

ECLA**EUROPEAN CLASSIFICATION****B41F**

PRINTING MACHINES OR PRESSES (machines for manufacturing footwear incorporating printing or embossing apparatus [A43D](#), e.g. [A43D8/26](#), [A43D95/14](#); presses in general [B30B](#); making of printing surfaces [B41C](#), [B41D](#); manifolding devices, office printing machines [B41L](#); stencilling [B41L](#), [N:[B44D](#)]; printing processes not dependent on the use of special machines [B41M](#); duplicating or marking by sublimation or volatilisation of design [B41M5/035](#); thermography [B41M5/26](#); embossing decorations or marks [B44B5/00](#); [N: applying transfers or decalcomanias [B44C1/16](#)]; handling thin or filamentary material [B65H](#); electrography, electrophotography, magnetography [G03G](#)) [[C9409](#)]

Note

[[N9409](#)]Attention is drawn to Notes 1 and 2 following the title of subclass [B41L](#).

B41F1/00

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

B41F1/02

- . Hand-operated platen presses

B41F1/04

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

B41F1/06

- . . with platen maintained parallel to bed during movement (preparing stereotype matrices using presses [B41D1/06](#); [N: presses [B30B](#)])

B41F1/08

- . . on webs

B41F1/10

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

B41F1/12

- . . on sheets

B41F1/14

- . . . using swinging platens, or forme supports

B41F1/16

- . for offset printing [N: (pad printing [B41F17/00A](#))]

B41F1/18

- . for lithography

B41F1/20

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

B41F1/22

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

B41F1/24

- . specially adapted for proof printing

B41F1/26

- . Details

B41F1/26B

- . . [[N](#): Conveying webs (in general [B65H](#))]

B41F1/28

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

B41F1/30

- . . . using rotary grippers

B41F1/32

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

B41F1/34

- . . . Registering devices, e.g. gauges

B41F1/36

- . . . Clamps for conveying sheets and for holding same on the platens [[N](#): clamps in manifolding devices [B41L3/02](#)]

- B41F1/38 . . Platens or type-beds
- B41F1/40 . . Inking units [N: (for pad printing [B41F17/00A](#))]
- B41F1/42 . . . using flat inking elements, e.g. discs
- B41F1/44 . . . using inking ribbons
- B41F1/46 . . . using rollers
- B41F1/48 . . . pivoting around the platen or base
- B41F1/50 . . . supported on carriages for movement in or on runways
- B41F1/52 . . . Carriage driving gear
- B41F1/54 . . Printing-pressure control devices
- B41F1/56 . . Auxiliary devices
- B41F1/56N . . . [N: Numbering devices (stamping numbering devices [B41K](#))]
- B41F1/58 . . . Arrangements of counting devices for counting sheets
- B41F1/60 . . Safety devices
- B41F1/62 . . . for preventing injury to operator
- B41F1/64 to the hands of the operator
- B41F1/66 . . . responsive to incorrect operating conditions

B41F3/00 Cylinder presses, i.e. presses essentially comprising at least one cylinder co-operating with at least one flat type-bed

- B41F3/02 . with impression cylinder or cylinders rotating unidirectionally
- B41F3/04 . . intermittently; Stop-cylinder presses
- B41F3/06 . . continuously
- B41F3/08 . . . Single-revolution presses
- B41F3/10 . . . Two-revolution presses
- B41F3/12 . . Twin presses, i.e. with more than one cylinder or type-bed
- B41F3/14 . with impression cylinder or cylinders rotating in opposite directions during each working cycle
- B41F3/16 . . Twin presses, i.e. with more than one cylinder or type-bed
- B41F3/18 . of special construction or for particular purposes
- B41F3/20 . . with fixed type-beds and travelling impression cylinders
- B41F3/22 . . . with more than one type-bed
- B41F3/24 . . . with cylinders travelling around type-beds having upper and lower printing surfaces
- B41F3/26 . . with type-beds and impression cylinders simultaneously movable relative to one another
- B41F3/28 . . Proof-print presses for relief printing, lithography or intaglio printing, i.e. presses for checking accuracy of printing surfaces
- B41F3/30 . . for lithography (proof-print presses [B41F3/28](#))
- B41F3/32 . . . Damping devices
- B41F3/34 . . . for offset printing
- B41F3/36 . . for intaglio or heliogravure printing (proof-print presses [B41F3/28](#))

- B41F3/38 . . . Wiping mechanisms
- B41F3/40 . . for perfecting sheets, i.e. for printing on both sides thereof
- B41F3/42 . . for multicolour printing on sheets
- B41F3/44 . . 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

- B41F3/46 . Details
- B41F3/48 . . Press frames
- B41F3/51 . . Type-beds; Supports therefor ([B41F3/52](#) takes precedence)
- B41F3/52 . . Apparatus for cooling, heating, or drying printing surfaces
- B41F3/54 . . Impression cylinders; Supports therefor ([blankets or like coverings B41N10/00](#)) [[C9409](#)]
- B41F3/56 . . . Devices for adjusting cylinders relative to type-beds and setting in adjusted position
- B41F3/58 . . Driving, synchronising, or control gear
- B41F3/60 . . . for type-beds
- B41F3/62 Applications of linkwork or gearing for producing reciprocatory or angular motion
- B41F3/64 of crank motions
- B41F3/66 of rack-and-pinion gearing
- B41F3/68 with pinion rotating unidirectionally
- B41F3/70 Applications of directly-coupled motors
- B41F3/72 of fluid motors
- B41F3/74 Applications of clutches
- B41F3/76 Applications of braking devices or of devices for stopping type-bed in registered position
- B41F3/78 Air cushions
- B41F3/80 . . . for impression cylinders
- B41F3/81 . . Inking units

- B41F3/82 . Auxiliary devices
- B41F3/84 . . Arrangements of counting devices ([in printing machines in general B41F33/02](#))
- B41F3/86 . . Numbering devices

Guide heading: Rotary machines

- B41F5/00** **Rotary letterpress machines** [[N: office printing machines B41L15/00](#)]
- B41F5/02 . for printing on sheets
- B41F5/04 . for printing on webs
- B41F5/06 . . with several printing units in sequential arrangement
- B41F5/08 . . with several printing units in both superimposed and sequential arrangement
- B41F5/10 . . with several printing units arranged side by side
- B41F5/12 . . for printing on one side and on the other side of webs between the same forme and

- impression cylinders
- B41F5/14 . . with several impression cylinders arranged around a forme cylinder
- B41F5/16 . . for multicolour printing
- B41F5/18 . . . using one impression cylinder co-operating with several forme cylinders
- B41F5/20 . specially adapted for proof printing
- B41F5/22 . for indirect printing
- B41F5/24 . for flexographic printing

B41F7/00 Rotary lithographic machines [N: such office printing machines [B41L7/00](#)]

- B41F7/02 . for offset printing
- B41F7/02C . . [N: Multicolour printing or perfecting on sheets or on one or more webs, in one printing unit]
- B41F7/04 . . using printing units incorporating one forme cylinder, one transfer cylinder, and one impression cylinder, e.g. for printing on webs
- B41F7/06 . . . for printing on sheets
- B41F7/08 . . 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 [C9409]
- B41F7/10 . . using one impression cylinder co-operating with several transfer cylinders for printing on sheets or webs, e.g. satellite-printing units [C9409]
- B41F7/12 . . using two cylinders one of which serves two functions, e.g. as a transfer and impression cylinder in perfecting machines [C9409]
- B41F7/14 . . with two or more impression cylinders coacting with a single transfer cylinder [C9409]
- B41F7/15 . . . for printing on more than one web simultaneously [N9409]
- B41F7/16 . for printing on non-deformable material, e.g. sheet metal
- B41F7/18 . specially adapted for proof printing
- B41F7/20 . Details
- B41F7/24 . . Damping devices
- B41F7/26 . . . using transfer rollers
- B41F7/26C [N: for damping from the inside of the cylinders]
- B41F7/28 . . . using brushes
- B41F7/30 . . . using spraying elements
- B41F7/32 . . . Ducts, containers, or like supply devices for liquids
- B41F7/34 . . . Endless bands
- B41F7/36 . . . Inking-rollers serving also to apply ink repellent [C9409]
- B41F7/37 . . . with supercooling for condensation of air moisture (cooling forme or impression cylinders [B41F13/22](#); [N: cooling ink or ink rollers [B41F31/00C](#)]) [N9409]
- B41F7/38 . . . Absorbent pads
- B41F7/40 . . . Devices for tripping or lifting damping rollers; Supporting, adjusting, or removing arrangements therefor (such arrangements or devices for inking rollers)

[B41F31/30](#) [C9409]**B41F9/00****Rotary intaglio printing presses**

- B41F9/00A . [N: Heliostatic printing]
- B41F9/00B . [N: Sheet printing presses ([B41F9/02B](#) takes precedence)]
- B41F9/00C . [N: Web printing presses ([B41F9/02C](#) takes precedence)]
- B41F9/00C1 . . [N: Printing two webs with the same printing cylinder]
- B41F9/00C2 . . [N: Printing on two sides of the same web]
- B41F9/00C2B . . . [N: simultaneously]
- B41F9/00C2C . . . [N: with the same printing cylinder]
- B41F9/00D . [N: Means for preventing egress of vapours]
- B41F9/00E . [N: Reversible printing presses ([B41F9/02](#) takes precedence)]
- B41F9/01 . for indirect printing ([B41F9/02](#) takes precedence)
- B41F9/02 . for multicolour printing
- B41F9/02B . . [N: Sheet printing presses]
- B41F9/02C . . [N: Web printing presses]
- B41F9/02C1 . . . [N: with horizontally arranged printing units]
- B41F9/02C2 . . . [N: with vertically arranged printing units]
- B41F9/02C3 . . . [N: of the satellite type]
- B41F9/04 . specially adapted for proof printing
- B41F9/06 . Details
- B41F9/06B . . [N: Inking devices]
- B41F9/06B2 . . . [N: Using inking rollers]
- B41F9/06B3 . . . [N: Using inking rails]
- B41F9/06B4 . . . [N: Enclosures]
- B41F9/06B5 . . . [N: End seals between cylinder and housing]
- B41F9/08 . . Wiping mechanisms
- B41F9/10 . . . Doctors, scrapers, or like devices
- B41F9/10B [N: with reciprocating movement]
- B41F9/10C [N: using a wiping cylinder]
- B41F9/10D [N: Tripping devices]
- B41F9/10E [N: Clamping and adjusting devices]
- B41F9/10E2 [N: using fluid pressure]
- B41F9/10F [N: Sharpening, honing devices]
- B41F9/10G [N: Seals between blades and cylinder]
- B41F9/10H [N: Blade construction]

- B41F9/10J [N: using two or more blades]
- B41F9/10K [N: exchanging doctor blades]
- B41F9/12 . . . Absorbent pads
- B41F9/14 . . . Continuous flexible surfaces, e.g. endless bands
- B41F9/16 . . . Removing or recovering ink from wiping mechanisms
- B41F9/18 . . Auxiliary devices for exchanging forme cylinders

- B41F11/00 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**

- B41F11/02 . for securities ([security printing B41M3/14](#))

- B41F13/00 Common details of rotary presses or machines**

- B41F13/00A . [N: Driving devices ([B41F13/004](#) and [B41F13/008](#) take precedence)] [C9409]
- B41F13/00C . [N: Storage devices for printing cylinders]
- B41F13/00D . [N: Frames]
- B41F13/00N . [N: Auxiliary numbering devices]
- B41F13/004 . Electric or hydraulic features of drives [N9409]
- B41F13/004B . . [N: Electric driving devices] [N9409]
- B41F13/008 . Mechanical features of drives, e.g. gears, clutches [N9409]
- B41F13/012 . . Taking-up backlash [N: (devices for taking-up backlash in general [F16H55/00](#), e.g. [F16H55/18](#))] [N9409]
- B41F13/016 . Brakes
- B41F13/02 . Conveying or guiding webs through presses or machines ([web handling in general B65H](#), e.g. [step-by-step advancement B41F21/00](#), [turning or reversing B41F23/32](#)) [C0909]
- B41F13/02R . . [N: Registering devices]
- B41F13/03 . . Threading webs into printing machines [N9409]
- B41F13/04 . . intermittently
- B41F13/06 . . Turning-bar arrangements

- B41F13/08 . Cylinders
- B41F13/08A . . [N: with means for preventing or damping vibrations or shocks]
- B41F13/10 . . Forme cylinders
- B41F13/11 . . . Gravure cylinders [N: ([attaching cylindrical formes B41F27/10B](#))] [N9409]
- B41F13/12 . . . Registering devices
- B41F13/14 with means for displacing the cylinders
- B41F13/16 with means for displacing the printing formes on the cylinders

- B41F13/18 . . Impression cylinders
- B41F13/187 . . . for rotogravure [N9409]
- B41F13/193 . . Transfer cylinders; Offset cylinders [N: (attaching blankets B41F30/04)] [N9409]
- B41F13/20 . . Supports for bearings or supports for forme, offset, or impression cylinders [C9409]
- B41F13/21 . . . Bearer rings [N9409]
- B41F13/22 . . Means for cooling or heating forme or impression cylinders
- B41F13/24 . . Cylinder-tripping devices; Cylinder-impression adjustments
- B41F13/26 . . . Arrangement of cylinder bearings [C9409]
- B41F13/28 Bearings mounted eccentrically of the cylinder axis [C9409]
- B41F13/30 Bearings mounted on sliding supports [C9409]
- B41F13/32 Bearings mounted on swinging supports [C9409]
- B41F13/34 . . . Cylinder lifting or adjusting devices
- B41F13/36 Cams, eccentrics, wedges, or the like
- B41F13/38 electrically or magnetically operated
- B41F13/40 fluid-pressure operated
- B41F13/42 . . Guards or covers, e.g. for preventing ingress or egress of foreign matter

- B41F13/44 . Arrangements to accomodate interchangeable cylinders of different sizes to enable machine to print on areas of different sizes

- B41F13/46 . Printing units for inserting latest news

- B41F13/48 . Arrangements to enable printing to be effected over selected areas of a single forme cylinder (by inking selected areas B41F31/18)
- B41F13/50 . . by effecting relative movement of forme and impression cylinders during printing cycle
- B41F13/52 . . by projecting and retracting parts of the surface of the forme cylinder

- B41F13/54 . Auxiliary folding, cutting, collecting, or depositing of sheets or webs (in general B26D, B65H)
- B41F13/56 . . Folding or cutting
- B41F13/58 . . . lengthwise
- B41F13/60 . . . crosswise
- B41F13/62 . . . Folding-cylinders or drums
- B41F13/64 . . Collecting (gathering sheets or signatures in bookbinding B42C1/00)
- B41F13/66 . . . and stapling
- B41F13/68 . . Adding inserts
- B41F13/70 . . Depositing
- B41F13/70B . . . [N: Interleaving slip sheets]

- B41F15/00** **Screen printers (for selective printing B41J2/005) [C9409]**

- B41F15/02 . Manually-operable devices
- B41F15/04 . . for multicolour printing
- B41F15/06 . . with auxiliary equipment, e.g. for drying printed articles

- B41F15/08 . Machines
- B41F15/08A . . [N: for printing sheets]
- B41F15/08A2 . . . [N: with cylindrical or belt-like screens]
- B41F15/08A4 . . . [N: with flat screens]
- B41F15/08A4B [N: with a stationary screen and a moving squeegee]
- B41F15/08A4B2 [N: on a stack of sheets]
- B41F15/08A4C [N: with a stationary squeegee and a moving screen]
- B41F15/08B . . [N: for printing webs]
- B41F15/08B2 . . . [N: by means of cylindrical screens or screens in the form of endless belts]
- B41F15/08B2B [N: simultaneously printing on two sides]
- B41F15/08B4 . . . [N: with flat screens]
- B41F15/08B4B [N: with a stationary screen and a moving squeegee]
- B41F15/08B4C [N: with a stationary squeegee and a moving screen]
- B41F15/08B4D [N: movable on a long printing table]
- B41F15/08C . . [N: with a plurality of flat screens mounted on a turntable]
- B41F15/08D . . [N: for printing on filamentary articles]
- B41F15/08E . . [N: for printing on articles having essentially cylindrical surfaces]
- B41F15/08E2 . . . [N: of varying cross-section]
- B41F15/08F . . [N: for printing on polyhedral articles]
- B41F15/08G . . [N: for printing on conical or frusto-conical surfaces]
- B41F15/08H . . [N: for printing on essentially spherical surfaces]
- B41F15/08J . . [N: for printing on curved surfaces not otherwise provided for]
- B41F15/10 . . for multicolour printing
- B41F15/12 . . with auxiliary equipment, e.g. for drying printed articles

- B41F15/14 . Details
- B41F15/16 . . Printing tables
- B41F15/18 . . . Supports for workpieces
- B41F15/20 with suction-operated elements
- B41F15/22 for single sheets
- B41F15/24 for webs
- B41F15/26 for articles with flat surfaces
- B41F15/28 for elongated flat articles, e.g. strips, bands
- B41F15/30 for articles with curved surfaces
- B41F15/32 for articles with conical surfaces
- B41F15/34 . . Screens, Frames; Holders therefor
- B41F15/36 . . . flat
- B41F15/38 . . . curved
- B41F15/40 . . Inking units
- B41F15/40A . . . [N: Spraying apparatus]
- B41F15/42 . . . comprising squeegees or doctors
- B41F15/42B [N: Driving means for reciprocating squeegees]

- B41F15/42D [N: the squeegees or doctors being magnetically attracted]
- B41F15/44 . . squeegees or doctors(doctors of rotary intaglio printing pressesB41F9/10)[N: for photographic purposesG03D15/00]
- B41F15/46 . . . with two or more operative parts

- B41F16/00** **Transfer printing apparatus (apparatus or machines for applying decalcomanias B65C) [M1109]**

- B41F16/00F . [N: for printing from an inked or preprinted foil or band] [N1204]
- B41F16/00F2 . . [N: combined with other printing presses] [N1204]
- B41F16/00F4 . . [N: Presses of the rotary type] [N1204]
- B41F16/00F4B . . . [N: with means for applying print under heat and pressure, e.g. using heat activable adhesive] [N1204]
- B41F16/00F4D . . . [N: with means for applying print under pressure only, e.g. using pressure sensitive adhesive] [N1204]
- B41F16/00F6 . . [N: Presses of the reciprocating type] [N1204]
- B41F16/00F6B . . . [N: with means for applying print under heat and pressure, e.g. using heat activable adhesive] [N1204]
- B41F16/00F6D . . . [N: with means for applying print under pressure only, e.g. using pressure sensitive adhesive] [N1204]
- B41F16/00F8 . . [N: Arrangements for moving, supporting or positioning the printing foil or band] [N1204]
- B41F16/00F10 . . [N: Printing dies or forms] [N1204]
- B41F16/00F12 . . [N: with means for printing on specific materials or products] [N1204]
- B41F16/00F12B . . . [N: for printing on three-dimensional articles] [N1204]
- B41F16/00F12B2 [N: for printing on articles with cylindrical surfaces] [N1204]
- B41F16/00F14 . . [N: Attachments or auxiliary devices] [N1204]

- B41F16/02 . for textile material

- B41F17/00** **Printing apparatus or machines of special types or for particular purposes, not otherwise provided for (hand stamps, plier-like tools for printing or punching tickets or the like B41K; addressographs or other office printing equipment B41L; coding or marking of packaging material or of completed packages in packaging machines B65B61/00; ticket printing and issuing apparatus G07B)**

- B41F17/00A . [N: Pad printing apparatus or machines]
- B41F17/00B . [N: Supports of workpieces in machines for printing on hollow articles]
- B41F17/00E . [N: Special types of machines for printing textiles (using the screen printing process B41F15/00; printing on knitted fabrics B41F17/38)]
- B41F17/00E2 . . [N: Supports for workpieces; Devices for securing the workpieces to the supports]
- B41F17/00F . [N: for printing on curved surfaces not otherwise provided for]
- B41F17/00G . [N: Use of printing belts]
- B41F17/00N . [N: Numbering devices for printing on articles other than sheets or webs]

- B41F17/02 . for printing books or manifolding sets
- B41F17/04 . for printing calendars
- B41F17/08 . for printing on filamentary or elongated articles, or on articles with cylindrical surfaces [C0612]
- B41F17/10 . . on articles of indefinite length, e.g. wires, hoses, tubes, yarns
- B41F17/12 . . . at an angle to axis
- B41F17/13 . . . for printing on rolls of material, the roll serving as impression cylinder, e.g. strip printers [N1204]
- B41F17/14 . . on articles of finite length
- B41F17/16 . . . on end or bottom surfaces thereof
- B41F17/18 . . . on curved surfaces of articles of varying cross-section, e.g. bottles, lamp glasses
- B41F17/20 . . . on articles of uniform cross-section, e.g. pencils, rulers, resistors
- B41F17/22 by rolling contact

- B41F17/24 . for printing on flat surfaces of polyhedral articles
- B41F17/26 . . by rolling contact

- B41F17/28 . for printing on curved surfaces of conical or frusto-conical articles

- B41F17/30 . for printing on curved surfaces of essentially spherical, or part-spherical, articles
- B41F17/32 . . on lamp bulbs
- B41F17/34 . . on articles with surface irregularities, e.g. fruits, nuts

- B41F17/36 . for printing on tablets, pills, or like small articles

- B41F17/38 . for printing on knitted fabrics

- B41F19/00** **Apparatus or machines for carrying out printing operations combined with other operations** (auxiliary perforating apparatus associated with printing devices [B41G7/00](#); coding or marking in association with packaging [B65B61/00](#); label dispensers having printing equipment B65C)

- B41F19/00C . [N: with means for coating or laminating] [N1204]
- B41F19/00D . [N: with means for applying specific material other than ink] [N1204]
- B41F19/00D2 . . [N: with means for applying adhesive] [N1204]
- B41F19/00D4 . . [N: with means for applying metallic, conductive or chargeable material] [N1204]

- B41F19/00J . [N: with selective printing mechanisms, e.g. ink-jet or thermal printers] [N1204]

- B41F19/00S . [N: with means for stamping or cutting out] [N1204]

- B41F19/02 . with embossing (printing with a printer`s forme combined with embossing [B41M1/24](#))
- B41F19/04 . . using intaglio printing formes and wipers
- B41F19/06 . . 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"
- B41F19/06B . . . [N: Presses of the rotary type] [N9804]
- B41F19/06C . . . [N: Presses of the reciprocating type] [N9804]
- B41F19/06C2 [N: hand-driven] [N9804]
- B41F19/06C4 [N: motor-driven] [N9804]
- B41F19/08 . simultaneous moulding and printing

Guide heading: Common details of printing machinery

B41F21/00 **Devices for conveying sheets through printing apparatus or machines (through platen presses [B41F1/28](#); feeding sheets to or from printing apparatus or machines [B65H](#); [N: through manifolding apparatus or the like [B41L21/00](#)])**

- B41F21/00A . [N: Electrostatic holding down devices]
- B41F21/02 . Pins ([B41F21/12](#), [B41F21/14](#) take precedence)
- B41F21/04 . Grippers ([N: [B41F21/08](#), [B41F21/10](#)] [B41F21/12](#), [B41F21/14](#) take precedence)
- B41F21/05 . . In-feed grippers ([B41F21/06](#) takes precedence)
- B41F21/06 . . Suction-operated grippers
- B41F21/08 . Combinations of endless conveyors and grippers
- B41F21/10 . Combinations of transfer drums and grippers
- B41F21/10B . . [N: with pneumatic means ([B41F21/10D2](#) takes precedence)]
- B41F21/10C . . [N: Gripper details ([B41F21/10B](#) takes precedence)]
- B41F21/10D . . [N: for reversing sheets, e.g. for perfecting machine]
- B41F21/10D2 . . . [N: with pneumatic means]
- B41F21/12 . Adjusting leading edges, e.g. front stops
- B41F21/14 . Adjusting lateral edges, e.g. side stops
- B41F22/00** **Means preventing smudging of machine parts or printed articles ([B41F23/00](#) takes precedence) [N9409]**
- B41F22/00B . [N: using a back grey cloth] [N9409]
- B41F23/00** **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. [B29C71/00](#), [D21H23/00](#) or [D21H25/00](#); [N: in manifolding apparatus or the like [B41L23/00](#)]; surface treatment in general [B44D](#), of metal [C23G](#)) [C9409]**
- B41F23/00A . [N: cleaning devices for sheets or webs]
- B41F23/00B . [N: of non-flat articles]

- B41F23/00C . [N: with heat treatment before printing]
- B41F23/02 . by dampening (in rotary lithographic machines [B41F7/24](#)) [N: ([B41F23/00B](#) takes precedence)]
- B41F23/04 . by heat drying, by cooling, by applying powders [N: ([B41F23/00B](#) takes precedence)]
- B41F23/04B . . [N: Drying webs ([B41F23/04F](#) takes precedence)]
- B41F23/04B2 . . . [N: by radiation ([B41F23/04B8](#) takes precedence)]
- B41F23/04B2B [N: Ultra-violet dryers]
- B41F23/04B2C [N: Infra-red dryers]
- B41F23/04B4 . . . [N: by conduction ([B41F23/04B8](#) takes precedence)]
- B41F23/04B4B [N: using heated rolls]
- B41F23/04B6 . . . [N: by convection ([B41F23/04B8](#) takes precedence)]
- B41F23/04B6B [N: using heated air]
- B41F23/04B6C [N: using gas or fuel burners]
- B41F23/04B6D [N: using steam]
- B41F23/04B8 . . . [N: using a combination of radiation, conduction or convection]
- B41F23/04C . . [N: Drying sheets, e.g. between two printing stations ([B41F23/04F](#) takes precedence)]
- B41F23/04C2 . . . [N: after printing]
- B41F23/04C2B [N: Wicket conveyers]
- B41F23/04C4 . . . [N: by radiation] [N1204]
- B41F23/04C4B [N: by ultra-violet dryers] [N1204]
- B41F23/04C4D [N: by infrared dryers] [N1204]
- B41F23/04C6 . . . [N: by conduction, e.g. using heated rolls] [N1204]
- B41F23/04C8 . . . [N: by convection] [N1204]
- B41F23/04C8B [N: by using heated air] [N1204]
- B41F23/04C8D [N: by using gas or fuel burners] [N1204]
- B41F23/04C8F [N: by using steam] [N1204]
- B41F23/04D . . [N: Cooling ([B41F23/04E](#) takes precedence)]
- B41F23/04D2 . . . [N: using chill rolls]
- B41F23/04E . . [N: Drying combined with cooling]
- B41F23/04F . . [N: Particular types of dryers]
- B41F23/04F2 . . . [N: Vacuum dryers]
- B41F23/04F4 . . . [N: Microwave dryers]
- B41F23/04G . . [N: Proof dryers]
- B41F23/06 . . Powdering devices, e.g. for preventing set-off
- B41F23/06B . . . [N: for thermography]
- B41F23/08 . . Print finishing devices, e.g. for glossing prints [N: ([B41F23/00B](#) takes precedence)]

B41F25/00 **Devices for pressing sheets or webs against cylinders, e.g. for smoothing purposes** (apparatus for taking-out curl from webs in general [B65H23/34](#))

- B41F27/00** **Devices for attaching printing elements or formes to supports** (attaching by chemical means [B41N6/00](#)) [C9409]
- B41F27/00R . [N: Attaching and registering printing formes to supports]
- B41F27/02 . Magnetic devices
- B41F27/04 . for attaching printing elements to flat type-beds
- B41F27/06 . for attaching printing elements to forme cylinders
- B41F27/08 . for attaching printing formes to flat type-beds
- B41F27/10 . for attaching non-deformable curved printing formes to forme cylinders
- B41F27/10B . . [N: for attaching cylindrical printing formes]
- B41F27/12 . for attaching flexible printing formes
- B41F27/12A . . [N: Feeding to or removing from the forme cylinder]
- B41F27/12B . . [N: using pneumatic force]
- B41F27/12C . . [N: comprising printing plate tensioning devices]
- B41F27/12C2 . . . [N: moving in the printing plate end substantially rectilinearly]
- B41F27/12C2B [N: by translatory motion substantially tangential to support surface]
- B41F27/12C2C [N: by translatory motion substantially perpendicular to support surface]
- B41F27/12C2D [N: by pivotal or swivelling motion, e.g. by means of a rocking lever]
- B41F27/12C4 . . . [N: moving in the printing plate end on a curvilinear path, e.g. by winding on a roll]
- B41F27/12C6 . . . [N: with two semi-cylinders movable relative to each other]
- B41F27/12D . . [N: without tensioning means]
- B41F27/12D2 . . . [N: by self-locking or snap-on means]
- B41F27/12D4 . . . [N: by means of adhesives, staples]
- B41F27/12E . . [N: details of the printing plate ends]
- B41F27/12F . . [N: devices for bending the printing plates or the printing plate ends]
- B41F27/12G . . [N: Devices for filling up the cylinder gap; Devices for removing the filler]
- B41F27/14 . for attaching printing formes to intermediate supports, e.g. adapter members
- B41F30/00** **Devices for attaching coverings or make-ready devices; Guiding devices for coverings** (make-ready devices [B41N6/00](#); blankets or like coverings [B41N10/00](#)) [N9409]
- B41F30/02 . attaching to impression cylinders [N9409]
- B41F30/04 . attaching to transfer cylinders [N9409]
- B41F30/06 . attaching of endless or like continuously-fed coverings [N9409]
- B41F31/00** **Inking arrangements or devices** (inking units for platen presses [B41F1/40](#); for cylinder

presses [B41F3/81](#); [N: for rotary intaglio printing presses [B41F9/06B](#)]; applying liquids or other fluent materials to surfaces in general [B05](#); inking arrangements or devices for typewriters or selective printing mechanisms [B41J](#))

- B41F31/00B . [N: Ink mist preventing means]
- B41F31/00C . [N: Heating or cooling of ink or ink rollers]
- B41F31/00D . [N: Driving means for ink rollers]
- B41F31/00E . [N: Ink viscosity control means]
- B41F31/00F . [N: Removing water from ink trains]
- B41F31/00G . [N: Inking devices for reversible printing presses]
- B41F31/02 . Ducts, containers, supply or metering devices (level control in general [G05D9/00](#)) [[C9409](#)]
- B41F31/02C . . [N: Ink level control devices]
- B41F31/02D . . [N: Ducts formed between two rollers]
- B41F31/02E . . [N: Ink rail devices for inking ink rollers]
- B41F31/03 . . Ink agitators [[N9409](#)]
- B41F31/04 . . with duct-blades or like metering devices [[C9409](#)]
- B41F31/04B . . . [N: Remote control of the duct keys]
- B41F31/05 . . . Positioning devices therefor [[N9409](#)]
- B41F31/06 . . Troughs or like reservoirs with immersed or partly immersed, rollers or cylinders
- B41F31/07 . . . for rotogravure [[N9409](#)]
- B41F31/08 . . with ink ejecting means, e.g. pumps, nozzles
- B41F31/10 . . Applications of feed or duct rollers (messenger or moving transfer rollers [B41F31/14](#))
- B41F31/12 . . . adjustable for regulating supply
- B41F31/13 . . Means for driving fountain rollers [N: ([B41F13/12](#) takes precedence)] [[N9409](#)]
- B41F31/14 . . Applications of messenger or other moving transfer rollers
- B41F31/15 . Devices for moving vibrator-rollers [[N9409](#)]
- B41F31/16 . Continuous, e.g. endless, band apparatus
- B41F31/18 . for inking selected parts of printing formes
- B41F31/20 . Ink-removing or collecting devices
- B41F31/22 . for inking from interior of cylinder
- B41F31/24 . Absorbent pads
- B41F31/26 . Construction of inking rollers (inking-rollers serving also to apply ink repellent in rotary lithographic machines [B41F7/36](#)) [[C9409](#)]

- B41F31/28 . Spray apparatus
- B41F31/30 . Arrangements for tripping, lifting, adjusting, or removing inking rollers; Supports, bearings, or forks therefor
- B41F31/30B . . [N: Devices for tripping and adjusting form rollers]
- B41F31/30C . . [N: Devices for tripping inking devices as a whole]
- B41F31/30D . . [N: Arrangements for inking roller bearings, forks or supports ([B41F31/30B](#) takes precedence)]
- B41F31/30D1 . . . [N: Eccentric bearings]
- B41F31/30D2 . . . [N: Sliding bearings]
- B41F31/30D3 . . . [N: Swinging bearings]
- B41F31/32 . . Lifting or adjusting devices (for damping rollers [B41F7/40](#)) [C9409]
- B41F31/34 . . . Cam, eccentric, wedge, or like devices
- B41F31/36 . . . fluid-pressure operated
- B41F31/38 . . . magnetically operated

- B41F33/00** **Indicating, counting, warning, control, or safety devices** (ink supply or metering devices [B41F31/02](#); such devices in general, see the relevant subclasses, e.g. counting in general G06M) [C9409]
- B41F33/00A . [N: Central control units]
- B41F33/00B . [N: Protection means against injury to the operator]
- B41F33/00C . [N: Devices for scanning originals, printing formes or the like for determining or presetting the ink supply]
- B41F33/00D . [N: Devices for scanning or checking the printed matter for quality control]
- B41F33/00D1 . . [N: for automatically regulating the ink supply]
- B41F33/00E . [N: Devices for controlling dampening]
- B41F33/00F . [N: Devices for measuring the thickness of liquid films on rollers or cylinders]
- B41F33/00G . [N: Devices for measuring the pressure between cylinders or bearer rings]
- B41F33/00H . [N: Devices for scanning register marks]
- B41F33/00N . [N: Devices for controlling numbering]
- B41F33/02 . Arrangements of indicating devices, e.g. counters (arrangements of counting devices in platen presses [B41F1/00](#), e.g. [B41F1/58](#); in cylinder presses [B41F3/84](#); in typewriters or selective printing mechanisms [B41J29/20](#)) [N: in manifolding apparatus or the like [B41L39/00](#)]
- B41F33/02C . . [N: Counters]
- B41F33/04 . Tripping devices or stop-motions ([N: tripping devices for doctor blades [B41F9/10D](#)]; cylinder-tripping devices of rotary presses or machines [B41F13/24](#); arrangements for tripping inking rollers [B41F31/30](#))

- B41F33/04N . . [N: for starting or stopping operation of numbering devices]
- B41F33/06 . . for starting or stopping operation of sheet or web feed
- B41F33/08 . . for starting or stopping operation of cylinders
- B41F33/10 . . for starting or stopping operation of damping or inking units
- B41F33/12 . . for starting or stopping the machine as a whole
- B41F33/14 . . Automatic control of tripping devices by feelers, photoelectric devices, pneumatic devices, or other detectors

- B41F33/16 . Programming systems for automatic control of sequence of operations

- B41F33/18 . Web break detection ([B41F33/04](#) takes precedence) [N9409]

- B41F35/00** **Cleaning arrangements or devices** [N: in manifolding apparatus or the like [B41L41/00](#)]

- B41F35/00B . [N: Devices for cleaning parts removed from the printing machines ([B41F35/00D](#) takes precedence)]

- B41F35/00C . [N: for dampening rollers]

- B41F35/00D . [N: for screen printers or parts thereof]
- B41F35/00D2 . . [N: for cylindrical screens]
- B41F35/00D4 . . [N: for flat screens]

- B41F35/00E . [N: for impression cylinders]

- B41F35/00F . [N: for supports of workpieces]

- B41F35/00G . [N: for doctor blades]

- B41F35/02 . for forme cylinders

- B41F35/04 . for inking rollers

- B41F35/06 . for offset cylinders