

Symbol	Typ	Titel
B	Sektion	PERFORMING OPERATIONS; TRANSPORTING
B21	Untersektion	SHAPING
B21	Klasse	MECHANICAL METAL-WORKING WITHOUT ESSENTIALLY REMOVING MATERIAL; PUNCHING METAL (casting, powder metallurgy B22; shearing B23D; working of metal by the action of a high concentration of electric current B23H; soldering, welding, flame-cutting B23K; other working of metal B23P; punching sheet material in general B26F; processes for changing of physical properties of metals C21D , C22F; electroforming C25D 1/00)
B21J	Unterklasse	FORGING; HAMMERING; PRESSING; RIVETING; FORGE FURNACES (rolling of metal B21B; making particular products by forging or pressing B21K; cladding or plating B23K; finishing surfaces by hammering B23P 9/04; compacting surfaces by blasting with particulate material B24C 1/10; general features of presses, presses for consolidating scrap B30B; furnaces in general F27)
B21J 1/00	Hauptgruppe	Preparing metal stock
B21J 1/02	1-Punkt Untergruppe	. Preliminary treatment of metal stock without particular shaping, e.g. salvaging segregated zones, forging or pressing in the rough (modifying the physical properties by deformation C21D 7/00 , C22F 1/00)
B21J 1/04	1-Punkt Untergruppe	. Shaping in the rough solely by forging or pressing
B21J 1/06	1-Punkt Untergruppe	. Heating or cooling methods or arrangements specially adapted for performing forging or pressing operations
B21J 3/00	Hauptgruppe	Lubricating during forging or pressing (lubricating in general F16N)
B21J 5/00	Hauptgruppe	Methods for forging, hammering, or pressing (for working sheet metal or metal tubes, rods, or profiles B21D; for working wire B21F); Special equipment or accessories therefor
B21J 5/02	1-Punkt Untergruppe	. Die forging; Trimming by making use of special dies
B21J 5/04	1-Punkt Untergruppe	. by directly applied fluid pressure or explosive action
B21J 5/06	1-Punkt Untergruppe	. for performing particular operations
B21J 5/08	2-Punkt Untergruppe	. . Upsetting
B21J 5/10	2-Punkt Untergruppe	. . Piercing billets (in combination with extrusion B21C 23/00)
B21J 5/12	2-Punkt Untergruppe	. . Forming profiles on internal or external surfaces (making screw-thread by forging, pressing, or hammering B21K)
B21J 7/00	Hauptgruppe	Hammers; Forging machines with hammers or die jaws acting by impact (hand hammers B25D; electrical features section H)
B21J 7/02	1-Punkt Untergruppe	. Special design or construction
B21J 7/04	2-Punkt Untergruppe	. . Power hammers
B21J 7/06	2-Punkt Untergruppe	. . Drop hammers
B21J 7/08	3-Punkt Untergruppe	. . . with rigidly-guided hammer
B21J 7/10	2-Punkt Untergruppe	. . with both drive and hammer connected to a fulcrumed lever, e.g. tail hammers
B21J 7/12	3-Punkt Untergruppe	. . . the lever being a spring, i.e. spring hammers
B21J 7/14	2-Punkt Untergruppe	. . Forging machines working with several hammers
B21J 7/16	3-Punkt Untergruppe	. . . in rotary arrangements
B21J 7/18	2-Punkt Untergruppe	. . Forging machines working with die jaws, e.g. pivoted, movable laterally of the forging or pressing direction, e.g. for swaging

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B21J 7/20	1-Punkt Untergruppe	. Drives for hammers; Transmission means therefor
B21J 7/22	2-Punkt Untergruppe	. . for power hammers
B21J 7/24	3-Punkt Untergruppe	. . . operated by steam, air, or other gaseous pressure
B21J 7/26	4-Punkt Untergruppe	 operated by internal combustion
B21J 7/28	3-Punkt Untergruppe	. . . operated by hydraulic or liquid pressure
B21J 7/30	3-Punkt Untergruppe	. . . operated by electro-magnets
B21J 7/32	3-Punkt Untergruppe	. . . operated by rotary drive, e.g. electric motor
B21J 7/34	3-Punkt Untergruppe	. . . operating both the hammer and the anvil, so-called counter-tup
B21J 7/36	2-Punkt Untergruppe	. . for drop hammers
B21J 7/38	3-Punkt Untergruppe	. . . driven by steam, air, or other gaseous pressure
B21J 7/40	3-Punkt Untergruppe	. . . driven by hydraulic or liquid pressure
B21J 7/42	3-Punkt Untergruppe	. . . operated by rotary drive, e.g. electric motors
B21J 7/44	4-Punkt Untergruppe	 equipped with belts, ropes, cables, chains
B21J 7/46	2-Punkt Untergruppe	. . Control devices specially adapted to forging hammers, not restricted to one of the preceding subgroups
B21J 9/00	Hauptgruppe	Forging presses
B21J 9/02	1-Punkt Untergruppe	. Special design or construction
B21J 9/04	2-Punkt Untergruppe	. . Piercing presses
B21J 9/06	2-Punkt Untergruppe	. . Swaging presses; Upsetting presses
B21J 9/08	3-Punkt Untergruppe	. . . equipped with devices for heating the workpiece (electric heating elements H05B)
B21J 9/10	1-Punkt Untergruppe	. Drives for forging presses
B21J 9/12	2-Punkt Untergruppe	. . operated by hydraulic or liquid pressure
B21J 9/14	3-Punkt Untergruppe	. . . in conjunction with electric power
B21J 9/16	3-Punkt Untergruppe	. . . in conjunction with steam or gas power
B21J 9/18	2-Punkt Untergruppe	. . operated by making use of gearing mechanisms, e.g. levers, spindles, crankshafts, eccentrics, toggle-levers, rack bars
B21J 9/20	2-Punkt Untergruppe	. . Control devices specially adapted to forging presses not restricted to one of the preceding subgroups
B21J 11/00	Hauptgruppe	Forging hammers combined with forging presses; Forging machines with provision for hammering and pressing
B21J 13/00	Hauptgruppe	Details of machines for forging, pressing, or hammering
B21J 13/02	1-Punkt Untergruppe	. Dies or mountings therefor [2]
B21J 13/03	2-Punkt Untergruppe	. . Die mountings [2]
B21J 13/04	1-Punkt Untergruppe	. Frames; Guides
B21J 13/06	1-Punkt Untergruppe	. Hammer tups; Anvils; Anvil blocks
B21J 13/08	1-Punkt Untergruppe	. Accessories for handling work or tools

Symbol	Typ	Titel
B21J 13/10	2-Punkt Untergruppe	. . Manipulators (in general B25J)
B21J 13/12	3-Punkt Untergruppe	. . . Turning means
B21J 13/14	2-Punkt Untergruppe	. . Ejecting devices
B21J 15/00	Hauptgruppe	Riveting
B21J 15/02	1-Punkt Untergruppe	. Riveting procedures
B21J 15/04	2-Punkt Untergruppe	. . Riveting hollow rivets mechanically
B21J 15/06	2-Punkt Untergruppe	. . Riveting hollow rivets by means of hydraulic, liquid, or gas pressure
B21J 15/08	2-Punkt Untergruppe	. . Riveting by applying heat to the end parts of the rivets to enable heads to be formed
B21J 15/10	1-Punkt Untergruppe	. Riveting machines (electric heating elements H05B)
B21J 15/12	2-Punkt Untergruppe	. . with tools or tool parts having a movement additional to the feed movement, e.g. spin
B21J 15/14	2-Punkt Untergruppe	. . specially adapted for riveting specific articles, e.g. brake lining machines
B21J 15/16	2-Punkt Untergruppe	. . Drives for riveting machines; Transmission means therefor
B21J 15/18	3-Punkt Untergruppe	. . . operated by air pressure or other gas pressure, e.g. explosion pressure
B21J 15/20	3-Punkt Untergruppe	. . . operated by hydraulic or liquid pressure
B21J 15/22	3-Punkt Untergruppe	. . . operated by both hydraulic or liquid pressure and gas pressure
B21J 15/24	3-Punkt Untergruppe	. . . operated by electro-magnets
B21J 15/26	3-Punkt Untergruppe	. . . operated by rotary drive, e.g. by electric motor
B21J 15/28	2-Punkt Untergruppe	. . Control devices specially adapted to riveting machines not restricted to one of the preceding subgroups
B21J 15/30	2-Punkt Untergruppe	. . Particular elements, e.g. supports; Suspension equipment specially adapted for portable riveters
B21J 15/32	3-Punkt Untergruppe	. . . Devices for inserting or holding rivets in position with or without feeding arrangements
B21J 15/34	4-Punkt Untergruppe	 for installing tubular rivets
B21J 15/36	2-Punkt Untergruppe	. . Rivet sets, i.e. tools for forming heads; Mandrels for expanding parts of hollow rivets
B21J 15/38	1-Punkt Untergruppe	. Accessories for use in connection with riveting, e.g. pliers for upsetting; Hand tools for riveting
B21J 15/40	2-Punkt Untergruppe	. . for forming rivet heads
B21J 15/42	2-Punkt Untergruppe	. . Special clamping devices for workpieces to be riveted together, e.g. operating through the rivet holes
B21J 15/44	2-Punkt Untergruppe	. . Rivet hole positioners
B21J 15/46	2-Punkt Untergruppe	. . Positioners for rivets for making tube joints
B21J 15/48	2-Punkt Untergruppe	. . Devices for caulking rivets
B21J 15/50	2-Punkt Untergruppe	. . Removing or cutting devices for rivets
B21J 17/00	Hauptgruppe	Forge furnaces (furnaces for heat treatment C21D 9/00; furnaces in general F27)
B21J 17/02	1-Punkt Untergruppe	. electrically heated (electric heating elements H05B)
B21J 19/00	Hauptgruppe	Blacksmiths' requisites not otherwise provided for
B21J 19/02	1-Punkt Untergruppe	. Hearths; Air supply arrangements specially adapted therefor

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B21J 19/04	1-Punkt Untergruppe	. Anvils; Associated items