(57) Abstract: A digital printing apparatus comprises a substrate (10) having a surface modified with a plurality of pixels. Each pixel includes a) a cavity (14) having an upper opening which extends below the surface of the substrate; b) a flexible membrane (11) bonded to the substrate surface and covering the plurality of pixels; c) means (20) for maintaining portions of the membrane in a first depressed position over each of the plurality of pixels; and means (36) for selectively elevating the depressed portions of the membrane from the first depressed position to a second elevated position in a selected number of the plurality of pixels.
Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
13 November 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
## A. CLASSIFICATION OF SUBJECT MATTER

<table>
<thead>
<tr>
<th>IPC(7)</th>
<th>B41N 1/00; B41L 47/02</th>
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<tr>
<td>US CL</td>
<td>101/368, 369, 395, 401, 489, 491</td>
</tr>
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</table>

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 101/368, 369, 395, 401, 489, 491

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

USPTO APS EAST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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</thead>
<tbody>
<tr>
<td>X,P</td>
<td>US 6,234,079 B1 (CHERTKOW) 22 May 2001 (22.05.2001), column 4, lines 45-65.</td>
<td>1-35</td>
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<tr>
<td>Y</td>
<td>US 2,338,588 A (WICKWIRE, JR.) 04 January 1944 (04.01.1944), column 2, lines 11-35.</td>
<td>1-35</td>
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</table>

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search: 01 APRIL 2003

Date of mailing of the international search report: 04 SEP 2003

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