

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

		1/20	• Manifolding assemblies, e.g. book-like assemblies {(multi-copy labels G09F 3/0288)}
		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 (sheet materials B41M 5/00)
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 {(clamps for platens B41F 1/36)}
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		

3/04	. . Bars provided with pins engaging perforations in the elements	11/00	Apparatus for directly duplicating from hectographic masters in mirror image, i.e. "wet duplicators" for producing positive copies
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 (chemical aspects B41M)
3/20	. . for facilitating manifolding in books	13/00	Stencilling apparatus for office or other commercial use (screen printing B41F 15/00; stencils, stencil materials, carriers therefor B41N 1/24)
3/22	. . Applications of ink ribbons; Holding, feeding, or guiding means therefor	13/02	. with flat stencil carriers
5/00	Autographic registers or like manifolding apparatus using movable strips or webs (movable strip writing or reading apparatus B42D 19/00)	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 genral B65H)}	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 pins } 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 {(typewriters for Braille B41J 3/32)}
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 (cash registers G07G)	15/00	Letterpress printing apparatus specially adapted for office or other commercial purposes (in general B41F; printing plates or foils, materials thereof B41N 1/00)
<u>Apparatus or machines for duplicating or printing for office or other commercial purposes</u>		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	Apparatus for directly duplicating from hectographic originals, i.e. for obtaining copies in mirror image	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	Apparatus for indirectly duplicating from hectographic originals by means of hectographic intermediaries or transfer surfaces, i.e. "dry duplicators"	15/14	. Attachments, e.g. for punching, cutting, severing
9/02	. Containers for clay or gelatin	17/00	Lithographic printing apparatus for office or other commercial purposes (in general B41F; printing plates or foils, materials thereof B41N 1/00)
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

19/00	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)	25/00	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)
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
<u>Common details of, or accessories for, apparatus or machines for manifolding, duplicating, or printing for office or other commercial purposes</u>		27/00	Inking arrangements or devices (inking units for stencilling apparatus B41L 13/18; applying liquids or other fluent materials to surfaces, in general B05)
21/00	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 B41L 47/24; {feeding sheets or webs to or from printing apparatus or machines B65H; in printing presses in general B41F 21/00})	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
23/00	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)	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
		29/00	Devices for attaching printing elements or formes to supports {(in printing presses in general B41F 27/00)}
		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	41/00	Cleaning arrangements or devices {(for printing presses in general B41F 35/00)}
31/00	Devices for removing flexible printing formes from forme cylinders	41/02	. for forme cylinders
33/00	Pressing flexible printing formes or sheets or webs of copy material against cylinders, e.g. for smoothing purposes {(in printing presses in general B41F 25/00)}	41/04	. for inking rollers
35/00	Cylinders for apparatus or machines for manifolding, duplicating, or printing for office or other commercial purposes {(in printing presses in general B41F 13/08)}	41/06	. for offset cylinders
35/02	. Forme cylinders	43/00	Auxiliary folding, collecting, or depositing of sheets or webs (in general B65H)
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	Addressing machines or like series-printing machines	
35/22	. . . Sliding bearings	45/00	Kinds or types of addressing machines or of like series-printing machines
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
38/00	Devices for attaching coverings or make-ready devices; Guiding devices for coverings (make-ready devices B41N 6/00 ; blankets or like coverings B41N 10/00)	47/00	Details of addressographs or like series-printing machines (common details of printing machines B41F 21/00 - B41F 35/00)
38/02	. attaching to impression cylinders	47/02	. Applications of printing surfaces in addressing machines or like series-printing machines (printing surfaces in general B41N)
38/04	. attaching of endless or like continuously-fed coverings	47/04	. . of flat or curved plates for relief printing
39/00	Indicating, counting, warning, control, or safety devices (ink-level control devices B41L 27/04 ; such devices in general, see relevant subclasses, e.g. counting in general G06M)	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 {(B41L 19/16 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 B65 ;))
		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