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(54) **Reflector and multi band antenna**

(57) The present invention relates to a reflector for an antenna comprising a first reflector assembly (1) and at least one second reflector assembly (2), said first reflector assembly (1) having a first reflector structure adapted for a first antenna frequency band f_1 and at least one second antenna frequency band f_2 ; said at least one second reflector assembly (2) having a second reflector structure adapted for said first antenna frequency band f_1 and at least one third antenna frequency band f_3 ; and wherein said first reflector assembly (1) and said at least one second reflector assembly (2) are electrically coupled so that said first reflector assembly (1) and said at least one second reflector assembly (2) together form a common reflector structure (R) adapted for said first f_1 , at least one second f_2 and at least one third f_3 antenna frequency bands. Furthermore, the invention also relates to a multi band antenna comprising at least one such reflector.

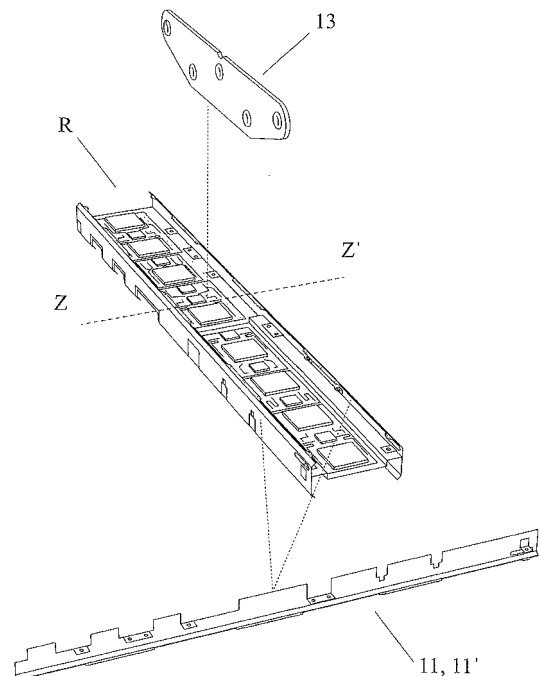


Fig. 4



EUROPEAN SEARCH REPORT

Application Number
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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 2010/265150 A1 (ARVIDSSON PER-ANDERS [SE] ET AL) 21 October 2010 (2010-10-21)	1-4,8	INV.
Y	* paragraphs [0027] - [0049] *	9	H01Q15/16
	* figures 2a,3a,3b,3c *		H01Q19/10
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Y	DE 299 10 570 U1 (ALLGON AB [SE])	9	H01Q5/00
	2 September 1999 (1999-09-02)		
A	* page 3, line 11 - page 9, line 6 *	1	
	* figures 1,2 *		

			TECHNICAL FIELDS SEARCHED (IPC)
			H01Q
<p>2 The present search report has been drawn up for all claims</p>			
Place of search		Date of completion of the search	Examiner
Munich		21 November 2012	Kruck, Peter
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p> <p>& : member of the same patent family, corresponding document</p>			

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
- 1-9
- ☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION
SHEET B

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-9

relating to a multi band reflector comprising first and second reflector assemblies;

2. claims: 10-15

relating to an antenna array with interleaved single band and dual band antenna elements;

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

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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21-11-2012

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82