

(11) Publication number:

0 143 938

**A3** 

(12)

## **EUROPEAN PATENT APPLICATION**

(21) Application number: 84111580.1

51 Int. Cl.4: H 01 J 29/07

H 01 J 9/227

(22) Date of filing: 27.09.84

(30) Priority: 30.09.83 US 538001 18.01.84 US 572088 18.01.84 US 572089

- (43) Date of publication of application: 12.06.85 Bulletin 85/24
- (88) Date of deferred publication of search report: 13.08.86
- 84 Designated Contracting States:
  BE DE FR GB IT NL

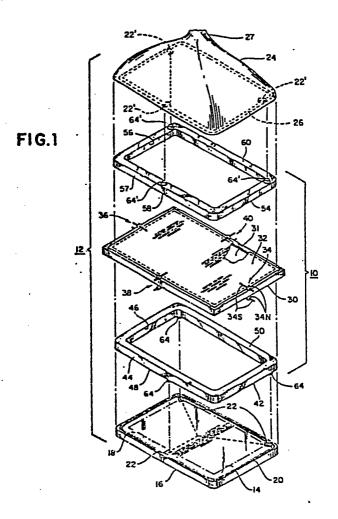
71) Applicant: ZENITH ELECTRONICS CORPORATION Zenith Center 1000 Milwaukee Avenue Glenview Illinois 60025(US)

- (72) Inventor: Palac, Kazimir 628 Hawthorne Lane Carpentersville Illinois 60110(US)
- (72) Inventor: Strauss, Paul 336 Wellington, Apt.2005 Chicago Illinois 60657(US)
- | Inventor: Rowe, William A. | 723 Monterey Road | Palatine Illinois 60067(US)
- (74) Representative: Baillie, lain Cameron et al, c/o Ladas & Parry Isartorplatz 5
  D-8000 München 2(DE)

64 Color cathode ray tube and component thereof and method of manufacturing same.

(57) A tensed color selection electrode assembly (10) is utilized in screening a pattern of phosphor areas upon the target surface (14) of the faceplate (16) of a color cathode ray tube (12) and is thereafter incorporated as a component of the tube. The faceplate (16) is formed of a material having a predetermined temperature coefficient of expansion and has registration affording means (22) thereon. The initial assembly includes a severable mount (30) formed of a material having a temperature coefficient of expansion greater than than of the faceplate and has a central opening (31) of a predetermined expanse. A planar metal foil (32) having a predetermined pattern of apertures and formed of a material having a temperature coefficient of expansion not greater than that of the mount is secured to the mount. First and second frames, (42, 59) each having an overall span less than the mount opening and each having a central aperture dimensioned to enclose the target surface, are formed of a material having a temperature coefficient of expansion approximating that of the faceplate. Each frame further includes a pair of space apart sealing lands (48, 50, 58, 66) with one sealing land of each frame disposed in a confronting relation. Devitrifying frit disposed between the confronting sealing lands bond the frames and a peripheral portion of the foil in sandwich fashion to maintain the foil in tension. Indexing means (64) associated with the other sealing land of

the first frame co-operate with the registration affording means (22) on the faceplate to permit repeated precise registrations between the foil and the faceplate to facilitate screening of the phosphor pattern as well as to facilitate mating of the electrode assembly to the faceplate. Finally, the invention contemplates a method of utilizing the electrode assembly for screening a phosphor pattern as well as methods of making a color cathode ray tube having such an electrode assembly.





## **EUROPEAN SEARCH REPORT**

84 11 1580 ΕP

Category	Citation of document with indication, where appropriate, of relevant passages		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)	
A	line 23; column 9	(MOORE) ine 2 - column 4, 9, line 54 - col- e 24; figures	1,22,29,33	H O1 J 29/0 H O1 J 9/2	
Α	US-A-4 069 567 * Column 4, li: line 24; figure	ne 26 - column 5,	1		
A		hand column, line ight-hand column,	1	· ·	
A	GB-A-2 052 148 * Page 1, line 1 50; figures 2-4	03 - page 2, line	1	TECHNICAL FIELDS SEARCHED (Int. Cl.4)	
A,D	US-A-3 638 063 al.)	- (TACHIKAWA et		H 01 J 31/0 H 01 J 29/0 H 01 J 9/0	)O )O
A,D	US-A-2 625 734	- (LAW)			
A,D	US-A-3 284 655	- (OESS)			
		<b></b>			
	The present search report has b	een drawn up for all claims	1		
Place of search THE HAGUE  Date of completion of the search 23-05-1986		JANSS	Examiner ON P.E.		
Y: pa do A: te O: no	CATEGORY OF CITED DOCL articularly relevant if taken alone articularly relevant if combined w bocument of the same category chnological background bn-written disclosure termediate document	E : earlier pate after the fil ith another D : document L : document	ent document, ling date cited in the ap cited for other I the same pate	lying the invention but published on, or plication reasons ent family, corresponding	