

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(security printing B41M 3/14)
B41F 13/00	Common details of rotary presses or machines
B41F 13/0008	. {Driving devices(B41F 13/004 and B41F 13/008 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{(devices for taking-up backlash in general [F16H 55/00](#) , e.g. [F16H 55/18](#))}
- B41F 13/016 . . Brakes
- B41F 13/02 . . Conveying or guiding webs through presses or machines(web handling in general [B65H](#), e.g. step-by-step advancement [B41F 21/00](#) , turning or reversing [B65H 23/32](#))
- 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(doctors of rotary intaglio printing presses [B41F 9/10](#)) { for photographic purposes [G03D 15/00](#) }
- B41F 15/46 ... with two or more operative parts
- B41F 16/00** **Transfer printing apparatus**(apparatus or machines for applying decalcomanias [B65C](#))
 - 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

B41F 17/00

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 [B65B 61/00](#) ; ticket printing and issuing apparatus [G07B](#))

- 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 [B41F 15/00](#) ; printing on knitted fabrics [B41F 17/38](#))}
- 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 manifold 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 manifoldng 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
- B41F 22/00** **Means preventing smudging of machine parts or printed articles**([B41F 23/00](#) takes precedence)
- B41F 22/005 . {using a back grey cloth}

B41F 23/00

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. [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](#))

- 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
B41F 33/00	Indicating, counting, warning, control, or safety devices (ink supply or metering devices B41F 31/02 ; such devices in general, see the relevant subclasses, e.g. counting in general G06M)
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(arrangements of counting devices in platen presses B41F 1/00 , e.g. B41F 1/58 ; in cylinder presses B41F 3/84 ; in typewriters or selective printing mechanisms B41J 29/20) { in manifolding apparatus or the like B41L 39/00 }
B41F 33/025	.. {Counters}
B41F 33/04	. Tripping devices or stop-motions({ tripping devices for doctor blades B41F 9/1027 } ; cylinder-tripping devices of rotary presses or machines B41F 13/24 ; arrangements for tripping inking rollers B41F 31/30)
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(B41F 33/04 takes precedence)
B41F 35/00	Cleaning arrangements or devices { in manifolding apparatus or the like B41L 41/00 }
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