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)

Definition statement

This place covers:
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 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, solar panels for the production of heat F24S 40/20; 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, reactive gases C23C16/445; 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)

Definition statement

This place covers:
The mechanical cleaning of objects by means of mechanical members such as tools, brushes, or analogous members, with or without the application of fluid.

B08B 1/007

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

Definition statement

This place covers:
The cleaning of objects by methods involving the use of tools, brushes, or analogous members, further comprising means to clean or regenerate the cleaning members.
Example: EP-A2-1101542

**B08B 1/008**

{using translating operative members}

**Definition statement**

This place covers:

The cleaning of objects by means of cleaning members comprising guiding means for performing a translatory movement along the object to be cleaned.


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**B08B 1/02**

Cleaning travelling work, e.g. a web, articles on a conveyor

**Definition statement**

This place covers:

The cleaning of objects while these are travelling past at least one cleaning member.

Example: DE-A1-19770602

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**B08B 1/04**

using rotary operative members (**B08B 1/02** takes precedence)

**Definition statement**

This place covers:

The cleaning of objects by means of cleaning members which are arranged to perform a rotary movement during cleaning.
Example: WO-A1-01/78910

B08B 3/00

Cleaning by methods involving the use or presence of liquid or steam (B08B 9/00 takes precedence)

Definition statement

This place covers:
The mechanical cleaning of objects by means of liquid. The cleaning of objects by means of contacting with steam.

B08B 3/003

{Cleaning involving contact with foam}

Definition statement

This place covers:
The cleaning of objects by means of contacting with a foam.

B08B 3/006

{Cabinets or cupboards specially adapted for cleaning articles by hand}

Definition statement

This place covers:
Manual cleaning of objects while these are located within a cabinet such as a parts washer.

Example: EP-A2-1524040
B08B 3/02

Cleaning by the force of jets or sprays

Definition statement

This place covers:
The cleaning of objects by means of the mechanical action of a liquid or steam jet.

Example: WO-A1-03/092524

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}

Definition statement

This place covers:
The cleaning of objects by means of hand-held spray guns.
B08B 3/028
{Spray guns}

Definition statement
This place covers:
Gun lances used in the cleaning of objects by means of hand-held spray guns.

B08B 3/04
Cleaning involving contact with liquid

Definition statement
This place covers:
The cleaning of objects by means of contacting with a liquid.

B08B 3/041
{Cleaning travelling work}

Definition statement
This place covers:
The cleaning of objects while these are travelling and in contact with a liquid.

Example: GB-A-2469605

B08B 3/042
{the loose articles or bulk material travelling gradually through a drum or other container, e.g. by helix or gravity}

Definition statement
This place covers:
The cleaning of objects while these are travelling gradually through a container in contact with a liquid.
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))

Definition statement

This place covers:
The cleaning of objects while these are within an agitated container filled with a liquid.

B08B 3/045

(using perforated containers, e.g. baskets, or racks immersed and agitated in a liquid bath (using perforated drums B08B 3/06))

Definition statement

This place covers:
The cleaning of objects while these are within a perforated container which is agitated within a liquid bath.


B08B 3/047

(Containers specially adapted therefor)

Definition statement

This place covers:
Specially adapted perforated containers.

B08B 3/06

using perforated drums in which the article or material is placed {(B08B 3/042 takes precedence)}

Definition statement

This place covers:
The cleaning of objects while these are within a perforated drum and contacted with a liquid.

**B08B 3/08**

the liquid having chemical or dissolving effect (substances used, see the relevant classes)

**Definition statement**

*This place covers:*

The cleaning of objects by means of contacting with a liquid having chemical or dissolving effect in addition to the mechanical action of the liquid.

**B08B 3/10**

with additional treatment of the liquid or of the object being cleaned, e.g. by heat, by electricity, by vibration

**Definition statement**

*This place covers:*

The cleaning of objects while these are contacted with a liquid and whereby the liquid or the object is subjected to an additional treatment.

**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)}

**Definition statement**

*This place covers:*

Subjecting the liquid to agituation.

**B08B 3/104**

{using propellers}

**Definition statement**

*This place covers:*

Subjecting the liquid to agitation by means of propellers.
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)

Definition statement

This place covers:
Subjecting the object or the liquid to sonic or ultrasonic vibrations.

Example: WO-A2-2005/124885

B08B 3/123

{Cleaning travelling work, e.g. webs, articles on a conveyor (conveyors B65G; handling webs B65H})

Definition statement

This place covers:
Subjecting the object or the liquid to sonic or ultrasonic vibrations while the objects are travelling.

B08B 3/14

Removing waste, e.g. labels, from cleaning liquid; {Regenerating cleaning liquids} (treatment of water in general C02F)

Definition statement

This place covers:
The additional treatment of the liquid consists in removing contaminants from the liquid.
Example: FR-A1-2820995

**B08B 5/00**

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

*Definition statement*

*This place covers:*

The cleaning of objects by means of a gas.

**B08B 5/02**

Cleaning by the force of jets, e.g. blowing-out cavities {(airguns or nozzles per se **B05B 1/005")

*Definition statement*

*This place covers:*

The cleaning of objects by means of the mechanical action of a gas jet.

**B08B 5/04**

Cleaning by suction, with or without auxiliary action (**B08B 9/035** takes precedence; } suction cleaners **A47L**)

*Definition statement*

*This place covers:*

The cleaning of objects by means of the mechanical action of suction.

**B08B 6/00**

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

*Definition statement*

*This place covers:*

The cleaning of objects by means of electrostatic action on the contaminants.
Example: WO-A1-2010/109755

**B08B 7/0007**

{**by explosions**}

**Definition statement**

This place covers:

The cleaning of objects by means of subjecting the objects to an explosion.


**B08B 7/0014**

{**by incorporation in a layer which is removed with the contaminants**}

**Definition statement**

This place covers:

The cleaning of objects by means of applying a layer to a contaminated surface, into which layer contaminants become incorporated, and removing the layer with the contaminants.
Example US-A-6123777

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

Definition statement
This place covers:
The cleaning of objects by means of subjecting the objects to the washing action of a liquid gas or a supercritical fluid.

B08B 7/0028
{by adhesive surfaces}

Definition statement
This place covers:
The cleaning of objects by means of applying a tacky layer to a contaminated surface, onto which layer contaminants become attached, and removing the layer with the contaminants.

Example: JP-A-8274059

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

Definition statement
This place covers:
The cleaning of objects by means of subjecting the objects to the action of radiant energy.
Example: WO-A1-02/052347

**B08B 7/0042**

{by laser}

**Definition statement**

*This place covers:*
The cleaning of objects by means of subjecting the objects to laser radiation.


**B08B 7/0064**

{by temperature changes}

**Definition statement**

*This place covers:*
The cleaning of objects by means of subjecting the objects to temperature changes.
**B08B 7/02**

by distortion, beating, or vibration of the surface to be cleaned \{(*B08B 7/0007 takes precedence*)\}

**Definition statement**

This place covers:
Example: GB-A-2336428

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**B08B 9/00**

Cleaning hollow articles by methods or apparatus specially adapted thereto \(\text{(B08B 3/12, B08B 6/00 take precedence)}\)

**Definition statement**

This place covers:
The cleaning of hollow objects by methods or apparatus specially adapted thereto, the objects being other than containers, pipes.

**B08B 9/0321**

\{using pressurised, pulsating or purging fluid \(\text{(E04F 17/126 takes precedence)}\)\}

**Definition statement**

This place covers:
Example: WO-A-97/15406

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**Special rules of classification**

In this group "Purging" is to be understood as "flushing". The concept of the group is that the pipe is being flushed.
The idea of the parent group B08B 9/032 is to cover subject-matter involving mechanical action with a cleaning fluid which is not classifiable in any of the subgroups.

**B08B 9/035**

**by suction**

**Definition statement**

This place covers:

Example: WO85/02565

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**B08B 9/043**

**moved by externally powered mechanical linkage, e.g. pushed or drawn through the pipes**

**Definition statement**

This place covers:

Example: WO-A1-03/095792
B08B 9/049
having self-contained propelling means for moving the cleaning devices along the pipes {, i.e. self-propelled}

Definition statement
This place covers:

B08B 9/053
moved along the pipes by a fluid, e.g. by fluid pressure or by suction

Definition statement
This place covers:

B08B 9/08
Cleaning containers, e.g. tanks

Definition statement
This place covers:
The cleaning of inner and/or outer surfaces of containers by methods or apparatus specially adapted thereto.

B08B 9/0804
{Cleaning containers having tubular shape, e.g. casks, barrels, drums (B08B 9/20 take precedence)}

Definition statement
This place covers:
The cleaning of containers, whereby the tubular shape of the container is essential to the definition of the cleaning method or apparatus.
**B08B 9/0808**

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

**Definition statement**

*This place covers:*

The cleaning of containers by means of mechanical members, whereby the shape of the container is essential to the definition of the mechanical member used.


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**B08B 9/0813**

{by the force of jets or sprays}

**Definition statement**

*This place covers:*

The cleaning of containers by means of a fluid jet, whereby the shape of the container is essential to the definition of the fluid jet applied.

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**B08B 9/087**

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

**Definition statement**

*This place covers:*

The cleaning of containers by means of mechanical members, whereby the shape of the container is not essential to the definition of the mechanical member used.

Example: DE-C1-3311117
**B08B 9/093**

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

**Definition statement**

*This place covers:*

The cleaning of containers by means of a fluid jet, whereby the shape of the container is not essential to the definition of the fluid jet applied.

**B08B 9/0933**

{Removing sludge or the like from tank bottoms}

**Definition statement**

*This place covers:*

The removal of sludge, sediment or the like from tank bottoms, using a fluid jet to fluidize the sludge, sediment or the like.

**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**)}

**Definition statement**

*This place covers:*

Methods and apparatus for the cleaning of series of bottles.


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**B08B 9/205**

{Conveying containers to or from the cleaning machines}

**Definition statement**

*This place covers:*

The cleaning method or apparatus being characterized by the method or apparatus for conveying the bottles to or from the cleaning machine.
B08B 9/44
the means being for loading or unloading the apparatus

Definition statement
This place covers:
The cleaning method or apparatus being characterized by the method or apparatus for loading or unloading the bottles.

B08B 9/46
Inspecting cleaned containers for cleanliness

Definition statement
This place covers:
The cleaning method or apparatus being characterized by the method or apparatus for inspecting cleaned bottles.

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)}

Definition statement
This place covers:
Collecting or removing dirt or fumes from the area where these are produced using a central suction system to which a plurality of collecting or removing devices are connected.

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}

Definition statement
This place covers:
Branch units configured to move along a sealed longitudinal slit in a main duct, the branch units travelling with a source of dirt or fumes.

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)}

Definition statement

*This place covers:*

Example: DE-A1-102004031881

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B08B 17/06

by giving articles subject to fouling a special shape or arrangement

Definition statement

*This place covers:*

Preventing fouling or deposition of fouling or of dust by means of giving articles subject to fouling a shape or arrangement such that fouling or deposition of fouling or of dust will be minimized or eliminated, e.g. by application of the lotus effect.

Example: DE-A1-102005013560