



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 768 736 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
28.10.1998 Bulletin 1998/44

(51) Int. Cl.⁶: **H01R 17/12, H01R 13/52**

(43) Date of publication A2:
16.04.1997 Bulletin 1997/16

(21) Application number: **96114695.8**

(22) Date of filing: **13.09.1996**

(84) Designated Contracting States:
BE CH DE DK GB IT LI

(72) Inventor: **Gigas, George R.**
Madison, CT 06443 (US)

(30) Priority: **16.10.1995 US 543808**

(74) Representative:
Döring, Roger, Dipl.-Ing.
Alcatel Kabel Beteiligungs-AG,
Kabelkamp 20
30179 Hannover (DE)

(71) Applicant:
kabelmetal electro GmbH
30179 Hannover (DE)

(54) **Moisture migration proof unpressurized radio frequency transmission system and method**

(57) A water migration proof radio frequency transmission system and method is disclosed. The system comprises an unpressurized foam dielectric coaxial cable having a center conductor surrounded by a foam dielectric which is surrounded by an outer conductor. The system also comprises a connector for connecting the center and outer conductors of the cable to the center and outer conductors of an antenna. The connector includes sealing means for preventing moisture migration into the cable from the center conductor of the antenna. In one embodiment the connector has an insu-

lative center conductor contact bead with an O-ring positioned on its outer periphery and with a bore in the bead press fit to an inner conductor contact which in turn connects to the coaxial cable center conductor. In another embodiment the bead includes a second O-ring within the bore for moisture sealing engagement with the inner conductor. The method uses such a connector within a dielectric foam coaxial cable to form a moisture proof radio frequency transmission system.

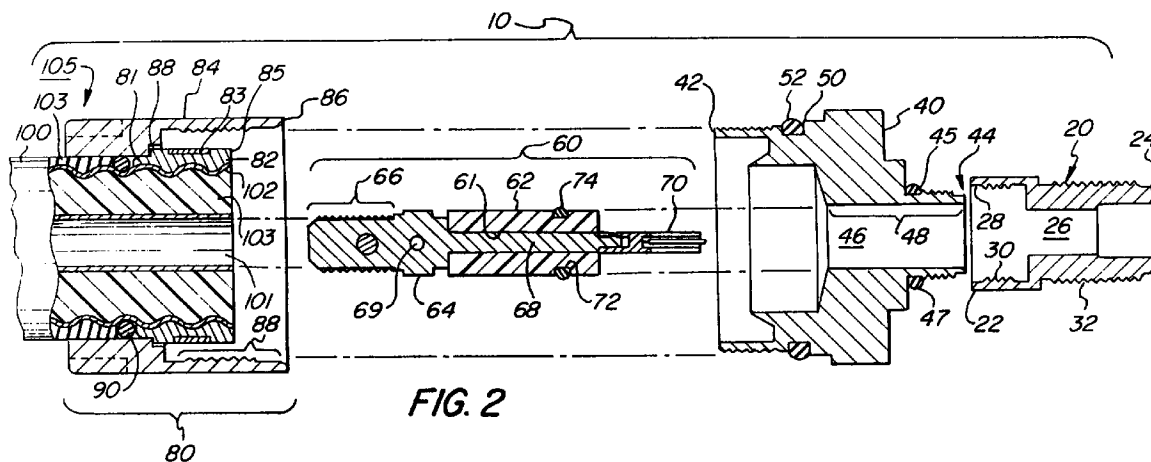


FIG. 2

EP 0 768 736 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 96 11 4695

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	GB 2 263 828 A (SPINNER GEORG) 4 August 1993	1,8	H01R17/12 H01R13/52
A	* page 3, line 16 - page 4, line 23; figure 1 *	5,7	
Y	US 3 854 789 A (KAPLAN E) 17 December 1974	1,8	
A	* column 2, line 13; figures 2,6 *	5,7	
Y	US 5 439 386 A (ELLIS WILLIAM H ET AL) 8 August 1995	1,8	
A	* column 5, line 8-21; figure 5 *	5,7	
A,D	US 5 137 470 A (DOLES CONNIE S) 11 August 1992 * column 2, line 13 - column 4, line 53; figure 3 *	1,5,7,8	TECHNICAL FIELDS SEARCHED (Int.Cl.6) H01R
A,D	US 5 454 735 A (NELSON JAMES W) 3 October 1995 * figures 4,5 *	1,5,7,8	
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		4 September 1998	Waern, G
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)