Symbol	Typ	Titel
B	**Sektion**	**SECTION B — PERFORMING OPERATIONS; TRANSPORTING**
B23	**Klasse**	**MACHINE TOOLS; METAL-WORKING NOT OTHERWISE PROVIDED FOR (punching, perforating, making articles by processing sheet metal, tubes, or profiles B21D; wire-working B21F; making pins, needles, or nails B21G; making chains B21L; grinding B24)**
B23D	**Unterklasse**	**PLANING; SLOTTING; SHEARING; BROACHING; SAWING; FILING; SCRAPING; LIKE OPERATIONS FOR WORKING METAL BY REMOVING MATERIAL, NOT OTHERWISE PROVIDED FOR (making toothed gears or the like B23F; cutting metal by applying heat locally B23K; arrangements for copying or controlling B23Q)**
		Planing; Slotting
B23D 1/00	**Hauptgruppe**	**Planing or slotting machines cutting by relative movement of the tool and workpiece in a horizontal straight line only**
B23D 1/02	1-Punkt Untergruppe	. by movement of the work-support
B23D 1/04	2-Punkt Untergruppe	. . with the tool supported only on one side of the bed
B23D 1/06	2-Punkt Untergruppe	. . with the tool supported on both sides of the bed
B23D 1/08	1-Punkt Untergruppe	. by movement of the tool
B23D 1/10	2-Punkt Untergruppe	. . with means for adjusting the tool-guide vertically
B23D 1/12	3-Punkt Untergruppe	. . . with the tool supported only on one side of the bed
B23D 1/14	3-Punkt Untergruppe	. . . with the tool supported on both sides of the bed
B23D 1/16	2-Punkt Untergruppe	. . without means for adjusting the tool-guide vertically
B23D 1/18	1-Punkt Untergruppe	. cutting on both the forward and the return stroke
B23D 1/20	1-Punkt Untergruppe	. with tool-supports or work-supports specially mounted or guided for working in different directions or at different angles; Special purpose machines
B23D 1/22	2-Punkt Untergruppe	. . for planing ingots or the like (scrubbing or peeling ingots by milling B23C 3/14)
B23D 1/24	2-Punkt Untergruppe	. . for planing inner surfaces, e.g. of moulds
B23D 1/26	2-Punkt Untergruppe	. . for planing edges or ridges or cutting grooves (cutting helical grooves B23D 5/02)
B23D 1/28	2-Punkt Untergruppe	. . in which the tool or workpiece is fed otherwise than in a straight line, e.g. for planing profiled stock
B23D 1/30	3-Punkt Untergruppe	. . . in which the direction of feed is controlled by a copying device, e.g. by a pattern (features of copying devices B23Q 35/00)
B23D 3/00	**Hauptgruppe**	**Planing or slotting machines cutting by relative movement of the tool and workpiece in a vertical or inclined straight line**
B23D 3/02	1-Punkt Untergruppe	. for cutting grooves (cutting helical grooves B23D 5/02)
B23D 3/04	1-Punkt Untergruppe	. in which the tool or workpiece is fed otherwise than in a straight line
B23D 3/06	2-Punkt Untergruppe	. . in which the direction of feed is controlled by a copying device, e.g. by a pattern (features of copying devices B23Q 35/00)
B23D 5/00	**Hauptgruppe**	**Planing or slotting machines cutting otherwise than by relative movement of the tool and workpiece in a straight line**
B23D 5/02	1-Punkt Untergruppe	. involving rotary and straight-line movements only, e.g. for cutting helical grooves
B23D 5/04	1-Punkt Untergruppe	. controlled by a copying device, e.g. by a pattern (features of copying devices B23Q 35/00)

Symbol	Typ	Titel
B23D 7/00	**Hauptgruppe**	**Planing or slotting machines characterised only by constructional features of particular parts (constructional features of these parts per seB23Q)**
B23D 7/02	1-Punkt Untergruppe	. of frames, of work-table beds
B23D 7/04	1-Punkt Untergruppe	. of pillars, of cross-beams
B23D 7/06	1-Punkt Untergruppe	. of tool-carrying arrangements
B23D 7/08	1-Punkt Untergruppe	. of work-tables
B23D 7/10	1-Punkt Untergruppe	. of drives for reciprocating parts
B23D 7/12	1-Punkt Untergruppe	. of arrangements for impact damping or regenerating energy
B23D 9/00	**Hauptgruppe**	**Hand-operated planing devices; Portable planing apparatus (details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed B25F 5/00) [4]**
B23D 11/00	**Hauptgruppe**	**Planing or slotting devices able to be attached to a machine tool, whether or not replacing an operative portion of the machine tool**
B23D 13/00	**Hauptgruppe**	**Tools or tool holders specially designed for planing or slotting machines (features applicable also to turning-machines B23B 27/00, B23B 29/00; for cutting gear teeth B23F 21/04)**
B23D 13/02	1-Punkt Untergruppe	. Pivotally-mounted holders
B23D 13/04	1-Punkt Untergruppe	. Holders for tool sets
B23D 13/06	1-Punkt Untergruppe	. Devices for lifting or lowering the tool
		Shearing; Similar cutting
B23D 15/00	**Hauptgruppe**	**Shearing machines or shearing devices cutting by blades which move parallel to each other**
B23D 15/02	1-Punkt Untergruppe	. having both upper and lower moving blades
B23D 15/04	1-Punkt Untergruppe	. having only one moving blade
B23D 15/06	1-Punkt Untergruppe	. Sheet shears
B23D 15/08	2-Punkt Untergruppe	. . with a blade moved in one plane, e.g. perpendicular to the surface of the sheet
B23D 15/10	2-Punkt Untergruppe	. . with a blade moved in a curved surface, e.g. for producing an edge with a curved cross-section
B23D 15/12	1-Punkt Untergruppe	. characterised by drives or gearings therefor
B23D 15/14	2-Punkt Untergruppe	. . actuated by fluid or gas pressure
B23D 17/00	**Hauptgruppe**	**Shearing machines or shearing devices cutting by blades pivoted on a single axis (on an axis parallel to the blade B23D 15/10; hand-held devices B23D 29/00)**
B23D 17/02	1-Punkt Untergruppe	. characterised by drives or gearings therefor
B23D 17/04	2-Punkt Untergruppe	. . actuated by a rotary shaft
B23D 17/06	2-Punkt Untergruppe	. . actuated by fluid or gas pressure
B23D 17/08	2-Punkt Untergruppe	. . actuated by hand or foot operated lever mechanism
B23D 19/00	**Hauptgruppe**	**Shearing machines or shearing devices cutting by rotary discs (by friction saw discs B23D 45/00)**
B23D 19/02	1-Punkt Untergruppe	. having both a fixed shearing blade and a rotary shearing disc
B23D 19/04	1-Punkt Untergruppe	. having rotary shearing discs arranged in co-operating pairs
B23D 19/06	2-Punkt Untergruppe	. . with several spaced pairs of shearing discs working simultaneously, e.g. for trimming or making strips

Symbol	Typ	Titel
B23D 19/08	1-Punkt Untergruppe	. for special use, e.g. for cutting curves, for chamfering edges
B23D 21/00	**Hauptgruppe**	**Machines or devices for shearing or cutting tubes (as additional equipment for deep-drawing presses B21D 24/16; by sawing, see the relevant groups for sawing machines or sawing devices)**
B23D 21/02	1-Punkt Untergruppe	. otherwise than in a plane perpendicular to the axis of the tube, e.g. for making mitred cuts, for making bicycle frames
B23D 21/04	1-Punkt Untergruppe	. Tube-severing machines with rotating tool-carrier
B23D 21/06	1-Punkt Untergruppe	. Hand-operated tube cutters
B23D 21/08	2-Punkt Untergruppe	. . with cutting wheels
B23D 21/10	2-Punkt Untergruppe	. . with other cutting blades or tools
B23D 21/12	3-Punkt Untergruppe	. . . with provision for hammering on the tool
B23D 21/14	1-Punkt Untergruppe	. cutting inside the tube
B23D 23/00	**Hauptgruppe**	**Machines or devices for shearing or cutting profiled stock (hand-held devices B23D 29/00)**
B23D 23/02	1-Punkt Untergruppe	. otherwise than in a plane perpendicular to the axis of the stock
B23D 23/04	1-Punkt Untergruppe	. by means of holding-dies, arranged side by side, subjecting the stock to torsional stress
B23D 25/00	**Hauptgruppe**	**Machines or arrangements for shearing stock while the latter is travelling otherwise than in the direction of the cut (control arrangements specially adapted for machines for shearing stock while the latter is travelling otherwise than in the direction of the cut B23D 36/00; controlling slack in travelling flexible stock B21C 47/10) [2]**
B23D 25/02	1-Punkt Untergruppe	. Flying shearing machines (B23D 25/12 takes precedence; flying shears for cutting in general B26D 1/56)
B23D 25/04	2-Punkt Untergruppe	. . in which a cutting unit moves bodily with the work while cutting (B23D 25/06 takes precedence)
B23D 25/06	2-Punkt Untergruppe	. . having a cutting device mounted on an oscillating lever
B23D 25/08	2-Punkt Untergruppe	. . having two coacting shearing blades mounted independently
B23D 25/10	3-Punkt Untergruppe	. . . on co-operating beams moving parallel to each other and attached to lever mechanisms
B23D 25/12	1-Punkt Untergruppe	. Shearing machines with blades on coacting rotating drums
B23D 25/14	1-Punkt Untergruppe	. without regard to the exact dimensions of the resulting material, e.g. for cutting-up scrap
B23D 27/00	**Hauptgruppe**	**Machines or devices for cutting by a nibbling action**
B23D 27/02	1-Punkt Untergruppe	. Hand-held devices (details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed B25F 5/00) [4]
B23D 27/04	2-Punkt Untergruppe	. . actuated by electric power
B23D 27/06	2-Punkt Untergruppe	. . actuated by fluid or gas pressure
B23D 29/00	**Hauptgruppe**	**Hand-held metal-shearing or metal-cutting devices (with nibbling action B23D 27/02; hand-operated devices for metal-cutting otherwise than by shearing B26B)**
B23D 29/02	1-Punkt Untergruppe	. Hand-operated metal-shearing devices
B23D 31/00	**Hauptgruppe**	**Shearing machines or shearing devices covered by none or more than one of the groups B23D 15/00-B23D 29/00; Combinations of shearing machines**
B23D 31/02	1-Punkt Untergruppe	. for performing different cutting operations on travelling stock, e.g. slitting and severing simultaneously
B23D 31/04	1-Punkt Untergruppe	. for trimming stock combined with devices for shredding scrap
B23D 33/00	**Hauptgruppe**	**Accessories for shearing machines or shearing devices (feeding stock to machines or removing stock B21D 43/00)**

Symbol	Typ	Titel
B23D 33/02	1-Punkt Untergruppe	. Arrangements for holding, guiding, or feeding work during the operation
B23D 33/04	2-Punkt Untergruppe	. . for making circular cuts
B23D 33/06	2-Punkt Untergruppe	. . in which the direction of feed is controlled by a copying device, e.g. by a pattern (features of copying devices B23Q 35/00)
B23D 33/08	1-Punkt Untergruppe	. Press-pads; Counter-bases; Hold-down devices
B23D 33/10	1-Punkt Untergruppe	. Stops for positioning work
B23D 33/12	1-Punkt Untergruppe	. Equipment for indicating where to cut
B23D 35/00	**Hauptgruppe**	**Tools for shearing machines or shearing devices; Holders or chucks for shearing tools**
B23D 36/00	**Hauptgruppe**	**Control arrangements specially adapted for machines for shearing or similar cutting, or for sawing, stock while the latter is travelling otherwise than in the direction of the cut [2]**
		Broaching
B23D 37/00	**Hauptgruppe**	**Broaching machines or broaching devices**
B23D 37/02	1-Punkt Untergruppe	. Broaching machines with horizontally-arranged working tools
B23D 37/04	2-Punkt Untergruppe	. . for broaching inner surfaces
B23D 37/06	2-Punkt Untergruppe	. . for broaching outer surfaces
B23D 37/08	1-Punkt Untergruppe	. Broaching machines with vertically-arranged working tools
B23D 37/10	2-Punkt Untergruppe	. . for broaching inner surfaces
B23D 37/12	2-Punkt Untergruppe	. . for broaching outer surfaces
B23D 37/14	1-Punkt Untergruppe	. Broaching machines with rotatably-arranged working tools
B23D 37/16	2-Punkt Untergruppe	. . for broaching helical grooves
B23D 37/18	1-Punkt Untergruppe	. Broaching machines with working tools mounted on an endless chain or belt
B23D 37/20	1-Punkt Untergruppe	. Broaching machines with arrangements for working in opposite directions
B23D 37/22	1-Punkt Untergruppe	. for special purposes (B23D 37/14 takes precedence)
B23D 39/00	**Hauptgruppe**	**Accessories for broaching machines or broaching devices**
B23D 41/00	**Hauptgruppe**	**Broaching machines or broaching devices characterised only by constructional features of particular parts (constructional features of these parts per seB23Q)**
B23D 41/02	1-Punkt Untergruppe	. of frames; of work supports
B23D 41/04	1-Punkt Untergruppe	. of tool-carrying arrangements
B23D 41/06	1-Punkt Untergruppe	. of devices for feeding, clamping, or ejecting workpieces
B23D 41/08	1-Punkt Untergruppe	. of drives; of control devices
B23D 43/00	**Hauptgruppe**	**Broaching tools (for cutting gear teeth B23F 21/26)**
B23D 43/02	1-Punkt Untergruppe	. for cutting by rectilinear movement (B23D 43/08 takes precedence)
B23D 43/04	2-Punkt Untergruppe	. . having inserted cutting edges
B23D 43/06	1-Punkt Untergruppe	. for cutting by rotational movement
B23D 43/08	1-Punkt Untergruppe	. mounted on an endless chain or belt
		Sawing (surgical saws A61B 17/14; sawing wood or similar material B27B)

Symbol	Typ	Titel
B23D 45/00	**Hauptgruppe**	**Sawing machines or sawing devices with circular saw blades or with friction saw discs (shearing machines with rotary discs B23D 19/00-B23D 25/00)**
B23D 45/02	1-Punkt Untergruppe	. with a circular saw blade or the stock mounted on a carriage
B23D 45/04	1-Punkt Untergruppe	. with a circular saw blade or the stock carried by a pivoted lever
B23D 45/06	1-Punkt Untergruppe	. with a circular saw blade arranged underneath a stationary work-table
B23D 45/08	1-Punkt Untergruppe	. with a ring blade having inside saw teeth
B23D 45/10	1-Punkt Untergruppe	. with a plurality of circular saw blades
B23D 45/12	1-Punkt Untergruppe	. with a circular saw blade for cutting tubes
B23D 45/14	1-Punkt Untergruppe	. for cutting otherwise than in a plane perpendicular to the axis of the stock, e.g. for making a mitred cut
B23D 45/16	1-Punkt Untergruppe	. Hand-held sawing devices with circular saw blades
B23D 45/18	1-Punkt Untergruppe	. Machines with circular saw blades for sawing stock while the latter is travelling otherwise than in the direction of the cut (control of such machines B23D 36/00) [2]
B23D 45/20	2-Punkt Untergruppe	. . Flying sawing machines, the saw carrier of which is reciprocated in a guide and moves with the travelling stock during sawing
B23D 45/22	2-Punkt Untergruppe	. . Flying sawing machines with lever-supported saw carrier which moves in a complete circular path
B23D 45/24	2-Punkt Untergruppe	. . Flying sawing machines with lever-supported saw carrier which oscillates in an arc
B23D 45/26	1-Punkt Untergruppe	. with high-speed cutting discs, performing the cut by frictional heat melting the material (grinders for cutting-off B24B 27/06)
B23D 47/00	**Hauptgruppe**	**Sawing machines or sawing devices working with circular saw blades, characterised only by constructional features of particular parts (constructional features of these parts per seB23Q; details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed B25F 5/00) [4]**
B23D 47/02	1-Punkt Untergruppe	. of frames; of guiding arrangements for work-table or saw-carrier
B23D 47/04	1-Punkt Untergruppe	. of devices for feeding, positioning, clamping, or rotating work
B23D 47/06	2-Punkt Untergruppe	. . for stock of indefinite length
B23D 47/08	1-Punkt Untergruppe	. of devices for bringing the circular saw blade to the workpiece or removing same therefrom
B23D 47/10	2-Punkt Untergruppe	. . actuated by fluid or gas pressure
B23D 47/12	1-Punkt Untergruppe	. of drives for circular saw blades
B23D 49/00	**Hauptgruppe**	**Machines or devices for sawing with straight reciprocating saw blades, e.g. hacksaws**
B23D 49/02	1-Punkt Untergruppe	. Hacksaw machines with straight saw blades secured to a rectilinearly-guided frame, e.g. with the frame fed stepwise in the plane of the guide
B23D 49/04	1-Punkt Untergruppe	. Hacksaw machines with straight saw blades secured to a pivotally-arranged frame
B23D 49/06	1-Punkt Untergruppe	. Hacksaw machines with straight saw blades for special use
B23D 49/08	1-Punkt Untergruppe	. Pad-saw machines, i.e. machines in which the blade is attached to a carrier at one end only
B23D 49/10	1-Punkt Untergruppe	. Hand-held or hand-operated sawing devices with straight saw blades
B23D 49/11	2-Punkt Untergruppe	. . for special purposes, e.g. offset-blade hand saws [5]
B23D 49/12	2-Punkt Untergruppe	. . Hacksaws (B23D 49/11, B23D 49/16 take precedence; bows adjustable in length or height B23D 51/12) [5]

Symbol	Typ	Titel
B23D 49/14	2-Punkt Untergruppe	. . Pad saws (B23D 49/11, B23D 49/16 take precedence) [5]
B23D 49/16	2-Punkt Untergruppe	. . actuated by electric or magnetic power or prime movers (B23D 49/11 takes precedence) [5]
B23D 51/00	**Hauptgruppe**	**Sawing machines or sawing devices working with straight blades, characterised only by constructional features of particular parts (constructional features of these parts per seB23Q; details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed B25F 5/00); Carrying or attaching means for tools, covered by this subclass, which are connected to a carrier at both ends [4]**
B23D 51/01	1-Punkt Untergruppe	. characterised by the handle [5]
B23D 51/02	1-Punkt Untergruppe	. of beds; of guiding arrangements for work-tables or saw carriers; of frames [5]
B23D 51/03	2-Punkt Untergruppe	. . with extensible or collapsible frames [5]
B23D 51/04	1-Punkt Untergruppe	. of devices for feeding, positioning, clamping, or rotating work
B23D 51/06	2-Punkt Untergruppe	. . for stock of indefinite length
B23D 51/08	1-Punkt Untergruppe	. of devices for mounting straight saw blades or other tools
B23D 51/10	2-Punkt Untergruppe	. . for hand-held or hand-operated devices
B23D 51/12	2-Punkt Untergruppe	. . for use with tools, dealt with in this subclass, which are connected to a carrier at both ends, e.g. bows adjustable in length or height
B23D 51/14	3-Punkt Untergruppe	. . . Attachment of the tool
B23D 51/16	1-Punkt Untergruppe	. of drives or feed mechanisms for straight tools, e.g. saw blades, or bows
B23D 51/18	2-Punkt Untergruppe	. . actuated by fluid or gas pressure (B23D 51/20 takes precedence)
B23D 51/20	2-Punkt Untergruppe	. . with controlled feed of the tool, or with special arrangements for relieving or lifting the tool on the return stroke
B23D 53/00	**Hauptgruppe**	**Machines or devices for sawing with strap saw blades which are effectively endless in use, e.g. for contour cutting**
B23D 53/02	1-Punkt Untergruppe	. with stationarily-mounted wheels carrying the strap (B23D 53/06 takes precedence)
B23D 53/04	1-Punkt Untergruppe	. with the wheels carrying the strap mounted shiftably or swingingly, other than merely for adjustment
B23D 53/06	1-Punkt Untergruppe	. with shiftable or swinging work-table
B23D 53/08	1-Punkt Untergruppe	. for cutting profiled stock
B23D 53/10	1-Punkt Untergruppe	. Sawing devices working with strap saw blades able to be attached to a machine tool, whether or not replacing an operative portion of the machine tool
B23D 53/12	1-Punkt Untergruppe	. Hand-held or hand-operated sawing devices working with strap saw blades
B23D 55/00	**Hauptgruppe**	**Sawing machines or sawing devices working with strap saw blades, characterised only by constructional features of particular parts (constructional features of these parts per seB23Q)**
B23D 55/02	1-Punkt Untergruppe	. of frames; of tables
B23D 55/04	1-Punkt Untergruppe	. of devices for feeding or clamping work
B23D 55/06	1-Punkt Untergruppe	. of drives for strap saw blades; of wheel mountings
B23D 55/08	1-Punkt Untergruppe	. of devices for guiding or feeding strap saw blades

Symbol	Typ	Titel
B23D 55/10	1-Punkt Untergruppe	. of devices for tensioning strap saw blades (B23D 55/06 takes precedence; incorporated in the strap B23D 61/12)
B23D 57/00	**Hauptgruppe**	**Sawing machines or sawing devices not covered by one of groups B23D 45/00-B23D 55/00**
B23D 57/02	1-Punkt Untergruppe	. with chain saws
B23D 59/00	**Hauptgruppe**	**Accessories specially designed for sawing machines or sawing devices (lubricating or cooling machine tools in general B23Q 11/12)**
B23D 59/02	1-Punkt Untergruppe	. Devices for lubricating or cooling circular saw blades
B23D 59/04	1-Punkt Untergruppe	. Devices for lubricating or cooling straight or strap saw blades
B23D 61/00	**Hauptgruppe**	**Tools for sawing machines or sawing devices (tools for trepanning B23B 51/04); Clamping devices for these tools**
B23D 61/02	1-Punkt Untergruppe	. Circular saw blades
B23D 61/04	2-Punkt Untergruppe	. . with inserted saw teeth
B23D 61/06	3-Punkt Untergruppe	. . . in exchangeable arrangement
B23D 61/08	2-Punkt Untergruppe	. . Ring saw blades with internal saw teeth
B23D 61/10	2-Punkt Untergruppe	. . clamped between hubs; Clamping or aligning devices therefor
B23D 61/12	1-Punkt Untergruppe	. Straight saw blades; Strap saw blades
B23D 61/14	2-Punkt Untergruppe	. . with inserted saw teeth
B23D 61/16	3-Punkt Untergruppe	. . . in exchangeable arrangement
B23D 61/18	1-Punkt Untergruppe	. Sawing tools of special type, e.g. wire saw strands, saw blades or saw wire equipped with diamonds or other abrasive particles in selected individual positions
B23D 63/00	**Hauptgruppe**	**Dressing the tools of sawing machines or sawing devices for use in cutting any kind of material, e.g. in the manufacture of sawing tools**
B23D 63/02	1-Punkt Untergruppe	. Setting saw teeth by means of hand-operated devices
B23D 63/04	1-Punkt Untergruppe	. Setting saw teeth of circular, straight, or strap saw blades by means of power-operated devices
B23D 63/06	1-Punkt Untergruppe	. Upsetting the cutting edges of saw teeth, e.g. swaging
B23D 63/08	1-Punkt Untergruppe	. Sharpening the cutting edges of saw teeth
B23D 63/10	2-Punkt Untergruppe	. . by filing
B23D 63/12	2-Punkt Untergruppe	. . by grinding
B23D 63/14	3-Punkt Untergruppe	. . . Sharpening circular saw blades
B23D 63/16	2-Punkt Untergruppe	. . of chain saws (of mortise chain cutters B24B 3/14)
B23D 63/18	1-Punkt Untergruppe	. Straightening damaged saw blades; Reconditioning the side surface of saw blades, e.g. by grinding
B23D 63/20	1-Punkt Untergruppe	. Combined processes for dressing saw teeth, e.g. both hardening and setting
B23D 65/00	**Hauptgruppe**	**Making tools for sawing machines or sawing devices for use in cutting any kind of material**
B23D 65/02	1-Punkt Untergruppe	. Making saw teeth by punching, cutting, or planing
B23D 65/04	1-Punkt Untergruppe	. Making saw teeth by milling
		Filing or rasping (sharpening saw teeth thereby B23D 63/10)
B23D 67/00	**Hauptgruppe**	**Filing or rasping machines or devices (securing arrangements for files or rasps B23D 71/00)**

Symbol	Typ	Titel
B23D 67/02	1-Punkt Untergruppe	. with reciprocating tools, mounted on a yoke or the like
B23D 67/04	1-Punkt Untergruppe	. with reciprocating tools, attached to a carrier at one end only
B23D 67/06	1-Punkt Untergruppe	. with rotating tools
B23D 67/08	1-Punkt Untergruppe	. with tools mounted on an endless chain or belt
B23D 67/10	1-Punkt Untergruppe	. for special use, e.g. for filing keys; Accessories therefor
B23D 67/12	1-Punkt Untergruppe	. Hand-held or hand-operated filing or rasping devices (hand files or rasps B23D 71/04)
B23D 69/00	**Hauptgruppe**	**Filing or rasping machines or devices, characterised only by constructional features of particular parts, e.g. guiding arrangements, drives (constructional features of these parts per seB23Q; details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed B25F 5/00); Accessories for filing or rasping (attached to the tool B23D 71/10) [4]**
B23D 69/02	1-Punkt Untergruppe	. Guiding arrangements for hand tools
B23D 71/00	**Hauptgruppe**	**Filing or rasping tools; Securing arrangements therefor (tool holders for machine tools B23Q 3/00; handles for hand implements B25G)**
B23D 71/02	1-Punkt Untergruppe	. for filing or rasping machines or devices
B23D 71/04	1-Punkt Untergruppe	. Hand files or hand rasps (carrying or attaching means for tools which are connected to a carrier at both ends B23D 51/12; guiding arrangements B23D 69/02)
B23D 71/06	2-Punkt Untergruppe	. . using a single interchangeable blade
B23D 71/08	2-Punkt Untergruppe	. . using a plurality of interchangeable cutting elements
B23D 71/10	1-Punkt Untergruppe	. Accessories for filing or rasping tools, e.g. for preventing scoring of workpieces by the edges of the tool
B23D 73/00	**Hauptgruppe**	**Making files or rasps**
B23D 73/02	1-Punkt Untergruppe	. Preliminary treatment of blanks, e.g. grinding, polishing, specially adapted for the manufacture of files or rasps
B23D 73/04	1-Punkt Untergruppe	. Methods or machines for the manufacture of files or rasps (non-mechanical methods, see the relevant classes)
B23D 73/06	2-Punkt Untergruppe	. . Cutting the working surfaces by means of chisels
B23D 73/08	2-Punkt Untergruppe	. . Milling, planing, slotting, knurling, or broaching the working surfaces
B23D 73/10	2-Punkt Untergruppe	. . Grinding the working surfaces
B23D 73/12	2-Punkt Untergruppe	. . Peculiar procedures for sharpening or otherwise treating the working surfaces (special treatment by sand-blast B24C 1/02; sharpening files by etching C23F 1/06)
B23D 73/14	1-Punkt Untergruppe	. Tools or accessories specially adapted for making files or rasps, e.g. chisels, supporting-frames
		Reaming bored holes
B23D 75/00	**Hauptgruppe**	**Reaming machines or reaming devices (tool holders for machine tools B23Q 3/00; handles for hand implements B25G)**
B23D 77/00	**Hauptgruppe**	**Reaming tools**
B23D 77/02	1-Punkt Untergruppe	. Reamers with inserted cutting edges
B23D 77/04	2-Punkt Untergruppe	. . with cutting edges adjustable to different diameters along the whole cutting length
B23D 77/06	1-Punkt Untergruppe	. Reamers with means for compensating wear (B23D 77/04 takes precedence)

Symbol	Typ	Titel
B23D 77/08	2-Punkt Untergruppe	. . by spreading slotted parts of the tool body
B23D 77/10	2-Punkt Untergruppe	. . by expanding a tube-like non-slotted part of the tool body
B23D 77/12	1-Punkt Untergruppe	. Reamers with cutting edges arranged in tapered form
B23D 77/14	1-Punkt Untergruppe	. Reamers for special use, e.g. for working cylinder ridges
B23D 79/00	**Hauptgruppe**	**Methods, machines or devices not covered elsewhere, for working metal by removal of material (by combined operations B23D 81/00; working of metal by the action of a high concentration of electric current B23H; cutting by electron-beam B23K 15/00, by laser beam B23K 26/00; other working of metal B23P; tool holders for machine tools B23Q 3/00; handles for hand implements B25G)**
B23D 79/02	1-Punkt Untergruppe	. Machines or devices for scraping (turning machines for bevelling, chamfering, or deburring the ends of bars or tubes B23B 5/16; scrubbing or peeling ingots by milling B23C 3/14)
B23D 79/04	2-Punkt Untergruppe	. . with rotating cutting-tool, e.g. for smoothing linings of bearings
B23D 79/06	2-Punkt Untergruppe	. . with reciprocating cutting-tool
B23D 79/08	2-Punkt Untergruppe	. . Hand scraping-implements
B23D 79/10	2-Punkt Untergruppe	. . Accessories for holding scraping tools or work to be scraped
B23D 79/12	1-Punkt Untergruppe	. Machines or devices for peeling bars or tubes by making use of cutting bits arranged around the workpiece, otherwise than by turning (by turning B23B 5/12) [2]
B23D 81/00	**Hauptgruppe**	**Methods, machines, or devices for working metal, covered by more than one main group in this subclass (in combination with other metal-working operations B23P 13/00, B23P 23/00)**