

CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING (NOTES omitted)

PRINTING

B41 PRINTING; LINING MACHINES; TYPEWRITERS; STAMPS

B41F PRINTING MACHINES OR PRESSES (manifolding devices or office printing machines [B41L](#))

NOTE

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

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00	Platen presses, i.e. presses in which printing is effected by at least one essentially-flat pressure-applying member co-operating with a flat type-bed	1/58	. . . Arrangements of counting devices for counting sheets
1/02	. Hand-operated platen presses	1/60	. . Safety devices
1/04	. for mono-impression printing, e.g. on sheets	1/62	. . . for preventing injury to operator
1/06	. . with platen maintained parallel to bed during movement	1/64 to the hands of the operator
1/08	. . on webs	1/66	. . . responsive to incorrect operating conditions
1/10	. for multi-impression printing in one or more colours, e.g. on webs	3/00	Cylinder presses, i.e. presses essentially comprising at least one cylinder co-operating with at least one flat type-bed
1/12	. . on sheets	3/02	. with impression cylinder or cylinders rotating unidirectionally
1/14	. . . using swinging platens, or forme supports	3/04	. . intermittently; Stop-cylinder presses
1/16	. for offset printing {(pad printing B41F 17/001)}	3/06	. . continuously
1/18	. for lithography	3/08	. . . Single-revolution presses
1/20	. for perfecting sheets, i.e. for printing on both sides of sheets	3/10	. . . Two-revolution presses
1/22	. specially adapted for printing heads, e.g. letter heads	3/12	. . Twin presses, i.e. with more than one cylinder or type-bed
1/24	. specially adapted for proof printing	3/14	. with impression cylinder or cylinders rotating in opposite directions during each working cycle
1/26	. Details	3/16	. . Twin presses, i.e. with more than one cylinder or type-bed
1/265	. . {Conveying webs (in general B65H)}	3/18	. of special construction or for particular purposes
1/28	. . Sheet-conveying, -aligning or -clamping devices	3/20	. . with fixed type-beds and travelling impression cylinders
1/30	. . . using rotary grippers	3/22	. . . with more than one type-bed
1/32	. . . using air pressure, e.g. vacuum	3/24	. . . with cylinders travelling around type-beds having upper and lower printing surfaces
1/34	. . . Registering devices, e.g. gauges	3/26	. . with type-beds and impression cylinders simultaneously movable relative to one another
1/36	. . . Clamps for conveying sheets and for holding same on the platens {(clamps in manifolding devices B41L 3/02)}	3/28	. . Proof-print presses for relief printing, lithography or intaglio printing, i.e. presses for checking accuracy of printing surfaces
1/38	. . Platens or type-beds	3/30	. . for lithography (proof-print presses B41F 3/28)
1/40	. . Inking units {(for pad printing B41F 17/001)}	3/32	. . . Damping devices
1/42	. . . using flat inking elements, e.g. discs	3/34	. . . for offset printing
1/44	. . . using inking ribbons	3/36	. . for intaglio or heliogravure printing (proof-print presses B41F 3/28)
1/46	. . . using rollers	3/38	. . . Wiping mechanisms
1/48	. . . pivoting around the platen or base	3/40	. . for perfecting sheets, i.e. for printing on both sides thereof
1/50	. . . supported on carriages for movement in or on runways		
1/52 Carriage driving gear		
1/54	. . Printing-pressure control devices		
1/56	. . Auxiliary devices		
1/565	. . . {Numbering devices (stamping numbering devices B41K)}		

- 3/42 . . for multicolour printing on sheets
- 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
- 3/46 . Details
- 3/48 . . Press frames
- 3/51 . . Type-beds; Supports therefor ([B41F 3/52 takes precedence](#))
- 3/52 . . Apparatus for cooling, heating, or drying printing surfaces
- 3/54 . . Impression cylinders; Supports therefor
- 3/56 . . . Devices for adjusting cylinders relative to type-beds and setting in adjusted position
- 3/58 . . Driving, synchronising, or control gear
- 3/60 . . . for type-beds
- 3/62 Applications of linkwork or gearing for producing reciprocatory or angular motion
- 3/64 of crank motions
- 3/66 of rack-and-pinion gearing
- 3/68 with pinion rotating unidirectionally
- 3/70 Applications of directly-coupled motors
- 3/72 of fluid motors
- 3/74 Applications of clutches
- 3/76 Applications of braking devices or of devices for stopping type-bed in registered position
- 3/78 Air cushions
- 3/80 . . . for impression cylinders
- 3/81 . . Inking units
- 3/82 . Auxiliary devices
- 3/84 . . Arrangements of counting devices
- 3/86 . . Numbering devices

Rotary machines

- 5/00 Rotary letterpress machines** ([{office printing machines B41L 15/00}](#))
- 5/02 . for printing on sheets
- 5/04 . for printing on webs
- 5/06 . . with several printing units in sequential arrangement
- 5/08 . . with several printing units in both superimposed and sequential arrangement
- 5/10 . . with several printing units arranged side by side
- 5/12 . . for printing on one side and on the other side of webs between the same forme and impression cylinders
- 5/14 . . with several impression cylinders arranged around a forme cylinder
- 5/16 . . for multicolour printing
- 5/18 . . . using one impression cylinder co-operating with several forme cylinders
- 5/20 . specially adapted for proof printing
- 5/22 . for indirect printing
- 5/24 . for flexographic printing
- 7/00 Rotary lithographic machines** ([{\(such office printing machines B41L 7/00\)}](#))
- 7/02 . for offset printing
- 7/025 . . [{Multicolour printing or perfecting on sheets or on one or more webs, in one printing unit}](#)
- 7/04 . . using printing units incorporating one forme cylinder, one transfer cylinder, and one impression cylinder, e.g. for printing on webs

- 7/06 . . . for printing on sheets
- 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
- 7/10 . . using one impression cylinder co-operating with several transfer cylinders for printing on sheets or webs, e.g. satellite-printing units
- 7/12 . . using two cylinders one of which serves two functions, e.g. as a transfer and impression cylinder in perfecting machines
- 7/14 . . with two or more impression cylinders coacting with a single transfer cylinder
- 7/15 . . . for printing on more than one web simultaneously
- 7/16 . for printing on non-deformable material, e.g. sheet metal
- 7/18 . specially adapted for proof printing
- 7/20 . Details
- 7/24 . . Damping devices
- 7/26 . . . using transfer rollers
- 7/265 [{for damping from the inside of the cylinders}](#)
- 7/28 . . . using brushes
- 7/30 . . . using spraying elements
- 7/32 . . . Ducts, containers, or like supply devices for liquids
- 7/34 . . . Endless bands
- 7/36 . . . Inking-rollers serving also to apply ink repellants
- 7/37 . . . with supercooling for condensation of air moisture
- 7/38 . . . Absorbent pads
- 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](#))

9/00 Rotary intaglio printing presses

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

- 9/066 . . . {Enclosures}
- 9/068 . . . {End seals between cylinder and housing}
- 9/08 . . Wiping mechanisms
- 9/10 . . . Doctors, scrapers, or like devices
- 9/1009 {with reciprocating movement}
- 9/1018 {using a wiping cylinder}
- 9/1027 {Tripping devices}
- 9/1036 {Clamping and adjusting devices}
- 9/1045 {using fluid pressure}
- 9/1054 {Sharpening, honing devices}
- 9/1063 {Seals between blades and cylinder}
- 9/1072 {Blade construction}
- 9/1081 {using two or more blades}
- 9/109 {exchanging doctor blades}
- 9/12 . . . Absorbent pads
- 9/14 . . . Continuous flexible surfaces, e.g. endless bands
- 9/16 . . . Removing or recovering ink from wiping mechanisms
- 9/18 . . Auxiliary devices for exchanging forme cylinders
- 11/00 Rotary presses or machines having forme cylinders carrying a plurality of printing surfaces, or for performing letterpress, lithographic, or intaglio processes selectively or in combination**
- 11/02 . for securities ([security printing B41M 3/14](#))
- 13/00 Common details of rotary presses or machines**
- 13/0008 . {Driving devices ([B41F 13/004](#) and [B41F 13/008](#) take precedence)}
- 13/0016 . {Storage devices for printing cylinders}
- 13/0024 . {Frames}
- 13/0032 . {Auxiliary numbering devices}
- 13/004 . Electric or hydraulic features of drives
- 13/0045 . . {Electric driving devices}
- 13/008 . Mechanical features of drives, e.g. gears, clutches
- 13/012 . . Taking-up backlash {(devices for taking-up backlash in general [F16H 55/00](#), e.g. [F16H 55/18](#))}
- 13/016 . Brakes
- 13/02 . Conveying or guiding webs through presses or machines
- 13/025 . . {Registering devices}
- 13/03 . . Threading webs into printing machines
- 13/04 . . intermittently
- 13/06 . . Turning-bar arrangements
- 13/08 . Cylinders
- 13/085 . . {with means for preventing or damping vibrations or shocks}
- 13/10 . . Forme cylinders
- 13/11 . . . Gravure cylinders {(attaching cylindrical formes [B41F 27/105](#))}
- 13/12 . . . Registering devices
- 13/14 with means for displacing the cylinders
- 13/16 with means for displacing the printing formes on the cylinders
- 13/18 . . Impression cylinders
- 13/187 . . . for rotogravure
- 13/193 . . Transfer cylinders; Offset cylinders {(attaching blankets [B41F 30/04](#))}
- 13/20 . . Supports for bearings or supports for forme, offset, or impression cylinders
- 13/21 . . . Bearer rings
- 13/22 . . Means for cooling or heating forme or impression cylinders
- 13/24 . . Cylinder-tripping devices; Cylinder-impression adjustments
- 13/26 . . . Arrangement of cylinder bearings
- 13/28 Bearings mounted eccentrically of the cylinder axis
- 13/30 Bearings mounted on sliding supports
- 13/32 Bearings mounted on swinging supports
- 13/34 . . . Cylinder lifting or adjusting devices
- 13/36 Cams, eccentrics, wedges, or the like
- 13/38 electrically or magnetically operated
- 13/40 fluid-pressure operated
- 13/42 . . Guards or covers, e.g. for preventing ingress or egress of foreign matter
- 13/44 . Arrangements to accommodate interchangeable cylinders of different sizes to enable machine to print on areas of different sizes
- 13/46 . Printing units for inserting latest news
- 13/48 . Arrangements to enable printing to be effected over selected areas of a single forme cylinder ([by inking selected areas B41F 31/18](#))
- 13/50 . . by effecting relative movement of forme and impression cylinders during printing cycle
- 13/52 . . by projecting and retracting parts of the surface of the forme cylinder
- 13/54 . Auxiliary folding, cutting, collecting or depositing of sheets or webs
- 13/56 . . Folding or cutting
- 13/58 . . . lengthwise
- 13/60 . . . crosswise
- 13/62 . . . Folding-cylinders or drums
- 13/64 . . Collecting ([gathering sheets or signatures in bookbinding B42C 1/00](#))
- 13/66 . . . and stapling
- 13/68 . . Adding inserts
- 13/70 . . Depositing
- 13/705 . . . {Interleaving slip sheets}
- 15/00 Screen printers**
- 15/02 . Manually-operable devices
- 15/04 . . for multicolour printing
- 15/06 . . with auxiliary equipment, e.g. for drying printed articles
- 15/08 . Machines
- 15/0804 . . {for printing sheets}
- 15/0809 . . . {with cylindrical or belt-like screens}
- 15/0813 . . . {with flat screens}
- 15/0818 {with a stationary screen and a moving squeegee}
- 15/0822 {on a stack of sheets}
- 15/0827 {with a stationary squeegee and a moving screen}
- 15/0831 . . {for printing webs}
- 15/0836 . . . {by means of cylindrical screens or screens in the form of endless belts}
- 15/084 {simultaneously printing on two sides}
- 15/0845 . . . {with flat screens}
- 15/085 {with a stationary screen and a moving squeegee}
- 15/0854 {with a stationary squeegee and a moving screen}
- 15/0859 {movable on a long printing table}

- 15/0863 . . {with a plurality of flat screens mounted on a turntable}
- 15/0868 . . {for printing on filamentary articles}
- 15/0872 . . {for printing on articles having essentially cylindrical surfaces}
- 15/0877 . . . {of varying cross-section}
- 15/0881 . . {for printing on polyhedral articles}
- 15/0886 . . {for printing on conical or frusto-conical surfaces}
- 15/089 . . {for printing on essentially spherical surfaces}
- 15/0895 . . {for printing on curved surfaces not otherwise provided for}
- 15/10 . . for multicolour printing
- 15/12 . . with auxiliary equipment, e.g. for drying printed articles
- 15/14 . Details
- 15/16 . . Printing tables
- 15/18 . . . Supports for workpieces
- 15/20 with suction-operated elements
- 15/22 for single sheets
- 15/24 for webs
- 15/26 for articles with flat surfaces
- 15/28 for elongated flat articles, e.g. strips, bands
- 15/30 for articles with curved surfaces
- 15/32 for articles with conical surfaces
- 15/34 . . Screens, Frames; Holders therefor
- 15/36 . . . flat
- 15/38 . . . curved
- 15/40 . . Inking units
- 15/405 . . . {Spraying apparatus}
- 15/42 . . . comprising squeegees or doctors
- 15/423 {Driving means for reciprocating squeegees}
- 15/426 {the squeegees or doctors being magnetically attracted}
- 15/44 . . Squeegees or doctors
- 15/46 . . . with two or more operative parts
- 16/00 Transfer printing apparatus**
- 16/0006 . {for printing from an inked or preprinted foil or band}
- 16/0013 . . {combined with other printing presses}
- 16/002 . . {Presses of the rotary type}
- 16/0026 . . . {with means for applying print under heat and pressure, e.g. using heat activable adhesive}
- 16/0033 . . . {with means for applying print under pressure only, e.g. using pressure sensitive adhesive}
- 16/004 . . {Presses of the reciprocating type}
- 16/0046 . . . {with means for applying print under heat and pressure, e.g. using heat activable adhesive}
- 16/0053 . . . {with means for applying print under pressure only, e.g. using pressure sensitive adhesive}
- 16/006 . . {Arrangements for moving, supporting or positioning the printing foil or band}
- 16/0066 . . {Printing dies or forms}
- 16/0073 . . {with means for printing on specific materials or products}
- 16/008 . . . {for printing on three-dimensional articles}
- 16/0086 {for printing on articles with cylindrical surfaces}
- 16/0093 . . {Attachments or auxiliary devices}
- 16/02 . . for textile material

17/00**Printing apparatus or machines of special types or for particular purposes, not otherwise provided for**

- 17/001 . {Pad printing apparatus or machines}
- 17/002 . {Supports of workpieces in machines for printing on hollow articles}
- 17/003 . {Special types of machines for printing textiles (using the screen printing process [B41F 15/00](#); printing on knitted fabrics [B41F 17/38](#))}
- 17/005 . . {Supports for workpieces; Devices for securing the workpieces to the supports}
- 17/006 . {for printing on curved surfaces not otherwise provided for}
- 17/007 . {Use of printing belts}
- 17/008 . {Numbering devices for printing on articles other than sheets or webs}
- 17/02 . for printing books or manifolding sets
- 17/04 . for printing calendars
- 17/08 . for printing on filamentary or elongated articles, or on articles with cylindrical surfaces
- 17/10 . . on articles of indefinite length, e.g. wires, hoses, tubes, yarns
- 17/12 . . . at an angle to axis
- 17/13 . . . for printing on rolls of material, the roll serving as impression cylinder, e.g. strip printers
- 17/14 . . on articles of finite length
- 17/16 . . . on end or bottom surfaces thereof
- 17/18 . . . on curved surfaces of articles of varying cross-section, e.g. bottles, lamp glasses
- 17/20 . . . on articles of uniform cross-section, e.g. pencils, rulers, resistors
- 17/22 by rolling contact
- 17/24 . for printing on flat surfaces of polyhedral articles
- 17/26 . . by rolling contact
- 17/28 . for printing on curved surfaces of conical or frusto-conical articles
- 17/30 . for printing on curved surfaces of essentially spherical, or part-spherical, articles
- 17/32 . . on lamp bulbs
- 17/34 . . on articles with surface irregularities, e.g. fruits, nuts
- 17/36 . for printing on tablets, pills, or like small articles
- 17/38 . for printing on knitted fabrics
- 19/00 Apparatus or machines for carrying out printing operations combined with other operations**
- 19/001 . {with means for coating or laminating}
- 19/002 . {with means for applying specific material other than ink}
- 19/004 . . {with means for applying adhesive}
- 19/005 . . {with means for applying metallic, conductive or chargeable material}
- 19/007 . {with selective printing mechanisms, e.g. ink-jet or thermal printers}
- 19/008 . {with means for stamping or cutting out}
- 19/02 . with embossing
- 19/04 . . using intaglio printing formes and wipers
- 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"
- 19/062 . . . {Presses of the rotary type}
- 19/064 . . . {Presses of the reciprocating type}
- 19/066 {hand-driven}
- 19/068 {motor-driven}

- 19/08 . Simultaneous moulding and printing

Common details of printing machinery

21/00 Devices for conveying sheets through printing apparatus or machines (through platen presses [B41F 1/28](#))

- 21/005 . {Electrostatic holding down devices}
- 21/02 . Pins ([B41F 21/12](#), [B41F 21/14](#) take precedence)
- 21/04 . Grippers ({[B41F 21/08](#), [B41F 21/10](#)} [B41F 21/12](#), [B41F 21/14](#) take precedence)
- 21/05 . . In-feed grippers ([B41F 21/06](#) takes precedence)
- 21/06 . . Suction-operated grippers
- 21/08 . Combinations of endless conveyors and grippers
- 21/10 . Combinations of transfer drums and grippers
- 21/102 . . {with pneumatic means ([B41F 21/108](#) takes precedence)}
- 21/104 . . {Gripper details ([B41F 21/102](#) takes precedence)}
- 21/106 . . {for reversing sheets, e.g. for perfecting machine}
- 21/108 . . . {with pneumatic means}
- 21/12 . Adjusting leading edges, e.g. front stops
- 21/14 . Adjusting lateral edges, e.g. side stops

22/00 Means preventing smudging of machine parts or printed articles ([B41F 23/00](#) takes precedence)

- 22/005 . {using a back grey cloth}

23/00 Devices for treating the surfaces of sheets, webs, or other articles in connection with printing

- 23/002 . {cleaning devices for sheets or webs}
- 23/005 . {of non-flat articles}
- 23/007 . {with heat treatment before printing}
- 23/02 . by dampening (in rotary lithographic machines [B41F 7/24](#) ; [B41F 23/005](#) takes precedence)
- 23/04 . by heat drying, by cooling, by applying powders ([B41F 23/005](#) takes precedence)}
- 23/0403 . . {Drying webs ([B41F 23/0486](#) takes precedence)}
- 23/0406 . . . {by radiation ([B41F 23/0436](#) takes precedence)}
- 23/0409 {Ultraviolet dryers}
- 23/0413 {Infrared dryers}
- 23/0416 . . . {by conduction ([B41F 23/0436](#) takes precedence)}
- 23/042 {using heated rolls}
- 23/0423 . . . {by convection ([B41F 23/0436](#) takes precedence)}
- 23/0426 {using heated air}
- 23/043 {using gas or fuel burners}
- 23/0433 {using steam}
- 23/0436 . . . {using a combination of radiation, conduction or convection}
- 23/044 . . {Drying sheets, e.g. between two printing stations ([B41F 23/0486](#) takes precedence)}
- 23/0443 . . . {after printing}
- 23/0446 {Wicket conveyors}
- 23/045 . . . {by radiation}
- 23/0453 {by ultraviolet dryers}
- 23/0456 {by infrared dryers}
- 23/0459 . . . {by conduction, e.g. using heated rolls}
- 23/0463 . . . {by convection}
- 23/0466 {by using heated air}
- 23/0469 {by using gas or fuel burners}
- 23/0473 {by using steam}
- 23/0476 . . {Cooling ([B41F 23/0483](#) takes precedence)}

- 23/0479 . . . {using chill rolls}
- 23/0483 . . {Drying combined with cooling}
- 23/0486 . . {Particular types of dryers}
- 23/0489 . . . {Vacuum dryers}
- 23/0493 . . . {Microwave dryers}
- 23/0496 . . {Proof dryers}
- 23/06 . . Powdering devices, e.g. for preventing set-off
- 23/065 . . . {for thermography}
- 23/08 . Print finishing devices, e.g. for glossing prints ([B41F 23/005](#) takes precedence)}

25/00 Devices for pressing sheets or webs against cylinders, e.g. for smoothing purposes

27/00 Devices for attaching printing elements or formes to supports (attaching by chemical means [B41N 6/00](#))

- 27/005 . {Attaching and registering printing formes to supports}
- 27/02 . Magnetic devices
- 27/04 . for attaching printing elements to flat type-beds
- 27/06 . for attaching printing elements to forme cylinders
- 27/08 . for attaching printing formes to flat type-beds
- 27/10 . for attaching non-deformable curved printing formes to forme cylinders
- 27/105 . . {for attaching cylindrical printing formes}
- 27/12 . for attaching flexible printing formes
- 27/1206 . . {Feeding to or removing from the forme cylinder}
- 27/1212 . . {using pneumatic force}
- 27/1218 . . {comprising printing plate tensioning devices}
- 27/1225 . . . {moving in the printing plate end substantially rectilinearly}
- 27/1231 {by translatory motion substantially tangential to support surface}
- 27/1237 {by translatory motion substantially perpendicular to support surface}
- 27/1243 {by pivotal or swivelling motion, e.g. by means of a rocking lever}
- 27/125 . . . {moving in the printing plate end on a curvilinear path, e.g. by winding on a roll}
- 27/1256 . . . {with two semi-cylinders movable relative to each other}
- 27/1262 . . {without tensioning means}
- 27/1268 . . . {by self-locking or snap-on means}
- 27/1275 . . . {by means of adhesives, staples}
- 27/1281 . . {details of the printing plate ends}
- 27/1287 . . {devices for bending the printing plates or the printing plate ends}
- 27/1293 . . {Devices for filling up the cylinder gap; Devices for removing the filler}
- 27/14 . for attaching printing formes to intermediate supports, e.g. adapter members

30/00 Devices for attaching coverings or make-ready devices; Guiding devices for coverings (make-ready devices [B41N 6/00](#))

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

31/00 Inking arrangements or devices (inking units for platen presses [B41F 1/40](#); inking units for cylinder presses [B41F 3/81](#))

- 31/001 . {Ink mist preventing means}
- 31/002 . {Heating or cooling of ink or ink rollers}
- 31/004 . {Driving means for ink rollers}
- 31/005 . {Ink viscosity control means}
- 31/007 . {Removing water from ink trains}
- 31/008 . {Inking devices for reversible printing presses}
- 31/02 . Ducts, containers, supply or metering devices
- 31/022 . . {Ink level control devices}
- 31/025 . . {Ducts formed between two rollers}
- 31/027 . . {Ink rail devices for inking ink rollers}
- 31/03 . . Ink agitators
- 31/04 . . with duct-blades or like metering devices
- 31/045 . . . {Remote control of the duct keys}
- 31/05 . . . Positioning devices therefor
- 31/06 . . Troughs or like reservoirs with immersed or partly immersed, rollers or cylinders
- 31/07 . . . for rotogravure
- 31/08 . . with ink ejecting means, e.g. pumps, nozzles
- 31/10 . . Applications of feed or duct rollers ([messenger or moving transfer rollers B41F 31/14](#))
- 31/12 . . . adjustable for regulating supply
- 31/13 . . Means for driving fountain rollers {(B41F 13/12 takes precedence)}
- 31/14 . . Applications of messenger or other moving transfer rollers
- 31/15 . Devices for moving vibrator-rollers
- 31/16 . Continuous, e.g. endless, band apparatus
- 31/18 . for inking selected parts of printing formes
- 31/20 . Ink-removing or collecting devices
- 31/22 . for inking from interior of cylinder
- 31/24 . Absorbent pads
- 31/26 . Construction of inking rollers ([inking-rollers serving also to apply ink repellants in rotary lithographic machines B41F 7/36](#))
- 31/28 . Spray apparatus
- 31/30 . Arrangements for tripping, lifting, adjusting, or removing inking rollers; Supports, bearings, or forks therefor
- 31/301 . . {Devices for tripping and adjusting form rollers}
- 31/302 . . {Devices for tripping inking devices as a whole}
- 31/304 . . {Arrangements for inking roller bearings, forks or supports (B41F 31/301 takes precedence)}
- 31/305 . . . {Eccentric bearings}
- 31/307 . . . {Sliding bearings}
- 31/308 . . . {Swinging bearings}
- 31/32 . . Lifting or adjusting devices ([for damping rollers B41F 7/40](#))
- 31/34 . . . Cam, eccentric, wedge, or like devices
- 31/36 . . . fluid-pressure operated
- 31/38 . . . magnetically operated
- 33/00 Indicating, counting, warning, control or safety devices** ([arrangements of counting devices in platen presses B41F 1/00](#) {, [B41F 1/58](#); [arrangements of counting devices](#)} in cylinder presses [B41F 3/84](#); [ink supply or metering devices B41F 31/02](#))
- 33/0009 . {Central control units}
- 33/0018 . {Protection means against injury to the operator}
- 33/0027 . {Devices for scanning originals, printing formes or the like for determining or presetting the ink supply}
- 33/0036 . {Devices for scanning or checking the printed matter for quality control}
- 33/0045 . . {for automatically regulating the ink supply}
- 33/0054 . {Devices for controlling dampening}
- 33/0063 . {Devices for measuring the thickness of liquid films on rollers or cylinders}
- 33/0072 . {Devices for measuring the pressure between cylinders or bearer rings}
- 33/0081 . {Devices for scanning register marks}
- 33/009 . {Devices for controlling numbering}
- 33/02 . Arrangements of indicating devices, e.g. counters
- 33/025 . . {Counters}
- 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](#))
- 33/045 . . {for starting or stopping operation of numbering devices}
- 33/06 . . for starting or stopping operation of sheet or web feed
- 33/08 . . for starting or stopping operation of cylinders
- 33/10 . . for starting or stopping operation of damping or inking units
- 33/12 . . for starting or stopping the machine as a whole
- 33/14 . . Automatic control of tripping devices by feelers, photoelectric devices, pneumatic devices, or other detectors
- 33/16 . Programming systems for automatic control of sequence of operations
- 33/18 . Web break detection ([B41F 33/04 takes precedence](#))
- 35/00 Cleaning arrangements or devices** {(in [manifolding apparatus or the like B41L 41/00](#))}
- 35/001 . {Devices for cleaning parts removed from the printing machines (B41F 35/003 takes precedence)}
- 35/002 . {for dampening rollers}
- 35/003 . {for screen printers or parts thereof}
- 35/004 . . {for cylindrical screens}
- 35/005 . . {for flat screens}
- 35/006 . {for impression cylinders}
- 35/007 . {for supports of workpieces}
- 35/008 . {for doctor blades}
- 35/02 . for forme cylinders
- 35/04 . for inking rollers
- 35/06 . for offset cylinders