

CPC**COOPERATIVE PATENT CLASSIFICATION****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 57/0087](#) ; cleaning grips of bats on rackets [A63B 59/0062](#) } ; 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 conveyers [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 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 3/00 D](#) } ; 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](#) , H, [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](#) .

Guidance heading:**B08B 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)

B08B 1/001

. { characterised by the type of cleaning tool }

B08B 1/002

.. { Brushes }

B08B 1/003

.. { Swabs }

B08B 1/005

.. { Scrapers }

B08B 1/006

.. { Wipes }

B08B 1/007

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

- B08B 1/008 . { using translating operative members }
- B08B 1/02 . Cleaning travelling work, e.g. a web, articles on a conveyer
- B08B 1/04 . using rotary operative members ([B08B 1/02](#) takes precedence)
- B08B 3/00** **Cleaning by methods involving the use or presence of liquid or steam ([B08B 9/00](#) takes precedence)**
- B08B 3/003 . { Cleaning involving contact with foam }
- B08B 3/006 . { Cabinets or cupboards specially adapted for cleaning articles by hand }
- B08B 3/02 . Cleaning by the force of jets or sprays
- B08B 3/022 . . { Cleaning travelling work ([B08B 3/042](#) takes precedence) }
- B08B 3/024 . . { Cleaning by means of spray elements moving over the surface to be cleaned }
- B08B 3/026 . . { Cleaning by making use of hand-held spray guns; Fluid preparations therefor }
- B08B 3/028 . . . { Spray guns }
- WARNING**
- This group is no longer used for classification. Documents are in the process of being reclassified to subclass [B05B](#)
- B08B 3/04 . Cleaning involving contact with liquid
- B08B 3/041 . . { Cleaning travelling work }
- B08B 3/042 . . . { the loose articles or bulk material travelling gradually through a drum or other container, e.g. by helix or gravity }
- B08B 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 9/12D](#) ; mixers with shaking, oscillating or vibrating mechanisms [B01F 11/00](#)) }
- B08B 3/045 . . { using perforated containers, e.g. baskets, or racks immersed and agitated in a liquid bath (using perforated drums [B08B 3/06](#)) }
- B08B 3/047 . . . { Containers specially adapted therefor }
- B08B 3/048 . . { Overflow-type cleaning, e.g. tanks in which the liquid flows over the tank in which the articles are placed }
- B08B 3/06 . . using perforated drums in which the article or material is placed { ([B08B 3/042](#) takes precedence) }
- B08B 3/08 . . the liquid having chemical or dissolving effect (substances used, see the relevant classes)
- B08B 3/10 . . with additional treatment of the liquid or of the object being cleaned, e.g. by heat, by electricity, by vibration
- B08B 3/102 . . . { with means for agitating the liquid (by agitating the container [B08B 3/042](#) , [B08B 3/044](#) , [B08B 3/045](#) , [B08B 3/06](#)) }
- B08B 3/104 { using propellers }
- B08B 3/106 . . . { by boiling the liquid }
- B08B 3/108 . . . { by lowering and raising the level of the cleaning liquid }

B08B 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 protheses 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](#))

B08B 3/123 { Cleaning travelling work, e.g. webs, articles on a conveyer (conveyers [B65G](#) ; handling webs [B65H](#)) }

B08B 3/126 { in particular moving bottles }

B08B 3/14 . . . Removing waste, e.g. labels, from cleaning liquid; { Regenerating cleaning liquids } (treatment of water in general [C02F](#))

B08B 5/00 **Cleaning by methods involving the use of air flow or gas flow ([B08B 6/00](#) takes precedence)**

B08B 5/02 . Cleaning by the force of jets, e.g. blowing-out cavities { ([airguns or nozzles per se](#) [B05B 1/005](#)) }

B08B 5/023 . . { Cleaning travelling work }

B08B 5/026 . . . { Cleaning moving webs }

B08B 5/04 . Cleaning by suction, with or without auxiliary action ({ [B08B 9/03](#) takes precedence; } (suction cleaners [A47L](#)))

B08B 5/043 . . { Cleaning travelling work }

B08B 5/046 . . . { Cleaning moving webs }

B08B 6/00 **Cleaning by electrostatic means (domestic cleaning implements functioning electrostatically [A47L 13/40](#) ; cleaning of grooved record carriers [G11B 3/58](#))**

B08B 7/00 **Cleaning by methods not provided for in a single other subclass or a single group in this subclass**

B08B 7/0007 . { by explosions }

B08B 7/0014 . { by incorporation in a layer which is removed with the contaminants }

B08B 7/0021 . { by liquid gases or supercritical fluids }

B08B 7/0028 . { by adhesive surfaces }

B08B 7/0035 . { by radiant energy, e.g. UV, laser, light beam or the like }

B08B 7/0042 . . { by laser }

B08B 7/005 . . { by infrared radiation }

B08B 7/0057 . . { by ultraviolet radiation }

B08B 7/0064 . { by temperature changes }

B08B 7/0071 . . { by heating ([B08B 7/0035](#) takes precedence) }

B08B 7/0078 . . . { in a fluidized bed }

B08B 7/0085 . . . { by pyrolysis }

B08B 7/0092 . . { by cooling }

- B08B 7/02 . by distortion, beating, or vibration of the surface to be cleaned { ([B08B 7/0007](#) takes precedence) }
- B08B 7/022 .. { Needle scalers }
- B08B 7/024 .. { Rotary scalers }
- B08B 7/026 .. { Using sound waves }
- B08B 7/028 ... { Using ultrasounds }
- B08B 7/04 . by a combination of operations

B08B 9/00 **Cleaning hollow articles by methods or apparatus specially adapted thereto ([B08B 3/12](#) , [B08B 6/00](#) take precedence)**

- B08B 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](#) })
- B08B 9/021 .. { Cleaning pipe ends or pipe fittings, e.g. before soldering ([grinding tube ends B24B 9/007](#)) }
- B08B 9/023 .. Cleaning the external surface ([B08B 9/021](#) takes precedence)
- B08B 9/027 .. Cleaning the internal surfaces ; Removal of blockages
- B08B 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](#) })
- B08B 9/0321 { using pressurised, pulsating or purging fluid ([E04F 17/12B](#) takes precedence) }
- B08B 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](#)) }
- B08B 9/0323 { Arrangements specially designed for simultaneous and parallel cleaning of a plurality of conduits }
- B08B 9/0325 { Control mechanisms therefor }
- B08B 9/0326 { Using pulsations }
- B08B 9/0327 { the fluid being in the form of a mist }
- B08B 9/0328 { by purging the pipe with a gas or a mixture of gas and liquid }
- B08B 9/035 by suction
- B08B 9/04 ... using cleaning devices introduced into and moved along the pipes

WARNING

Group [B08B 9/04](#) and subgroups are not complete. See also [B08B 9/02](#) and subgroups

- B08B 9/043 moved by externally powered mechanical linkage, e.g. pushed or drawn through the pipes
- B08B 9/0433 { provided exclusively with fluid jets as cleaning tools }
- B08B 9/0436 { provided with mechanical cleaning tools, e.g. scrapers, with or without additional fluid jets ([B08B 9/045](#) , [B08B 9/047](#) take precedence) }
- B08B 9/045 the cleaning devices being rotated while moved { , e.g. flexible rotating shaft or "snake" } ([B08B 9/047](#) takes precedence)

B08B 9/047	.....	the cleaning devices having { internal } motors [e.g. turbines] for powering cleaning tools
B08B 9/049	....	having self-contained propelling means for moving the cleaning devices along the pipes { i.e. self-propelled }
B08B 9/0492	.....	{ Heavy-type cleaning devices, e.g. crawlers with plural cleaning members (B08B 9/051 takes precedence) }
B08B 9/0495	.....	{ Nozzles propelled by fluid jets }
B08B 9/0497	.....	{ provided with additional mechanical cleaning tools }
B08B 9/051	....	the cleaning devices having { internal } motors [e.g. turbines] for powering cleaning tools
B08B 9/053	....	moved along the pipes by a fluid, e.g. by fluid pressure or by suction
B08B 9/0535	.....	{ the cleaning device being restricted in its movement by a cable or the like }
B08B 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) } }
B08B 9/0551	.....	{ Control mechanisms therefor }
B08B 9/0552	.....	{ Spherically shaped pigs }
B08B 9/0553	.....	{ Cylindrically shaped pigs }
B08B 9/0554	.....	{ Diablo shaped pigs }
B08B 9/0555	.....	{ Gelled or degradable pigs }
B08B 9/0556	.....	{ at least partially formed of a frozen liquid or gas }
B08B 9/0557	.....	{ Pigs with rings shaped cleaning members, e.g. cup shaped pigs }
B08B 9/0558	.....	{ with additional jet means }
B08B 9/057	.....	the cleaning devices being entrained discrete elements, e.g. balls, grinding elements, brushes
B08B 9/08	.	Cleaning containers, e.g. tanks
B08B 9/0804	..	{ Cleaning containers having tubular shape, e.g. casks, barrels, drums (B08B 9/20 take precedence) }
B08B 9/0808	...	{ by methods involving the use of tools, e.g. by brushes, scrapers }
B08B 9/0813	...	{ by the force of jets or sprays }
B08B 9/0817	...	{ by agitating or tumbling containers filled with liquid or liquid and abrasive, e.g. chain }
B08B 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) }
B08B 9/0826	...	{ the containers being brought to the cleaning device }
B08B 9/083	..	{ Removing scrap from containers, e.g. removing labels }
B08B 9/0835	...	{ Removing remnants of closures from bottle necks }
B08B 9/0839	..	{ Cleaning milk churns (B08B 9/0804 , B08B 9/20 take precedence) }
B08B 9/0843	...	{ for large numbers of milk churns }
B08B 9/0848	...	{ Devices for inverting or emptying milk churns, applying or unseating covers }
B08B 9/0852	..	{ Drainage racks (see also A47J 47/20) }
B08B 9/0856	..	{ Cleaning of water-treatment installations }

- B08B 9/0861 .. { Cleaning crates, boxes or the like ([B08B 9/083](#) takes precedence) }
- B08B 9/0865 .. { by burning-out ([B08B 9/40](#) takes precedence) }
- B08B 9/087 .. by methods involving the use of tools, e.g. brushes, scrapers ({ [B08B 9/0808](#) }, [B08B 9/20](#) take precedence)
- B08B 9/093 .. by the force of jets or sprays ({ [B08B 9/0813](#) }, [B08B 9/20](#) take precedence)
- B08B 9/0933 ... { Removing sludge or the like from tank bottoms }
- B08B 9/0936 ... { using rotating jets }
- B08B 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](#)) }
- B08B 9/205 ... { Conveying containers to or from the cleaning machines }
- B08B 9/22 ... the apparatus cleaning by soaking alone
- B08B 9/24 and having conveyers
- B08B 9/26 Rotating conveyers
- B08B 9/28 ... the apparatus cleaning by splash, spray, or jet application, with or without soaking
- B08B 9/283 { by gas jets }
- B08B 9/286 { the gas being ionized }
- B08B 9/30 and having conveyers
- B08B 9/32 Rotating conveyers
- B08B 9/34 Arrangements of conduits or nozzles
- B08B 9/36 ... the apparatus cleaning by using brushes
- B08B 9/38 ... the apparatus cleaning by using scrapers, chains, grains of shot, sand or other abrasive means ([abrasive blasting in general B24C](#))
- B08B 9/40 ... the apparatus cleaning by burning out
- B08B 9/42 ... the apparatus being characterised by means for conveying or carrying containers therethrough
- B08B 9/423 { Holders for bottles, cell construction }
- B08B 9/426 { Grippers for bottles }
- B08B 9/44 the means being for loading or unloading the apparatus
- B08B 9/46 .. Inspecting cleaned containers for cleanliness

B08B 11/00 **Cleaning flexible or delicate articles by methods or apparatus specially adapted thereto ([B08B 3/12](#) , [B08B 6/00](#) take precedence)**

- B08B 11/02 . Devices for holding articles during cleaning { ([B08B 9/42](#) takes precedence) }
- B08B 11/04 . specially adapted for plate glass, e.g. prior to manufacture of windshields ([cleaning the gap between permanently secured panes E06B 3/677](#))

B08B 13/00 **Accessories or details of general applicability for machines or apparatus for cleaning**

B08B 15/00 **Preventing escape of dirt or fumes from the area where they are produced ; Collecting or removing dirt or fumes from that area (parts, details or accessories of cooking-vessels for withdrawing or condensing cooking vapours from such vessels [A47J 36/38](#) ; refuse disposal [B65F](#) ; devices for conducting smoke or fumes, e.g. flues, [F23J 11/00](#) ; removing cooking fumes from domestic stoves or ranges [F24C 15/20](#) ; air**

conditioning, ventilation [F24F](#))

- B08B 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](#)) }
- B08B 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 }
- B08B 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) }
- B08B 15/02 . using chambers or hoods covering the area { ([B08B 15/002](#) takes precedence) }
- B08B 15/023 . . { Fume cabinets or cupboards, e.g. for laboratories }
- B08B 15/026 . . { Boxes for removal of dirt, e.g. for cleaning brakes, glove- boxes }
- B08B 15/04 . from a small area, e.g. a tool { (removing chips [B23Q 11/0042](#)) }
- B08B 17/00** **Methods preventing fouling** { (preventing accumulation of deposits in pneumatic conveyers [B65G 53/521](#)) }
- B08B 17/02 . Preventing deposition of fouling or of dust
- B08B 17/025 . . { Prevention of fouling with liquids by means of devices for containing or collecting said liquids }
- B08B 17/04 . . by using removable coverings
- B08B 17/06 . . by giving articles subject to fouling a special shape or arrangement
- B08B 17/065 . . . { the surface having a microscopic surface pattern to achieve the same effect as a lotus flower }

Guidance heading:

B08B 2200/00 **Dummy title**

Guidance heading:

B08B 2203/00 **Details of cleaning machines or methods involving the use or presence of liquid or steam**

- B08B 2203/002 . the liquid being a degassed liquid
- B08B 2203/005 . the liquid being ozonated
- B08B 2203/007 . Heating the liquid
- B08B 2203/02 . Details of machines or methods for cleaning by the force of jets or sprays
- B08B 2203/0205 . . Bypass pressure relief valves

- B08B 2203/0211 . . Case coverings
- B08B 2203/0217 . . Use of a detergent in high pressure cleaners ; arrangements for supplying the same
- B08B 2203/0223 . . Electric motor pumps
- B08B 2203/0229 . . Suction chambers for aspirating the sprayed liquid
- B08B 2203/0235 . . Cooling the motor pump
- B08B 2203/0241 . . Combustion motor pumps
- B08B 2203/0247 . . Hose joints, e.g. quick joints, rotating joints
- B08B 2203/0252 . . Ecological type pressure cleaners, e.g. by pressure intensifiers
- B08B 2203/0258 . . Multiple lance high pressure cleaning station
- B08B 2203/0264 . . Splash guards
- B08B 2203/027 . . Pump details
- B08B 2203/0276 . . Hose reels specific for high pressure cleaners
- B08B 2203/0282 . . Safety devices
- B08B 2203/0288 . . Ultra or megasonic jets
- B08B 2203/0294 . . Wobbling swash plates for high pressure cleaners

B08B 2205/00 Details of machines or methods for cleaning by the use of gas or air flow

- B08B 2205/005 . Using the coanda effect of the gas flow/stream

B08B 2209/00 Details of machines or methods for cleaning hollow articles

- B08B 2209/005 . Use of ultrasonics or cavitation, e.g. as primary or secondary action
- B08B 2209/02 . Details of apparatuses or methods for cleaning pipes or tubes
 - B08B 2209/022 . . making use of the reversal flow of the cleaning liquid
 - B08B 2209/024 . . by creating a shock wave in the cleaning liquid
 - B08B 2209/027 . . for cleaning the internal surfaces
 - B08B 2209/032 . . . by the mechanical action of a moving fluid
 - B08B 2209/04 . . . using cleaning devices introduced into and moved along the pipes
 - B08B 2209/045 Making cleaning devices buoyant within a pipeline to be cleaned
 - B08B 2209/053 being moved along the pipes by a fluid, e.g. by fluid pressure or by suction
 - B08B 2209/055 the cleaning devices conforming to, or being conformable to, substantially the same cross-section of the pipes, e.g. pigs or moles
 - B08B 2209/0553 Pigs provided with detection means
 - B08B 2209/0556 the detection means being magnets
- B08B 2209/08 . Details of machines or methods for cleaning containers, e.g. tanks
- B08B 2209/085 . . Cleaning flexible bags

B08B 2215/00 Preventing escape of dirt or fumes from the area where they are produced ; Collecting or removing dirt or fumes from that area

- B08B 2215/003 . with the assistance of blowing nozzles

[B08B 2215/006](#) . Suction tables

[B08B 2220/00](#) Type of materials or objects being removed

[B08B 2220/01](#) . Adhesive materials

[B08B 2220/02](#) . Chewing gum

[B08B 2220/04](#) . Polymers

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

[B08B 2230/01](#) . Cleaning with steam

[B08B 2240/00](#) Type of materials or objects being cleaned

[B08B 2240/02](#) . Optical fibers or optical fiber connectors