

15 Printing, ruling machines, typewriters, stamps

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- 15a Elements, implements and machines for manufacturing and distributing type**
 - 15b Processes for the manufacture and reproduction of printing forms**
 - 15c Processes for the reproduction of printing plates**
 - 15d High-speed presses, rotary presses, office printing machines and platen presses; printing processes insofar as connected with the use of special machines**
 - 15e Automatic folding machines for paper sheets, auxiliary machines related to printing, especially perforating, bronzing, edging; automatic sheet feeding devices for printing and other machines**
 - 15f Ruling machines**
 - 15g Typewriters and accessories**
 - 15h Hand stamps, stamping and numbering mechanisms**
 - 15i Duplicating devices; duplicating processes, insofar as they are dependent upon the use of special equipment**
 - 15k Printing and duplicating processes, including colour relief printing; special printed products; letter spacing**
 - 15l Materials for graphic printing**
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- 15a Elements, implements and machines for manufacturing and distributing type**
 - Elements and implements for hand-setting**
 - 15a-1 Types for book printing
 - 15a-2 Type matter spacing
 - 15a-3 Rules, including brass rules for type matter (15a-34)
 - 15a-4 Type matter whites: sticks, furniture
 - 15a-5 Chases for type matter
 - 15a-6 Locking-up devices for type matter
 - 15a-7/01 Type cases, composing frames, composing racks
 - 15a-7/02 Cleaning of type cases and the like
 - 15a-8 Composing sticks and rules for type matter
 - 15a-9 Galleys, column galleys and column locks for type matter
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 - 15a-12 Musical type setting
 - Typesetting and distributing machines**
 - 15a-13 Hand-setting apparatus
 - 15a-14 Setting machines for setting with ready-made type and details
 - 15a-15 Distributing machines for setting with ready-made type and details
 - 15a-16 Justifying devices for setting with ready-made type and details
 - Matrix setting and line casting machine**
 - 15a-17/01 Matrix setting and line-casting machines, types of machines

- 15a-17/02 Matrix setting and line-casting machines with toothed distributor bars
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- 15a-18/01 Matrix setting and line-casting machines with magazine equipment, general
- 15a-18/02 Magazine receiver hoppers for matrix setting and line-casting machines
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- 15a-18/04 Magazine changing devices for matrix setting and line-casting machines
- 15a-18/05 Matrix locking devices in the magazines of matrix setting and line-casting machines
- 15a-18/06 Matrix reject funnels for matrix setting and line-casting machines
- 15a-18/07 Hand matrix magazines for matrix setting and line-casting machines
- 15a-19/01 Setting devices for matrix setting and line-casting machines, general
- 15a-19/02 Matrix releasing devices for matrix setting and line casting machines
- 15a-19/03 Space releasing devices for matrix setting and line-casting machines
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- 15a-19/05 Keyboards for matrix setting and line-casting machines
- 15a-20/01 Feeding devices for matrix setting and line-casting machines, general
- 15a-20/02 Matrix line transfer slides in matrix setting and line-casting machines
- 15a-20/03 Matrix feeding intermediate channel of matrix setting and line-casting machines
- 15a-20/04 Casting slides for the matrix line for matrix setting and line-casting machines
- 15a-20/05 Distributing devices for the matrices in matrix setting and line-casting machines
- 15a-21/01 Casting equipment for matrix setting and line-casting machines, general
- 15a-21/02 Casting pots of matrix setting and line-casting machines
- 15a-21/03 Casting pumps for matrix setting and line-casting machines
- 15a-21/04 Feeding devices for casting pots of matrix setting and line-casting machines
- 15a-21/05 Casting mouth elements of line-casting pots of matrix setting and line-casting machines
- 15a-21/06 Casting mouth wipers for matrix setting and line-casting machines
- 15a-21/07 Heating devices for the casting pots of matrix setting and line-casting machines
- 15a-21/10 Casting disks for matrix-setting and line-casting machines
- 15a-21/11 Moulds for the casting disks of matrix setting and line-casting machines
- 15a-21/12 Casting disk slides of matrix setting and line-casting machines
- 15a-21/13 Adjusting devices for the casting disk slides of matrix setting and line-casting machines
- 15a-21/14 Matrix aligning devices on casting disk slides of matrix setting and line-casting machines
- 15a-21/20 Devices for casting spares, etc., with matrix setting and line-casting machines
- 15a-22 Justifying devices for matrix setting and line-casting machines
- 15a-23 Ejectors and dressing devices for the cast lines of matrix setting and line-casting machines
- 15a-24 Miscellaneous particular elements of matrix setting and line-casting machines
- 15a-25/01 Matrices for matrix setting and line-casting machines
- 15a-25/02 Spaces for matrix setting and line-casting machines
- 15a-25/03 Matrix and space cleaning devices of matrix setting and line-casting machines
- Monotype casting and composing machines**
- 15a-26/01 Monotype casting and composing machines, types of machines
- 15a-26/02 Matrix cases for monotype casting and composing machines and adjustments
- 15a-26/03 Type-casting devices for monotype casting and composing machines
- 15a-26/04 Type-line assemblers for monotype casting and composing machines
- 15a-26/05 Miscellaneous particular elements of monotype casting and composing machines (matrices 15a-30)
- 15a-27 Embossing machines with adjustable character punches, matrices and counterdies

- 15a-28 Record tape punching machine
- 15a-29 Special elements common to composing machines of all kinds, e.g. keyboard arrangements, control devices using record tapes (15a-19/05; 15a-24; 15a-26/05)

Type-casting

- 15a-30 Matrices for type-casting, manufacture and use
- 15a-31 Hand-casting devices for type-casting
- 15a-32 Type-casting machines
- 15a-33 Implements and machines for grinding and finishing type
- 15a-34 Production and preparation of type matter rules
- 15a-35 Space cutters for making spaces and type matter justification
- 15a-36 Miscellaneous in the art of making and distributing of type

15b Processes for the manufacture and reproduction of printing forms (photomechanical reproduction 57d)

Processes for the manufacture of printing forms and printing designs in general

- 15b-1/01 by etching (48a-16; 48a-163/00; 48d-1; 48d1-1/00; 57d-2; 75b-10)
- 15b-1/02 by engraving (75a-6 – 75a-12; 75b-10)
- 15b-1/03 by transferring, opalographic processes
- 15b-1/04 by elevating or recessing the design
- 15b-1/05 by using the design as a printing form (planographic form) (15k-7/03)
- 15b-1/06 by moulding the design

Processes for the reproduction and duplication of printing surfaces

- 15b-2/01 by stereotyping (15c; 15l-9)
- 15b-2/02 by stamping synthetic substances, celluloid
- 15b-2/03 by electrotyping (48a-7)
- 15b-3 Processes for the manufacture of multicolour printing forms (57d-3)

Processes for the manufacture of printing forms for special purposes or with special auxiliary media

- 15b-4/01 Making printing forms for negative printing, stencil printing (57d-1; 57d-4)
- 15b-4/02 Making printing forms for amalgam printing
- 15b-4/03 Making printing forms by means of typewriters
- 15b-5 Processes for the production of printing forms upon non-planar plates, especially cylinders, also for printing on textiles (8c-9; 57d-5)
- 15b-6 Processes for graining printing forms (57d-6; 57d-7; devices 67a-23)

15c Processes for the reproduction of printing plates (by electrotyping 48a-7)

Stereotyping

Manufacture of stereotype matrices

- 15c-1/01 by means of hydraulic presses
- 15c-1/02 by means of toggle presses
- 15c-1/10 by means of moving brushes
- 15c-1/20 by means of miscellaneous devices
- 15c-1/21 Devices for drying or moistening matrices

Equipment for the casting of

- 15c-2/01 flat stereotypes
- 15c-2/02 semicylindrical stereotypes in horizontal moulds
- 15c-2/03 semicylindrical stereotypes in vertical molds
- 15c-2/04 tubular stereotypes

- 15c-2/05 Casting machines with several cores, i.e. chills
- 15c-2/06 Casting machines with pumps for conveying the stereotype metal into the moulds
- 15c-2/07 Closures for the melting pots and operators therefor (15c-2/08)
- 15c-2/08 Devices for opening and closing moulds and melting pot outlets (15c-2/07)
- 15c-2/09 Devices for cooling moulds
- 15c-2/10 Melting furnaces
- 15c-2/11 Matrix locks
- 15c-2/20 Miscellaneous

- 15c-3/01 Devices for the processing of flat stereotypes
- 15c-3/02 curved stereotypes
- 15c-3/03 Devices for bending stereotype plates
- 15c-4 Rubber-covered pantographs (42a-16)
- 15c-5 Miscellaneous devices for the manufacture and reproduction of printing forms (15b; 15k-10/01; 57d-5/01)

- 15d High-speed presses, rotary presses, office printing machines and platen presses; printing processes insofar as connected with the use of special machines**

- 15d-1/01 High-speed cylinder presses and components (15d-27 – 15d-36)
- 15d-1/01 Stop cylinder high-speed presses
- 15d-1/02 Oscillating cylinder presses (15d-3)
- 15d-2 High-speed cylinder presses with constant rotation impression cylinder
- 15d-3 Double high-speed presses (15d-1/02)

- High-speed cylinder presses with fixed cylinder and reciprocating bed for perfecting
- 15d-4/01 for sheets
- 15d-4/02 for webs

- 15d-5/01 High-speed cylinder presses with fixed bed and travelling cylinder
- 15d-5/10 High-speed cylinder presses with several superposed or successive fixed beds and travelling cylinder
- 15d-5/20 High-speed cylinder presses with oppositely moved bed and cylinder
- 15d-5/30 High-speed cylinder presses in which the cylinders revolve around fixed, flat printing forms

- High-speed cylinder presses for multicolour printing
- 15d-6/01 General
- 15d-6/02 with solid or liquid ink pads
- 15d-6/03 with printing forms having movable or recessed inserted forms
- 15d-7/01 Hand presses for planographic printing
- 15d-7/02 Rubber printing frames in hand presses for planographic printing
- 15d-8/01 High-speed presses for planographic printing, general
- 15d-8/02 High-speed presses for rubber printing (15d-17/20)
- 15d-8/05 High-speed presses for phototype printing
- 15d-8/10 Dampeners in high-speed planographic presses (15d-20)
- 15d-9/01 Hand and high-speed presses for intaglio printing
- 15d-9/02 Wiping devices for hand and high-speed intaglio presses (15d-21/11)

- Bed moving devices for high-speed cylinder presses
- 15d-10/01 by means of racks and alternately, counter-rotating pinions
- 15d-10/02 by means of racks and one pinion continuously rotating in the same direction
- 15d-10/03 by means of a crank drive

- 15d-10/04 by means of a motor or traction mechanism engaging the bed
- 15d-10/05 Devices for reversing the bed of high-speed cylinder presses at the ends of the strokes
- 15d-10/06 Air buffers for braking the bed of high-speed cylinder presses at the ends of the strokes
- 15d-11/01 Devices for driving the impression cylinder in high-speed cylinder presses
- 15d-11/02 Devices for arresting the impression in high-speed cylinder presses
- 15d-11/03 Devices for breaking the impression cylinder in high-speed cylinder presses
- 15d-11/04 Devices for stopping and starting the impression cylinder in relation to the base of high-speed cylinder presses
- 15d-11/10 Structure and supports for the impression cylinders in high-speed cylinder presses
- 15d-11/11 Impression cylinder packing (15d-19/15)
- Structure and drives for the following devices attached to the impression cylinders of high-speed cylinder presses
- 15d-12/01 Clamp grippers
- 15d-12/02 Suction grippers
- 15d-12/03 Dotting devices in high-speed cylinder presses
- 15d-12/04 Conveyor belts, etc., with grippers for conveying the sheets during the printing process of high-speed cylinder presses
- 15d-12/10 Miscellaneous related to the gripping devices of high-speed cylinder presses
- 15d-13/01 Printing machines with devices for treating the sheets before printing
- 15d-13/02 Printing machines with devices for drying and warming sheets before and after printing (15d-26/22)
- 15d-13/09 Printing machines with devices for making the print glossy
- 15d-13/10 Frame structures for high-speed cylinder presses
- 15d-13/11 Bed supports and bed raising and lowering in high-speed cylinder presses (15d-5/01)
- 15d-13/12 Devices for driving high-speed cylinder presses
- 15d-13/20 High-speed cylinder presses with devices for counting the sheets before or after printing
- 15d-13/21 Arrangement of numbering devices in high-speed cylinder presses
- 15d-13/22 Cooling, heating and drying of the forms in high-speed cylinder presses
- 15d-13/30 High-speed stamping presses
- 15d-13/40 Miscellaneous arrangements in high-speed cylinder presses
- Rotary printing presses and components (15d-27 – 15d-36)**
- Rotary printing presses for perfecting
- 15d-14/01 General
- 15d-14/03 in which several printing units are superimposed or successively arranged
- 15d-14/04 in which several printing units are successively arranged, end to end machines
- 15d-14/06 in which several printing units are juxtaposed
- 15d-14/08 in which first-impression and perfecting are carried out between the same form and impression cylinder, pony printing units
- 15d-14/09 in which several impression cylinders are arranged around a plate cylinder relief
- 15d-14/20 Rotary printing presses for first-impression
- 15d-15 Rotary printing presses for different sizes
- Rotary printing presses for multicolour printing
- 15d-16/01 in which one impression cylinder cooperates with several plate cylinders
- 15d-16/02 in which each plate cylinder cooperates with one impression cylinder
- Printing presses, particularly rotary printing presses
- 15d-17/01 for the printing of tear-off calendars
- 15d-17/02 for the printing of carbon-copy books, etc.

- 15d-17/05 for the printing of wrapping paper, tying bands, etc.
- 15d-17/10 for printing miscellaneous articles with flat surfaces
- 15d-17/20 for printing miscellaneous articles with curved surfaces
- 15d-17/21 for printing incandescent lamps
- 15d-17/22 for printing various round articles, such as bottles, lamp chimneys, tin cans, etc.
- 15d-17/23 for printing on pencils, etc.
- 15d-17/40 Miscellaneous rotary presses
- 15d-18 Rotary planographic presses
 - Rotary rubber printing presses
- 15d-19/01 General
- 15d-19/02 in which one rubber cylinder cooperates with several plate cylinders
- 15d-19/03 in which one impression cylinder cooperates with several rubber cylinders
- 15d-19/04 with two cylinders
- 15d-19/05 with three cylinders for sheets and webs
- 15d-19/06 with three cylinders for sheet metal plates, etc.
- 15d-19/07 with two contacting rubber cylinders, each of which cooperates with one or more plate cylinders
- 15d-19/15 Fastening the rubber blanket to the rubber cylinder (15d-11/11)
- 15d-19/16 Starting and stopping devices for the cylinders (15d-26/05)
- 15d-20 Dampeners for rotary planographic presses (15d-8/10)
 - Rotogravure printing presses
- 15d-21/01 General
- 15d-21/02 for multicolour printing
- 15d-21/03 for making proofs
- 15d-21/10 Auxiliary devices used in the changing of plate cylinders or their copper tubes
- 15d-21/11 Wiping devices (15d-9/02)
- 15d-22 Rotary presses for printing and embossing
- 15d-23 Rotary presses for printing combination plates
 - Plate cylinders
- 15d-24/01 the circumference of which is entirely or partially flattened
- 15d-24/02 with movable printing plates (15d-6/03)
- 15d-24/03 the printing plates of which form an endless band
- 15d-24/04 of stone
- 15d-24/10 of miscellaneous designs
- 15d-25 Devices for dampening paper webs or sheets in printing machines
- 15d-26/01 Motor drives for rotary presses (21c-62/45)
- 15d-26/02 Miscellaneous drives
- 15d-26/03 Fudges for "latest news"
- 15d-26/04 Arrangement of numbering devices in rotary presses (structure of the numbering unit 15h)
- 15d-26/05 Start and stop devices for the impression unit cylinders (15d-19/16)
- 15d-26/06 Supports for impression and plate cylinders
- 15d-26/07 Structure of the impression cylinders of rotary presses
- 15d-26/08 Registering adjustment in rotary presses by adjustment of the plate cylinders or of the impression plates on the plate cylinders
- 15d-26/20 Cooling or heating of impression and plate cylinders
- 15d-26/21 Manipulation, e.g. preprint cleaning of the paper web
- 15d-26/22 Drying of the print by heating, cooling, powdering, etc. of the web before or after printing (15d-13/02)

- 15d-26/30 Miscellaneous in the art of rotary presses
- Particular equipment for high-speed and rotary printing presses**
- 15d-27/01 Hand-feeding devices for sheets, general (automatic sheet-feeding devices 15e)
- 15d-27/02 Front gauges
- 15d-27/03 Pre-grippers
- 15d-27/04 Side and draw-in marks
- 15d-27/05 Special feed table structures (15e-9/16; 15e-9/17)
- Sheet delivery devices**
- 15d-28/01 General
- 15d-28/02 with reciprocating delivery elements
- 15d-28/03 with delivery elements having a constant or staged step-by-step unidirectional motion
- 15d-28/04 with swinging flies
- 15d-28/05 with suction elements
- 15d-28/06 in which offset sheets are inserted between the printed sheets
- 15d-28/07 in which the printed sheets are rolled or unrolled in a paper web
- 15d-28/08 with cutting and folding devices in high-speed cylinder presses
- 15d-28/09 Delivery tables (15e-9/09; 15e-9/10; 15e-10)
- 15d-28/10 Delivery of the printed sheets to several pile tables (15d-28/06)
- 15d-29 Devices for straightening of the printed sheets on the delivery table
- Paper web guides**
- 15d-30/01 General
- 15d-30/02 with registering devices (21c-62/45)
- 15d-30/03 with paper web tension regulators and paper roll brakes
- 15d-30/04 with paper roll drives
- 15d-30/05 with devices for gluing a new web to the paper web being run off
- 15d-30/06 Supports, fastening, lifting in and out of paper rolls
- 15d-30/07 Pressing and smoothing webs or sheets on plate cylinders
- 15d-31 Devices to prevent soiling of the perfecting cylinder
- Devices for disengagement in case of faulty feed or delivery of paper webs or sheets**
- 15d-32/01 by mechanically actuated means
- 15d-32/02 by electrically actuated means
- 15d-32/10 Labour safety devices
- Devices for fastening**
- 15d-33/01 of type matter to the base of high-speed cylinder presses
- 15d-33/02 of type matter to the plate cylinders of high-speed cylinder presses
- 15d-33/03 of flat stereotype plates and rigid rotogravure plates to the base of high-speed cylinder presses
- 15d-33/04 of curved stereotype plates and curved rigid rotogravure plates to the plate cylinders of rotary presses
- 15d-33/10 of flexible planographic and rotogravure plates to the base of high-speed cylinder presses or to the plate cylinders of rotary presses
- 15d-33/15 of printing forms to a support used as a printing form carrier in the machine
- Inking units**
- 15d-34/01 for high-speed cylinder presses, general
- 15d-34/02 for rotary printing presses, general
- 15d-34/03 for rotogravure presses
- 15d-34/04 for printing machines in which the ink is sprayed on
- 15d-34/10 Devices for adjusting inking rollers - roller sockets

- 15d-34/11 Structure of ink fountains and doctor blades
- 15d-34/12 Structure of ink rollers, mechanical section (chemical section 15I-8/01)
- 15d-34/20 Devices for the axial reciprocation of the inking rollers, especially of the distributor rollers
- 15d-34/30 Miscellaneous special features of inking units
- Devices for folding, cutting, collecting and delivering
- 15d-35/01 General
- 15d-35/02 for longitudinal folding and cutting
- 15d-35/03 for transverse folding and cutting
- 15d-35/04 Folding cylinders and drums
- 15d-35/07 for collecting
- 15d-35/08 for adding supplements and covers
- 15d-35/09 for delivery
- 15d-36 Doctor arrangements
- Office printing machines**
- 15d-37 Stencil machine for flat stencils (8c-8; duplicating devices 15i)
- Rotary stencil machines
- 15d-38/01 in which the stencil is attached to a drum
- 15d-38/02 in which the stencil runs over two or more drums
- 15d-38/03 Fastening devices for the stencils
- 15d-39 Type printers with flat type or flat plate
- 15d-40 Rotary type printers
- 15d-41/01 Rotary rubber type printers
- 15d-41/02 Rotary flat printers
- 15d-41/10 Miscellaneous in the art of rotary office printing machines
- Addressing machines
- 15d-42/01 in which the printing plates are guided between two flat impression surfaces
- 15d-42/02 in which the printing plates are guided between two impression cylinders
- 15d-42/03 in which the printing plates are guided between one flat impression surface and one impression cylinder
- 15d-42/04 with devices for printing standing matter
- 15d-42/10 with devices for conveying the plates or stencils
- 15d-42/11 with devices for selecting plates or stencils
- 15d-42/12 with devices for passing over or repeatedly printing plates
- 15d-42/15 with devices for the feed and delivery of sheets and webs
- 15d-42/20 Address printing plate and stencil structures
- 15d-42/30 Containers for address printing plates and stencils
- 15d-42/35 Disengaging devices
- 15d-42/40 Miscellaneous
- 15d-43/01 Inking units for type printers
- 15d-43/02 Inking units for stencil printers
- 15d-43/03 Devices for advancing the inking ribbon in type printers
- Sheet feeding and delivery devices
- 15d-44/01 in office printing machines with flat type
- 15d-44/02 in office rotary machines
- Platen printing presses and accessories**
- Platen presses
- 15d-45/01 with swinging platen for single colour printing of sheets

- 15d-45/02 with parallel-motion platens for single colour printing of sheets
- 15d-45/03 Hand presses
- 15d-45/04 for rubber printing
- 15d-45/05 for planographic printing
- 15d-45/06 for single colour printing of webs
- 15d-46/01 for multicolour printing of sheets, general
- 15d-46/02 for multicolour printing of sheets, with rotating platens or form supports
- 15d-46/03 for multicolour printing of webs
- 15d-47 Platen presses for perfecting
- 15d-48/01 Plate inking units in platen presses
- 15d-48/02 Roller inking units in platen presses
- 15d-48/03 Inking units in platen presses circulating around the base or platen of platen presses
- 15d-48/04 Ribbon inking units for platen machines
- 15d-48/05 Rail and roller structures for the inking units of platen machines
- 15d-49 Devices for moving the ink roller carriage of platen machines
- Devices for the feeding and delivery of sheets in platen machines
- 15d-50/01 General
- 15d-50/02 by means of circulating grippers
- 15d-50/03 by means of suction and/or compressed air
- 15d-50/04 Lay gauges
- 15d-50/05 Grippers for placing and holding the sheet on the platen
- 15d-51 Start and stop devices for the printing pressure of platen presses
- 15d-52/01 Safety devices in platen machines actuated in case of functional disturbances
- 15d-52/02 Safety devices in platen machines against accidents, hand protectors
- 15d-53 Headline printing presses
- 15d-54/01 Sheet counting devices for platen machines
- 15d-54/02 Miscellaneous in the art of platen machines
- 15d-55 Platen embossing presses with intaglio forms and wiping apparatus
- 15d-56 Platen embossing presses for Braille, gold, and colour printing

15e Automatic folding machines for paper sheets (for paper webs, general 54d-4; in connection with the press 15d-35), **auxiliary machines related to printing, especially perforating, bronzing, edging; automatic sheet feeding devices for printing and other machines**

Folding machines

- 15e-1/01 with folding blades, knife folding
- 15e-1/02 with folding boxes, folding by buckling
- 15e-1/03 for taking up and simultaneous folding of the lowest sheet in a pile
- 15e-1/04 for full size and half sheets
- 15e-1/05 with blades guided along parallel paths
- 15e-1/06 Feed and delivery devices
- 15e-1/07 Turning devices for cross folding
- 15e-1/08 Electrical devices
- 15e-1/09 Cutting devices
- 15e-1/10 Control, straightening and disengaging devices, also feed control devices
- 15e-1/11 Grooving, smoothing, adhesive application
- 15e-1/12 Zigzag folding and insetting (of paper webs 54d-4/01; 15d-35/03)
- 15e-1/13 Sheet pushers
- 15e-1/14 Counters

- 15e-1/15 Folding cylinder supports
- 15e-1/16 Oblique cylinder and belt feeding boards
- 15e-1/17 Miscellaneous
- Perforating machines and devices (7c-11; 11e-8; 15h-2/05; 15h-2/07; 54d-3)**
- 15e-2/01 automatic, with revolving knives
- 15e-2/02 automatic, with knives parallel or nearly parallel to the base
- 15e-2/03 in connection with printing machines
- 15e-2/04 in connection with folding and bronzing machines, etc.
- Bronzing machines and devices, including accessories (75c-3; 75c-22)**
- 15e-3/01 Flat bronzing machines
- 15e-3/02 Cylinder bronzing machines
- 15e-3/03 Bronzing devices for liquid bronze ink
- 15e-3/04 Feeding and delivery devices for bronzing machines
- 15e-4 Devices for the strip-printing of sheet edges, envelopes, etc.
- Automatic sheet feeding devices for printing and other machines**
- Devices for separating the sheets of a pile by means of friction rollers, friction belts, rubbing fingers, etc.
- 15e-5/01 Friction rollers and disks for stripping off the top sheet in a vertical pile
- 15e-5/02 Friction rollers and disks for stripping off the bottom sheet in a vertical pile
- 15e-5/03 Friction rollers and disks in connection with curved stacks
- 15e-5/04 Sensors for advancing the feeding bands
- 15e-5/05 Sensors for lifting the stripping devices
- 15e-5/06 Friction belts, rollers, rubbing fingers for separating the top or bottom sheet of the pile
- 15e-5/07 Presser arms and fingers
- 15e-5/08 Buckling fingers and rollers in connection with stripping devices
- 15e-5/09 Electrical control devices
- 15e-5/10 Separation of the top or bottom sheet of an oblique or vertical pile by means of stripping devices
- 15e-5/11 Blocking and locking of the stripping devices
- 15e-5/12 Use of tongues in connection with stripping devices
- 15e-5/13 Miscellaneous
- 15e-6 Devices for lifting separate sheets by means of adhesives
- 15e-7 Devices for separating sheets by means of needles
- Devices for lifting separate sheets of a pile by air suction
- 15e-8/01 of the top sheet by suction tubes
- 15e-8/02 of the top sheet by a single suction element
- 15e-8/03 of the top sheet by suction drums, suction disks, suction cylinders
- 15e-8/04 of the bottom sheet by suction tubes
- 15e-8/05 of the bottom sheet by a single suction element
- 15e-8/06 of the bottom sheet by suction drums, suction disks, suction cylinders
- 15e-8/07 Special suction head structures
- 15e-8/08 Separation of sheets from oblique or vertical piles
- 15e-8/09 Use of suction and compressed air for loosening and separating sheets
- 15e-8/10 Use of buckling fingers, stripping rollers, etc., in conjunction with suction or compressed air for separating sheets
- 15e-8/11 Grippers working in conjunction with suction elements in sheet separation
- 15e-8/12 Oscillating suction arms for sheet separation
- 15e-8/13 Electrical devices

- 15e-8/14 Suction elements in connection with curved stacks
15e-8/15 Miscellaneous
- Special devices associated with automatic sheet feeding apparatus**
- 15e-9/01 Retarding devices for sheet feeding apparatus
15e-9/02 Gear shifts for sheet feeding apparatus
15e-9/03 Straightening the sheets during feeding
15e-9/04 Straightening the sheets on the pile
15e-9/05 Feeding the sheets along chutes by means of pushers or carriages
15e-9/06 Feeding at intervals; cutting, turning
15e-9/07 Special feeding devices for single sheets
15e-9/08 Raising and lowering, or reciprocating the stack table at every single operation
15e-9/09 Tables and feeding devices capable of being folded up and down, raised and displaced
15e-9/10 partitioned stack tables
15e-9/11 Special gripper, grip chain and grip roller structures in sheet feeding devices
15e-9/12 Tongues and presser fingers in sheet feeding devices
15e-9/13 Control and disengagement devices actuated in case of faulty sheet feeding operation
15e-9/14 Sorting devices for the separation of satisfactory material from rejects
15e-9/15 Counting devices
15e-9/16 Feeding the sheets on the feed board of the press by means of belts and at variable speeds (15d-27/05)
15e-9/17 Feeding the sheets on the feed board of the press by means of reciprocating and swinging rods (15d-27/05)
- 15e-10 Devices for lifting, lowering or otherwise moving the stack table (15d-28/09)
15e-11 Automatic feeding mechanism for cards, envelopes, etc., for printing and other machines
- Machines for the manufacture and treatment of inking rollers for printing machines**
- 15e-12/01 Devices for casting composition rollers
15e-12/02 Devices for stripping composition rollers
15e-12/03 Devices for covering with leather and coating impression cylinders
15e-13 Devices for mounting and removing cylinders in high-speed presses; etc.
15e-14 Devices for cleaning cylinders and forms, and for preserving cylinders
- Special auxiliary machines for the printing art**
- 15e-15/01 Newspaper inserting machines
15e-15/02 Mobile feed boards
15e-15/03 Block height measuring devices, straightening machines, cleaning apparatus for zinc plates, etc.
- 15f Ruling machines (15a-34; 70e-11)**
15f (No subdivision)
- 15g Typewriters and accessories**
- Classified according to the character of the type carrier**
- 15g-1 Type-lever typewriters
15g-2 Type-wheel typewriters with keys
15g-3 Type-wheel sector typewriters with keys
15g-4 Type-cylinder typewriters with keys
15g-5 Type-disk typewriters with keys
15g-6 Type-wheel typewriters with (single) key or indicator
15g-7 Type-sector typewriters with (single) key or indicator

15g-8	Type-cylinder typewriters with (single) key or indicator
15g-8/50	Type-wheel and cylinder typewriters, electrically operated
15g-9	Type-disk typewriters with (single) key or indicator
15g-10	Type-plate typewriters
15g-11	Type-bar typewriters
15g-12	Type-rod typewriters
15g-13	Type-band or rule typewriters
15g-14	Typewriters with spherical type carriers

Typewriters classified according to use

15g-15	Book and flat plate typewriters
15g-16	Tabulating typewriters, tabulators
15g-17	Musical notation typewriters (51e-4; 51e-5)
15g-18	Stenographic typewriters
15g-19	Braille typewriters (42n-2/02; 70d-13/10)
15g-20	Cryptographic typewriters for coding and decoding (42n-14)
15g-20/50	Line typewriters

Typewriters classified on the basis of the drive

15g-21	Pneumatic typewriters
15g-22	Hydraulic typewriters
15g-23	Electric typewriters
15g-24	Typewriters with automatic drive for duplicating

Operating and shifting devices for typewriters

	Type-bar operating devices (15g-1)
15g-25/01	General
15g-25/02	Power operated
15g-25/03	Noiseless operation
15g-25/04	for machines with interchangeable type bar basket
	Shifting devices
15g-26/01	with shifting platen
15g-26/02	with shifting type carrier
15g-26/03	power operated (15g-25/02)
	Carriage feed mechanisms
15g-27/01	General
15g-27/02	with spacing corresponding to the different letter widths
15g-27/03	with equipment for writing after locking
15g-27/04	Line justifying devices
15g-27/05	Devices for the release and silent return of the carriage
15g-27/06	Devices for arbitrarily feeding the carriage in either direction
	Line spacing devices
15g-28/01	General
15g-28/02	with device for writing above or below the line
15g-28/03	Line escapement wheel couplings
15g-29	Back spacer mechanisms for carriages
	Carriage return mechanisms
15g-30/01	General
15g-30/02	Electromagnetically operated
15g-30/03	Electric motor operated
15g-31	Platen feeding devices for line-forming in the direction of rotation of the platen

Elements of typewriter carriages**Margin limiting devices**

- 15g-32/01 for the side margin
- 15g-32/02 for the upper or lower margin of the paper sheet
- 15g-33 Devices for indicating the position of the carriage
- 15g-34 Carriage structures and guides

Paper feeding mechanism

- 15g-35/01 Feed roll structures and drives
- 15g-35/02 Paper holding fingers and upper pressure rollers
- 15g-35/03 Side margin guides
- 15g-35/04 Front guide plates
- 15g-35/05 Devices for holding and guiding cards
- 15g-35/06 Devices for typing one original and several account copies
- 15g-35/07 with special feed of the original and of the account copies
- 15g-35/08 Billing devices
- 15g-35/09 Devices for typing totaliser strips
- 15g-35/10 Devices for typing paper webs
- 15g-35/11 Devices for typing paper webs with removable carbon sheet holders
- 15g-35/12 Devices for the automatic feed of envelopes and sheets
- 15g-35/13 Miscellaneous paper feeding devices
- 15g-36 Paper rollers and supports therefor

Typewriter inking units (15g-1 – 15g-14)

- 15g-37/01 Inking devices with ink ribbon
- 15g-37/02 for multicolour writing
- 15g-37/03 Automatic devices for reversing longitudinal ribbon movement
- 15g-37/04 Ribbon fork guide drives
- 15g-37/05 Accent-writing devices
- 15g-37/06 Inking devices with auxiliary ink ribbons (15g-35/10)
- 15g-37/07 Ink ribbons
- 15g-37/08 Ink ribbons spools and ribbon attachment to the spool
- 15g-38 Inking devices with ink pads
- 15g-39 Inking devices with ink rollers

Other typewriter elements

- 15g-40/01 Key units (15g-1 – 15g-5)
- 15g-40/02 Key caps
- 15g-40/03 Key locks
- 15g-41 Type lever arrangements (15g-1; 15g-25; 15g-45/06)
- 15g-42 Printing hammers
- 15g-43 Devices for rendering the writing visible
- 15g-44 Devices for counting letters, words, lines and pages
- 15g-45/01 Sound damping devices
- 15g-45/02 Typewriters for oriental languages
- 15g-45/03 Type-cleaning devices
- 15g-45/04 Underlining or dash making devices
- 15g-45/05 Sheet feeding and straightening devices
- 15g-45/06 Types and devices for mounting and attaching same on the type carriers
- 15g-45/07 Type guides on the point of impact
- 15g-45/08 Type bar supports for the rest position
- 15g-45/09 Erasing devices
- 15g-45/10 Special devices for portable typewriters

15g-45/11 Manufacture of type wheels
 15g-45/12 Carbon paper holders and roller guards
 15g-45/13 Devices for actuating the keys or other parts with the foot or knee
 15g-45/14 Devices for inking or renewing the ink ribbon
 15g-45/15 Miscellaneous other equipment for typewriters

Copy holders for typewriters
 15g-46/01 with flat support without line-by-line indicator feed
 15g-46/02 with line-by-line indicator feed
 15g-46/03 with line-by-line copy feed
 15g-46/04 with roller-guided copy

15h Hand stamps, stamping and numbering mechanisms

Hand stamps
 15h-1/01 General
 15h-1/02 Ribbon stamps
 15h-1/03 Roller stamps
 15h-1/04 Stamps with movable or flexible handle
 15h-1/05 Stamps with visible mark
 15h-1/06 Stamps with interchangeable stamp plates
 15h-1/07 Stamps with aligning device
 15h-1/08 Stamps with several printing surfaces
 15h-1/09 Egg stamps (45h-43/10)
 15h-1/10 Stencil stamps
 15h-1/11 Plier-type stamps, general, and punching, stamping and marking plier-type devices for tickets, etc. (recording and indicating devices for plier-type stamps, etc. 43a-21)
 15h-1/12 Hammer or impact stamps
 15h-1/13 Swinging motion stamps
 15h-1/14 Press-down self-inking stamps
 15h-1/15 Multicolour stamps
 15h-1/16 Ball stamps
 15h-1/17 Dry stamps
 15h-1/18 Pocket stamps

Hand-printing devices
 15h-2/01 General
 15h-2/02 with guide rule
 15h-2/03 Type holder
 15h-2/04 Laundry-marking devices
 15h-2/05 Check printing devices
 15h-2/06 Check perforating devices
 15h-2/07 Automatic perforating devices (15e-2; 54d-3)

15h-3 Stamp pads, inking devices for hand stamps
 15h-4 Letter stamping devices and machines for cancelling postage stamps (dispatching machines 43a-24)

15h-5/01 Card and ticket printing devices (43a-20; 42p-12/50)
 15h-5/02 Label printing devices
 15h-6 Number and numbering devices for the printing art, paginating machines (42p)
 15h-7/01 Miscellaneous in the art of hand stamps
 15h-7/02 Stamp holders

- 15i Duplicating devices (stencil printing 15d); duplicating processes, insofar as they are dependent upon the use of special equipment (chemical processes 15k)**
- 15i-1 Copying presses
 - 15i-2 Copying machines for documents (photocopying machines 57c-11; sculptors' copying machines 75a-13 – 75a-15)
 - 15i-3/01 Loose-leaf manifolding devices (writing pads 70d-11/01, 70d-11/10, 70d-11/20)
 - 15i-3/02 Manifolding devices for paper rolls
 - 15i-4/01 Manifolding blocks
 - 15i-4/50 Manifolding books
 - 15i-5 Hectographs (hectographic materials 15i-4/01)
 - 15i-6 Miscellaneous duplicating devices (15d-37 – 15d-44; sheet feeding devices 15e-1, 15e-5 – 15e-11)
- 15k Printing and duplicating processes, including colour relief printing (when determined by the use of special machines 15d, 15i; photomechanical reproduction 57d); special printed products; letter spacing**
- 15k-1/01 Inking and impressing a printing form in general (15h-3)
 - 15k-1/02 Stencil printing
 - Multicolour printing (57d-3)
 - 15k-2/01 Simultaneous printing of all colours, mosaic printing
 - 15k-2/02 Superimposed printing of the colours
 - 15k-2/03 Combination printing (15d, 23)
 - 15k-3 Printing with pastel colours, e.g. transfer and varnish inks
 - 15k-4 Printing with dissolved paints, e.g. hectographing (15i-5; 15i-4) rubber cylinder printing
 - 15k-5 Printing with metal foils, bronze, powdered inks (75b-3 – 75b-5; 75c-3; 75c-4)
 - 15k-6 Colour relief printing (75b-11; 75b-19)
 - Duplication processes
 - 15k-7/01 Copying processes, office flat printing processes (mechanical section 15b-1/05; 15d-42; 15i-1, 15i-2, 15i-6)
 - 15k-7/02 Manifolding processes (15i-3; 15i-4)
 - 15k-7/03 Contact printing, "catatype" [catalytic printing] (57d-9)
 - 15k-7/04 Chemical printing
 - 15k-7/05 Electrical printing
 - Printing upon bases other than ordinary printing paper (cloth-printing 8n)
 - 15k-8/01 Printing upon solid articles
 - 15k-8/02 Printing upon metal
 - 15k-8/03 Printing upon wood, horn, celluloid, rubber
 - 15k-8/04 Printing upon glass, ceramic articles (80b-23)
 - 15k-8/05 Graphic printing on textiles, leather, linoleum (8n-1 – 8n-4)
 - 15k-8/06 Printing upon specially prepared papers (75b-6)
 - Printing of special designs
 - 15k-9/01 Card printing
 - 15k-9/02 Musical notation (musical type setting 15a-12)
 - 15k-9/03 Natural design printing, wood and marble grains (75b; 75d)
 - 15k-9/04 Special adaptation of printed patterns to the printing industry
 - 15k-9/05 Special effects
 - 15k-9/06 Watermark printing (55d-17; 75d-5)
 - 15k-9/07 Relief print reproduction by means of ground powders

- 15k-9/08 Transfer picture printing (75c-5; 80b-23)
- 15k-9/09 Transfer pattern printing (8n)
- 15k-9/10 Printing of securities (55f-9; 75d-5/03)
- 15k-9/11 Braille writing (15g-19)
- 15k-9/12 Wallpaper printing, chemical section, apart from cloth-printing (8c; 8n; 75b)
- 15k-10/01 Letter spacing and other modifications of the appearance, especially preparation of printing forms
- 15k-10/02 Relief plates
- 15I** **Materials for graphic printing, e.g. plates, compositions, inks, wetting and washing media, matrix boards**
- 15I-1 Printing plates of natural and artificial stone also stone composites on a metal backing (15b-1; 15b-6)
 - Printing plates of metal
- 15I-2/01 for relief and intaglio printing
- 15I-2/02 for planographic printing
- 15I-3 Printing plates of various materials, e.g. celluloid (39b)
 - Flexible printing plates
- 15I-4/01 Transfer sheets, hectographic sheets and materials (15k-4)
- 15I-4/02 Stencil sheets (stencil papers 55f-15)
 - Printing plates other than plane, especially cylinders (mechanical structure 8c, 15d)
 - 15I-5/01 of stone
 - 15I-5/02 of metal
 - 15I-5/03 of various materials
- 15I-6/01 Chemical grinding agents
- 15I-6/02 Chemical graining agents (67a-9; 67a-13; 67a-14)
- 15I-6/03 Chemical cleaning agents (22g-14)
- 15I-6/04 Base plates for printing forms, compositions for backing up the shell (electrotype) and chemical means for attaching printing forms to base plates, as supports in the press (fastening of printing forms to the bed or base plates, as supports in the press (15d-33)
 - Transfer media for graphic printing
- 15I-7/01 Printing inks (8n; 22g; 22h)
- 15I-7/02 Inks for hectographs, typewriters, manifold papers (15k-4)
- 15I-7/03 Inks for lithography, autography (22g)
- 15I-7/04 Chemically active inks (sympathetic inks and colours 22g)
- 15I-7/05 Wetting, washing and neutralising agents
 - Materials for the components or accessories of printing machines
- 15I-8/01 Roller materials for ink and distributor cylinders (manufacturing equipment, e.g. for casting 15e-12; cleaning 15e-14)
- 15I-8/02 Wipers for intaglio printing
- 15I-8/03 Covers for ink, wetting and impression cylinders, impression blankets (cover devices 15e-12)
- 15I-9 Materials for the reproduction of printing forms, especially flongs for stereotyping (15b-2)