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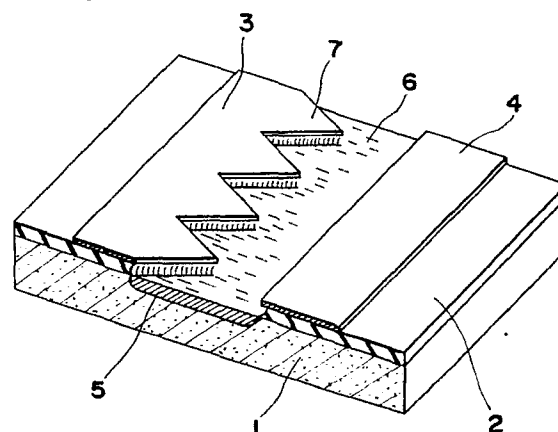
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(54) **Field-emission type switching device and method of manufacturing it.**

(57) A field-emission type switching device includes a substrate (1, 2; 11) formed with a recess (6; 15) having a straight edge and serrated edge opposite to the straight edge. A gate electrode (5; 14) is formed at the bottom of the recess (6; 15). An emitter electrode (3, 12) is provided over the substrate (1, 2; 11) and formed with a serrated edge which is slightly off alignment with the serrate edge of the recess (6; 15) so as to provide an emitter overhanging portion (3a) overhanging the recess (6; 15). Similarly, a collector electrode (4, 13) is provided over the substrate means (1, 2; 11) and formed with a straight edge which is slightly off alignment with the straight edge of the recess (6; 15) so as to provide a collector overhanging portion (4a) overhanging the recess (6; 15).

Fig. 2



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EUROPEAN SEARCH REPORT

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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 (Int. Cl.5)
X,Y	EP-A-0 260 075 (THE GENERAL ELECTRIC COMPANY PLC.) * abstract; figures 1-4, 9 ** column 1, lines 12 - 53 @ column 2, line 17 - column 3, line 3 @ column 3, lines 27 - 36 @ column 4, lines 45 - 59 * - - -	1,2,3,5,9,10	H 01 J 21/10 H 01 J 19/24 H 01 J 3/02 H 01 J 9/02
Y	EP-A-0 290 026 (CANON K.K.) * abstract; figures 2, 6-8, 10, 11 ** page 3, lines 5 - 17 ** page 5, lines 7 - 12 ** page 5, lines 30 - 55 * - - -	2,3,5,9,10	
A	US-A-4 578 614 (GRAY) * abstract; figure 1 ** column 1, lines 36 - 57 ** column 3, lines 17 - 35 * - - -	1-3,5-14	
P,A	US-A-4 855 636 (BUSTA) * column 2, line 39 - column 3, line 22; figures 1-3, 6 ** column 4, lines 19 - 40 * - - - - -	1-3,5-14	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl.5) H 01 J H 01 T
Place of search The Hague		Date of completion of search 28 January 91	Examiner COLVIN G.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			