

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.

Manifolding by means of pressure-sensitive layers or intermediaries

		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}
1/00	Devices for performing operations in connection with manifolding by means of pressure-sensitive layers or intermediaries, e.g. carbons; Accessories for manifolding purposes	1/323 {Uniting several webs, e.g. transversely}
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	1/325 {longitudinally}
		1/326 {Severance lines; Perforations}
		1/328 {Removing carbon sheets}
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	1/34	. . for making masters for hectographic duplicators
		1/36	. . with pressure-sensitive layers or coating other than carbon (sheet materials B41M 5/00)
1/06	. . on single form sets	3/00	Platens or like sheet supports for manifolding using pressure-sensitive layers or intermediaries, e.g. for book-keeping purposes
1/08	. . on continuous manifold assemblies		
1/10	. . . Separate folding or disposition of single webs	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)}
1/12	. . . Severing webs to obtain single sheets or forms, e.g. by cutting, by bursting		
1/14	. . . Severing edge perforations from webs	3/04	. . Bars provided with pins engaging perforations in the elements
1/16	. Carriers or supply devices for pressure-sensitive material, e.g. for carbon sheets; Carbon gloves	3/06	. with movable clamping or guiding means for the elements of the manifolding assembly
1/18	. . for carbon webs; Continuous carbon supply mechanisms	3/08	. with non-mechanical means for holding the elements in registered position, e.g. magnetic means
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		

- 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
- 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)**
- 19/003 . {using heat, e.g. wax transfer}
- 19/006 . {Auxiliary numbering devices}

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)	25/06	• using spraying elements
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)	25/08	• using endless bands
19/06	• . with co-operating forme and impression cylinders	25/10	• using absorbent pads
19/08	• . . by effecting relative movement of forme and impression cylinders during printing cycle	25/12	• Ducts, containers, or like supply devices for liquids
19/10	• . . by projecting and retracting parts of the surfaces of the forme cylinders	25/14	• Inking rollers serving also to apply ink repellent {(in rotary lithographic machines B41F 7/36)}
19/12	• . . by masking parts of the printing surfaces on the forme cylinders	25/16	• Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor {(in rotary lithographic machines B41F 7/40)}
19/14	• . . by selective damping of the copy material	25/18	• Construction of damping rollers
19/16	• . . by selective tripping of impression cylinders	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)
Common details of, or accessories for, apparatus or machines for manifolding, duplicating, or printing for office or other commercial purposes		27/02	• adapted for inking by hand
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)}	27/04	• Ducts, containers, or supply devices or ink-level control devices (level control in general G05D 9/00)
21/02	• for conveying sheets	27/06	• . Duct blades or like supply devices
21/04	• . Pins	27/08	• . Troughs or like reservoirs with immersed, or partly immersed rollers
21/06	• . Grippers	27/10	• . with ink-ejecting means, e.g. pumps
21/08	• . . Suction-operated grippers	27/12	• . Feed or duct rollers (messenger or moving transfer rollers B41L 27/16)
21/10	• . Combinations of endless conveyors and grippers	27/14	• . . adjustable for regulating supply
21/12	• for conveying webs	27/16	• . Messenger or other moving transfer rollers
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)	27/18	• Continuous, e.g. endless-band apparatus
23/02	• by damping, e.g. by moistening copy sheets in connection with hectographic printing	27/20	• for inking selected parts of printing formes
23/04	• . using friction rollers	27/22	• Ink removing or collecting devices
23/06	• . using brushes	27/24	• for inking from interior of cylinder
23/08	• . using spray elements	27/26	• Absorbent pads
23/10	• . using endless bands	27/28	• Construction of inking rollers
23/12	• . using absorbent pads	27/30	• Spray apparatus
23/14	• . Ducts, containers, or like supply devices for liquids	27/32	• Arrangements for tripping, lifting, adjusting, or removing inking rollers; Supports, bearings or forks therefor
23/16	• . Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor	27/34	• . Lifting or adjusting devices
23/18	• . Construction of damping rollers	27/36	• . . Cams, eccentrics, wedges, or the like devices
23/20	• by heat drying, by cooling, by applying powders	27/38	• . . fluid-pressure operated
23/22	• . Powdering devices, e.g. for preventing set-off	27/40	• . . magnetically operated
23/24	• Print-finishing devices, e.g. for glossing prints	29/00	Devices for attaching printing elements or formes to supports {(in printing presses in general B41F 27/00)}
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)	29/02	• magnetic
25/005	• {Pre-damping etching devices}	29/04	• for attaching printing elements to flat type-beds
25/02	• using friction rollers	29/06	• for attaching elements to forme cylinders
25/04	• using brushes	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
		29/22	• for attaching printing formes to intermediate supports, e.g. adapter members
		31/00	Devices for removing flexible printing formes from 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](#))}

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](#))}

- 35/02 . Forme cylinders
- 35/04 . . Registering devices
- 35/06 . . . with means for displacing the cylinders
- 35/08 . . . with means for displacing the printing formes on the cylinders
- 35/10 . Impression cylinders
- 35/12 . Bearings or supports for forme, offset, or transfer or impression cylinders
- 35/14 . Means for heating or cooling forme or impression cylinders
- 35/16 . Cylinder-tripping devices; Cylinder impression adjustments
- 35/18 . . Arrangements or dispositions of cylinder bearings, forks, or supports
- 35/20 . . . Eccentric bearings
- 35/22 . . . Sliding bearings
- 35/24 . . . Swinging bearings
- 35/26 . . Cylinder lifting or adjusting devices
- 35/28 . . . Cams, eccentrics, wedges, or the like
- 35/30 . . . electrically or magnetically operated
- 35/32 . . . fluid-pressure operated
- 35/34 . Guards or covers, e.g. for safety purposes, for preventing egress or ingress of foreign matter

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](#))

- 38/02 . attaching to impression cylinders
- 38/04 . attaching of endless or like continuously-fed coverings

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](#))

- 39/02 . Indicating devices, e.g. counters
- 39/04 . Tripping devices or stop motions
- 39/06 . . for starting or stopping operation of sheet or web feed
- 39/08 . . for starting or stopping operation of cylinders {(B41L 19/16 takes precedence)}
- 39/10 . . for starting or stopping operation of damping or inking units
- 39/12 . . for starting or stopping the machines as a whole
- 39/14 . . Automatic control of tripping devices by feelers, photoelectric devices, pneumatic devices, or other detectors
- 39/16 . Programming systems for automatic control of sequence of operations

41/00 Cleaning arrangements or devices {(for printing presses in general [B41F 35/00](#))}

- 41/02 . for forme cylinders
- 41/04 . for inking rollers
- 41/06 . for offset cylinders

43/00 Auxiliary folding, collecting, or depositing of sheets or webs (in general [B65H](#))

- 43/02 . Folding
- 43/04 . . lengthwise
- 43/06 . . crosswise
- 43/08 . . Folding-cylinders or drums
- 43/10 . Collecting
- 43/12 . . and stapling
- 43/14 . Adding inserts
- 43/16 . Depositing

Addressing machines or like series-printing machines

45/00 Kinds or types of addressing machines or of like series-printing machines

- 45/02 . using printing plates
- 45/04 . . composed on type-setting machines
- 45/06 . . for addressing combined with other operations, e.g. franking, collating documents
- 45/08 . with printing surfaces in the form of belts, or carried by chains
- 45/10 . . for addressing combined with other operations, e.g. franking, collating documents
- 45/12 . with separate devices for printing additional texts or images, e.g. for printing receipts on blank sheets or webs

47/00 Details of addressographs or like series-printing machines (common details of printing machines [B41F 21/00](#) - [B41F 35/00](#))

- 47/02 . Applications of printing surfaces in addressing machines or like series-printing machines (printing surfaces in general [B41N](#))
- 47/04 . . of flat or curved plates for relief printing
- 47/06 . . of flat or curved stencils
- 47/08 . . of flat or curved plates for hectographic printing
- 47/10 . . of printing surfaces in the form of belts or chains
- 47/12 . Auxiliary devices, e.g. for flattening plates, for assembling plates in predetermined order, for wetting stencils
- 47/14 . Devices or arrangements for storing or handling plates
- 47/16 . . Magazines
- 47/18 . . Devices for feeding the plates in their plane
- 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