**CPC** COOPERATIVE PATENT CLASSIFICATION

**A** HUMAN NECESSITIES

**PERSONAL OR DOMESTIC ARTICLES**

**A47** FURNITURE; DOMESTIC ARTICLES OR APPLIANCES; COFFEE MILLS; SPICE MILLS; SUCTION CLEANERS IN GENERAL

*(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.

**WARNING**

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

<table>
<thead>
<tr>
<th>Cleaning windows, window shades, window screens, venetian blinds</th>
<th>Suction cleaners (pneumatically taking-up undesirable matter from roads or like surfaces E01H 1/08)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/00 Cleaning windows</td>
<td>5/00 Structural features of suction cleaners</td>
</tr>
<tr>
<td>1/02 . Power-driven machines or devices</td>
<td>5/02 . with user-driven air-pumps or compressors</td>
</tr>
<tr>
<td>1/03 . . cleaning both sides of a window simultaneously</td>
<td>5/04 . . with pistons, bellows, or diaphragms, e.g. driven by the cleaner-supporting wheels</td>
</tr>
<tr>
<td>1/05 . . Hand apparatus with built-in electric motors</td>
<td>5/05 . . . with driven dust-loosening tools</td>
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<tr>
<td>1/06 . Hand implements (with built-in electric motors A47L 1/05)</td>
<td>5/06 . . with rotary fans</td>
</tr>
<tr>
<td>1/08 . . with provision for supplying liquids, e.g. cleaning agents (A47L 1/095, A47L 1/13, A47L 1/15 take precedence)</td>
<td>5/08 . . . driven by cleaner-supporting wheels</td>
</tr>
<tr>
<td>1/09 . . for cleaning one side with access from the other side only</td>
<td>5/10 . . . . with driven dust-loosening tools</td>
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<tr>
<td>1/095 . . . with provision for supplying liquids, e.g. cleaning agents</td>
<td>5/12 . . . with power-driven air-pumps or air-compressors, e.g. driven by motor vehicle engine vacuum</td>
</tr>
<tr>
<td>1/12 . . for cleaning both sides simultaneously</td>
<td>5/14 . . cleaning by blowing-off, also combined with suction cleaning</td>
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<tr>
<td>1/13 . . with provision for supplying liquids, e.g. cleaning agents</td>
<td>5/16 . . with suction devices other than rotary fans</td>
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<tr>
<td>1/15 . . Cloths, sponges, pads, or the like, e.g. containing cleaning agents</td>
<td>5/18 . . with ejectors, e.g. connected to motor vehicle exhaust</td>
</tr>
<tr>
<td>1/16 . Devices for defrosting window-panes (H05B 3/84 takes precedence)</td>
<td>5/20 . . with bellows, diaphragms or pistons</td>
</tr>
<tr>
<td>3/00 Safety devices for use in window-cleaning (safety belts A62B 35/00; for scaffolding in general E04G; for ladders E06C)</td>
<td>5/22 . . with rotary fans</td>
</tr>
<tr>
<td>3/02 . Cages; Platforms</td>
<td>5/225 . . . {Convertible suction cleaners, i.e. convertible between different types thereof, e.g. from upright suction cleaners to sledge-type suction cleaners}</td>
</tr>
<tr>
<td>4/00 Cleaning window shades, window screens, venetian blinds (A47L 1/15 takes precedence; suction cleaner nozzles A47L 9/02)</td>
<td>5/26 . . . with driven dust-loosening tools</td>
</tr>
<tr>
<td>4/02 . Hand implements for cleaning venetian blinds</td>
<td>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)</td>
</tr>
<tr>
<td>4/04 . Accessories facilitating cleaning, e.g. venetian blind separators, spreaders, or cleaning racks</td>
<td>5/30 . . . . with driven dust-loosening tools, e.g. rotating brushes</td>
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<tr>
<td></td>
<td>5/32 . . . with means for connecting a hose (hose couplings for suction cleaners A47L 9/24)</td>
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<tr>
<td></td>
<td>5/34 . . . with height adjustment of nozzles or dust-loosening tools</td>
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</tbody>
</table>
Suction cleaners

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]
Suction cleaners

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 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ...
Suction cleaners

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)
11/04 . . . . . 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]
Cleaning floors, carpets, furniture, walls, or wall coverings

11/00  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 . . . Scrapper 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 . . . containing 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]
Cleaning or polishing household articles or the like

A47L

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 . . . [Dehydration 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 tab]
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
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
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
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
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
15/38 . . . . . [(for drinking glasses A47L 15/0068)]
Cleaning or polishing household articles or the like

15/421 . . . Safety arrangements for preventing water damage

15/422 . . . Detection of water leaks; Collection of leaked water, e.g. in the casing

15/423 . . . Water supply, recirculation or discharge arrangements; Devices therefor

15/424 . . . Fittings for water supply, e.g. valves or plumbing means to connect to cold or warm water lines, aquastops

15/425 . . . Water recirculation (A47L 15/0078 takes precedence)

15/426 . . . Arrangements for redirection of washing water, e.g. water diverters to selectively supply the spray arms (A47L 15/0078 takes precedence)

15/427 . . . Devices for water discharge, e.g. devices to prevent siphoning, non-return valves

15/428 . . . Arrangements or adaption of recirculation or discharge pumps

15/429 . . . [with macerator arrangements for chopping entrained food particles]

15/430 . . . Water softening arrangements

15/431 . . . Constructional details of the salt container or the ion exchanger

15/432 . . . Steam generating arrangements

15/433 . . . Arrangements to sterilize or disinfect dishes or washing liquids (A47L 15/4234 takes precedence)

15/434 . . . by using electrolytic cells

15/435 . . . by using ozone

15/436 . . . by using ultraviolet generators

15/437 . . . Water-level measuring or regulating arrangements

15/438 . . . Details of the tub (A47L 15/4272 takes precedence; insulation arrangements A47L 15/4209)

15/439 . . . Arrangements for dividing the tub compartment, e.g. for simultaneous washing of delicate and normal crockery

15/440 . . . Details of the casing (insulation arrangements A47L 15/4209; collecting leaked water in the casing for preventing water damage A47L 15/4212)

15/441 . . . Supporting arrangements for the casing, e.g. rollers or supporting legs

15/442 . . . Details of the loading door

15/443 . . . Arrangements of locking or security/safety devices for doors, e.g. door latches, switch to stop operation when door is open

15/444 . . . [Connections of the door to the casing, e.g. door hinges]

15/445 . . . [Door sealing arrangements]

15/446 . . . Arrangements of door covering/decoration panels or plinths, e.g. for integrated dishwashers

15/447 . . . [Arrangements for transporting or moving, e.g. stiffening]

15/448 . . . [Arrangements for setting the machine, e.g. anti-tip devices therefor, fixing of integrated machines]

15/449 . . . [Supporting arrangements for the tub]

15/450 . . . [Arrangement of electrical components, e.g. control units or cables (A47L 15/4293 takes precedence)]

15/451 . . . [Arrangements to detect or remove bad smells or odours]

15/452 . . . [Nozzles]

15/453 . . . [Rotary nozzles]

15/454 . . . [Arrangements to change or modify spray pattern or direction]

15/455 . . . [Water-heater arrangements (steam generating arrangements A47L 15/4234)]

15/456 . . . [Temperature measuring or regulating arrangements]

15/457 . . . [Spray-pressure measuring or regulating arrangements (nozzles A47L 15/4278)]

15/458 . . . [Recovery arrangements, e.g. for the recovery of energy or water]

15/459 . . . [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]

15/460 . . . [Arrangements for detecting or measuring the condition of the crockery or tableware, e.g. nature or quantity]

15/461 . . . [Arrangements for detecting or measuring the condition of the washing water, e.g. turbidity]

15/462 . . . Devices for adding cleaning agents; [Devices for dispensing cleaning agents, rinsing aids or deodorants]

15/463 . . . [by tipping containers or opening their lids, e.g. with the help of a programmer]

15/464 . . . [in the form of liquids (A47L 15/4409, A47L 15/4436, A47L 15/4445 take precedence)]

15/465 . . . [in the form of a detergent solution made by gradually dissolving a powder detergent cake or a solid detergent block]

15/466 . . . [Detachable devices]

15/467 . . . [with automatic identification means, e.g. barcodes, RFID tags or magnetic strips]

15/468 . . . [Multi-dose dispensing arrangements]

15/469 . . . [Blister packaging or refill cartridges]

15/470 . . . [Deodorants, perfumes or odor removals (A47L 15/4274 takes precedence)]

15/471 . . . [Deodorants, perfumes or odor removals takes precedence]

15/472 . . . [Blister packaging or refill cartridges]

15/473 . . . [Deodorants, perfumes or odor removals (A47L 15/4274 takes precedence)]

15/474 . . . [Deodorants, perfumes or odor removals takes precedence]
Cleaning or polishing household articles or the like

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. teacloths
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)
23/25 . . . [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-scrappers, 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

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
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

2401/03. 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