

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### SEPARATING; MIXING

## B08 CLEANING

**B08B CLEANING IN GENERAL; PREVENTION OF FOULING IN GENERAL** (brushes [A46](#); devices for domestic or like cleaning [A47L](#); {cleaning golf-clubs or golf accessories [A63B 57/60](#); cleaning grips of bats on rackets [A63B 60/36](#)} ; separation of particles from liquids or gases [B01D](#); separation of solids [B03](#), [B07](#); spraying or applying liquids or other fluent materials to surfaces in general [B05](#); cleaning devices for conveyors [B65G 45/10](#); concurrent cleaning, filling and closing of bottles [B67C 7/00](#); inhibiting corrosion or incrustation in general [C23](#); cleaning streets, permanent ways, beaches or land [E01H](#); parts, details or accessories of swimming or splash baths or pools, specially adapted for cleaning [E04H 4/16](#); preventing or removing electrostatic charges [H05F](#))

#### NOTE

This subclass covers only inventions relating to cleaning which are usually classified according to one (or more) of the aspects mentioned below if they are not fully classifiable in a subclass a subclass providing for any of the following aspects:

- the articles cleaned, e.g. bed-pans, urinal or other sanitary devices for bed-ridden persons [A61G 9/02](#), filters, semi-permeable membranes [B01D](#), castings and moulds [B22D 29/00](#), vehicles [B60S](#), coke ovens [C10B 43/00](#), building forms [E04G](#), boilers [F22](#), combustion apparatus [F23](#), furnaces [F27](#); the general nature of the cleaning, e.g. preparing for sugar manufacture [A23N](#), domestic cleaning [A47L](#), treatment of textiles [D06](#), laundry [D06F](#), air-conditioning [F24F](#);
- the particular operation performed, e.g. filtering [B01D](#), separating of solids [B03](#), [B07](#), sand-blasting [B24C](#);
- the particular apparatus or device, e.g. brushes [A46B](#), mops [A47L](#), centrifuges [B04](#), hand tools [B25](#) { devices for cleaning paint-applying hand tools after use [B44D 3/006](#) } ;
- the substance cleaned, e.g. metals [B21C](#), [C23](#), water [C02](#), glass [C03B](#), leather [C14B](#), textile fibres [D01](#);
- the substance removed (or prevented from depositing or forming) e.g. { removing paint [B44D 3/00](#), e.g. } implements or apparatus for removing dry paint from surfaces [B44D 3/16](#);
- chemical paint-removers [C09D 9/00](#);
- preventing rust [C23F](#);
- the substance used, e.g. macromolecular compounds or compositions [C08](#), anti-icing materials [C09K](#), detergents [C11D](#);
- the operation in connection with which cleaning is done, e.g. metal rolling [B21B](#), metal boring [B23B](#), soldering [B23K](#), textile fabrication [D01G](#), [D01H](#), [D03J](#), [D04B](#);
- the surroundings of a surface to be cleaned or kept clean, e.g. water in a boiler [C02F](#), air in a room [F24F](#).

**1/00 Cleaning by methods involving the use of tools, brushes, or analogous members** ([B08B 3/12](#), [B08B 6/00](#) {, [B08B 7/02](#)}, [B08B 9/00](#) take precedence)

1/001 . {characterised by the type of cleaning tool}

1/002 . . {Brushes}

1/003 . . {Swabs}

1/005 . . {Scrapers}

1/006 . . {Wipes}

1/007 . {having means to clean the cleaning members before, during or after use}

1/008 . {using translating operative members}

1/02 . Cleaning travelling work, e.g. a web, articles on a conveyor

1/04 . using rotary operative members ([B08B 1/02](#) takes precedence)

**3/00 Cleaning by methods involving the use or presence of liquid or steam** ([B08B 9/00](#) takes precedence)

3/003 . {Cleaning involving contact with foam}

3/006 . {Cabinets or cupboards specially adapted for cleaning articles by hand}

3/02 . Cleaning by the force of jets or sprays

3/022 . . {Cleaning travelling work ([B08B 3/042](#) takes precedence)}

3/024 . . {Cleaning by means of spray elements moving over the surface to be cleaned}

3/026 . . {Cleaning by making use of hand-held spray guns; Fluid preparations therefor}

3/028 . . . {Spray guns}

#### WARNING

This group is no longer used for classification. Documents are in the process of being reclassified to subclass [B05B](#)

3/04 . Cleaning involving contact with liquid

3/041 . . {Cleaning travelling work}

- 3/042 . . . {the loose articles or bulk material travelling gradually through a drum or other container, e.g. by helix or gravity}
- 3/044 . . {using agitated containers in which the liquid and articles or material are placed (by means of ultrasonic vibrations [B08B 3/12](#); cleaning casks or barrels by agitating [B08B 9/0817](#); mixers with shaking, oscillating or vibrating mechanisms [B01F 11/00](#))}
- 3/045 . . {using perforated containers, e.g. baskets, or racks immersed and agitated in a liquid bath (using perforated drums [B08B 3/06](#))}
- 3/047 . . . {Containers specially adapted therefor}
- 3/048 . . {Overflow-type cleaning, e.g. tanks in which the liquid flows over the tank in which the articles are placed}
- 3/06 . . using perforated drums in which the article or material is placed {( [B08B 3/042](#) takes precedence)}
- 3/08 . . the liquid having chemical or dissolving effect (substances used, [see the relevant classes](#))
- 3/10 . . with additional treatment of the liquid or of the object being cleaned, e.g. by heat, by electricity, by vibration
- 3/102 . . . {with means for agitating the liquid (by agitating the container [B08B 3/042](#), [B08B 3/044](#), [B08B 3/045](#), [B08B 3/06](#))}
- 3/104 . . . . {using propellers}
- 3/106 . . . {by boiling the liquid}
- 3/108 . . . {by lowering and raising the level of the cleaning liquid}
- 3/12 . . . by sonic or ultrasonic vibrations (washing or rinsing machines for crockery or tableware using sonic or ultrasonic waves [A47L 15/13](#); of natural teeth, of prostheses using ultrasonic techniques similar to those used for natural teeth [A61C 17/20](#); application of ultrasonic vibrations to chemical, physical, or physico-chemical processes in general [B01J 19/10](#))
- 3/123 . . . . {Cleaning travelling work, e.g. webs, articles on a conveyor (conveyors [B65G](#); handling webs [B65H](#))}
- 3/126 . . . . . {in particular moving bottles}
- 3/14 . . . Removing waste, e.g. labels, from cleaning liquid; {Regenerating cleaning liquids} (treatment of water in general [C02F](#))
- 5/00** **Cleaning by methods involving the use of air flow or gas flow ([B08B 6/00](#) takes precedence)**
- 5/02 . . Cleaning by the force of jets, e.g. blowing-out cavities {(airguns or nozzles [per se B05B 1/005](#))}
- 5/023 . . {Cleaning travelling work}
- 5/026 . . . {Cleaning moving webs}
- 5/04 . . Cleaning by suction, with or without auxiliary action (([B08B 9/035](#) takes precedence; ) suction cleaners [A47L](#))
- 5/043 . . {Cleaning travelling work}
- 5/046 . . . {Cleaning moving webs}
- 6/00** **Cleaning by electrostatic means (domestic cleaning implements functioning electrostatically [A47L 13/40](#); cleaning of grooved record carriers [G11B 3/58](#))**
- 7/00** **Cleaning by methods not provided for in a single other subclass or a single group in this subclass**
- 7/0007 . {by explosions}
- 7/0014 . {by incorporation in a layer which is removed with the contaminants}
- 7/0021 . {by liquid gases or supercritical fluids}
- 7/0028 . {by adhesive surfaces}
- 7/0035 . {by radiant energy, e.g. UV, laser, light beam or the like}
- 7/0042 . . {by laser}
- 7/005 . . {by infrared radiation}
- 7/0057 . . {by ultraviolet radiation}
- 7/0064 . {by temperature changes}
- 7/0071 . . {by heating ([B08B 7/0035](#) takes precedence)}
- 7/0078 . . . {in a fluidized bed}
- 7/0085 . . . {by pyrolysis}
- 7/0092 . . {by cooling}
- 7/02 . by distortion, beating, or vibration of the surface to be cleaned {( [B08B 7/0007](#) takes precedence)}
- 7/022 . . {Needle scalers}
- 7/024 . . {Rotary scalers}
- 7/026 . . {Using sound waves}
- 7/028 . . . {Using ultrasounds}
- 7/04 . by a combination of operations
- 9/00** **Cleaning hollow articles by methods or apparatus specially adapted thereto ([B08B 3/12](#), [B08B 6/00](#) take precedence)**
- 9/02 . . Cleaning pipes or tubes or systems of pipes or tubes (apparatus for cleaning metal pipes by chemical methods [C23G 3/04](#) ; removing obstructions in waste pipes or sinks [E03C 1/30](#); cleaning sewer pipes [E03F 9/00](#); cleaning boreholes or wells [E21B 37/00](#); cleaning furnace tubes, flues, chimneys [F23J 3/02](#); cleaning heat-transfer conduits, e.g. water tubes of boilers [F28G](#))}
- 9/021 . . {Cleaning pipe ends or pipe fittings, e.g. before soldering (grinding tube ends [B24B 9/007](#))}
- 9/023 . . Cleaning the external surface ([B08B 9/021](#) takes precedence)
- 9/027 . . Cleaning the internal surfaces; Removal of blockages
- 9/032 . . . by the mechanical action of a moving fluid, e.g. by flushing ([B08B 9/04](#) takes precedence ; by fluid jets mounted on cleaning devices [B08B 9/0433](#))}
- 9/0321 . . . . {using pressurised, pulsating or purging fluid ([E04F 17/126](#) takes precedence)}
- 9/0322 . . . . . {in combination with a plug, e.g. inflatable mole, to isolate a part of the tube (plugging pigs for stopping flow in pipes [F16L 55/1283](#))}
- 9/0323 . . . . . {Arrangements specially designed for simultaneous and parallel cleaning of a plurality of conduits}
- 9/0325 . . . . . {Control mechanisms therefor}
- 9/0326 . . . . . {Using pulsations}
- 9/0327 . . . . . {the fluid being in the form of a mist}
- 9/0328 . . . . . {by purging the pipe with a gas or a mixture of gas and liquid}
- 9/035 . . . . by suction
- 9/04 . . . using cleaning devices introduced into and moved along the pipes
- 9/043 . . . . moved by externally powered mechanical linkage, e.g. pushed or drawn through the pipes

- 9/0433 . . . . . {provided exclusively with fluid jets as cleaning tools}
- 9/0436 . . . . . {provided with mechanical cleaning tools, e.g. scrapers, with or without additional fluid jets ([B08B 9/045](#), [B08B 9/047](#) take precedence)}
- 9/045 . . . . . the cleaning devices being rotated while moved {, e.g. flexible rotating shaft or "snake"} ([B08B 9/047](#) takes precedence)
- 9/047 . . . . . the cleaning devices having {internal} motors {, e.g. turbines} for powering cleaning tools
- 9/049 . . . . . having self-contained propelling means for moving the cleaning devices along the pipes {, i.e. self-propelled}
- 9/0492 . . . . . {Heavy-type cleaning devices, e.g. crawlers with plural cleaning members ([B08B 9/051](#) takes precedence)}
- 9/0495 . . . . . {Nozzles propelled by fluid jets}
- 9/0497 . . . . . {provided with additional mechanical cleaning tools}
- 9/051 . . . . . the cleaning devices having {internal} motors {, e.g. turbines} for powering cleaning tools
- 9/053 . . . . . moved along the pipes by a fluid, e.g. by fluid pressure or by suction
- 9/0535 . . . . . {the cleaning device being restricted in its movement by a cable or the like}
- 9/055 . . . . . the cleaning devices conforming to, or being conformable to, substantially the same cross-section of the pipes, {e.g. pigs or moles (pigs or moles per se [F16L 55/26](#); their launching and detection [F16L 55/46](#); separating pigs in pipelines [F17D 3/00](#))}
- 9/0551 . . . . . {Control mechanisms therefor}
- 9/0552 . . . . . {Spherically shaped pigs}
- 9/0553 . . . . . {Cylindrically shaped pigs}
- 9/0554 . . . . . {Diablo shaped pigs}
- 9/0555 . . . . . {Gelled or degradable pigs}
- 9/0556 . . . . . {at least partially formed of a frozen liquid or gas}
- 9/0557 . . . . . {Pigs with rings shaped cleaning members, e.g. cup shaped pigs}
- 9/0558 . . . . . {with additional jet means}
- 9/057 . . . . . the cleaning devices being entrained discrete elements, e.g. balls, grinding elements, brushes
- 9/08 . . . . . Cleaning containers, e.g. tanks
- 9/0804 . . . . . {Cleaning containers having tubular shape, e.g. casks, barrels, drums ([B08B 9/20](#) take precedence)}
- 9/0808 . . . . . {by methods involving the use of tools, e.g. by brushes, scrapers}
- 9/0813 . . . . . {by the force of jets or sprays}
- 9/0817 . . . . . {by agitating or tumbling containers filled with liquid or liquid and abrasive, e.g. chain}
- 9/0821 . . . . . {Handling or manipulating containers, e.g. moving or rotating containers in cleaning devices, conveying to or from cleaning devices ([B08B 9/20](#) takes precedence)}
- 9/0826 . . . . . {the containers being brought to the cleaning device}
- 9/083 . . . . . {Removing scrap from containers, e.g. removing labels}
- 9/0835 . . . . . {Removing remnants of closures from bottle necks}
- 9/0839 . . . . . {Cleaning milk churns ([B08B 9/0804](#), [B08B 9/20](#) take precedence)}
- 9/0843 . . . . . {for large numbers of milk churns}
- 9/0848 . . . . . {Devices for inverting or emptying milk churns, applying or unseating covers}
- 9/0852 . . . . . {Drainage racks (see also [A47J 47/20](#))}
- 9/0856 . . . . . {Cleaning of water-treatment installations}
- 9/0861 . . . . . {Cleaning crates, boxes or the like ([B08B 9/083](#) takes precedence)}
- 9/0865 . . . . . {by burning-out ([B08B 9/40](#) takes precedence)}
- 9/087 . . . . . by methods involving the use of tools, e.g. brushes, scrapers ({[B08B 9/0808](#)}, [B08B 9/20](#) take precedence)
- 9/093 . . . . . by the force of jets or sprays ({[B08B 9/0813](#)}, [B08B 9/20](#) take precedence)
- 9/0933 . . . . . {Removing sludge or the like from tank bottoms}
- 9/0936 . . . . . {using rotating jets}
- 9/20 . . . . . by using apparatus into or on to which containers, e.g. bottles, jars, cans are brought {(washing or rinsing crockery or tableware [A47L 15/00](#))}
- 9/205 . . . . . {Conveying containers to or from the cleaning machines}
- 9/22 . . . . . the apparatus cleaning by soaking alone
- 9/24 . . . . . and having conveyors
- 9/26 . . . . . Rotating conveyors
- 9/28 . . . . . the apparatus cleaning by splash, spray, or jet application, with or without soaking
- 9/283 . . . . . {by gas jets}
- 9/286 . . . . . {the gas being ionized}
- 9/30 . . . . . and having conveyors
- 9/32 . . . . . Rotating conveyors
- 9/34 . . . . . Arrangements of conduits or nozzles
- 9/36 . . . . . the apparatus cleaning by using brushes
- 9/38 . . . . . the apparatus cleaning by using scrapers, chains, grains of shot, sand or other abrasive means (abrasive blasting in general [B24C](#))
- 9/40 . . . . . the apparatus cleaning by burning out
- 9/42 . . . . . the apparatus being characterised by means for conveying or carrying containers therethrough
- 9/423 . . . . . {Holders for bottles, cell construction}
- 9/426 . . . . . {Grippers for bottles}
- 9/44 . . . . . the means being for loading or unloading the apparatus
- 9/46 . . . . . Inspecting cleaned containers for cleanliness
- 11/00** . . . . . **Cleaning flexible or delicate articles by methods or apparatus specially adapted thereto ([B08B 3/12](#), [B08B 6/00](#) take precedence)**
- 11/02 . . . . . Devices for holding articles during cleaning {([B08B 9/42](#) takes precedence)}
- 11/04 . . . . . specially adapted for plate glass, e.g. prior to manufacture of windshields (cleaning the gap between permanently secured panes [E06B 3/677](#))
- 13/00** . . . . . **Accessories or details of general applicability for machines or apparatus for cleaning**

15/00	<b>Preventing escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area</b> (parts, details or accessories of cooking-vessels for withdrawing or condensing cooking vapours from such vessels <a href="#">A47J 36/38</a> ; refuse disposal <a href="#">B65F</a> ; devices for conducting smoke or fumes, e.g. flues, <a href="#">F23J 11/00</a> ; removing cooking fumes from domestic stoves or ranges <a href="#">F24C 15/20</a> ; air conditioning, ventilation <a href="#">F24F</a> )	2203/027	. . Pump details
		2203/0276	. . Hose reels specific for high pressure cleaners
		2203/0282	. . Safety devices
		2203/0288	. . Ultra or megasonic jets
		2203/0294	. . Wobbling swash plates for high pressure cleaners
15/002	. {using a central suction system, e.g. for collecting exhaust gases in workshops (removing dust from textile machines <a href="#">D01H 11/00</a> ; ventilation of mines, galleries or tunnels, e.g. traffic tunnels, <a href="#">E21F 1/00</a> )}	2205/00	<b>Details of machines or methods for cleaning by the use of gas or air flow</b>
15/005	. . {comprising a stationary main duct with one or more branch units, the branch units being freely movable along a sealed longitudinal slit in the main duct}	2205/005	. Using the coanda effect of the gas flow/stream
15/007	. {Fume suction nozzles arranged on a closed or semi-closed surface, e.g. on a circular, ring-shaped or rectangular surface adjacent the area where fumes are produced ( <a href="#">B08B 15/04</a> takes precedence)}	2209/00	<b>Details of machines or methods for cleaning hollow articles</b>
15/02	. using chambers or hoods covering the area ({ <a href="#">B08B 15/002</a> takes precedence})	2209/005	. Use of ultrasonics or cavitation, e.g. as primary or secondary action
15/023	. . {Fume cabinets or cupboards, e.g. for laboratories}	2209/02	. Details of apparatuses or methods for cleaning pipes or tubes
15/026	. . {Boxes for removal of dirt, e.g. for cleaning brakes, glove- boxes}	2209/022	. . making use of the reversal flow of the cleaning liquid
15/04	. from a small area, e.g. a tool ({ <a href="#">removing chips</a> <a href="#">B23Q 11/0042</a> )}	2209/024	. . by creating a shock wave in the cleaning liquid
17/00	<b>Methods preventing fouling</b> ({ <a href="#">preventing accumulation of deposits in pneumatic conveyors</a> <a href="#">B65G 53/521</a> )}	2209/027	. . for cleaning the internal surfaces
17/02	. Preventing deposition of fouling or of dust	2209/032	. . . by the mechanical action of a moving fluid
17/025	. . {Prevention of fouling with liquids by means of devices for containing or collecting said liquids}	2209/04	. . . using cleaning devices introduced into and moved along the pipes
17/04	. . by using removable coverings	2209/045	. . . . Making cleaning devices buoyant within a pipeline to be cleaned
17/06	. . by giving articles subject to fouling a special shape or arrangement	2209/053	. . . . being moved along the pipes by a fluid, e.g. by fluid pressure or by suction
17/065	. . . {the surface having a microscopic surface pattern to achieve the same effect as a lotus flower}	2209/055	. . . . the cleaning devices conforming to, or being conformable to, substantially the same cross-section of the pipes, e.g. pigs or moles
2203/00	<b>Details of cleaning machines or methods involving the use or presence of liquid or steam</b>	2209/0553	. . . . . Pigs provided with detection means
2203/002	. the liquid being a degassed liquid	2209/0556	. . . . . the detection means being magnets
2203/005	. the liquid being ozonated	2209/08	. Details of machines or methods for cleaning containers, e.g. tanks
2203/007	. Heating the liquid	2209/085	. . Cleaning flexible bags
2203/02	. Details of machines or methods for cleaning by the force of jets or sprays	2215/00	<b>Preventing escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area</b>
2203/0205	. . Bypass pressure relief valves	2215/003	. with the assistance of blowing nozzles
2203/0211	. . Case coverings	2215/006	. Suction tables
2203/0217	. . Use of a detergent in high pressure cleaners; arrangements for supplying the same	2220/00	<b>Type of materials or objects being removed</b>
2203/0223	. . Electric motor pumps	2220/01	. Adhesive materials
2203/0229	. . Suction chambers for aspirating the sprayed liquid	2220/02	. Chewing gum
2203/0235	. . Cooling the motor pump	2220/04	. Polymers
2203/0241	. . Combustion motor pumps	2230/00	<b>Other cleaning aspects applicable to all <a href="#">B08B</a> range</b>
2203/0247	. . Hose joints, e.g. quick joints, rotating joints	2230/01	. Cleaning with steam
2203/0252	. . Ecological type pressure cleaners, e.g. by pressure intensifiers	2240/00	<b>Type of materials or objects being cleaned</b>
2203/0258	. . Multiple lance high pressure cleaning station	2240/02	. Optical fibers or optical fiber connectors
2203/0264	. . Splash guards		