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(54) **Lithographic printing system with reusable support surfaces and lithographic constructions for use therewith**

(57) Lithographic printing constructions are removable from a permanent support, which may be a metal sheet affixable (usually by clamps) to a plate cylinder,

or may instead be the permanent surface of such a cylinder. In this way, the traditional "plate" is replaced with a thin, easily manufactured printing member, which is separated from the support following its use.



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EUROPEAN SEARCH REPORT

Application Number
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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.6)
X	WO 96 30291 A (INTERGRAPH CORP) 3 October 1996 (1996-10-03) * page 6, line 23 - page 9, line 20 * * page 11, line 20 - page 12, line 21; figures 1-9 *	1,6,15, 18,19, 21,22, 24,33,34	B41F27/12 B41F30/06 B41N6/02 B41C1/10
X	--- PATENT ABSTRACTS OF JAPAN vol. 199, no. 610, 31 October 1996 (1996-10-31) & JP 08 142305 A (TOPPAN PRINTING CO LTD), 4 June 1996 (1996-06-04) * abstract *	1,6,15, 18,19, 21,34	
X	--- US 4 005 653 A (ARKELL WILLIAM C) 1 February 1977 (1977-02-01) * column 1, line 6 - column 6, line 6; figures 1-5 *	1,6,15, 18,19, 21,34	
A	--- US 4 856 428 A (GREEN MELVIN E ET AL) 15 August 1989 (1989-08-15) * the whole document *	1,6,15, 18-27, 33,34	TECHNICAL FIELDS SEARCHED (Int.Cl.6) B41F B41N
A	--- US 5 402 721 A (SCHULTZ JOHN E) 4 April 1995 (1995-04-04) * column 4, line 45 - column 5, line 8; claim 1; figures 1-5 *	1,6,15, 18-27, 33,34	
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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 11 February 2000	Examiner Balsters, E
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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CLAIMS INCURRING FEES

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

- ☐ Only part of the claims 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 claim(s):
- ☐ 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.

LACK OF UNITY OF INVENTION

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

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ 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 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 invention first mentioned in the claims, namely claims:



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EUROPEAN SEARCH REPORT

Application Number
EP 98 30 1592

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.6)
P,X P,A	EP 0 807 534 A (AGFA GEVAERT NV) 19 November 1997 (1997-11-19) * page 4, line 1 - line 5 * * page 5, line 1 - page 6, line 59 * ---	2-4,6,8, 9,11 5,7,10, 12-14, 17,19, 28-32	
A	EP 0 644 064 A (AGFA GEVAERT NV) 22 March 1995 (1995-03-22) * column 2, line 58 - column 5, line 39 * ---	2-14,17, 19,28-32	
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A	US 4 461 663 A (TACHIBANA EIICHI ET AL) 24 July 1984 (1984-07-24) * column 4, line 28 - column 9, line 53 * -----	4,8,9, 17,19, 28-32	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
Place of search THE HAGUE		Date of completion of the search 11 February 2000	Examiner Balsters, E
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1, 6 (dependent on claim 1), 15, 18,
19 (dependent on claims 1 or 18), 20-27, 33, 34

Printing methods and systems involving a porous cylindrical means for supporting a printing sheet and the creation of negative pressure within the cylinder to hold the printing sheet in position. Special technical feature for positioning the printing sheet being the vacuum and pores provided by the support, no particular technical feature is required of the printing sheet itself. The problem of fixing the printing sheet is solved by measures taken within the support, this shares no technical teaching with the provision of adhesive on the printing sheet as taught by the unsearched claims.

2. Claims: 2-5, 6 (dependent on claim 4), 7-14, 17,
19 (dependent on claim 4), 28-32

Printing methods and systems whereby the lithographic printing sheet is provided with a layer of heat responsive adhesive such that it can be bonded to a cylindrical printing support, special technical feature being the adhesive provided on the printing sheet, no particular technical feature of the support is necessary.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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11-02-2000

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82