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EUROPEAN PATENT APPLICATION

21 Application number: **83304532.1**

22 Date of filing: **05.08.83**

51 Int. Cl.4: **B 41 M 5/24, B 41 M 5/26,**
B 41 C 1/10, B 41 N 1/14

30 Priority: **09.08.82 US 406628**
09.08.82 US 406699
09.08.82 US 406700
09.08.82 US 407001

43 Date of publication of application: **22.02.84**
Bulletin 84/8

84 Designated Contracting States: **AT BE CH DE FR GB IT**
LI LU NL SE

88 Date of deferred publication of search
report: **03.04.85 Bulletin 85/14**

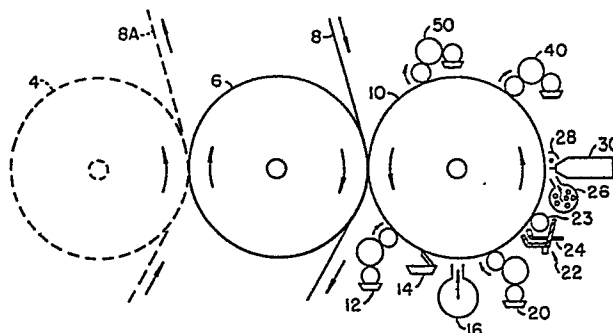
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54 **Printing method and apparatus.**

57 A printing system incorporates a re-usable image-carrying printing surface. A material which forms a thin hydrophobic layer is arranged by various techniques over a substantially hydrophilic printing surface in a configuration which defines the desired latent image in terms of exposed, contiguous hydrophilic and hydrophobic areas. Depending upon the configuration of the layers, either an aqueous or oleo ink may be used to develop and print an image. If desired, the layer configuration may be replaced by a different configuration without substantial interruption to the printing process. No photo-induced chemical reaction or latent image developing steps are required at any time. In a typical apparatus, the hydrophilic surface of a printing roll (10) is cleaned (12-16) and coated with a hydrophobic material (20-24), and the hydrophobic material is physically removed from selected areas by a computer-addressable spark discharge (26-30), laser or other device to form a latent image. A fountain liquid is subsequently applied (40), followed by an ink (50), and the ink image is transferred to a substrate to be printed either directly (8) with the help of a pressure roll (6) or indirectly (8A) through an offset roll (6).





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)
X	LEXIKON DER GRAPHISCHEN TECHNIK, 3rd edition, 1970, pages 336-337, Verlag Dokumentation, Munich, Pullach and Berlin, DE; * article "Lithographie" *	1,2,7	B 41 M 5/24 B 41 M 5/26 B 41 C 1/10 B 41 N 1/14
X	--- ANGEW. CHEM. INT. ED. ENGL., vol. 19, 1980, pages 99-110, Verlag Chemie, Weinheim, DE; H.W. VOLLMANN: "New technologies for the filmless manufacture of printing forms" * page 100, column 1, lines 4-8 *	1,2,7	
X	--- DE-A-2 392 828 (R. HELL) * whole document *	1,2,7, 12,13, 17-23	
X	--- FR-A-2 349 443 (TOKYO KIKAI SEISAKUSHO) * whole document *	1,2,7, 12,13, 17-23	B 41 M 5/24 B 41 M 5/26 B 41 C 1/10 B 41 N 1/14
X	--- XEROX DISCLOSURE JOURNAL, vol. 1, no. 4, April 1976, page 19, Stamford, Connecticut, US; R.N. JONES: "Process for preparing printing masters" --- -/-	1,2,7, 12,13, 17-23	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 07-11-1984	Examiner RASSCHAERT A.
CATEGORY OF CITED DOCUMENTS		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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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 3)
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X	US-A-3 654 864 (S.R. OVSHINSKY) * whole document *	1,2,7 12,13 17-23	
X	US-A-3 678 852 (J. FEINLEIB et al.) * whole document *	1,2,7 12,13 17-23	
X	DE-A-2 450 535 (CROSFIELD) * whole document *	1,2,7 16	
X	US-A-2 923 590 (A. LORENZ) * column 2, lines 14-18 *	1,2,7 16	
X	FR-A-1 105 934 (INTERNATIONAL STANDARD ELECTRIC) * whole document *	1,2,7 16	
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X	DE-A-2 826 122 (FUJI) * claim 7 *	1-4,10		
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E	DE-A-3 311 237 (HARRIS CORP.) * whole document * -----	1-23	
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