

## SECTION B — PERFORMING OPERATIONS; TRANSPORTING

## B41 PRINTING; LINING MACHINES; TYPEWRITERS; STAMPS

## B41B MACHINES OR ACCESSORIES FOR MAKING, SETTING, OR DISTRIBUTING TYPE; TYPE; PHOTOGRAPHIC OR PHOTOELECTRONIC COMPOSING DEVICES (photographic devices in general G03)

Subclass index

HAND COMPOSING.....	1/00
MECHANICAL COMPOSING	
Using prefabricated type; making type.....	3/00, 5/00
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PHOTOGRAPHIC COMPOSING	
Machines composing lines prior to photography.....	15/00
Machines without means for composing lines prior to photography.....	17/00
Electronic machines.....	19/00
Equipment for special work.....	13/00
Details of machines; auxiliaries.....	21/00, 23/00
PREPARATION OF RECORD CARRIERS.....	25/00
CONTROL, INDICATING, SAFETY.....	27/00

**1/00 Elements or appliances for hand composition; Chases, quoins, or galleys [1, 2006.01]**

- 1/02 • Printing letters or type [1, 2006.01]
- 1/04 • Quadrats or quads; Spaces or other justifiers [1, 2006.01]
- 1/06 • for special purposes [1, 2006.01]
- 1/08 • • for inserting latest news [1, 2006.01]
- 1/10 • • for inserting advertisements [1, 2006.01]
- 1/12 • • for setting musical notations [1, 2006.01]
- 1/14 • Composing rules, e.g. of brass [1, 2006.01]
- 1/16 • Galleys [1, 2006.01]
- 1/18 • Chases [1, 2006.01]
- 1/20 • Quoins or other binding means [1, 2006.01]
- 1/22 • Composing tables; Type cases; Storage cabinets; Washing or cleaning devices therefor [1, 2006.01]
- 1/24 • • Washing or cleaning devices [1, 2006.01]
- 1/26 • Composing or setting sticks [1, 2006.01]
- 1/28 • Galleys [1, 2006.01]

5/06 • • mechanically operated [1, 2006.01]

5/08 • Tools or auxiliaries [1, 2006.01]

5/10 • • for polishing or finishing type (polishing in general B24B) [1, 2006.01]

5/12 • • for making type in the form of lines, e.g. by drawing or casting [1, 2006.01]

5/14 • • for cutting spaces [1, 2006.01]

**7/00 Kinds or types of apparatus for mechanical composition in which the type is cast or moulded from matrices [1, 2006.01]**

7/02 • operating with fixed combinations of matrices (details B41B 9/00) [1, 2006.01]

7/04 • • for casting individual characters or spaces, e.g. "monotype" machines [1, 2006.01]

7/06 • • for composing, justifying, and casting complete lines of matrices, e.g. "monoline" machines [1, 2006.01]

7/08 • operating with separate matrices for individual characters or spaces which are selected and assembled (details B41B 11/00) [1, 2006.01]

7/10 • • in which a line is composed of matrices and in which single types or spaces are cast, e.g. stringer type [1, 2006.01]

7/12 • • in which a justified line is composed of matrices and a type line is cast in one piece [1, 2006.01]

7/14 • • • the matrices being composed by hand [1, 2006.01]

7/16 • • • the lines of matrices being composed and justified by machine operation, e.g. "linotype", "intertype" machines [1, 2006.01]

7/18 • • • the matrices being guided by wires, e.g. "typograph" machines [1, 2006.01]

Machines or other mechanical apparatus for composing**3/00 Apparatus for mechanical composition using prefabricated type, i.e. without casting equipment [1, 2006.01]**

- 3/02 • Mechanical composing machines using single types or logotypes and having slide magazines therefor, e.g. flat, cylindrical, radial, single magazines [1, 2006.01]
- 3/04 • Means for distributing type [1, 2006.01]
- 3/06 • Justifying means [1, 2006.01]

**5/00 Devices for making type or lines (for mechanical composition B41B 7/00, B41B 9/00, B41B 11/00) [1, 2006.01]**

- 5/02 • Matrices [1, 2006.01]
- 5/04 • Casting devices [1, 2006.01]

- 9/00 Details of, or accessories for, machines for mechanical composition using fixed combinations of matrices from which type is cast or moulded [1, 2006.01]**
- 9/02 • Combinations of matrices [1, 2006.01]
  - 9/04 • Carriers for combinations of matrices, e.g. blocks, cylinders, wheels, bars [1, 2006.01]
  - 9/06 • Mechanisms for effecting relative movements of matrix carriers and moulds for character or space selection [1, 2006.01]
  - 9/08 • Moulding or casting devices [1, 2006.01]
  - 9/10 • • Moulds [1, 2006.01]
  - 9/12 • • Justifying devices [1, 2006.01]
  - 9/14 • • Supply devices for molten metal [1, 2006.01]
  - 9/16 • Devices for handling type after casting [1, 2006.01]
  - 9/18 • • Ejector mechanisms [1, 2006.01]
  - 9/20 • • Trimming devices [1, 2006.01]
- 11/00 Details of, or accessories for, machines for mechanical composition using matrices for individual characters which are selected and assembled for type casting or moulding [1, 2006.01]**
- 11/02 • Matrices [1, 2006.01]
  - 11/04 • Space bands [1, 2006.01]
  - 11/06 • Storage devices for matrices or space bands [1, 2006.01]
  - 11/08 • • Magazines for matrices [1, 2006.01]
  - 11/10 • • • for composing by hand [1, 2006.01]
  - 11/12 • • • Attachment of magazines to machines; Magazine-selection or magazine-shift mechanisms (controlling selection or shifting B41B 27/42) [1, 2006.01]
  - 11/14 • • • with escapement devices [1, 2006.01]
  - 11/16 • • Boxes for space bands; Escapements or guides for releasing space bands [1, 2006.01]
  - 11/18 • Devices or arrangements for assembling matrices and space bands (control devices therefor B41B 27/44) [1, 2006.01]
  - 11/20 • • Assembler guide channels [1, 2006.01]
  - 11/22 • • Assembler cover plates or framework [1, 2006.01]
  - 11/24 • • Belt conveyors co-operating with assembler guides [1, 2006.01]
  - 11/26 • • Devices for feeding or guiding space bands into association with matrices [1, 2006.01]
  - 11/28 • • Star wheels or other stacking devices for matrices and space bands; Guides associated therewith [1, 2006.01]
  - 11/30 • • Assembler elevators or associated mechanisms, e.g. braking devices, retaining pawls, line resistants, delivery slides [1, 2006.01]
  - 11/32 • • Transfer channels or line-delivery carriages [1, 2006.01]
  - 11/34 • • First elevators or associated mechanisms [1, 2006.01]
  - 11/36 • • for presenting matrices or space bands directly to moulds [1, 2006.01]
  - 11/38 • Devices for aligning or clamping lines of matrices and space bands [1, 2006.01]
  - 11/40 • • Jaw clamps; Operating devices therefor [1, 2006.01]
  - 11/42 • • • for quadding and centring [1, 2006.01]
  - 11/44 • • • for justifying [1, 2006.01]
  - 11/46 • • Aligning devices [1, 2006.01]
  - 11/48 • • Cleaning devices for aligning jaws (cleaning matrices B41B 11/96) [1, 2006.01]
  - 11/50 • • Vice frames; Devices for releasing or locking [1, 2006.01]
  - 11/52 • Moulding or casting devices or associated mechanisms [1, 2006.01]
  - 11/54 • • Moulds; Liners therefor [1, 2006.01]
  - 11/56 • • • Mould wheels; Slides or driving gear therefor [1, 2006.01]
  - 11/58 • • • • with locking wedges [1, 2006.01]
  - 11/60 • • • • adjustable or removable [1, 2006.01]
  - 11/62 • • • • with interchangeable moulds [1, 2006.01]
  - 11/64 • • • • with a series of moulds and mechanism for selecting individual moulds [1, 2006.01]
  - 11/66 • • • mounted on reciprocable carriages [1, 2006.01]
  - 11/68 • • • with provision for adjusting length or width of slot; with a plurality of slots [1, 2006.01]
  - 11/70 • • • for casting type-bars of special form, e.g. with projections [1, 2006.01]
  - 11/72 • • Devices for trimming type-bars; Cleaning devices for trimming knives; Ejectors for type-bars [1, 2006.01]
  - 11/74 • • Devices for supplying molten metal [1, 2006.01]
  - 11/76 • • • Pots (melting pots for casting stereotype plates B41D 3/20) [1, 2006.01]
  - 11/78 • • • • movable towards, and away from, mould [1, 2006.01]
  - 11/80 • • • • with stirrers or means for removing dross [1, 2006.01]
  - 11/82 • • • • associated with mechanisms for introducing metal in solid form [1, 2006.01]
  - 11/84 • • • • Throats or mouthpieces; Wipers for mouthpieces [1, 2006.01]
  - 11/86 • • • • Heaters for pots; Temperature-control devices [1, 2006.01]
  - 11/88 • • • Pumps; Stop-motions or safety devices therefor [1, 2006.01]
  - 11/90 • Arrangements or devices for distributing matrices or space bands after casting or moulding [1, 2006.01]
  - 11/92 • • Second elevators [1, 2006.01]
  - 11/94 • • Screw conveyors [1, 2006.01]
  - 11/96 • Devices for cooling or cleaning matrices [1, 2006.01]
- Photographic or photoelectronic composing devices**
- 13/00 Equipment specially adapted for photographing mounted characters or the like, e.g. advertisements, lines [1, 2006.01]**
- 13/02 • the characters being composed or mounted by hand, and photographed simultaneously [1, 2006.01]
  - 13/04 • • with means for justifying [1, 2006.01]
  - 13/06 • • • by elastic or extensible type-line carriers [1, 2006.01]
  - 13/08 • • • by optical line correction [1, 2006.01]
  - 13/10 • the characters being progressively photographed one by one [1, 2006.01]
- 15/00 Photographic composing machines with movable character carriers for composing lines of characters prior to photography [1, 2006.01]**
- 15/02 • with means for photographing complete lines [1, 2006.01]
  - 15/04 • • and with carriers for individual characters [1, 2006.01]
  - 15/06 • • and with carriers for complete sets of characters, e.g. slidable elongated members, rotary wheels [1, 2006.01]

- 15/08 • with means for photographing composed characters in succession [1, 2006.01]
- 15/10 • Details [1, 2006.01]
- 15/12 • • Character carriers; Cleaning devices therefor [1, 2006.01]
- 15/14 • • • with a single character, or with combinations of different styles of a single character [1, 2006.01]
- 15/16 • • • with combinations of different characters [1, 2006.01]
- 15/18 • • • with parts of characters for building up complex characters, e.g. oriental characters [1, 2006.01]
- 15/20 • • Devices for handling or storing character carriers [1, 2006.01]
- 15/22 • • • Magazines [1, 2006.01]
- 15/24 • • • for justifying purposes [1, 2006.01]
- 15/26 • • • for repeating a character [1, 2006.01]
- 15/28 • • Photographic devices (in general G03) [1, 2006.01]
- 15/30 • • • Composing cameras [1, 2006.01]
- 15/32 • • • Film-handling mechanisms [1, 2006.01]
- 15/34 • • • Adjusting enlargement or register; Correcting exposure time [1, 2006.01]
- 17/00 Photographic composing machines having fixed or movable character carriers and without means for composing lines prior to photography [1, 2006.01]**
- 17/02 • with manually-adjustable character carriers to enable characters to be photographed in succession [1, 2006.01]
- 17/04 • with a carrier for all characters in at least one fount [1, 2006.01]
- 17/06 • • with an adjustable carrier [1, 2006.01]
- 17/08 • • with a fixed carrier [1, 2006.01]
- 17/10 • • with a continuously-movable carrier [1, 2006.01]
- 17/12 • • with means for moving the optical path for photographing characters, e.g. intermittently [1, 2006.01]
- 17/14 • • • continuously [1, 2006.01]
- 17/16 • • with means for moving the film in its plane for photographing characters in succession [1, 2006.01]
- 17/18 • Details [1, 2006.01]
- 17/20 • • Character carriers; Cleaning devices therefor [1, 2006.01]
- 17/22 • • • with a single character; with a single character in more than one style [1, 2006.01]
- 17/24 • • • with all characters [1, 2006.01]
- 17/26 • • • on belts [1, 2006.01]
- 17/28 • • • on polygonal rods [1, 2006.01]
- 17/30 • • • on a sheet of square or rectangular shape [1, 2006.01]
- 17/32 • • • • on a flat disc [1, 2006.01]
- 17/34 • • • • on a cylinder [1, 2006.01]
- 17/36 • • • with selection indicators [1, 2006.01]
- 17/38 • • • with means for indicating the width [1, 2006.01]
- 17/40 • • • • in caliper form [1, 2006.01]
- 17/42 • • • • in coded form [1, 2006.01]
- 19/00 Photoelectronic composing machines [1, 3, 2006.01]**
- 19/01 • having electron-beam tubes producing an image of at least one character which is photographed [3, 2006.01]
- 19/02 • • the characters appearing on the screen in succession [1, 3, 2006.01]
- 19/04 • • • at the same place [1, 3, 2006.01]
- 19/06 • • • at different predetermined places [1, 3, 2006.01]
- 19/08 • • with combinations of characters appearing on the screen at the same time [1, 3, 2006.01]
- 19/10 • • • in unbroken lines or columns [1, 3, 2006.01]
- 19/12 • • • in broken lines or columns [1, 3, 2006.01]
- 19/14 • • • and presenting a text of more than one line [1, 3, 2006.01]
- 19/16 • • Character carriers associated with electron-beam tubes [1, 3, 2006.01]
- 21/00 Common details of photographic composing machines of the kinds covered in groups B41B 17/00 and B41B 19/00 [1, 2006.01]**
- 21/02 • Shutters in optical systems (in general G03B) [1, 2006.01]
- 21/04 • • for selecting characters [1, 2006.01]
- 21/06 • • for adjusting exposures [1, 2006.01]
- 21/08 • Light sources; Devices associated therewith, e.g. control devices [1, 2006.01]
- 21/10 • • Single light sources [1, 2006.01]
- 21/12 • • Stroboscopic light sources [1, 2006.01]
- 21/14 • • Combinations of light sources [1, 2006.01]
- 21/16 • Optical systems (shutters B41B 21/02; light sources B41B 21/08) [1, 2006.01]
- 21/18 • • defining a single optical path [1, 2006.01]
- 21/20 • • • with means for moving stepwise [1, 2006.01]
- 21/22 • • • with means for moving continuously [1, 2006.01]
- 21/24 • • defining multiple optical paths [1, 2006.01]
- 21/26 • • • with means for selecting individual optical paths (means for moving the optical path B41B 17/12) [1, 2006.01]
- 21/28 • • • with means for fount selection [1, 2006.01]
- 21/30 • Electron-beam tubes or charactrons (in general H01J 31/00) [1, 2006.01]
- 21/32 • Film carriers; Film-conveying or -positioning devices (film-handling means in line-composing photographic devices B41B 15/32; machines with means for moving the film in its plane for photographing characters in succession B41B 17/16) [1, 2006.01]
- 21/34 • • with positioning mechanisms [1, 2006.01]
- 21/36 • • • for feeding films stepwise in line direction [1, 2006.01]
- 21/38 • • • for feeding films continuously in line direction [1, 2006.01]
- 21/40 • • • for line spacing [1, 2006.01]
- 21/42 • • • for subscript or superscript notation [1, 2006.01]
- 21/44 • • adjustable for enlarging purposes [1, 2006.01]
- 23/00 Auxiliary devices for modifying, mixing, or correcting text or layout in connection with photographic or photoelectronic composing [1, 2006.01]**
- 23/02 • for mixing by line-by-line projection of parts of texts from a number of films on to another [1, 2006.01]
- 23/04 • for facilitating hand correction of texts [1, 2006.01]
- 23/06 • for correcting texts by removing incorrect lines from one film and splicing-in corrected lines from another film [1, 2006.01]

**B41B**

**Marking record carriers used for controlling composing machines; Control, indicating, or safety devices or systems for composing machines of various kinds or types**

- 25/00 **Apparatus specially adapted for preparation of record carriers for controlling composing machines** (for casting individual characters or spaces, e.g. in "monotype" machines, B41B 7/04; methods for marking or reproducing record carriers having digital data thereon in general G06K 1/00) [1, 2006.01]
- 25/10 • incorporating devices for line justification, e.g. counting and indicating devices for length of line [1, 2006.01]
- 25/12 • • comprising elements which circulate from and to magazines [1, 2006.01]
- 25/14 • • operating without space bands [1, 2006.01]
- 25/16 • • using a binary code for the width of the matrices [1, 2006.01]
- 25/18 • combined with type-setting machines [1, 2006.01]
- 25/20 • Auxiliary devices; Devices serving special purposes [1, 2006.01]
- 25/22 • • for indicating length of line [1, 2006.01]
- 25/24 • • for error correction [1, 2006.01]
- 25/26 • • for changing the fount of type [1, 2006.01]
- 27/00 **Control, indicating, or safety devices or systems for composing machines of various kinds or types** (computers in general G06F) [1, 2006.01]
- 27/02 • Systems for controlling all operations [1, 2006.01]
- 27/04 • • Keyboards [1, 2006.01]
- 27/06 • • • operable by input of recorded or stored information, e.g. on punched tapes [1, 2006.01]
- 27/08 • • • • from several sources [1, 2006.01]
- 27/10 • • with direct control of all operations by input of recorded or stored information [1, 2006.01]
- 27/12 • • • on tapes [1, 2006.01]
- 27/14 • • • • on punched tapes [1, 2006.01]

- 27/16 • • • • on magnetic tapes [1, 2006.01]
- 27/18 • • • from memory devices [1, 2006.01]
- 27/20 • • • • from electromagnetic devices, e.g. memory matrices [1, 2006.01]
- 27/22 • • • from several sources [1, 2006.01]
- 27/24 • • of several associated machines [1, 2006.01]
- 27/26 • • with means for temporarily arresting input of recorded or stored information to introduce time delays [1, 2006.01]
- 27/28 • Control, indicating, or safety devices for individual operations or machine elements (in devices for supplying molten metal B41B 11/86, B41B 11/88; for light sources B41B 21/08) [1, 2006.01]
- 27/30 • • for arresting or varying speed of one operation in response to failure or variation in speed of another operation [1, 2006.01]
- 27/32 • • for line-justification operations [1, 2006.01]
- 27/34 • • • without the use of space bands [1, 2006.01]
- 27/36 • • • using electronic devices [1, 2006.01]
- 27/38 • • for measuring length of composed lines; for reading composed characters [1, 2006.01]
- 27/40 • • for proof-printing operations [1, 2006.01]
- 27/41 • • Printing mechanisms coupled to typographical composing machines [1, 2006.01]
- 27/42 • • for controlling selection of shifting of matrix magazines [1, 2006.01]
- 27/44 • • for controlling assembly of matrices and space bands [1, 2006.01]
- 27/46 • • • for controlling insertion of space bands (for line justification B41B 27/32) [1, 2006.01]
- 27/48 • • for deleting errors or inserting corrections (devices, non-fluid media or methods for cancelling or correcting errors in typewriters or selective printing mechanisms B41J 29/26) [1, 2006.01]
- 27/50 • • operated by coupled machines [1, 2006.01]

**B41C PROCESSES FOR THE MANUFACTURE OR REPRODUCTION OF PRINTING SURFACES** (photomechanical processes for producing printing surfaces G03F; photoelectrical processes for producing printing surfaces G03G)

- 1/00 **Forme preparation** [1, 2006.01]
- 1/02 • Engraving; Heads therefor (recording on record carriers, heads therefor G11B) [1, 5, 2006.01]
- Note(s) [5]**  
Attention is drawn to the title of class B41 and to subclass H04N, in particular to the Notes following the title of that subclass and to group H04N 1/00.
- 1/04 • • using heads controlled by an electric information signal [1, 2006.01]
- 1/045 • • • Mechanical engraving heads [5, 2006.01]
- 1/05 • • • Heat-generating engraving heads, e.g. laser beam, electron beam [5, 2006.01]
- 1/055 • Thermographic processes for producing formes (B41C 1/02 takes precedence) [5, 2006.01]
- 1/06 • Transferring (B41C 1/10, B41C 1/18 take precedence) [1, 5, 2006.01]
- 1/08 • by embossing, e.g. with a typewriter (typewriters adapted therefor B41J 3/38) [1, 2006.01]

- 1/10 • for lithographic printing; Master sheets for transferring a lithographic image to the forme (B41C 1/055 takes precedence; neutralising or similar differentiation treatments of lithographic printing formes B41N 3/08) [1, 5, 2006.01]
- 1/12 • Multicolour formes [1, 2006.01]
- 1/14 • for stencil printing or silk-screen printing (B41C 1/055 takes precedence) [1, 5, 2006.01]
- 1/16 • Formes with areas rendered ink-resistant by covering with an amalgam; Printing plates for amalgam printing [1, 5, 2006.01]
- 1/18 • Curved printing formes or printing cylinders [1, 2006.01]
- 3/00 **Reproduction or duplicating of printing formes** [1, 2006.01]
- 3/02 • Stereotyping (casting stereotype plates B41D 3/00) [1, 2, 2006.01]
- 3/04 • to produce rubber printing blocks [1, 2006.01]
- 3/06 • to produce printing blocks from plastics [1, 2006.01]
- 3/08 • Electrotyping; Application of backing layers thereon [1, 5, 2006.01]

**B41D APPARATUS FOR THE MECHANICAL REPRODUCTION OF PRINTING SURFACES FOR STEREOTYPE PRINTING; SHAPING ELASTIC OR DEFORMABLE MATERIAL TO FORM PRINTING SURFACES** (marking or engraving metal by the action of a high concentration of electric current B23H 9/06; type, machines, or accessories for making, setting, or distributing type B41B; processes for the manufacture or reproduction of printing surfaces B41C; machines or apparatus for engraving in general, or for embossing B44B 3/00, B44B 5/00; chemical etching of metal C23F 1/00; electrolytic etching C25F 3/00; photomechanical reproduction G03F)

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| <p><b>1/00 Preparing or treating stereotype matrices [1, 2006.01]</b></p> <p>1/02 • using brushes [1, 2006.01]</p> <p>1/04 • using cylinders or rollers [1, 2006.01]</p> <p>1/06 • using presses, e.g. toggle or like lever-and-link type presses [1, 2006.01]</p> <p>1/08 • • using hydraulic presses [1, 2006.01]</p> <p>1/10 • Performing secondary operations on matrices [1, 2006.01]</p> <p>1/12 • • Humidifying or moistening [1, 2006.01]</p> <p>1/14 • • Drying [1, 2006.01]</p> | <p>3/20 • • Melting pots [1, 2006.01]</p> <p>3/22 • • • with pumps for conveying the molten metal into the casting chambers or boxes [1, 2006.01]</p> <p>3/24 • • • with control valves [1, 2006.01]</p> <p>3/26 • • • with devices for stirring the molten metal [1, 2006.01]</p> <p>3/28 • • Devices for cooling the moulds [1, 2006.01]</p> <p><b>5/00 Working, treating, or handling stereotype plates [1, 2006.01]</b></p> <p>5/02 • by bending [1, 2006.01]</p> <p>5/04 • of flat plates [1, 2006.01]</p> <p>5/06 • of curved plates [1, 2006.01]</p> |
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#### Producing printing surfaces

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| <p><b>3/00 Casting stereotype plates; Machines, moulds, or devices therefor [1, 2006.01]</b></p> <p>3/02 • Horizontal moulds for casting flat plates [1, 2006.01]</p> <p>3/04 • Moulds, e.g. horizontal, for casting curved, e.g. semi-cylindrical, plates [1, 2006.01]</p> <p>3/06 • • Vertical moulds [1, 2006.01]</p> <p>3/08 • Moulds, e.g. horizontal, for casting tubular, i.e. cylindrical, plates [1, 2006.01]</p> <p>3/10 • • Vertical moulds [1, 2006.01]</p> <p>3/12 • Multiple-mould stereotype casting machines [1, 2006.01]</p> <p>3/14 • Details [1, 2006.01]</p> <p>3/16 • • Matrix clamps [1, 2006.01]</p> <p>3/18 • • Devices for closing or opening moulds [1, 2006.01]</p> | <p><b>7/00 Shaping elastic or deformable material, e.g. rubber, plastics material, to form printing surfaces</b> (making rubber printing blocks B41C 3/04) [1, 2006.01]</p> <p>7/02 • by impression [1, 2006.01]</p> <p>7/04 • Forming printing surfaces by covering printing forms with a thin elastic skin, e.g. rubber foil, and retaining the latter thereon; Obtaining reduced or enlarged printing surfaces by using thin elastic transfer foils (pantographic instruments for copying, reducing, or enlarging B43L 13/10) [1, 2006.01]</p> <hr/> <p><b>99/00 Subject matter not provided for in other groups of this subclass [2006.01]</b></p> |
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**B41F PRINTING MACHINES OR PRESSES** (manifolding devices or office printing machines B41L) [4]

#### Note(s) [6]

Attention is drawn to Notes (1) and (2) following the title of subclass B41L.

#### Subclass index

PLATEN PRESSES.....	1/00
CYLINDER PRESSES.....	3/00
ROTARY MACHINES	
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DETAILS	
Handling sheets or other surfaces to be printed; treating such surfaces.....	21/00, 25/00, 22/00, 23/00
Attaching printing elements; make-ready arrangements, impression or offset surfaces; inking.....	27/00, 30/00, 31/00
Auxiliary devices; cleaning.....	33/00, 35/00

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| <p><b>1/00 Platen presses, i.e. presses in which printing is effected by at least one essentially-flat pressure-applying member co-operating with a flat type-bed [1, 2006.01]</b></p> | <p>1/02 • Hand-operated platen presses [1, 2006.01]</p> <p>1/04 • for mono-impression printing, e.g. on sheets [1, 2006.01]</p> |
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- 1/06 • • with platen maintained parallel to bed during movement [1, 2006.01]
  - 1/08 • • on webs [1, 2006.01]
  - 1/10 • for multi-impression printing in one or more colours, e.g. on webs [1, 2006.01]
  - 1/12 • • on sheets [1, 2006.01]
  - 1/14 • • • using swinging platens, or forme supports [1, 2006.01]
  - 1/16 • for offset printing [1, 2006.01]
  - 1/18 • for lithography [1, 2006.01]
  - 1/20 • for perfecting sheets, i.e. for printing on both sides of sheets [1, 2006.01]
  - 1/22 • specially adapted for printing heads, e.g. letter heads [1, 2006.01]
  - 1/24 • specially adapted for proof printing [1, 2006.01]
  - 1/26 • Details [1, 2006.01]
  - 1/28 • • Sheet-conveying, -aligning or -clamping devices [1, 2006.01]
  - 1/30 • • • using rotary grippers [1, 2006.01]
  - 1/32 • • • using air pressure, e.g. vacuum [1, 2006.01]
  - 1/34 • • • Registering devices, e.g. gauges [1, 2006.01]
  - 1/36 • • • Clamps for conveying sheets and for holding same on the platens [1, 2006.01]
  - 1/38 • • Platens or type-beds [1, 2006.01]
  - 1/40 • • Inking units [1, 2006.01]
  - 1/42 • • • using flat inking elements, e.g. discs [1, 2006.01]
  - 1/44 • • • using inking ribbons [1, 2006.01]
  - 1/46 • • • using rollers [1, 2006.01]
  - 1/48 • • • pivoting around the platen or base [1, 2006.01]
  - 1/50 • • • supported on carriages for movement in or on runways [1, 2006.01]
  - 1/52 • • • • Carriage driving gear [1, 2006.01]
  - 1/54 • • Printing-pressure control devices [1, 2006.01]
  - 1/56 • • Auxiliary devices [1, 2006.01]
  - 1/58 • • • Arrangements of counting devices for counting sheets [1, 2006.01]
  - 1/60 • • Safety devices [1, 2006.01]
  - 1/62 • • • for preventing injury to operator [1, 2006.01]
  - 1/64 • • • • to the hands of the operator [1, 2006.01]
  - 1/66 • • • responsive to incorrect operating conditions [1, 2006.01]
  - 3/00 Cylinder presses, i.e. presses essentially comprising at least one cylinder co-operating with at least one flat type-bed [1, 2006.01]**
  - 3/02 • with impression cylinder or cylinders rotating unidirectionally [1, 2006.01]
  - 3/04 • • intermittently; Stop-cylinder presses [1, 2006.01]
  - 3/06 • • continuously [1, 2006.01]
  - 3/08 • • • Single-revolution presses [1, 2006.01]
  - 3/10 • • • Two-revolution presses [1, 2006.01]
  - 3/12 • • Twin presses, i.e. with more than one cylinder or type-bed [1, 2006.01]
  - 3/14 • with impression cylinder or cylinders rotating in opposite directions during each working cycle [1, 2006.01]
  - 3/16 • • Twin presses, i.e. with more than one cylinder or type-bed [1, 2006.01]
  - 3/18 • of special construction or for particular purposes [1, 2006.01]
  - 3/20 • • with fixed type-beds and travelling impression cylinders [1, 2006.01]
  - 3/22 • • • with more than one type-bed [1, 2006.01]
  - 3/24 • • • with cylinders travelling around type-beds having upper and lower printing surfaces [1, 2006.01]
  - 3/26 • • with type-beds and impression cylinders simultaneously movable relative to one another [1, 2006.01]
  - 3/28 • • Proof-print presses for relief printing, lithography or intaglio printing, i.e. presses for checking accuracy of printing surfaces [1, 2006.01]
  - 3/30 • • for lithography (proof-print presses B41F 3/28) [1, 2006.01]
  - 3/32 • • • Damping devices [1, 2006.01]
  - 3/34 • • • for offset printing [1, 2006.01]
  - 3/36 • • for intaglio or heliogravure printing (proof-print presses B41F 3/28) [1, 2006.01]
  - 3/38 • • • Wiping mechanisms [1, 2006.01]
  - 3/40 • • for perfecting sheets, i.e. for printing on both sides thereof [1, 2006.01]
  - 3/42 • • for multicolour printing on sheets [1, 2006.01]
  - 3/44 • • for monocolour or multicolour printing on one side of webs, or for perfecting webs, i.e. monocolour or multicolour printing on both sides of webs [1, 2006.01]
  - 3/46 • Details [1, 2006.01]
  - 3/48 • • Press frames [1, 2006.01]
  - 3/51 • • Type-beds; Supports therefor (B41F 3/52 take precedence) [3, 2006.01]
  - 3/52 • • Apparatus for cooling, heating, or drying printing surfaces [1, 3, 2006.01]
  - 3/54 • • Impression cylinders; Supports therefor [1, 2006.01]
  - 3/56 • • • Devices for adjusting cylinders relative to type-beds and setting in adjusted position [1, 2006.01]
  - 3/58 • • Driving, synchronising, or control gear [1, 2006.01]
  - 3/60 • • • for type-beds [1, 2006.01]
  - 3/62 • • • • Applications of linkwork or gearing for producing reciprocatory or angular motion [1, 2006.01]
  - 3/64 • • • • • of crank motions [1, 2006.01]
  - 3/66 • • • • • of rack-and-pinion gearing [1, 2006.01]
  - 3/68 • • • • • with pinion rotating unidirectionally [1, 2006.01]
  - 3/70 • • • • Applications of directly-coupled motors [1, 2006.01]
  - 3/72 • • • • • of fluid motors [1, 2006.01]
  - 3/74 • • • • Applications of clutches [1, 2006.01]
  - 3/76 • • • • Applications of braking devices or of devices for stopping type-bed in registered position [1, 2006.01]
  - 3/78 • • • • • Air cushions [1, 2006.01]
  - 3/80 • • • for impression cylinders [1, 2006.01]
  - 3/81 • • Inking units [3, 2006.01]
  - 3/82 • Auxiliary devices [1, 2006.01]
  - 3/84 • • Arrangements of counting devices [1, 2, 2006.01]
  - 3/86 • • Numbering devices [1, 2006.01]
- Rotary machines**
- 5/00 Rotary letterpress machines [1, 2006.01]**
  - 5/02 • for printing on sheets [1, 2006.01]
  - 5/04 • for printing on webs [1, 2006.01]
  - 5/06 • • with several printing units in sequential arrangement [1, 2006.01]

- 5/08 • • with several printing units in both superimposed and sequential arrangement [1, 2006.01]
- 5/10 • • with several printing units arranged side by side [1, 2006.01]
- 5/12 • • for printing on one side and on the other side of webs between the same forme and impression cylinders [1, 2006.01]
- 5/14 • • with several impression cylinders arranged around a forme cylinder [1, 2006.01]
- 5/16 • • for multicolour printing [1, 2006.01]
- 5/18 • • • using one impression cylinder co-operating with several forme cylinders [1, 2006.01]
- 5/20 • specially adapted for proof printing [1, 2006.01]
- 5/22 • for indirect printing [3, 2006.01]
- 5/24 • for flexographic printing [3, 2006.01]
- 7/00 Rotary lithographic machines [1, 2006.01]**
- 7/02 • for offset printing [1, 2006.01]
- 7/04 • • using printing units incorporating one forme cylinder, one transfer cylinder, and one impression cylinder, e.g. for printing on webs [1, 2006.01]
- 7/06 • • • for printing on sheets [1, 2006.01]
- 7/08 • • using one transfer cylinder co-operating with several forme cylinders for printing on sheets or webs, e.g. sampling of colours on one transfer cylinder [1, 2006.01]
- 7/10 • • using one impression cylinder co-operating with several transfer cylinders for printing on sheets or webs, e.g. satellite-printing units [1, 2006.01]
- 7/12 • • using two cylinders one of which serves two functions, e.g. as a transfer and impression cylinder in perfecting machines [1, 2006.01]
- 7/14 • • with two or more impression cylinders coating with a single transfer cylinder [1, 2006.01]
- 7/15 • • • for printing on more than one web simultaneously [6, 2006.01]
- 7/16 • for printing on non-deformable material, e.g. sheet metal [1, 2006.01]
- 7/18 • specially adapted for proof printing [1, 2006.01]
- 7/20 • Details [1, 2006.01]
- 7/24 • • Damping devices [1, 2006.01]
- 7/26 • • • using transfer rollers [1, 3, 2006.01]
- 7/28 • • • using brushes [1, 2006.01]
- 7/30 • • • using spraying elements [1, 2006.01]
- 7/32 • • • Ducts, containers, or like supply devices for liquids [1, 2006.01]
- 7/34 • • • Endless bands [1, 2006.01]
- 7/36 • • • Inking-rollers serving also to apply ink repellent [1, 2006.01]
- 7/37 • • • with supercooling for condensation of air moisture [6, 2006.01]
- 7/38 • • • Absorbent pads [1, 2006.01]
- 7/40 • • • Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor (such arrangements or devices for inking rollers B41F 31/30) [1, 2006.01]
- 9/00 Rotary intaglio printing presses [1, 2006.01]**
- 9/01 • for indirect printing [3, 5, 2006.01]
- 9/02 • for multicolour printing [1, 2006.01]
- 9/04 • specially adapted for proof printing [1, 2006.01]
- 9/06 • Details [1, 2006.01]
- 9/08 • • Wiping mechanisms [1, 2006.01]
- 9/10 • • • with doctors, scrapers, or like devices [1, 2006.01]
- 9/12 • • • with absorbent pads [1, 2006.01]
- 9/14 • • • with continuous flexible surfaces, e.g. endless bands [1, 2006.01]
- 9/16 • • • Removing or recovering ink from wiping mechanisms [1, 2006.01]
- 9/18 • • Auxiliary devices for exchanging forme cylinders [1, 2006.01]
- 11/00 Rotary presses or machines having forme cylinders carrying a plurality of printing surfaces, or for performing letterpress, lithographic, or intaglio processes selectively or in combination [1, 2006.01]**
- 11/02 • for securities (security printing B41M 3/14) [3, 2006.01]
- 13/00 Common details of rotary presses or machines [1, 2006.01]**
- 13/004 • Electric or hydraulic features of drives [6, 2006.01]
- 13/008 • Mechanical features of drives, e.g. gears, clutches [6, 2006.01]
- 13/012 • • Taking-up backlash [6, 2006.01]
- 13/016 • Brakes [6, 2006.01]
- 13/02 • Conveying or guiding webs through presses or machines [1, 2006.01]
- 13/03 • • Threading webs into printing machines [6, 2006.01]
- 13/04 • • intermittently [1, 2006.01]
- 13/06 • • Turning-bar arrangements [1, 2006.01]
- 13/08 • Cylinders [1, 2006.01]
- 13/10 • • Forme cylinders [1, 2006.01]
- 13/11 • • • Gravure cylinders [6, 2006.01]
- 13/12 • • • Registering devices [1, 2006.01]
- 13/14 • • • • with means for displacing the cylinders [1, 2006.01]
- 13/16 • • • • with means for displacing the printing formes on the cylinders [1, 2006.01]
- 13/18 • • Impression cylinders [1, 2006.01]
- 13/187 • • • for rotogravure [6, 2006.01]
- 13/193 • • Transfer cylinders; Offset cylinders [6, 2006.01]
- 13/20 • • Supports for bearings or supports for forme, offset, or impression cylinders [1, 2006.01]
- 13/21 • • • Bearer rings [6, 2006.01]
- 13/22 • • Means for cooling or heating forme or impression cylinders [1, 2006.01]
- 13/24 • • Cylinder-tripping devices; Cylinder-impression adjustments [1, 2006.01]
- 13/26 • • • Arrangement of cylinder bearings [1, 2006.01]
- 13/28 • • • • Bearings mounted eccentrically of the cylinder axis [1, 2006.01]
- 13/30 • • • • Bearings mounted on sliding supports [1, 2006.01]
- 13/32 • • • • Bearings mounted on swinging supports [1, 2006.01]
- 13/34 • • • • Cylinder-lifting or -adjusting devices [1, 2006.01]
- 13/36 • • • • Cams, eccentrics, wedges, or the like [1, 2006.01]
- 13/38 • • • • electrically or magnetically operated [1, 2006.01]
- 13/40 • • • • fluid-pressure operated [1, 2006.01]
- 13/42 • • Guards or covers, e.g. for preventing ingress or egress of foreign matter [1, 2006.01]
- 13/44 • Arrangements to accommodate interchangeable cylinders of different sizes to enable machine to print on areas of different sizes [1, 2006.01]
- 13/46 • Printing units for inserting latest news [1, 2006.01]

- 13/48 • Arrangements to enable printing to be effected over selected areas of a single forme cylinder (by inking selected areas B41F 31/18) [1, 2006.01]
- 13/50 • • by effecting relative movement of forme and impression cylinders during printing cycle [1, 2006.01]
- 13/52 • • by projecting and retracting parts of the surface of the forme cylinder [1, 2006.01]
- 13/54 • Auxiliary folding, cutting, collecting or depositing of sheets or webs [1, 2006.01]
- 13/56 • • Folding or cutting [1, 2006.01]
- 13/58 • • • lengthwise [1, 2006.01]
- 13/60 • • • crosswise [1, 2006.01]
- 13/62 • • • Folding-cylinders or drums [1, 2006.01]
- 13/64 • • Collecting [1, 2006.01]
- 13/66 • • • and stapling [1, 2006.01]
- 13/68 • • Adding inserts [1, 2006.01]
- 13/70 • • Depositing [1, 2006.01]
- 15/00 Screen printers [1, 2006.01]**
- 15/02 • Manually-operable devices [1, 2006.01]
- 15/04 • • for multicolour printing [1, 2006.01]
- 15/06 • • with auxiliary equipment, e.g. for drying printed articles [1, 2006.01]
- 15/08 • Machines [1, 2006.01]
- 15/10 • • for multicolour printing [1, 2006.01]
- 15/12 • • with auxiliary equipment, e.g. for drying printed articles [1, 2006.01]
- 15/14 • Details [1, 2006.01]
- 15/16 • • Printing tables [1, 2006.01]
- 15/18 • • • Supports for workpieces [1, 2006.01]
- 15/20 • • • • with suction-operated elements [1, 2006.01]
- 15/22 • • • • for single sheets [1, 2006.01]
- 15/24 • • • • for webs [1, 2006.01]
- 15/26 • • • • for articles with flat surfaces [1, 2006.01]
- 15/28 • • • • for elongated flat articles, e.g. strips, bands [1, 2006.01]
- 15/30 • • • • for articles with curved surfaces [1, 2006.01]
- 15/32 • • • • for articles with conical surfaces [1, 2006.01]
- 15/34 • • Screens; Frames; Holders therefor [1, 2006.01]
- 15/36 • • • flat [1, 2006.01]
- 15/38 • • • curved [1, 2006.01]
- 15/40 • • Inking units [1, 2006.01]
- 15/42 • • • comprising squeegees or doctors [1, 2006.01]
- 15/44 • • Squeegees or doctors [1, 2006.01]
- 15/46 • • • with two or more operative parts [1, 2006.01]
- 16/00 Transfer printing apparatus [4, 2006.01]**
- 16/02 • for textile material [4, 2006.01]
- 17/00 Printing apparatus or machines of special types or for particular purposes, not otherwise provided for [1, 2006.01]**
- 17/02 • for printing books or manifold sets [1, 2006.01]
- 17/04 • for printing calendars [1, 2006.01]
- 17/08 • for printing on filamentary or elongated articles or material, or on articles with cylindrical surfaces [1, 2006.01]
- 17/10 • • on articles or material of indefinite length, e.g. wires, hoses, tubes or yarns [1, 2006.01]
- 17/12 • • • at an angle to axis [1, 2006.01]
- 17/13 • • • for printing on rolls of material, the roll serving as impression cylinder, e.g. strip printers [2009.01]
- 17/14 • • on articles of finite length [1, 2006.01]
- 17/16 • • • on end or bottom surfaces thereof [1, 2006.01]
- 17/18 • • • on curved surfaces of articles of varying cross-section, e.g. bottles, lamp glasses [1, 2006.01]
- 17/20 • • • on articles of uniform cross-section, e.g. pencils, rulers, resistors [1, 2006.01]
- 17/22 • • • • by rolling contact [1, 2006.01]
- 17/24 • for printing on flat surfaces of polyhedral articles [1, 2006.01]
- 17/26 • • by rolling contact [1, 2006.01]
- 17/28 • for printing on curved surfaces of conical or frusto-conical articles [1, 2006.01]
- 17/30 • for printing on curved surfaces of essentially spherical, or part-spherical, articles [1, 2006.01]
- 17/32 • • on lamp bulbs [1, 2006.01]
- 17/34 • • on articles with surface irregularities, e.g. fruit, nuts [1, 2006.01]
- 17/36 • for printing on tablets, pills, or like small articles [1, 2006.01]
- 17/38 • for printing on knitted fabrics [1, 2006.01]
- 19/00 Apparatus or machines for carrying out printing operations combined with other operations [1, 2, 2006.01]**
- 19/02 • with embossing [1, 2006.01]
- 19/04 • • using intaglio printing formes and wipers [1, 2006.01]
- 19/06 • • Printing and embossing between a negative and a positive forme after inking and wiping the negative forme; Printing from an ink band treated with colour or "gold" [1, 2006.01]
- 19/08 • Simultaneous moulding and printing [1, 2006.01]
- Common details of printing machinery**
- 21/00 Devices for conveying sheets through printing apparatus or machines (through platen presses B41F 1/28) [1, 2006.01]**
- 21/02 • Pins [1, 3, 5, 2006.01]
- 21/04 • Grippers [1, 3, 5, 2006.01]
- 21/05 • • In-feed grippers [3, 5, 2006.01]
- 21/06 • • Suction-operated grippers [1, 2006.01]
- 21/08 • Combinations of endless conveyors and grippers [1, 2006.01]
- 21/10 • Combinations of transfer drums and grippers [3, 2006.01]
- 21/12 • Adjusting leading edges, e.g. front stops [3, 2006.01]
- 21/14 • Adjusting lateral edges, e.g. side stops [3, 2006.01]
- 22/00 Means preventing smudging of machine parts or printed articles (B41F 23/00 takes precedence) [6, 2006.01]**
- 23/00 Devices for treating the surfaces of sheets, webs or other articles in connection with printing [1, 2006.01]**
- 23/02 • by dampening (in rotary lithographic machines B41F 7/24) [1, 2006.01]
- 23/04 • by heat drying, by cooling, by applying powders [1, 2006.01]
- 23/06 • • Powdering devices, e.g. for preventing set-off [1, 2006.01]
- 23/08 • Print-finishing devices, e.g. for glossing prints [1, 2006.01]
- 25/00 Devices for pressing sheets or webs against cylinders, e.g. for smoothing purposes [1, 2006.01]**



- 27/00 Devices for attaching printing elements or formes to supports** (attaching by chemical means B41N 6/00) [1, 5, 2006.01]
- 27/02 • Magnetic devices [1, 2006.01]
  - 27/04 • for attaching printing elements to flat type-beds [1, 2006.01]
  - 27/06 • for attaching printing elements to forme cylinders [1, 2006.01]
  - 27/08 • for attaching printing formes to flat type-beds [1, 2006.01]
  - 27/10 • for attaching non-deformable curved printing formes to forme cylinders [1, 2006.01]
  - 27/12 • for attaching flexible printing formes [1, 2006.01]
  - 27/14 • for attaching printing formes to intermediate supports, e.g. adapter members [1, 2006.01]
- 30/00 Devices for attaching coverings or make-ready devices; Guiding devices for coverings** (make-ready devices B41N 6/00) [5, 2006.01]
- 30/02 • attaching to impression cylinders [5, 2006.01]
  - 30/04 • attaching to transfer cylinders [5, 2006.01]
  - 30/06 • attaching of endless or like continuously-fed coverings [5, 2006.01]
- 31/00 Inking arrangements or devices** (inking units for platen presses B41F 1/40; inking units for cylinder presses B41F 3/81) [1, 2006.01]
- 31/02 • Ducts, containers, supply or metering devices [1, 3, 2006.01]
  - 31/03 • • Ink agitators [6, 2006.01]
  - 31/04 • • with duct-blades or like metering devices [1, 2006.01]
  - 31/05 • • • Positioning devices therefor [6, 2006.01]
  - 31/06 • • Troughs or like reservoirs with immersed, or partly immersed, rollers or cylinders [1, 2006.01]
  - 31/07 • • • for rotogravure [6, 2006.01]
  - 31/08 • • with ink-ejecting means, e.g. pumps, nozzles [1, 2006.01]
  - 31/10 • • Applications of feed or duct rollers (messenger or moving transfer rollers B41F 31/14) [1, 2006.01]
  - 31/12 • • • adjustable for regulating supply [1, 2006.01]
  - 31/13 • • Means for driving fountain rollers [6, 2006.01]
  - 31/14 • • Applications of messenger or other moving transfer rollers [1, 2006.01]
  - 31/15 • Devices for moving vibrator-rollers [6, 2006.01]
  - 31/16 • Continuous, e.g. endless, band apparatus [1, 2006.01]
  - 31/18 • for inking selected parts of printing formes [1, 2006.01]
- 31/20 • Ink-removing or collecting devices [1, 2006.01]**
- 31/22 • for inking from interior of cylinder [1, 2006.01]**
- 31/24 • Absorbent pads [1, 2006.01]**
- 31/26 • Construction of inking rollers (inking-rollers serving also to apply ink repellent in rotary lithographic machines B41F 7/36) [1, 2006.01]**
- 31/28 • Spray apparatus, e.g. containing brushes [1, 2006.01]**
- 31/30 • Arrangements for tripping, lifting, adjusting, or removing inking rollers; Supports, bearings, or forks therefor [1, 2006.01]**
- 31/32 • • Lifting or adjusting devices (for damping rollers B41F 7/40) [1, 2006.01]**
- 31/34 • • • Cam, eccentric, wedge, or like devices [1, 2006.01]**
- 31/36 • • • fluid-pressure operated [1, 2006.01]**
- 31/38 • • • magnetically operated [1, 2006.01]**
- 33/00 Indicating, counting, warning, control or safety devices** (arrangements of counting devices in platen presses B41F 1/00, in cylinder presses B41F 3/84; ink supply or metering devices B41F 31/02) [1, 3, 2006.01]
- 33/02 • Arrangements of indicating devices, e.g. counters [1, 2, 2006.01]
  - 33/04 • Tripping devices or stop-motions (cylinder-tripping devices of rotary presses or machines B41F 13/24; arrangements for tripping inking rollers B41F 31/30) [1, 2, 2006.01]
  - 33/06 • • for starting or stopping operation of sheet or web feed [1, 2006.01]
  - 33/08 • • for starting or stopping operation of cylinders [1, 2006.01]
  - 33/10 • • for starting or stopping operation of damping or inking units [1, 2006.01]
  - 33/12 • • for starting or stopping the machine as a whole [1, 2006.01]
  - 33/14 • • Automatic control of tripping devices by feelers, photoelectric devices, pneumatic devices, or other detectors [1, 2006.01]
  - 33/16 • Programming systems for automatic control of sequence of operations [1, 2006.01]
  - 33/18 • Web break detection (B41F 33/04 takes precedence) [6, 2006.01]
- 35/00 Cleaning arrangements or devices [1, 2006.01]**
- 35/02 • for forme cylinders [1, 2006.01]
  - 35/04 • for inking rollers [1, 2006.01]
  - 35/06 • for offset cylinders [1, 2006.01]
- B41G APPARATUS FOR BRONZE PRINTING, LINE PRINTING, OR FOR BORDERING OR EDGING SHEETS OR LIKE ARTICLES; AUXILIARY APPARATUS FOR PERFORATING IN CONJUNCTION WITH PRINTING** (perforating in general B26D; production of decorations B44C; perforating in conjunction with sheet or web delivery B65H 35/00; folding or unfolding thin material, e.g. sheets, webs, B65H 45/00, B65H 47/00)
- 1/00 Apparatus for bronze printing or for like operations** (applying granular materials or metallic foils for decorative purposes B44C 1/00) [1, 2006.01]
- 1/02 • platen type [1, 2006.01]
  - 1/04 • cylinder type [1, 2006.01]
- 3/00 Apparatus for printing lines [1, 2006.01]**
- 5/00 Apparatus for bordering or edging sheets or like articles, e.g. for producing black rims on mourning cards [1, 2006.01]**
- 7/00 Auxiliary perforating apparatus associated with printing devices** (apparatus or machines for carrying-out printing operations combined with operations other than perforating B41F 19/00) [1, 2006.01]

**B41J TYPEWRITERS; SELECTIVE PRINTING MECHANISMS, i.e. MECHANISMS PRINTING OTHERWISE THAN FROM A FORME; CORRECTION OF TYPOGRAPHICAL ERRORS** (composing B41B; printing on special surfaces B41F; laundry marking B41K; erasers, rubbers or erasing devices B43L 19/00; fluid media for correction of typographical errors by coating C09D 10/00; recording the results of measuring G01; recognition or presentation of data, marking record carriers in digital fashion, e.g. by punching, G06K; franking or ticket-printing and issuing apparatus G07B; electric keyboard switches, in general H01H 13/70, H03K 17/94; coding in connection with keyboards or like devices, in general H03M 11/00; receivers or transmitters for transmission of digital information H04L; transmission or reproduction of documents, or the like, e.g. facsimile transmission, H04N 1/00; printing mechanisms specially adapted for apparatus, e.g. cash registers, weighing machines, producing records of their own performance, see the relevant subclasses)

**Note(s) [3, 5]**

1. This subclass covers:
  - manually controlled power-operated apparatus or apparatus of this type with additional control by input of recorded information, e.g. on punched cards or tapes;
  - the "print-out" features of apparatus controlled by record carriers or electric signals in so far as these are of general interest, e.g. impression, inking, line-spacing mechanisms, printing heads.
2. This subclass does not cover:
  - electrical features of apparatus controlled by record carriers or electric signals and of interest apart from the "print-out" features of said apparatus;
  - apparatus controlled by record carriers or electric signals, as a whole.
3. In this subclass, the following term is used with the meaning indicated:
  - "paper" covers also similar flexible copy material;
  - "printing material" covers both paper and temporary record carriers from which records are transferred to a paper, but does not cover printing masters, e.g. formes.

**Subclass index**

**KINDS OF APPARATUS**

characterised by the mounting, arrangement, or disposition of the types or dies.....1/00  
 characterised by the printing or marking process for which they are designed.....2/00  
 characterised by the purpose.....3/00

**COMMON DETAILS OR ACCESSORIES**

Character selection..... 5/00, 7/00  
 Hammer impression..... 9/00  
 Supporting or handling copy or duplicating material..... 11/00-15/00  
 Transfer material  
     of page-width..... 17/00  
     in ribbon form; ink ribbon cartridges..... 31/00, 33/00, 35/00, 32/00  
 Inking..... 27/00  
 Spacing..... 19/00  
 Drives..... 23/00  
 Particular operations..... 21/00  
 Others..... 25/00, 29/00, 35/00

**Kinds of typewriters or of selective printing mechanisms**

**1/00 Typewriters or selective printing mechanisms characterised by the mounting, arrangement, or disposition of the types or dies** (non-selective embossing B44B 5/00) [1, 2006.01]

- 1/02 • with separate or detached types or dies [1, 2006.01]
- 1/04 • with types or dies carried upon levers or radial arms, e.g. manually operated (B41J 1/16 takes precedence) [1, 2006.01]
- 1/06 • • on power-operated levers or arms [1, 2006.01]
- 1/08 • with types or dies carried on sliding bars or rods [1, 2006.01]
- 1/10 • • on end surfaces thereof [1, 2006.01]
- 1/12 • • on side surfaces thereof, e.g. fixed thereto [1, 2006.01]
- 1/14 • • • the types or dies being movable relative to the bars or rods (mounted on flexible bars or rods B41J 1/16) [1, 2006.01]

- 1/16 • with types or dies arranged in stationary or sliding cases or frames or upon flexible strips, plates, bars, or rods [1, 2006.01]
- 1/18 • with types or dies strung on wires or rods [1, 2006.01]
- 1/20 • with types or dies mounted on endless bands or the like [1, 2006.01]
- 1/22 • with types or dies mounted on carriers rotatable for selection [1, 2006.01]
- 1/24 • • the plane of the type or die face being perpendicular to the axis of rotation (B41J 1/60 takes precedence) [1, 2006.01]
- 1/26 • • • Carriers moving for impression (B41J 1/27 takes precedence) [1, 3, 2006.01]
- 1/27 • • • Carriers moving during impression [3, 2006.01]
- 1/28 • • • Carriers stationary for impression, e.g. with the types or dies not moving relative to the carriers [1, 2006.01]

- 1/30 • • • • with the types or dies moving relative to the carriers or mounted on flexible carriers [1, 2006.01]
- 1/32 • • • the plane of the type or die face being parallel to the axis of rotation, e.g. with type on the periphery of cylindrical carriers (B41J 1/60 takes precedence) [1, 2006.01]
- 1/34 • • • Carriers rotating during impression [1, 2006.01]
- 1/36 • • • Carriers sliding for impression, e.g. manually operated [1, 2006.01]
- 1/38 • • • • power operated [1, 2006.01]
- 1/40 • • • Carriers swinging for impression [1, 2006.01]
- 1/42 • • • • about an axis parallel to the axis of rotation of the carrier [1, 2006.01]
- 1/44 • • • Carriers stationary for impression [1, 2006.01]
- 1/46 • • • • Types or dies fixed on wheel, drum, cylinder, or like carriers [1, 2006.01]
- 1/48 • • • • • with a plurality of carriers, one for each character space [1, 2006.01]
- 1/50 • • • • • with one or more carriers travelling across copy material in letter-space direction [1, 2006.01]
- 1/52 • • • • • with copy material moving in the letter-space direction, and carrier mounting being fixed relative to the machine [1, 2006.01]
- 1/54 • • • • Types or dies movable on wheel, drum, cylinder, or like carriers [1, 2006.01]
- 1/56 • • • • Types or dies on shuttles or like loose carriers [1, 2006.01]
- 1/58 • • • • Types or dies upon arcuate bars [1, 2006.01]
- 1/60 • with types or dies on spherical, truncated-spherical, or like surfaces [1, 2006.01]
- 2/00 Typewriters or selective printing mechanisms characterised by the printing or marking process for which they are designed** (mounting, arrangement, or disposition of types or dies B41J 1/00; marking methods B41M 5/00; structure or manufacture of heads, e.g. inductive, for recording by magnetisation or demagnetisation of a record carrier G11B 5/127; heads for reproducing capacitive information G11B 9/07) [5, 2006.01]
- Note(s) [5]**
- This group covers devices reproducing only a discrete number of tones, whereas group H04N 1/00 covers devices used for the reproduction of documents or the like, which devices are capable of reproducing continuous tone value scales.
  - In this group, the following expressions are used with the meanings indicated:
    - "ink jet" involves the projection of ink on to the printing material, e.g. paper, through a nozzle as a stream of droplets or particles of colouring matter;
    - "continuous ink jet" means a jet of ink transformed into a continuous stream of droplets or particles of colouring matter after having left the nozzle;
    - "ink spray" means a spray of ink transported by a stream of charged particles or air on to the printing material.
- 2/005 • characterised by bringing liquid or particles selectively into contact with a printing material (printing by selective application of impact or pressure on a printing or impression-transfer material B41J 2/22) [5, 2006.01]
- 2/01 • • Ink jet [5, 2006.01]
- 2/015 • • • characterised by the jet generation process (B41J 2/215 takes precedence) [5, 2006.01]
- 2/02 • • • • generating a continuous ink jet [5, 2006.01]
- 2/025 • • • • • by vibration [5, 2006.01]
- 2/03 • • • • • by pressure [5, 2006.01]
- 2/035 • • • • • by electric or magnetic field [5, 2006.01]
- 2/04 • • • • generating single droplets or particles on demand [5, 2006.01]
- 2/045 • • • • • by pressure, e.g. electromechanical transducers [5, 2006.01]
- 2/05 • • • • • • produced by the application of heat [5, 2006.01]
- 2/055 • • • • • • Devices for absorbing or preventing back-pressure [5, 2006.01]
- 2/06 • • • • • by electric or magnetic field [5, 2006.01]
- 2/065 • • • • • • involving the preliminary making of ink protuberances [5, 2006.01]
- 2/07 • • • characterised by jet control (B41J 2/205 takes precedence) [5, 2006.01]
- 2/075 • • • • for many-valued deflection [5, 2006.01]
- 2/08 • • • • • charge-control type [5, 2006.01]
- 2/085 • • • • • • Charge means, e.g. electrodes [5, 2006.01]
- 2/09 • • • • • • Deflection means [5, 2006.01]
- 2/095 • • • • • • electric field-control type [5, 2006.01]
- 2/10 • • • • • • magnetic field-control type [5, 2006.01]
- 2/105 • • • • • for binary-valued deflection [5, 2006.01]
- 2/11 • • • • • for ink spray [5, 2006.01]
- 2/115 • • • • • synchronising the droplet separation and charging time [5, 2006.01]
- 2/12 • • • • • testing or correcting charge or deflection [5, 2006.01]
- 2/125 • • • • • Sensors, e.g. deflection sensors [5, 2006.01]
- 2/13 • • • • • for inclination of printed pattern [5, 2006.01]
- 2/135 • • • • Nozzles [5, 2006.01]
- 2/14 • • • • • Structure thereof [5, 2006.01]
- 2/145 • • • • • Arrangement thereof [5, 2006.01]
- 2/15 • • • • • • for serial printing [5, 2006.01]
- 2/155 • • • • • • for line printing [5, 2006.01]
- 2/16 • • • • • Production of nozzles [5, 2006.01]
- 2/165 • • • • • Prevention of nozzle clogging, e.g. cleaning, capping or moistening for nozzles [5, 2006.01]
- 2/17 • • • • characterised by ink handling [5, 2006.01]
- 2/175 • • • • Ink supply systems [5, 2006.01]
- 2/18 • • • • Ink recirculation systems [5, 2006.01]
- 2/185 • • • • • Ink-collectors; Ink-catchers [5, 2006.01]
- 2/19 • • • • • for removing air bubbles [5, 2006.01]
- 2/195 • • • • • for monitoring ink quality [5, 2006.01]
- 2/20 • • • • • for preventing or detecting contamination of compounds [5, 2006.01]
- 2/205 • • • • for printing a discrete number of tones (B41J 2/21 takes precedence) [5, 2006.01]
- 2/21 • • • • for multi-colour printing [5, 2006.01]
- 2/215 • • • • by passing a medium, e.g. consisting of an air or particle stream, through an ink mist [5, 2006.01]
- 2/22 • characterised by selective application of impact or pressure on a printing material or impression-transfer material [5, 2006.01]
- 2/225 • • • ballistic, e.g. using solid balls or pellets [5, 2006.01]
- 2/23 • • • using print wires [5, 2006.01]
- 2/235 • • • • Print head assemblies [5, 2006.01]

## B41J

- 2/24 • • • serial printer type (B41J 2/25, B41J 2/265 take precedence) [5, 2006.01]
- 2/245 • • • line printer type (B41J 2/25, B41J 2/265 take precedence) [5, 2006.01]
- 2/25 • • • Print wires [5, 2006.01]
- 2/255 • • • Arrangement of the print ends of the wires [5, 2006.01]
- 2/26 • • • Connection of print wire and actuator [5, 2006.01]
- 2/265 • • • Guides for print wires [5, 2006.01]
- 2/27 • • • Actuators for print wires [5, 2006.01]
- 2/275 • • • of clapper type (B41J 2/28 takes precedence) [5, 2006.01]
- 2/28 • • • of spring charge type, i.e. with mechanical power under electro-magnetic control [5, 2006.01]
- 2/285 • • • of plunger type [5, 2006.01]
- 2/29 • • • of moving-coil type [5, 2006.01]
- 2/295 • • • using piezo-electric elements [5, 2006.01]
- 2/30 • • • Control circuits for actuators [5, 2006.01]
- 2/305 • • • Ink supply apparatus (ink ribbons, ink-ribbon mechanisms B41J 31/00-B41J 35/00) [5, 2006.01]
- 2/31 • • using a print element with projections on its surface impacted or impressed by hammers [5, 2006.01]
- 2/315 • characterised by selective application of heat to a heat sensitive printing or impression-transfer material (B41J 2/385, B41J 2/435 take precedence) [5, 2006.01]
- 2/32 • • using thermal heads [5, 2006.01]
- 2/325 • • • by selective transfer of ink from ink carrier, e.g. from ink ribbon or sheet [5, 2006.01]
- 2/33 • • • from ink roller [5, 2006.01]
- 2/335 • • • Structure of thermal heads [5, 2006.01]
- 2/34 • • • comprising semiconductors [5, 2006.01]
- 2/345 • • • characterised by the arrangement of resistors or conductors [5, 2006.01]
- 2/35 • • • providing current or voltage to the thermal head [5, 2006.01]
- 2/355 • • • Control circuits for heating-element selection [5, 2006.01]
- 2/36 • • • Print density control [5, 2006.01]
- 2/365 • • • • by compensation for variation in temperature [5, 2006.01]
- 2/37 • • • • by compensation for variation in current [5, 2006.01]
- 2/375 • • • Protection arrangements against overheating [5, 2006.01]
- 2/38 • • Preheating, i.e. heating to a temperature insufficient to cause printing [5, 2006.01]
- 2/385 • characterised by selective supply of electric current or selective application of magnetism to a printing or impression-transfer material (B41J 2/005 takes precedence; electrography, magnetography G03G) [5, 2006.01]
- 2/39 • • using multi-stylus heads [5, 2006.01]
- 2/395 • • • Structure of multi-stylus heads [5, 2006.01]
- 2/40 • • • providing current or voltage to the multi-stylus head [5, 2006.01]
- 2/405 • • • Selection of the stylus or auxiliary electrode to be supplied (electronic switching circuits in general H03K 17/00) [5, 2006.01]
- 2/41 • • for electrostatic printing (B41J 2/39 takes precedence) [5, 2006.01]
- 2/415 • • • by passing charged particles through a hole or a slit [5, 2006.01]
- 2/42 • • for heating selectively [5, 2006.01]
- 2/425 • • for removing surface layer selectively from electro-sensitive material, e.g. metal coated paper [5, 2006.01]
- 2/43 • • for magnetic printing [5, 2006.01]
- 2/435 • characterised by selective application of radiation to a printing material or impression-transfer material (optical elements, systems, or apparatus G02B; modulation or deflection of light G02F; electrophotography G03G) [5, 2006.01]
- 2/44 • • using single radiation source, e.g. lighting beams or shutter arrangements (B41J 2/475 takes precedence) [5, 2006.01]
- 2/445 • • • using liquid crystals [5, 2006.01]
- 2/447 • • using arrays of radiation sources (B41J 2/475 takes precedence) [6, 2006.01]
- 2/45 • • • using light-emitting diode arrays [5, 2006.01]
- 2/455 • • • using laser arrays [5, 2006.01]
- 2/46 • • • characterised by using glass fibres [5, 2006.01]
- 2/465 • • using masks, e.g. light-switching masks (photographic composing B41B) [5, 2006.01]
- 2/47 • • using the combination of scanning and modulation of light [5, 2006.01]
- 2/475 • • for heating selectively [5, 2006.01]
- 2/48 • • • melting ink on a film or melting ink granules [5, 2006.01]
- 2/485 • characterised by the process of building-up characters applicable to two or more kinds of printing or marking processes [5, 2006.01]
- 2/49 • • by writing [5, 2006.01]
- 2/495 • • by selective printing from a rotating helical member [5, 2006.01]
- 2/50 • • by the selective combination of two or more non-identical printing elements [5, 2006.01]
- 2/505 • • from an assembly of identical printing elements [5, 2006.01]
- 2/51 • • • serial printer type [5, 2006.01]
- 2/515 • • • line printer type [5, 2006.01]
- 2/52 • Arrangement for printing a discrete number of tones, not covered by group B41J 2/205, e.g. applicable to two or more kinds of printing or marking process (B41J 2/525 takes precedence; for photomechanical production G03F 5/00) [5, 2006.01]
- 2/525 • Arrangement for multi-colour printing, not covered by group B41J 2/21, e.g. applicable to two or more kinds of printing or marking process (for photomechanical production G03F 3/00) [5, 2006.01]
- 3/00 Typewriters or selective printing or marking mechanisms characterised by the purpose for which they are constructed** (cryptographic typewriters G09C 3/00) [1, 5, 2006.01]
- 3/01 • for special character, e.g. for Chinese characters or barcodes [5, 2006.01]
- 3/24 • for perforating or stencil cutting using special types or dies [1, 2006.01]
- 3/26 • for stenographic writing [1, 2006.01]
- 3/28 • for printing downwardly on flat surfaces, e.g. of books, drawings, boxes [1, 2006.01]
- 3/30 • for printing with large type, e.g. on bulletins, tickets [1, 2006.01]
- 3/32 • for printing in Braille or with keyboards specially adapted for use by blind or disabled persons [1, 2006.01]
- 3/34 • for printing musical scores [1, 2006.01]

- 3/36 • for portability [1, 2006.01]
- 3/37 • • Foldable typewriters [5, 2006.01]
- 3/38 • for embossing, e.g. for making matrices for stereotypes [1, 2006.01]
- 3/39 • • hand-held (manually-controlled or manually-operable label dispensers having printing equipment B65C 11/02) [5, 2006.01]
- 3/407 • for marking on special material (printing on special surfaces B41F 17/00) [5, 2006.01]
- 3/413 • • for metal [5, 2006.01]
- 3/42 • Two or more complete typewriters coupled for simultaneous operation [1, 2006.01]
- 3/44 • Typewriters or selective printing mechanisms having dual functions or combined with, or coupled to, apparatus performing other functions (printing mechanisms coupled to typographical composing machines B41B 27/41) [1, 2006.01]
- 3/46 • • Printing mechanisms combined with apparatus providing a visual indication [1, 2006.01]
- 3/50 • • Mechanisms producing characters by printing and also producing a record by other means (punching mechanisms G06K) [1, 5, 2006.01]
- 3/51 • • • the printed and recorded information being identical; using type elements with code-generating means (G06K 1/12 takes precedence) [1, 5, 2006.01]
- 3/54 • with two or more sets of type or printing elements (B41J 3/60 takes precedence) [1, 5, 2006.01]
- 3/60 • for printing on both faces of the printing material [5, 2006.01]
- 3/62 • for printing on two or more separate sheets or strips of printing material (B41J 3/54 takes precedence) [5, 2006.01]
- 5/32 • • • by printed, embossed, or photographic records, e.g. cards, sheets [1, 2006.01]
- 5/34 • • • • by strips or tapes [1, 2006.01]
- 5/36 • • • by punched records, e.g. cards, sheets [1, 2006.01]
- 5/38 • • • • by strips or tapes [1, 2006.01]
- 5/40 • • • by magnetic or electrostatic records, e.g. cards, sheets [1, 2006.01]
- 5/42 • • • • by strips or tapes [1, 2006.01]
- 5/44 • • characterised by the kind of storage of recorded information [1, 2006.01]
- 5/46 • • • the storage being on internal storages [1, 2006.01]
- 5/48 • • • the storage being on external storages [1, 2006.01]
- 5/50 • • • • on a single storage [1, 2006.01]
- 5/51 • • • • on more than one separate storage, e.g. on additional correction strips or tapes [3, 2006.01]
- 5/52 • • characterised by the provision of additional devices for producing a punched or like record, e.g. simultaneously [1, 2006.01]

#### 7/00 **Type-selecting or type-actuating mechanisms** (index setting B41J 5/02) [1, 2006.01]

- 7/02 • Type-lever actuating mechanisms [1, 2006.01]
- 7/04 • • Levers mounted on fixed pivots [1, 2006.01]
- 7/06 • • • and connected to transmission members, e.g. toothed gearing [1, 2006.01]
- 7/08 • • • • with pin-and-slot or like loose connections; Cam-slot members [1, 2006.01]
- 7/10 • • • • Chain, belt, flexible-cable, or like members [1, 2006.01]
- 7/12 • • • U-shaped type-lever on two pivots [1, 2006.01]
- 7/14 • • • Single key-and-type lever [1, 2006.01]
- 7/16 • • • Type-head pivoted to, or rotating on, lever [1, 2006.01]
- 7/18 • • Levers having moving or variable fulcra to alter the mechanical advantage during the stroke [1, 2006.01]
- 7/20 • • Levers having moving pivots fixed relative to the lever; Type-bars each pivoted on two links [1, 2006.01]
- 7/22 • • Type-baskets; Bearings or hangers for type-levers [1, 2006.01]
- 7/24 • • Construction of type-levers (U-shaped levers B41J 7/12) [1, 2006.01]
- 7/26 • • Special means, e.g. repulsers, for ensuring return of type-levers [1, 2006.01]
- 7/28 • • Key-lever and type-member returned independently to rest position [1, 2006.01]
- 7/30 • • Preventing rebound or clash of levers or type-members [1, 2006.01]
- 7/32 • Type-face selected by operation of sliding members [1, 2006.01]
- 7/34 • Type-face selected by operation of rotary members [1, 2006.01]
- 7/36 • Selecting arrangements applied to type-carriers rotating during impression [1, 2006.01]
- 7/38 • • Type movable on carrier for selection [1, 2006.01]
- 7/40 • • Type movable on carrier for impression [1, 2006.01]
- 7/42 • • Timed impression, e.g. without impact [1, 2006.01]
- 7/44 • • • with impact [1, 2006.01]
- 7/46 • • Rolling contact during impression [1, 2006.01]

#### **Common details or accessories**

- 5/00 **Devices or arrangements for controlling character selection** (methods or arrangements for sensing record carriers G06K 7/00) [1, 2006.01]
- 5/02 • Character or syllable selected by setting an index [1, 2006.01]
- 5/04 • • Single-character selection [1, 2006.01]
- 5/06 • • Multiple-character selection [1, 2006.01]
- 5/08 • Character or syllable selected by means of keys or keyboards of the typewriter type [1, 2006.01]
- 5/10 • • Arrangements of keyboards [1, 2006.01]
- 5/12 • • Construction of key buttons [1, 2006.01]
- 5/14 • • Construction of key levers [1, 2006.01]
- 5/16 • • Mounting or connecting key buttons on or to key levers [1, 2006.01]
- 5/18 • • Locks [1, 2006.01]
- 5/20 • • • for subsidiary keys, e.g. for shift keys [1, 2006.01]
- 5/22 • • • Interlocks between keys, e.g. without detent arrangements [1, 2006.01]
- 5/24 • • • • with detent arrangements [1, 2006.01]
- 5/26 • • Regulating touch, key dip or stroke, or the like [1, 2006.01]
- 5/28 • • Multiple-action keys, e.g. keys depressed by two or more amounts or movable in two or more directions to effect different functions or selections [1, 2006.01]
- 5/30 • Character or syllable selection controlled by recorded information [1, 2006.01]
- 5/31 • • characterised by form of recorded information [1, 2006.01]

- 7/48 • Type-carrier arrested in selected position by electromagnetic means [1, 2006.01]
- 7/50 • Type-face selected by combinations of two movements of type-carrier [1, 2006.01]
- 7/52 • • by combined rotary and sliding movement [1, 2006.01]
- 7/54 • Selecting arrangements including combination, permutation, summation, or aggregation means [1, 2006.01]
- 7/56 • • Summation devices for mechanical movements [1, 2006.01]
- 7/58 • • • Wedges [1, 2006.01]
- 7/60 • • • Levers [1, 2006.01]
- 7/62 • • • Gearing [1, 2006.01]
- 7/64 • • • Pulley-and-strand mechanism [1, 2006.01]
- 7/66 • • Movable members, e.g. pins, displaceable according to a code [1, 2006.01]
- 7/68 • • with means for selectively closing an electric circuit for type presentation [1, 2006.01]
- 7/90 • Syllable, line, or like type selection [1, 2006.01]
- 7/92 • Impact adjustment; Means to give uniformity of impression (B41J 9/46, B41J 9/48 take precedence) [1, 5, 2006.01]
- 7/94 • • Character-by-character adjustment [1, 2006.01]
- 7/96 • Means for checking correctness of setting [1, 2006.01]
- 9/00 Hammer-impression mechanisms [1, 2006.01]**
- 9/02 • Hammers; Arrangements thereof [1, 2006.01]
- 9/04 • • of single hammers, e.g. travelling along printing line [1, 2006.01]
- 9/06 • • • of stationary hammers, e.g. engaging a single type-carrier [1, 2006.01]
- 9/08 • • • • engaging more than one type-carrier [1, 2006.01]
- 9/10 • • of more than one hammer, e.g. one for each character position [1, 2006.01]
- 9/12 • • • each operating in more than one character position [1, 2006.01]
- 9/127 • • Mounting of hammers [3, 2006.01]
- 9/133 • • Construction of hammer body or tip [3, 2006.01]
- 9/14 • Means for selecting or suppressing individual hammers [1, 2006.01]
- 9/16 • Means for cocking or resetting hammers [1, 2006.01]
- 9/18 • • Cams [1, 2006.01]
- 9/20 • • Springs [1, 2006.01]
- 9/22 • • Fluid-pressure means [1, 2006.01]
- 9/24 • • Electromagnetic means [1, 2006.01]
- 9/26 • Means for operating hammers to effect impression [1, 2006.01]
- 9/28 • • Cams [1, 2006.01]
- 9/30 • • Springs [1, 2006.01]
- 9/32 • • arranged to be clutched to snatch roll [1, 2006.01]
- 9/34 • • Fluid-pressure means [1, 2006.01]
- 9/36 • • in which mechanical power is applied under electromagnetic control [1, 2006.01]
- 9/38 • • Electromagnetic means [1, 2006.01]
- 9/40 • • including an electro-adhesive clutch [1, 2006.01]
- 9/42 • with anti-rebound arrangements [1, 2006.01]
- 9/44 • Control for hammer-impression mechanisms [5, 2006.01]
- 9/46 • • for deciding or adjusting hammer-firing time [5, 2006.01]
- 9/48 • • for deciding or adjusting hammer-drive energy [5, 2006.01]
- 9/50 • • for compensating for the variations of printer drive conditions, e.g. for compensating for the variation of temperature or current supply [5, 2006.01]
- 9/52 • • for checking the operation of print hammers [5, 2006.01]
- 9/54 • • • for checking the breakage of print hammers [5, 2006.01]
- 11/00 Devices or arrangements for supporting or handling copy material in sheet or web form** (specially adapted for supporting or handling copy material in short lengths B41J 13/00, in continuous form B41J 15/00; holders for text to be copied B41J 29/00) [1, 2006.01]
- 11/02 • Platens [1, 2006.01]
- 11/04 • • Roller platens [1, 2006.01]
- 11/053 • • • with sound-deadening devices (structure of surface B41J 11/057) [3, 2006.01]
- 11/057 • • • Structure of the surface [3, 2006.01]
- 11/06 • • Flat page-size platens [1, 2006.01]
- 11/08 • • Bar or like line-size platens [1, 2006.01]
- 11/10 • • Anvil or like character-size platens [1, 2006.01]
- 11/13 • • Backings or blankets (for roller platens B41J 11/057) [3, 2006.01]
- 11/14 • • Platen-shift mechanisms; Driving gear therefor [1, 2006.01]
- 11/16 • • with balancing means [1, 2006.01]
- 11/18 • • Platen-impression arrangements [1, 2006.01]
- 11/20 • • Platen adjustments for varying the strength of impression, for a varying number of papers, for wear or for alignment [1, 2006.01]
- 11/22 • • Paper-carriage guides or races [1, 2006.01]
- 11/24 • • Detents, brakes, or couplings for feed rollers or platens [1, 2006.01]
- 11/26 • • Pin feeds [1, 2006.01]
- 11/27 • • on or within the platen-rollers [1, 2006.01]
- 11/28 • • Pin wheels [1, 2006.01]
- 11/30 • • Pin traction elements other than wheels, e.g. pins on endless bands [1, 2006.01]
- 11/32 • • Adjustment of pin wheels or traction elements, e.g. laterally [1, 2006.01]
- 11/34 • • Guides coacting with pin feeds [1, 2006.01]
- 11/36 • • Blanking or long feeds; Feeding to a particular line, e.g. by rotation of platen or feed roller [1, 2006.01]
- 11/38 • • Manually-operated feeding devices [1, 2006.01]
- 11/40 • • specially adapted for printing musical scores [1, 2006.01]
- 11/42 • • Controlling [1, 2006.01]
- 11/44 • • • by devices, e.g. programme tape or contact wheel, moved in correspondence with movement of paper-feeding devices, e.g. platen rotation [1, 2006.01]
- 11/46 • • • by marks or formations on the paper being fed [1, 2006.01]
- 11/48 • • Apparatus for condensed record, tally strip, or like work using two or more papers, or sets of papers [1, 2006.01]
- 11/50 • • in which two or more papers or sets are separately fed in the same direction towards the printing position [1, 2006.01]
- 11/51 • • • with different feed rates [3, 2006.01]
- 11/52 • • in which one paper or set is moved transversely relative to another [1, 2006.01]
- 11/53 • • • Devices for holding in place one paper or set during replacement of one or more of the auxiliary papers or sets [1, 2006.01]

- 11/54 • • in which one paper or set is fed towards printing position from the front of the apparatus [1, 2006.01]
- 11/55 • • • with means for adjusting a paper or set [3, 2006.01]
- 11/56 • specially constructed to facilitate storage or transport of typewriter [1, 2006.01]
- 11/58 • Supply holders for sheets or fan-folded webs, e.g. shelves, tables, scrolls, pile holders [1, 2006.01]
- 11/60 • Erasing or correcting tables [1, 2006.01]
- 11/62 • Shields or masks [1, 2006.01]
- 11/64 • Applications of scales or indicators [1, 2006.01]
- 11/66 • Applications of cutting devices [1, 2006.01]
- 11/68 • • cutting parallel to the direction of paper feed [1, 2006.01]
- 11/70 • • cutting perpendicular to the direction of paper feed [1, 2006.01]
- 13/00 Devices or arrangements specially adapted for supporting or handling copy material in short lengths, e.g. sheets [1, 2006.01]**
- 13/02 • Rollers (roller platens B41J 11/04) [1, 2006.01]
- 13/03 • • driven, e.g. feed rollers separate from platen [1, 2006.01]
- 13/036 • • co-operating with a roller platen [3, 2006.01]
- 13/042 • • • Front and rear rollers or sets of front or rear rollers each mounted on a separate carrier [3, 2006.01]
- 13/048 • • • Front and rear rollers both mounted on a common carrier [3, 2006.01]
- 13/054 • • • • on the paper apron concentric with the roller platen [3, 2006.01]
- 13/076 • • Construction of rollers; Bearings therefor [1, 2006.01]
- 13/08 • Bands or like feeding devices [1, 2006.01]
- 13/10 • Sheet holders, retainers, or stationary guides [1, 2006.01]
- 13/12 • • specially adapted for cards, envelopes, or the like [1, 2006.01]
- 13/14 • • Aprons or guides [1, 2006.01]
- 13/16 • • • movable for insertion or release of sheets [1, 2006.01]
- 13/18 • • • concentric with roller platen [1, 2006.01]
- 13/20 • • Bails [1, 2006.01]
- 13/22 • • Clamps or grippers [1, 2006.01]
- 13/24 • • Strips for supporting or holding papers [1, 2006.01]
- 13/26 • Registering devices [1, 2006.01]
- 13/28 • • Front lays, stops, or gauges [1, 2006.01]
- 13/30 • • Side lays or gauges [1, 2006.01]
- 13/32 • • Means for positioning sheets in two directions under one control, e.g. for format control or orthogonal sheet positioning [1, 2006.01]
- 15/00 Devices or arrangements specially adapted for supporting or handling copy material in continuous form, e.g. webs [1, 2006.01]**
- 15/02 • Web rolls or spindles; Attaching webs to cores or spindles [1, 2006.01]
- 15/04 • Supporting, feeding, or guiding devices; Mountings for web rolls or spindles [1, 2006.01]
- 15/06 • • characterised by being applied to printers having stationary carriages [1, 2006.01]
- 15/08 • • characterised by being applied to printers having transversely-moving carriages [1, 2006.01]
- 15/10 • • • and mounted on the carriage [1, 2006.01]
- 15/12 • • • and coupled to the carriage [1, 2006.01]
- 15/14 • • • and detached from the carriage [1, 2006.01]
- 15/16 • Means for tensioning or winding the web [1, 2006.01]
- 15/18 • Multiple-web feeding apparatus [1, 2006.01]
- 15/20 • • for webs superimposed during printing (machines for separating superposed webs B65H 41/00) [1, 2006.01]
- 15/22 • • for feeding webs in separate paths during printing [1, 2006.01]
- 15/24 • • with means for registering the webs with each other [1, 2006.01]
- 17/00 Mechanisms for manipulating page-width impression-transfer material, e.g. carbon paper (in manifolding devices B41L; sheet material for duplicating or marking B41M 5/00) [1, 2006.01]**
- 17/02 • Feeding mechanisms [1, 2006.01]
- 17/04 • • Feed dependent on the record-paper feed, e.g. both moved at the same time [1, 2006.01]
- 17/06 • • • "Creep" feed, i.e. impression-transfer material fed slower than the record paper [1, 2006.01]
- 17/07 • • • electromagnetically controlled [1, 2006.01]
- 17/08 • • Feed independent of the record-paper feed [1, 2006.01]
- 17/10 • • • electromagnetically controlled [1, 2006.01]
- 17/12 • • Special adaptations for ensuring maximum life [1, 2006.01]
- 17/14 • • Automatic arrangements for reversing the feed direction [1, 2006.01]
- 17/16 • Holders in the machine for sheets of impression-transfer material [1, 2006.01]
- 17/18 • • pivotable to and from the platen [1, 2006.01]
- 17/20 • • slidable to and from the platen [1, 2006.01]
- 17/22 • Supply arrangements for webs or impression-transfer material [1, 2006.01]
- 17/24 • • Webs supplied from reels or spools attached to the machine (reels *per se* B65H 75/02) [1, 2006.01]
- 17/26 • • Webs supplied from trays or like supports attached to the machines [1, 2006.01]
- 17/28 • Arrangements of guides for the impression-transfer material [1, 2006.01]
- 17/30 • Constructions of guides for the impression-transfer material [1, 2006.01]
- 17/32 • Detachable carriers or holders for impression-transfer material mechanism [1, 2006.01]
- 17/34 • Backings for impression-transfer material, e.g. sheets for reducing friction, shields for preventing imprint [1, 2006.01]
- 17/36 • Alarms, indicators, or feed-disabling devices responsive to material breakage or exhaustion [1, 2006.01]
- 17/38 • for dealing with the impression-transfer material after use [1, 2006.01]
- 17/40 • • for retracting sheets for re-use [1, 2006.01]
- 17/42 • • for webs [1, 2006.01]
- 19/00 Character- or line-spacing mechanisms (key actions B41J 25/02) [1, 2006.01]**
- 19/02 • with retarding devices, e.g. brakes [1, 2006.01]
- 19/04 • Sound-deadening or shock-absorbing devices or measures therein (B41J 19/38 takes precedence) [1, 2006.01]
- 19/06 • • Resilient mounting of mechanism [1, 2006.01]
- 19/08 • • Buffers, springs, or like carriage stops [1, 2006.01]
- 19/10 • • Dash-pots [1, 2006.01]

- 19/12 • • Gearing made of special material or specially constructed to reduce sound or shock [1, 2006.01]
- 19/14 • with means for effecting line or character spacing in either direction [1, 2006.01]
- 19/16 • Special spacing mechanisms for circular, spiral, or diagonal-printing apparatus [1, 2006.01]
- 19/18 • Character-spacing or back-spacing mechanisms; Carriage-return or release devices therefor [1, 2006.01]
- 19/20 • Positive-feed character-spacing mechanisms (controlled by escapements B41J 19/52) [1, 2006.01]
- 19/22 • • • acting by friction or gripping effect [1, 2006.01]
- 19/24 • • • Pawl and ratchet [1, 2006.01]
- 19/26 • • • • moving a paper or like carriage [1, 2006.01]
- 19/28 • • • • moving a paper or like web or strip, e.g. over a stationary support [1, 2006.01]
- 19/30 • • • Electromagnetically-operated mechanisms [1, 2006.01]
- 19/32 • • • Differential or variable-spacing arrangements [1, 2006.01]
- 19/34 • • Escapement-feed character-spacing mechanisms [1, 2006.01]
- 19/36 • • • Driving mechanisms, e.g. springs stressed during carriage return [1, 2006.01]
- 19/38 • • • • adapted for silent return [1, 2006.01]
- 19/40 • • • Escapements having a single pawl or like detent [1, 2006.01]
- 19/42 • • • Escapements having two pawls or like detents [1, 2006.01]
- 19/44 • • • • coacting with two toothed members, e.g. racks or wheels [1, 2006.01]
- 19/46 • • • • and mounted on a single rocker [1, 2006.01]
- 19/48 • • • • and mounted on a single slider [1, 2006.01]
- 19/50 • • • Electromagnetically-controlled escapements [1, 2006.01]
- 19/52 • • • Escapements controlling positive-feed mechanism [1, 2006.01]
- 19/54 • • • Construction of universal bars [1, 2006.01]
- 19/56 • • • Escapements controlling web or strip feed [1, 2006.01]
- 19/58 • • • Differential or variable-spacing arrangements [1, 2006.01]
- 19/60 • • Auxiliary feed or adjustment devices [1, 2006.01]
- 19/62 • • • for back-spacing [1, 2006.01]
- 19/64 • • • for justifying [1, 2006.01]
- 19/66 • • Carriage-release mechanisms [1, 2006.01]
- 19/68 • • Carriage-return mechanisms, e.g. manually actuated [1, 2006.01]
- 19/70 • • • power driven [1, 2006.01]
- 19/72 • • • • with power stored during character spacing [1, 2006.01]
- 19/74 • • with special means to maintain character-spacing or back-spacing elements in engagement during case-shift or like movement [1, 2006.01]
- 19/76 • Line-spacing mechanisms (special line-feeds, e.g. long feeds, B41J 11/36) [1, 2006.01]
- 19/78 • • Positive-feed mechanisms [1, 2006.01]
- 19/80 • • • Pawl-and-ratchet mechanisms [1, 2006.01]
- 19/82 • • • • moving a paper or like carriage [1, 2006.01]
- 19/84 • • • • • in the form of a roller rotated for line spacing [1, 2006.01]
- 19/86 • • • • • the pawl being normally in engagement with the ratchet [1, 2006.01]
- 19/88 • • • • moving a type carriage [1, 2006.01]
- 19/90 • • • • moving a paper or like web or strip, e.g. over a stationary support, automatically in response to movements other than carriage return [1, 2006.01]
- 19/92 • • • Electromagnetically-operated mechanisms [1, 2006.01]
- 19/94 • • • automatically operated in response to carriage return [1, 2006.01]
- 19/96 • • • Variable-spacing arrangements [1, 2006.01]
- 19/98 • • Escapement-feed mechanisms [1, 2006.01]
- 21/00 Column, tabular, or like printing arrangements; Means for centralising short lines** (carriage-release mechanisms B41J 19/66; key actions B41J 25/18) [1, 2006.01]
- 21/02 • Stops or stop-racks [1, 2006.01]
- 21/04 • Mechanisms for setting or restoring tabulation stops [1, 2006.01]
- 21/06 • with means for preventing rebound from stops [1, 2006.01]
- 21/08 • Mechanisms for initiating, effecting, skipping, or stopping tabulation movement; Means for centralising short lines [1, 2006.01]
- 21/10 • with central, counter, or equivalent stop projected into path of tabulation stops [1, 2006.01]
- 21/12 • characterised by arrangements of electrical contacts [1, 2006.01]
- 21/14 • characterised by denominational arrangements [1, 2006.01]
- 21/16 • controlled by the sensing of marks or formations on the paper being typed, an undersheet, or the platen [1, 2006.01]
- 21/17 • controlled by stored information [5, 2006.01]
- 21/18 • characterised by applications of scales or indicators [1, 2006.01]
- 23/00 Power drives for actions or mechanisms** (B41J 9/00 take precedence) [1, 2006.01]
- 23/02 • Mechanical power drives [1, 2006.01]
- 23/04 • • with driven mechanism arranged to be clutched to continuously-operating power source [1, 2006.01]
- 23/06 • • • by snatch rolls [1, 2006.01]
- 23/08 • • • by one-revolution or part-revolution clutches [1, 2006.01]
- 23/10 • • • and arrested in selected position [1, 2006.01]
- 23/12 • • Mechanism driven by cams engaging rotating roller [1, 2006.01]
- 23/14 • • Mechanism driven through an oscillating or reciprocating member [1, 2006.01]
- 23/16 • • Mechanism driven by a spring tensioned by power means [1, 2006.01]
- 23/18 • • Continuously-cycling drives [1, 2006.01]
- 23/20 • Fluid-pressure power drives [1, 2006.01]
- 23/22 • • for key or like type selection [1, 2006.01]
- 23/24 • • for impression mechanisms [1, 2006.01]
- 23/26 • • for platen or carriage movements, e.g. for line spacing, letter spacing, or carriage return [1, 2006.01]
- 23/28 • • for type-carriage movements [1, 2006.01]
- 23/30 • • for case shift [1, 2006.01]
- 23/32 • Electromagnetic power drives, e.g. applied to key levers [1, 2006.01]
- 23/34 • • applied to elements other than key levers [1, 2006.01]
- 23/36 • • • and acting on type members [1, 2006.01]



- 23/38 • • • and acting on aligning or case-shift mechanisms [1, 2006.01]
- 25/00 Actions or mechanisms not otherwise provided for [1, 2006.01]**
- 25/02 • Key actions for specified purposes [1, 2006.01]
- 25/04 • • Back-spacing [1, 2006.01]
- 25/06 • • Carriage return [1, 2006.01]
- 25/08 • • Case shift [1, 2006.01]
- 25/10 • • Ink-ribbon adjustment [1, 2006.01]
- 25/12 • • Character spacing [1, 2006.01]
- 25/14 • • Line spacing [1, 2006.01]
- 25/16 • • Line spacing and carriage return by a single key [1, 2006.01]
- 25/18 • • Tabulating [1, 2006.01]
- 25/20 • Auxiliary type mechanisms for printing distinguishing marks, e.g. for accenting, using dead or half-dead key arrangements, for printing marks in telegraph printers to indicate that machine is receiving [1, 2006.01]
- 25/22 • for aligning characters for impression (in machines using index setting B41J 5/02) [1, 2006.01]
- 25/24 • Case-shift mechanisms (B41J 11/14 takes precedence; key actions B41J 25/08); Fount-change arrangements [1, 2006.01]
- 25/304 • Bodily-movable mechanisms for print heads or carriages movable towards or from paper surface (type carriers sliding for impression B41J 1/36; type carriers swinging for impression B41J 1/40) [5, 2006.01]
- 25/308 • • with print gap adjustment mechanisms [5, 2006.01]
- 25/312 • • with print pressure adjustment mechanisms, e.g. pressure-on-the-paper mechanisms [5, 2006.01]
- 25/316 • • with tilting motion mechanisms relative to paper surface [5, 2006.01]
- 25/32 • Impression mechanisms in which a roller co-operates with stationary type-faces [1, 2006.01]
- 25/34 • Bodily-changeable print heads or carriages (B41J 1/20, B41J 1/22, B41J 1/60 take precedence) [5, 2006.01]
- 27/00 Inking apparatus [1, 2006.01]**
- 27/02 • with ink applied by pads or rotary discs [1, 2006.01]
- 27/04 • • Pads or discs; Ink-supply arrangements therefor [1, 2006.01]
- 27/06 • • Arrangements to ensure maximum life of pads or discs [1, 2006.01]
- 27/08 • • Arrangements for multicolour work [1, 2006.01]
- 27/10 • with ink applied by rollers; Ink-supply arrangements therefor [1, 2006.01]
- 27/12 • • Rollers [1, 2006.01]
- 27/14 • • Arrangements for multicolour work [1, 2006.01]
- 27/16 • with ink deposited electrostatically or electromagnetically, e.g. powdered ink [1, 2006.01]
- 27/18 • • with liquid ink deposited [1, 2006.01]
- 27/20 • with ink supplied by capillary action, e.g. through porous type-members, through porous platens [1, 2006.01]
- 27/22 • with inking discs or sectors [1, 2006.01]
- 29/00 Details of, or accessories for, typewriters or selective printing mechanisms not otherwise provided for [1, 2006.01]**
- 29/02 • Framework [1, 2006.01]
- 29/04 • Means for attaching machines to baseboards [1, 2006.01]
- 29/06 • Special supports, platforms, or trolleys for supporting machines on tables [1, 2006.01]
- 29/08 • Sound-deadening or shock-absorbing stands, supports, cases, or pads separate from machines [1, 2006.01]
- 29/10 • Sound-deadening devices embodied in machines (B41J 19/04 takes precedence) [1, 2006.01]
- 29/12 • Guards, shields or dust excluders [1, 5, 2006.01]
- 29/13 • • Cases or covers [5, 2006.01]
- 29/14 • Attachments operated by the leg, e.g. the foot or knee [1, 2006.01]
- 29/15 • Script supports connected to the typewriter or printer (tables, desks, office furniture, in general A47B) [5, 2006.01]
- 29/16 • Auxiliary receptacles for articles, e.g. erasers, pencils [1, 2006.01]
- 29/17 • Cleaning arrangements [5, 2006.01]
- 29/18 • Mechanisms for rendering the print visible to the operator (ink-ribbon shifts B41J 35/20) [1, 5, 2006.01]
- 29/19 • • with reflectors or illuminating devices [5, 2006.01]
- 29/20 • Arrangements of counting devices [1, 2006.01]
- 29/22 • • Line counters [1, 2006.01]
- 29/24 • • Word counters [1, 2006.01]
- 29/26 • Devices, non-fluid media or methods for cancelling, correcting errors, underscoring or ruling [1, 4, 2006.01]
- 29/28 • • Writing or like instruments in holders or guides [1, 2006.01]
- 29/30 • • Wheels [1, 2006.01]
- 29/32 • • Type-members [1, 2006.01]
- 29/34 • • • repeatedly actuated [1, 2006.01]
- 29/36 • • for cancelling or correcting errors by overprinting (B41J 31/00 takes precedence) [1, 4, 2006.01]
- 29/367 • • • sheet media carrying a pigmented transferable correction layer [4, 2006.01]
- 29/373 • • • sheet media bearing an adhesive layer effective to lift off wrongly typed characters [4, 2006.01]
- 29/377 • Cooling or ventilating arrangements [5, 2006.01]
- 29/38 • Drives, motors, controls, or automatic cut-off devices for the entire printing mechanism [1, 2006.01]
- 29/387 • • Automatic cut-off devices [5, 2006.01]
- 29/393 • • Devices for controlling or analysing the entire machine [5, 2006.01]
- 29/40 • Means for printing fixed, i.e. unchanging, matter in addition to selectable matter [1, 2006.01]
- 29/42 • Scales and indicators, e.g. for determining side margins [1, 2006.01]
- 29/44 • • for determining top and bottom margins or indicating exhaust of paper [1, 2006.01]
- 29/46 • Applications of alarms, e.g. responsive to approach of end of line (responsive to transfer-material breakage or exhaustion B41J 17/36, B41J 35/36) [1, 2006.01]
- 29/48 • • responsive to breakage or exhaustion of paper or approach of bottom of paper [1, 2006.01]
- 29/50 • Side-stop mechanisms [1, 2006.01]
- 29/52 • Top-and-bottom stop mechanisms [1, 2006.01]
- 29/54 • Locking devices applied to printing mechanisms [1, 2006.01]
- 29/56 • • and manually actuated [1, 2006.01]
- 29/58 • • and automatically actuated [1, 2006.01]
- 29/60 • • • in response to failure of power supply [1, 2006.01]

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- 29/62 • • • by the absence of paper to lock hammer mechanism [1, 2006.01]
- 29/64 • • • by a function of the printer to lock the keyboard [1, 2006.01]
- 29/66 • • • • Locking devices actuated when platen reaches the end of a line [1, 2006.01]
- 29/68 • • • by completion of a page or predetermined number of lines or exhaustion of paper to lock the keyboard [1, 2006.01]
- 29/70 • • • Interlocks between any two carriage-moving mechanisms, e.g. character-space, back-space, tabulation, carriage-return, or carriage-release mechanisms [1, 2006.01]

### Ink ribbons; Ink-ribbon mechanisms

- 31/00 **Ink ribbons** (sheet material for duplicating or marking B41M 5/00; storing webs or tapes, e.g. on reels, B65H 75/00); **Renovating or testing ink ribbons** [1, 2006.01]
- 31/02 • Ink ribbons characterised by the material from which they are woven [1, 2006.01]
- 31/04 • • woven from synthetic material [1, 2006.01]
- 31/05 • Ink ribbons having coatings other than impression-material coatings [1, 2006.01]
- 31/06 • • the coatings being directly on the base material, i.e. below impression-transfer material; Ink ribbons having base material impregnated with material other than impression material [1, 2006.01]
- 31/08 • • the coatings being superimposed on impression-transfer material [1, 2006.01]
- 31/09 • Ink ribbons characterised by areas carrying media for obliteration or removal of typing errors [4, 2006.01]
- 31/10 • Ink ribbons having arrangements to facilitate threading through a machine [1, 2006.01]
- 31/12 • Ink ribbons having arrangements to prevent undesired contact between the impression-transfer material and machine parts or other articles [1, 2006.01]
- 31/14 • Renovating or testing ink ribbons [1, 2006.01]
- 31/16 • • while fitted in the machine using the ink ribbons [1, 2006.01]

### 32/00 **Ink-ribbon cartridges** [3, 2006.01]

- 32/02 • for endless ribbons [3, 2006.01]

### 33/00 **Apparatus or arrangements for feeding ink ribbons or like character-size impression-transfer material** (ink-ribbon cartridges B41J 32/00) [1, 2006.01]

- 33/02 • Ribbon arrangements [1, 2006.01]
- 33/04 • • mounted on moving carriages [1, 2006.01]
- 33/06 • • Ribbons associated, but not moving, with typewriter platens, e.g. extending transversely to the length of the platen [1, 2006.01]
- 33/08 • • • and extending parallel to the length of the platen [1, 2006.01]
- 33/10 • • Arrangements of endless ribbons [1, 2006.01]
- 33/12 • • Ribbons carried by coaxially-mounted spools [1, 2006.01]
- 33/14 • Ribbon-feed devices or mechanisms [1, 2006.01]
- 33/16 • • with drive applied to spool or spool spindle [1, 2006.01]
- 33/18 • • • by ratchet mechanism (B41J 33/30 takes precedence) [1, 2006.01]
- 33/20 • • • by friction [1, 2006.01]
- 33/22 • • • by gears or pulleys [1, 2006.01]

- 33/24 • • with drive applied directly to ribbon [1, 2006.01]
- 33/26 • • • by rollers engaging the ribbon [1, 2006.01]
- 33/28 • • • by mechanism pulling or gripping the ribbon [1, 2006.01]
- 33/30 • • Escapement mechanisms [1, 2006.01]
- 33/32 • • Electromagnetic devices [1, 2006.01]
- 33/34 • • driven by motors independently of the machine as a whole [1, 2006.01]
- 33/36 • • with means for adjusting feeding rate [1, 2006.01]
- 33/38 • • Slow, e.g. "creep", feed mechanisms [1, 2006.01]
- 33/382 • • • the ribbon being fed only during carriage return [1, 2006.01]
- 33/384 • • • • and attached to the carriage during writing [1, 2006.01]
- 33/386 • • • the ribbon being fed only by operation of the line-spacing mechanism [1, 2006.01]
- 33/388 • • • the ribbon being fed only when type impression takes place [1, 2006.01]
- 33/40 • • with arrangements for reversing the feed direction [1, 2006.01]
- 33/42 • • • manually [1, 2006.01]
- 33/44 • • • automatically [1, 2006.01]
- 33/46 • • • • and characterised by its application to mechanism in which two spools are driven by pawl-and-ratchet mechanism [1, 2006.01]
- 33/48 • • • • • comprising two pawls and ratchets, one for each spool [1, 2006.01]
- 33/50 • • • • • comprising a single pawl or integral double-tooth pawl selectively engageable with two ratchets, one for each spool [1, 2006.01]
- 33/51 • • • • • and characterised by the use of particular reversing control means [1, 2006.01]
- 33/512 • • • • • using a pivoted reversing-feeler engaging the external periphery of the wound ribbon [1, 2006.01]
- 33/514 • • • • • using a pivoted reversing-feeler engaging the interior of the wound ribbon [1, 2006.01]
- 33/516 • • • • • using a reversing-feeler responsive to the tension of the ribbon [1, 2006.01]
- 33/518 • • • • • the reversing-feeler engaging buttons or the like secured to the ribbon near its ends [1, 2006.01]
- 33/52 • • Braking devices therefor [1, 2006.01]
- 33/54 • • for ensuring maximum life of the ribbon (B41J 33/38 takes precedence; by adjustment of vibrator mechanisms B41J 35/14) [1, 2006.01]
- 33/56 • • • Ribbon adjusted transversely [1, 2006.01]
- 33/58 • • • Ribbon fed angularly [1, 2006.01]
- 33/60 • • responsive to telegraph code or other extraneous signals [1, 2006.01]

### 35/00 **Other apparatus or arrangements associated with, or incorporated in, ink-ribbon mechanisms** [1, 2006.01]

- 35/02 • Frames or holders for unwound short lengths of ink ribbons [1, 2006.01]
- 35/03 • • the holder being movable to inoperative position, e.g. by swinging upwardly [1, 2006.01]
- 35/04 • Ink-ribbon guides [1, 2006.01]
- 35/06 • • stationary [1, 2006.01]
- 35/08 • • with tensioning arrangements [1, 2006.01]
- 35/10 • • Vibrator mechanisms; Driving gear therefor [1, 2006.01]
- 35/12 • • • adjustable, e.g. for case shift (key actions B41J 25/02) [1, 2006.01]

- 35/14 • • • • for multicolour work; for ensuring maximum life of ink ribbon; for rendering ink ribbon inoperative [1, 2006.01]
- 35/16 • Multicolour arrangements (B41J 35/10 takes precedence) [1, 2006.01]
- 35/18 • • Colour change effected automatically [1, 2006.01]
- 35/20 • Ink-ribbon shifts, e.g. for exposing print, for case-shift adjustment, for rendering ink ribbon inoperative [1, 2006.01]
- 35/22 • Mechanisms permitting the selective use of a plurality of ink ribbons [1, 2006.01]
- 35/23 • • with two or more ribbon guides [1, 2006.01]
- 35/24 • Mechanisms specially adapted for feeding impression-transfer materials of foil form [1, 2006.01]
- 35/26 • Ink-ribbon shields or backings [1, 2006.01]
- 35/28 • Detachable carriers or holders for ink-ribbon mechanisms [1, 2006.01]
- 35/30 • Manifolding or like arrangements [1, 2006.01]
- 35/32 • • for producing a plurality of copies along the printing line by a single ink ribbon [1, 2006.01]
- 35/34 • • using a plurality of separate ink ribbons, e.g. including one hectographic ink ribbon [1, 2006.01]
- 35/35 • • using unwound short lengths of ink ribbons [1, 2006.01]
- 35/36 • Alarms, indicators, or feed-disabling devices responsive to ink-ribbon breakage or exhaustion [1, 2006.01]
- 35/38 • Feeding the ink ribbon to waste after use [1, 2006.01]

**B41K STAMPS; STAMPING OR NUMBERING APPARATUS OR DEVICES** (marking meat A22C 17/10; embossing combined with printing B41F 19/00; selective printing mechanisms B41J; embossing decorations or marks B44B 5/00; marking or coding completed packages B65B 61/26; ticket printing and issuing, fare registering, non-printing aspects of franking apparatus G07B)

- 1/00 Portable hand-operated devices without means for supporting or locating the articles to be stamped, i.e. hand stamps; Inking devices or other accessories therefor [1, 2006.01]**
- 1/02 • with one or more flat stamping surfaces having fixed images [1, 2006.01]
- 1/04 • • with multiple stamping surfaces; with stamping surfaces replaceable as a whole [1, 2006.01]
- 1/06 • • with means for locating the image to be obtained [1, 2006.01]
- 1/08 • with a flat stamping surface and changeable characters [1, 2006.01]
- 1/10 • • having movable type-carrying bands or chains [1, 2006.01]
- 1/12 • • having adjustable type-carrying wheels [1, 2006.01]
- 1/14 • • having automatic means for changing type-characters [1, 2006.01]
- 1/16 • • • Numbering devices [1, 2006.01]
- 1/18 • • • • for pages [1, 2006.01]
- 1/20 • • with means for locating the image to be obtained [1, 2006.01]
- 1/22 • with curved stamping surfaces for stamping by rolling contact [1, 2006.01]
- 1/24 • • Rocking stamps [1, 2006.01]
- 1/26 • with stamping surfaces adapted for application to non-flat surfaces [1, 2006.01]
- 1/28 • • flexible [1, 2006.01]
- 1/30 • for offset or intaglio stamping [1, 2006.01]
- 1/32 • for stencilling [1, 2006.01]
- 1/34 • for multicolour stamping [1, 2006.01]
- 1/36 • Details [1, 2006.01]
- 1/38 • • Inking devices; Stamping surfaces [1, 2006.01]
- 1/40 • • • Inking devices operated by stamping movement [1, 2006.01]
- 1/42 • • • • with pads or rollers movable for inking [1, 2006.01]
- 1/44 • • • for offset, intaglio, or stencil stamping [1, 2006.01]
- 1/46 • • • for multicolour stamping [1, 2006.01]
- 1/48 • • • with ink ribbons, ink sheets, or carbon tape or paper [1, 2006.01]
- 1/50 • • • Stamping surfaces impregnated with ink, or made of material leaving a mark after stamping contact [1, 2006.01]
- 1/52 • • • Ink reservoirs, e.g. integral with stamp handles [1, 2006.01]
- 1/54 • • • Inking pads [1, 2006.01]
- 1/56 • • Handles [1, 2006.01]
- 1/58 • • Stands or other means for keeping hand stamps or the like within easy reach [1, 2006.01]
- 3/00 Apparatus for stamping articles having integral means for supporting the articles to be stamped** (means for printing on articles of special shape or having a surface of particular configuration B41F 17/00) [1, 2006.01]
- 3/02 • with stamping surface located above article-supporting surface [1, 2006.01]
- 3/04 • • and movable at right angles to the surface to be stamped [1, 2006.01]
- 3/06 • • • having type-carrying bands or chains [1, 2006.01]
- 3/08 • • • having adjustable type-carrying wheels [1, 2006.01]
- 3/10 • • • having automatic means for changing type-characters, e.g. numbering devices [1, 2006.01]
- 3/12 • • with curved stamping surface for stamping by rolling contact [1, 2006.01]
- 3/14 • • • for relief stamping [1, 2006.01]
- 3/16 • • • for intaglio stamping [1, 2006.01]
- 3/18 • • • for offset stamping [1, 2006.01]
- 3/20 • • • for stencilling [1, 2006.01]
- 3/22 • • • with means for producing distorted images [1, 2006.01]
- 3/24 • • for multicolour stamping [1, 2006.01]
- 3/26 • with stamping surface located below article-supporting surface [1, 2006.01]
- 3/28 • • and bearing a positive image [1, 2006.01]
- 3/30 • • • and having means for varying the image, e.g. by exchanging stamping plates in succession [1, 2006.01]
- 3/32 • with co-operating stamping and counter-stamping members [1, 2006.01]
- 3/34 • • in the form of indexable cylinders, e.g. of curved or polygonal cross-section, or of movable chains or bands [1, 2006.01]

**B41K**

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| <ul style="list-style-type: none"> <li>3/36 • with means for deforming or punching the copy matter [1, 2006.01]</li> <li>3/38 • • separate from the stamping means [1, 2006.01]</li> <li>3/40 • • for numerical or alphabetical characters [1, 2006.01]</li> <li>3/42 • Stamping apparatus with selection mechanisms for successively stamping and delivering lists or other items giving information, e.g. for warehouse administration, washing lists, supermarket guides [1, 2006.01]</li> <li>3/44 • Means for handling copy matter [1, 2006.01]</li> <li>3/46 • • for locating when stationary [1, 2006.01]</li> <li>3/48 • • for conveying intermittently to or from stamping station [1, 2006.01]</li> <li>3/50 • • for conveying during stamping operation [1, 2006.01]</li> <li>3/52 • • for discharging [1, 2006.01]</li> <li>3/54 • Inking devices [1, 2006.01]</li> <li>3/56 • • using inking pads [1, 2006.01]</li> <li>3/58 • • using ink ribbons, ink sheets, or carbon tape or paper [1, 2006.01]</li> </ul> | <ul style="list-style-type: none"> <li>3/60 • • using rollers, e.g. rollers with integral ink-supply devices [1, 2006.01]</li> <li>3/62 • Details or accessories [1, 2006.01]</li> <li>3/64 • • Stamping mechanisms controlled by feed of copy matter [1, 2006.01]</li> <li>3/66 • • Safety devices, e.g. for preventing extraction of copy matter before completion of stamping operation [1, 2006.01]</li> <li>3/68 • • Cutting or severing devices (in general B26) [1, 2006.01]</li> <li><b>5/00 Plier-like tools for stamping, or stamping and delivering, tickets or the like [1, 2006.01]</b></li> <li>5/02 • with means for varying the image stamped [1, 2006.01]</li> <li>5/04 • with devices for collecting counterfoils, or with other means for recording stamping operations (counting devices G06M) [1, 2006.01]</li> <li>5/06 • • for recording on separate tape [1, 2006.01]</li> <li>5/08 • • with counting devices [1, 2006.01]</li> <li><b>99/00 Subject matter not provided for in other groups of this subclass [2006.01]</b></li> </ul> |
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**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, 2006.01]**
- 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, 2006.01]
- 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, 2006.01]
- 1/06 • • on single form sets [1, 2006.01]
- 1/08 • • on continuous manifold assemblies [1, 2006.01]
- 1/10 • • • Separate folding or disposition of single webs [1, 2006.01]
- 1/12 • • • Severing webs to obtain single sheets or forms, e.g. by cutting, by bursting [1, 2006.01]
- 1/14 • • • Severing edge perforations from webs [1, 2006.01]
- 1/16 • Carriers or supply devices for pressure-sensitive material, e.g. for carbon sheets; Carbon gloves [1, 2006.01]
- 1/18 • • for carbon webs; Continuous carbon-supply mechanisms [1, 2006.01]
- 1/20 • Manifolding assemblies, e.g. book-like assemblies [1, 2006.01]
- 1/22 • • made up of single sheets or forms [1, 2006.01]
- 1/24 • • • Pads or books [1, 2006.01]
- 1/26 • • Continuous assemblies made up of webs [1, 2006.01]
- 1/28 • • • in rolled or wound form [1, 2006.01]
- 1/30 • • • folded longitudinally [1, 2006.01]
- 1/32 • • • folded transversely [1, 2006.01]
- 1/34 • • for making masters for hectographic duplicators [1, 2006.01]
- 1/36 • • with pressure-sensitive layers or coating other than carbon (sheet materials B41M 5/00) [1, 2006.01]
- 3/00** **Platens or like sheet supports for manifolding using pressure-sensitive layers or intermediaries, e.g. for book-keeping purposes [1, 2006.01]**
- 3/02 • with stationary clamping means for holding the manifolding assembly in registered position, e.g. resilient clamps for holding non-perforated sheets [1, 2006.01]
- 3/04 • • Bars provided with pins engaging perforations in the elements [1, 2006.01]
- 3/06 • with movable clamping or guiding means for the elements of the manifolding assembly [1, 2006.01]
- 3/08 • with non-mechanical means for holding the elements in registered position, e.g. magnetic means [1, 2006.01]
- 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 [1, 2006.01]
- 3/12 • Auxiliary devices [1, 2006.01]
- 3/14 • • Magazines or storage compartments, e.g. for slips [1, 2006.01]
- 3/16 • • Web-feeding arrangements [1, 2006.01]
- 3/18 • • Displaceable covers, e.g. with windows [1, 2006.01]
- 3/20 • • for facilitating manifolding in books [1, 2006.01]

- 3/22 • • Applications of ink ribbons; Holding, feeding, or guiding means therefor [1, 2006.01]
- 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) [1, 2006.01]**
- 5/02 • with means for limiting movements of webs fed by hand [1, 2006.01]
- 5/04 • with mechanisms for feeding webs or for arranging web feed; with web-storage arrangements [1, 2006.01]
- 5/06 • • by means of rollers, wheels, or chains [1, 2006.01]
- 5/08 • • by reciprocating mechanisms [1, 2006.01]
- 5/10 • with mechanisms for feeding the pressure-sensitive web or webs separately from the other webs, e.g. transversely [1, 2006.01]
- 5/12 • with means for indicating exhaustion of web supply [1, 2006.01]
- 5/14 • with auxiliary means for printing, perforating, or severing the web [1, 2006.01]
- 5/16 • Accessories, e.g. drawers for storing forms, for money (cash registers G07G) [1, 2006.01]

**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 [1, 2006.01]**
- 7/02 • by passing original and copy-sheet or -web between rollers [1, 2006.01]
- 7/04 • • with means for guiding original or copy-sheet or -web [1, 2006.01]
- 7/06 • • with means for severing copy-sheet or -web [1, 2006.01]
- 7/08 • • with means for moistening or drying [1, 2006.01]
- 9/00** **Apparatus for indirectly duplicating from hectographic originals by means of hectographic intermediaries or transfer surfaces, i.e. "dry duplicators" [1, 2006.01]**
- 9/02 • Containers for clay or gelatin [1, 2006.01]
- 9/04 • with flat supports over which gelatin-paper is stretched [1, 2006.01]
- 9/06 • • and with carriages for feeding the sheets [1, 2006.01]
- 9/08 • • and with devices for rolling-in and securing hectographic gelatin-paper webs [1, 2006.01]
- 9/10 • with rotary cylinders carrying sheets of hectographic gelatin-paper [1, 2006.01]
- 11/00** **Apparatus for directly duplicating from hectographic masters in mirror image, i.e. "wet duplicators" for producing positive copies [1, 2006.01]**
- 11/02 • with a flat support carrying the masters [1, 2006.01]
- 11/04 • • and with carriages for feeding the sheets [1, 2006.01]
- 11/06 • • for stack duplicating with pressure rollers [1, 2006.01]
- 11/08 • with rotary cylinders carrying the masters [1, 2006.01]
- 11/10 • with two rollers between which master is stretched [1, 2006.01]
- 11/12 • Driving gear; Control thereof [1, 2006.01]

## B41L

- 11/14 • Constructional features of masters (chemical aspects B41M) [1, 2006.01]
- 13/00 Stencilling apparatus for office or other commercial use** (screen printing B41F 15/00; stencils, stencil materials, carriers therefor B41N 1/24) [1, 2006.01]
  - 13/02 • with flat stencil carriers [1, 2006.01]
  - 13/04 • with curved or rotary stencil carriers [1, 2006.01]
  - 13/06 • with a single cylinder carrying the stencil [1, 2006.01]
  - 13/08 • with stencil carried by two or more cylinders, e.g. through the intermediary of endless bands [1, 2006.01]
  - 13/10 • • Clips or clamps for securing stencils to stencil carriers [1, 2006.01]
  - 13/12 • for special purposes, e.g. for reproducing Braille characters [1, 2006.01]
  - 13/14 • Attachments, e.g. for punching, cutting, severing [1, 2006.01]
  - 13/16 • Driving gear; Control thereof [1, 2006.01]
  - 13/18 • Inking units [3, 2006.01]
- 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) [1, 2006.01]
  - 15/02 • with flat printing surfaces, e.g. with flat type-beds, surfaces made of thin sheet material or moulded from plastics or rubber [1, 2006.01]
  - 15/04 • of composed type locked in chases [1, 2006.01]
  - 15/06 • with curved printing surfaces, e.g. cylinders [1, 2006.01]
  - 15/08 • with stereotypes [1, 2006.01]
  - 15/10 • for multicolour printing; for perfecting [1, 2006.01]
  - 15/12 • Driving gear; Control thereof [1, 2006.01]
  - 15/14 • Attachments, e.g. for punching, cutting, severing [1, 2006.01]
- 17/00 Lithographic printing apparatus for office or other commercial purposes** (in general B41F; printing plates or foils, materials therefor B41N 1/00) [1, 2006.01]
  - 17/02 • for direct impression printing [1, 2006.01]
  - 17/04 • with flat printing surfaces [1, 2006.01]
  - 17/06 • with curved printing surfaces, e.g. cylinders [1, 2006.01]
  - 17/08 • for offset printing [1, 2006.01]
  - 17/10 • with flat printing surfaces, e.g. co-operating with travelling offset cylinders [1, 2006.01]
  - 17/12 • with curved printing surfaces, e.g. forme cylinders [1, 2006.01]
  - 17/14 • of two-cylinder type, e.g. co-operating forme and impression cylinders [1, 2006.01]
  - 17/16 • of three-cylinder type [1, 2006.01]
  - 17/18 • for multicolour printing, e.g. tandem machines; for perfecting [1, 2006.01]
  - 17/20 • without damping means, e.g. using heat-activatable inks, refrigerated printing surfaces [1, 2006.01]
  - 17/22 • Driving gear; Control thereof [1, 2006.01]
  - 17/24 • Attachments, e.g. for punching, cutting, severing [1, 2006.01]
- 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) [1, 2006.01]

- 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) [1, 2006.01]
- 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) [1, 2006.01]
- 19/06 • with co-operating forme and impression cylinders [1, 2006.01]
- 19/08 • • by effecting relative movement of forme and impression cylinders during printing cycle [1, 2006.01]
- 19/10 • • • by projecting and retracting parts of the surfaces of the forme cylinders [1, 2006.01]
- 19/12 • • • by masking parts of the printing surfaces on the forme cylinders [1, 2006.01]
- 19/14 • • • by selective damping of the copy material [1, 2006.01]
- 19/16 • • • by selective tripping of impression cylinders [1, 2006.01]

### 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) [1, 2006.01]
  - 21/02 • for conveying sheets [1, 2006.01]
  - 21/04 • Pins [1, 2006.01]
  - 21/06 • Grippers [1, 2006.01]
  - 21/08 • • Suction-operated grippers [1, 2006.01]
  - 21/10 • • Combinations of endless conveyors and grippers [1, 2006.01]
  - 21/12 • for conveying webs [1, 2006.01]
- 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) [1, 2006.01]
  - 23/02 • by damping, e.g. by moistening copy-sheets in connection with hectographic printing [1, 2006.01]
  - 23/04 • using friction rollers [1, 2006.01]
  - 23/06 • using brushes [1, 2006.01]
  - 23/08 • using spray elements [1, 2006.01]
  - 23/10 • using endless bands [1, 2006.01]
  - 23/12 • using absorbent pads [1, 2006.01]
  - 23/14 • Ducts, containers, or like supply devices for liquids [1, 2006.01]
  - 23/16 • Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor [1, 2006.01]
  - 23/18 • Construction of damping rollers [1, 2006.01]
  - 23/20 • by heat drying, by cooling, by applying powders [1, 2006.01]
  - 23/22 • Powdering devices, e.g. for preventing set-off [1, 2006.01]
  - 23/24 • Print-finishing devices, e.g. for glossing prints [1, 2006.01]

- 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) [1, 2006.01]
- 25/02 • using friction rollers [1, 2006.01]
  - 25/04 • using brushes [1, 2006.01]
  - 25/06 • using spraying elements [1, 2006.01]
  - 25/08 • using endless bands [1, 2006.01]
  - 25/10 • using absorbent pads [1, 2006.01]
  - 25/12 • Ducts, containers, or like supply devices for liquids [1, 2006.01]
  - 25/14 • Inking rollers serving also to apply ink repellent [1, 2006.01]
  - 25/16 • Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor [1, 2006.01]
  - 25/18 • Construction of damping rollers [1, 2006.01]
- 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) [1, 3, 2006.01]
- 27/02 • adapted for inking by hand [1, 2006.01]
  - 27/04 • Ducts, containers, supply devices or ink-level control devices (level control in general G05D 9/00) [1, 3, 2006.01]
  - 27/06 • • Duct-blades or like supply devices [1, 2006.01]
  - 27/08 • • Troughs or like reservoirs with immersed, or partly immersed, rollers [1, 2006.01]
  - 27/10 • • with ink-ejection means, e.g. pumps, nozzles [1, 2006.01]
  - 27/12 • • Feed or duct rollers (messenger or moving transfer rollers B41L 27/16) [1, 2006.01]
  - 27/14 • • • adjustable for regulating supply [1, 2006.01]
  - 27/16 • • Messenger or other moving transfer rollers [1, 2006.01]
  - 27/18 • Continuous, e.g. endless-band, apparatus [1, 2006.01]
  - 27/20 • for inking selected parts of printing formes [1, 2006.01]
  - 27/22 • Ink-removing or collecting devices [1, 2006.01]
  - 27/24 • for inking from interior of cylinder [1, 2006.01]
  - 27/26 • Absorbent pads [1, 2006.01]
  - 27/28 • Construction of inking rollers [1, 2006.01]
  - 27/30 • Spray apparatus, e.g. containing brushes [1, 2006.01]
  - 27/32 • Arrangements for tripping, lifting, adjusting, or removing inking rollers; Supports, bearings, or forks therefor [1, 2006.01]
  - 27/34 • • Lifting or adjusting devices [1, 2006.01]
  - 27/36 • • • Cams, eccentrics, wedges, or the like devices [1, 2006.01]
  - 27/38 • • • fluid-pressure operated [1, 2006.01]
  - 27/40 • • • magnetically operated [1, 2006.01]
- 29/00 Devices for attaching printing elements or formes to supports** [1, 2006.01]
- 29/02 • magnetic [1, 2006.01]
  - 29/04 • for attaching printing elements to flat type-beds [1, 2006.01]
  - 29/06 • for attaching printing elements to forme cylinders [1, 2006.01]
  - 29/08 • for attaching printing formes to flat type-beds [1, 2006.01]
  - 29/10 • for attaching non-deformable curved printing formes to forme cylinders [1, 2006.01]
  - 29/12 • for attaching flexible printing formes [1, 2006.01]
  - 29/14 • • Clamping devices [1, 2006.01]
- 29/16 • • • operating automatically during operation of rotary machines to attach the printing formes to the forme cylinders [1, 2006.01]
  - 29/18 • • • • electromagnetic, pneumatic, or hydraulic [1, 2006.01]
  - 29/20 • • • for adjusting position of leading edges of flexible printing formes circumferentially of forme cylinders [1, 2006.01]
  - 29/22 • for attaching printing formes to intermediate supports, e.g. adapter members [1, 2006.01]
- 31/00 Devices for removing flexible printing formes from forme cylinders** [1, 2006.01]
- 33/00 Pressing flexible printing formes or sheets or webs of copy material against cylinders, e.g. for smoothing purposes** [1, 2006.01]
- 35/00 Cylinders for apparatus or machines for manifolding, duplicating, or printing for office or other commercial purposes** [1, 2006.01]
- 35/02 • Forme cylinders [1, 2006.01]
  - 35/04 • • Registering devices [1, 2006.01]
  - 35/06 • • • with means for displacing the cylinders [1, 2006.01]
  - 35/08 • • • with means for displacing the printing formes on the cylinders [1, 2006.01]
  - 35/10 • Impression cylinders [1, 2006.01]
  - 35/12 • Bearings or supports for forme, offset or transfer, or impression cylinders [1, 2006.01]
  - 35/14 • Means for heating or cooling forme or impression cylinders [1, 2006.01]
  - 35/16 • Cylinder-tripping devices; Cylinder-impression adjustments [1, 2006.01]
  - 35/18 • • Arrangements or dispositions of cylinder bearings, forks, or supports [1, 2006.01]
  - 35/20 • • • Eccentric bearings [1, 2006.01]
  - 35/22 • • • Sliding bearings [1, 2006.01]
  - 35/24 • • • Swinging bearings [1, 2006.01]
  - 35/26 • • Cylinder-lifting or adjusting devices [1, 2006.01]
  - 35/28 • • • Cams, eccentrics, wedges, or the like [1, 2006.01]
  - 35/30 • • • electrically or magnetically operated [1, 2006.01]
  - 35/32 • • • fluid-pressure operated [1, 2006.01]
  - 35/34 • Guards or covers, e.g. for safety purposes, for preventing egress or ingress of foreign matter [1, 2006.01]
- 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, 2006.01]
- 38/02 • attaching to impression cylinders [5, 2006.01]
  - 38/04 • attaching of endless or like continuously-fed coverings [5, 2006.01]
- 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) [1, 3, 2006.01]
- 39/02 • Indicating devices, e.g. counters [1, 2006.01]
  - 39/04 • Tripping devices or stop-motions [1, 2006.01]
  - 39/06 • • for starting or stopping operation of sheet or web feed [1, 2006.01]
  - 39/08 • • for starting or stopping operation of cylinders [1, 2006.01]

## B41L

- 39/10 • • for starting or stopping operation of damping or inking units [1, 2006.01]
- 39/12 • • for starting or stopping the machines as a whole [1, 2006.01]
- 39/14 • • Automatic control of tripping devices by feelers, photoelectric devices, pneumatic devices, or other detectors [1, 2006.01]
- 39/16 • Programming systems for automatic control of sequence of operations [1, 2006.01]
- 41/00 Cleaning arrangements or devices [1, 2006.01]**
- 41/02 • for forme cylinders [1, 2006.01]
- 41/04 • for inking rollers [1, 2006.01]
- 41/06 • for offset cylinders [1, 2006.01]
- 43/00 Auxiliary folding, collecting, or depositing of sheets or webs [1, 2006.01]**
- 43/02 • Folding [1, 2006.01]
- 43/04 • • lengthwise [1, 2006.01]
- 43/06 • • crosswise [1, 2006.01]
- 43/08 • • Folding-cylinders or -drums [1, 2006.01]
- 43/10 • Collecting [1, 2006.01]
- 43/12 • • and stapling [1, 2006.01]
- 43/14 • Adding inserts [1, 2006.01]
- 43/16 • Depositing [1, 2006.01]
- Addressing machines or like series-printing machines**
- 45/00 Kinds or types of addressing machines or of like series-printing machines [1, 2006.01]**
- 45/02 • using printing plates [1, 2006.01]
- 45/04 • • composed on type-setting machines [1, 2006.01]
- 45/06 • • for addressing combined with other operations, e.g. franking, collating documents [1, 2006.01]
- 45/08 • with printing surfaces in the form of belts, or carried by chains [1, 2006.01]
- 45/10 • • for addressing combined with other operations, e.g. franking, collating documents [1, 2006.01]
- 45/12 • with separate devices for printing additional texts or images, e.g. for printing receipts on blank sheets or webs [1, 2006.01]
- 47/00 Details of addressing machines or like series-printing machines (common details of printing machines B41F 21/00-B41F 35/00) [1, 2006.01]**
- 47/02 • Applications of printing surfaces in addressing machines or like series-printing machines (printing surfaces in general B41N) [1, 2006.01]
- 47/04 • • of flat or curved plates for relief printing [1, 2006.01]
- 47/06 • • of flat or curved stencils [1, 2006.01]
- 47/08 • • of flat or curved plates for hectographic printing [1, 2006.01]
- 47/10 • • of printing surfaces in the form of belts or chains [1, 2006.01]
- 47/12 • Auxiliary devices, e.g. for flattening plates, for assembling plates in predetermined order, for wetting stencils [1, 2006.01]
- 47/14 • Devices or arrangements for storing or handling plates [1, 2006.01]
- 47/16 • • Magazines [1, 2006.01]
- 47/18 • • Devices for feeding the plates in their plane [1, 2006.01]
- 47/20 • • Devices for feeding the plates otherwise than in their plane, e.g. transversely thereto [1, 2006.01]
- 47/22 • • with means for presenting plates for repeated printing operations [1, 2006.01]
- 47/24 • Mechanisms for conveying copy material through addressing machines or like series-printing machines (in general B65H) [1, 2006.01]
- 47/26 • • for conveying or positioning single sheet-like articles, e.g. envelopes [1, 2006.01]
- 47/28 • • with gauging-rulers or the like, e.g. for facilitating hand-printing of copy material fed from stacks [1, 2006.01]
- 47/30 • • for conveying webs [1, 2006.01]
- 47/32 • • • combined with devices for other purposes, e.g. for cutting, severing, gluing [1, 2006.01]
- 47/34 • • • specially adapted for conveying chains of forms [1, 2006.01]
- 47/36 • • for conveying sheets or webs for tabulating purposes; Tabulating mechanisms combined with sheet or web conveyors [1, 2006.01]
- 47/38 • • • with clamping means for head or margin [1, 2006.01]
- 47/40 • • • with means for automatically reciprocating sheet or web transversely to enable addresses to be printed in columns side by side [1, 2006.01]
- 47/42 • Printing mechanisms [1, 2006.01]
- 47/44 • • using flat platens [1, 2006.01]
- 47/46 • • using line-contact members, e.g. rollers, cylinders [1, 2006.01]
- 47/48 • • with inking or ink-ribbon devices [1, 2006.01]
- 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) [1, 2006.01]
- 47/52 • • with movable counter-pressure plates for printing from selected areas of printing surfaces [1, 2006.01]
- 47/54 • • with means for automatically reciprocating printing plate transversely to enable addresses to be printed in columns side by side [1, 2006.01]
- 47/56 • Indicating, warning, control or safety devices (B41L 47/58 takes precedence) [1, 2006.01]
- 47/58 • Arrangements or devices for selecting, or for facilitating selection of, text or image to be printed [1, 2006.01]
- 47/60 • • Markings applied to printing plates, e.g. code marks, colours, clips, perforations, edge notches, projections [1, 2006.01]
- 47/62 • • Selecting devices, e.g. cams, windows, position indicators [1, 2006.01]
- 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 [1, 2006.01]
- 49/00 Accessories or attachments for addressing machines or like series-printing machines [1, 2006.01]**
- 49/02 • Counting, numbering, or dating devices [1, 2006.01]
- 49/04 • Devices for applying selection markings to printing plates [1, 2006.01]



**B41M PRINTING, DUPLICATING, MARKING, OR COPYING PROCESSES; COLOUR PRINTING** (correction of typographical errors B41J; processes for applying transfer pictures or the like B44C 1/16; fluid media for correction of typographical errors by coating C09D 10/00; printing textiles D06P)

- 1/00 Inking and printing with a printer's forme [1, 2006.01]**
- 1/02 • Letterpress printing, e.g. book printing [1, 2006.01]
- 1/04 • • Flexographic printing [1, 2006.01]
- 1/06 • Lithographic printing [1, 2006.01]
- 1/08 • • Dry printing [1, 2006.01]
- 1/10 • Intaglio printing [1, 2006.01]
- 1/12 • Stencil printing; Silk-screen printing [1, 2006.01]
- 1/14 • Multicolour printing [1, 2006.01]
- 1/16 • • using different inks which flow into one another to produce iridescent effects [1, 2006.01]
- 1/18 • • Printing one ink over another [1, 2006.01]
- 1/20 • • by applying differently-coloured inks simultaneously to different parts of the printing surface [1, 2006.01]
- 1/22 • Metallic printing; Printing with powdered inks [1, 2006.01]
- 1/24 • combined with embossing (printing machines for carrying out printing operations combined with embossing B41F 19/02) [1, 2, 2006.01]
- 1/26 • Printing on other surfaces than ordinary paper (B41M 1/40 takes precedence) [1, 2006.01]
- 1/28 • • on metals [1, 2006.01]
- 1/30 • • on organic plastics, horn, or like materials [1, 2006.01]
- 1/32 • • on rubber [1, 2006.01]
- 1/34 • • on glass or ceramic surfaces [1, 2006.01]
- 1/36 • • on pretreated paper, e.g. on parchment, oiled paper, paper for registration purposes [1, 2006.01]
- 1/38 • • on wooden surfaces, leather, or linoleum (printing on matches or match boxes when combined with match manufacture C06F 1/18) [1, 2006.01]
- 1/40 • Printing on bodies of particular shapes [1, 2006.01]
- 1/42 • Printing without contact between forme and surface to be printed, e.g. by using electrostatic fields [2, 2006.01]
- 3/00 Printing processes to produce particular kinds of printed work, e.g. patterns** (special designs or pictures *per se* B44F; manufacturing printed circuits using printing techniques H05K 3/12) [1, 5, 2006.01]
- 3/02 • Maps; Sea or meteorological charts [1, 2006.01]
- 3/04 • Music [1, 2006.01]
- 3/06 • Veined printings; Fluorescent printings; Stereoscopic images; Imitated patterns, e.g. tissues, textiles [1, 5, 2006.01]
- 3/10 • Watermarks [1, 2006.01]
- 3/12 • Transfer pictures or the like, e.g. decalcomanias [1, 2006.01]
- 3/14 • Security printing [1, 2006.01]
- 3/16 • Braille printing (typewriters or selective printing mechanisms for Braille printing B41J 3/32) [1, 2, 2006.01]
- 3/18 • Particular kinds of wallpapers [1, 2006.01]
- 5/00 Duplicating or marking methods; Sheet materials for use therein** (by using light-sensitive materials G03; electrography, magnetography G03G) [1, 2006.01]
- 5/025 • by transferring ink from the master sheet [4, 2006.01]
- 5/03 • • by pressure [4, 2006.01]
- 5/035 • • by sublimation or volatilisation of design [4, 2006.01]
- 5/04 • • using solvent-soluble dyestuffs on the master sheet, e.g. alcohol-soluble [1, 5, 2006.01]
- 5/06 • • using master sheets coated with jelly-like materials, e.g. gelatin [1, 2006.01]
- 5/08 • • • Sheet materials therefor [1, 2006.01]
- 5/10 • by using carbon paper or the like [1, 2006.01]
- 5/124 • using pressure to make a masked colour visible, e.g. to make a coloured support visible, to create an opaque or transparent pattern, or to form colour by uniting colour-forming components [5, 2006.01]
- 5/128 • • Desensitisers; Compositions for fault correction, detection or identification of the layers [5, 2006.01]
- 5/132 • • Chemical colour-forming components; Additives or binders therefor [5, 2006.01]
- 5/136 • • • Organic colour formers, e.g. leuco dyes [5, 2006.01]
- 5/145 • • • • with a lactone or lactam ring [5, 2006.01]
- 5/15 • • • • Spiro-pyrans [5, 2006.01]
- 5/155 • • • Colour-developing components, e.g. acidic compounds; Additives or binders therefor; Layers containing such colour-developing components, additives or binders [5, 2006.01]
- 5/165 • • characterised by the use of microcapsules; Special solvents for incorporating the ingredients [5, 2006.01]
- 5/20 • using electric current (B41M 5/24 takes precedence) [1, 5, 2006.01]
- 5/24 • Ablative recording, e.g. by burning marks; Spark recording [1, 5, 2006.01]
- 5/26 • Thermography (B41M 5/20, B41M 5/24 take precedence; photothermographic systems G03C 1/498) [1, 5, 2006.01]
- 5/28 • • using thermo-chromic compounds or layers containing liquid crystals, microcapsules, bleachable dyes or heat decomposable compounds, e.g. gas liberating [5, 2006.01]
- 5/30 • • using chemical colour formers (B41M 5/34 takes precedence) [5, 2006.01]
- 5/32 • • • one component thereof being a heavy metal compound [5, 2006.01]
- 5/323 • • • Organic colour formers, e.g. leuco dyes [2006.01]
- 5/327 • • • with a lactone or lactam ring [2006.01]
- 5/333 • • • Colour developing components therefor, e.g. acidic compounds [2006.01]
- 5/337 • • • Additives; Binders [2006.01]
- 5/34 • • Multicolour thermography [5, 2006.01]
- 5/36 • • using a polymeric layer, which may be particulate and which is deformed or structurally changed with modification of its properties, e.g. of its optical, hydrophobic-hydrophilic, solubility or permeability properties [5, 2006.01]
- 5/382 • • Contact transfer or sublimation processes (sublistatic printing B41M 5/035; ink-, dye- or pigment-receptive coatings B41M 5/50) [2006.01]
- 5/385 • • • characterised by the transferable dyes or pigments [2006.01]
- 5/388 • • • • Azo dyes [2006.01]

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- 5/39 • • • • Dyes containing one or more carbon-to-nitrogen double bonds, e.g. azomethine [2006.01]
- 5/392 • • • Additives other than colour forming substances, dyes or pigments, e.g. sensitisers, transfer promoting agents [2006.01]
- 5/395 • • • • Macromolecular additives, e.g. binders [2006.01]
- 5/398 • • Processes based on the production of stickiness patterns using powders [2006.01]
- 5/40 • • characterised by the base, intermediate or covering layers; Heat, radiation filtering or absorbing means or layers; combined with layers or compositions suitable for other methods of image registration; Special originals for reproduction by thermography [5, 2006.01]
- 5/41 • • • Base layers [2006.01]
- 5/42 • • • Intermediate or covering layers [2006.01]
- 5/44 • • • • characterised by the macromolecular compounds [2006.01]
- 5/46 • • • characterised by the light-to-heat converting means; characterised by the heat or radiation filtering or absorbing means or layers [2006.01]
- 5/48 • • • combined with other image registration layers or compositions; Special originals for reproduction by thermography [2006.01]
- 5/50 • Recording sheets characterised by the coating used to improve ink, dye or pigment receptivity, e.g. for ink-jet or thermal dye transfer recording (printing on pretreated paper B41M 1/36) [2006.01]
- 5/52 • • Macromolecular coatings [2006.01]
- 7/00 After-treatment of printed works, e.g. heating, irradiating [1, 2006.01]**
- 7/02 • Dusting; Varnishing (devices for treating the surfaces of sheets, webs, or other articles in connection with printing B41F 23/00, B41L 23/00) [1, 2006.01]
- 9/00 Processes wherein make-ready devices are used (make-ready devices *per se* B41N 6/00) [1, 5, 2006.01]**
- 9/02 • Relief make-readies [1, 2006.01]
- 9/04 • • photomechanical [1, 2006.01]
- 99/00 Subject matter not provided for in other groups of this subclass [2006.01]**

**B41N PRINTING PLATES OR FOILS (photosensitive materials G03); MATERIALS FOR SURFACES USED IN PRINTING MACHINES FOR PRINTING, INKING, DAMPING, OR THE LIKE; PREPARING SUCH SURFACES FOR USE OR CONSERVING THEM**

- 1/00 Printing plates or foils; Materials therefor [1, 2006.01]**
- 1/02 • made of stone [1, 2006.01]
- 1/04 • metallic [1, 2006.01]
- 1/06 • • for relief printing or intaglio printing [1, 2006.01]
- 1/08 • • for lithographic printing [1, 2006.01]
- 1/10 • • • multiple [1, 2006.01]
- 1/12 • non-metallic other than stone [1, 2006.01]
- 1/14 • • Lithographic printing foils [1, 2006.01]
- 1/16 • Curved printing plates, especially cylinders [1, 2006.01]
- 1/18 • • made of stone [1, 2006.01]
- 1/20 • • made of metal [1, 2006.01]
- 1/22 • • made of other substances [1, 2006.01]
- 1/24 • Stencils; Stencil materials; Carriers therefor (stencilling apparatus for office or other commercial use B41L 13/00) [1, 2006.01]
- 3/00 Preparing for use or conserving printing surfaces [1, 2006.01]**
- 3/03 • Chemical or electrical pretreatment [5, 2006.01]
- 3/04 • Graining or abrasion by mechanical means (chemical graining B41N 3/03) [1, 5, 2006.01]
- 3/06 • by use of detergents [1, 2006.01]
- 3/08 • Damping; Neutralising or similar differentiation treatments of lithographic printing formes [1, 5, 2006.01]
- 6/00 Mounting boards; Make-ready devices, e.g. underlays, overlays; Attaching by chemical means, e.g. vulcanising [5, 2006.01]**
- 6/02 • Chemical means for fastening printing formes on mounting boards [5, 2006.01]
- 7/00 Shells for rollers of printing machines [1, 2006.01]**
- 7/02 • of leather [1, 2006.01]
- 7/04 • for damping rollers [1, 2006.01]
- 7/06 • for inking rollers [5, 2006.01]
- 10/00 Blankets or like coverings; Coverings for wipers for intaglio printing (wipers for intaglio printing B41F 9/08) [5, 2006.01]**
- 10/02 • Blanket structure [5, 2006.01]
- 10/04 • • multi-layer [5, 2006.01]
- 10/06 • • facilitating fastening to, or location on, supports [5, 2006.01]
- 11/00 Stereotype mats [1, 2006.01]**
- 99/00 Subject matter not provided for in other groups of this subclass [2006.01]**