



## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 21 96 50 34

**Classification of the application (IPC):**  
H01Q 9/42, H01Q 1/52, H01Q 21/24, H01Q 1/24

**Technical fields searched (IPC):**  
H01Q

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	US 2015029062 A1 (NG JACKSON [US] ET AL) 29 January 2015 (2015-01-29) * figure 12 * * paragraph [0052] * * paragraph [0068] *	1-15
A	US 6542128 B1 (JOHNSON GREGORY F [US] ET AL) 01 April 2003 (2003-04-01) * column 11, line 33 - column 14, line 17; figures 1,8-10 * * column 5, line 12 - column 6, line 38 *	1-15
A	US 2020028276 A1 (WATSON PAUL ROBERT [CA]) 23 January 2020 (2020-01-23) * figure 8 * * paragraphs [0078] - [0080] *	1-15

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 17 October 2024	Examiner Niemeijer, Reint
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### CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

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## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

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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 17-10-2024  
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2015029062 A1	29-01-2015	EP 3025392 A1	01-06-2016
		US 2015029062 A1	29-01-2015
		WO 2015012942 A1	29-01-2015
US 6542128 B1	01-04-2003	US 6542128 B1	01-04-2003
		WO 0176007 A1	11-10-2001
US 2020028276 A1	23-01-2020	US 2020028276 A1	23-01-2020
		WO 2020015742 A1	23-01-2020