

(12)

**EUROPEAN PATENT APPLICATION**

(21) Application number: 83307522.9

(51) Int. Cl.<sup>4</sup>: **H 01 H 13/70**  
**G 06 F 3/023**

(22) Date of filing: 09.12.83

(30) Priority: 23.12.82 US 452642  
23.12.82 US 452586

(43) Date of publication of application:  
11.07.84 Bulletin 84/28

(88) Date of deferred publication of search report: 21.05.86

(84) Designated Contracting States:  
AT BE CH DE FR GB IT LI NL SE

(71) Applicant: **AMP INCORPORATED**  
P.O. Box 3608 449 Eisenhower Boulevard  
Harrisburg Pennsylvania 17105(US)

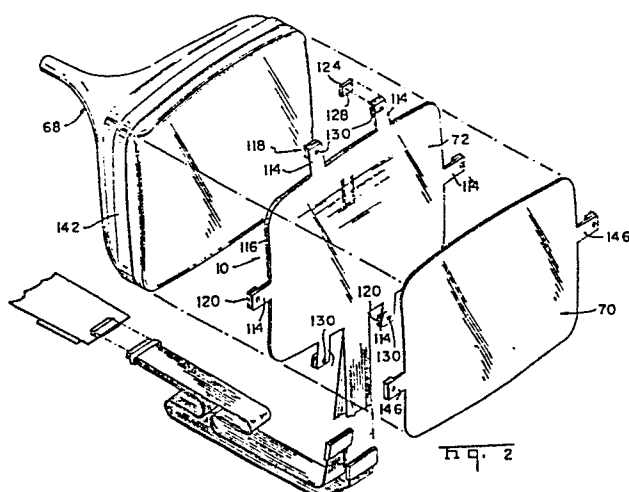
(72) Inventor: **Hilhorst, Jacques Jacobus**  
7 Forest Valley Court  
Greensboro North Carolina 27410(US)

(72) Inventor: **Stillie, Donald Gray**  
4912 Stonington Road  
Winston-Salem North Carolina 27103(US)

(74) Representative: **Gray, Robin Oliver et al,**  
**BARON & WARREN** 18 South End Kensington  
London W14 0JY(GB)

(54) **A membrane switch assembly for cathode ray tubes and mounting thereof.**

(57) A transparent membrane switch assembly (10) and mounting means (118) for mounting the assembly (10) to a cathode ray tube (CRT) (68) are disclosed. The assembly (10, 10') is comprised of two layers (12, 16) of transparent film having spaced-apart parallel double fineline conductors (20) deposited on the internal surface (14, 18) of both layers (12, 16). The mounting means (118) comprise extension (114) protruding from the perimeter (116) of at least one of the layers of film, and a patch of a coupled fastening assembly (120) attached to each extension (114). Each fastening assembly comprises two separable parts, an outer surface (124) of one part being attachable to a side surface of a CRT when the switch assembly is registered with the CRT face.





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. 3)
Y	US-A- 4 066 852 (G.E. ZENK)		H 01 H 13/70 G 06 F 3/023
A	* Column 2, lines 49-61 *	1,2 4-8	
	---		
Y	US-A- 3 471 903 (W.E. NORTHRUP)		
	* Column 2, lines 1-19 *	1,2	
	---		
A	US-A- 3 560 675 (I.B.M.)		
	* Column 1, line 54 - column 2, line 52 *	3,4,7	
	---		
A	DE-A- 2 339 460 (THE MARCONI CO.)		
	* Page 6, paragraph 2 *	3	
	-----		
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		19-02-1986	LIBBERECHT
<b>CATEGORY OF CITED DOCUMENTS</b>			
X : particularly relevant if taken alone		T : theory or principle underlying the invention	
Y : particularly relevant if combined with another document of the same category		E : earlier patent document, but published on, or after the filing date	
A : technological background		D : document cited in the application	
O : non-written disclosure		L : document cited for other reasons	
P : intermediate document		& : member of the same patent family, corresponding document	



## CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

## X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions.

namely:

- 1) Claims 1,2 and 4-10, partly, as far as related to  
the matter of claims 1 and 2:  
Hook and loop type mounting of a membrane  
key-board to a CRT
- 2) Claims 3 and 4-10, partly, as far as related to  
the matter of claim 3:  
Construction of a transparent membrane  
key-board

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims: