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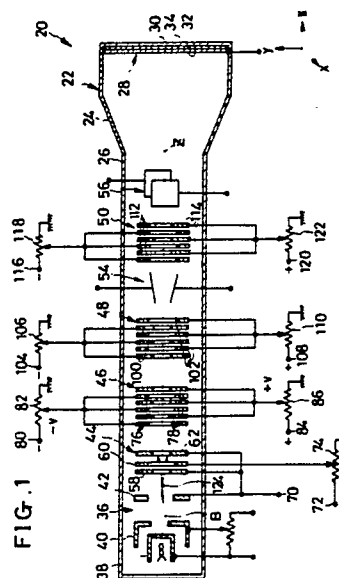
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54 **Cathode ray tube having an electron gun constructed for ready refocusing of the electron beam.**

57 A cathode ray tube comprises a series of quadrupolar lenses for focusing a beam of electrons, emitted from a cathode at one end of an evacuated envelope under the control of a control electrode, at a target screen at the other end of the envelope. After having been focused at the target by adjustment of electric potentials on the quadrupolar lenses, the electron beam will defocus upon change in a potential on the control electrode because then the crossover or initial focusing point of the electron beam will be displaced along the central axis of the envelope. With a view to ready refocusing of the beam at the target, a refocusing lens is provided between the crossover point and the quadrupolar lenses for providing a converging lens action of radial symmetry about the envelope axis. The beam can be refocused through adjustment of a single potential on the refocusing lens rather than through adjustment of several different potentials on the

quadrupolar lenses.



EP 0 283 941 A3



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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-4 188 563 (JANKO) * Abstract; column 1, line 59 - column 2, line 9; column 3, lines 55-58; column 4, lines 18-20,51-58; figures 1,2 *	1,4,19,20	H 01 J 29/62 H 01 J 29/48 H 01 J 31/12
A	---	5-12,14,16	
Y	US-A-3 417 199 (YOSHIDA et al.) * Column 1, lines 19-23,45-69; figures *	1,4,19,20	
A	---	1,20	
A	GB-A-1 157 202 (CSF-COMPAGNIE GENERALE DE TELEGRAPHIE SANS FIL) * Page 2, lines 1-6; page 1, lines 9-14,30-41; figure 1 *		
A	---	1,4,19,20	
A	US-A-4 371 808 (URANO et al.) * Abstract; figure 2 *		
A	---	1,2	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
D,P Y D,P A	GB-A-2 049 989 (TEKTRONIX) * Abstract; page 1, lines 51-61; claims 1,2,15,16; figures 1,4 * ---		H 01 J
	EP-A-0 241 945 (IWATSU) * Whole document *	1,4,19,20,21	
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 03-05-1989	Examiner MARTIN Y VICENTE M.A.
<b>CATEGORY OF CITED DOCUMENTS</b> 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			