

CPC COOPERATIVE PATENT CLASSIFICATION

A HUMAN NECESSITIES

PERSONAL OR DOMESTIC ARTICLES

A47 FURNITURE (arrangements of seats for, or adaptations of seats to, vehicles [B60N](#)); **DOMESTIC ARTICLES OR APPLIANCES; COFFEE MILLS; SPICE MILLS; SUCTION CLEANERS IN GENERAL** (ladders [E06C](#))
(NOTE omitted)

A47L DOMESTIC WASHING OR CLEANING (brushes [A46B](#); cleaning quantities of bottles or of other hollow articles of one kind [B08B 9/00](#); laundry [D06F](#)); **SUCTION CLEANERS IN GENERAL** (cleaning in general [B08](#))

NOTE

Machines or implements which can be used for cleaning windows, window shades, window screens, venetian blinds, as well as floors, carpets, furniture, walls or wall coverings are classified in group [A47L 11/00](#) or [A47L 13/00](#).

Cleaning windows, window shades, window screens, venetian blinds

1/00 Cleaning windows

- 1/02 . Power-driven machines or devices
- 1/03 . . cleaning both sides of a window simultaneously
- 1/05 . . Hand apparatus with built-in electric motors
- 1/06 . Hand implements (with built-in electric motors [A47L 1/05](#))
- 1/08 . . with provision for supplying liquids, e.g. cleaning agents ([A47L 1/095](#), [A47L 1/13](#), [A47L 1/15](#) take precedence)
- 1/09 . . for cleaning one side with access from the other side only
- 1/095 . . . with provision for supplying liquids, e.g. cleaning agents
- 1/12 . . for cleaning both sides simultaneously
- 1/13 . . . with provision for supplying liquids, e.g. cleaning agents
- 1/15 . . Cloths, sponges, pads, or the like, e.g. containing cleaning agents
- 1/16 . Devices for defrosting window-panes ([H05B 3/84](#) takes precedence)

3/00 Safety devices for use in window-cleaning (safety belts [A62B 35/00](#); for scaffolding in general [E04G](#); for ladders [E06C](#))

- 3/02 . Cages; Platforms
- 3/04 . Safety ropes

4/00 Cleaning window shades, window screens, venetian blinds ([A47L 1/15](#) takes precedence; suction cleaner nozzles [A47L 9/02](#))

- 4/02 . Hand implements for cleaning venetian blinds
- 4/04 . Accessories facilitating cleaning, e.g. venetian blind separators, spreaders, or cleaning racks

Suction cleaners (pneumatically taking-up undesirable matter from roads or like surfaces [E01H 1/08](#))

5/00 Structural features of suction cleaners

- 5/02 . with user-driven air-pumps or compressors

- 5/04 . . with pistons, bellows, or diaphragms, e.g. driven by the cleaner-supporting wheels
- 5/05 . . . with driven dust-loosening tools
- 5/06 . . with rotary fans
- 5/08 . . . driven by cleaner-supporting wheels
- 5/10 with driven dust-loosening tools
- 5/12 . with power-driven air-pumps or air-compressors, e.g. driven by motor vehicle engine vacuum
- 5/14 . . cleaning by blowing-off, also combined with suction cleaning
- 5/16 . . with suction devices other than rotary fans
- 5/18 . . . with ejectors, e.g. connected to motor vehicle exhaust
- 5/20 . . . with bellows, diaphragms or pistons
- 5/22 . . with rotary fans
- 5/225 . . . {Convertible suction cleaners, i.e. convertible between different types thereof, e.g. from upright suction cleaners to sledge-type suction cleaners}
- 5/24 . . . Hand-supported suction cleaners
- 5/26 with driven dust-loosening tools
- 5/28 . . . Suction cleaners with handles and nozzles fixed on the casings, e.g. wheeled suction cleaners with steering handle ([A47L 5/24](#) takes precedence)
- 5/30 with driven dust-loosening tools, e.g. rotating brushes
- 5/32 with means for connecting a hose (hose couplings for suction cleaners [A47L 9/24](#))
- 5/34 with height adjustment of nozzles or dust-loosening tools
- 5/36 . . . Suction cleaners with hose between nozzle and casing; Suction cleaners for fixing on staircases; Suction cleaners for carrying on the back
- 5/362 {of the horizontal type, e.g. canister or sledge type}
- 5/365 {of the vertical type, e.g. tank or bucket type}
- 5/367 {Suction cleaners for fixing on staircases}

- 5/38 . . . Built-in suction cleaner installations, i.e. with fixed tube system to which, at different stations, hoses can be connected
- 7/00** **Suction cleaners adapted for additional purposes (suction devices for removing ash [F23J 1/02](#)); Tables with suction openings for cleaning purposes; Containers for cleaning articles by suction; Suction cleaners adapted to cleaning of brushes; Suction cleaners adapted to taking-up liquids**
- 7/0004 . {Suction cleaners adapted to take up liquids, e.g. wet or dry vacuum cleaners (floor-scrubbing machines taking-up dirty liquid by suction [A47L 11/30](#))}
- 7/0009 . . {with means mounted on the nozzle; nozzles specially adapted for the recovery of liquid}
- 7/0014 . . {with additional means or devices between nozzle and casing}
- 7/0019 . . {Details of the casing}
- 7/0023 . . {Recovery tanks (for cleaning machines [A47L 11/4013](#))}
- 7/0028 . . . {Security means, e.g. float valves or level switches for preventing overflow}
- 7/0033 . . . {with means for recycling the dirty liquid}
- 7/0038 . . . {with means for emptying the tanks}
- 7/0042 . . {Gaskets; Sealing means}
- 7/0047 . {Furniture or stationary devices with suction openings (built-in suction cleaners [A47L 5/38](#))}
- 7/0052 . {Containers for cleaning articles by suction}
- 7/0057 . {Suction cleaners adapted for cleaning of brushes (shakers for dust-cloths or mops [A47L 13/502](#))}
- 7/0061 . {adapted for disinfecting or sterilising}
- 7/0066 . {adapted for removing nail dust, hair or the like}
- 7/0071 . {with containers for ash, soot, contaminant or harmful materials (suction devices for removing ashes [F23J 1/02](#))}
- 7/0076 . {adapted for vehicle cleaning (vehicle cleaning apparatus for interior of land vehicles [B60S 3/008](#))}
- 7/008 . {adapted for mattresses or the like}
- 7/0085 . {adapted for special purposes not related to cleaning}
- 7/009 . {Details of suction cleaner tools for additional purposes}
- 7/0095 . {Suction cleaners or attachments adapted to collect dust or waste from power tools}
- 7/02 . with driven tools for special purposes (with floor-polishing tools [A47L 11/20](#))
- 7/04 . for using the exhaust air for other purposes, e.g. for distribution of chemicals in a room, for sterilisation of the air (spraying or atomising in general [B05](#))
- 7/06 . . for supporting the suction cleaner on the exhaust air
- 7/08 . . with combustion of dust in exhaust air
- 9/00** **Details or accessories of suction cleaners, e.g. mechanical means for controlling the suction or for effecting pulsating action; Storing devices specially adapted to suction cleaners or parts thereof; Carrying-vehicles specially adapted for suction cleaners**
- 9/0009 . {Storing devices (winding devices for electric cables [A47L 9/26](#)); Supports, stands or holders}
- 9/0018 . . {integrated in or removably mounted upon the suction cleaner for storing parts of said suction cleaner}
- 9/0027 . . . {specially adapted for holding the suction cleaning tools}
- 9/0036 . . . {specially adapted for holding the suction hose}
- 9/0045 . . . {specially adapted for holding the suction tube}
- 9/0054 . . {Stands or the like for temporary interruption of work}
- 9/0063 . . {External storing devices; Stands, casings or the like for the storage of suction cleaners}
- 9/0072 . {Mechanical means for controlling the suction or for effecting pulsating action}
- 9/0081 . {Means for exhaust-air diffusion; Means for sound or vibration damping}
- 9/009 . {Carrying-vehicles; Arrangements of trollies or wheels; Means for avoiding mechanical obstacles}
- 9/02 . Nozzles (suction nozzles for fluid transport [B65G 51/00](#))
- 9/04 . . with driven brushes or agitators
- 9/0405 . . . {Driving means for the brushes or agitators}
- 9/0411 {driven by electric motor}
- 9/0416 {driven by fluid pressure, e.g. by means of an air turbine}
- 9/0422 {driven by the rotation of the supporting wheels on which the nozzle travels over the floor}
- 9/0427 {Gearing or transmission means therefor}
- 9/0433 {Toothed gearings}
- 9/0438 {with gears having orbital motion, e.g. planetary gearing}
- 9/0444 {for conveying motion by endless flexible members, e.g. belts}
- 9/045 {Friction gearings}
- 9/0455 {Bearing means therefor}
- 9/0461 {Dust-loosening tools, e.g. agitators, brushes}
- 9/0466 {Rotating tools}
- 9/0472 {Discs}
- 9/0477 {Rolls}
- 9/0483 {Reciprocating or oscillating tools, e.g. vibrators, agitators, beaters}
- 9/0488 {Combinations or arrangements of several tools, e.g. edge cleaning tools}
- 9/0494 {Height adjustment of dust-loosening tools}
- 9/06 . . with fixed, e.g. adjustably fixed brushes or the like
- 9/0606 {rigidly anchored brushes, combs, lips or pads}
- 9/0613 {with means specially adapted for picking up threads, hair or the like, e.g. brushes, combs, lint pickers or bristles pads}
- 9/062 {Rigidly anchored edge brushes}
- 9/0626 {Rigidly anchored lips, e.g. nozzles adapted for picking up liquids}
- 9/0633 {with retractable brushes, combs, lips or pads}
- 9/064 {actuating means therefor}
- 9/0646 {with pneumatic actuation}
- 9/0653 {with mechanical actuation, e.g. using a lever}
- 9/066 {with adjustably mounted brushes, combs, lips or pads; Height adjustment of nozzle or dust loosening tools (for suction cleaners with handles and nozzles fixed on the casing [A47L 5/34](#))}
- 9/0666 {with tilting, floating or similarly arranged brushes, combs, lips or pads}

- 9/0673 . . . {with removable brushes, combs, lips or pads}
- 9/068 . . . {Nozzles combined with a different cleaning side, e.g. duplex nozzles or dual purpose nozzles}
- 9/0686 . . . {Nozzles with cleaning cloths, e.g. using disposal fabrics for covering the nozzle}
- 9/0693 . . . {Specially shaped nozzles, e.g. for cleaning radiators, tubes, fans or the like; Dusters}
- 9/08 . . with means adapted for blowing
- 9/10 . Filters (in general [B01D](#); cyclones [B04C](#)); Dust separators; Dust removal; Automatic exchange of filters {(for machines for cleaning floors [A47L 11/40](#))}
- 9/102 . . {Dust separators (cyclones [A47L 9/16](#))}
- 9/104 . . . {Means for intercepting small objects}
- 9/106 . . {Dust removal}
- 9/108 . . . {Dust compression means}
- 9/12 . . Dry filters
- 9/122 . . . {flat}
- 9/125 . . . {funnel-shaped}
- 9/127 . . . {tube- or sleeve-shaped}
- 9/14 . . Bags or the like; {Rigid filtering receptacles; Attachment of, or closures for, bags {or receptacles}
- 9/1409 . . . {Rigid filtering receptacles (dust collecting receptacles for cyclones [A47L 9/1683](#))}
- 9/1418 . . . {Impermeable dust collecting bags}
- 9/1427 . . . {Means for mounting or attaching bags or filtering receptacles in suction cleaners; Adapters}
- 9/1436 {Connecting plates, e.g. collars, end closures}
- 9/1445 {with closure means}
- 9/1454 {Self-sealing closures, e.g. valves}
- 9/1463 {specially adapted for rigid filtering receptacles}
- 9/1472 {combined with security means, e.g. for preventing use, e.g. in case of absence of the bag}
- 9/1481 . . . {Means for removing bags in suction cleaners, e.g. ejecting means; Means for exchanging bags}
- 9/149 . . . {Emptying means; Reusable bags}
- 9/16 . . Arrangement or disposition of cyclones or other devices with centrifugal action
- 9/1608 . . . {Cyclonic chamber constructions}
- 9/1616 . . . {Multiple arrangement thereof}
- 9/1625 {for series flow}
- 9/1633 {Concentric cyclones}
- 9/1641 {for parallel flow}
- 9/165 . . . {Construction of inlets}
- 9/1658 . . . {Construction of outlets}
- 9/1666 {with filtering means}
- 9/1675 {movable, revolving or rotary}
- 9/1683 . . . {Dust collecting chambers; Dust collecting receptacles}
- 9/1691 . . . {Mounting or coupling means for cyclonic chamber or dust receptacles}
- 9/18 . . Liquid filters
- 9/181 . . . {Separating by passing the air through a liquid bath}
- 9/182 . . . {Separating by passing the air over a liquid bath ([arrangement of cyclones A47L 9/16](#))}
- 9/183 . . . {Spray cleaning}
- 9/185 . . . {Means for the mechanical control of flow of air, e.g. deflectors, baffles or labyrinths}
- 9/186 . . . {Construction of outlets}
- 9/187 {with filtering means, e.g. separators}
- 9/188 {movable, revolving or rotary}
- 9/19 . . Means for monitoring filtering operation
- 9/20 . Means for cleaning filters
- 9/22 . Mountings for motor fan assemblies
- 9/24 . Hoses {or pipes}; Hose {or pipe} couplings ([hoses or hose joints in general F16L](#))
- 9/242 . . {Hose or pipe couplings}
- 9/244 . . . {for telescopic or extensible hoses or pipes}
- 9/246 . . . {with electrical connectors}
- 9/248 . . {Parts, details or accessories of hoses or pipes ([nozzles A47L 9/02](#))}
- 9/26 . Incorporation of winding devices for electric cables ([devices specially adapted for repeatedly paying-out or re-storing cables B65H 75/34](#); [arrangements of electrical cables or lines between relatively-movable parts H02G 11/00](#))
- 9/28 . Installation of the electric equipment, e.g. adaptation or attachment to the suction cleaner; Controlling suction cleaners by electric means
- 9/2805 . . . {Parameters or conditions being sensed}
- 9/281 . . . {the amount or condition of incoming dirt or dust}
- 9/2815 {using optical detectors}
- 9/2821 . . . {Pressure, vacuum level or airflow}
- 9/2826 . . . {the condition of the floor}
- 9/2831 . . . {Motor parameters, e.g. motor load or speed}
- 9/2836 . . {characterised by the parts which are controlled}
- 9/2842 . . . {Suction motors or blowers}
- 9/2847 . . . {Surface treating elements}
- 9/2852 . . . {Elements for displacement of the vacuum cleaner or the accessories therefor, e.g. wheels, casters or nozzles}
- 9/2857 . . {User input or output elements for control, e.g. buttons, switches or displays}
- 9/2863 . . . {Control elements activated by pivoting movement of the upright vacuum cleaner handle}
- 9/2868 . . {Arrangements for power supply of vacuum cleaners or the accessories thereof}
- 9/2873 . . . {Docking units or charging stations ([for autonomous or robotic vacuum cleaners A47L 2201/02](#))}
- 9/2878 . . . {Dual-powered vacuum cleaners, i.e. devices which can be operated with mains power supply or by batteries}
- 9/2884 . . . {Details of arrangements of batteries or their installation}
- 9/2889 . . {Safety or protection devices or systems, e.g. for prevention of motor over-heating or for protection of the user}
- 9/2894 . . {Details related to signal transmission in suction cleaners}
- 9/30 . . Arrangement of illuminating devices
- 9/32 . Handles
- 9/322 . . {for hand-supported suction cleaners}
- 9/325 . . {for wheeled suction cleaners with steering handle}

- 9/327 . . {for suction cleaners with hose between nozzle and casing}

Cleaning floors, carpets, furniture, walls, or wall coverings

11/00 Machines for cleaning floors, carpets, furniture, walls, or wall coverings

- 11/02 . Floor surfacing or polishing machines ([polishing machines in general B24B 29/00](#))
- 11/03 . . characterised by having provisions for supplying cleaning or polishing agents ([A47L 11/065](#), [A47L 11/085](#), [A47L 11/125](#), [A47L 11/145](#), [A47L 11/161](#), [A47L 11/1625](#), [A47L 11/185](#), [A47L 11/201](#) take precedence)
- 11/04 . . hand-driven
- 11/06 . . . with reciprocating or oscillating tools
- 11/065 {with supply of cleaning agents}
- 11/08 . . . with rotating tools
- 11/085 {with supply of cleaning agents}
- 11/10 . . motor-driven
- 11/12 . . . with reciprocating or oscillating tools
- 11/125 {with supply of cleaning agents}
- 11/14 . . . with rotating tools
- 11/145 {with supply of cleaning agents}
- 11/16 the tools being disc brushes
- 11/161 {with supply of cleaning agents}
- 11/162 having only a single disc brush
- 11/1625 {with supply of cleaning agents}
- 11/164 Parts or details of the brushing tools
- 11/18 the tools being roll brushes
- 11/185 {with supply of cleaning agents}
- 11/19 Parts or details of the brushing tools
- 11/20 . . combined with vacuum cleaning devices
- 11/201 . . . {with supply of cleaning agents}
- 11/202 . . . having separate drive for the cleaning brushes
- 11/2025 {the tools being disc brushes}
- 11/204 . . . having combined drive for brushes and for vacuum cleaning
- 11/205 for reciprocating brushes
- 11/206 for rotary disc brushes
- 11/2065 {having only one disc brush}
- 11/22 . Floor-sweeping machines, hand-driven
- 11/24 . Floor-sweeping machines, motor-driven
- 11/26 . Floor-scrubbing machines, hand-driven ([A47L 11/29](#) takes precedence)
- 11/28 . Floor-scrubbing machines, motor-driven ([A47L 11/29](#) takes precedence)
- 11/282 . . having rotary tools
- 11/283 . . . the tools being disc brushes
- 11/284 . . having reciprocating tools
- 11/29 . Floor-scrubbing machines characterised by means for taking-up dirty liquid
- 11/292 . . having rotary tools ([A47L 11/30](#) takes precedence)
- 11/293 . . . the tools being disc brushes
- 11/294 . . having reciprocating tools ([A47L 11/30](#) takes precedence)
- 11/30 . . by suction
- 11/302 . . . {having rotary tools}
- 11/305 {the tools being disc brushes}
- 11/307 . . . {having reciprocating tools}
- 11/32 . Carpet-sweepers ([combined with suction cleaners A47L 7/02](#))

- 11/325 . . {Shampoo devices for carpet-sweepers}
- 11/33 . . having means for storing dirt
- 11/34 . Machines for treating carpets in position by liquid, foam, or vapour, e.g. by steam
- 11/36 . Machines for beating upholstery
- 11/38 . Machines, specially adapted for cleaning walls, ceilings, roofs, or the like
- 11/40 . Parts or details of machines not {provided for in} groups [A47L 11/02](#) - [A47L 11/38](#), {or not restricted to one of these groups}, e.g. handles, arrangements of switches, skirts, buffers, levers
- 11/4002 . . {Installations of electric equipment}
- 11/4005 . . . {Arrangements of batteries or cells; Electric power supply arrangements}
- 11/4008 . . . {Arrangements of switches, indicators or the like}
- 11/4011 . . {Regulation of the cleaning machine by electric means; Control systems and remote control systems therefor}
- 11/4013 . . {Contaminants collecting devices, i.e. hoppers, tanks or the like}
- 11/4016 . . . {specially adapted for collecting fluids}
- 11/4019 {Fill level sensors; Security means to prevent overflow, e.g. float valves}
- 11/4022 {with means for recycling the dirty liquid ([treatment of waste water C02F](#))}
- 11/4025 . . . {Means for emptying}
- 11/4027 . . {Filtering or separating contaminants or debris}
- 11/403 . . . {Means for monitoring filtering operation}
- 11/4033 . . . {Means for cleaning filters}
- 11/4036 . . {Parts or details of the surface treating tools}
- 11/4038 . . . {Disk shaped surface treating tools}
- 11/4041 . . . {Roll shaped surface treating tools}
- 11/4044 . . . {Vacuuming or pick-up tools; Squeegees}
- 11/4047 . . . {Wound-up or endless cleaning belts}
- 11/405 . . . {Machines using UV-lamps, IR-lamps, ultrasound or plasma cleaning}
- 11/4052 . . {Movement of the tools or the like perpendicular to the cleaning surface}
- 11/4055 . . . {for lifting the tools to a non-working position}
- 11/4058 . . . {for adjusting the height of the tool}
- 11/4061 . . {Steering means; Means for avoiding obstacles; Details related to the place where the driver is accommodated}
- 11/4063 . . {Driving means; Transmission means therefor}
- 11/4066 . . . {Propulsion of the whole machine}
- 11/4069 . . . {Driving or transmission means for the cleaning tools}
- 11/4072 . . {Arrangement of castors or wheels}
- 11/4075 . . {Handles; levers}
- 11/4077 . . {Skirts or splash guards}
- 11/408 . . {Means for supplying cleaning or surface treating agents}
- 11/4083 . . . {Liquid supply reservoirs; Preparation of the agents, e.g. mixing devices}
- 11/4086 . . . {Arrangements for steam generation}
- 11/4088 . . . {Supply pumps; Spraying devices; Supply conduits}
- 11/4091 . . {Storing or parking devices, arrangements therefor; Means allowing transport of the machine when it is not being used}
- 11/4094 . . {Accessories to be used in combination with conventional vacuum-cleaning devices}

- 11/4097 . . {Means for exhaust-air diffusion; Exhaust-air treatment, e.g. air purification; Means for sound or vibration damping}
- 13/00 Implements for cleaning floors, carpets, furniture, walls, or wall coverings (brushes, their handles or fastenings [A46B](#), [B25G](#); scrapers for finishing work on buildings [E04F 21/00](#))**
- 13/02 . Scraping
- 13/022 . . Scraper handles
- 13/03 . . Scrapers having provisions for supplying cleaning agents
- 13/04 . . with steel wool
- 13/06 . . with wire brushes or wire meshes
- 13/07 . . . Metal sponges ([A47L 13/022](#), [A47L 13/03](#) take precedence)
- 13/08 . . with scraping blades
- 13/10 . Scrubbing; Scouring; Cleaning; Polishing
- 13/11 . . Squeegees
- 13/12 . . Implements with several different treating devices
- 13/14 . . combined with squeezing or wringing devices
- 13/142 . . . having torsional squeezing or wringing action
- 13/144 . . . having squeezing rollers
- 13/146 . . . having pivoting squeezing plates
- 13/16 . . Cloths; Pads; Sponges ([metal scraping sponges \[A47L 13/07\]\(#\)](#))
- 13/17 . . . containing cleaning agents ([A47L 13/19](#) takes precedence {; [chemical compositions \[C11D 17/049\]\(#\)](#)})
- 13/18 . . . Gloves; Glove-like cloths
- 13/19 containing cleaning agents
- 13/20 . . Mops
- 13/22 . . . with liquid-feeding devices
- 13/225 {[Steam mops](#)}
- 13/23 connectable to the water mains
- 13/24 . . . Frames for mops; Mop heads ([handles \[B25G\]\(#\)](#))
- 13/25 Wire frames
- 13/252 for mops of textile fringes or the like
- 13/253 of adjustable or foldable type
- 13/254 Plate frames
- 13/255 for mops of textile fringes or the like
- 13/256 for mops made of cloth
- 13/257 for mops made of sponge material
- 13/258 of adjustable or foldable type
- 13/26 . . Other cleaning devices with liquid supply arrangements ([such arrangements on floor-polishing machines \[A47L 11/00\]\(#\), on scrapers \[A47L 13/03\]\(#\), on mops \[A47L 13/22\]\(#\); cloths, pads, or the like containing cleaning agents \[A47L 13/17\]\(#\), \[A47L 13/19\]\(#\)](#))
- 13/28 . . Polishing implements ([polishing machines \[A47L 11/02\]\(#\)](#))
- 13/282 . . . mounted under footwear
- 13/284 . . . having fixed or detachable weights
- 13/286 . . . having containers for storing polishing material, e.g. polishing paper
- 13/29 . . . having movable or detachable polishing or shining cloths
- 13/294 . . . having invertible head, one side being used for dispensing polishing material and the reverse side for shining
- 13/30 . . . Implements for polishing and waxing or oiling, with dispensers for wax or oil
- 13/31 having movable or detachable polishing or shining cloths
- 13/312 supplied with liquid wax or oil
- 13/314 having invertible head, one side being used for dispensing wax or oil and the reverse side for shining
- 13/316 supplied with liquid wax or oil
- 13/32 . . . Wax dispensers with heating arrangements
- 13/34 . . Scouring implements for hearths or metal objects
- 13/36 . . Carpet-beaters
- 13/38 . . Other dusting implements ({[using adhesive surfaces \[A47L 25/005\]\(#\)](#)})
- 13/40 . . Cleaning implements actuated by electrostatic attraction; Devices for cleaning same; Magnetic cleaning implements
- 13/41 . . . Magnetic cleaning implements
- 13/42 . . Details
- 13/44 . . . Securing scouring-cloths to the brush or like body of the implement
- 13/46 . . . Securing scouring or polishing cloths or sponges to the handles by gripping means, tongs, or the like
- 13/48 . . . Protective devices, such as bumpers or guard plates
- 13/50 . . Auxiliary implements ([cleaning devices for brushes or the like \[A46B 17/06\]\(#\)](#))
- 13/502 . . . Shakers for dust-cloths or mops; Bumpers therefor
- 13/51 . . . Storing of cleaning tools, e.g. containers therefor
- 13/512 Clamping devices for hanging the tools
- 13/52 . . . Dust pans; Crumb trays
- 13/54 . . . Racks for beating carpets
- 13/56 . . . Implements for applying wax or oil
- 13/58 . . . Wringers for scouring pads, mops, or the like, combined with buckets
- 13/59 with movable squeezing members
- 13/60 with squeezing rollers
- 13/62 . . . Kneeling supports, especially wheeled ([kneeling cushions attachable to knees \[A41D 13/06\]\(#\)](#))
- Cleaning or polishing household articles or the like**
- 15/00 Washing or rinsing machines for crockery or tableware**
- 15/0002 . {[Washing processes, i.e. machine working principles characterised by phases or operational steps](#)}
- 15/0005 . . {[Rinsing phases, e.g. pre-rinsing, intermediate rinsing, final rinsing](#)}
- 15/0007 . . {[Washing phases](#)}
- 15/001 . . {[Drain phases, including initial, intermediate or partial draining phases](#)}
- 15/0013 . . {[Drying phases, including dripping-off phases](#)}
- 15/0015 . . {[other treatment phases, e.g. steam or sterilizing phase](#)}

- 15/0018 . {Controlling processes, i.e. processes to control the operation of the machine characterised by the purpose or target of the control (for control of water softening or water softener regeneration [A47L 15/4229](#); for control of water level [A47L 15/4244](#); for control of bad smells or odours [A47L 15/4276](#); for control of water temperature [A47L 15/4287](#); for control of water pressure [A47L 15/4289](#); for control of condition of crockery or tableware [A47L 15/4295](#); for control of condition of washing water [A47L 15/4297](#))}
- 15/0021 . . {Regulation of operational steps within the washing processes, e.g. optimisation or improvement of operational steps depending from the detergent nature or from the condition of the crockery}
- 15/0023 . . . {Water filling ([A47L 15/4244](#) takes precedence)}
- 15/0026 . . . {Rinsing phases}
- 15/0028 . . . {Washing phases}
- 15/0031 . . . {Water discharge phases}
- 15/0034 . . . {Drying phases, including dripping-off phases}
- 15/0036 . . . {Steam or sterilizing phases}
- 15/0039 . . . {Filter cleaning phases}
- 15/0042 . . . {Desorption phases of reversibly dehydrogenated drying material, e.g. zeolite in a sorption drying system}
- 15/0044 . . {Operation time reduction}
- 15/0047 . . {Energy or water consumption, e.g. by saving energy or water}
- 15/0049 . . {Detection or prevention of malfunction, including accident prevention ([arrangements to prevent clogging of filters A47L 15/4208](#); [safety arrangements for preventing water damage A47L 15/421](#))}
- 15/0052 . . {Noise reduction}
- 15/0055 . . {Metering or indication of used products, e.g. type or quantity of detergent, rinse aid or salt; for measuring or controlling the product concentration}
- 15/0057 . . {Cleaning of machines parts, e.g. removal of deposits like lime scale or proteins from piping or tub}
- 15/006 . . {using wireless communication between internal components of the machine}
- 15/0063 . . {using remote monitoring or controlling of the dishwasher operation, e.g. networking systems}
- 15/0065 . {specially adapted for drinking glasses}
- 15/0068 . . {with brushes or similar scraping members}
- 15/0071 . . {the glasses being placed on conveyors}
- 15/0073 . . . {of the rotary table type}
- 15/0076 . {of non-domestic use type, e.g. commercial dishwashers for bars, hotels, restaurants, canteens or hospitals ([machines specially adapted for drinking glasses A47L 15/0065](#); [drawer-type dishwashers A47L 15/0084](#); [in-sink dishwashers A47L 15/0086](#); [miniature dishwashers A47L 15/0089](#); [conveyor-type dishwashers A47L 15/24](#); [machines with crockery cleaned by brushes A47L 15/37](#))}
- 15/0078 . . {with a plurality of fluid recirculation arrangements, e.g. with separated washing liquid and rinsing liquid recirculation circuits}
- 15/0081 . . {with vertical sliding closing doors, e.g. hood-type dishwashers}
- 15/0084 . {of drawer-type}
- 15/0086 . {In-sink dishwashers}
- 15/0089 . {of small size, e.g. portable mini dishwashers for small kitchens, office kitchens, boats, recreational vehicles ([specially adapted for drinking glasses A47L 15/0065](#))}
- 15/0092 . {specially adapted to wash large items like pots, trays, baking trays, cooking grids}
- 15/0094 . {cleaning with abrasive solid particles, e.g. by blasting the crockery with liquid containing granules}
- 15/0097 . {Combination of dishwashers with other household appliances}
- 15/02 . with circulation and agitation of the cleaning liquid in the cleaning chamber containing a stationary basket {(for drinking glasses [A47L 15/0065](#))}
- 15/04 . . by reciprocating movement of the cleaning chamber
- 15/06 . . by means of an impeller in the chamber
- 15/08 . . by application of a pressure effect produced by pumps
- 15/10 . . by introducing compressed air or other gas into the liquid
- 15/12 . . by a boiling effect
- 15/13 . . using sonic or ultrasonic waves
- 15/14 . with stationary crockery baskets and spraying devices within the cleaning chamber {(for drinking glasses [A47L 15/0065](#))}
- 15/16 . . with rigidly-mounted spraying devices
- 15/18 . . with movably-mounted spraying devices
- 15/20 . . . Swingable spraying devices
- 15/22 . . . Rotary spraying devices
- 15/23 moved by means of the sprays
- 15/24 . with movement of the crockery baskets by conveyors {(for drinking glasses [A47L 15/0071](#))}
- 15/241 . . {the dishes moving in a horizontal plane}
- 15/242 . . . {in a closed loop}
- 15/243 {with conveyors of the rotary table type}
- 15/245 . . . {the dishes being placed directly on the conveyors, i.e. not in dish racks ([A47L 15/242](#) takes precedence)}
- 15/246 . . {the dishes moving in a vertical plane, e.g. in a closed loop}
- 15/247 . . {Details specific to conveyor-type machines, e.g. curtains}
- 15/248 . . . {relating to the conveyors}
- 15/26 . with movement of the crockery baskets by other means {(for drinking glasses [A47L 15/0065](#))}
- 15/28 . . by lowering and lifting only
- 15/30 . . by rotating only
- 15/32 . . . rotated by means of spraying water
- 15/33 . . . with moving baskets submerged in the cleaning fluid
- 15/34 . . by lowering and lifting combined with a rotating movement
- 15/36 . . by a sideways motion
- 15/37 . with crockery cleaned by brushes {(for drinking glasses [A47L 15/0068](#))}
- 15/39 . . with brushes on movable supports

- 15/42 . Details
- NOTE**
- Details specific to a particular type of dishwasher should also get a classification symbol for the relevant type of dishwasher
- 15/4202 . . {Water filter means or strainers}
- 15/4204 . . . {Flat filters}
- 15/4206 . . . {Tubular filters}
- 15/4208 . . . {Arrangements to prevent clogging of the filters, e.g. self-cleaning}
- 15/4209 . . {Insulation arrangements, e.g. for sound damping or heat insulation}
- 15/421 . . {Safety arrangements for preventing water damage}
- 15/4212 . . . {Detection of water leaks; Collection of leaked water, e.g. in the casing}
- 15/4214 . . {Water supply, recirculation or discharge arrangements; Devices therefor}
- 15/4217 . . . {Fittings for water supply, e.g. valves or plumbing means to connect to cold or warm water lines, aquastops}
- 15/4219 . . . {Water recirculation ([A47L 15/0078](#) takes precedence)}
- 15/4221 {Arrangements for redirection of washing water, e.g. water diverters to selectively supply the spray arms ([A47L 15/0078](#) takes precedence)}
- 15/4223 . . . {Devices for water discharge, e.g. devices to prevent siphoning, non-return valves}
- 15/4225 . . . {Arrangements or adaption of recirculation or discharge pumps}
- 15/4227 {with macerator arrangements for chopping entrained food particles}
- 15/4229 . . {Water softening arrangements}
- 15/4231 . . . {Constructional details of the salt container or the ion exchanger}
- 15/4234 . . {Steam generating arrangements}
- 15/4236 . . {Arrangements to sterilize or disinfect dishes or washing liquids ([A47L 15/4234](#) takes precedence)}
- 15/4238 . . . {by using electrolytic cells}
- 15/424 . . . {by using ozone}
- 15/4242 . . . {by using ultraviolet generators}
- 15/4244 . . {Water-level measuring or regulating arrangements}
- 15/4246 . . {Details of the tub ([A47L 15/4272](#) takes precedence; insulation arrangements [A47L 15/4209](#))}
- 15/4248 . . . {Arrangements for dividing the tub compartment, e.g. for simultaneous washing of delicate and normal crockery}
- 15/4251 . . {Details of the casing (insulation arrangements [A47L 15/4209](#); collecting leaked water in the casing for preventing water damage [A47L 15/4212](#))}
- 15/4253 . . . {Supporting arrangements for the casing, e.g. rollers or supporting legs}
- 15/4257 . . . {Details of the loading door}
- 15/4259 {Arrangements of locking or security/safety devices for doors, e.g. door latches, switch to stop operation when door is open}
- 15/4261 {Connections of the door to the casing, e.g. door hinges}
- 15/4263 {Door sealing arrangements}
- 15/4265 {Arrangements of door covering/decoration panels or plinths, e.g. for integrated dishwashers}
- 15/4268 . . . {Arrangements for transporting or moving, e.g. stiffening}
- 15/427 . . . {Arrangements for setting the machine, e.g. anti-tip devices therefor, fixing of integrated machines}
- 15/4272 . . . {Supporting arrangements for the tub}
- 15/4274 . . . {Arrangement of electrical components, e.g. control units or cables ([A47L 15/4293](#) takes precedence)}
- 15/4276 . . {Arrangements to detect or remove bad smells or odours}
- 15/4278 . . {Nozzles}
- 15/428 . . . {Rotary nozzles}
- 15/4282 . . . {Arrangements to change or modify spray pattern or direction}
- 15/4285 . . {Water-heater arrangements ([steam generating arrangements A47L 15/4234](#))}
- 15/4287 . . {Temperature measuring or regulating arrangements}
- 15/4289 . . {Spray-pressure measuring or regulating arrangements ([nozzles A47L 15/4278](#))}
- 15/4291 . . {Recovery arrangements, e.g. for the recovery of energy or water}
- 15/4293 . . {Arrangements for programme selection, e.g. control panels; Indication of the selected programme, programme progress or other parameters of the programme, e.g. by using display panels}
- 15/4295 . . {Arrangements for detecting or measuring the condition of the crockery or tableware, e.g. nature or quantity}
- 15/4297 . . {Arrangements for detecting or measuring the condition of the washing water, e.g. turbidity}
- 15/44 . . Devices for adding cleaning agents; {Devices for dispensing cleaning agents, rinsing aids or deodorants}
- 15/4409 . . . {by tipping containers or opening their lids, e.g. with the help of a programmer}
- 15/4418 . . . {in the form of liquids ([A47L 15/4409](#), [A47L 15/4436](#), [A47L 15/4445](#) take precedence)}
- 15/4427 {entrained in the water supply line by a pressure drop, e.g. resulting from a Venturi throat}
- 15/4436 . . . {in the form of a detergent solution made by gradually dissolving a powder detergent cake or a solid detergent block}
- 15/4445 . . . {Detachable devices}
- 15/4454 {with automatic identification means, e.g. barcodes, RFID tags or magnetic strips}
- 15/4463 . . . {Multi-dose dispensing arrangements}
- 15/4472 . . . {Blister packaging or refill cartridges}
- 15/4481 . . . {Deodorants, perfumes or odor removals ([A47L 15/4276](#) takes precedence)}
- 15/449 . . . {Metering controlling devices ([A47L 15/4229](#) takes precedence)}
- 15/46 . . Devices for the automatic control of the different phases of cleaning {; Controlling devices ([A47L 15/449](#) takes precedence)}
- 15/48 . . Drying arrangements

- 15/481 . . . {by using water absorbent materials, e.g. Zeolith}
- 15/483 . . . {by using condensers}
- 15/485 . . . {by using alternative heat sources, e.g. microwave or infrared}
- 15/486 . . . {Blower arrangements}
- 15/488 . . . {Connections of the tub with the ambient air, e.g. air intake or venting arrangements}
- 15/50 . . Racks {; Baskets}
- 15/501 . . . {Baskets, e.g. for conveyor-type, in-sink type or hood-type machines}
- 15/502 . . . {Cutlery baskets}
- 15/503 . . . {with foldable parts}
- 15/504 . . . {Arrangements for changing the height of racks}
- 15/505 . . . {Inserts, e.g. for holding baby bottles, stemware or cups}
- 15/506 . . . {Arrangements for lifting racks for loading or unloading purposes}
- 15/507 . . . {Arrangements for extracting racks, e.g. roller supports}
- 15/508 . . . {Hydraulic connections for racks}
- 17/00 Apparatus or implements used in manual washing or cleaning of crockery, table-ware, cooking-ware or the like (foam-making devices [A47K 5/14](#))**
- 17/02 . Basins (dish-washing tables [A47B 33/00](#); sanitary basins [A47K 1/04](#); basins connected to waste pipe [E03C 1/12](#))
- 17/04 . Pan or pot cleaning utensils
- 17/06 . . Scrapers
- 17/08 . . Pads; Balls of steel wool, wire, or plastic meshes
- 17/10 . Tongs for crockery
- 19/00 Drying devices for crockery or table-ware, e.g. tea-cloths**
- 19/02 . Draining-boards
- 19/04 . Crockery baskets; Draining-racks
- 21/00 Polishing of table-ware, e.g. knives, forks, spoons**
- 21/02 . Machines
- 21/04 . Hand implements
- 21/06 . Supports or rests for use while polishing
- 23/00 Cleaning footwear**
- 23/02 . Shoe-cleaning machines, with or without applicators for shoe polish
- 23/04 . Hand implements for shoe-cleaning, with or without applicators for shoe polish ([ordinary brushes, with or without containers, \[A46B 11/00\]\(#\)](#))
- 23/05 . . with applicators for shoe polish
- 23/06 . . with electric drive
- 23/08 . . Special hand implements for cleaning and recolouring footwear, e.g. powder pads
- 23/10 . . Cloth or collapsible cleaning pads; Glove-like cleaning cloths ([glove-like washing cloths \[A47K 7/02\]\(#\)](#))
- 23/12 . . Cleaning devices for suede
- 23/14 . . Implements for use during shoe-cleaning, to guard against spoiling
- 23/16 . Shoe-shine stands; Foot-rests with guides for the polishing cloths
- 23/17 . . Foot-rests with guides for the polishing cloths
- 23/18 . Devices for holding footwear during cleaning or shining ([shoe-lasts \[A43D 3/00\]\(#\)](#)); Holding devices with stretching effect
- 23/20 . Devices or implements for drying footwear, also with heating arrangements ([cabinets for shoes \[A47B 61/04\]\(#\)](#))
- 23/205 . . {with heating arrangements}
- 23/22 . Devices or implements resting on the floor for removing mud, dirt, or dust from footwear ([built-in gratings, e.g. foot-scrapers, \[E04F 19/10\]\(#\)](#))
- 23/24 . . Rigid cleaning-gratings; Tread plates or scrapers for cleaning the soles of footwear ([floor mats in general \[A47G 27/02\]\(#\)](#))
- 23/26 . . Mats or gratings combined with brushes {; Mats}
- 23/263 . . . {with moving or driven parts, also combined with suction cleaning}
- 23/266 . . . {Mats}
- 23/28 . Receptacles for shoe-cleaning equipment
- 25/00 Miscellaneous cleaning devices (for cleaning spectacles [G02C 13/00](#))**
- 25/005 . {using adhesive or tacky surfaces to remove dirt, e.g. lint removers}
- 25/02 . for buttons, clasps, or military insignia
- 25/04 . for door-knobs
- 25/06 . Guard plates for use while cleaning butts, door-knobs, or the like
- 25/08 . Pads or the like for cleaning clothes ({[using adhesive surfaces \[A47L 25/005\]\(#\)](#)})
- 25/12 . Devices or implements for cleaning lamp chimneys
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- 2201/00 Robotic cleaning machines, i.e. with automatic control of the travelling movement or the cleaning operation**
- 2201/02 . Docking stations; Docking operations
- 2201/022 . . Recharging of batteries
- 2201/024 . . Emptying dust or waste liquid containers
- 2201/026 . . Refilling cleaning liquid containers
- 2201/028 . . Refurbishing floor engaging tools, e.g. cleaning of beating brushes
- 2201/04 . Automatic control of the travelling movement; Automatic obstacle detection
- 2201/06 . Control of the cleaning action for autonomous devices; Automatic detection of the surface condition before, during or after cleaning
- 2301/00 Manual input in controlling methods of washing or rinsing machines for crockery or tableware, i.e. information entered by a user**
- 2301/02 . Consumable products information, e.g. information on detergent, rinsing aid or salt; Dispensing device information, e.g. information on the type, e.g. detachable, or status of the device
- 2301/023 . . Quantity or concentration of the consumable product
- 2301/026 . . Nature or type of the consumable product, e.g. information on detergent, e.g. 3-in-1 tablets, rinsing aid or salt
- 2301/04 . Operation mode, e.g. delicate washing, economy washing, reduced time, sterilizing, water softener regenerating, odor eliminating or service
- 2301/06 . Crockery or tableware details, e.g. material, quantity, condition

- 2301/08 . Other manual input
- 2401/00 Automatic detection in controlling methods of washing or rinsing machines for crockery or tableware, e.g. information provided by sensors entered into controlling devices**
- 2401/02 . Consumable products information, e.g. information on detergent, rinsing aid or salt; Dispensing device information, e.g. information on the type, e.g. detachable, or status of the device
- 2401/023 . . Quantity or concentration of the consumable product
- 2401/026 . . Nature or type of the consumable product, e.g. information on detergent, e.g. 3-in-1 tablets, rinsing aid or salt
- 2401/03 . Operation mode, e.g. delicate washing, economy washing, reduced time, sterilizing, water softener regenerating, odor eliminating or service
- 2401/04 . Crockery or tableware details, e.g. material, quantity, condition
- 2401/06 . Water supply, circulation or discharge information ([water level A47L 2401/09](#); [water pressure or flow rate A47L 2401/14](#))
- 2401/07 . Status of hydraulic components, e.g. open/close status of water inlet/outlet valves, operating position of water diverters
- 2401/08 . Drain or recirculation pump parameters, e.g. pump rotational speed or current absorbed by the motor
- 2401/09 . Water level
- 2401/10 . Water cloudiness or dirtiness, e.g. turbidity, foaming or level of bacteria
- 2401/11 . Water hardness, acidity or basicity
- 2401/12 . Water temperature
- 2401/14 . Water pressure or flow rate
- 2401/17 . Air pressure
- 2401/18 . Air temperature
- 2401/19 . Air humidity
- 2401/20 . Time, e.g. elapsed operating time
- 2401/22 . Number of operational cycles
- 2401/24 . Spray arms status, e.g. detection of spray arm rotation
- 2401/26 . Loading door status, e.g. door latch opened or closed state
- 2401/28 . Conveyor belt parameters, e.g. velocity of conveyor belts
- 2401/30 . Variation of electrical, magnetical or optical quantities
- 2401/32 . Vibration or sound detection
- 2401/34 . Other automatic detections
- 2501/00 Output in controlling method of washing or rinsing machines for crockery or tableware, i.e. quantities or components controlled, or actions performed by the controlling device executing the controlling method**
- 2501/01 . Water supply, e.g. opening or closure of the water inlet valve
- 2501/02 . Water discharge, e.g. opening or closure of discharge valve
- 2501/03 . Water recirculation, e.g. control of distributing valves for redirection of water flow
- 2501/04 . Water pressure or flow rate
- 2501/05 . Drain or recirculation pump, e.g. regulation of the pump rotational speed or flow direction
- 2501/06 . Water heaters
- 2501/07 . Consumable products, e.g. detergent, rinse aids or salt
- 2501/10 . Air circulation, e.g. air intake or venting arrangements
- 2501/11 . Air heaters
- 2501/12 . Air blowers
- 2501/14 . Steam generators
- 2501/16 . Sterilisers ([Steam generators A47L 2501/14](#))
- 2501/18 . Water softening devices
- 2501/20 . Spray nozzles or spray arms
- 2501/22 . Loading doors, e.g. door latches, inflatable door seals
- 2501/24 . Conveyor belts, e.g. conveyor belts motors
- 2501/26 . Indication or alarm to the controlling device or to the user
- 2501/265 . . about the number of remaining operation cycles or the remaining operation time
- 2501/28 . Machine starting, e.g. normal start, restart after electricity cut-off or start scheduling
- 2501/30 . Regulation of machine operational steps within the washing process, e.g. performing an additional rinsing phase, shortening or stopping of the drying phase, washing at decreased noise operation conditions
- 2501/32 . Stopping or disabling machine operation, including disconnecting the machine from a network, e.g. from an electrical power supply
- 2501/34 . Change machine operation from normal operational mode into special mode, e.g. service mode, resin regeneration mode, sterilizing mode, steam mode, odour eliminating mode or special cleaning mode to clean the hydraulic circuit
- 2501/36 . Other output
- 2601/00 Washing methods characterised by the use of a particular treatment**
- 2601/02 . Pressurised cleaning liquid delivered by a pump
- 2601/03 . Pressurised, gaseous medium, also used for delivering of cleaning liquid
- 2601/04 . Steam
- 2601/06 . Electrolysed water
- 2601/08 . Ozone
- 2601/10 . Ultraviolet radiation
- 2601/12 . Microwaves
- 2601/14 . Infrared
- 2601/16 . Agitation of cleaning liquid by impeller
- 2601/17 . Sonic or ultrasonic waves
- 2601/18 . Liquid and granule
- 2601/20 . Other treatments, e.g. dry cleaning