

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### SEPARATING; MIXING

#### B08 CLEANING

#### B08B CLEANING IN GENERAL; PREVENTION OF FOULING IN GENERAL

##### NOTE

This subclass does not cover cleaning specially adapted for articles, substances, devices or surroundings provided that its cleaning aspects are fully classifiable in the relevant application place. Otherwise, classification is made in the most appropriate place in this subclass.

##### 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.}

<b>1/00</b>	<b>Cleaning by methods involving the use of tools</b> (cleaning hollow articles by methods or apparatus specially adapted thereto <a href="#">B08B 9/00</a> )	3/028	. . . {Spray guns}
1/10	. characterised by the type of cleaning tool		
1/12	. . Brushes		
1/14	. . Wipes; Absorbent members, e.g. swabs or sponges (with integrated means for dispensing fluids <a href="#">B08B 1/40</a> )		
1/143	. . . {Wipes}		
1/145	. . . {Swabs}		
1/16	. . Rigid blades, e.g. scrapers; Flexible blades, e.g. wipers		
1/165	. . . {Scrapers}		
1/20	. Cleaning of moving articles, e.g. of moving webs or of objects on a conveyor		
1/30	. by movement of cleaning members over a surface		
1/32	. . using rotary cleaning members		
1/34	. . . rotating about an axis parallel to the surface		
1/36	. . . rotating about an axis orthogonal to the surface		
1/40	. Cleaning tools with integrated means for dispensing fluids, e.g. water, steam or detergents (cleaning by the force of jets or sprays <a href="#">B08B 3/02</a> )		
1/50	. involving cleaning of the cleaning members		
1/52	. . using fluids		
1/54	. . using mechanical tools		
<b>3/00</b>	<b>Cleaning by methods involving the use or presence of liquid or steam</b> ( <a href="#">B08B 9/00</a> 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 ( <a href="#">B08B 3/042</a> 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}		
		3/04	. 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 <a href="#">B08B 3/12</a> ; cleaning casks or barrels by agitating <a href="#">B08B 9/0817</a> ; mixers with shaking, oscillating or vibrating mechanisms <a href="#">B01F 31/00</a> )}
		3/045	. . {using perforated containers, e.g. baskets, or racks immersed and agitated in a liquid bath (using perforated drums <a href="#">B08B 3/06</a> )}
		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 ({ <a href="#">B08B 3/042</a> takes precedence})
		3/08	. . the liquid having chemical or dissolving effect
		3/10	. . with additional treatment of the liquid or of the object being cleaned, e.g. by heat, by electricity or by vibration
		3/102	. . . {with means for agitating the liquid (by agitating the container <a href="#">B08B 3/042</a> , <a href="#">B08B 3/044</a> , <a href="#">B08B 3/045</a> , <a href="#">B08B 3/06</a> )}
		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

- 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
- 5/00** **Cleaning by methods involving the use of air flow or gas flow (cleaning hollow articles by methods or apparatus specially adapted thereto [B08B 9/00](#))**
- 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
- 5/043 . . {Cleaning travelling work}
- 5/046 . . . {Cleaning moving webs}
- 6/00** **Cleaning by electrostatic means**
- 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 scalars}
- 7/024 . . {Rotary scalars}
- 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**
- 9/02 . Cleaning pipes or tubes or systems of pipes or tubes ([apparatus for cleaning metal pipes by chemical methods C23G 3/04](#))
- 9/021 . . {Cleaning pipe ends or pipe fittings, e.g. before soldering}
- 9/023 . . Cleaning the external surfaces ([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**
- 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
- 13/00** **Accessories or details of general applicability for machines or apparatus for cleaning**
- 15/00** **Preventing escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area**
- 15/002 . {using a central suction system, e.g. for collecting exhaust gases in workshops ([removing dust from textile machines D01H 11/00](#); ventilation of mines, galleries or tunnels, e.g. traffic tunnels, [E21F 1/00](#))}
- 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}
- 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 ([B08B 15/04](#) takes precedence)}
- 15/02 . using chambers or hoods covering the area ([B08B 15/002](#) takes precedence)}
- 15/023 . . {Fume cabinets or cupboards, e.g. for laboratories}
- 15/026 . . {Boxes for removal of dirt, e.g. for cleaning brakes, glove- boxes}
- 15/04 . from a small area, e.g. a tool ([removing chips B23Q 11/0042](#))}
- 17/00** **Methods preventing fouling {(preventing accumulation of deposits in pneumatic conveyors [B65G 53/521](#))}**
- 17/02 . Preventing deposition of fouling or of dust
- 17/025 . . {Prevention of fouling with liquids by means of devices for containing or collecting said liquids}
- 17/04 . . by using removable coverings
- 17/06 . . by giving articles subject to fouling a special shape or arrangement
- 17/065 . . . {the surface having a microscopic surface pattern to achieve the same effect as a lotus flower}
- 2203/00** **Details of cleaning machines or methods involving the use or presence of liquid or steam**
- 2203/002 . the liquid being a degassed liquid
- 2203/005 . the liquid being ozonated
- 2203/007 . Heating the liquid
- 2203/02 . Details of machines or methods for cleaning by the force of jets or sprays
- 2203/0205 . . Bypass pressure relief valves
- 2203/0211 . . Case coverings
- 2203/0217 . . Use of a detergent in high pressure cleaners; arrangements for supplying the same
- 2203/0223 . . Electric motor pumps
- 2203/0229 . . Suction chambers for aspirating the sprayed liquid

## B08B

- 2203/0235 . . Cooling the motor pump
- 2203/0241 . . Combustion motor pumps
- 2203/0247 . . Hose joints, e.g. quick joints, rotating joints
- 2203/0252 . . Ecological type pressure cleaners, e.g. by pressure intensifiers
- 2203/0258 . . Multiple lance high pressure cleaning station
- 2203/0264 . . Splash guards
- 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

### **2205/00 Details of machines or methods for cleaning by the use of gas or air flow**

- 2205/005 . Using the coanda effect of the gas flow/stream

### **2209/00 Details of machines or methods for cleaning hollow articles**

- 2209/005 . Use of ultrasonics or cavitation, e.g. as primary or secondary action
- 2209/02 . Details of apparatuses or methods for cleaning pipes or tubes
  - 2209/022 . . making use of the reversal flow of the cleaning liquid
  - 2209/024 . . by creating a shock wave in the cleaning liquid
  - 2209/027 . . for cleaning the internal surfaces
  - 2209/032 . . . by the mechanical action of a moving fluid
  - 2209/04 . . . using cleaning devices introduced into and moved along the pipes
  - 2209/045 . . . . Making cleaning devices buoyant within a pipeline to be cleaned
  - 2209/053 . . . . being moved along the pipes by a fluid, e.g. by fluid pressure or by suction
  - 2209/055 . . . . . the cleaning devices conforming to, or being conformable to, substantially the same cross-section of the pipes, e.g. pigs or moles
  - 2209/0553 . . . . . Pigs provided with detection means
  - 2209/0556 . . . . . the detection means being magnets
- 2209/08 . Details of machines or methods for cleaning containers, e.g. tanks
- 2209/085 . . Cleaning flexible bags

### **2215/00 Preventing escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area**

- 2215/003 . with the assistance of blowing nozzles
- 2215/006 . Suction tables

### **2220/00 Type of materials or objects being removed**

- 2220/01 . Adhesive materials
- 2220/02 . Chewing gum
- 2220/04 . Polymers

### **2230/00 Other cleaning aspects applicable to all [B08B](#) range**

- 2230/01 . Cleaning with steam

### **2240/00 Type of materials or objects being cleaned**

- 2240/02 . Optical fibers or optical fiber connectors