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EUROPEAN PATENT APPLICATION

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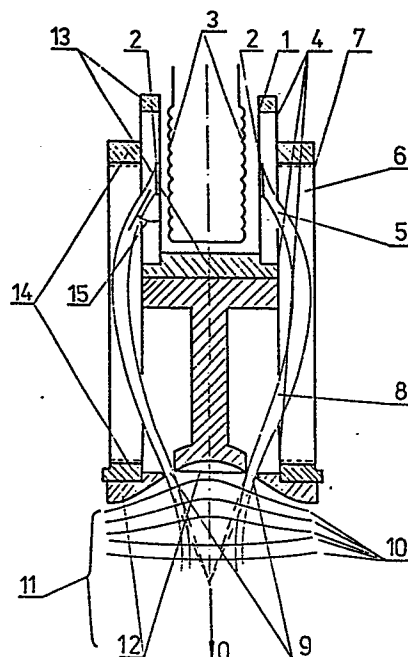
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⑤④ **Method and electron gun for generating an electron beam, particularly of high current density at the surface of its utilisation.**

⑤⑦ Electron gun having a cylindrical cathode (1), part of the surface of which is in the form of a 0.01–10 mm wide ring coated with emission paste (2). Electrodes (4, 7) of the cylindrical narrow analyser are mounted around the cathode (1). An inlet slit (5) of the internal electrode (4) is shifted horizontally in relation to the active cathode surface coated with emission paste (2) so that the angle between the electron beam in the region of that slit (5) and the axis (0) of the system is contained within an interval of 0–0.5 radian around their central angle (15) of 0.1–1.5 radians. Electrons with a narrow energy interval are separated from the beam by means of a cylindrical mirror analyser (4, 7) after curving the electron paths therein and selecting them with the application of slits (8, 9). These electrons are then converged in a set of electron lenses (11).

The electron gun comprises an electrode (12) placed between the analyser (4, 7) and the set of electron lenses (11), co-forming equipotential lines (10) with a coaxial circular ring-shaped slit (9).





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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.4)
Y	US-A-3 805 057 (YANAGISAWA et al.) * Figures 1,2,8a; column 6, line 57 - end; column 7, lines 1-46 *	1,2	H 01 J 3/02
Y	--- US-A-3 013 179 (L. HARRIS) * Figure 2; column 2, lines 14,15 *	1	
A	--- DE-C- 548 917 (W. ROGOWSKI) * Figure 2; page 1, line 20 - end *	1	
A	--- US-A-3 005 926 (C. HORNER et al.) * Figure 2; column 2, lines 54-65 *	3	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			H 01 J 29/00 H 01 J 3/00 H 01 J 37/00 H 01 J 23/00
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18-01-1985	Examiner WITH F.B.
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			

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