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, 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 members 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 3/00 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 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, 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}
7/04 . {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 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 9/00; cleaning the external surface (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 9/0431)}
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

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
take precedence)

(by burning-out (B08B 9/40 takes precedence)

(by methods involving the use of tools, e.g.
bottles, jars, cans are brought [(washing or
rinsing crockery or tableware A47L 15/00)]

(by methods involving 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]

(by apparatus into or on to which containers,
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11/04 . specially adapted for plate glass, e.g. prior to manufacture of windshields (cleaning the gap between permanently secured panes E06B 3/677)

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 (parts, details or accessories of cooking-vessels for withdrawing or condensing cooking vapours from such vessels A47J 36/38; refuse disposal B05F; 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)

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

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

2209/002 . . 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