(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 058 855**
A3

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **82100837.2**

(22) Date of filing: **05.02.82**

(51) Int. Cl.³: **B 41 M 5/20**

(30) Priority: **24.02.81 US 237560**

(43) Date of publication of application: **01.09.82 Bulletin 82/35**

(84) Designated Contracting States: **DE FR GB IT**

(88) Date of deferred publication of search report: **30.03.83 Bulletin 83/13**

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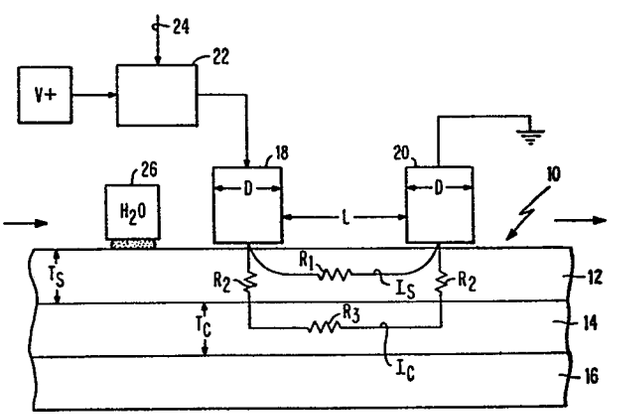
(54) Electrolytic printing method and apparatus.

(57) The recording medium (10) includes three distinct layers: The surface layer (12) incorporates a leuco dye that is responsive to low voltage pulses of amplitude and duration that would be compatible with voltages used by modern integrated circuit chips. The middle layer is a conductive layer and the bottom or support layer is made from any suitable insulating material.

The printing apparatus is supplied with write (18) and ground (20) electrodes of predetermined surface area that will contact the recording medium. The spacing or distance of the electrodes along the plane of the recording medium is also predetermined.

By proper selection of the thickness of the surface layer (12), the areas of the write and ground electrodes (18, 20) and their lateral spacing, low level electrolytic printing will be assured. A sufficient quantity of current is forced to flow into the surface and conductive layers beneath the write electrode means and thereby effects acceptable printing. Preferably, pulses of no more than 15 V amplitude will cause printing when at least 75 percent of the current delivered will be constrained to flow into the conductive layer (14).



EP 0 058 855 A3

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EUROPEAN SEARCH REPORT

0058855
Application number

EP 82 10 0837

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	EP-A-0 020 974 (IBM) *Page 6, lines 4-28*	1-9	B 41 M 5/20
Y	FUJITSU SCIENT. & TECHN. JOURNAL, vol. 12, no. 3, September 1976, pages 131-146, Kawasaki (JP); TOSHISUKE KITAKOHJI et al.: "Dichromatic electrolytic recording paper". *Page 133, figure 1; page 137, formula 1*	1-9	
Y	US-A-4 042 936 (AKIRA YOSHIKAWA) *Figure 3; claims*	1,6	
Y	FR-A-2 422 507 (ELETRICITE DE FRANCE) *Claim 4*	4-5,8, 10	TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
			B 41 M 5/20
A	DE-A-2 140 048 (ING. C OLIVETTI) *The whole document*	1-9	
A	FR-A-1 499 526 (ALLIED CHEMICAL) *The whole document*	1	
	-/-		

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	15-12-1982	RASSCHAERT A.

CATEGORY OF CITED DOCUMENTS

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A	IBM TECHNICAL DISCLOSURE BULLETIN, vol. 22, no. 8A, January 1980, pages 3439-3440, New York (USA); C.J.SAMBUCETTI et al.: "Method to increase print density and speed in electrochromic printing". *The whole document*	1	
A	US-A-2 879 127 (H.CARLSON) *Figures*		
E	EP-A-0 047 367 (IBM) *Page 2, lines 17-21*	1,4,5, 8,10	
E	EP-A-0 058 338 (IBM) *Page 2, lines 21-32*	1,4,5, 8,10	TECHNICAL FIELDS SEARCHED (Int. Cl. ³)

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