

From Edition A, this heading primarily includes subject-matter at a higher organisational level than other B3 headings which are primarily concerned with unit metal-working operations. Prior to Edition A, considerable overlap existed between this heading and other, particularly other B3, headings, with multiple filings of documents for essentially the same disclosure. Therefore, from Edition A only combinations and associations of unit metal-working operations and of metal-working operations and metal treating operations will be found in B3A. The term metal-working refers to metal shaping operations, which embraces moulding and forming operations, cutting operations, and joining operations. Metal treating covers essentially non-shaping operations, *e.g.* certain surface treatment operations, burnishing, electroplating and heat treatment

As regards processes involving heat treatment, only disclosures where significance lies in combinations or associations of metal shaping operations and heat treating operations are to be found in B3A. Where the centre of interest lies in the heat treatment *per se*, the metal shaping operation being of a generalised character, *e.g.* rolling, the subject-matter is to be found in C7N, Heat-treatment of metals. Alternatively, where the centre of interest lies in the metal shaping operation the subject-matter is to be found in the relevant B3 metal-working heading

Likewise, in a multi-operation process where the centre of interest lies in one or more of the unit operations with the general character of the process being known the subject-matter is dealt with at the lower level in the relevant unit operation B3 metal-working heading or C7 metal treating heading. Where the centre of interest lies in the form of the product, the metal-working and/or treating operations being conventional the subject-matter is dealt with in the relevant product or article heading

Disclosures essentially concerned with one (or more) laser cutting operation, any other operations being incidental to it (*eg* pre- or post- treatments) are subject-matter for Part C of heading B3V, Miscellaneous working of metals &c. However, disclosures in which a laser is used in one (or more) of several steps, wherein the interest is in the sequence of operations are classified here

Residually the heading also includes the manufacture of metal articles by single operations not provided for in any other heading

Thus from Edition A the heading can therefore be considered to cover the following subject-matter:

- . producing metal stock articles *e.g.* rod, wire, pipes and tubes, plates and sheets, profiled sections and composites (*including* metal/non-metal composites), by a combination of operations
- . producing metal articles (both general and specific) by a combination of operations in which there is significant interest in this combination whether or not the product is of interest *per se*
- . producing metal articles (both general and specific) by means of an essentially single step process, *e.g.* assembly, which is not classifiable elsewhere

It should be noted that B3E includes apparatus and processes for performing plural distinct bending, breaking (*other than* by crushing), stretching or twisting operations or combinations of these unit operations and such subject-matter is excluded from B3A

The exclusion references listed in this heading are not exhaustive. Reference should be made to the appropriate general heading/s listed for processes, materials, elements or devices which may be more widely applicable than can appropriately be classified in this heading

Relationship with the Universal Indexing Schedules (heading U1S)

As classification in this heading explicitly or inherently connotes use or application, and the heading is not concerned with materials *per se*, U1S will rarely be applied to specifications classified here

Operative date for Key entries

The operative date of the terms in this heading is earlier than that of Edition A

Search note

In this heading terms are only assigned to those features with which novelty is associated. Thus it is not possible to use a combination of terms for searching

- A2 abrading, polishing, and burnishing apparatus
 . abrading discs. *See* tools, engineers' &c (milling-cutters)
 . wheel centres on which abrasive is bonded. *See* wheels &c
- A1 agricultural machines and implements
 . guards for moving parts. *See* machine details &c
 . hand tools. *See* hand tools &c
 . rollers for lawn mowers and rollers. *See* rollers &c
- A3 aircraft
 . struts and ties. *See* rods &c
- A4 anchors and grapnels
 annealing-pots. *See* hollow-ware
- A6 anvils
 apple-corers. *See* mincing &c
 armour-plates. *See* plate, sheet &c
 ash pans. *See* fenders &c
 awls. *See* needles &c
 axes. *See* hand tools &c
 axles. *See* shafts &c
 badges. *See* jewellery
 bale-ties and bale-tie fasteners. *See* fastenings
 ball-and-socket joints. *See* flexible shafts &c
- A9 balls
 . bearing balls. *See* F2A, Bearings, lubricating &c
 . by cooling falling drops. *See* C7X, Miscellaneous metallurgy
 . hollow balls. *See* knobs &c
 . milling. *See* B3K, Milling
 . rolling. *See* B3M, Rolling metals
 . turning. *See* B3T, Turning
 baths. *See* hollow-ware
- A8 batons and like pointers
 battery plates. *See* electric battery &c
 bayonets. *See* cutlery &c blades
 bearings and bearing components, *eg* hangers. *See* F2A, Bearings, lubricating &c
 bedsteads and cots. *See* furniture
 belaying-pins. *See* bolts &c
- A16 bellows (*including* pressure-actuated diaphragms *other than* sound recording and reproducing)
 . diaphragms, sound recording and reproducing. *See* musical instruments
 bells, whistles, and other sounders. *See* musical instruments
 belt fastenings. *See* gearing, belt &c
 billets. *See* ingots
 bill-hooks. *See* scythes &c
- A13 boats. *See* ships &c
 bobbins and reels
 . pirns and cop tubes. *See* pipes &c
 bodkins. *See* needles &c
- A14 bolt-hole bushes. *See* bolts &c
 bolts, studs, screws, eyelets, rivets, dowels, and bolt-like pins
 . bifurcated rivets (*other than* sheet-metal). *See* nails &c
 . bifurcated rivets, sheet-metal. *See* fastenings
 . extruding. *See* B3P, Drawing and extruding metals
 . facing bolt heads. *See* B3T, Turning
 . forging. *See* B3H, Power hammers &c
 . helical screw thread inserts. *See* springs
 . lacing hooks. *See* fastenings
 . self-tapping screws. *See* tools, engineers' &c (taps &c)
 . turning wood-screws. *See* B3T, Turning
 . wood-screw sockets or cups. *See* nuts &c

- A15 bombs. *See* projectiles &
 boots and shoes, appliances for use with
 . lasts. *See* A3B, Boots and shoes
 . toe and heel irons and other protectors. *See* horseshoes &
 bottles. *See* hollow-ware
 Bowden cables. *See* F2K, Linkwork; cams; Bowden mechanisms
 boxes and cases. *See* hollow-ware
 bracelets, hinged and flexible. *See* chains; jewellery
 bracelets or bangles. *See* hoops &
 A17 brackets and stands
 . bearing-hangers. *See* F2A, Bearings, lubricating &
 . flower stands. *See* furniture
 . gas and electric light brackets. *See* gas & fixtures
 A18 brakes
 branding-irons. *See* soldering & irons
 A19 bricks, building and paving blocks, and tiles (*including* manhole covers for roads and paving)
 . manhole covers, pressure-resisting. *See* doors, lids &
 brooches. *See* jewellery
 brushes (*other than* wire bristles *per se*). *See* A4K, Brushes &
 . wire bristles *per se*. *See* wire, ribbon &
 buckets and pails. *See* hollow-ware
 buckles and slides. *See* fastenings
 bullets. *See* projectiles &
 buoys. *See* hollow-ware
 burners. *See* lamps &
 butter coolers. *See* plates, dishes &
 A22 buttonhole shields. *See* buttons &
 buttons and buttoning-appliances
 . eyelets. *See* bolts &
 . press-buttons. *See* fastenings
 cables, Bowden. *See* F2K, Linkwork; cams; Bowden mechanisms
 cables, electric. *See* electric conductors &
 A23 cages, pens, and traps for birds and other animals
 . springs for. *See* springs
 calendering and mangling rollers. *See* rollers &
 calendering-apparatus. *See* ironing-apparatus
 cams. *See* machine details &
 camshafts. *See* shafts &
 candlesticks. *See* lamps &
 cans and canisters. *See* hollow-ware
 A25 capsules, caps, and like cupped articles (*including* thimbles)
 . cartridge-cases, heading and necking. *See* B3Q, Stamping and embossing metals
 . castors. *See* castors, furniture &
 . cupped tips or castor substitutes with spikes for securing to furniture legs. *See* nails &
 . cupping. *See* B3Q, Stamping and embossing metals
 . extruding. *See* B3P, Drawing and extruding metals
 . sizing and restoring shape by stamping. *See* B3Q, Stamping and embossing metals
 cartridge-cases. *See* capsules &
 cartridge-clips. *See* hollow-ware
 cartridge-magazines. *See* hollow-ware
 A26 cased or compound metal forms
 . casting. *See* B3F, Casting metals
 . extruding. *See* B3P, Drawing and extruding metals
 . fitting projectiles with driving bands. *See* projectiles &
 . re-capping rails. *See* rods &
 cash-boxes. *See* hollow-ware
 cash registers, key levers for. *See* cranks &
 casks and barrels. *See* hollow-ware
 A27 castors, furniture and like
 . cupped tips or castor substitutes with spikes for securing to furniture legs. *See* nails &
 . wheels. *See* wheels &
 cathode-ray tube honeycombs and masks. *See* gratings &

- centres, lathe and like. *See* machine details &c
centrifugal bowls for cream separators and for distilling. *See* hollow-ware
centrifugal fans. *See* propellers, screw &c
centrifugal pots for spinning cellulose threads. *See* hollow-ware
- A28 chains
. bending. *See* B3E, Bending and breaking metals
. casting. *See* B3F, Casting metals
. coupling-hooks. *See* hooks
. forging. *See* B3H, Power hammers &c
. punching from cruciform bars. *See* B3W, Shearing, punching &c metals
. rollers for. *See* rollers &c
. rolling. *See* B3M, Rolling metals
. separate bushes for. *See* pipes &c
. swivels. *See* hinges &c
checks, workmen's. *See* coins &c
chemical saturators and digesters. *See* hollow-ware
- A30 chimney and ventilating-shaft tops
churns. *See* hollow-ware
- A31 cigar-cutters, tobacco-pipe cleaners, and smokers' accessories
. cigarette and like lighters. *See* lamps &c
circlips. *See* cotters &c
clamps and cramps. *See* vices
clasps, hair. *See* pins, dress &c
- A172 clocks and watches
. bezels. *See* lens mountings
. keys. *See* hand tools &c
clothes-pegs. *See* fastenings
clutches. *See* machine details &c
coffins. *See* hollow-ware
coffins, screw-covers and wreath-holders for. *See* metalwork, ornamental
- A185 coins and medals
. discs, cutting out by annular drills. *See* B3C, Drilling and boring
. embossing. *See* B3Q, Stamping and embossing metals
colliery and mine-shaft linings. *See* pipes &c
colour television masks. *See* gratings &c
colour television mask frames. *See* picture frames &c
columns. *See* rods &c
combs, lace-machine. *See* knitting &c machines
combs, spinning-machine. *See* spinning &c
- A34 combs, toilet and like
. curry-combs. *See* harness &c
- A36 combustion chambers and jet-pipes for gas turbines and jet engines; propulsion nozzles for jet engines
. turbine nozzles. *See* turbines &c
. rocket motor combustion chambers. *See* hollow-ware
commutators for dynamo-electric machines. *See* dynamo-electric machines &c
condensers, electric, electrodes and other metal parts of. *See* electric capacitors &c
condensers, steam and like. *See* steam generators &c
conductors' batons. *See* batons &c
conduits and culverts. *See* pipes &c
connecting-rods. *See* cranks &c
- A183 conveyors and elevators
. belts for. *See* gearing, belt &c
. buckets for. *See* hollow-ware
. chains, for. *See* chains
. screw. *See* propellers, screw &c
cooking and kitchen utensils. *See* hollow-ware
copying templets. *See* machine details &c
cores, magnet, transformer, and like. *See* dynamo-electric machines &c
cork-screws. *See* hand tools &c
- A37 cotters, split pins, circlips, keys and wedges
couplings, ball-and-socket. *See* flexible shafts &c
couplings, fluid. *See* turbines &c
couplings, shaft. *See* shafts &c
cowls. *See* chimney &c tops
- A38 cranks, levers, and linkwork
. crank shafts. *See* shafts &c
. eye-bars. *See* rods &c
. turning crank pins. *See* B3T, Turning

- crinoline steels. *See* springs
- A39 crucibles, melting-pots, foundry ladles, and retorts
 . retorts for cracking hydrocarbons. *See* hollow-ware
 cruet frames and stands. *See* brackets &c
- A76 crushing, disintegrating, pulverizing, and mixing apparatus
 . rollers and drums. *See* rollers &c
 curling pins. *See* pins, dress &c
 curry-combs. *See* harness &c
 curtains, drawing and suspending, apparatus for. *See* furniture
- A92 cutlery and like, eg razor, blades (*including* tangs, bolsters, and handles formed integrally therewith); cutters
 and foils for dry shavers
 . bolsters and handles formed separately from blades. *See* handles
 cutters, pastry. *See* hand tools &c
 cycles and like vehicles
 . axles. *See* shafts &c
 . cranks. *See* cranks &c
 . eye-bolts for adjusting chains. *See* bolts &c
 . forks, lugs, saddle-pins, handle-bars, and like tube fittings. *See* pipes &c
 . lamp brackets. *See* brackets
 . mudguard and carrier stays. *See* rods &c
 . mudguards. *See* railway &c vehicle details
 . pipes and tubes for. *See* pipes &c
 . wheels and hubs. *See* wheels &c
- A40 cylinders, cylinder heads and blocks, engine and like
 . curved and other cylinders, boring. *See* B3C, Drilling and boring
 . curved cylinders, turning. *See* B3T, Turning
 . cylinders, not specified. *See* pipes &c
 . extruders for. *See* tools engineers' &c (punches &c)
 . fins for (*including* attaching). *See* pipes &c
 cylinders or pipes. *See* pipes &c
 daggers. *See* cutlery &c blades
 damascened metalwork. *See* metalwork, ornamental; ordnance &c
 dental burrs. *See* tools, engineers' &c (files &c)
 dental parts. *See* teeth, artificial &c
- A41 diaphragms and shutters, optical
 diaphragms, pressure-actuated (*other than* sound recording and reproducing). *See* bellows
 diaphragms, sound recording and reproducing. *See* musical instruments
 dies. *See* tools, engineers' &c (punches &c)
 discs, coin and like. *See* coins &c
 discs for wheels. *See* wheels &c
 discs, scanning, for television. *See* diaphragms &c
 disintegrating-apparatus. *See* crushing &c
 door fastenings. *See* fastenings
 door knockers. *See* handles
- A103 doors and door frames for buildings. *See* windows &c
 doors, lids, and covers for resisting fluid pressure
 doors, sliding, hangers for. *See* pulley-blocks &c
 door stops. *See* windows &c
 dowels. *See* bolts &c
 drawing pins. *See* nails &c
 dredger buckets. *See* hollow-ware
 drills. *See* tools engineers' &c (boring &c)
 drills, chuck keys for. *See* machine details &c
 drinking-vessels. *See* hollow-ware
- A42 drying-apparatus
 . clothes horses. *See* furniture
 . clothes racks. *See* brackets &c
 dry shaver cutters and foils. *See* cutlery &c
 dynamo brushes. *See* electric components &c (current collectors &c)
- A188 dynamo-electric-machine and other electric coils, *otherwise than* by winding bobbins and spools (*including*
 apparatus for inserting completed coils and coil-securing means in core slots)
 . winding toroidal cores. *See* B8G, Covering cores by winding
- A44 dynamo-electric machines, magnets and transformers and like cores
 . wound strip cores, rewinding round coils. *See* HIT, Electric transformers &c
 earthing pins. *See* electric components &c
 eggs, utensils for transferring to frying-pans and for separating whites from yolks. *See* hollow-ware
 electrically-heated irons. *See* ironing-apparatus

- A10 electric battery and accumulator plates and electrodes; electrodes for electrolysis (*other than* electrolytic machining)
 . casting battery plates. *See* B3F, Casting metals
 . electrodes for electrolytic machining. *See* metal cutting &c
 . electrodes formed as containers. *See* hollow-ware
 . grids for thermionic valves. *See* electric components &c
 . metal shavings, wool, and powder for. *See* metal shavings &c
 . wire for. *See* wire, ribbon &c
- A50 electric capacitors, electrodes and other metal parts of electric components *not otherwise provided for*—
 . covers. *See* hollow-ware
 . electric battery and accumulator plates and electrodes. *See* electric battery &c
 . filaments for incandescent lamps. *See* H1F, Electric incandescent lamps
 . guards for lamps. *See* gratings &c
 . junction and like boxes. *See* hollow-ware
 . lamp pendants and brackets. *See* gas &c fixtures
 . magnetron cavity structures. *See* gratings &c
 . semi-conductor devices *per se*; manufacture of casings, envelopes, mountings and connections therefor. *See* H1K, Electric solid-state devices &c
- A49A . aerials
 A49B . anodes, cathodes, grids, heaters and screens for electron discharge tubes
 . assembling components to circuit boards and chassis—
 . . manipulating and other handling of solid state devices during manufacture. *See* H1K, Electric solid state devices &c
 . . other. *See* H1R, Printed circuits; electric component assemblies
 . . attaching connectors and terminals to conductors—
- A49D1 . . crimped connections
 A49D2 . . friction connections
 A49D5 . . interconnected terminals
 A49D4 . . soldered or welded joints
 A49D3 . . wrapped joints
 A49E . bimetallic strips, fuses, bridge wires, induction heaters, strain gauges, resistances
 A49F . bonding-connections for bus-bars and rails
 A49G . cathode-ray tubes, lamps, valves and parts therefor *not otherwise provided for*
 . circuit boards and terminal boards, *including* printed circuits. *See* H1R, Printed circuits, electric component assemblies &c
- A49J . connectors, lamp holders, plugs and sockets, screening cans, valve-holders, *including* forming edge or socket connectors in printed circuit boards
- A49K . current collectors, *including* brush holders
 A49L . delay lines and wave guides
 A49M . electric leads from continuous wire stock; *eg* by *simultaneously* cutting wire *and* stripping insulation from wire (*including* making cable harnesses)
 . . cutting wire *per se*. *See* B3W, Shearing, punching &c metals
 . . stripping insulation *per se*. *See* H2C, Electric and optic cable installations &c
- A49N . getters
 A49P . heating and heat transferring devices
 A49Q . insulator parts
 A49S . sparking plugs
 A49T . switches and switch parts, *including* contacts with reeds *not otherwise provided for*
 A49U . terminals
 A49V . transducers
 A45 electric conductors of indefinite length
 . armourings with wire and strip. *See* B3E, Bending and breaking metals
 . optic cables. *See* G2J, Optical apparatus &c
 . sheathing with metal. *See* B3F, Casting metals; B3P, Drawing and extruding metals
 . wire for. *See* wire &c
 electric contact strips. *See* electric components &c
 electric couplings. *See* electric components &c
 electric furnaces. *See* furnaces &c
 electric hot plates. *See* furnaces &c
 electric insulators and supports therefor. *See* electric components &c
 electric lamps. *See* electric components &c
 electric meters. *See* meters
 electric resistances. *See* electric components &c
 electric switches and cut-outs. *See* electric components &c
 electric switches, hollow covers for. *See* hollow-ware
 electrodes for capacitors. *See* electric capacitors &c
 electrodes for electrolysis (*other than* for electrolytic machining). *See* electric battery &c plates &c
 electrodes for electrostatic precipitators and magnetrons. *See* gratings &c
 electrodes for welding and for cutting or removing metal by electric spark discharge and by electrolytic machining. *See* metal cutting and working apparatus
 electroliers. *See* gas, electric &c fixtures
 escutcheons and liners, keyhole and like. *See* locks &c

- A51 exhaust silencers and gas emission controllers
- A52 expanded metal
 . cutting. *See* B3W, Shearing, punching &c metals
 . expanding and stretching. *See* B3E, Bending and breaking metals
 eye-bolts for adjusting cycle chains. *See* bolts &c
 eyeglasses and protectors. *See* spectacles &c
 eyelets. *See* bolts &c
- A54 eyes and rings, screw and like
 . screw hooks. *See* hooks
 fans, centrifugal and screw. *See* propellers, screw &c
- A56 fastenings
 . anchors and grapnels. *See* anchors &c
 . attaching fastenings and fastening elements to non-metallic materials. *See* E2A, Releasable fastenings; E2S, Strip fastenings
 . bolts, studs, screws, eyelets, non-bifurcated rivets, dowels, and bolt-like pins. *See* bolts &c
 . buttons (*other than* press-buttons). *See* buttons &c
 . collar and like dress studs. *See* jewellery
 . corner pieces for picture frames. *See* picture frames &c
 . cotters, split pins, circlips, keys and wedges. *See* cotters &c
 . coupling-hooks. *See* hooks
 . coupling-links and shackles. *See* chains
 . driving-belt fastenings. *See* gearing, belt &c
 . eyes and rings, screw and like. *See* eyes &c
 . hinged and quadrant casement and like stays. *See* hinges &c
 . locks and latches. *See* locks &c
 . loose leaf binders. *See* filing documents &c
 . nails, spikes, wire staples, tacks; bifurcated rivets (*other than* sheet metal). *See* nails &c
 . nuts and washers. *See* nuts &c
 . pins, dress and like, *eg* safety pins. *See* pins, dress &c
 . railway and wagon door fastenings. *See* railway &c vehicle details
 . self-tapping screws. *See* tools, engineers' &c (tapes &c)
- A57 feeding and drinking appliances for animals
 . gratings, grids, sieves, and screens for. *See* gratings &c
- A58 fencing and gates
 . posts. *See* rods &c
- A59 fenders, ashpans, fireirons, and firedogs
 ferrules for condenser tubes, tool handles, and the like. *See* pipes &c
 ferrules or tips. *See* capsules &c
 files and rasps. *See* tools, engineers' &c
- A35 filing documents, apparatus for
 filtering and straining apparatus. *See* gratings &c
 firebars. *See* furnaces &c
- A60 fire-extinguishing apparatus
- A184 fishing-apparatus
 . hooks. *See* hooks
 fish slices. *See* spoons &c
- A90 flexible shafts and universal joints (*including* ball-and-socket joints)
 flower stands. *See* furniture
 fluid couplings and torque converters. *See* turbines &c
 flushing-tanks. *See* hollow-ware
- A63 foil
 . making packets or the like from foil. *See* B5D, Making bags, boxes &c
 . planishing and beating. *See* B3H, Power hammers &c
 . turning. *See* B3T, Turning
 fork lifts. *See* machine details, unclassified
 forks, agricultural, coke, and like. *See* hand tools &c
 forks, table. *See* spoons &c
- A7 fortifications and like armoured structures
 . armour plates, for. *See* plate, sheet, &c
 . facing gun turrets. *See* B3T, Turning
 foundry ladles. *See* crucibles &c
 fuel-economizers. *See* furnaces &c
 funnels of liquids. *See* hollow-ware
- A66 furnaces, stoves, and fireplaces
 . chain grates. *See* chains
 . electric components of interest apart from furnaces. *See* electric components &c
 . pipes and tubes. *See* pipes &c
 . tuyeres. *See* nozzles

- A67 furniture (*including* apparatus for drawing and suspending curtains)
 . brackets. *See* brackets &c
 . castors, furniture and like. *See* castors, furniture &c
 . hooks. *See* hooks
 . hoops and rings. *See* hoops &c
 . knobs and terminal ornaments. *See* knobs &c
 . ornamental bands for curtains. *See* metalwork, ornamental
 . rack plates for oven shelves. *See* furnaces &c
 . tubular rods for. *See* pipes &c
- A68 games and sports, appliances for, and toys
 . billiard tables. *See* furniture
 . posts. *See* rods &c
 . quoits of ring form. *See* hoops &c
 . toy aeroplanes. *See* aircraft
 . tubular shafts for golf clubs. *See* pipes &c
 gardening-appliances. *See* hand tools &c
 garment hangers. *See* brackets &c
- A69 gas, electric, and other lamp pendants and fixtures
 gas engines. *See* steam &c engines
 gaskets. *See* packing, joint-making
- A71 gauges for determining and testing dimensions and shapes
 . rules and scales. *See* mathematical drawing-appliances
 gauges, pressure. *See* meters &c
- A72 gazogenes, seltzogenes, and siphon-bottles, heads for. *See* valves &c
 gearing, belt, rope, and chain
 . chains. *See* chains
 . pulleys. *See* wheels &c
 . screws for fastening. *See* bolts &c
 . sprocket wheels. *See* gearing, toothed &c
- A73 gearing, toothed and friction
 . cutting toothed gears. *See* B3K, Milling; B3L, Planing metals &c
 . wheel blanks. *See* wheels &c
 gimbal rings. *See* flexible shafts &c
 gimlets. *See* tools, engineers' &c
 girders and beams. *See* rods &c
 glazing-bars. *See* rods &c
 gramophone needles. *See* needles &c
- A75 gratings, grids, grilles, sieves, and screens (*including* honeycombs and masks for cathode-ray tubes)
 . battery grids. *See* electric battery &c
 . casting. *See* B3F, Casting metals
 . grids for thermionic valves. *See* electric components &c
 . partitions for refrigerator ice trays. *See* hollow-ware
 grenades, hand. *See* projectiles &c
 grinding or abrading apparatus. *See* abrading &c
 grinding or crushing apparatus. *See* crushing &c
 grommets. *See* packing, joint-making
 guards, machine. *See* machine details &c
 gudgeon pins. *See* cranks &c
 gun-barrels. *See* ordnance &c
 gutters. *See* rods &c
 hair-clippers. *See* cutlery &c blades
 hair-pins. *See* pins, dress &c
 hammers, hand. *See* hand tools &c
 handbags, hinged frames for. *See* hinges &c
- A77 handles, spouts and attachment thereof (*including* pull-tabs for cans)
 . crank. *See* cranks &c
 . handle sockets formed integrally with hand tools. *See* hand tools &c
 . tangs, bolsters, and handles formed integrally with or attached to cutlery and like blades, forks and spoons.
 See cutlery and like blades &c; spoons &c
 hand punches. *See* tools, engineers' &c
 hand-rails. *See* fencing &c
- A79 hand tools and appliances
 . drills and rotary cutters, files and rasps, gimlets, punches, taps, stocks and dies. *See* tools, engineers' &c
 . saws. *See* saws
 . scissors. *See* scissors &c
 . scuttles and scoops. *See* hollow-ware
 . scythes, sickles, and the like. *See* scythes &c
 hand-trucks. *See* railway &c vehicle details

- A81 harness and saddlery
 . hooks. *See* hooks
 harrows. *See* agricultural machines &c
 hatchets. *See* hand tools &c
 hat frames. *See* wire fabrics &c
 hats, apparatus for making. *See* wearing-apparel details
- A80 helmets
- A82 hinges, pivots, and swivels
 . *See* also E2F, Hinges &c
 . self-hinging box lids, the hinge parts being made from the material of the box or lid
 . . with or without an additional pintle wire. *See* hollow-ware
 . umbrella ribs, attaching gifts to. *See* umbrellas &c
 hoes. *See* hand tools &c
 hollow-ware—
 . ash pans. *See* fenders &c
 . bellows. *See* bellows
 . bucket ears. *See* handles &c
 . cans and like receptacles, beading and wiring edges of. *See* B3E, Bending and breaking metals
 . cans and like receptacles, seaming. *See* B3J, Seaming &c metal sheets
 . cans and like receptacles, soldering. *See* B3R, Welding, soldering and brazing
 . caps and like cupped forms made from discs. *See* capsules &c
 . erecting and repairing gas holders. *See* F4X, Gas distribution, liquid heating vessels &c
 . erecting and repairing in situ large tank structures, methods of. *See* E1T, Tanks silos &c
 . handles, and bucket ears (*including* attaching). *See* handles &c
 . hollow balls and like floats. *See* knobs &c
 . jacketed containers. *See* steam generators, radiators &c
 . keys for opening cans. *See* hand tools &c
 . ornamental fittings. *See* metalwork, ornamental
 . pyramidal corner pieces and like fastenings for non-metallic boxes. *See* fastenings
 . roses for watering-cans. *See* knobs &c
 . sizing and restoring shape by stamping. *See* B3Q, Stamping and embossing metals
 . spiked and like strips for joining sides of cardboard and like boxes. *See* fastenings
 . spouts, attaching. *See* handles &c
 . sprinkler lids for cans. *See* gratings &c
 . wire fabrics and wirework. *See* wire fabrics &c
- A83C . attaching linings
- A83D . attaching separately made openers
 . by operations (*other than* final finishing operations not essential in shaping of article) *including*—
- A83A1 . . bending, coiling, seaming, stretch forming, wrapping
- A83A2 . . bolting, screwing
- A83A3 . . bonding by adhesives
- A83A4 . . casting, spraying metal
- A83A5 . . chemical or electrolytic methods
- A83A6 . . crimping, deep drawing, stamping
- A83A7 . . drawing, extruding
- A83A9 . . forging, rolling
- A83A10 . . grinding, machining, mechanical polishing
- A83A8 . . high energy rate forming (*including* bonding by)
- A83A11 . . punching, shearing
- A83A12 . . riveting
- A83A13 . . soldering, welding
- A83A14 . . spinning
- A83AX . . unclassified methods
- A83E . can-making machinery
 . particular articles—
- A83B1 . . aerosol containers
- A83B2 . . baths, bowls, cooking utensils, pots without spouts, sinks, tubs
- A83B3 . . bottles, jugs, kettles, tea pots
- A83B4 . . boxes, cartridge-magazines, cups, trays, tubular cases
- A83B5 . . buckets, buoys, cans, casks, churns, drums, dust-bins, kegs, scuttles, tanks
- A83B6 . . bungs, closures, orifices (*including* hermetically sealing)
- A83B7 . . casting moulds
- A83B8 . . pressure vessels, rocket combustion chambers
- A83BX . . unclassified
- A83F . setting out segments for hollow-ware
 honeycombs, artificial, *eg* for cathode-ray tubes. *See* gratings &c

- A84 hooks
 . barbing by cutting. *See* B3W, Shearing, punching &c metals
 . crochet and like. *See* needles &c
 . hooked spikes. *See* nails &c
 . knobs and terminal ornaments serving as. *See* knobs &c
 . lacing-hooks. *See* fastenings
 . screw eyes. *See* eyes and rings, screw &c
 . shackles. *See* chains
 . sockets for wire ropes. *See* ropes & eyes &c for
 . swivels. *See* hinges &c
 . tenter hooks. *See* nails &c
 hoop iron. *See* rods &c
- A85 hoops and rings
 . bearing race-rings. *See* F2A, Bearings, lubricating &c
 . chain links. *See* chains
 . contracting. *See* B3E, Bending and breaking metals; B3H, Power hammers &c
 . expanding and stretching. *See* B3E, Bending and breaking metals
 . gimbal rings. *See* flexible shafts &c
 . grommets, gaskets, and joint packing rings. *See* packing, joint-making
 . hinged and flexible bracelets. *See* jewellery
 . hoops or clips for springs. *See* springs
 . piston rings. *See* F2T, Pistons, cylinders, flywheels &c
 . rolling. *See* B3M, Rolling metals
 . turning piston-rings. *See* B3T, Turning
 . tyres, spring wire. *See* wire fabrics
 . umbrella top-notches. *See* umbrellas &c
 . valve seats. *See* valves &c
 . washers. *See* nuts &c
 . welding. *See* B3R, Welding, soldering and brazing
 horse-clippers. *See* cutlery &c blades
- A86 horseshoes and boot-protectors
 . bending. *See* B3E, Bending and breaking metals
 . forging. *See* B3H, Power hammers &c
 . rolling. *See* B3M, Rolling metals
 . spiked plates. *See* nails &c
 ingot moulds. *See* hollow-ware
- A182 ingots
 . casting. *See* B3F, Casting metals
- A87 injectors and ejectors
- A88 internal-combustion engines. *See* steam &c engines &c
- A88 ironing-apparatus
- A89 jet engines. *See* steam &c engines
- A89 jewellery
 . finger rings, casting. *See* B3F, Casting metals
 . finger rings, contracting. *See* B3E, Bending and breaking metals
 . finger rings, expanding and stretching. *See* B3E, Bending and breaking metals; B3M, Rolling metals
 . pins. *See* pins, dress &c
 joints, universal. *See* flexible shafts &c
 kettles. *See* hollow-ware
 keys for drill chucks. *See* machine details &c
 keys for locks. *See* locks &c
 keys, shafting and like. *See* cotters &c
- A91 knitting and lace machines
 . needles. *See* needles &c
 knife edges. *See* weighing apparatus &c
 knives and razors. *See* cutlery &c blades
- A93 knobs and terminal ornaments
 label fastenings and holders. *See* fastenings
 labels. *See* nameplates &c
 lace machines. *See* knitting &c machines
 lacing-tags, making and attaching. *See* A3H, Dress fastenings, jewellery &c
- A95 ladders
- A96 ladles, domestic. *See* spoons &c
- A96 lamps and burners
 . chimney caps. *See* capsules &c
 . containers for naphtha lamps. *See* hollow-ware
 . glazing-bars. *See* rods &c
 . lens mountings. *See* lens mountings
 . mixing tubes or venturi tubes for. *See* pipes &c
 . reflectors. *See* mirrors &c

- lances. *See* cutlery &c
laps. *See* abrading &c
latches, windows. *See* fastenings
lathe centres. *See* machine details &c
A97 lathing (*other than* expanded metal)
. stabbed sheets for use as. *See* gratings &c
lavatory fittings. *See* sanitary fittings
lawn-mowers. *See* agricultural machines &c
lecturers' and like pointers. *See* batons &c
A94 lens mountings (*including* clock and watch bezels)
levels, spirit. *See* gauges &c
levers and linkwork. *See* cranks &c
lifting-jack bodies. *See* machinery beds &c
lighters, cigarette and like. *See* lamps &c
limbs, artificial. *See* surgical &c appliances
lockets. *See* jewellery
A99 locks and latches (*including* keys)
. keepers for rim locks. *See* fastenings
. milling keys. *See* B3K, Milling
A100 looms
A101 lubricators
A105 machine details, unclassified
. helices for coil clutches. *See* springs
A64 machinery beds and frames
machinery guards. *See* machine details &c
magnets. *See* dynamo-electric machines &c
making from specified stock materials—
. *The articles are indexed also under subdivisions above and below*
A200A . attached halves
A200B . connected series in bar form
A200C . profiled bars
A200D . separate halves
A200E . waste reducing by arrangement of blanks in sheets
manhole and handhole doors, pressure-resisting. *See* doors, lids &c
manhole covers for roads and paving. *See* bricks &c
manicure appliances. *See* cutlery &c; surgical &c (*nail cleaners*); tools, engineers' &c (files &c)
maps, metal relief. *See* metalwork, ornamental
matchets. *See* scythes &c
A104 mathematical drawing-appliances
. pivots. *See* hinges &c
. rule-joints. *See* hinges &c
mats, scraper, (*other than* wire-fabric). *See* gratings &c
mats, scraper, wire-fabric. *See* wire-fabrics &c
mechanism. *See* machine details &c
melting-pots. *See* crucibles &c
A98 metal cutting and working apparatus (*including* electrodes for welding and for cutting or removing metal by
electric spark discharge and by electrolytic machining)
. abrading, polishing, and burnishing apparatus. *See* abrading &c apparatus
. beds and frames. *See* machinery beds &c
. details not peculiar to metal cutting and working machines. *See* machine details &c
. electrodes for electrolysis (*other than* for electrolytic machining). *See* electric battery &c plates &c
. hand tools and appliances. *See* hand tools &c
. moulds. *See* hollow-ware
. saws. *See* saws
. scissors, shears, and like shearing instruments. *See* scissors &c
. soldering-irons. *See* soldering &c irons
. steady-rests. *See* F2A, Bearings, lubricating &c
. tools, engineers' and like, for machine or hand use. *See* tools, engineers' &c
A102 metal shavings, wool, powder, and like comminuted metal
. planing. *See* B3L, Planing metals &c
. powder and like comminuted metal making by granulating and atomising. *See* C7X, Miscellaneous metallurgy
. turning. *See* B3T, Turning
A106 metalwork, ornamental
. damascened smallarms. *See* ordnance &c
. damascening by piling. *See* B3H, Power hammers &c
. knobs and terminal ornaments. *See* knobs &c
. turning. *See* B3T, Turning
A70 meters
. bellows and pressure-actuated diaphragms. *See* bellows
. Bourdon tubes. *See* pipes &c
. cylinders for crusher-gauges. *See* test pieces
A107 mincing and fruit and vegetable peeling machines
. grating-surfaces for. *See* gratings &c
mine casings. *See* hollow-ware

- A108 mirrors and reflectors
 . frames for mirrors. *See* picture frames &c
 . mixing-apparatus. *See* crushing &c
 . mouldings. *See* rods &c
 . moulds for casting metals. *See* hollow-ware
 . moulds for casting non-metallic materials. *See* tools, engineers' &c
 . mowing-machines. *See* agricultural machines &c
 . muffles. *See* crucibles &c
- A109 musical instruments (*including* sound recording and reproducing diaphragms in general)
 . pressure-actuated diaphragms (*other than* sound recording and reproducing). *See* bellows
 . tone-arms for phonographs and gramophones. *See* pipes &c
 . tune sheets. *See* record sheets &c
- A110 nails, spikes, wire staples, and tacks (*including* bifurcated rivets *other than* sheet metal) (18)
 . bifurcated rivets, sheet metal. *See* fastenings
 . bolt-like spikes or pins. *See* bolts &c
 . connecting two or more nails to a plate or strip by capping. *See* B3H, Power hammers &c
 . cutting. *See* B3W, Shearing, punching &c metals
 . extruding. *See* B3P, Drawing and extruding metals
 . forging. *See* B3H, Power hammers &c
 . hardened rivet heads on malleable shanks. *See* bolts &c
 . nail-driving machines and means combined therewith for merely cutting the nails from stock or for roughening them. *See* B4C, Impelling-tools &c
 . rolling. *See* B3M, Rolling metals
 . stapling-machines and means combined therewith for forming the staples from wire stock. *See* B4C, Impelling-tools &c
- A111 nameplates, labels, signboards, and advertisement tablets
 . plates for addressing-machines. *See* printers' apparatus &c
- A112 needles, sewing and other (*including* styli)
 . forging. *See* B3H, Power hammers &c
 . hypodermic needles. *See* surgical &c appliances
 . sinkers or jacks for knitting machines. *See* knitting &c machines
 . straightening. *See* B3E, Bending and breaking metals
 . nightlight sustainers. *See* lamps &c
 . nipples, spoke and like. *See* nuts &c
- A113 nozzles
 . for turbines. *See* turbines &c
 . propulsion nozzles for jet engines. *See* combustion chambers &c
 . number wheels for meters and like devices. *See* meters
 . number wheels for numbering machines. *See* printers' apparatus &c
- A114 nut-crackers
- A115 nuts and washers
 . facing. *See* B3T, Turning
 . forging. *See* B3H, Power hammers &c
 . helical screw-thread inserts. *See* springs
 . punching. *See* B3W, Shearing, punching &c metals
 . tapping nuts. *See* B3N, Screwing and tapping
 . oil-cans. *See* hollow-ware
- A116 ordnance and smallarms
 . cartridge-cases. *See* capsules &c
 . cartridge-clips. *See* hollow-ware
 . cartridge-magazines. *See* hollow-ware
 . damascening by piling. *See* B3H, Power hammers &c
 . rifling. *See* B3C, Drilling and boring; B3L, Planning metals &c
 . straightening. *See* B3E, Bending and breaking metals
 . winding wire on barrels. *See* B3E, Bending and breaking metals
- A117 packing, joint-making
 . shims and like packing and making-up pieces. *See* machine details &c
- A118 paper-fasteners. *See* fastenings
 . paper-making apparatus
 . pastry cutters. *See* hand tools &c
 . paving-blocks. *See* bricks &c
 . pencil sharpeners. *See* cutlery &c
- A119 pens, penholders, and pencil holders
 . pocket clips. *See* fastenings
- A126 photographic cameras
 . diaphragms and shutters. *See* diaphragms &c
 . spools for. *See* bobbins &c
- A120 pick-axes. *See* hand tools &c
 . picture frames and accessories
 . frames for motor-car windscreens. *See* railway &c vehicle details
 . hooks. *See* hooks
 . nails. *See* nails &c

- pins, dowel and like. *See* bolts &c
 pins, drawing and like. *See* nails &c
 pins, dress and like
 pipe holdfasts or clips. *See* fastenings
 pipe holdfasts or spiked hooks. *See* nails &c
 pipes, tubes, conduits, and tunnel linings—
 . closing tube ends (*other than* collapsible tubes). *See* B3H, Power hammers &c; B3J, Seaming &c metal sheets
 . collapsible. *See* tubes, collapsible
 . extruding pipes and tubes. *See* B3P, Drawing and extruding metals
 . flanging. *See* B3E, Bending and breaking metals
 . hollow shafts, strengthened. *See* shafts &c
 . organ pipes. *See* musical instruments
 . ornamental tubes. *See* metalwork, ornamental
 . treating tubes to form cylindrical gratings. *See* gratings &c
 . union and other loose nuts for. *See* nuts &c
 A122A . Bourdon and like
 A122B . capillary and like small bore
 A122C . conduit and tunnel segments
 A122R . cop
 A122D . corrugated
 A122E . drill-steels and like hollow bars
 A122T . eccentric-bore
 A122F . elbows, bends, tees, crosses, and like pipe fittings; pipes adapted therefor
 A122G . gilled (*ie* with attached fins)
 A122H . helically-jointed
 A122U . helical or spiral form of
 . . coiling helical tubes. *See* B3E, Bending and breaking metals
 A122J . longitudinally-jointed
 A122S . multiple-bore
 A122K . non-circular cross-section (*other than* corrugated)
 A122L . ribbed (*ie* with integral fins)
 A122M . seamless
 A122N . spigot and socket-ended
 A122P . superheater and like return bends
 A122Q . taper
 A122X . unclassified
 A123 . pistons and plungers, and rods therefor
 . helical spring packing. *See* springs
 . piston-rings. *See* F2T, Pistons, cylinders, flywheels &c
 . turning curved pistons. *See* B3T, Turning
 plane irons. *See* hand tools &c
 plate, sheet, and strip
 . paving plates for roads. *See* bricks &c
 . planishing and beating. *See* B3H, Power hammers &c
 A125 . plates, dishes, saucers, and the like
 . ploughs, agricultural. *See* agricultural machines &c
 . pointers, lecturers' and like. *See* batons &c
 . posts and columns. *See* rods &c
 . powdered metal. *See* metal shavings &c
 . press-plates for fabrics. *See* plate, sheet &c
 A128 . printers' apparatus and fittings
 . casting leads, rules, and like continuous strips. *See* B3F, Casting metals
 . embossing stamps or dies. *See* tools, engineers' &c
 . mill-engraving rollers. *See* B3M, Rolling metals
 . milling type matrices. *See* B3K, Milling
 . reciprocating tables. *See* machine details &c
 . rollers. *See* rollers &c
 A129 . projectiles and bombs
 . spherical bullets and shot. *See* balls
 . turning. *See* B3T, Turning
 A130 . propellers, screw, and centrifugal impellers
 . casting. *See* B3F, Casting metals
 . forging. *See* B3H, Power hammers &c
 . milling. *See* B3K, Milling
 . planing. *See* B3L, Planing metals &c
 . turbine compressors. *See* turbines &c
 . puddlers' implements. *See* hand tools &c
 A131 . pulley-blocks and frames
 . castor frames. *See* castors &c
 . pulleys. *See* wheels &c

- pulleys, belt and like. *See* wheels &
 pulverizing-apparatus. *See* crushing &
 pumps. *See* steam &c engines &c
 push rods. *See* machine details unclassified
 racks for airing clothes. *See* brackets &
 racks for photographic plates and like articles. *See* brackets &
 radiators and coils for heating, cooling, and the like. *See* steam generators &
 rag-tearing apparatus. *See* paper-making apparatus
 railings. *See* fencing &c
 A134 railway, road, and tramway vehicle details
 . axle-boxes. *See* F2A, Bearings, lubricating &c
 . axles. *See* shafts &c
 . brakes. *See* brakes
 . coupling-hooks. *See* hooks
 . coupling-links. *See* chains
 . motor road vehicles, rear-axle casings for. *See* shafts &c
 . motor vehicles, gear-boxes for. *See* machine details &c
 . springs. *See* springs
 . wheels. *See* wheels &c
 A135 railways and tramways, permanent way of
 . chair keys. *See* cotters &c
 . converting worn rails. *See* B3V, Miscellaneous working of metals &c
 . dressing rails and rail-joints *in situ*. *See* B3D, Abrading; B3K, Milling; B3L, Planing metals &c
 . rail benders or jim crows. *See* B3E, Bending and breaking metals
 . rail bonds. *See* electric conductors
 . rails not modified for joints, points and crossings. *See* rods &c
 . reworking old rails and scrap. *See* B3V, Miscellaneous working of metals &c.
 . spikes. *See* nails &c
 . welding rails (*including* bonds and fishplates). *See* B3R, Welding, soldering and brazing
 . rakes. *See* hand tools &c
 . razor blades and dry shaver cutters and foils. *See* cutlery &c
 . razor stropping devices. *See* abrading &c apparatus
 . reaping and mowing machines. *See* agricultural machines &c
 A133 record sheets, perforated, notched, and like
 . reels. *See* bobbins &c
 . reflectors. *See* mirrors &c
 . refrigerators. *See* steam generators &c
 . retorts. *See* crucibles &c
 . ribbon and tape. *See* wire &c
 . rings. *See* hoops &c
 . rivets. *See* bolts &c
 . rivets, bifurcated, (*other than* sheet metal). *See* nails &c
 . rivets, bifurcated, sheet metal. *See* fastenings
 A137 roads, paving-plates for. *See* bricks &c
 . rods, bars, girders, beams posts, and columns
 . picture rails. *See* picture frames &c
 . ribbon and tape. *See* wire, ribbon &c
 . rods forming endless strings of articles. *See* subdivisions for articles
 . ties for tramway and like rails. *See* railways &c
 . welding and solder rods. *See* metal cutting and working apparatus
 A138 rollers and drums
 . bearing rollers. *See* F2A, Bearings, lubricating &c
 . knurling-rolls. *See* tools, engineers' &c
 . roofs, formed sheets and capping strips for. *See* bricks &c
 A139 root cutters. *See* agricultural machines &c
 . ropes and cords, eyes, cleats, thimbles, and holders for
 . grommets. *See* packing, joint-making
 . roses for watering-cans. *See* knobs &c
 . rule joints. *See* hinges &c
 A140 rules, steel. *See* mathematical drawing-appliances
 . safes and strongrooms
 . compound plates for. *See* cased &c forms; plate, sheet &c
 . safety pins. *See* pins, dress &c
 . salad servers. *See* spoons &c

- A43 sanitary fittings
 . casting S and like traps. *See* B3F, Casting metals
 . plugs for basins and sinks. *See* stoppers &c
 . sinks and draining boards. *See* hollow-ware
 . strainer plates for. *See* gratings &c
 sashes and sash fittings. *See* windows &c
- A141 saws
 . bands for. *See* hoops &c
 . sharpening. *See* B3K, Milling; B3L, Planing metals &c
 . toothing by file and rasp cutting machines. *See* tools, engineers' &c (files &c)
- A173 scabbards
- A142 scaffolding, clamps for. *See* vices
 scissors, shears, and like shearing-instruments
 scoops. *See* hollow-ware
 scouring-pads containing metal strands. *See* metal shavings &c
 scrapers, wood and like. *See* hand tools &c
 screw conveyers and elevators. *See* propellers, screw &c
 screw covers and wreath holders for coffins. *See* metalwork, ornamental
 screwdrivers. *See* hand tools &c
 screw fans. *See* propellers, screw &c
 screws *other than* self-tapping. *See* bolts &c
 screws, self-tapping. *See* tools engineers' &c (taps &c)
 scuttles. *See* hollow-ware
- A144 scythes, sickles, reaping-hooks, and the like
 . serrating by file and rasp cutting machines. *See* tools, engineers' &c (files &c)
 sealing strips. *See* packing, joint-making
 sewerage fittings. *See* sanitary fittings
- A145 sewing-machines
 . needles for. *See* needles &c
 shackles and coupling-links. *See* chains
- A147 shadow masks. *See* gratings &c
 shafts and shafting
 . flexible shafts. *See* flexible shafts &c
 . forging crank shafts. *See* B3H, Power hammers &c
 . turning crank pins and shafts. *See* B3T, Turning
 shelves and shelving. *See* furniture
 shims and like packing and making-up pieces. *See* machine details &c
 shingles. *See* bricks &c
- A148 ships and boats
 shoe horns. *See* boots &c
 show-cards, hanger strips for the top edges of. *See* picture frames &c
 shutters, other than roller-blind. *See* windows &c
 shutters, roller-blind. *See* window-blinds
 shuttles. *See* looms; sewing-machines
 shuttles, bobbins and reels for. *See* bobbins &c
 sieves and screens. *See* gratings &c
 silencers, exhaust. *See* exhaust silencers
 siphon heads. *See* valves &c
 skates. *See* games &c
 skewers. *See* nails &c
 sleeve-links. *See* jewellery
 snap-hooks. *See* hooks
 soap-shredders. *See* mincing &c
 sockets for wire ropes. *See* ropes &c
- A149 soldering and branding irons
 solitaires. *See* jewellery
 spades and shovels. *See* hand tools &c
 spanners and wrenches. *See* hand tools &c
 spark erosion electrodes. *See* metal cutting &c
 sparking-plugs. *See* electric components &c

- special metals, made from—
 . alloys and mixtures. *per se* See C7A, Alloys &
 A78A . aluminium
 A78B . copper
 A78C . gold
 A78W . iron
 A78D . lead
 A78E . magnesium
 A78F . nickel
 A78L . periodic Group I (*other than* copper, gold, and silver)
 A78M . periodic Group II (*other than* magnesium and zinc)
 A78N . periodic Group III (*other than* aluminium and rare earth metals, *but including* actinide series metals, *e.g.* thorium, uranium)
 A78V . periodic Group IV (*other than* lead and tin)
 A78Q . periodic Group V
 A78R . periodic Group VI (*other than* tungsten)
 A78S . periodic Group VII
 A78TA . periodic Group VIII (*other than* iron, nickel and platinum)
 A78G . platinum
 A78P . rare earth metals, *i.e.* lanthanide series metals
 A78H . silver
 A78U . tin
 A78J . tungsten
 A78K . zinc
 A151 spectacles and eyeglasses and protectors
 spinnerets. *See* nozzles
 A152 spinning yarns and threads, apparatus for
 . bolster cases for spindles. *See* F2A, Bearings, lubricating &
 . cop-tubes. *See* pipes &
 . gin saws. *See* saws
 . rollers and drums. *See* rollers &
 . sliver cans. *See* hollow-ware
 . spindle caps. *See* capsules &
 . traveller rings. *See* hoops &
 spittoons. *See* hollow-ware
 split pins. *See* cotters &
 A154 spoons, forks, and ladles, table and like
 spouts. *See* handles &
 sprayer tops for bottles. *See* nozzles
 spraying pistols. *See* metal cutting &
 spring pins. *See* cotters &
 A155 springs
 . coiling helices. *See* B3E, Bending and breaking metals
 . flanged washers for retaining springs. *See* nuts &
 . piston-rings, spring. *See* F2T, Pistons, cylinders, flywheels &
 . shackles for. *See* cranks &
 . umbrella-runner springs. *See* umbrellas &
 . washers, spring. *See* nuts &
 sprinkler lids for cans. *See* gratings &
 . sprinkler tops for bottles. *See* nozzles
 spurs. *See* harness &
 A156 stair-rods and stair-rod eyes
 . separate terminals or knobs. *See* knobs &
 stands, displaying and like. *See* brackets &
 staples, hasp and like. *See* fastenings
 staples, wire and like. *See* nails &
 stays or struts, hinged. *See* hinges &
 A157 steam and other fluid-pressure engines and pumps
 . carburettor choke tubes. *See* injectors &
 . carburettor jets. *See* nozzles
 . centrifugal and screw impellers. *See* propellers, screw &
 . combustion chambers, jet-pipes, and propulsion nozzles for jet engines. *See* combustion chambers &
 . crank cases, beds, and frames. *See* machinery beds &
 . cylinders, and cylinder heads and blocks. *See* cylinders &
 . pistons and plungers and rods therefor. *See* pistons &
 . sparking plugs. *See* electric components &
 . valve gear links and slide blocks. *See* cranks &
 A158 steam generators, radiators, and coils for heating, cooling, and the like
 . dummy radiators, surrounds or frames of. *See* railway & vehicle details
 . dummy radiators or stone guards. *See* gratings &
 . honeycomb plates for radiators. *See* gratings &
 . pipes and tubes. *See* pipes &
 . plates for. *See* plate, sheet &
 . stay bolts. *See* bolts &

- steels, crinoline and corset. *See* springs
 steels for sharpening. *See* hand tools &
 steering wheels. *See* wheels &
 stencilling-apparatus. *See* printers' apparatus &
 stilettoes and like sewing appliances. *See* needles &
 stirrups. *See* harness &
 stocks and dies. *See* tools, engineers' &
 A160 stoppers, lids, and covers, bottle, jar, and like
 . capsules. *See* capsules &
 . lid-like stoppers. *See* hollow-ware
 stoves and fireplaces. *See* furnaces &
 straw knives. *See* scythes &
 strip. *See* plate and sheet
 struts, aeroplane. *See* posts &
 studs, collar and like dress. *See* jewellery
 styli. *See* needles &
 sucker rods for oil wells. *See* rods &
 sugar tongs. *See* spoons &
 A161 superheaters, steam. *See* steam generators &
 surgical and medical appliances
 . eyes for sutures. *See* ropes &
 . knives. *See* cutlery & blades
 swivels. *See* hinges &
 tanks and cisterns. *See* hollow-ware
 A162 tea pot stands. *See* brackets &
 teeth, artificial, and fillings for teeth
 . casting. *See* B3F, Casting metals
 templets, copying. *See* machine details &
 tenterhooks. *See* nails &
 tent umbrellas. *See* umbrellas &
 A159 terminals for electric conductors. *See* electric components &
 test pieces
 thermionic valves. *See* electric components &
 thermometers. *See* meters
 thermopiles. *See* electric battery & plates &
 A153 thermostats
 thimbles. *See* capsules &
 thrashing-machines. *See* agricultural machines &
 thread guides, unclassified. *See* machine details &
 tie rods. *See* rods &
 timber hangers. *See* fastenings
 tin-openers. *See* hand tools &
 tips or caps. *See* capsules &
 toast-racks. *See* brackets &
 tobacco-pipe cleaners. *See* cigar-cutters &
 tongs, curling. *See* hand tools &
 tongs, fire. *See* fenders &
 tools, edge. *See* hand tools &
 tools, engineers' and like, for machine or hand use—
 . cutting-chains. *See* chains
 . saws. *See* saws
 A163A . boring and drilling drills and cutters
 A163F . cold chisels and percussive rock drills
 A163G . cutters, other than drills, for excavating earth and rock
 A163H . diamond and like tools
 A163E . files, rasps and dental burrs
 . . cutting by chisel cuts. *See* B3H, Power hammers &
 . . re-cutting and sharpening by chemical action. *See* B3L, Planing metals &
 A163U . knurling-rolls
 A163J . lathe and like tools
 A163K . machine knives
 A163L . milling-cutters
 . . wheel centres on which abrasive is bonded. *See* wheels &
 A163B . punches and dies (*including* moulds for casting non-metals, for electrodeposition, and for glass-blowing)
 . . moulds for casting metals. *See* hollow-ware
 A163M . shear blades
 A163D . taps, stocks, and screwing dies (*including* self-tapping screws)
 A163N . tube drawing and rolling mandrels
 A163P . wood-working, unclassified

- tools, hand. *See* hand tools &c; tools, engineers' &c
 torch lamps. *See* lamps &c
 torpedoes. *See* projectiles &c
 torpedo tubes. *See* ordnance &c
 torque converters, fluid. *See* turbines &c
 toys. *See* games &c
 tracing wheels, dressmakers' and like. *See* hand tools &c
 transformer cores. *See* dynamo-electric machines &c
 traps for animals. *See* cages &c
 trays. *See* hollow-ware
 treads for floors, stairs, and the like. *See* bricks &c
 trees, boot. *See* boots &c
 trowels. *See* hand tools &c
 trunks, travelling. *See* hollow-ware
 A165 tubes, collapsible
 . closing container-tubes after filling. *See* B8C, Packaging &c
 . extruding. *See* B3P, Drawing and extruding metals
 A166 tunnel and colliery and mine shaft linings. *See* pipes &c
 turbines and like bladed rotors and compressors (*including* turbine nozzles)
 . combustion chambers for gas turbines. *See* combustion chambers &c
 . milling blades. *See* B3K, Milling
 tuyeres. *See* nozzles
 A164 typewriters
 A167 umbrellas, parasols, and the like
 . handles. *See* handles
 . stands and holders for. *See* furniture
 . wire for. *See* wire, ribbon &c
 universal joints. *See* flexible shafts &c
 A169 valves and cocks
 . cylinder liner and like sleeve valves. *See* cylinders &c
 . engine and like slide valves and chests. *See* steam &c engines &c
 . extruding poppet valves. *See* B3P, Drawing and extruding metals
 . facing valves and valve seats. *See* B3K, Milling; B3T, Turning
 . fuel injector spraying valves. *See* nozzles
 . hollow balls and like floats. *See* knobs &c
 . tappet rods. *See* machine details &c
 vehicle wheels. *See* wheels &c
 A171 vices
 wall plugs. *See* bolts &c
 wall ties. *See* rods and bars
 washers. *See* nuts &c
 A175 washing machines and apparatus
 watches. *See* clocks &c
 weapons, bladed. *See* cutlery &c blades
 A174 wearing apparel details
 . crinoline and corset steels, sinuous garment stays, and like spring strips. *See* springs
 wedges. *See* cotters &c
 A176 weighing-apparatus and weights
 . scale pans. *See* hollow-ware
 A177 wheels and pulleys
 . casting. *See* B3F, Casting metals
 . discs for, cutting out by annular drills. *See* B3C, Drilling and boring
 . forging. *See* B3H, Power hammers &c
 . rims and metal tyres forming separate hoops. *See* hoops &c
 . rolling. *See* B3M, Rolling metals
 . tracing wheels, dressmakers' and like. *See* hand tools &c
 . tyre valves. *See* valves &c
 . welding. *See* B3R, Welding, soldering and brazing
 whistles. *See* musical instruments
 A178 window blinds
 . flanged and like roller ends. *See* bobbins &c
 . roller bodies. *See* rollers &c
 A179 windows, shutters, and doors and door frames for buildings
 . bars for. *See* rods &c
 . casement stays, hinged and quadrant. *See* hinges &c
 . cylinders for door checks. *See* cylinders, engine and like
 . fastenings for. *See* fastenings
 . mouldings for. *See* rods &c
 . sash-lifts. *See* handles &c
 . shutters, roller-blind. *See* window-blinds
 windscreen wipers. *See* railway &c vehicle details

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- A186 wire fabrics and wirework
. making by bending and twisting. *See* B3E, Bending and breaking metals
. sinuous and like spring strips. *See* springs
. welding by pressure or hammering. *See* B3R, Welding, soldering and brazing
- A180 wire, ribbon, and tape (379)
. barbing by cutting. *See* B3W, Shearing, punching &c metals
. extruding. *See* B3P, Drawing and extruding metals
. garnett wire. *See* spinning yarns &c
. making by sintering powdered metal. *See* C7D, Process metallurgy &c
. securing sheet-metal barbs by squeezing. *See* B3Q, Stamping and embossing metals
. securing wire barbs by coiling. *See* B3E, Bending and breaking metals
wood-screws, sockets for. *See* bolts &c