

**CPC****COOPERATIVE PATENT CLASSIFICATION****B41F**

**PRINTING MACHINES OR PRESSES**( machines for manufacturing footwear incorporating printing or embossing apparatus [A43D](#) , e.g. [A43D 8/26](#) , [A43D 95/14](#) ; presses in general [B30B](#) ; making of printing surfaces [B41C](#) , [B41D](#) ; manifolding devices, office printing machines [B41L](#) ; stencilling [B41L](#) , {[B44D](#)} ; printing processes not dependent on the use of special machines [B41M](#) ; duplicating or marking by sublimation or volatilisation of design [B41M 5/035](#) ; thermography [B41M 5/26](#) ; embossing decorations or marks [B44B 5/00](#) ; { applying transfers or decalcomanias [B44C 1/16](#)} ; handling thin or filamentary material [B65H](#) ; electrography, electrophotography, magnetography [G03G](#))

**NOTE**

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

**B41F 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**

**B41F 1/02**

- . Hand-operated platen presses

**B41F 1/04**

- . for mono-impression printing, e.g. on sheets

**B41F 1/06**

- . . with platen maintained parallel to bed during movement( [preparing stereotype matrices using presses B41D 1/06](#) ; { presses [B30B](#)})

**B41F 1/08**

- . . on webs

**B41F 1/10**

- . for multi-impression printing in one or more colours, e.g. on webs

**B41F 1/12**

- . . on sheets

**B41F 1/14**

- . . . using swinging platens, or forme supports

**B41F 1/16**

- . for offset printing{( [pad printing B41F 17/001](#))}

**B41F 1/18**

- . for lithography

**B41F 1/20**

- . for perfecting sheets, i.e. for printing on both sides of sheets

**B41F 1/22**

- . specially adapted for printing heads, e.g. letter heads

**B41F 1/24**

- . specially adapted for proof printing

**B41F 1/26**

- . Details

**B41F 1/265**

- . . {[Conveying webs\( in general B65H\)](#)}

**B41F 1/28**

- . . Sheet-conveying, -aligning or -clamping devices([in general B65H](#))

**B41F 1/30**

- . . . using rotary grippers

**B41F 1/32**

- . . . using air pressure, e.g. vacuum

- B41F 1/34 . . . Registering devices, e.g. gauges
  - B41F 1/36 . . . Clamps for conveying sheets and for holding same on the platens{ [clamps in manifolding devices B41L 3/02](#)}
  - B41F 1/38 . . Platens or type-beds
  - B41F 1/40 . . Inking units{( [for pad printing B41F 17/001](#))}
  - B41F 1/42 . . . using flat inking elements, e.g. discs
  - B41F 1/44 . . . using inking ribbons
  - B41F 1/46 . . . using rollers
  - B41F 1/48 . . . pivoting around the platen or base
  - B41F 1/50 . . . supported on carriages for movement in or on runways
  - B41F 1/52 . . . . Carriage driving gear
  - B41F 1/54 . . Printing-pressure control devices
  - B41F 1/56 . . Auxiliary devices
  - B41F 1/565 . . . {[Numbering devices](#)( [stamping numbering devices B41K](#))}
  - B41F 1/58 . . . Arrangements of counting devices for counting sheets
  - B41F 1/60 . . Safety devices
  - B41F 1/62 . . . for preventing injury to operator
  - B41F 1/64 . . . . to the hands of the operator
  - B41F 1/66 . . . responsive to incorrect operating conditions
- B41F 3/00      Cylinder presses, i.e. presses essentially comprising at least one cylinder co-operating with at least one flat type-bed**
- B41F 3/02 . with impression cylinder or cylinders rotating unidirectionally
  - B41F 3/04 . . intermittently; Stop-cylinder presses
  - B41F 3/06 . . continuously
  - B41F 3/08 . . . Single-revolution presses
  - B41F 3/10 . . . Two-revolution presses
  - B41F 3/12 . . Twin presses, i.e. with more than one cylinder or type-bed
  - B41F 3/14 . with impression cylinder or cylinders rotating in opposite directions during each working cycle
  - B41F 3/16 . . Twin presses, i.e. with more than one cylinder or type-bed
  - B41F 3/18 . of special construction or for particular purposes
  - B41F 3/20 . . with fixed type-beds and travelling impression cylinders
  - B41F 3/22 . . . with more than one type-bed
  - B41F 3/24 . . . with cylinders travelling around type-beds having upper and lower printing surfaces
  - B41F 3/26 . . with type-beds and impression cylinders simultaneously movable relative to one another
  - B41F 3/28 . . Proof-print presses for relief printing, lithography or intaglio printing, i.e. presses for checking accuracy of printing surfaces

- B41F 3/30 .. for lithography( [proof-print presses B41F 3/28](#))
- B41F 3/32 ... Damping devices
- B41F 3/34 ... for offset printing
- B41F 3/36 .. for intaglio or heliogravure printing( [proof-print presses B41F 3/28](#))
- B41F 3/38 ... Wiping mechanisms
- B41F 3/40 .. for perfecting sheets, i.e. for printing on both sides thereof
- B41F 3/42 .. for multicolour printing on sheets
- B41F 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
  
- B41F 3/46 . Details
- B41F 3/48 .. Press frames
- B41F 3/51 .. Type-beds; Supports therefor([B41F 3/52 takes precedence](#) )
- B41F 3/52 .. Apparatus for cooling, heating, or drying printing surfaces
- B41F 3/54 .. Impression cylinders; Supports therefor( [blankets or like coverings B41N 10/00](#))
- B41F 3/56 ... Devices for adjusting cylinders relative to type-beds and setting in adjusted position
- B41F 3/58 .. Driving, synchronising, or control gear
- B41F 3/60 ... for type-beds
- B41F 3/62 .... Applications of linkwork or gearing for producing reciprocatory or angular motion
- B41F 3/64 ..... of crank motions
- B41F 3/66 ..... of rack-and-pinion gearing
- B41F 3/68 ..... with pinion rotating unidirectionally
- B41F 3/70 .... Applications of directly-coupled motors
- B41F 3/72 ..... of fluid motors
- B41F 3/74 .... Applications of clutches
- B41F 3/76 .... Applications of braking devices or of devices for stopping type-bed in registered position
- B41F 3/78 ..... Air cushions
- B41F 3/80 ... for impression cylinders
- B41F 3/81 .. Inking units
  
- B41F 3/82 . Auxiliary devices
- B41F 3/84 .. Arrangements of counting devices( [in printing machines in general B41F 33/02](#))
- B41F 3/86 .. Numbering devices

**Guidance heading: Rotary machines**

**B41F 5/00 Rotary letterpress machines**{ [office printing machines B41L 15/00](#)}

- B41F 5/02 . for printing on sheets

- B41F 5/04 . for printing on webs
- B41F 5/06 .. with several printing units in sequential arrangement
- B41F 5/08 .. with several printing units in both superimposed and sequential arrangement
- B41F 5/10 .. with several printing units arranged side by side
- B41F 5/12 .. for printing on one side and on the other side of webs between the same forme and impression cylinders
- B41F 5/14 .. with several impression cylinders arranged around a forme cylinder
- B41F 5/16 .. for multicolour printing
- B41F 5/18 ... using one impression cylinder co-operating with several forme cylinders
- B41F 5/20 . specially adapted for proof printing
- B41F 5/22 . for indirect printing
- B41F 5/24 . for flexographic printing
- B41F 7/00 Rotary lithographic machines{ such office printing machines [B41L 7/00](#)}**
- B41F 7/02 . for offset printing
- B41F 7/025 .. {Multicolour printing or perfecting on sheets or on one or more webs, in one printing unit}
- B41F 7/04 .. using printing units incorporating one forme cylinder, one transfer cylinder, and one impression cylinder, e.g. for printing on webs
- B41F 7/06 ... for printing on sheets
- B41F 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
- B41F 7/10 .. using one impression cylinder co-operating with several transfer cylinders for printing on sheets or webs, e.g. satellite-printing units
- B41F 7/12 .. using two cylinders one of which serves two functions, e.g. as a transfer and impression cylinder in perfecting machines
- B41F 7/14 .. with two or more impression cylinders coacting with a single transfer cylinder
- B41F 7/15 ... for printing on more than one web simultaneously
- B41F 7/16 . for printing on non-deformable material, e.g. sheet metal
- B41F 7/18 . specially adapted for proof printing
- B41F 7/20 . Details
- B41F 7/24 .. Damping devices
- B41F 7/26 ... using transfer rollers
- B41F 7/265 .... {for damping from the inside of the cylinders}
- B41F 7/28 ... using brushes
- B41F 7/30 ... using spraying elements
- B41F 7/32 ... Ducts, containers, or like supply devices for liquids

- B41F 7/34 . . . Endless bands
- B41F 7/36 . . . Inking-rollers serving also to apply ink repellent
- B41F 7/37 . . . with supercooling for condensation of air moisture( [cooling forme or impression cylinders B41F 13/22](#) ; { [cooling ink or ink rollers B41F 31/002](#)})
- B41F 7/38 . . . Absorbent pads
- B41F 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](#))

## **B41F 9/00 Rotary intaglio printing presses**

- B41F 9/001 . {Heliostatic printing}
- B41F 9/002 . {Sheet printing presses([B41F 9/021 takes precedence](#) )}
- B41F 9/003 . {Web printing presses([B41F 9/023 takes precedence](#) )}
- B41F 9/004 . . {Printing two webs with the same printing cylinder}
- B41F 9/005 . . {Printing on two sides of the same web}
- B41F 9/006 . . . {simultaneously}
- B41F 9/007 . . . {with the same printing cylinder}
- B41F 9/008 . {Means for preventing egress of vapours}
- B41F 9/009 . {Reversible printing presses([B41F 9/02 takes precedence](#) )}
- B41F 9/01 . for indirect printing([B41F 9/02 takes precedence](#) )
- B41F 9/02 . for multicolour printing
- B41F 9/021 . . {Sheet printing presses}
- B41F 9/023 . . {Web printing presses}
- B41F 9/025 . . . {with horizontally arranged printing units}
- B41F 9/026 . . . {with vertically arranged printing units}
- B41F 9/028 . . . {of the satellite type}
- B41F 9/04 . specially adapted for proof printing
- B41F 9/06 . Details
- B41F 9/061 . . {Inking devices}
- B41F 9/063 . . . {Using inking rollers}
- B41F 9/065 . . . {Using inking rails}
- B41F 9/066 . . . {Enclosures}
- B41F 9/068 . . . {End seals between cylinder and housing}
- B41F 9/08 . . Wiping mechanisms
- B41F 9/10 . . . Doctors, scrapers, or like devices

|             |       |   |
|-------------|-------|---|
| B41F 9/1009 | ....  | {with reciprocating movement}                     |
| B41F 9/1018 | ....  | {using a wiping cylinder}                         |
| B41F 9/1027 | ....  | {Tripping devices}                                |
| B41F 9/1036 | ....  | {Clamping and adjusting devices}                  |
| B41F 9/1045 | ..... | {using fluid pressure}                            |
| B41F 9/1054 | ....  | {Sharpening, honing devices}                      |
| B41F 9/1063 | ....  | {Seals between blades and cylinder}               |
| B41F 9/1072 | ....  | {Blade construction}                              |
| B41F 9/1081 | ....  | {using two or more blades}                        |
| B41F 9/109  | ....  | {exchanging doctor blades}                        |
| B41F 9/12   | ...   | Absorbent pads                                    |
| B41F 9/14   | ...   | Continuous flexible surfaces, e.g. endless bands  |
| B41F 9/16   | ...   | Removing or recovering ink from wiping mechanisms |
| B41F 9/18   | ..    | Auxiliary devices for exchanging forme cylinders  |

**B41F 11/00**      **Rotary presses or machines having forme cylinder carrying a plurality of printing surfaces, or for performing letterpress, lithographic, or intaglio processes selectively or in combination**

|            |   |   |
|------------|---|---|
| B41F 11/02 | . | for securities( <a href="#">security printing B41M 3/14</a> ) |
|------------|---|---|

**B41F 13/00**      **Common details of rotary presses or machines**

|              |    |  |
|--------------|----|--|
| B41F 13/0008 | .  | {Driving devices( <a href="#">B41F 13/004</a> and <a href="#">B41F 13/008</a> take precedence )}   |
| B41F 13/0016 | .  | {Storage devices for printing cylinders}   |
| B41F 13/0024 | .  | {Frames}   |
| B41F 13/0032 | .  | {Auxiliary numbering devices}  |
| B41F 13/004  | .  | Electric or hydraulic features of drives   |
| B41F 13/0045 | .. | {Electric driving devices}   |
| B41F 13/008  | .  | Mechanical features of drives, e.g. gears, clutches  |
| B41F 13/012  | .. | Taking-up backlash{( <a href="#">devices for taking-up backlash in general F16H 55/00</a> , e.g. <a href="#">F16H 55/18</a> )}   |
| B41F 13/016  | .  | Brakes   |
| B41F 13/02   | .  | Conveying or guiding webs through presses or machines( <a href="#">web handling in general B65H</a> , e.g. <a href="#">step-by-step advancement B41F 21/00</a> , turning or reversing <a href="#">B65H 23/32</a> ) |
| B41F 13/025  | .. | {Registering devices}  |
| B41F 13/03   | .. | Threading webs into printing machines  |

- B41F 13/04 .. intermittently
- B41F 13/06 .. Turning-bar arrangements
- B41F 13/08 . Cylinders
- B41F 13/085 .. {with means for preventing or damping vibrations or shocks}
- B41F 13/10 .. Forme cylinders
- B41F 13/11 ... Gravure cylinders{( attaching cylindrical formes [B41F 27/105](#))}
- B41F 13/12 ... Registering devices
- B41F 13/14 .... with means for displacing the cylinders
- B41F 13/16 .... with means for displacing the printing formes on the cylinders
- B41F 13/18 .. Impression cylinders
- B41F 13/187 ... for rotogravure
- B41F 13/193 .. Transfer cylinders; Offset cylinders{( attaching blankets [B41F 30/04](#))}
- B41F 13/20 .. Supports for bearings or supports for forme, offset, or impression cylinders
- B41F 13/21 ... Bearer rings
- B41F 13/22 .. Means for cooling or heating forme or impression cylinders
- B41F 13/24 .. Cylinder-tripping devices; Cylinder-impression adjustments
- B41F 13/26 ... Arrangement of cylinder bearings
- B41F 13/28 .... Bearings mounted eccentrically of the cylinder axis
- B41F 13/30 .... Bearings mounted on sliding supports
- B41F 13/32 .... Bearings mounted on swinging supports
- B41F 13/34 ... Cylinder lifting or adjusting devices
- B41F 13/36 .... Cams, eccentrics, wedges, or the like
- B41F 13/38 .... electrically or magnetically operated
- B41F 13/40 .... fluid-pressure operated
- B41F 13/42 .. Guards or covers, e.g. for preventing ingress or egress of foreign matter
- B41F 13/44 . Arrangements to accomodate interchangeable cylinders of different sizes to enable machine to print on areas of different sizes
- B41F 13/46 . Printing units for inserting latest news
- B41F 13/48 . Arrangements to enable printing to be effected over selected areas of a single forme cylinder( by inking selected areas [B41F 31/18](#))
- B41F 13/50 .. by effecting relative movement of forme and impression cylinders during printing cycle
- B41F 13/52 .. by projecting and retracting parts of the surface of the forme cylinder
- B41F 13/54 . Auxiliary folding, cutting, collecting, or depositing of sheets or webs( in general [B26D](#) , [B65H](#))
- B41F 13/56 .. Folding or cutting
- B41F 13/58 ... lengthwise
- B41F 13/60 ... crosswise

- B41F 13/62 . . . Folding-cylinders or drums
- B41F 13/64 . . Collecting( gathering sheets or signatures in bookbinding [B42C 1/00](#))
- B41F 13/66 . . . and stapling
- B41F 13/68 . . Adding inserts
- B41F 13/70 . . Depositing
- B41F 13/705 . . . {Interleaving slip sheets}

**B41F 15/00**      **Screen printers**( for selective printing [B41J 2/005](#))

- B41F 15/02 . Manually-operable devices
- B41F 15/04 . . for multicolour printing
- B41F 15/06 . . with auxiliary equipment, e.g. for drying printed articles
- B41F 15/08 . Machines
- B41F 15/0804 . . {for printing sheets}
- B41F 15/0809 . . . {with cylindrical or belt-like screens}
- B41F 15/0813 . . . {with flat screens}
- B41F 15/0818 . . . . {with a stationary screen and a moving squeegee}
- B41F 15/0822 . . . . . {on a stack of sheets}
- B41F 15/0827 . . . . {with a stationary squeegee and a moving screen}
- B41F 15/0831 . . {for printing webs}
- B41F 15/0836 . . . {by means of cylindrical screens or screens in the form of endless belts}
- B41F 15/084 . . . . {simultaneously printing on two sides}
- B41F 15/0845 . . . {with flat screens}
- B41F 15/085 . . . . {with a stationary screen and a moving squeegee}
- B41F 15/0854 . . . . {with a stationary squeegee and a moving screen}
- B41F 15/0859 . . . . {movable on a long printing table}
- B41F 15/0863 . . {with a plurality of flat screens mounted on a turntable}
- B41F 15/0868 . . {for printing on filamentary articles}
- B41F 15/0872 . . {for printing on articles having essentially cylindrical surfaces}
- B41F 15/0877 . . . {of varying cross-section}
- B41F 15/0881 . . {for printing on polyhedral articles}
- B41F 15/0886 . . {for printing on conical or frusto-conical surfaces}
- B41F 15/089 . . {for printing on essentially spherical surfaces}
- B41F 15/0895 . . {for printing on curved surfaces not otherwise provided for}
- B41F 15/10 . . for multicolour printing
- B41F 15/12 . . with auxiliary equipment, e.g. for drying printed articles
- B41F 15/14 . Details
- B41F 15/16 . . Printing tables
- B41F 15/18 . . . Supports for workpieces



|                   |      |   |
|-------------------|------|---|
| B41F 15/20        | .... | with suction-operated elements  |
| B41F 15/22        | .... | for single sheets   |
| B41F 15/24        | .... | for webs  |
| B41F 15/26        | .... | for articles with flat surfaces   |
| B41F 15/28        | .... | for elongated flat articles, e.g. strips, bands   |
| B41F 15/30        | .... | for articles with curved surfaces   |
| B41F 15/32        | .... | for articles with conical surfaces  |
| B41F 15/34        | ..   | Screens, Frames; Holders therefor   |
| B41F 15/36        | ...  | flat  |
| B41F 15/38        | ...  | curved  |
| B41F 15/40        | ..   | Inking units  |
| B41F 15/405       | ...  | {Spraying apparatus}  |
| B41F 15/42        | ...  | comprising squeegees or doctors   |
| B41F 15/423       | .... | {Driving means for reciprocating squeegees}   |
| B41F 15/426       | .... | {the squeegees or doctors being magnetically attracted}   |
| B41F 15/44        | ..   | squeegees or doctors( <a href="#">doctors of rotary intaglio printing presses B41F 9/10</a> ){ <a href="#">for photographic purposes G03D 15/00</a> } |
| B41F 15/46        | ...  | with two or more operative parts  |
| <b>B41F 16/00</b> |      | <b>Transfer printing apparatus</b> ( <a href="#">apparatus or machines for applying decalcomanias B65C</a> )  |
| B41F 16/0006      | .    | {for printing from an inked or preprinted foil or band}   |
| B41F 16/0013      | ..   | {combined with other printing presses}  |
| B41F 16/002       | ..   | {Presses of the rotary type}  |
| B41F 16/0026      | ...  | {with means for applying print under heat and pressure, e.g. using heat activable adhesive}   |
| B41F 16/0033      | ...  | {with means for applying print under pressure only, e.g. using pressure sensitive adhesive}   |
| B41F 16/004       | ..   | {Presses of the reciprocating type}   |
| B41F 16/0046      | ...  | {with means for applying print under heat and pressure, e.g. using heat activable adhesive}   |
| B41F 16/0053      | ...  | {with means for applying print under pressure only, e.g. using pressure sensitive adhesive}   |
| B41F 16/006       | ..   | {Arrangements for moving, supporting or positioning the printing foil or band}  |
| B41F 16/0066      | ..   | {Printing dies or forms}  |
| B41F 16/0073      | ..   | {with means for printing on specific materials or products}   |
| B41F 16/008       | ...  | {for printing on three-dimensional articles}  |
| B41F 16/0086      | .... | {for printing on articles with cylindrical surfaces}  |
| B41F 16/0093      | ..   | {Attachments or auxiliary devices}  |
| B41F 16/02        | .    | for textile material  |

|                   |   |
|-------------------|---|
| <b>B41F 17/00</b> | <b>Printing apparatus or machines of special types or for particular purposes, not otherwise provided for</b> ( hand stamps, plier-like tools for printing or punching tickets or the like <a href="#">B41K</a> ; addressographs or other office printing equipment <a href="#">B41L</a> ; coding or marking of packaging material or of completed packages in packaging machines <a href="#">B65B 61/00</a> ; ticket printing and issuing apparatus <a href="#">G07B</a> ) |
| B41F 17/001       | . {Pad printing apparatus or machines}  |
| B41F 17/002       | . {Supports of workpieces in machines for printing on hollow articles}  |
| B41F 17/003       | . {Special types of machines for printing textiles( using the screen printing process <a href="#">B41F 15/00</a> ; printing on knitted fabrics <a href="#">B41F 17/38</a> )}  |
| B41F 17/005       | . . {Supports for workpieces; Devices for securing the workpieces to the supports}  |
| B41F 17/006       | . {for printing on curved surfaces not otherwise provided for}  |
| B41F 17/007       | . {Use of printing belts}   |
| B41F 17/008       | . {Numbering devices for printing on articles other than sheets or webs}  |
| B41F 17/02        | . for printing books or manifolded sets   |
| B41F 17/04        | . for printing calendars  |
| B41F 17/08        | . for printing on filamentary or elongated articles, or on articles with cylindrical surfaces   |
| B41F 17/10        | . . on articles of indefinite length, e.g. wires, hoses, tubes, yarns   |
| B41F 17/12        | . . . at an angle to axis   |
| B41F 17/13        | . . . for printing on rolls of material, the roll serving as impression cylinder, e.g. strip printers   |
| B41F 17/14        | . . on articles of finite length  |
| B41F 17/16        | . . . on end or bottom surfaces thereof   |
| B41F 17/18        | . . . on curved surfaces of articles of varying cross-section, e.g. bottles, lamp glasses   |
| B41F 17/20        | . . . on articles of uniform cross-section, e.g. pencils, rulers, resistors   |
| B41F 17/22        | . . . . by rolling contact  |
| B41F 17/24        | . for printing on flat surfaces of polyhedral articles  |
| B41F 17/26        | . . by rolling contact  |
| B41F 17/28        | . for printing on curved surfaces of conical or frusto-conical articles   |
| B41F 17/30        | . for printing on curved surfaces of essentially spherical, or part-spherical, articles   |
| B41F 17/32        | . . on lamp bulbs   |
| B41F 17/34        | . . on articles with surface irregularities, e.g. fruits, nuts  |
| B41F 17/36        | . for printing on tablets, pills, or like small articles  |

B41F 17/38 . for printing on knitted fabrics

**B41F 19/00** **Apparatus or machines for carrying out printing operations combined with other operations**( auxiliary perforating apparatus associated with printing devices [B41G 7/00](#) ; coding or marking in association with packaging [B65B 61/00](#) ; label dispensers having printing equipment [B65C](#))

B41F 19/001 . {with means for coating or laminating}

B41F 19/002 . {with means for applying specific material other than ink}

B41F 19/004 .. {with means for applying adhesive}

B41F 19/005 .. {with means for applying metallic, conductive or chargeable material}

B41F 19/007 . {with selective printing mechanisms, e.g. ink-jet or thermal printers}

B41F 19/008 . {with means for stamping or cutting out}

B41F 19/02 . with embossing( printing with a printer's forme combined with embossing [B41M 1/24](#))

B41F 19/04 .. using intaglio printing formes and wipers

B41F 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"

B41F 19/062 ... {Presses of the rotary type}

B41F 19/064 ... {Presses of the reciprocating type}

B41F 19/066 .... {hand-driven}

B41F 19/068 .... {motor-driven}

B41F 19/08 . simultaneous moulding and printing

**Guidance heading:** **Common details of printing machinery**

**B41F 21/00** **Devices for conveying sheets through printing apparatus or machines**( through platen presses [B41F 1/28](#) ; feeding sheets to or from printing apparatus or machines [B65H](#) ; { through manifolding apparatus or the like [B41L 21/00](#)})

B41F 21/005 . {Electrostatic holding down devices}

B41F 21/02 . Pins([B41F 21/12](#) , [B41F 21/14](#) take precedence )

B41F 21/04 . Grippers({[B41F 21/08](#) , [B41F 21/10](#)}[B41F 21/12](#) , [B41F 21/14](#) take precedence )

B41F 21/05 .. In-feed grippers([B41F 21/06](#) takes precedence )

B41F 21/06 .. Suction-operated grippers

B41F 21/08 . Combinations of endless conveyors and grippers

B41F 21/10 . Combinations of transfer drums and grippers

|                   |   |
|-------------------|---|
| B41F 21/102       | .. {with pneumatic means(B41F 21/108 takes precedence )}  |
| B41F 21/104       | .. {Gripper details(B41F 21/102 takes precedence )}   |
| B41F 21/106       | .. {for reversing sheets, e.g. for perfecting machine}  |
| B41F 21/108       | ... {with pneumatic means}  |
| B41F 21/12        | . Adjusting leading edges, e.g. front stops   |
| B41F 21/14        | . Adjusting lateral edges, e.g. side stops  |
| <b>B41F 22/00</b> | <b>Means preventing smudging of machine parts or printed articles(B41F 23/00 takes precedence )</b>   |
| B41F 22/005       | . {using a back grey cloth}   |
| <b>B41F 23/00</b> | <b>Devices for treating the surfaces of sheets, webs, or other articles in connection with printing( cleaning in general B08B ; as a final step in the manufacture of such articles, see appropriate subclasses, e.g. B29C 71/00 , D21H 23/00 or D21H 25/00 ; { in manifolding apparatus or the like B41L 23/00} ; surface treatment in general B44D , of metal C23G)</b> |
| B41F 23/002       | . {cleaning devices for sheets or webs}   |
| B41F 23/005       | . {of non-flat articles}  |
| B41F 23/007       | . {with heat treatment before printing}   |
| B41F 23/02        | . by dampening( in rotary lithographic machines B41F 7/24){(B41F 23/005 takes precedence )}   |
| B41F 23/04        | . by heat drying, by cooling, by applying powders{(B41F 23/005 takes precedence )}  |
| B41F 23/0403      | .. {Drying webs(B41F 23/0486 takes precedence )}  |
| B41F 23/0406      | ... {by radiation(B41F 23/0436 takes precedence )}  |
| B41F 23/0409      | .... {Ultra-violet dryers}  |
| B41F 23/0413      | .... {Infra-red dryers}   |
| B41F 23/0416      | ... {by conduction(B41F 23/0436 takes precedence )}   |
| B41F 23/042       | .... {using heated rolls}   |
| B41F 23/0423      | ... {by convection(B41F 23/0436 takes precedence )}   |
| B41F 23/0426      | .... {using heated air}   |
| B41F 23/043       | .... {using gas or fuel burners}  |
| B41F 23/0433      | .... {using steam}  |
| B41F 23/0436      | ... {using a combination of radiation, conduction or convection}  |
| B41F 23/044       | .. {Drying sheets, e.g. between two printing stations(B41F 23/0486 takes precedence )}  |
| B41F 23/0443      | ... {after printing}  |
| B41F 23/0446      | .... {Wicket conveyers}   |

- B41F 23/045 . . . {by radiation}
- B41F 23/0453 . . . . {by ultra-violet dryers}
- B41F 23/0456 . . . . {by infrared dryers}
- B41F 23/0459 . . . {by conduction, e.g. using heated rolls}
- B41F 23/0463 . . . {by convection}
- B41F 23/0466 . . . . {by using heated air}
- B41F 23/0469 . . . . {by using gas or fuel burners}
- B41F 23/0473 . . . . {by using steam}
- B41F 23/0476 . . {Cooling([B41F 23/0483](#) takes precedence )}
- B41F 23/0479 . . . {using chill rolls}
- B41F 23/0483 . . {Drying combined with cooling}
- B41F 23/0486 . . {Particular types of dryers}
- B41F 23/0489 . . . {Vacuum dryers}
- B41F 23/0493 . . . {Microwave dryers}
- B41F 23/0496 . . {Proof dryers}
- B41F 23/06 . . Powdering devices, e.g. for preventing set-off
- B41F 23/065 . . . {for thermography}
  
- B41F 23/08 . Print finishing devices, e.g. for glossing prints([B41F 23/005](#) takes precedence )}
  
- B41F 25/00** **Devices for pressing sheets or webs against cylinders, e.g. for smoothing purposes**( [apparatus for taking-out curl from webs in general B65H 23/34](#))
  
- B41F 27/00** **Devices for attaching printing elements or formes to supports**( [attaching by chemical means B41N 6/00](#))
  
- B41F 27/005 . {Attaching and registering printing formes to supports}
- B41F 27/02 . Magnetic devices
- B41F 27/04 . for attaching printing elements to flat type-beds
- B41F 27/06 . for attaching printing elements to forme cylinders
- B41F 27/08 . for attaching printing formes to flat type-beds
- B41F 27/10 . for attaching non-deformable curved printing formes to forme cylinders
- B41F 27/105 . . {for attaching cylindrical printing formes}
  
- B41F 27/12 . for attaching flexible printing formes
- B41F 27/1206 . . {Feeding to or removing from the forme cylinder}
- B41F 27/1212 . . {using pneumatic force}
- B41F 27/1218 . . {comprising printing plate tensioning devices}

- B41F 27/1225 . . . {moving in the printing plate end substantially rectilinearly}
- B41F 27/1231 . . . . {by translatory motion substantially tangential to support surface}
- B41F 27/1237 . . . . {by translatory motion substantially perpendicular to support surface}
- B41F 27/1243 . . . . {by pivotal or swivelling motion, e.g. by means of a rocking lever}
- B41F 27/125 . . . {moving in the printing plate end on a curvilinear path, e.g. by winding on a roll}
- B41F 27/1256 . . . {with two semi-cylinders movable relative to each other}
- B41F 27/1262 . . {without tensioning means}
- B41F 27/1268 . . . {by self-locking or snap-on means}
- B41F 27/1275 . . . {by means of adhesives, staples}
- B41F 27/1281 . . {details of the printing plate ends}
- B41F 27/1287 . . {devices for bending the printing plates or the printing plate ends}
- B41F 27/1293 . . {Devices for filling up the cylinder gap; Devices for removing the filler}

- B41F 27/14 . for attaching printing formes to intermediate supports, e.g. adapter members

**B41F 30/00** **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](#))

- B41F 30/02 . attaching to impression cylinders
- B41F 30/04 . attaching to transfer cylinders
- B41F 30/06 . attaching of endless or like continuously-fed coverings

**B41F 31/00** **Inking arrangements or devices**( [inking units for platen presses B41F 1/40](#) ; [for cylinder presses B41F 3/81](#) ; { [for rotary intaglio printing presses B41F 9/061](#) } ; [applying liquids or other fluent materials to surfaces in general B05](#) ; [inking arrangements or devices for typewriters or selective printing mechanisms B41J](#))

- B41F 31/001 . {Ink mist preventing means}
- B41F 31/002 . {Heating or cooling of ink or ink rollers}
- B41F 31/004 . {Driving means for ink rollers}
- B41F 31/005 . {Ink viscosity control means}
- B41F 31/007 . {Removing water from ink trains}
- B41F 31/008 . {Inking devices for reversible printing presses}
- B41F 31/02 . Ducts, containers, supply or metering devices( [level control in general G05D 9/00](#))
- B41F 31/022 . . {Ink level control devices}
- B41F 31/025 . . {Ducts formed between two rollers}
- B41F 31/027 . . {Ink rail devices for inking ink rollers}

- B41F 31/03 . . Ink agitators
- B41F 31/04 . . with duct-blades or like metering devices
- B41F 31/045 . . . {Remote control of the duct keys}
- B41F 31/05 . . . Positioning devices therefor
- B41F 31/06 . . Troughs or like reservoirs with immersed or partly immersed, rollers or cylinders
- B41F 31/07 . . . for rotogravure
- B41F 31/08 . . with ink ejecting means, e.g. pumps, nozzles
- B41F 31/10 . . Applications of feed or duct rollers( messenger or moving transfer rollers [B41F 31/14](#))
- B41F 31/12 . . . adjustable for regulating supply
- B41F 31/13 . . Means for driving fountain rollers([B41F 13/12 takes precedence](#) )}
- B41F 31/14 . . Applications of messenger or other moving transfer rollers
- B41F 31/15 . Devices for moving vibrator-rollers
- B41F 31/16 . Continuous, e.g. endless, band apparatus
- B41F 31/18 . for inking selected parts of printing formes
- B41F 31/20 . Ink-removing or collecting devices
- B41F 31/22 . for inking from interior of cylinder
- B41F 31/24 . Absorbent pads
- B41F 31/26 . Construction of inking rollers( inking-rollers serving also to apply ink repellent in rotary lithographic machines [B41F 7/36](#))
- B41F 31/28 . Spray apparatus
- B41F 31/30 . Arrangements for tripping, lifting, adjusting, or removing inking rollers; Supports, bearings, or forks therefor
- B41F 31/301 . . {Devices for tripping and adjusting form rollers}
- B41F 31/302 . . {Devices for tripping inking devices as a whole}
- B41F 31/304 . . {Arrangements for inking roller bearings, forks or supports([B41F 31/301 takes precedence](#) )}
- B41F 31/305 . . . {Eccentric bearings}
- B41F 31/307 . . . {Sliding bearings}
- B41F 31/308 . . . {Swinging bearings}
- B41F 31/32 . . Lifting or adjusting devices( for damping rollers [B41F 7/40](#))
- B41F 31/34 . . . Cam, eccentric, wedge, or like devices
- B41F 31/36 . . . fluid-pressure operated
- B41F 31/38 . . . magnetically operated

|                   |  |
|-------------------|--|
| <b>B41F 33/00</b> | <b>Indicating, counting, warning, control, or safety devices</b> ( <a href="#">ink supply or metering devices B41F 31/02</a> ; such devices in general, see the relevant subclasses, e.g. counting in general <a href="#">G06M</a> )   |
| B41F 33/0009      | . {Central control units}  |
| B41F 33/0018      | . {Protection means against injury to the operator}  |
| B41F 33/0027      | . {Devices for scanning originals, printing formes or the like for determining or presetting the ink supply}   |
| B41F 33/0036      | . {Devices for scanning or checking the printed matter for quality control}  |
| B41F 33/0045      | .. {for automatically regulating the ink supply}   |
| B41F 33/0054      | . {Devices for controlling dampening}  |
| B41F 33/0063      | . {Devices for measuring the thickness of liquid films on rollers or cylinders}  |
| B41F 33/0072      | . {Devices for measuring the pressure between cylinders or bearer rings}   |
| B41F 33/0081      | . {Devices for scanning register marks}  |
| B41F 33/009       | . {Devices for controlling numbering}  |
| B41F 33/02        | . Arrangements of indicating devices, e.g. counters( <a href="#">arrangements of counting devices in platen presses B41F 1/00</a> , e.g. <a href="#">B41F 1/58</a> ; in cylinder presses <a href="#">B41F 3/84</a> ; in typewriters or selective printing mechanisms <a href="#">B41J 29/20</a> ){ <a href="#">in manifolding apparatus or the like B41L 39/00</a> } |
| B41F 33/025       | .. {Counters}  |
| B41F 33/04        | . Tripping devices or stop-motions({ <a href="#">tripping devices for doctor blades B41F 9/1027</a> ; <a href="#">cylinder-tripping devices of rotary presses or machines B41F 13/24</a> ; arrangements for <a href="#">tripping inking rollers B41F 31/30</a> )   |
| B41F 33/045       | .. {for starting or stopping operation of numbering devices}   |
| B41F 33/06        | .. for starting or stopping operation of sheet or web feed   |
| B41F 33/08        | .. for starting or stopping operation of cylinders   |
| B41F 33/10        | .. for starting or stopping operation of damping or inking units   |
| B41F 33/12        | .. for starting or stopping the machine as a whole   |
| B41F 33/14        | .. Automatic control of tripping devices by feelers, photoelectric devices, pneumatic devices, or other detectors  |
| B41F 33/16        | . Programming systems for automatic control of sequence of operations  |
| B41F 33/18        | . Web break detection( <a href="#">B41F 33/04 takes precedence</a> )   |
| <b>B41F 35/00</b> | <b>Cleaning arrangements or devices</b> { <a href="#">in manifolding apparatus or the like B41L 41/00</a> }  |



- B41F 35/001 . {Devices for cleaning parts removed from the printing machines([B41F 35/003](#) takes precedence )}
- B41F 35/002 . {for dampening rollers}
- B41F 35/003 . {for screen printers or parts thereof}
- B41F 35/004 . . {for cylindrical screens}
- B41F 35/005 . . {for flat screens}
- B41F 35/006 . {for impression cylinders}
- B41F 35/007 . {for supports of workpieces}
- B41F 35/008 . {for doctor blades}
- B41F 35/02 . for forme cylinders
- B41F 35/04 . for inking rollers
- B41F 35/06 . for offset cylinders