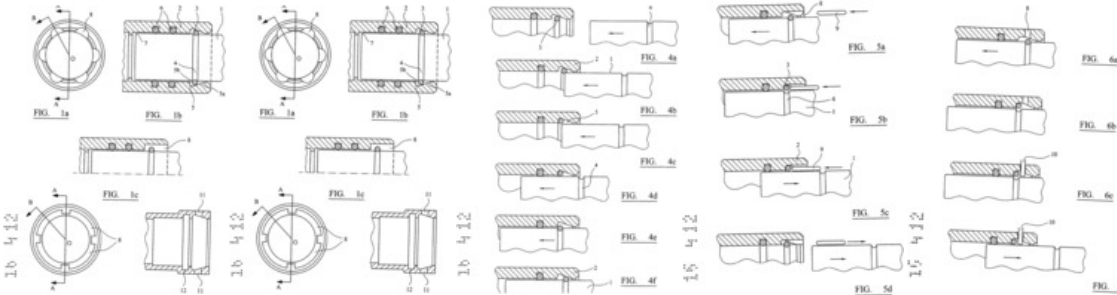
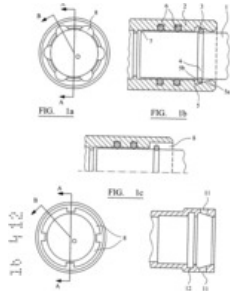


PROBLEM TO BE SOLVED: To prevent fluid leakage without damaging O-rings and a **hose** even though a **sleeve** is tightly caulked, in a **fitting** provided with a nipple having a seal member, and the **sleeve** caulking the **hose**.
SOLUTION: This **fitting** 10 is so caulked that the O-ring 52 as a first seal member arranged on the peripheral wall of a **hose** connection part 22 is positioned between recessed parts 16 axially arranged on the inner peripheral wall of the **sleeve** 12. Further, the O-ring 54 as a second seal member is circumferentially arranged on the peripheral wall of an abutting part 42.

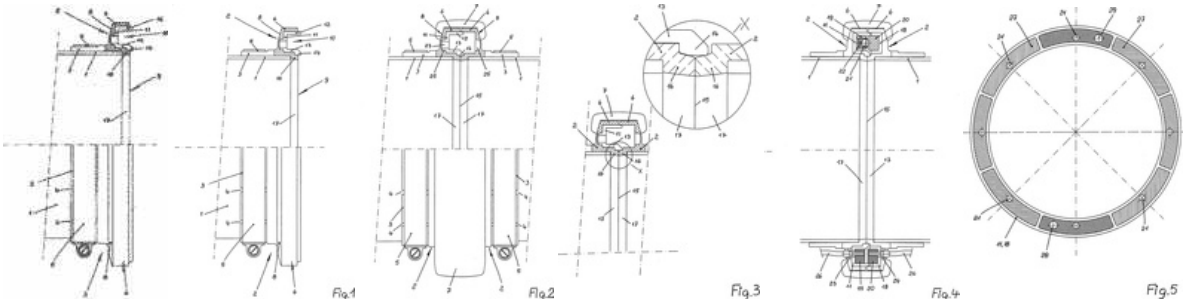
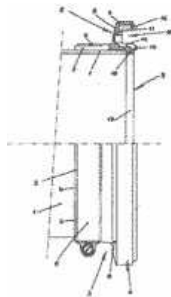
COPYRIGHT: (C)2008,JPO&INPIT



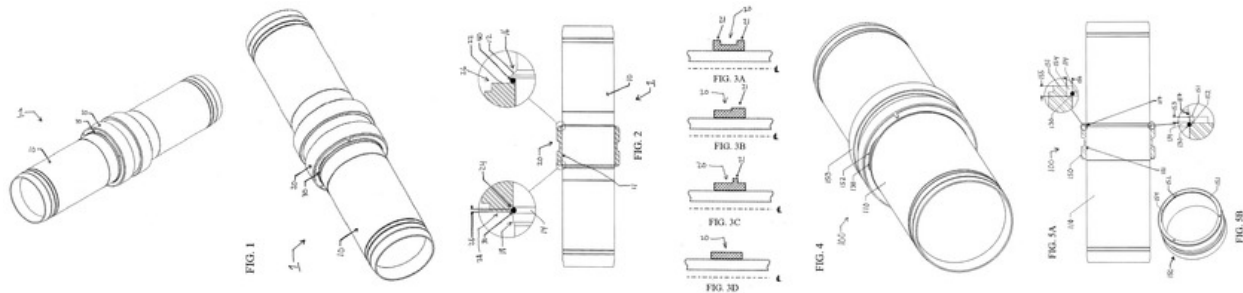
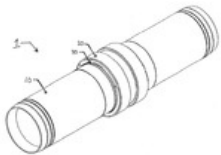
A **pipe fitting** comprising an open-ended **sleeve** portion 2 for **fitting** over the end of a **pipe** 1 is disclosed, the **sleeve** portion 2 being provided with a circumferentially extending tapered groove 5 on its inner surface. The tapered groove 5 has a depth which increases in a direction away from the end of the **sleeve** portion. A **pipe** gripping element 3 (e.g. a metal **ring**) is located in the groove and one or more circumferential housing accommodates sealing elements (e.g. O-rings) 6. When a **pipe** 1 is inserted into the **fitting** the metal **ring** engages a groove in the **pipe** to secure it in the **fitting**. The **fitting** may further comprise access holes (8) for insertion of a removal tool which moves the metal spring **ring** to the far end of the tapered groove. A joint including such a **fitting** is also claimed, along with a method of disassembling the joint.



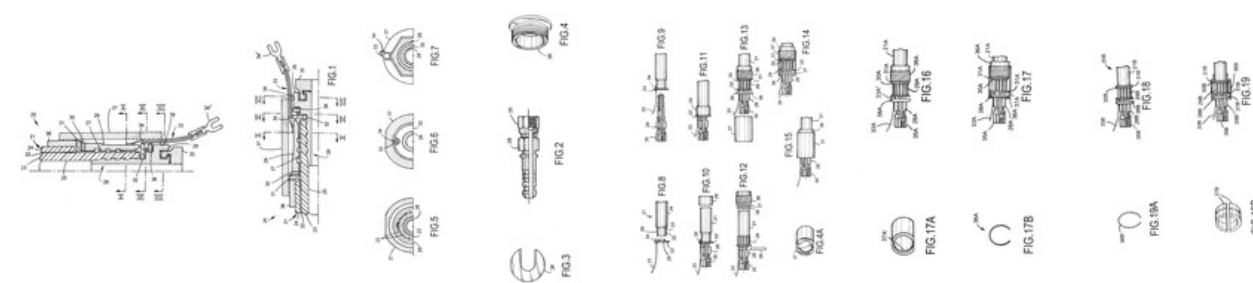
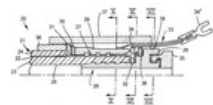
Each **flange** (2) has an inward-extending portion (16) **fitting** over the end of the **pipe** (1). Tongues (3) extend away from the end of the **pipe** and are compressed onto the outside of the **pipe** by a band (5) with a screw tensioner. There are grooves (4) between the adjacent tongues. The C-section **flange** has an outward-extending portion (8) and a **cylindrical** outer portion (6) extending toward the end of the **pipe**. A centering **ring** (11) with forward-extending flanges (12,13) fits inside the C-section **flange**. It has an expanded sealing lip (14) **fitting** against the join between adjacent flanges on **pipe** ends.



A **pipe connector** for connecting pipes that includes an elongate tubular body having an outer diameter, a **sleeve** disposed over the elongate tubular body, and a first **wire ring**. The elongate tubular body that has a groove formed on the outer diameter. The **sleeve** has a groove formed on an inner diameter that is spaced from a first end of the **sleeve** and is aligned with the groove of the elongate tubular member. The first **wire ring** is disposed within the groove of the elongate tubular body and within the groove of the **sleeve** such that the **sleeve** is coupled to the elongate tubular body by the first **wire ring**.



An electrically conductive **hose** apparatus includes a **hose** having a **wire** reinforcer therein that is electrically conductive, an end section with some **hose** material being cut away to expose ends of the **wire** reinforcer; a **hose** end stem engaging the **hose** but not the **wire** reinforcer; a conductive ferrule **sleeve** clamped onto the exposed ends of the **wire** reinforcer; an insulated **wire** in electrical contact with the exposed ends of the **wire** reinforcer and the **sleeve** to form an electrically conductive circuit; and a rotatable **coupling** nut for rotatably connecting the **hose** and stem to a high pressure hydraulic system but that is insulated from the electrically conductive circuit. The apparatus can be used in an existing pre-approved high pressure hydraulic **hose**.



21.

Connector hard sealing structure for corrugated stainless steel hose

CN104266019

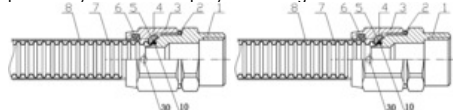
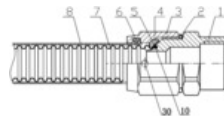
2014-09-02

WUHU TAIHE PIPE INDUSTRY*

2015-01-07

2015-01-07

The invention discloses a **connector** hard sealing structure for a corrugated stainless steel **hose**. The **connector** hard sealing structure comprises the corrugated **hose**, a nut and an externally threaded **connector**. The corrugated **hose** and the externally threaded **connector** penetrate into the nut from the two ends of the nut respectively and are connected through the nut. The **connector** hard sealing structure further comprises a split type clamping **ring** capable of stopping the nut from being disengaged, the clamping **ring** is arranged on the corrugated neck portion at the end of the corrugated **hose** which penetrates into the nut, and a **ring** cavity of the clamping **ring** is a cone. A **pipe** opening corrugated **ring**, placed in the **ring** cavity of the clamping **ring**, of the corrugated **hose** is a conical **ring** which is clamped on the conical face of the **ring** cavity of the clamping **ring** in a corrugation shaping mode. A metal **ring** is inlaid on the end conical face of the externally threaded **connector** with the nut and the corrugated **hose** screwed therein, and the end conical face of the externally threaded **connector** is matched with the conical **ring**. The **connector** hard sealing structure for the corrugated stainless steel **hose** is simple in structure, convenient to manufacture, rapid to dismount and mount, firm and reliable, capable of replacing an original rubber pad sealing structural mode, capable of achieving efficient sealing, high in practicability, low in material cost, small and exquisite in **connector** size, compact and attractive in appearance, high in superior product rate, long in service life and particularly suitable for rapidly connecting small-caliber metal hoses.



22.

Quick acting coupling device between a pipeline and a joint, especially for a heat exchanger, and heat exchanger comprising this device

FR2736135

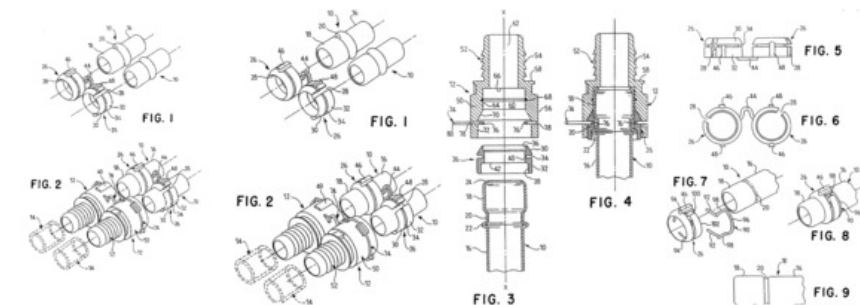
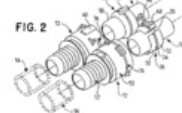
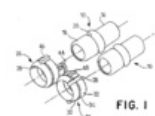
1995-06-28

VALEO CLIMATISATION*

1997-01-03

1997-01-03

The rapid **connector** for joining a **tube** (10), having an annular groove, to a ferrule comprises a **ring** (26) which is slipped around the **tube**. The **ring** comprises a deformable annular body interrupted by a slot and an internal annular rib (40). The rib locks the **ring** onto the **tube** by engaging the rib in the **tube** annular groove as the **ring** is deformed. The ferrule (12) comprises a housing (60) for taking one end (18) of the **tube** as well as the **ring**. A seal (68) is interposed between the **tube** and the ferrule. The ferrule has a second locking **ring** (74) which partly surrounds the ferrule. This **ring** has two opposite parts (76) which are elastically returned towards each other. The two opposite part of the **ring** pass through opposite slots (78) in the ferrule to engage in an annular groove (34) in the **ring** periphery.



23.

Coupling nipple for pipe or hose

GB959100

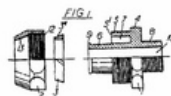
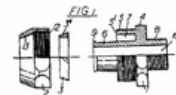
1961-03-08

EINAR BJORN CHRISTENSEN*

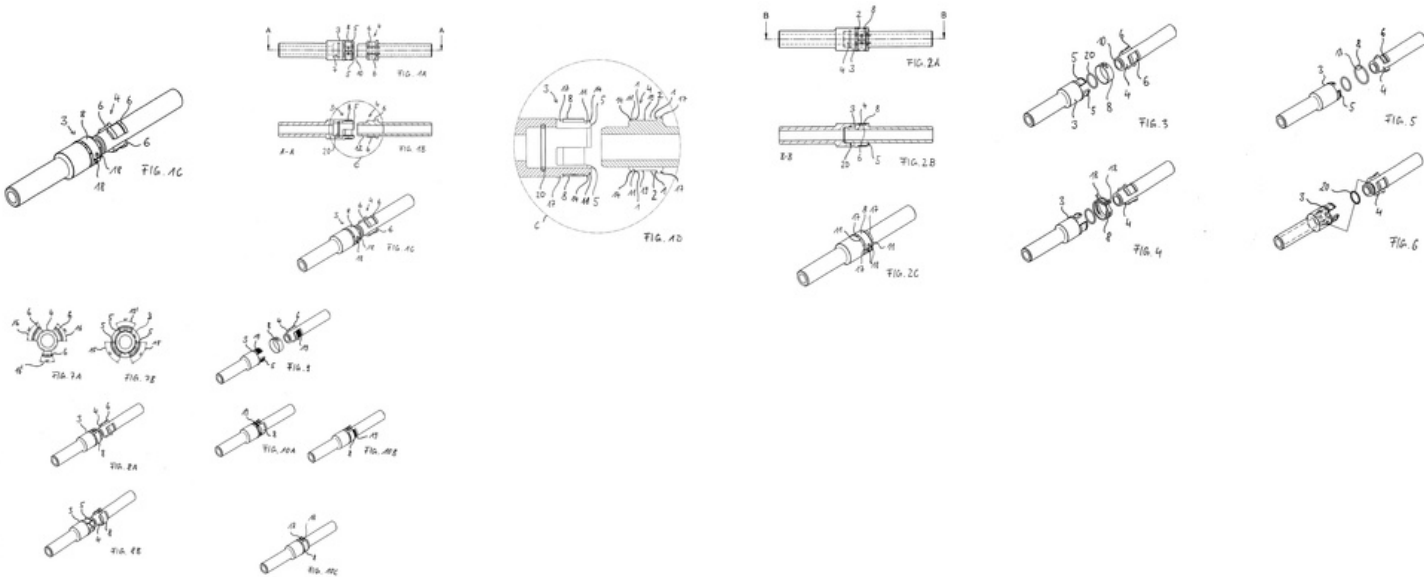
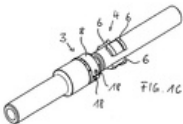
1964-05-27

1964-05-27

959,100. **Pipe** couplings. E. B. CHRISTENSEN. March 8, 1961, No. 8435/61. Heading F2G. A **coupling** nipple for a **pipe** or **hose** comprises a **coupling** part 1 having a threaded portion 5 and a tapered plug 6 with an outwardly projecting beading 9, a shell 2 having an internally threaded part 12 and a conical part 13 and a split **ring** 3 of flexible material having an outer conical surface 3<SP>11</SP> and an oblique slot therethrough. The end of the **pipe** or **hose** is received in the hollow space 7 and is clamped to the nipple on threaded engagement of the part 1 with the shell 2 by the **ring** 3 which is pressed into the wall of the **pipe** or **hose** between the surface 5<SP>1</SP> and the beading 9 by the action of the conical surfaces 13, 311 and the abutment of the end of the **ring** 3 with the surface 5<SP>1</SP>.



The connector has **coupling** housing (3) including an insertion opening (7) for the **coupling** plug (4). The guide ribs (5) are arranged on **coupling** housing and guide segments (6) are arranged on **coupling** plug are arranged such that guide ribs and guide segments are inserted into lateral boundary surfaces of groove when **coupling** plug is connected with **coupling** housing. The groove includes locking spring (8) for locking the **coupling** housing and **coupling** plug. The guide rib and segments have heel portion with rising ramp for expansion of locking spring.



PROBLEM TO BE SOLVED: To provide a rubber **hose** with a mouth **fitting**, for actualizing easy and reliable anchoring of the mouth **fitting**.
SOLUTION: A stop **ring** 7 is protruded on the outer peripheral face of the mouth **fitting** 3. The **hose** body 2 is formed to cover the stop **ring** 7. A reinforcing fiber layer 4a located deviating from the stop **ring** 7 and a spiral **wire** 5 each have a winding diameter set to be smaller than the outer diameter of the stop **ring** 7. An anchoring cord 6 is wound on the outer periphery side beyond the reinforcing fiber layer 4a at its front end side beyond the stop **ring** 7. The anchoring cord 6 restricts the diameter enlargement of the reinforcing fiber layer 4a and the spiral **wire** 5. The reinforcing fiber layer 4a and the spiral **wire** 5 are caught at their front end sides on the stop **ring** 7 via a rubber. The come-off of the mouth **fitting** 3 from the **hose** body 2 is prevented during anchoring.
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