

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING (NOTES omitted)

### PRINTING

#### B41 PRINTING; LINING MACHINES; TYPEWRITERS; STAMPS

#### B41L APPARATUS OR DEVICES FOR MANIFOLDING, DUPLICATING, OR PRINTING FOR OFFICE OR OTHER COMMERCIAL PURPOSES; ADDRESSING MACHINES OR LIKE SERIES-PRINTING MACHINES ([printing presses or machines for industrial purposes B41F](#); [stamps, stamping or numbering devices B41K](#))

##### NOTES

1. This subclass does not cover constituent parts common to manifolding by means of pressure-sensitive layers or intermediaries, to apparatus or machines for duplicating or printing for office or other commercial purposes, or to addressing machines or like series-printing machines, which are covered by subclass [B41F](#).
2. In this subclass, as indicated by the references, groups [B41L 15/00](#) and [B41L 17/00](#) are intended to cover letterpress and lithographic printing apparatus only in so far as it is specially adapted for office or other commercial purposes; the general constructions or features of apparatus of these types are classified in subclass [B41F](#). Constructions or features determining classification in these groups are, for example: ease of operation by clerical staff, cleanliness of operation in non-industrial environments, the use of printing surfaces constructed for the production of a limited number of copies.
3. In this subclass, the following terms are used with the meanings indicated:
  - "manifolding" means the obtaining of several copies simultaneously by means of pressure-sensitive layers when making an original;
  - "duplicating" means the obtaining of successive copies from a master, e.g. a hectographic image;
  - "stencilling" involves the use of a printing surface which is perforated to form the image, the ink flowing through the perforations on the copy material.

##### WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

#### Manifolding by means of pressure-sensitive layers or intermediaries

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|      |  | 1/20  | • Manifolding assemblies, e.g. book-like assemblies<br>{(multi-copy labels <a href="#">G09F 3/0288</a> )}  |
|      |  | 1/22  | • . . made up of single sheets or forms  |
|      |  | 1/24  | • . . . Pads or books  |
|      |  | 1/26  | • . Continuous assemblies made up of webs  |
|      |  | 1/28  | • . . in rolled or wound form  |
|      |  | 1/30  | • . . folded longitudinally  |
|      |  | 1/32  | • . . folded transversely  |
|      |  | 1/321 | • . . . {Stacks of sheets attached to a carrier strip or web}  |
|      |  | 1/323 | • . . . . {Uniting several webs, e.g. transversely}  |
|      |  | 1/325 | • . . . . {longitudinally}   |
|      |  | 1/326 | • . . . . {Severance lines; Perforations}  |
|      |  | 1/328 | • . . . . {Removing carbon sheets}   |
|      |  | 1/34  | • . for making masters for hectographic duplicators  |
|      |  | 1/36  | • . with pressure-sensitive layers or coating other than carbon ( <a href="#">sheet materials B41M 5/00</a> )  |
| 1/00 | Devices for performing operations in connection with manifolding by means of pressure-sensitive layers or intermediaries, e.g. carbons; Accessories for manifolding purposes             | 3/00  | Platens or like sheet supports for manifolding using pressure-sensitive layers or intermediaries, e.g. for book-keeping purposes   |
| 1/02 | • Devices for preparatory operations, e.g. for bringing together sheets or webs and interposed carbons; Devices combined with devices for printing, for coating with carbon, for folding | 3/02  | • with stationary clamping means for holding the manifolding assembly in registered position, e.g. resilient clamps for holding non-perforated sheets<br>{(clamps for platens <a href="#">B41F 1/36</a> )} |
| 1/04 | • Devices for performing operations subsequent to manifolding, e.g. for separating single sheets or webs from single form sets, continuous manifold assemblies from carbons              |       |  |
| 1/06 | • . on single form sets  |       |  |
| 1/08 | • . on continuous manifold assemblies  |       |  |
| 1/10 | • . . Separate folding or disposition of single webs   |       |  |
| 1/12 | • . . Severing webs to obtain single sheets or forms, e.g. by cutting, by bursting   |       |  |
| 1/14 | • . . Severing edge perforations from webs   |       |  |
| 1/16 | • Carriers or supply devices for pressure-sensitive material, e.g. for carbon sheets; Carbon gloves  |       |  |
| 1/18 | • . for carbon webs; Continuous carbon supply mechanisms   |       |  |

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| 3/04  | . . Bars provided with pins engaging perforations in the elements   | 11/00 | <b>Apparatus for directly duplicating from hectographic masters in mirror image, i.e. "wet duplicators" for producing positive copies</b>  |
| 3/06  | . with movable clamping or guiding means for the elements of the manifolding assembly   | 11/02 | . with a flat support carrying the masters   |
| 3/08  | . with non-mechanical means for holding the elements in registered position, e.g. magnetic means  | 11/04 | . . and with carriages for feeding the sheets  |
| 3/10  | . with means for moving assembled elements step by step relative to platen or support, e.g. for column or line selection; Means for locating assembled elements when stationary | 11/06 | . . for stack duplicating with pressure rollers  |
| 3/12  | . Auxiliary devices   | 11/08 | . with rotary cylinders carrying the masters   |
| 3/14  | . . Magazines or storage compartments, e.g. for slips   | 11/10 | . with two rollers between which master is stretched   |
| 3/16  | . . Web-feeding arrangements  | 11/12 | . Driving gear; Control thereof  |
| 3/18  | . . Displaceable covers, e.g. with windows  | 11/14 | . Constructional features of masters ( <a href="#">chemical aspects B41M</a> )   |
| 3/20  | . . for facilitating manifolding in books   | 13/00 | <b>Stencilling apparatus for office or other commercial use (<a href="#">screen printing B41F 15/00</a>; <a href="#">stencils, stencil materials, carriers therefor B41N 1/24</a>)</b>                   |
| 3/22  | . . Applications of ink ribbons; Holding, feeding, or guiding means therefor  | 13/02 | . with flat stencil carriers   |
| 5/00  | <b>Autographic registers or like manifolding apparatus using movable strips or webs (<a href="#">movable strip writing or reading apparatus B42D 19/00</a>)</b>                 | 13/04 | . with curved or rotary stencil carriers   |
| 5/02  | . with means for limiting movements of webs fed by hand   | 13/06 | . . with a single cylinder carrying the stencil  |
| 5/04  | . with mechanisms for feeding webs or for arranging web feed; with web storage arrangements {(in <a href="#">genral B65H</a> )}   | 13/08 | . . with stencil carried by two or more cylinders, e.g. through the intermediary of endless bands  |
| 5/06  | . . by means of rollers, wheels, or chains {, e.g. with <a href="#">pins</a> } transversely   | 13/10 | . . . Clips or clamps for securing stencils to stencil carriers  |
| 5/08  | . . by reciprocating mechanisms   | 13/12 | . for special purposes, e.g. for reproducing Braille characters {( <a href="#">typewriters for Braille B41J 3/32</a> )}  |
| 5/10  | . with mechanisms for feeding the pressure-sensitive web or webs separately from the other webs, e.g. transversely  | 13/14 | . Attachments, e.g. for punching, cutting, severing  |
| 5/12  | . with means for indicating exhaustion of web supply  | 13/16 | . Driving gear; Control thereof  |
| 5/14  | . with auxiliary means for printing, perforating, or severing the web   | 13/18 | . Inking units   |
| 5/16  | . Accessories, e.g. drawers for storing forms, for money ( <a href="#">cash registers G07G</a> )  | 15/00 | <b>Letterpress printing apparatus specially adapted for office or other commercial purposes (in general <a href="#">B41F</a>; <a href="#">printing plates or foils, materials thereof B41N 1/00</a>)</b> |
| <b><u>Apparatus or machines for duplicating or printing for office or other commercial purposes</u></b> |   | 15/02 | . with flat printing surfaces, e.g. with flat type-beds, surfaces made of thin sheet material or moulded from plastics or rubber   |
| 7/00  | <b>Apparatus for directly duplicating from hectographic originals, i.e. for obtaining copies in mirror image</b>  | 15/04 | . . of composed type locked in chases  |
| 7/02  | . by passing original and copy-sheet or -web between rollers  | 15/06 | . with curved printing surfaces, e.g. cylinders  |
| 7/04  | . . with means for guiding original or copy-sheet or -web   | 15/08 | . . with stereotypes   |
| 7/06  | . . with means for severing copy-sheet or -web  | 15/10 | . for multicolour printing; for perfecting   |
| 7/08  | . . with means for moistening or drying   | 15/12 | . Driving gear; Control thereof  |
| 9/00  | <b>Apparatus for indirectly duplicating from hectographic originals by means of hectographic intermediaries or transfer surfaces, i.e. "dry duplicators"</b>                    | 15/14 | . Attachments, e.g. for punching, cutting, severing  |
| 9/02  | . Containers for clay or gelatin  | 17/00 | <b>Lithographic printing apparatus for office or other commercial purposes (in general <a href="#">B41F</a>; <a href="#">printing plates or foils, materials thereof B41N 1/00</a>)</b>                  |
| 9/04  | . with flat supports over which gelatin-paper is stretched  | 17/02 | . for direct impression printing   |
| 9/06  | . . and with carriages for feeding the sheets   | 17/04 | . . with flat printing surfaces  |
| 9/08  | . . and with devices for rolling-in and securing hectographic gelatin-paper webs  | 17/06 | . . with curved printing surfaces, e.g. cylinders  |
| 9/10  | . with rotary cylinders carrying sheets of hectographic gelatin-paper   | 17/08 | . for offset printing  |
|   |   | 17/10 | . . with flat printing surfaces, e.g. co-operating with travelling offset cylinders  |
|   |   | 17/12 | . . with curved printing surfaces, e.g. forme cylinders  |
|   |   | 17/14 | . of two-cylinder type, e.g. co-operating forme and impression cylinders   |
|   |   | 17/16 | . of three-cylinder type   |
|   |   | 17/18 | . for multicolour printing, e.g. tandem machines; for perfecting   |
|   |   | 17/20 | . without damping means, e.g. using heat-activatable inks, refrigerated printing surfaces  |
|   |   | 17/22 | . Driving gear; Control thereof  |
|   |   | 17/24 | . Attachments, e.g. for punching, cutting, severing  |

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| <b>19/00</b>  | <b>Duplicating or printing apparatus or machines for office or other commercial purposes, of special types or for particular purposes and not otherwise provided for (addressographs B41L 45/00)</b>  | <b>25/00</b> | <b>Devices for damping printing surfaces, e.g. moistening printing surfaces in connection with lithographic printing (applying liquids or other fluent materials to surfaces in general B05)</b> |
| 19/003  | • {using heat, e.g. wax transfer}   | 25/005       | • {Pre-damping etching devices}  |
| 19/006  | • {Auxiliary numbering devices}   | 25/02        | • using friction rollers   |
| 19/02   | • having forme cylinders carrying a plurality of printing surfaces, or for performing letterpress and lithographic processes selectively or in combination (in general B41F 11/00)  | 25/04        | • using brushes  |
| 19/04   | • for printing from selected parts of one or more printing surfaces in one cycle, e.g. line printing (by inking selected areas B41L 27/20)  | 25/06        | • using spraying elements  |
| 19/06   | • . . with co-operating forme and impression cylinders  | 25/08        | • using endless bands  |
| 19/08   | • . . . by effecting relative movement of forme and impression cylinders during printing cycle  | 25/10        | • using absorbent pads   |
| 19/10   | • . . . by projecting and retracting parts of the surfaces of the forme cylinders   | 25/12        | • Ducts, containers, or like supply devices for liquids  |
| 19/12   | • . . . by masking parts of the printing surfaces on the forme cylinders  | 25/14        | • Inking rollers serving also to apply ink repellent {(in rotary lithographic machines B41F 7/36)}   |
| 19/14   | • . . . by selective damping of the copy material   | 25/16        | • Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor {(in rotary lithographic machines B41F 7/40)}  |
| 19/16   | • . . . by selective tripping of impression cylinders   | 25/18        | • Construction of damping rollers  |
| <b><u>Common details of, or accessories for, apparatus or machines for manifold, duplicating, or printing for office or other commercial purposes</u></b> |   | <b>27/00</b> | <b>Inking arrangements or devices (inking units for stencilling apparatus B41L 13/18; applying liquids or other fluent materials to surfaces, in general B05)</b>                                |
| <b>21/00</b>  | <b>Devices for conveying sheets or webs of copy material through the apparatus or machines for manifold, duplicating, or printing (mechanisms for conveying copy material through addressographs or like series-printing machines B41L 47/24; {feeding sheets or webs to or from printing apparatus or machines B65H; in printing presses in general B41F 21/00})</b> | 27/02        | • adapted for inking by hand   |
| 21/02   | • for conveying sheets  | 27/04        | • Ducts, containers, or supply devices or ink-level control devices (level control in general G05D 9/00)   |
| 21/04   | • . Pins  | 27/06        | • . Duct blades or like supply devices   |
| 21/06   | • . Grippers  | 27/08        | • . Troughs or like reservoirs with immersed, or partly immersed rollers   |
| 21/08   | • . . Suction-operated grippers   | 27/10        | • . . with ink-ejecting means, e.g. pumps  |
| 21/10   | • . . Combinations of endless conveyors and grippers  | 27/12        | • . . Feed or duct rollers (messenger or moving transfer rollers B41L 27/16)   |
| 21/12   | • for conveying webs  | 27/14        | • . . . adjustable for regulating supply   |
| <b>23/00</b>  | <b>Devices for treating the surfaces of sheets, webs, or other articles in connection with printing (as a final step in the manufacture of such articles, see the relevant places, e.g. B29C 71/00, D21H 23/00 or D21H 25/00; after-treatment of prints B41M 7/00)</b>  | 27/16        | • . . Messenger or other moving transfer rollers   |
| 23/02   | • by damping, e.g. by moistening copy sheets in connection with hectographic printing   | 27/18        | • Continuous, e.g. endless-band apparatus  |
| 23/04   | • . using friction rollers  | 27/20        | • for inking selected parts of printing formes   |
| 23/06   | • . using brushes   | 27/22        | • Ink removing or collecting devices   |
| 23/08   | • . using spray elements  | 27/24        | • for inking from interior of cylinder   |
| 23/10   | • . using endless bands   | 27/26        | • Absorbent pads   |
| 23/12   | • . using absorbent pads  | 27/28        | • Construction of inking rollers   |
| 23/14   | • . Ducts, containers, or like supply devices for liquids   | 27/30        | • Spray apparatus  |
| 23/16   | • . Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor   | 27/32        | • Arrangements for tripping, lifting, adjusting, or removing inking rollers; Supports, bearings or forks therefor  |
| 23/18   | • . Construction of damping rollers   | 27/34        | • . . Lifting or adjusting devices   |
| 23/20   | • by heat drying, by cooling, by applying powders   | 27/36        | • . . . Cams, eccentrics, wedges, or the like devices  |
| 23/22   | • . Powdering devices, e.g. for preventing set-off  | 27/38        | • . . . fluid-pressure operated  |
| 23/24   | • Print-finishing devices, e.g. for glossing prints   | 27/40        | • . . . magnetically operated  |
|   |   | <b>29/00</b> | <b>Devices for attaching printing elements or formes to supports {(in printing presses in general B41F 27/00)}</b>   |
|   |   | 29/02        | • magnetic   |
|   |   | 29/04        | • for attaching printing elements to flat type-beds  |
|   |   | 29/06        | • for attaching elements to forme cylinders  |
|   |   | 29/08        | • for attaching print formes to flat type-beds   |
|   |   | 29/10        | • for attaching non-deformable curved printing formes to forme cylinders   |
|   |   | 29/12        | • for attaching flexible printing formes   |
|   |   | 29/14        | • . Clamping devices   |
|   |   | 29/16        | • . . operating automatically during operation of rotary machines to attach the printing formes to the forme cylinders   |
|   |   | 29/18        | • . . . electromagnetic, pneumatic, or hydraulic   |

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| 29/20        | . . . for adjusting position of leading edges of flexible printing formes circumferentially of forme cylinders   | 39/16   | . Programming systems for automatic control of sequence of operations  |
| 29/22        | . for attaching printing formes to intermediate supports, e.g. adapter members   | <b>41/00</b>  | <b>Cleaning arrangements or devices</b> {(for printing presses in general <a href="#">B41F 35/00</a> )}  |
| <b>31/00</b> | <b>Devices for removing flexible printing formes from forme cylinders</b>  | 41/02   | . for forme cylinders  |
| <b>33/00</b> | <b>Pressing flexible printing formes or sheets or webs of copy material against cylinders, e.g. for smoothing purposes</b> {(in printing presses in general <a href="#">B41F 25/00</a> )}                                  | 41/04   | . for inking rollers   |
| <b>35/00</b> | <b>Cylinders for apparatus or machines for manifolding, duplicating, or printing for office or other commercial purposes</b> {(in printing presses in general <a href="#">B41F 13/08</a> )}                                | 41/06   | . for offset cylinders   |
| 35/02        | . Forme cylinders  | <b>43/00</b>  | <b>Auxiliary folding, collecting, or depositing of sheets or webs</b> (in general <a href="#">B65H</a> )   |
| 35/04        | . . Registering devices  | 43/02   | . Folding  |
| 35/06        | . . . with means for displacing the cylinders  | 43/04   | . . lengthwise   |
| 35/08        | . . . with means for displacing the printing formes on the cylinders   | 43/06   | . . crosswise  |
| 35/10        | . Impression cylinders   | 43/08   | . . Folding-cylinders or drums   |
| 35/12        | . Bearings or supports for forme, offset, or transfer or impression cylinders  | 43/10   | . Collecting   |
| 35/14        | . Means for heating or cooling forme or impression cylinders   | 43/12   | . . and stapling   |
| 35/16        | . Cylinder-tripping devices; Cylinder impression adjustments   | 43/14   | . Adding inserts   |
| 35/18        | . . Arrangements or dispositions of cylinder bearings, forks, or supports  | 43/16   | . Depositing   |
| 35/20        | . . . Eccentric bearings   | <b>Addressing machines or like series-printing machines</b> |  |
| 35/22        | . . . Sliding bearings   | <b>45/00</b>  | <b>Kinds or types of addressing machines or of like series-printing machines</b>   |
| 35/24        | . . . Swinging bearings  | 45/02   | . using printing plates  |
| 35/26        | . . Cylinder lifting or adjusting devices  | 45/04   | . . composed on type-setting machines  |
| 35/28        | . . . Cams, eccentrics, wedges, or the like  | 45/06   | . . for addressing combined with other operations, e.g. franking, collating documents  |
| 35/30        | . . . electrically or magnetically operated  | 45/08   | . with printing surfaces in the form of belts, or carried by chains  |
| 35/32        | . . . fluid-pressure operated  | 45/10   | . . for addressing combined with other operations, e.g. franking, collating documents  |
| 35/34        | . Guards or covers, e.g. for safety purposes, for preventing egress or ingress of foreign matter   | 45/12   | . with separate devices for printing additional texts or images, e.g. for printing receipts on blank sheets or webs  |
| <b>38/00</b> | <b>Devices for attaching coverings or make-ready devices; Guiding devices for coverings</b> (make-ready devices <a href="#">B41N 6/00</a> ; blankets or like coverings <a href="#">B41N 10/00</a> )                        | <b>47/00</b>  | <b>Details of addressographs or like series-printing machines</b> (common details of printing machines <a href="#">B41F 21/00</a> - <a href="#">B41F 35/00</a> ) |
| 38/02        | . attaching to impression cylinders  | 47/02   | . Applications of printing surfaces in addressing machines or like series-printing machines (printing surfaces in general <a href="#">B41N</a> )                 |
| 38/04        | . attaching of endless or like continuously-fed coverings  | 47/04   | . . of flat or curved plates for relief printing   |
| <b>39/00</b> | <b>Indicating, counting, warning, control, or safety devices</b> (ink-level control devices <a href="#">B41L 27/04</a> ; such devices in general, see relevant subclasses, e.g. counting in general <a href="#">G06M</a> ) | 47/06   | . . of flat or curved stencils   |
| 39/02        | . Indicating devices, e.g. counters  | 47/08   | . . of flat or curved plates for hectographic printing   |
| 39/04        | . Tripping devices or stop motions   | 47/10   | . . of printing surfaces in the form of belts or chains  |
| 39/06        | . . for starting or stopping operation of sheet or web feed  | 47/12   | . Auxiliary devices, e.g. for flattening plates, for assembling plates in predetermined order, for wetting stencils  |
| 39/08        | . . for starting or stopping operation of cylinders {( <a href="#">B41L 19/16</a> takes precedence)}   | 47/14   | . Devices or arrangements for storing or handling plates   |
| 39/10        | . . for starting or stopping operation of damping or inking units  | 47/16   | . . Magazines  |
| 39/12        | . . for starting or stopping the machines as a whole   | 47/18   | . . Devices for feeding the plates in their plane  |
| 39/14        | . . Automatic control of tripping devices by feelers, photoelectric devices, pneumatic devices, or other detectors   | 47/20   | . . Devices for feeding the plates otherwise than in their plane, e.g. transversely thereto  |
|              |  | 47/22   | . . with means for presenting plates for repeated printing operations  |
|              |  | 47/24   | . Mechanisms for conveying copy material through addressographs or like series-printing machines (in general <a href="#">B65</a> ;) )                            |
|              |  | 47/26   | . . for conveying or positioning single sheetlike articles, e.g. envelopes   |
|              |  | 47/28   | . . with gauging-rulers or the like, e.g. for facilitating hand-printing of copy material fed from stacks  |
|              |  | 47/30   | . . for conveying webs   |

- 47/32 . . . combined with devices for other purposes, e.g. for cutting, severing, gluing
- 47/34 . . . specially adapted for conveying chains of forms
- 47/36 . . for conveying sheets or webs for tabulating purposes; Tabulating mechanisms combined with sheet or web conveyors
- 47/38 . . . with clamping means for head or margin
- 47/40 . . . with means for automatically reciprocating sheet or web transversely to enable addresses to be printed in columns side by side
- 47/42 . Printing mechanisms
- 47/44 . . using flat platens
- 47/46 . . using line-contact members, e.g. rollers, cylinders
- 47/48 . . with inking or ink-ribbon devices
- 47/50 . . using multiple impression-members or -surfaces, e.g. for printing series of addresses with standing context, for printing from selected parts of printing surfaces ([applications of counting, numbering, or dating apparatus B41L 49/02](#))
- 47/52 . . with movable counter-pressure plates for printing from selected areas of printing surfaces
- 47/54 . . with means for automatically reciprocating printing plate transversely to enable addresses to be printed in columns side by side
- 47/56 . Indicating, warning, control, or safety devices ([B41L 47/58 takes precedence](#))
- 47/58 . Arrangements or devices for selecting, or for facilitating selection of, text or image to be printed
- 47/60 . . Markings applied to printing plates, e.g. code marks, colours, clips, perforations, edge notches, projections
- 47/62 . . Selecting devices, e.g. cams, windows, positions indicators
- 47/64 . . . Automatic selecting devices with or without overriding manual control, e.g. with scanning-fingers, with presetting controls operable by push-buttons, with programme control by punched tapes
- 49/00 Accessories or attachments for addressographs or like series-printing machines**
- 49/02 . Counting, numbering, or dating devices
- 49/04 . Devices for applying selection markings to printing plates