

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 57/60](#); 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 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 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](#).

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 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](#))
- 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

- 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	<ul style="list-style-type: none"> · {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	<ul style="list-style-type: none"> · . {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	<ul style="list-style-type: none"> · {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	<ul style="list-style-type: none"> · using chambers or hoods covering the area {(B08B 15/002 takes precedence)}
B08B 15/023	<ul style="list-style-type: none"> · . {Fume cabinets or cupboards, e.g. for laboratories}
B08B 15/026	<ul style="list-style-type: none"> · . {Boxes for removal of dirt, e.g. for cleaning brakes, glove- boxes}
B08B 15/04	<ul style="list-style-type: none"> · 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	<ul style="list-style-type: none"> · Preventing deposition of fouling or of dust
B08B 17/025	<ul style="list-style-type: none"> · . {Prevention of fouling with liquids by means of devices for containing or collecting said liquids}
B08B 17/04	<ul style="list-style-type: none"> · . by using removable coverings
B08B 17/06	<ul style="list-style-type: none"> · . by giving articles subject to fouling a special shape or arrangement
B08B 17/065	<ul style="list-style-type: none"> · . . {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	<ul style="list-style-type: none"> · the liquid being a degassed liquid
B08B 2203/005	<ul style="list-style-type: none"> · the liquid being ozonated
B08B 2203/007	<ul style="list-style-type: none"> · Heating the liquid
B08B 2203/02	<ul style="list-style-type: none"> · Details of machines or methods for cleaning by the force of jets or sprays
B08B 2203/0205	<ul style="list-style-type: none"> · . Bypass pressure relief valves
B08B 2203/0211	<ul style="list-style-type: none"> · . Case coverings
B08B 2203/0217	<ul style="list-style-type: none"> · . Use of a detergent in high pressure cleaners; arrangements for supplying the same
B08B 2203/0223	<ul style="list-style-type: none"> · . Electric motor pumps
B08B 2203/0229	<ul style="list-style-type: none"> · . Suction chambers for aspirating the sprayed liquid
B08B 2203/0235	<ul style="list-style-type: none"> · . Cooling the motor pump
B08B 2203/0241	<ul style="list-style-type: none"> · . Combustion motor pumps
B08B 2203/0247	<ul style="list-style-type: none"> · . Hose joints, e.g. quick joints, rotating joints
B08B 2203/0252	<ul style="list-style-type: none"> · . Ecological type pressure cleaners, e.g. by pressure intensifiers
B08B 2203/0258	<ul style="list-style-type: none"> · . Multiple lance high pressure cleaning station
B08B 2203/0264	<ul style="list-style-type: none"> · . Splash guards
B08B 2203/027	<ul style="list-style-type: none"> · . Pump details
B08B 2203/0276	<ul style="list-style-type: none"> · . Hose reels specific for high pressure cleaners

B08B 2203/0282	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Safety devices
B08B 2203/0288	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Ultra or megasonic jets
B08B 2203/0294	<ul style="list-style-type: none"> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Using the coanda effect of the gas flow/stream
B08B 2209/00	Details of machines or methods for cleaning hollow articles
B08B 2209/005	<ul style="list-style-type: none"> Use of ultrasonics or cavitation, e.g. as primary or secondary action
B08B 2209/02	<ul style="list-style-type: none"> Details of apparatuses or methods for cleaning pipes or tubes
B08B 2209/022	<ul style="list-style-type: none"> <ul style="list-style-type: none"> making use of the reversal flow of the cleaning liquid
B08B 2209/024	<ul style="list-style-type: none"> <ul style="list-style-type: none"> by creating a shock wave in the cleaning liquid
B08B 2209/027	<ul style="list-style-type: none"> <ul style="list-style-type: none"> for cleaning the internal surfaces
B08B 2209/032	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> by the mechanical action of a moving fluid
B08B 2209/04	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> using cleaning devices introduced into and moved along the pipes
B08B 2209/045	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Making cleaning devices buoyant within a pipeline to be cleaned
B08B 2209/053	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> being moved along the pipes by a fluid, e.g. by fluid pressure or by suction
B08B 2209/055	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Pigs provided with detection means
B08B 2209/0556	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> the detection means being magnets
B08B 2209/08	<ul style="list-style-type: none"> Details of machines or methods for cleaning containers, e.g. tanks
B08B 2209/085	<ul style="list-style-type: none"> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> with the assistance of blowing nozzles
B08B 2215/006	<ul style="list-style-type: none"> Suction tables
B08B 2220/00	Type of materials or objects being removed
B08B 2220/01	<ul style="list-style-type: none"> Adhesive materials
B08B 2220/02	<ul style="list-style-type: none"> Chewing gum
B08B 2220/04	<ul style="list-style-type: none"> Polymers
B08B 2230/00	Other cleaning aspects applicable to all B08B range
B08B 2230/01	<ul style="list-style-type: none"> Cleaning with steam
B08B 2240/00	Type of materials or objects being cleaned
B08B 2240/02	<ul style="list-style-type: none"> Optical fibers or optical fiber connectors