EUROPEAN PATENT APPLICATION

(54) Planar array waveguide antenna with L-shaped series/series coupling slots.

(57) An array antenna which includes a first waveguide 12 coupled to a second waveguide 20 by an L-shaped coupling slot 30. The slot 30 has a first portion 32 orthogonal to a second portion 34 thereof thereby providing the unique L-shape. In a specific embodiment, the slot 30 is located with the first portion 32 along the centerline and longitudinal axis of the first waveguide 12 and the second portion 34 along the centerline and longitudinal axis of the second waveguide 20.

The folded short, as well as the tapered section of prior designs can be eliminated by use of the L-shaped coupling slot of the present invention in the first and last positions of the coupling slot because a short can be placed at the L-shaped slot. Hence, the L-shaped coupling slot of the present invention provides a more compact planar antenna than that afforded by conventional designs.

FIG. 3
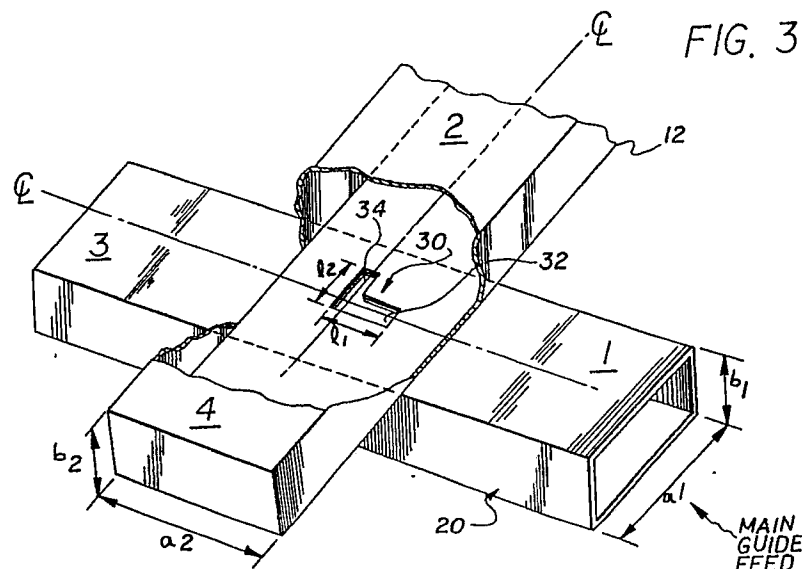
EP 0 434 283 A3

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.5)
A	US-A-4821044 (KURTZ) * abstract; figures 1-4 *	1, 7, 8	H01Q21/00
A	US-A-3537037 (BRUMBAUGH) * claims 1-4; figures 1-4 *	1-8	
A	US-A-3760304 (COHN) * column 3, lines 35 – 48; figure 6B *	1-8	
A	US-A-2632809 (RIBLET) * claims 1-13; figures 1-5a, 9a *	1-8	
A	MICROWAVE JOURNAL. vol. 31, no. 6, June 1988, DEDHAM US pages 26 – 48; Sparks: "Systems Applications of Mechanically Scanned Slotted Array Antennas" * the whole document *	1, 7, 9	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

H01Q
H01P

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	22 MAY 1991	ANGRABEIT F.F.K.

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
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T : theory or principle underlying the invention
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   after the filing date
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