

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 3/00D](#) } ; 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](#).

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 9/0817](#) ; 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 9/035](#) 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 17/126](#) 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
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- 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 }
B08B 2200/00	Dummy title
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
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- 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
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- 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