

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### PRINTING

**B41 PRINTING; LINING MACHINES; TYPEWRITERS; STAMPS** (reproduction or duplication of pictures or patterns by scanning and converting into electrical signals [H04N](#))

**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

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

- 3/04 . . Bars provided with pins engaging perforations in the elements
- 3/06 . with movable clamping or guiding means for the elements of the manifolding assembly
- 3/08 . with non-mechanical means for holding the elements in registered position, e.g. magnetic means
- 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
- 3/12 . Auxiliary devices
- 3/14 . . Magazines or storage compartments, e.g. for slips
- 3/16 . . Web-feeding arrangements
- 3/18 . . Displaceable covers, e.g. with windows
- 3/20 . . for facilitating manifolding in books
- 3/22 . . Applications of ink ribbons; Holding, feeding, or guiding means therefor
- 5/00 Autographic registers or like manifolding apparatus using movable strips or webs (movable strip writing or reading apparatus B42D 19/00)**
- 5/02 . with means for limiting movements of webs fed by hand
- 5/04 . with mechanisms for feeding webs or for arranging web feed; with web storage arrangements {(in general B65H)}
- 5/06 . . by means of rollers, wheels, or chains {, e.g. with pins} transversely
- 5/08 . . by reciprocating mechanisms
- 5/10 . with mechanisms for feeding the pressure-sensitive web or webs separately from the other webs, e.g. transversely
- 5/12 . with means for indicating exhaustion of web supply
- 5/14 . with auxiliary means for printing, perforating, or severing the web
- 5/16 . Accessories, e.g. drawers for storing forms, for money (cash registers G07G)

**Apparatus or machines for duplicating or printing for office or other commercial purposes**

- 7/00 Apparatus for directly duplicating from hectographic originals, i.e. for obtaining copies in mirror image**
- 7/02 . by passing original and copy-sheet or -web between rollers
- 7/04 . . with means for guiding original or copy-sheet or -web
- 7/06 . . with means for severing copy-sheet or -web
- 7/08 . . with means for moistening or drying
- 9/00 Apparatus for indirectly duplicating from hectographic originals by means of hectographic intermediaries or transfer surfaces, i.e. "dry duplicators"**
- 9/02 . Containers for clay or gelatin
- 9/04 . with flat supports over which gelatin-paper is stretched
- 9/06 . . and with carriages for feeding the sheets
- 9/08 . . and with devices for rolling-in and securing hectographic gelatin-paper webs
- 9/10 . with rotary cylinders carrying sheets of hectographic gelatin-paper

- 11/00 Apparatus for directly duplicating from hectographic masters in mirror image, i.e. "wet duplicators" for producing positive copies**
- 11/02 . with a flat support carrying the masters
- 11/04 . . and with carriages for feeding the sheets
- 11/06 . . for stack duplicating with pressure rollers
- 11/08 . with rotary cylinders carrying the masters
- 11/10 . with two rollers between which master is stretched
- 11/12 . Driving gear; Control thereof
- 11/14 . Constructional features of masters (chemical aspects B41M)
- 13/00 Stencilling apparatus for office or other commercial use (screen printing B41F 15/00; stencils, stencil materials, carriers therefor B41N 1/24)**
- 13/02 . with flat stencil carriers
- 13/04 . with curved or rotary stencil carriers
- 13/06 . . with a single cylinder carrying the stencil
- 13/08 . . with stencil carried by two or more cylinders, e.g. through the intermediary of endless bands
- 13/10 . . . Clips or clamps for securing stencils to stencil carriers
- 13/12 . for special purposes, e.g. for reproducing Braille characters {(typewriters for Braille B41J 3/32)}
- 13/14 . Attachments, e.g. for punching, cutting, severing
- 13/16 . Driving gear; Control thereof
- 13/18 . Inking units
- 15/00 Letterpress printing apparatus specially adapted for office or other commercial purposes (in general B41F; printing plates or foils, materials thereof or B41N 1/00)**
- 15/02 . with flat printing surfaces, e.g. with flat type-beds, surfaces made of thin sheet material or moulded from plastics or rubber
- 15/04 . . of composed type locked in chases
- 15/06 . with curved printing surfaces, e.g. cylinders
- 15/08 . . with stereotypes
- 15/10 . for multicolour printing; for perfecting
- 15/12 . Driving gear; Control thereof
- 15/14 . Attachments, e.g. for punching, cutting, severing
- 17/00 Lithographic printing apparatus for office or other commercial purposes (in general B41F; printing plates or foils, materials thereof B41N 1/00)**
- 17/02 . for direct impression printing
- 17/04 . . with flat printing surfaces
- 17/06 . . with curved printing surfaces, e.g. cylinders
- 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

<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 <a href="#">B41L 45/00</a>)</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 <a href="#">B05</a>)</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 <a href="#">B41F 11/00</a> )	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 <a href="#">B41L 27/20</a> )	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 <a href="#">B41F 7/36</a> )}
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 <a href="#">B41F 7/40</a> )}
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 manifolding, 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 <a href="#">B41L 13/18</a>; applying liquids or other fluent materials to surfaces, in general <a href="#">B05</a>)</b>
<b>21/00</b>	<b>Devices for conveying sheets or webs of copy material through the apparatus or machines for manifolding, duplicating, or printing (mechanisms for conveying copy material through addressographs or like series-printing machines <a href="#">B41L 47/24</a>; {feeding sheets or webs to or from printing apparatus or machines <a href="#">B65H</a>; in printing presses in general <a href="#">B41F 21/00</a>})</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 <a href="#">G05D 9/00</a> )
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 <a href="#">B41L 27/16</a> )
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. <a href="#">B29C 71/00</a>, <a href="#">D21H 23/00</a> or <a href="#">D21H 25/00</a>; after-treatment of prints <a href="#">B41M 7/00</a>)</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 <a href="#">B41F 27/00</a>)}</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

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 ( <a href="#">printing surfaces in general 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, <a href="#">see relevant subclasses, e.g. counting in general 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 ( <a href="#">in general 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