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, especially 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 3/006;
- 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.

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.

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}
1/002 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}
3/002 . Cleaning by the force of jets or sprays
3/0022 . . {Cleaning travelling work (B08B 3/0042 takes precedence)}
3/0024 . . {Cleaning by means of spray elements moving over the surface to be cleaned}
3/0026 . . {Cleaning by making use of hand-held spray guns; Fluid preparations therefor}
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)
5/03 . Cleaning involving contact with liquid
3/04 . Cleaning involving contact with liquid
3/05 . Cleaning involving contact with liquid
3/06 . 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)
3/07 . using agitated containers, e.g. baskets, or racks immersed and agitated in a liquid bath (using perforated drums B08B 3/06)
3/08 . [with means for agitating the liquid (by agitating the container B08B 3/042 takes precedence)]
3/09 . [by boiling the liquid]
3/10 . [by lowering and raising the level of the cleaning liquid]
3/11 . 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)
3/12 . [Cleaning travelling work, e.g. webs, articles on a conveyor (conveyors B65G; handling webs B65H)]
3/13 . [in particular moving bottles]
3/14 . Removing waste, e.g. labels, from cleaning liquid; [Regenerating cleaning liquids; (treatment of water in general C02F)]
3/15 . [Cleaning travelling work]
3/16 . [Cleaning moving webs]
5/04 . Cleaning by suction, with or without auxiliary action (B08B 9/0435 takes precedence;) suction cleaners A47L)
5/05 . [Cleaning travelling work]
5/06 . [Cleaning moving webs]
5/07 . [Cleaning travelling work]
5/08 . [Cleaning moving webs]
5/09 . [Cleaning travelling work]
5/10 . [Cleaning moving webs]
5/11 . [Cleaning travelling work]
5/12 . [Cleaning moving webs]
5/13 . [Cleaning travelling work]
5/14 . [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
7/007 . [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, heating, 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]
7/029 . 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 boresholes 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 9/041 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 9/0435])
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 55/12831)]
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]
Cleaning containers, e.g. tanks

[b]Cleaning containers having tubular shape, e.g. casks, barrels, drums (B08B 9/20 take precedence)\]

by methods involving the use of tools, e.g. by brushes, scrapers

by the force of jets or sprays

by agitation or tumbling containers filled with liquid or liquid and abrasive, e.g. chain

[b]Handling or manipulating containers, e.g. moving or rotating containers in cleaning devices, conveying to or from cleaning devices (B08B 9/20 take precedence)\]

the containers being brought to the cleaning device

Removing scrap from containers, e.g. removing labels

Removing remnants of closures from bottle necks

Cleaning milk churns (B08B 9/0804, B08B 9/20 take precedence)

[for large numbers of milk churns]

[Devices for inverting or emptying milk churns, applying or unseating covers]

[Drainage racks (see also A47J 47/20)]

[Cleaning of water-treatment installations]

[Cleaning crates, boxes or the like (B08B 9/083 takes precedence)]

[b]by burning-out (B08B 9/40 takes precedence)\]

by methods involving the use of tools, e.g. brushes, scrapers (B08B 9/0808, B08B 9/20 take precedence)

by the force of jets or sprays (B08B 9/0813, B08B 9/20 take precedence)

[Removing sludge or the like from tank bottoms]

[using rotating jets]

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)

[Conveying containers to or from the cleaning machines]

the apparatus cleaning by soaking alone

and having conveyors

Rotating conveyors

the apparatus cleaning by splash, spray, or jet application, with or without soaking

[by gas jets]

[the gas being ionized]

and having conveyors

Rotating conveyors

Arrangements of conduits or nozzles

the apparatus cleaning by using brushes

the apparatus cleaning by using scrapers, chains, grains of shot, sand or other abrasive means (abrasive blasting in general B24C)

the apparatus cleaning by burning out

the apparatus being characterised by means for conveying or carrying containers therethrough

[Holders for bottles, cell construction]

[Grippers for bottles]

the means being for loading or unloading the apparatus

Inspecting cleaned containers for cleanliness

Cleaning flexible or delicate articles by methods or apparatus specially adapted thereto (B08B 3/12, B08B 6/00 take precedence)
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
- 2203/0235 . . . Cooling the motor pump

Details of machines or methods for cleaning hollow articles

- 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

Details of apparatuses or methods for cleaning pipes or tubes

- 2205/00 Detail 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

Details of apparatuses or methods for cleaning pipes or tubes

- 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
- 2209/002 . . . Details of apparatuses or methods for cleaning pipes or tubes
- 2209/02 . . . 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

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

- 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

Type of materials or objects being removed

- 2220/00 Type of materials or objects being removed
- 2220/01 . . . Adhesive materials
- 2220/02 . . . Chewing gum
- 2220/04 . . . Polymers

Other cleaning aspects applicable to all B08B

- 2230/00 Other cleaning aspects applicable to all B08B range
- 2230/01 . . . Cleaning with steam

Type of materials or objects being cleaned

- 2240/00 Type of materials or objects being cleaned
- 2240/02 . . . Optical fibers or optical fiber connectors