SECTION B — PERFORMING OPERATIONS; TRANSPORTING

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)

Note(s)

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.

Subclass index

MANIFOLDING....1/00, 3/00, 5/00
DUPLICATING
From hectographic masters....7/00, 9/00, 11/00
By stencil....13/00
Otherwise....19/00
PRINTING
Letterpress apparatus....15/00
Lithographic apparatus....17/00
Other apparatus....19/00
COMMON DETAILS OR ACCESSORIES
Treatment of surfaces before printing; handling thereof....23/00, 21/00, 33/00
Impression or offset surfaces; moistening thereof....38/00, 25/00
Inking....27/00
Handling printing elements or formes....29/00-33/00
Cylinders; Attaching coverings or make-ready devices....35/00, 38/00
Auxiliary operations....39/00, 41/00, 43/00
SPECIAL MACHINES FOR SERIES-PRINTING....45/00, 47/00, 49/00

Manifolding by means of pressure-sensitive layers or intermediaries

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

1/02 • 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

1/04 • 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

1/20 • Manifolding assemblies, e.g. book-like assemblies

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
1/34 • • for making masters for hectographic duplicators
1/36 • • with pressure-sensitive layers or coating other than carbon (sheet materials B41M 5/00)

3/00 Platens or like sheet supports for manifolding using pressure-sensitive layers or intermediaries, e.g. for book-keeping purposes
3/02 • with stationary clamping means for holding the manifolding assembly in registered position, e.g. resilient clamps for holding non-perforated sheets
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 apparatus for manifolding by means of pressure-sensitive layers, 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
5/06 • • by means of rollers, wheels, or chains
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)

<u>Apparatus or machines for duplicating or printing for office or other commercial purposes</u>

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
13/14 • Attachments, e.g. for punching, cutting, severing
13/16 • Driving gear; Control thereof
13/18 • Inking units **[3]**

15/00 Letterpress printing apparatus specially adapted for office or other commercial purposes (in general B41F; printing plates or foils, materials therefor 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 therefor 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 (addressing machines B41L 45/00)
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)
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)
19/06 • • with co-operating forme and impression cylinders
19/08 • • • by effecting relative movement of forme and impression cylinders during printing cycle
19/10 • • • by projecting and retracting parts of the surfaces of the forme cylinders
19/12 • • • by masking parts of the printing surfaces on the forme cylinders
19/14 • • • by selective damping of the copy material
19/16 • • • by selective tripping of impression cylinders

Common details of, or accessories for, apparatus or machines for manifolding, duplicating, or printing for office or other commercial purposes

21/00 Devices for conveying sheets or webs of copy material through apparatus or machines for manifolding, duplicating, or printing (mechanisms for conveying copy material through addressing machines or like series-printing machines B41L 47/24)
21/02 • for conveying sheets
21/04 • • Pins
21/06 • • Grippers
21/08 • • • Suction-operated grippers
21/10 • • Combinations of endless conveyors and grippers
21/12 • for conveying webs

23/00 Devices for treating the surface of sheets, webs, or other articles in connection with printing (cleaning in general B08B, of metals C23G; 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)
23/02 • by damping, e.g. by moistening copy-sheets in connection with hectographic printing
23/04 • • using friction rollers
23/06 • • using brushes
23/08 • • using spray elements
23/10 • • using endless bands
23/12 • • using absorbent pads
23/14 • • Ducts, containers, or like supply devices for liquids
23/16 • • Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor
23/18 • • Construction of damping rollers
23/20 • by heat drying, by cooling, by applying powders
23/22 • • Powdering devices, e.g. for preventing set-off
23/24 • Print-finishing devices, e.g. for glossing prints

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)
25/02 • using friction rollers
25/04 • using brushes
25/06 • using spraying elements
25/08 • using endless bands
25/10 • using absorbent pads
25/12 • Ducts, containers, or like supply devices for liquids
25/14 • Inking rollers serving also to apply ink repellent
25/16 • Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor
25/18 • Construction of damping rollers

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) **[3]**
27/02 • adapted for inking by hand
27/04 • Ducts, containers, supply devices or ink-level control devices (level control in general G05D 9/00) **[3]**
27/06 • • Duct-blades or like supply devices
27/08 • • Troughs or like reservoirs with immersed, or partly immersed, rollers
27/10 • • with ink-ejection means, e.g. pumps, nozzles
27/12 • • Feed or duct rollers (messenger or moving transfer rollers B41L 27/16)
27/14 • • • adjustable for regulating supply
27/16 • • Messenger or other moving transfer rollers
27/18 • Continuous, e.g. endless-band, apparatus
27/20 • for inking selected parts of printing formes
27/22 • Ink-removing or collecting devices
27/24 • for inking from interior of cylinder
27/26 • Absorbent pads
27/28 • Construction of inking rollers
27/30 • Spray apparatus, e.g. containing brushes
27/32 • Arrangements for tripping, lifting, adjusting, or removing inking rollers; Supports, bearings, or forks therefor
27/34 • • Lifting or adjusting devices
27/36 • • • Cams, eccentrics, wedges, or the like devices
27/38 • • • fluid-pressure operated
27/40 • • • magnetically operated

29/00 Devices for attaching printing elements or formes to supports
29/02 • magnetic
29/04 • for attaching printing elements to flat type-beds
29/06 • for attaching printing elements to forme cylinders
29/08 • for attaching printing 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

35/00 Cylinders for apparatus or machines for manifolding, duplicating, or printing for office or other commercial purposes

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) **[5]**

38/02 • attaching to impression cylinders **[5]**
38/04 • attaching of endless or like continuously-fed coverings **[5]**

39/00 Indicating, counting, warning, control or safety devices (ink-level control devices B41L 27/04; such devices in general, see the relevant subclasses, e.g. counting in general G06M) **[3]**

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
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

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

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 addressing machines 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 addressing machines or like series-printing machines (in general B65H)
47/26 • • for conveying or positioning single sheet-like 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, position 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 addressing machines or like series-printing machines
49/02 • Counting, numbering, or dating devices
49/04 • Devices for applying selection markings to printing plates