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Search 3: SFT=(faucet and spray and head) and IC=(e03c) (Results 671)

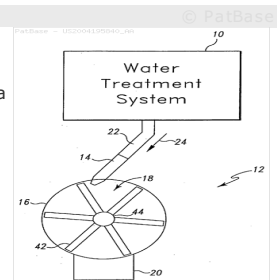
1) Family number: 30498177 (US2004195840A)

MINIATURE HYDRO-POWER GENERATION SYSTEM

Abstract: Source: US2004195840A A miniature hydro-power generation system may produce electric power from a flow of liquid. The miniature hydro-power generation system may include a housing that includes a plurality of paddles positioned to extend outwardly from an outer surface of the housing. The system may also include a nozzle and a centering rod extending through the housing. The housing may rotate around the centering rod when a stream of liquid from the nozzle is directed at the paddles. A generator that includes a rotor and a stator may be positioned within a cavity of the housing. The rotor may be coupled with the housing and the stator may be coupled with the centering rod. The rotor may rotate around the stator at high RPM to generate electric power when the housing rotates. The electric power may supply a load and/or may be stored in an energy storage device.

Probable Assignee: ERCHONIA CORP

Earliest Publication Date: 20010412



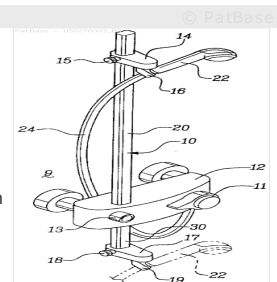
2) Family number: 20701637 (US6276003B)

ADJUSTABLE SUPPORT FOR A SHOWER

Abstract: Source: US6276003B An adjustable support for a shower, including a rod (10) installed in a substantially vertical position, which is supported near its midpoint by a support bracket (12) integrally formed with a mixing valve handle assembly (11). The rod (10) vertically extends in two branches (20, 30), an upper branch (20) and a lower branch (30) that mounts shower holders (19, 17) for retaining a hand held shower head (22). The holders (14, 17) are slidably mounted longitudinally along the rod and are equipped with a fastener for affixing them in a desired position. The rod (10) can be slidably adjusted longitudinally with respect to the support bracket (12) and, in this case, the support bracket for the rod is provided with a fastener (13) for affixing the rod (10) in place. The rod can furthermore be supported by a bracket (21) in proximity of its upper end.

Probable Assignee: MASCO CORP

Earliest Publication Date: 19990603



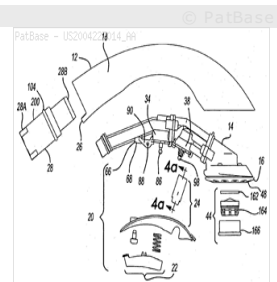
3) Family number: 31339752 (US2004227014A)

MULTI-PATTERN PULL-OUT SPRAY HEAD

Abstract: Source: US2004227014A A faucet head having a multi-pattern head and a fluid diversion system. The multi-pattern head has a stream outlet, a first spray outlet, and a second spray outlet. The fluid diversion system comprises a first valve, a second valve, and a water supply input. A first discharge pattern is characterized by the fluid diversion system connecting the stream outlet to the water supply input. A second discharge pattern is characterized by the fluid diversion system connecting the first spray outlet to the water supply input. A third discharge pattern is characterized by the fluid diversion system connecting the first spray outlet and the second spray outlet to the water supply input.

Probable Assignee: PRICE PFISTER INC

Earliest Publication Date: 20041118



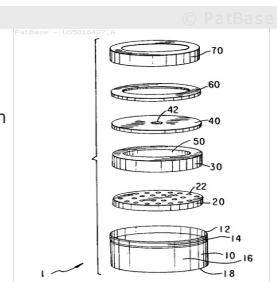
4) Family number: 14838590 (US5816497A)

WATER-SAVING DIFFUSER AND WATER DISTRIBUTION SYSTEM HAVING WATER FIXTURES WITH VARIABLE WATER-SAVING DIFFUSERS

Abstract: Source: US5816497A A water-saving diffuser for which a user perceives a relatively higher flow rate than the actual flow rate includes a hollow barrel for housing an accelerator disk having a plurality of apertures, a distributor disk having a central aperture of a predetermined size, and a chamber ring interposed between the distributor disk and the accelerator disk to define a chamber region therebetween. The central aperture of the distributor disk can be custom-tailored to produce a specific flow rate for a given water supply pressure. The water-saving diffuser may be used in a water distribution system to provide a predetermined uniform flow rate to all regions of a multi-story building.

Probable Assignee: WATER MANAGEMENT EQUIPMENT LTD

Earliest Publication Date: 19980514



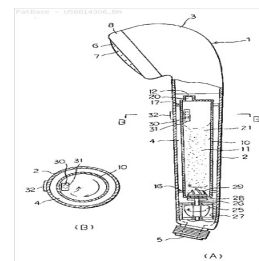
5) Family number: 15292008 (US6814306B)

WATER FEEDER WITH MIXED SOLUTION SUSTAINED-RELEASING FUNCTION

Abstract: Source: US6814306B A feed device is provided which can release a mixing solution in a suitable amount in correspondence with a flow rate of running water to thereby use the mixing solution efficiently so that the service life and exchange period of a cartridge can be prolonged. The feed device includes a body having a supply channel and a cartridge provided in the body. The cartridge includes a holding chamber for holding a mixing solution and a dilution chamber. The dilution chamber communicates with the supply channel through a sustained release outlet, and is supplied with the mixing solution from the holding chamber. When water passes through the supply channel, the mixing solution supplied to the dilution chamber is diluted with from the sustained release outlet. The mixing solution diluted to a uniform low concentration is sustainably released from the dilution chamber through the sustained release outlet to the supply channel.

Probable Assignee: OKUBO TAKAYASU

Earliest Publication Date: 20010208



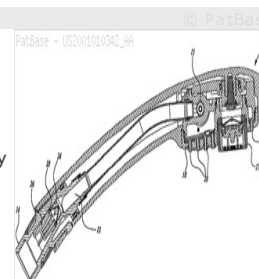
6) Family number: 28130169 (US2001010342A)

IN-LINE BASKET FILTER AND ANTI-SIPHON VALVE ASSEMBLY FOR **SPRAY** SPOUT AND THE LIKE

Abstract: Source: US2001010342A A hand held **spray** spout (10) has a basket filter (26) seated against an anti-siphon valve (24) proximate the base end of a water passage (12) within the spout. The filter has a plurality of protrusions (50) mounted within the inner diameter of the valve (24) and is also biased against the rim (52) of the valve. The filter has prongs (56) extending upstream from the basket section (40) to abut and be biased by a supply hose end which is mounted to the base end (14) of the hand held **spray** spout (10).

Probable Assignee: MASCO OF INDIANA CORP

Earliest Publication Date: 20010223



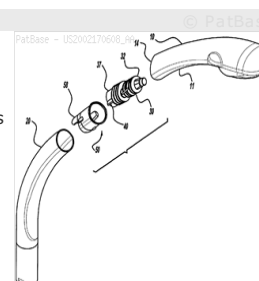
7) Family number: 28297587 (US2002170608A)

ANTI-WOBBLE **SPRAY** HEAD FOR PULL-OUT **FAUCET**

Abstract: Source: US2002170608A In a pull-out **spray head faucet** or hand shower an insert is disposed in the tube spout to keep the pull-out **spray head** or wand from wobbling when it is seated in the tube spout. The insert is generally tubular and is shaped and sized to fit into the tube spout. The insert has two opposed tabs on the interior walls which engage two wings on an adapter which is mounted in the wand, thereby securing the adapter and wand against wobble.

Probable Assignee: MASCO CORP

Earliest Publication Date: 20021121



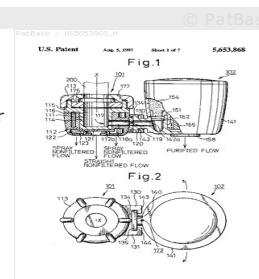
8) Family number: 29356562 (US5653868A)

DIVERTER AND WATER PURIFIER HAVING SAME

Abstract: Source: US5653868A A water purifier includes a diverter which can be detachably attached to a water **faucet** to select a plurality of water passages and a filter cartridge which can be detachably attached to the diverter to purify a water to be supplied through the diverter. The diverter is provided with a connector portion including a projection having a pair of guide grooves. The filter cartridge is provided with an engaging portion which can be inserted and fitted in the guide grooves. Disclosure is also directed to a diverter which includes a substantially cylindrical body which defines therein a main water passage to be connected to the **faucet**, and a rotatable selecting member which can be coaxially and rotatably fitted on the substantially cylindrical body and which is provided with a plurality of branch water passages which can be selectively registered with the main water passage of the substantially cylindrical body in accordance with the rotation of the selecting member.

Probable Assignee: MITSUBISHI RAYON CO LTD

Earliest Publication Date: 19951018



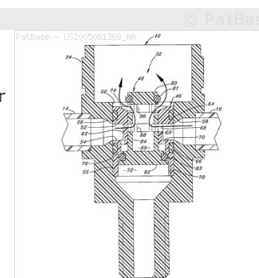
9) Family number: 31770321 (US2005061368A)

SIDE **SPRAY** DIVERTER VALVE

Abstract: Source: US2005061368A A side **spray** diverter valve with anti-siphoning and flow regulation of the water diverted to the **spray head**. A ported valve plunger sliding in a sleeve admits water from the inlet to the spout in one position while a lower O-ring seals the **spray** outlet. In the other position, the sleeve has axially directed ports which screen and trap particulates in the water over a predetermined size. The flow rate of screened water to the **spray** is regulated by the lower O-ring pressing against grooves in the wall of the sleeve.

Probable Assignee: NEOPERL INC

Earliest Publication Date: 20050324



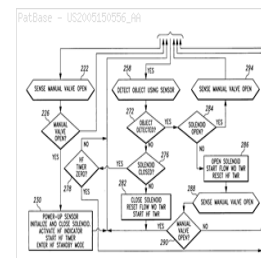
10) Family number: 32082313 (US2005150556A)

MULTI-MODE HANDS FREE AUTOMATIC **FAUCET**

Abstract: Source: US2005150556A A hands-free **faucet** comprises a proximity sensor, a logical control, a handle including a first touch control, a second touch control, and a mode indicator. The logical control has a manual mode (wherein the proximity sensor is inactive, and water flow is toggled on and off by positioning the handle) and a hands-free mode (wherein water flow is toggled on and off in response to the proximity sensor). The first touch control puts the **faucet** in the hands-free mode when touched by a user. The second touch control toggles the logical control between the hands-free mode and the manual mode when touched by a user. The mode indicator indicates which mode the **faucet** is presently in. The water flow has a temperature and a flow rate that are determined by the position of the handle.

Probable Assignee: DELTA FAUCET CO

Earliest Publication Date: 20050712



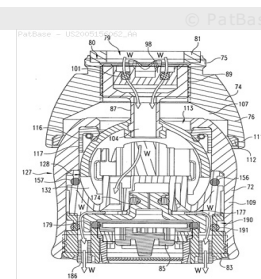
11) Family number: 32087428 (US2005156062A)

INTEGRATED SWIVEL **SPRAY** AERATOR WITH DIVERTER

Abstract: Source: US2005156062A A combination swivel **spray** aerator includes a stem that defines an inlet port for supplying water. The stem includes a neck and a swivel connector that is provided at one end of the stem. A **spray head** is coupled to the swivel connector in a swiveling manner. The **spray head** includes a housing and a swivel seal that seals between the housing and the swivel connector. A shroud is coupled to the stem for hiding at least the neck of the stem from view in order to provide a clean appearance. The swivel **spray** aerator further includes a diverter that switches between **spray** and aeration modes regardless which direction the **spray head** is rotated. A gimbal mechanism in the **spray head** allows the **spray head** to twist without requiring excessive swiveling friction.

Probable Assignee: DELTA FAUCET CO

Earliest Publication Date: 20050716



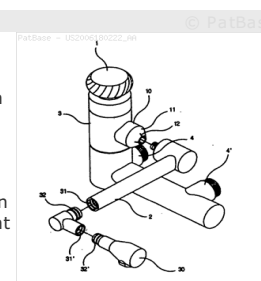
12) Family number: 33420629 (US2006180222A)

MESH-TYPE ANGLE-ADJUSTABLE **FAUCET**

Abstract: Source: US2006180222A Disclosed is a mesh-type angle-adjustable **faucet** for a kitchen sink, which can control the angle stepwisely by crown gears arranged at contact surfaces of two tubes. The **faucet** includes: a raw water pipe; a water tap; flow rate controlling means; a first tube connected with the water tap and having a first crown gear fixed at an end portion of the water tap via fixing means for preventing an idle rotation; a second tube having a second crown gear engaged with the first crown gear of the first tube at an end thereof via fixing means for preventing the idle rotation, the other end of the second crown gear being connected with the raw water pipe; an elastic member for allowing the first and second crown gears to be in close contact with each other; and a watertight member arranged at the contact surfaces of the first and second tubes.

Probable Assignee: JEUNG HYON JIN

Earliest Publication Date: 20050928



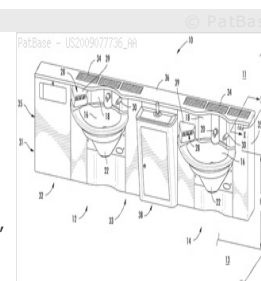
13) Family number: 43046216 (US2009077736A)

LAVATORY SYSTEM

Abstract: Source: US2009077736A A lavatory system is disclosed to include one or more integrated hand washing stations. Each hand washing station includes a basin, a **faucet**, a solenoid valve configured to control water flow to the **faucet**, and an electric hand dryer located adjacent the basin and the **faucet** so that the user of the washing station may use the **faucet** and the electric hand dryer without leaving the washing station. The electric hand dryer preferably includes an outlet to direct air across the associated basin so that any water that drips from the user's hands will fall within the basin. A control system may be provided to control activation of the fixtures such as the solenoid valve, the electric hand dryer, and/or soap dispenser. The control system may be configured, for example, to inhibit simultaneous activation of the solenoid valve and the hand dryer. A photovoltaic system may be provided to provide power to one or more of electrical fixtures.

Probable Assignee: BROOKS STEVENS

Earliest Publication Date: 20090326



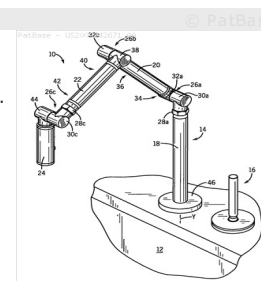
14) Family number: 43781695 (US2009242671A)

ARTICULATING **FAUCET** AND JOINT THEREFOR

Abstract: Source: US2009242671A Articulating **faucets** have segments connected by a plurality of movable joints. Each joint includes a pair of ceramic mating disks arranged in face to face contact, but able to rotate relative to each other when sufficient force is applied. A wave spring helps keep the disks in constant contact, and rubber spheres press against opposing surfaces of the ceramic disks to produce shear forces to keep the joint stable. In the **faucet** water passes through the joint by means of a tube or a hollow banjo bolt sealed from the joint. The **faucet** can therefore direct water to a wide variety of positions, without the need for a side **spray**, and while reducing the risk of joint leakage.

Probable Assignee: KOHLER CO

Earliest Publication Date: 20091001



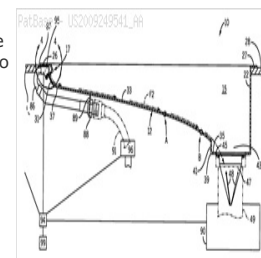
15) Family number: 43812545 (US2009249541A)

FOOD PREPARATION SINK

Abstract: Source: US2009249541A Food preparation sinks are disclosed which have an integral raised work area that is rinsed by an automatic system. Food waste or the like present in that area can be washed into a sump above a drain, and the weight of the waste and water in the sump is enough to automatically drive them through a baffle to a food waste disposer, without requiring the baffle to be manually opened. An automatic controller system coordinates water flow and food waste disposer operation, and the water supply can be linked to the sink below the sink rim to save counter top space. In some forms multiple rinsing nozzles are provided which pulse in altering fashion.

Probable Assignee: KOHLER CO

Earliest Publication Date: 20091008



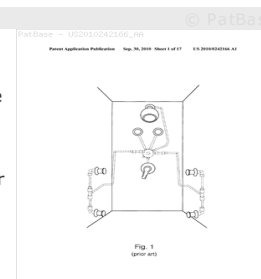
16) Family number: 46874333 (US2010242166A)

EXPOSED SHOWER SYSTEM

Abstract: Source: US2010242166A A shower system of exposed type is disclosed, comprising a main flow passage connected to a water supply; at least two conduits which are in communication with the main flow passage and connected in pair and horizontally to two sides of the main flow passage; at least two shower **spray** spouts in communication with the at least two conduits, and the shower **spray** spouts being carried at respective outer ends of the conduits; wherein the conduits are arranged such that the shower **spray** spouts are in a 180 degrees counter sit relationship with respect to the main flow passage and are combined with the conduits to define a shower stall.

Probable Assignee: CHAN

Earliest Publication Date: 20100929



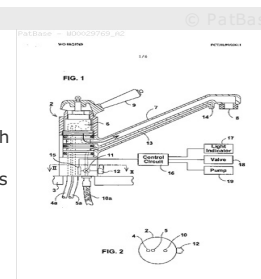
17) Family number: 52209986 (WO0029769A2)

WATER TAP CONSTRUCTION

Abstract: A water tap particularly for kitchen sinks includes a body member attachable to the kitchen sink and having first and second ports for connection to hot and cold water supply lines, respectively, of the kitchen sink and a third port for connection to a third water supply line; and a handle rotatably mounted about a longitudinal axis with respect to the body member and operatively connected to a valve assembly such that: (a) rotating the handle to a selected position within a first operating region connects the first and second ports to a mixing chamber and controls the proportions of the hot and cold water supplied to the mixing chamber from the respective hot and cold water supply lines for discharge through a spout; and (b) rotating the handle to a selected position within a second operating region connects the third port to the spout for discharging water from the third water supply line.

Probable Assignee: GRANOT J

Earliest Publication Date: 20000525



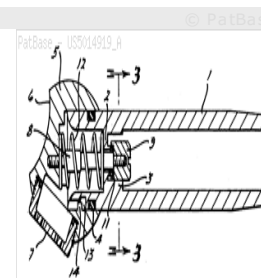
18) Family number: 9027193 (US5014919A)

SMALL HAND-HELD SHOWER HEAD FOR DOMESTIC SINKS CONNECTED TO A FAUCET

Abstract: Source: US5014919A PCT No. PCT/US89/03187 Sec. 371 Date Apr. 18, 1990 Sec. 102(e) Date Apr. 18, 1990 PCT Filed Jul. 24, 1989 PCT Pub. No. WO90/00935 PCT Pub. Date Feb. 8, 1990.A hand-held shower **head**, commonly called a vegetable **spray**, for domestic sinks having a tubular handle member (1) connectd to the water supply via flexible piping. A jet breaking or aerating **spray head** of the shower is axially and slidably mounted on the tubular stem which creates a seal. This **spray head** is connected through an internal stick (8) to a valve element (9) which cooperates with a valve seat (2) that is in the tubular stem between the valve element and the **spray head**. A spring (12) is preferably placed between the **spray head** and a ledge (2) which forms the valve seat for the valve element. Preferably, the valve element (9) is a separate member from the connecting stem and has an undercut seat (10) for receiving a sealing gasket (11). The gasket (11) can be inserted into this undercut seat (10) when the valve element (9) is separated from the connecting stem (8), but cannot be taken out again when the connecting stem is fixed to the valve **head**.

Probable Assignee: MASCO CORP

Earliest Publication Date: 19900208



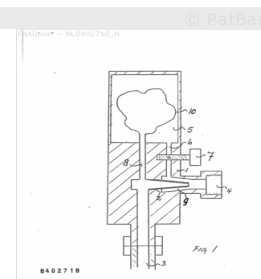
19) Family number: 10314555 (NL8402718A)

UNIT TO SUPPLY BATH FOAM LIQ. INTO WATER DURING SHOWERING - HAS HOUSING WITH WATER INLET TO EJECTOR NOZZLE AT SHOWER HOSE CONNECTION AND WATER PRESSURISED LIQUID CHAMBER CONNECTABLE TO EJECTOR CHAMBER

Abstract: The unit is intended for admixing a liquid substance to a liquid flow passing (from 3) to an outlet (4) with flow resistance, particularly bath foam liquid to water passing to a shower **head**. It comprises a housing (1) with duct connecting the water supply (3) to an ejector nozzle (2) arranged in a chamber (9) with connection (4) to the shower. The housing comprises an integral or separable chamber (5) which contains the foam liquid and is connected (8) with the supply (3). This chamber (5) connects, via a duct (6) with shut-off valve (7), to the ejector chamber (9). The liquid in the chamber (5) is preferably separated from the water by a flexible bag (10).

Probable Assignee: KOUTSTAAL WILLEM

Earliest Publication Date: 19860401



20) Family number: 1031861 (US3706418A)

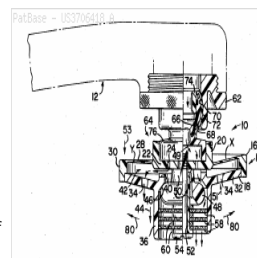
AERATOR

© PatBase

Abstract: Source: US3706418A A water aerating device having a housing which comprises a diaphragm cap and a nozzle cap cemented, welded or pressed fitted together such that movement of a diaphragm integrally formed on the diaphragm cap causes relative movement of the nozzle cap and a change in the configuration of a **spray** chamber formed therebetween. Sealing means is positioned in cooperative relation with a portion of the nozzle cap which is movably disposed so as to move into and out of sealing engagement with the sealing means wherein the sealing means may be automatically centered by virtue of it being movably connected within the housing. The device may be immovably attached to a water outlet or alternatively may include a swivel means interconnecting the housing to an adapter which is attached to the water outlet wherein a combined bearing and seal is positioned between the swivel means and the adapter to allow movement of the housing relative to the water outlet. Issuance of water from the device through a nozzle formed on the nozzle cap is in the form of an aerated stream wherein issuance of the water from fluid passages in the housing is in the form of a **spray** and control of the water's point of issuance is determined by the location of the diaphragm in a non-extended or extended position.

Probable Assignee: ROBERT W HYDE

Earliest Publication Date: 19721219



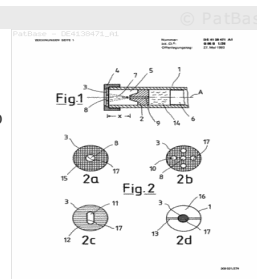
21) Family number: 10615047 (DE4138471A1)

FOAM GENERATING NOZZLE FOR PRESSURISED LIQUIDS E.G. FOR AERATION OF TAP-WATER - DOES NOT REQUIRE SEC. VENTURI AIR INLETS BETWEEN BREAK-UP NOZZLE AND SIEVE SCREEN

Abstract: Source: DE4138471A1 The foam in **spray** nozzles for liquids have a fine break-up nozzle for breaking up liq. fed under pressure and a sieve spaced apart from the break-up nozzle and on the axis of the conical **spray** beam. The sieve (3) has at least one sieve-free aperture (8,10,11,16) (claimed). The sieve-free holes in the sieve-screen can be varied to suit the prod./application, and are generally greater than 0.26 mm., more usually 0.6-1.0 mm., and in particular a hole area of 0.049-0.785 mm² is claimed. In particular embodiments claimed, the sieve screen can be convex or concave. In a further claimed embodiment, the sepn. distance of screen and break-up nozzle is adjustable. USE/ADVANTAGE - The foam producing nozzle arrangement is used for water taps, household appliances and domestic cleanser dispensers e.g. break-up actuator nozzles, providing uniform **spray**, and without the necessity for Venturi type secondary air inlets between the the break-up nozzle and the sieve screen.

Probable Assignee: BERGMANN FRANZ

Earliest Publication Date: 19930527



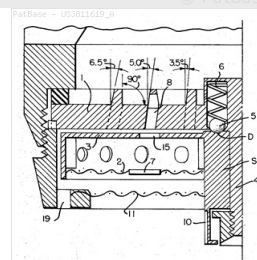
22) Family number: 1088629 (US3811619A)

SPRAY PRODUCING DEVICE

Abstract: Source: US3811619A An aerator arranged to vary the velocity and aeration of the issuing jet of water having a casing with one or more screens, which may have holes in them, arranged thereon and rotatable to vary and/or eliminate the screen resistance for producing alternately different **sprays** wherein the jets may or may not be bubbly. A rotatable sealing device may be arranged to cover various holes in a diaphragm mounted on the upstream side of the aerator. The velocity and aeration of the output jets may be varied by manually adjusting either the rotatable screens or the sealing disc, or through cooperation of both.

Probable Assignee: AGHNIDES ELIE P US

Earliest Publication Date: 19740117



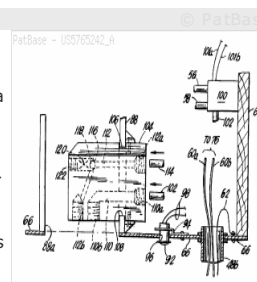
23) Family number: 10969059 (US5765242A)

HAND SANITIZING APPARATUS

Abstract: Source: US5765242A Hand sanitizing apparatus for use in combination with existing wash basins having a water supply. A person's hands are washed and dried while held at a sensed position below the apparatus. The apparatus includes a housing adapted to be supported a given height above the wash basin, and a soap/water **spray head** fixed inside the housing to direct soap and water toward the person's hands. Hot and cold water lines extend between the wash basin water supply and a solenoid valve in the housing, to communicate warm rinse water from the valve when opened to the **spray head** of the apparatus. A soap reservoir and pump are arranged inside the housing to communicate liquified soap to the **spray head**. An air dryer unit fixed inside the housing serves to dry the hands after wetting by the soap and water **sprays**. An electrical control circuit includes a sensor that detects the presence of the hands at the sensed position, and a microcontroller for sequential activation of the soap pump, the water solenoid valve, and the air dryer unit over preset operating cycles.

Probable Assignee: MARCIANO JOSEPH

Earliest Publication Date: 19980616



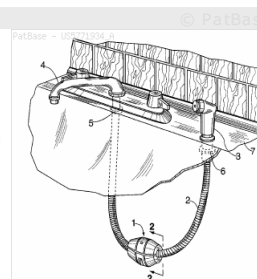
24) Family number: 10991449 (US5771934A)

ZINC-BASED **SPRAY FAUCET** HOSE COLLAR WEIGHT

Abstract: Source: US5771934A A collar weight for securing hand held **spray faucet** hoses therethrough is provided, wherein the collar weight is made of a composition including a zinc-based alloy to replace the use of lead in the collar weight, to prevent leaching of lead from the collar weight. To maintain the hose in an untangled position beneath the surface of a sink, the collar weight is strategically placed along an arcuate surface of the hose to weigh down the hose at approximately the midpoint of the hose. The collar weight includes a top half collar portion and a lower half collar portion, which are joinable at respective inner edges thereof by fastening means, such as screws, to provide a generally hollow longitudinally extending bore for insertion of the hose therein.

Probable Assignee: IW IND INC

Earliest Publication Date: 19980630



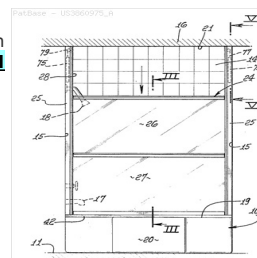
25) Family number: 1118775 (US3860975A)

BATHTUB CLOSURE MEANS HAVING VERTIFICALLY SLIDABLE PANELS AND METHOD OF ASSEMBLY

Abstract: Source: US3860975A A bathtub closure means comprising horizontally extending panel means arranged to close about two-thirds of the distance between the top of a tub wall and a ceiling of normal height and arranged in open position to provide access and entry to the tub along virtually the entire length of the tub with substantial **head** room. A bathtub closure and method of assembly comprising jamb means, sill means, panel means, and panel guide means arranged and constructed to facilitate shipping, installing, assembling and aligning in an opening to provide an effective closure of light weight and smooth operation.

Probable Assignee: GROSSMAN ABRAHAM US

Earliest Publication Date: 19740916



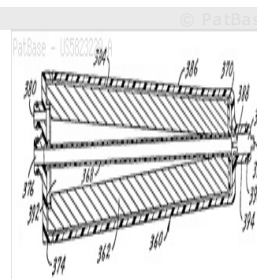
26) Family number: 11193473 (US5823229A)

FAUCET HAVING MULTIPLE WATER DISCHARGES

Abstract: Source: US5823229A A **faucet** having multiple water discharges includes a housing, an input water connection for the housing, a stream discharge on the housing, a **spray** discharge on the housing, a filtered water discharge on the housing, a water filter within the housing, and a control valve in the housing connected to each of the water discharges. There is an unfiltered water flow path from the input water connection to the control valve. A manual actuator accessible from the exterior of the housing operates the control valve to direct water from the unfiltered water flow path to either the stream discharge or the **spray** discharge. There is a filtered water flow path from the input water connection, through the filter, to the control valve. A filtered water manual actuator accessible from the exterior of the housing operates the control valve to direct filtered water to the filtered water discharge.

Probable Assignee: MOEN INC

Earliest Publication Date: 19980606



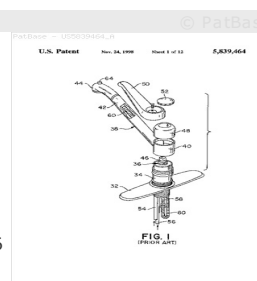
27) Family number: 11263328 (US5839464A)

CARTRIDGE VALVE WITH VACUUM BREAKER

Abstract: Source: US5839464A A cartridge valve 116 includes a fixed disk 80 and a movable disk 118 mounted in a housing 66. A lever 46 extends through a major opening 72 axially located at one end of the valve 116. The lever 46 is attached to a coupler 130 for facilitating movement of the movable disk 118 relative to the fixed disk 80 to control the flow and temperature of water passing through the valve 116. A flexible valve 144 is attached to the coupler 130 and, in normal use of the valve 116, prevents holes 136 formed therethrough from communicating with a passage formed through the movable disk 118. Air from the environment surrounding the valve 116 can enter the major opening 72, and upon the occurrence of a negative pressure in the water supply, will flex the valve 144 to allow air to enter the supply line to negate the undesirable effects thereof. In another cartridge valve 160, holes 166 are formed through the side wall of the housing 66 to provide further air communication through the holes 136 of the coupler 130. In still another cartridge valve 168, the lever 46 occupies the major opening 72 to the extent that there is no effective communication between the major opening and the holes 136 formed in the coupler 130. In this instance, the holes 166 formed in the side wall of the housing 66 provide the communication between the holes 136 of the coupler 130 and the environment surrounding the valve 116.

Probable Assignee: EMHART INC

Earliest Publication Date: 19980709



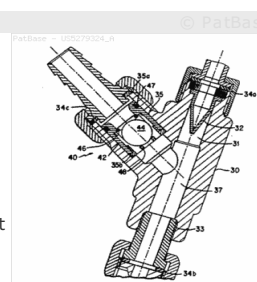
28) Family number: 11424903 (US5279324A)

ANTI-SIPHONING VALVE ASSEMBLY AND PLUMBING FIXTURE INCLUDING SAME

Abstract: Source: US5279324A A plumbing system is provided with a coupling having a chamber, an inlet passageway through which a fluid may enter the chamber from a supply, an outlet passageway through which a fluid may exit the chamber and the coupling, and a vent passageway in fluid communication with the chamber and having a vent inlet in communication with ambient atmosphere and a vent outlet in communication with the chamber. The coupling is provided between a source of liquid (e.g. a control capsule for mixing hot and cold water supplies via a user operable valve) and an outlet nozzle (e.g., a hose-connected **spray head**). A vacuum breaker check valve is located in the vent passageway of the coupling and includes a valve member for closing the vent inlet when pressure in the chamber is greater than pressure at the vent inlet and for opening the vent inlet when pressure in the chamber is less than pressure at the vent inlet.

Probable Assignee: KARRER WEBER AND CIE AG

Earliest Publication Date: 19940118



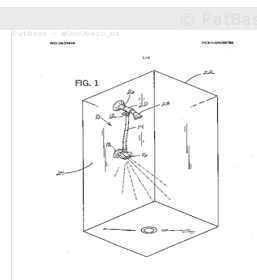
29) Family number: 11583760 (WO0039410A1)

PLUG-IN SHOWER SYSTEM

Abstract: A plug-in anti-scald adjustable shower system provides an attachment coupling which allows quick connection/disconnection of the shower system to an existing shower **head**, a flexible conduit having a first end attached to the coupling and a movable shower **head** attached to the second end of the flexible conduit. The movable shower **head** having an anti-scald device installed therein for stopping water flow after it reaches a certain threshold temperature, and a suction cup attached to the movable shower **head** allowing for independent positioning of the shower **head** on a shower stall wall or bathtub enclosure. In a second embodiment, a second suction cup is attached to the flexible conduit for keeping the flexible conduit close to the wall of the shower enclosure. The shower assembly has provisions for attaching a decorative cover on the shower **head**.

Probable Assignee: IDEA FACTORY INC

Earliest Publication Date: 20000706



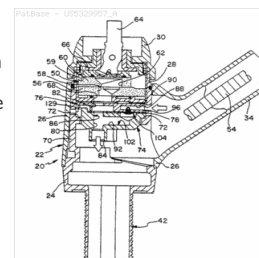
30) Family number: 11632499 (US5329957A)

FLUID FLOW SYSTEM VACUUM BREAKER

Abstract: Source: US5329957A A fluid flow system (20) includes fluid inlet conduits for supplying fluid through a fluid flow path (86) as formed by a manifold (74) and a module (76). The fluid is directed through fluid flow path (86) to a flexible conduit (54) and to a fluid dispensing wand (36) whereat the fluid can be selectively dispensed in a stream or a **spray**. A linking passageway (102) is formed by manifold (74) and module (76) to couple selectively the pressure of a pressurized environment, such as atmospheric pressure, to fluid flow path (86). An umbrella valve (104) is located in linking passageway (102) and is responsive to the development of a negative pressure at the fluid supply and thereafter couples the pressure of the pressurized environment to fluid flow path (86). This action neutralizes the effects of the negative pressure and precludes the reverse flow of fluid within fluid flow system (20).

Probable Assignee: EMHART INC

Earliest Publication Date: 19940719



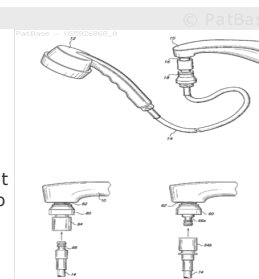
31) Family number: 11644811 (US5926868A)

QUICK CONNECT WATER FLOW SYSTEM

Abstract: Source: US5926868A The bathtub shower system includes a fitting for screwthreaded connection to the bathtub **faucet**. The fitting cooperates with a backflow preventer assembly, including a quick connect/disconnect such that the backflow assembly can be readily and easily connected to or disconnected from the fitting. The backflow preventer assembly is coupled to a shower **head** hose for use by an individual reclining or sitting in a bathtub. The backflow preventer assembly prevents siphoning of water from the tub to the water supply in the event the water supply is curtailed or suctions the tub **faucet**. The quick connect/disconnect enables the shower system to be removed from the bathtub **faucet** while permitting the bathtub **faucet** to operate in a conventional manner.

Probable Assignee: BJERKE THOMAS E

Earliest Publication Date: 19990727



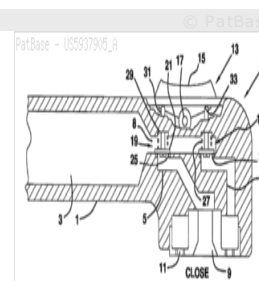
32) Family number: 11672398 (US5937905A)

FAUCET HEAD THREE-WAY VALVE

Abstract: Source: US5937905A A **faucet head** having at least two different types of outlets, utilizes a three-way valve which permits on-off operation of the **faucet** distal end. In conjunction with on-off operation, the three-way valve also controls flow of water through one of the **faucet head** outlets.

Probable Assignee: LORD KORI SANTOS

Earliest Publication Date: 19990817



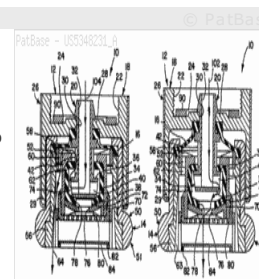
33) Family number: 11679183 (US5348231A)

TWO-STAGE AERATOR

Abstract: Source: US5348231A A two-stage aerator manually operable to provide either a low-volume **spray** or a high-volume stream. A valve poppet maintains the aerator in the selected position so long as water is flowing through the aerator. The low-volume **spray** position is the default, and the aerator includes a resilient diaphragm to return the aerator to this position whenever water flow is terminated.

Probable Assignee: ARNOLD DON C

Earliest Publication Date: 19940920



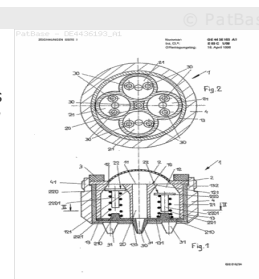
34) Family number: 11873205 (DE4436193A1)

WATER TAP JET CONTROL WITH PERFORATED PLATE

Abstract: Source: DE4436193A1 The perforated plate (10) is located upstream of one or more water outlet nozzles (30), downstream of separate flow chambers (20,21) following the perforated plate location. Parallel to the first flow chamber (20) with an inlet aperture (11), the remaining one (21) has separate inlet aperture (12). The separate inlet aperture(s) is so controlled by a valve (22), biased in its stop position that it is pressed into its opening position by a given pressure of the water flow. The valves of several flow chambers open sequentially with increased pressure of the water flow, and close by reduced pressure.

Probable Assignee: GROHE ARMATUREN FRIEDRICH

Earliest Publication Date: 19960418



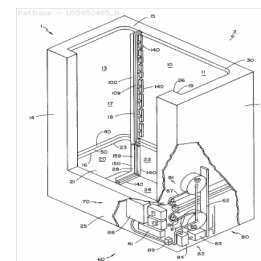
35) Family number: 12165605 (US5452485A)

GLIDING TUB AND SHOWER CLEANER

Abstract: Source: US5452485A A gliding tub and shower cleaning device for automatically cleaning a bath tub and a shower stall. The device consists of a control center, a tub glider and a shower glider. The tub and shower gliders have brushes attached and are connected to drive systems which move the gliders around the inside of the shower stall and the bathtub on tracks. The tracks contain a continuous fluid path for transporting fluid from the control center to the gliders. The tub and shower gliders **spray** a cleaning solution mixture and the brushes contact and remove dirt and grime from the walls and bottom of the shower and bathtub.

Probable Assignee: ROSS LESLIE

Earliest Publication Date: 19950926



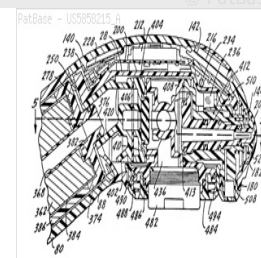
36) Family number: 12404125 (US5858215A)

WATER FILTER CONTAINING FAUCET AND DISPLAY THEREFOR

Abstract: Source: US5858215A The combination of a water filter and a display for indication of the water filter condition includes an electrical circuit connected to the display and responsive to use of the water filter. The circuit includes a microcontroller, a timer connected to the microcontroller and providing timing signals thereto, and a switch connected to the microcontroller and responsive to the flow of water from the filter to cause the microcontroller to process the timing signals. The microcontroller is programmed to utilize the timing signals to provide an electrical signal to the display indicative of filter condition.

Probable Assignee: MOEN INC

Earliest Publication Date: 19990112



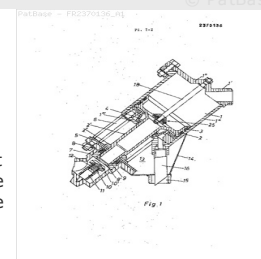
37) Family number: 1252601 (FR2370136A)

PIECE DE ROBINETTERIE DE DEBIT, NOTAMMENT POUR COUPE-TUYAU DANS DES CONDUITES D'EAU POTABLE

Abstract: The pipe disconnecter to be installed, in particular, in drinking-water lines has a cylinder (1), to be connected to the drinking-water supply line, a piston (2), which is displaceably guided in said cylinder, is subjected to the action of a restoring force and has a piston casing (2') passing through the cylinder floor (1), and a valve body (25) fitted on the cylinder cover (1"). In the pushed-in position of the piston (2), when the liquid supply is shut off, said valve body closes the piston casing (2') and only releases the liquid through-passage of the same when the piston casing (2') has been extended to a sufficient extent by the water pressure exerted on the piston (2) when the liquid supply stream has been released, that is to say when the piston casing (2') has been pushed, by its free casing end, into a discharge connecting stub (7) connected to the water consumer point. In order that, when the piston casing (2') is in the extended position, the valve body (25) poses a lesser obstruction to the water throughflow, operates such that it is not as susceptible to disruption and does not produce as much noise, and does not, itself, need to be sealed, the valve body (25) is fitted in the cylinder (1) such that it cannot move and is provided with a circumferential seal of such a diameter that, when the piston (2) is pushed in, the valve body projects in a sealing manner into the piston casing (2') of said piston.

Probable Assignee: WALETZKO ALFRED APPARATEBAU

Earliest Publication Date: 19780510



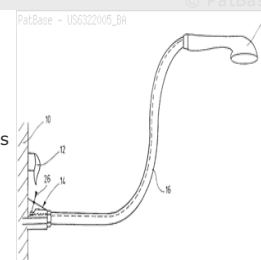
38) Family number: 12967154 (US6322005B)

SHOWER SYSTEM WITH ADJUSTABLE STREAMS

Abstract: Source: US6322005B The invention relates to a shower system with a showerhead (18) which is connected to a mixer faucet (12) for warm and cold water via a water delivery channel (16) and can be operated with various, according to selection, streams. According to the invention, a remote control unit is provided for adjusting the stream of the showerhead in order to enable an easier and more reliable change of the stream. To this end, an actuating element is located at a distance from the showerhead.

Probable Assignee: FRAUNHOFER GES ZUR FORDERUNG DER

Earliest Publication Date: 19990408



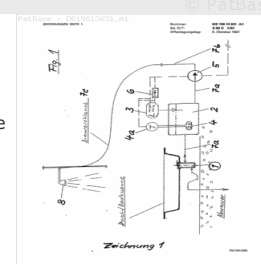
39) Family number: 13073308 (DE19613631A1)

CIRCULATION EQUIPMENT FOR SHOWER WATER

Abstract: Source: DE19613631A1 The equipment consists of a storage tank (2) with a circulating pump (5), pipe (7a) and hose (7b,7c) runs and unions. The pump can be controlled by a float switch with delayed opening and a foot operated waste pipe valve provided to select between running the water to waste or circulating it. Two separate waste pipes can be provided one discharging the water to the circulating system. A heater can be fitted in the storage tank to provide manual or automatic temperature control.

Probable Assignee: MAINEWITSCH ISOLDE

Earliest Publication Date: 19971009



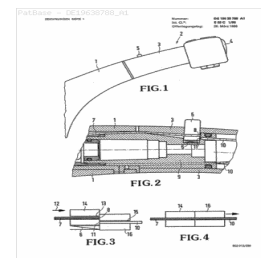
40) Family number: 13232806 (DE19638788A1)

SANITARY FITTING, E.G. FOR SHOWER HEAD VALVE

Abstract: Source: DE19638788A1 The fitting includes an actuator (5) which energises a mixing valve motor drive and is coupled to a control line formed, at least partly, by an optical fibre (7,10), which transmits the control signals as photosignals. Preferably the actuator switches directly a photopath through the optical fibre, particularly mechanically. Typically the actuator engages and moves the optical fibre. A light source for the optical fibre and a photoreceiver are located in the region of the control line end allocated to the drive, while the actuator is fitted at the control line opposite end. The control line may be incorporated in the shower hose.

Probable Assignee: GROHE KG HANS

Earliest Publication Date: 19980326



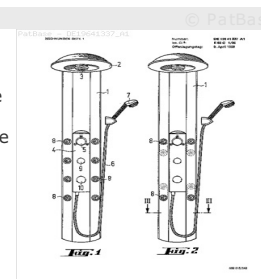
41) Family number: 13245197 (DE19641337A1)

HOLDER FOR **HEAD** OF SHOWER

Abstract: Source: DE19641337A1 The holder has a vertical profile (1) extending from the base of a shower cubicle to approximately **head** height and a number of side shower **heads** (8), positioned in two parallel rows along the profile, to generate a vertical shower jet area. All shower **heads** in one row are supplied with water via a valve. The shower **head** area can be adjusted in height or vertical length or type of jets. Some of the shower **heads** may be vertically displaceable on the holder. The upper or lowest shower **head** may have integrated volume control, and one may have integrated jet type adjustment.

Probable Assignee: GROHE KG HANS

Earliest Publication Date: 19980409



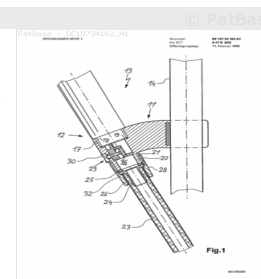
42) Family number: 13581933 (DE19734162A1)

MOUNTING FOR SANITARY ARTICLE SUCH AS SHOWER ATTACHMENT

Abstract: Source: DE19734162A1 Mounting (11), e.g. attached to the lower part (12) of a shower attachment (13), is fastened to a mounting bar (14). Preferably the mounting has a force-fitting attachment with a snap action connection from at least one side of the mounting bar and can be detached from the mounting bar.

Probable Assignee: GROHE KG HANS

Earliest Publication Date: 19990211



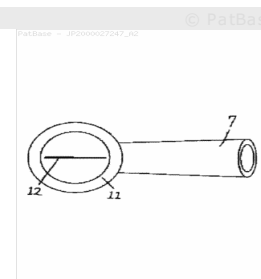
43) Family number: 13623990 (JP2000027247A)

KITCHEN SPOUT **HEAD**

Abstract: Source: JP2000027247A PROBLEM TO BE SOLVED: To quickly wash dishes or the like in a kitchen by boring a slit-like elliptic hole on a **spray** plate mounted on the lower part of the passage of a spout **head**. SOLUTION: A spout **head** 7 has a horizontally long passage in the inner part, and an opening is formed in the top end lower part of the passage. A disk-shaped **spray** plate 11 having a mixed water discharging elliptic hole 12 in the center is mounted by screwing a female screw part formed on the inside surface to the male screw part on the opening outside surface. When the lever of mixing valves for water combination **faucet** is operated in a prescribed direction in the use of the spout **head** 7, the mixed water is discharged to a vertically long wide range through the elliptic hole 12 bored in the **spray** plate 11 at the top of the spout **head** 7. Since the elliptic hole 12 is bored in the vertically long slit form, the mixed water can be widely discharged toward a sink with broad with a strong force. Accordingly, the whole surface of a vegetable or dish can be quickly washed.

Probable Assignee: CLEANUP CORP

Earliest Publication Date: 20000125



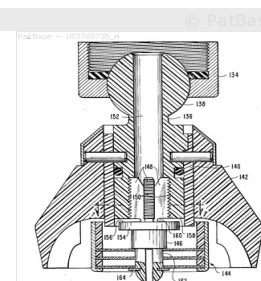
44) Family number: 1370704 (US3768735A)

COMBINATION **SPRAY** AND AERATOR DEVICE

Abstract: Source: US3768735A A combination **spray** and aerator device is disclosed for attachment to a **faucet** and includes a deflector selectively movable between a stream deflecting position in which the water is caused to flow through an aerator assembly and a non-deflecting position in which the water flows unobstructed to a **spray** skirt. The deflector may comprise a sleeve axially displaceable between the deflecting and non-deflecting positions.

Probable Assignee: WARD IRVING A

Earliest Publication Date: 19731008



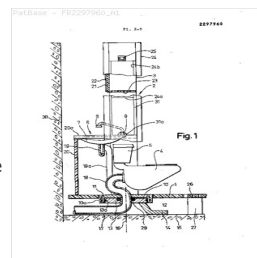
45) Family number: 1460424 (FR2297960A)

CONSTRUCTIONAL UNIT OF SANITARY TYPE WITH PIVOTING SUPPORT PLATE - HAS HOLE BETWEEN TOILET PAN SPACE REGION AND WASH REGION THROUGH WHICH BASIN MAY BE REACHED FROM TOILET PAN SPACE

Abstract: Source: FR2297960A (Claim 1) 1. Bloc sanitaire a plateau tournant autour d'un axe vertical, portant une structure composee d'au moins une cuvette d'aisance et d'au moins un lavabo, ces appareils etant disposes au-dessus de secteurs differents du plateau, le bloc etant caracterise en ce que la structure presente, au-dessus du lavabo, une ouverture par laquelle on peut atteindre le lavabo lorsqu'on se trouve dans la-partie de la piece situee au-dessus de la cuvette d'aisance. A sanitary type constructional unit having a pivoting plate or support and a unit fixed to this which consists of a toilet pan (4) and hand washing sink type unit with a mirror mounted above the sink itself on the unit, has the constructional unit so designed that there is a pentrant aperture between the hand wash basin unit (6) and the mirror. This aperture allows the hand wash basin unit (6) to be reached by the hands from the space or room in which the toilet pan (4) is situated. The hand wash basin (6) is provided with a shower type head (9) on the end of a hose.

Probable Assignee: BUCHER RENE

Earliest Publication Date: 19760715



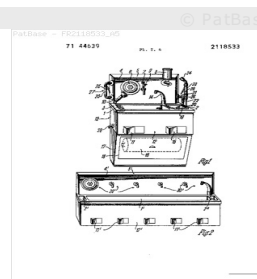
46) Family number: 14860718 (FR2118533A)

KNEE OPERATED TAP - FOR WASHING AND DISINFECTING INSTALLATION

Abstract: Source: FR2118533A (Claim 1) 1. Dispositif combine de nettoyage et/ou de desinfection colportant au moins une cuvette et des robinets a l'aide desquel l'alimentation en liquides peut etre reglee, notamment pour des installations exposees a la contamination, caracterise par le fait qu'il est prevu un dispositif d'actionnement par le genou (11, 15 ou 11') au moins pour l'un des robinets (1(), 14 ou 30'). The installation e.g. for use in hospitals includes a basin, and taps for supplying washing or disinfectant fluid to be supplied to the basin to allow manual washing of articles. The taps are provided with snap-action valves, operating pref. on an over centre toggle system. The valve actuating lever is connected to a pivoted operating member, arranged at knee height, and having two mutually inclined surfaces which can be pressed by the knee to pivot the operating member in one direction or the other to turn the tap on or off. The hands are left free to wash the articles.

Probable Assignee: NIRO PLAN AG

Earliest Publication Date: 19720404



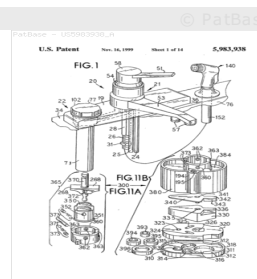
47) Family number: 14956663 (US5983938A)

COMBINED FAUCET AND FILTER ASSEMBLY

Abstract: Source: US5983938A A combination faucet assembly and filter assembly is provided wherein these respective assemblies are interconnected in a side-by-side relationship by pipes preferably located in a common housing structure. The combination is adapted for use in association with a kitchen sink or the like. The faucet assembly incorporates a valve for mixing hot and cold tap water and for diverting cold tap water for passage through a filter in the filter assembly. A spout is preferably associated with the faucet assembly. A pivotable faucet lever is preferably associated with the faucet assembly. The lever has a universal type of movement capability and is manipulated by an operator to accomplish regulating of either such mixing of such diverting, and also the regulating of water volume issuing from the spout. Preferably, in mixing hot and cold in an operator selected ratio are fed to a mixing chamber adjacent the valve before dispensing of the resulting water mixture from a spout. Preferably, in diverting, the faucet lever is moved downward below the normal off position whereby cold water is diverted from the faucet assembly, passes through the filter, returns to the faucet assembly and exits through the spout. Preferably, the filter is in a cartridge form that is insertable into and removable from the filter assembly through the top thereof. Preferably the spout has one channel for mixed water and another channel for filtered water.

Probable Assignee: PURE WATER INC

Earliest Publication Date: 19991116



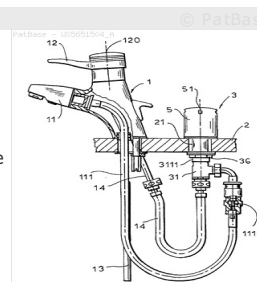
48) Family number: 14972615 (US5651504A)

VENTED BACKFLOW PREVENTER FOR HOSE-TYPE FAUCET

Abstract: Source: US5651504A A plumbing fixture having a valve supplying water under pressure to an output and a hose outlet having an intake end has a vented backflow preventer having a housing separate from the valve and having an inlet port connected to the valve output and an outlet port connected to the hose intake end. A lower check valve in the housing has a lower seat, an upper seat, and a valve body of density greater than water movable between a lower position sitting on and blocking the lower seat and an upper position sitting on and blocking the upper seat. The housing is formed with an inlet passage leading from the inlet port to the lower seat and an outlet passage leading from between the seats to the outlet port. An upper check valve in the housing above the lower check valve has an upper seat above the lower-valve upper seat and a valve body of a density less than water and moveable between an upper position sitting on and blocking the upper-valve upper seat and an upper position clear seat thereof. The housing is formed with an externally open vent opening into the upper check valve above the upper seat thereof.

Probable Assignee: FRIEDRICH GROHE AND CO AG KG

Earliest Publication Date: 19960104



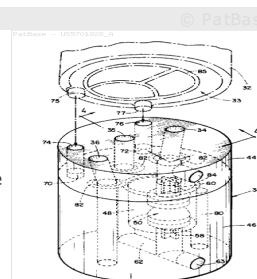
49) Family number: 14996804 (US5701926A)

BACKFLOW PREVENTION DEVICE AND VACUUM BREAKER FOR KITCHEN PLUMBING

Abstract: Source: US5701926A A back flow prevention device and/or vacuum breaker device for mounting on a plumbing fixture. The device comprises a body having fluid entry means, fluid exit means and backflow prevention means. The backflow prevention means is located between the fluid entry means and the fluid exit means and the backflow prevention means comprises, a chamber having an entry port contiguous with the fluid entry means, an exit port contiguous with the fluid exit means and a back flow prevention port which is open to atmospheric pressure and a valve movably mounted between a first position sealing the entry port and a second position sealing the backflow prevention port. Fluid flowing into the chamber moves the valve out of the first position into the second position thereby allowing fluid to freely flow through the chamber, out the exit port and along the fluid exit means. The valve, in the absence of fluid flow along the fluid entry means, returns to its first position thereby leaving the backflow prevention port open to atmospheric pressure to prevent backflow and to permit vacuum breakage.

Probable Assignee: RUBINET FAUCET CO

Earliest Publication Date: 19961208



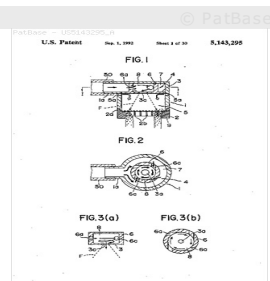
50) Family number: 15016842 (US5143295A)

BUBBLY WATER OUTLET DEVICE

Abstract: Source: US5143295A A bubbly water outlet device comprises a swirl chamber which is connected to a water supply source and is adapted to swirl a flow, and a bubbler chamber which is connected to the swirl chamber through a discharge port provided substantially at a center of the swirl chamber. The bubbler chamber is adapted to suck air from an exterior by virtue of the inflow of water from the discharge port and is capable of discharging bubbly water.

Probable Assignee: TOTO LTD

Earliest Publication Date: 19910522



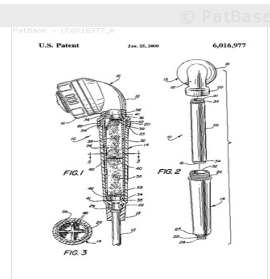
51) Family number: 15360930 (US6016977A)

HAND HELD SHOWER HEAD AND FILTER HOUSING

Abstract: Source: US6016977A A hand held shower head and filter assembly for attachment to a waterline to remove chlorine and other substances from water. This assembly includes a reversible and reusable filter assembly for use with hot water passing through a two stage bed of ceramic-type calcium sulfite beads and a copper/zinc material. The device includes an elongated, hollow handle which holds the filter element therein in such a manner that the filter media reacts with or removes chlorine and other substances more efficiently from shower water, thereby allowing a greater volume of water to be treated, as well as the treatment of water at elevated temperatures, in a more versatile and useful device.

Probable Assignee: FARLEY DAVID K

Earliest Publication Date: 20000125



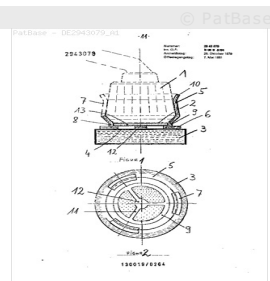
52) Family number: 15361532 (DE2943079A1)

VORRICHTUNG ZUR REINIGUNG VON WANNEN MIT EINEM DUSCHKOPF SINK CLEANING SPRAY INSTALLATION - USES SPRAY HEAD, SPONGE AND CLEANER, WITH SPONGE ATTACHED TO HOLDER DETACHABLY CONNECTED TO SPRAY HEAD

Abstract: Source: DE2943079A1 (Claim1) Vorrichtung zur Reinigung von Wannen mit einem DuschkopfPatentansprueche 1 Vorrichtung zur Reinigung von Becken, Wannen und der gleichen mit einem Duschkopf, einem Schwamm und Reini gungsmittel,dadurchgekennzeichnet, dass der Schwamm (3) mindestens eine ebene Oberflaeche (4) aufweist, die an der Unterflaeche (6) einer loesbar am Duschkopf (1) befestigten Halterung (5) ange bracht ist, und dass zwischen der Wasseraustrittsflaeche (2) des Duschkopfes (1) und dem Schwamm (3) ein Reini gungsmitteltraeger (13) angeordnet ist. The installation for cleaning sinks or basins includes a spray head, a sponge and cleaning liquids or powders. The sponge (3) has at least one level surface (4) attached to the lower surface (6) of a holder (5) detachably connected to the spray head (1). A support for the cleaner (13) is positioned between the water outlet surface (2) and can be clipped on to the spray head (1) by rods (7) projecting from the perforated, circular lower surface (6).

Probable Assignee: HERBST MANFRED DR

Earliest Publication Date: 19810507



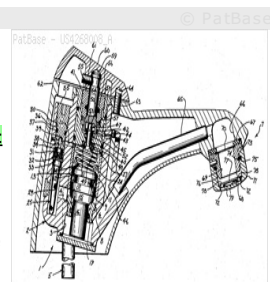
53) Family number: 1554708 (US4268008A)

PUSH BUTTON FAUCET

Abstract: Source: US4268008A An energy saving push button faucet for delivering a predetermined volume of water in a set period of time includes a control valve with a movable plunger having a front face and a rear face, the front face of the plunger is normally retained upon a valve seat shutting off flow through the valve in the faucet by supply line pressure on the rear face. The valve also includes a pilot valve which can be actuated by a push button to relieve the pressure on the rear face and permit supply line pressure on the front face to move the plunger off the seat and open the valve. The nose of the plunger is provided with an internal passage containing a flow control mechanism which reduces the effective diameter of the passage to control the volume of water delivered by the faucet. The valve also includes an adjustable timing mechanism which determines the timing cycle or length of time the valve remains open. When the valve is open, water flowing through the valve from the supply line to the faucet outlet passes through the flow control mechanism in the nose of the plunger. The jet action of the water passing through the flow control mechanism reduces the pressure on the front face of the plunger and places the pressure differential between the front face and the rear face across the seat. As a result, when a greater pressure is once again sensed by the rear face than that sensed by the front face of the plunger, the plunger will move to seat and positively shut off flow through the faucet.

Probable Assignee: BRADLEY CORP

Earliest Publication Date: 19810423



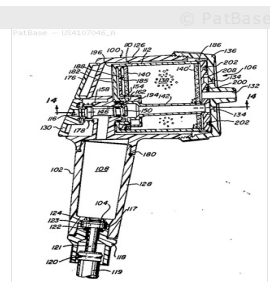
54) Family number: 1560600 (US4107046A)

WATER PURIFIER

Abstract: Source: US4107046A A filter cartridge, for an internally by-passable water purifier apparatus, is in the form of a tubular shell that has inlet and outlet walls with at least one opening being defined in each. A water filtering material is disposed within the shell. Running lengthwise of the shell is an arrangement for guiding water from the inlet to the outlet regions and exclusive of the filtering material. That arrangement is either interiorly of or external to the shell.

Probable Assignee: NIPPON DENSO CO

Earliest Publication Date: 19770117



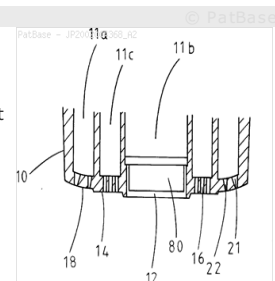
55) Family number: 16018368 (JP2002004368A)

SHOWER HEAD

Abstract: Source: JP2002004368A PROBLEM TO BE SOLVED: To provide a shower head which quickly and efficiently cleans objects to be cleaned such as tableware, and reduces the amount of consumption of water and hot water. SOLUTION: The shower head 1 spouts water from a faucet, and it is constituted such that outward spray holes 21 are formed in a face 10 thereof. Each outward spray hole 21 outwardly diffuses at a 10 deg. angle or more from an axial center in a spouting direction of the shower head 1. Thus, shower spray is carried out through the outward spray holes 21.

Probable Assignee: KVK CORP

Earliest Publication Date: 20020109



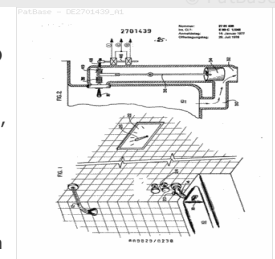
56) Family number: 1631919 (DE2701439A1)

AUTOMATISCHES STEUERSYSTEM FUER DIE BADEWANNEN-WASSERHOEHE AUTOMATIC CONTROL SYSTEM FOR BATH WATER LEVEL - HAS SOLENOID OPERATED VALVE CONTROLLED BY TIMER AND WATER LEVEL SENSOR

Abstract: Source: DE2701439A1 Steuereinrichtung, gekennzeichnet durch eine Badewanne, ein Wassereinflussrohr, ein von Hand gesteuertes Ventil, das mit dem Wassereinflussrohr gekoppelt ist um den Wasserstrom dadurch zu steuern, ein automatisch gesteuertes Ventil, das mit dem Wassereinflussrohr parallel mit dem von Hand gesteuerten Ventil gekoppelt ist, um den Wasserstrom durch das Wassereinflussrohr unabhängig von dem von Hand gesteuerten Ventil zu steuern wobei das automatisch gesteuerte Ventil ein erstes Solenoid einschliesst, durch eine Steuereinrichtung, die mit dem automatisch gesteuerten Ventil gekoppelt ist, um das Solenoid zu betätigen und zu ermöglichen, dass Wasser in die Badewanne strömt, bis ein vorbestimmtes Wasserniveau erreicht ist durch einen Abzugstopfen, einen automatisch gesteuerten Mechanismus mit einem zweiten Solenoid, das mit dem Abzugstopfen verbunden ist und von der Steuereinrichtung betätigbar ist, um zu verursachen, dass sich der Abflussstopfen vor Strömen des Wassers durch das automatisch gesteuerte Ventil schliesst, durch eine erste von Hand betätigbare Steuerung in der Steuereinrichtung, die einstellbar ist um zu ermöglichen, dass die Steuereinrichtung verursacht, dass das erste solenoid das automatisch gesteuerte Ventil öffnet, bis eine vorbestimmte Wasserhöhe erreicht ist und durch eine zweite von Hand betätigbare Steuerung in der Steuereinrichtung die mit dem Abflussstopfen gekoppelt ist, um zu ermöglichen, dass der Abfluss von Wasser unabhängig von dem automatisch gesteuerten Mechanismus geöffnet und geschlossen wird. The automatic control system is for bath water level. The drain and supply of water are controlled by electrical or electronic solid state elements. The manually controlled valve is connected to the water pipe, the automatic control valve being connected in parallel with the manually operated valve. The automatic system valve is solenoid operated, the drain being operated by another solenoid. The supply and drain valves are set manually to ensure a certain bath water level. An electrical filling timer is used which is set by hand and bath water level is sensed for valve operation.

Probable Assignee: AMERICAN BATH AND SHOWER

Earliest Publication Date: 19780720



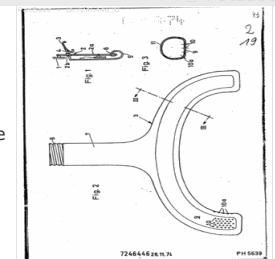
57) Family number: 16350587 (DE7246446U)

Abstract: Source: DE7246446U (Claim 1) 1. Duschereinrichtung mit einem Spruehkopf, der in wesentlichen als geschlossene Hohlform ausgebildet ist mit einer Eintrittsoffnung fuer Wasser und wenigstens einer Austrittsoffnung fuer das Wasser aufweisenden Spruehflaeche, mit einer Zuleitung fuer das Wasser und einer Halterung fuer den Spruehkopf, dadurch gekennzeichnet, dass der Spruehkopf (3) zum Erzeugen eines Wasservorhangs aus einem laenglichen Hohlkoerper mit gerade oder als offene oder geschlossene Kurve verlaufender Achse besteht mit einer sich. Ueber die ganze Laenge und einen auf eine zur. Haupterstreckungsebene des Hohlkoerpers parallele Ebene projizierbaren Umfangsbereich erstreckenden Deckflaeche (11) ohne Austrittsoffnungen, und mit einer dieser Deckflaeche (11) im wesentlichen gegenueberliegenden Spruehflaeche (9) mit Austrittsoffnungen (10).

Machine translation: (Claim 1) 1 Shower facility with a Spruehkopf, which is formed in substantially a closed hollow shape with a one-tritsoffnung for water and at least one outlet opening for having the water spray area, with a feed line for the water and a holder for the sprayer, wherein the spray head (3) to create a water curtain from an oblong Hohlkoerper with straight or as an open or closed curve is an axis extending itself. Over the entire length and a zur. a main extension plane of Hohlkoerpers parallel plane projectable size range extending Deckflaeche (11) without Austrittsoffnungen, and with one of these Deckflaeche (11) substantially opposite-lying spray area (9) with Austrittsoffnungen (10).

Probable Assignee: KOLB I

Earliest Publication Date: 19741128



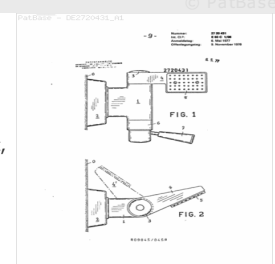
58) Family number: 1649048 (DE2720431A1)

GELENKHALTERUNG FUER EINE DUSCHE MIT EINGEBAUTEM STEUERORGAN SHOWER MIXER AND SPRAY HEAD - HAS SINGLE ASSEMBLY MOUNTED AT LOW LEVEL WITH SPRAY HEAD WHICH CAN BE DIRECTED UPWARDS

Abstract: Source: DE2720431A1 Patentanspruch Gelenkhalterung fuer eine Dusche fuer die Anbringung an einer Wand und den schwenkbaren Anschluss eines Duschkopfs, dadurch gekennzeichnet, dass sie in einer einzigen Baugruppe ein tragendes Teil (1), eine Gelenkeinrichtung (4), einen Duschkopf (5) und eine Ventilanordnung enthaelt 2. The shower unit comprising a mixer valve and spray head is constructed as one compact assembly. The mixer body (1) is mounted on the wall (O), low enough to be operated by a child. At one end of the unit is a single control lever (7) and at the other end, a pivoted arm (4) which conveys water from the valve (1) to the spray head (5). The spray head is continuously adjustable between obliquely downward facing and obliquely upward facing end positions.

Probable Assignee: KNAPP ALFONS DR

Earliest Publication Date: 19781109



59) Family number: 16550872 (DE8107538U1)

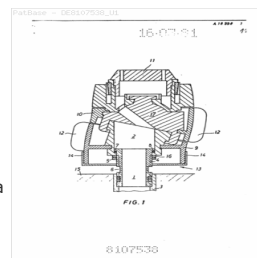
SANITAERE ARMATUR PLUMBING FIXTURE (MACHINE TRANSLATION)

Abstract: Source: DE8107538U1 (Claim 1) Sanitaere Armatur. Anspruche 1. Sanitaere Armatur, insbesondere Brausevorrichtung mit einem zum teilweisen Einschrauben in einen stationaeren, mit einer Wand buendig endenden Wasserzulauf ausgebildeten Anschlussstueck und einem im wesentlichen um die Laengsachse des Anschlussstaekkes drehbaren Bedienungskopf, dadurch gekennzeichnet, dass auf dem Anschlussstueck (1) eine axial bewegbare Rosette (13) vorgesehen ist, die einen zum Bedienungskopf (9, 10, 11) wei- senden Rand (14) aufweist, der den wandseitigen Teil (9) des Be- dienungskopfes am Umfang rundum ueberdeckt.

Machine translation: (Claim 1) sanitary fittings. Claims first Plumbing fixture, especially shower device with one to the partial installation in a stationary, with a flush with the wall ending water supply trained Anschlussstueck and a substantially around the longitudinal axis of the Anschlussstaekkes rotary control **head**, wherein the Anschlussstueck (1) an axially movable rosette (13) is provided, one has to use the **head** (9, 10, 11) further send edge (14), of the side wall part (9) of the Be- dienungskopfes around the circumference covers about.

Probable Assignee: HANS GROHE GMBH AND CO KG 7622 SCHILTACH DE

Earliest Publication Date: 19811126



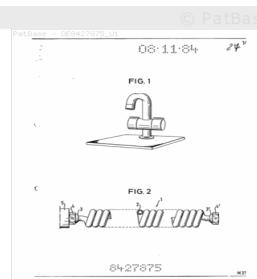
60) Family number: 16723925 (DE8427875U1)

Abstract: Source: DE8427875U1 (Claim 1) Ansprueche 1, Schlauch mit Sanitaerarmatur mit abnehmbarem Griffstueck, d a d u r c h g e k e n n z e i c h - n e t, dass der Schlauch (I) wendel foermig und durch Zug elastisch verlaengerbar ist. 2. Schlauch nach Anspruch 1, d a d u r c h g e - k e n n z e i c h n e t, dass er innen aus Metall und attssen ius Kunststoff besteht.

Machine translation: (Claim 1) claims 1, with detachable hose with Sanitaerarmatur Griffstueck, dadurchgekennzeich n-et that the tube (I) helical and extended by train is elastic. Second Tube according to claim 1, characterized dadurchg e-, that he is inside of metal and plastic attssen jus.

Probable Assignee: HIGH TECH AUSBAU UND EINRICHTUNGSPRODUKTE VERTRIEBSGESELLSCHAFT MBH 8000 MUENCHEN DE

Earliest Publication Date: 19861120



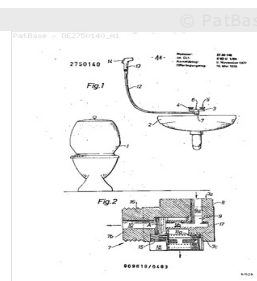
61) Family number: 1675438 (DE2750140A1)

ANORDNUNG ZUR UMLEITUNG EINES FLUESSIGKEITSFLUSSES FLOW DEFLECTOR VALVE FOR MIXER TAP - IS OF EJECTOR TYPE WITH INTAKE CONSTANTLY LINKED TO BOTH OUTLETS

Abstract: Source: DE2750140A1 Patentansprueche: oeloe Vorrichtung zur Umlenkung eines Fluessigkeitsstromes zwischen wenigstens zwei Zapfstellen, wobei die eine vorzugsweise von einer Dusche gebildet ist, welche Vorrichtung ein Ventil mit einem einlass sowie zwei an die beiden Zapfstellen angeschlossene erste und zweite Auslaeufo umfasst, wobei die Umlenkung des Fluessigkeitsstromes von dem einen zu dem anderen der beiden Auslaeufo und umgekehrt durch eine zwischen dem ersten Auslauf und der zugehoerigen Zapfstelle eingesetzte Absperrvorrichtung regelbar ist, dadurch gekennzeichnet, dass das Ventil (7) als Ejektorventil ausgebildet ist, dessen Einlass (9) staendig mit dem ersten und dem zweiten Auslauf (10, 11) in Verbindung steht 2. The devices is for deflecting a flow of liquid between two or more taps or hydrants, as in a shower with a hot-and-cold mixer and a hand-held **spray**. It has a valve with an intake and with outlets attached to the to tap points, with flow switched from one to the other and regulated by shut-off devices between the first outlet and its tap. The valve is an ejector valve (7), with intake (9) constantly in contact with the first and second outlets (10, 11). It may be fitted to the water tap or valve on a washbasin or washing-up sink.

Probable Assignee: LUNDBERGS SANITETSPRODUKTER

Earliest Publication Date: 19790510



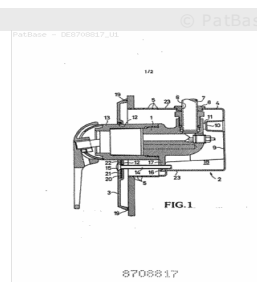
62) Family number: 16782544 (DE8708817U1)

Abstract: Source: DE8708817U1 (Claim 1) Montagehilfe fUr Unterputzaraaturen, insbesondere waaaerfueh- rende Badezimmerarmaturen Schutzansprueche: 1. Montagehilfe fuer Unterputzarmaturen (1), insbesondere wasserfuehrende Badezimmerarmaturen, welche einen die mindestens eine Unterputzarmatur (1) mindestens im wesentlichen seitlich umgebenden Rahmen (2) aus wasserundurchlaessigem Material aufweist, dadurch gekennzeichnet, dass der Rahmen (2) eine geschlossene, ggf.

Machine translation: (Claim 1) Installation Help for Unterputzaraaturen, especially waaaerfueh-render Schutzansprueche bathroom fixtures: 1 Assembly aid for concealed fittings (1), in particular Wasserfuehrer bathroom fixtures, which one at least a flush valve (1) at least substantially laterally surrounding frame (2) has a waterproof material, wherein the frame (2) a closed, possibly

Probable Assignee: WICO ARMATUREN GMBH AND SANITAER CO KG 6074 ROEDERMARK DE

Earliest Publication Date: 19870903



63) Family number: 16908257 (DE9409346U1)

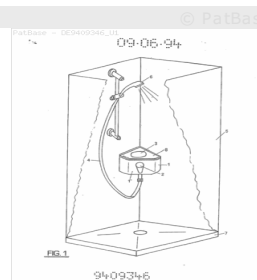
VORRICHTUNG ZUR HALTERUNG EINER DUSCHARMATUR DEVICE FOR MOUNTING A SHOWER FAUCET (MACHINE TRANSLATION)

Abstract: Source: DE9409346U1 (Claim 1) 1. Vorrichtung zur Halterung einer Duschventileinheit (2) im Eckbe- reich einer Dusche, dadurch gekennzeichnet, dass sie einen Rahmen (I) enthaelt mit einer oeffnung (I') zur Halterung der Ventileinheit (2) und Vorrichtungen (21, 22) zur Halterung dieses Rahmens (1) an der Wand.

Machine translation: (Claim 1) 1 Device for mounting a shower valve unit (2) in the corner areas of area of a shower, characterized in that one frame (I) contains an opening (I ') for holding the valve unit (2) and devices (21, 22) for supporting this Frame (1) on the wall.

Probable Assignee: RAF RUBINETTERIE

Earliest Publication Date: 19940804



64) Family number: 16911255 (DE9418986U1)

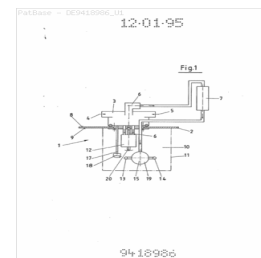
BADEWANNENARMATUR BATHTUB FAUCET (MACHINE TRANSLATION)

Abstract: Source: DE9418986U1 (Claim 1) 4000 004-*** i S c h u t z a n s p r u c h e 1. Regeleinrichtung fuer Badewannen mit einem Wasserzu- und einem dem Wannenboden zugeordneten Wasserauslauf, mit einer einstellbaren Wassermischkartusche, die ueber eine Schmutzwasserruecklaufsicherung mit dem Wannenzulauf und dem Zulauf zur Brause verbunden ist sowie mit dem Umsteller zwischen Wasserzulauf und Zulauf zur Brause und mit einem Stellteil fuer den Verschlussstoepfel, d g e k e n n z e i c h n e t, dass die Wassermischkartusche (12), Umsteller (15) fuer Wannenzulauf (13) und Zulauf (14) zur Brause und Stellteil (17) in eine wannenseitig angeordnete Stelleinrichtung (10) integriert sind und dass nur der Warm- und Kaltwasserzulauf (4,5) in Form eines Ein- und Ablaufkopfes (3) und die Schmutzwasserruecklaufsicherung (7) auf der Aussenseite (8) der Wanne (2) angeordnet sind.

Machine translation: (Claim 1) 4000 004 -*** chutzanspr i S u che first Control device for bathtubs with water supply and one to the tank bottom associated water outlet, with an adjustable water mixing cartridge, which is about one Schmutzwasserruecklaufsicherung with the tub inlet and the inlet to the shower is connected and with the diverter between water intake and feed to the shower, and with a control part for the Verschlussstoepfel, dgekennzeichnet that the water mixing cartridge (12), adjuster (15) for When the inlet (13) and inlet (14) to **spray** and control part (17) in a trough-side mounted control device (10) are integrated and that only the hot and cold water inlet (4.5) in the form of a **head**-end and (3) and the Schmutzwasserruecklaufsicherung (7) on the outside (8) of the pan (2) are arranged.

Probable Assignee: SCHEFFER OHG FRANZ

Earliest Publication Date: 19950209



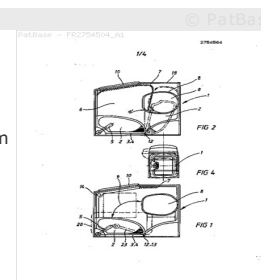
65) Family number: 16940088 (FR2754504A)

BATHROOM MODULE FOR CARAVANS, MOBILE HOMES, ETC.

Abstract: Source: FR2754504A The module has a washroom with basin, a shower room, and a separate lavatory. The wash basin (2) is located in the shower room, it has a rear wall formed by a mirror (3,4), and can be swivelled out of the shower room over the lavatory (8). The basin has a hinge (12), preferably of aluminium. The shower room is separated from the lavatory and the access door (10) by a water-proof sliding plastic shower curtain (7). The lavatory can also be swivelled to the side. A tap unit (5) above the wash basin with a tap outlet and a removable shower **head**, is also used as a shower fitting

Probable Assignee: HYMER AG

Earliest Publication Date: 19971204



66) Family number: 16998991 (DE2981521U1)

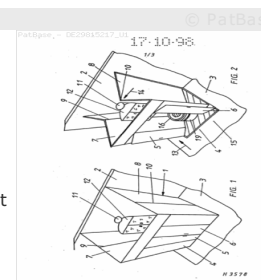
WET CELL, IN PARTICULAR FOR VEHICLES

Abstract: Source: DE2981521U1 (Claim 1) 1. Nasszelle, insbesondere fuer Fahrzeuge, mit einem Waschbecken, einer Toilette und einer Dusche, dadurch gekennzeichnet, dass sie eine faltbare Duschkabine (4, 7, 8) umfasst, in der eine Saeule (11) angeordnet ist, an der das Waschbecken (16) und die Toilette (19) drehbar befestigt sind.

Machine translation: (Claim 1) 1 Wet cell, especially for vehicles with a sink, a toilet and a shower, characterized in that it has a collapsible shower (4, 7, 8) comprises, in which the pillar (11) arranged at the sink (16) and the toilet (19) rotatably mounted.

Probable Assignee: HYMER AG

Earliest Publication Date: 19990930



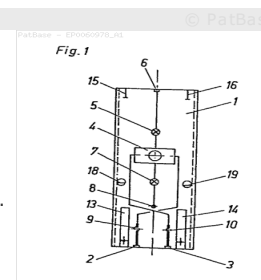
67) Family number: 17100864 (EP0060978A1)

FOAMED SANITARY CONSTRUCTION ELEMENT FOR SHOWER AND BATH TUB.

Abstract: 1. Foamed sanitary construction element for shower and bath tub, said sanitary construction element containing the necessary pipes (2, 3), valves (5, 7) and water connections (6, 8, 9, 10), characterized in that said sanitary construction element contains in a substantially symmetric arrangement on the side of the shower the thermostat (4) (lever mixer), the valves (5, 7) and water connections (6, 8) for the **head** shower and the mobile **spray head**, and that on the side of the bath tub the bath tub connections (9, 10) are mounted directly i.e. without any substantial dead branch lines onto the drinking water pipes (2, 3) and they are closed by plugs when not in use.

Probable Assignee: SANBLOC GMBH

Earliest Publication Date: 19811001



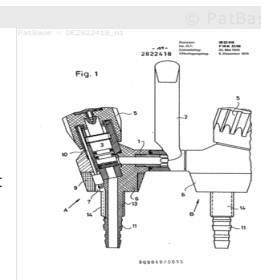
68) Family number: 1721960 (DE2822418A1)

ALS FLUESSIGKEITSSPENDER DIENENDE ARMATUR SWIVEL TAP FOR DISPENSING WATER INSIDE LIVING QUARTERS - IS CONNECTED WITH ELECTRIC PUMP AND COMPRISES METAL VALVE AND ACRYLIC CASING

Abstract: Source: DE2822418A1 Patentansprueche: Als Als Fluessigkeitsspender dienende Armatur, insbesondere ein mit einer elektrischen Pumpe in Verbindung stehender, mit einem schwenkbar angeordneten Auslaufrohr versehener Was serhahn fuer die Wasserversorgung im Innern eines zB Wohnwa gens, wobei der eine Ventileinheit aufweisende Wasser- hahn so ausgebildet ist, dass bei dessen Betaetigung der elektrische Stromkreis fuer die Pumpe geschlossen bzw. Liq.-dispensing fitting esp. a swivel tap for domestic water supply e.g. inside a caravan or trailer, the fitting being connected with an electric pump, is claimed. The tap has a valve and works in such a way that the electric circuit for the pump is closed or opened when the tap is turned on or off. The valve is made of a metal (in known manner) but the fitting casing consists of a plastics e.g. an acrylic resin. The casing also contains an electric switch which is actuated via a switching rod when the valve is opened.

Probable Assignee: COLEMAN CO

Earliest Publication Date: 19791206



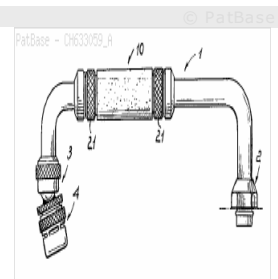
69) Family number: 17308423 (CH633059A)

PIPE FOR TAPS PROVIDED WITH A FILTER

Abstract: Source: CH633059A The pipe (1) for taps has, at one end, a union (2) for connection to the tap body, while, at the other end, it defines the outlet mouth to which, if necessary, a jet directing device (4) is applied. A middle portion of the pipe (1) has removably inserted in it a filtering cartridge (10) having, at its end, threads for engagement with ring nuts (21) for effecting connection to the pipe (1).

Probable Assignee: GALBIATI GIUSEPPE

Earliest Publication Date: 19821115



70) Family number: 17524865 (CN2198314Y)

MULTIFUNCTION WASHING DEVICE

Abstract: Source: CN2198314Y The utility model relates to a multifunctional washing device. An ordinary ware for washing hands comprises a **spray head**, a washing basin, a support bracket, a water **faucet** which is arranged on the **spray head**, etc. In the utility model, a washing liquid box is arranged on the support bracket, and the washing liquid box is communicated with a washing liquid nozzle which is arranged on the **spray head** through a communicating tube; sterilizing liquid in the washing liquid box flows out of the washing liquid nozzle. The two hands are flushed by clear water after washed by the sterilizing liquid, and the purpose of sterilizing the hands is verily achieved. The utility model which is additionally provided with a drying device is of convenient use.

Probable Assignee: LING QIZHANG

Earliest Publication Date: 19950524

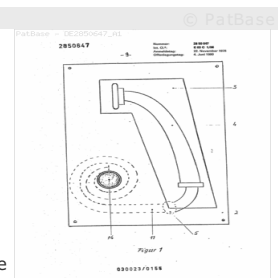
71) Family number: 1756001 (DE2850647A1)

SCHLAUCHBRAUSEARMATUR HAND SHOWER FITTING IN BATHROOM - CONSISTS OF RECESSED BOX, WITH PIPE SOCKET AND ROTATABLE PASSAGE WITH SPRING

Abstract: Source: DE2850647A1 PatentansprUeche S Schlauchbrausearmatur, gekennze1chnet durch einen Unterputzkasten (1), in dessen Deckel (2) eine Griff mulde (3) fuer die Handbrause (4) mit einer Oeffnung (5) fuer den Schlauch und Wasserabfluss eingefformt ist, waehrend in dem durch eine Leitung (6) mit einer Ueberlaufleitung verbundenen Unterputzkasten (1) selbst auf den von der Mischbatterie kommenden Wasseranschluss (7) ein Achsstummel (8) mit einer /auf e greater than etzt ist/ Drehdurchfuehrung (9) an der der Schlauchanschluss (10) des Schlauches (11) der Schlauchbrause befestigt ist, wobei die Drehdurchfuehrung (9) mit einer Spiralfeder (12) derart vorge spannt ist; dass sie den Schlauch auf sich aufwickelt und weiter mit einer Bremse versehen ist, die die Drehdurchfuehrung (9) in jeder Stellung festhaelt und die durch Knopfdruck oder der gleichen entriegelbar ist 2. The shower fitting has a recessed box with a cover having a grip recess for the shower with an aperture for hose and water outlet. The box is connected via a pipe to an overflow pipe, and contains a pipe socket, fastened via a turnable passage onto the water connection from the taps. The connection for the hose to the shower **head** is fastened to the passage. The passage is pretensioned by a helical spring, so that it winds the hose onto itself. It also has a brake, to retain it in any position, which may be released by a press button, etc.

Probable Assignee: AMELN HELMUT VON

Earliest Publication Date: 19800604



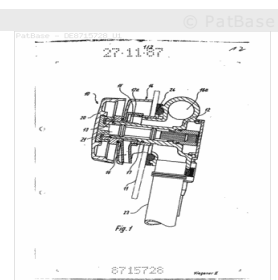
72) Family number: 17573507 (DE8715728U1)

Abstract: Source: DE8715728U1 (Claim 1) Schutzansprueche Zu- und ueberlaufarmatur fuer Badewannen, Brausewannen o. dgl. die durch eine Zulaufleitung mit einer Wannen- fuell- und Brausebatterie verbunden ist, mit einer Drehrosette zum Betaetigen eines Ablaufventils und mit einer einen Einstroemkanal aufweisenden Einlaufrosette, die mit einer Befestigungshuelse ausgeruestet ist, welche mit einer radialen Ausnehmung versehen ist, die die Einstroemoeffnung des Einstroemkanals bildet, d a d u r c h g e k e n n z e i c h n e t, dass in der Befestigungshuelse (15) eine den Querschnitt der Ein- stroemoeffnung des Einstroemkanals (16) veraendernde Einstellbuchse (17) drehbar gelagert ist, die an dem der Einstroemoeffnung zugeordneten Bereich mindestens einen Regelsteg (18) aufweist, der in verschiedenen Winkel- stellungen der Einstellbuchse (17) die Einstroemoeff- nung des Einstroemkanals (16) zumindest teilweise ab- deckt.

Machine translation: (Claim 1) Schutzansprueche inlet and overflow fittings for bathtubs, shower trays is o. connected like that through a feed line with a bath flood fill and shower fitting, with a twisting rosette for operating a drain valve and with an inflow passage having inlet flange, with a Befestigungshuelse is equipped, which is provided with a radial recess which forms the inflow opening of the inlet channel, wherein stored that is rotatable in the Befestigungshuelse (15) a cross section of the A-discharge ports of the inlet channel (16) changing an adjusting bush (17) is having on the area of the inflow associated with at least one control bar (18), in different settings, the angle adjuster (17), the inflow opening of the inlet channel (16), at least partially covered.

Probable Assignee: FA FRANZ VIEGENER II 5952 ATTENDORN DE

Earliest Publication Date: 19880114



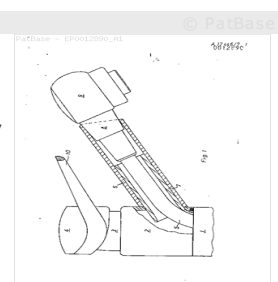
73) Family number: 1759106 (EP0012890A1)

STATIONARY WATER OUTLET VALVE, PARTICULARLY FOR SANITARY PURPOSES.

Abstract: 1. Stationary water discharge valve, particularly for sanitary purposes, with a single outlet in the form of a flexible hose (5, 15) connected to the discharge end of the valve casing (3, 13) and with a discharge end piece (8, 9, 18, 19) connected to the free hose end, for which a mounting support (6, 16) is provided on valve casing (3, 13) and is connected to the latter so as to be pivotable about a vertical axis, characterized in that the discharge end piece (8, 9, 18, 19) is constructed as a handle-like compact **head** and has a connection piece (8, 18) for hose (5, 15), which is insertable into the mounting support (6, 16) over essentially its entire length.

Probable Assignee: GROHE KG HANS

Earliest Publication Date: 19800619



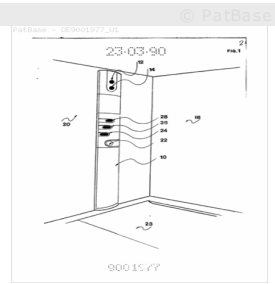
74) Family number: 17641369 (DE9001977U1)

Abstract: Source: DE9001977U1 (Claim 1) 1. Blend@ zum Abdecken von mit der Wand einer Duschkabine oder -decke verbindbaren Teilen, z. B. Mischbatterie, Handbrause, Armaturen oder dgl., gekennzeichnet durch eine laengsgestreckte und Betaetigungsausnehmungen fuer die Teile (21, 23) aufweisende Abdeckprofileiste (10, 30), die von mit der Wand (20, 31) verbindbaren Haltekoerpern (8) unter Bildung eines Aufnahme-raumes (9) fuer die Teile (21,23) festgehalten ist bzw. eine in der Wand (20) ausgebildete Aufnahme (70) fuer die Teile abdeckt.

Machine translation: (Claim 1) 1 @ Blend for covering the wall with a shower cubicle or ceiling verbindbaren parts, such as mixer, hand shower, fittings or the like, characterized by a laengsgestreckte Betaetigungsausnehmungen and for the parts (21, 23) having Abdeckprofileiste (10, 30) who is from the wall (20, 31) connectable Haltekoerpern (8) to form a receiving space (9) recorded for the parts (21.23) and one in the wall (20) trained intake (70) for the parts covers.

Probable Assignee: HORNTRICH GUENTER 7530 PFORZHEIM DE

Earliest Publication Date: 19900426

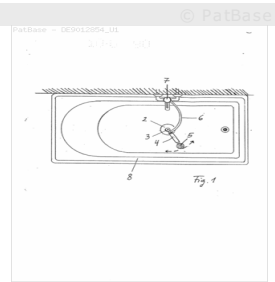
**75) Family number: 17653834** (DE9012854U1)

Abstract: Source: DE9012854U1 (Claim 1) Ansprueche 1) Zusatzgeraet fuer eine Badewanne, dadurch gekennzeichnet, dass es zur Herstellung eines Bidet-Ersatzes ein Standrohr (1) mit einem an dessen unterem Ende befestigten Saugfuss (2) und mit einer Halterung (3) aufweist, an der eine mit einem an eine Badewannenarmatur (7) anschliessbaren Wasserzulaufschlauch (6) versehene Handbrause (4) bei entgegengesetzt zum Saugfuss (2) gerichteten Brause kopf (5) drehbar befestigt oder befestigbar ist.

Machine translation: (Claim 1) Claims 1) Zusatzgeraet for a bath, characterized in that in order to produce a bidet substitute a standpipe (1) with a fortified at the lower end of suction foot (2) and with a bracket (3) which, at the one on one with a bathtub **faucet** (7) connectable water inlet hose (6) provided hand-held shower (4) in opposite to the suction cup (2) directional shower **head** (5) rotatably attached or fastened.

Probable Assignee: AXT ROBERT 6430 BAD HERSFELD DE

Earliest Publication Date: 19901115

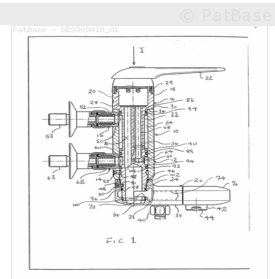
**76) Family number: 17667786** (DE9309418U1)**HEBELMISCHARMATUR
LEVER MIXING VALVE (MACHINE TRANSLATION)**

Abstract: Source: DE9309418U1 (Claim 1) 1. Hebelmischarmatur (10) mit einem Gehaeuse (12,16) mit Heiss- und Kaltwasserzulaufanschlussen (14,15), einer von einem Mischhebel (22) gesteuerten, die Wasserabgabemenge sowie die Wassertemperatur bestimmenden Mischpatrone (20) und mit mindestens einem Wasserauslauf (26), dadurch gekennzeichnet, dass das Gehaeuse (12,16) aus einem aeusseren, die Kalt-und Heisswasseranschluesse (14,15) aufweisenden Gehaeuseteil (12) sowie aus einem zum aeusseren Gehaeuseteil (12) konzentrisch angeordneten, die Mischpatrone (20) und den Mischhebel (22) umfassenden, zumindest im wesentlichen zylindrischen inneren Gehaeuseteil (16) besteht, das mindestens beschraenkt drehbar innerhalb des aeusseren Gehaeuseteils (12) angeordnet und in einer gewuenschten Drehstellung fixierbar ist und zur Mischpatrone (20) fuehrende, mit den jeweiligen Kalt-und Heisswasseranschluesen kommunizierende Kalt-und Heisswasserzulaufpassagen (58) sowie eine mit dem Wasserauslauf kommunizierende Brauchwasserpassage (70) aufweist.

Machine translation: (Claim 1) 1 Lever mixer tap (10) having a housing (12,16) with hot and Kaltwasserzulaufanschlussen (14,15), one controlled by a mixing lever (22), the water discharge quantity and the water temperature determining mixer cartridge (20) and (26) with at least one water outlet, wherein the housing (12,16) of an outer, cold and Heisswasseranschluesse (14,15) having Gehaeuseteil (12) and from one to the outer Gehaeuseteil (12) concentrically arranged, the mixer cartridge (20) and the mixing lever (22) comprehensive, at least substantially cylindrical inner Gehaeuseteil (16) is that at least limited rotatable within the outer Gehaeuseteils (12) arranged in a desired rotational position is fixable and the mixing cartridge (20) leading, with the respective cold-and Heisswasseranschluesen communicating hot and cold water inlet passages (58) and a water outlet communicating with the water passage (70) has.

Probable Assignee: KWC AG

Earliest Publication Date: 19930819

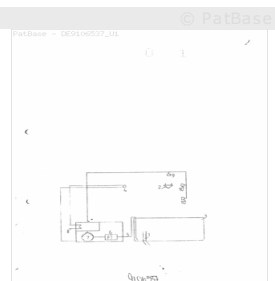
**77) Family number: 17672043** (DE9106537U1)

Abstract: Source: DE9106537U1 (Claim 1) 1. Geraet zur Mehrfachnutzung von Wasser, dadurch gekennzeichnet, dass es Pumpe und Reinigungseinrichtung enthaelt.

Machine translation: (Claim 1) 1 Device for multiple uses of water, characterized in that it contains pump and cleaning system.

Probable Assignee: DAMM MICHAEL 2000 HAMBURG DE

Earliest Publication Date: 19910801

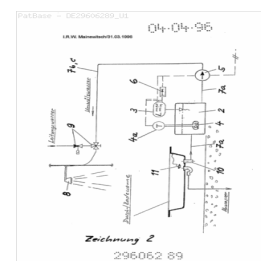
**78) Family number: 17726993** (DE29606289U1)**SHOWER WATER ROLLING OVER MECHANISM**

Abstract: Source: DE29606289U1 (Claim 1) 1. Duschwasseru m waeizeinrichtung fuer den Neubau und zumNachruesten von vorhandenen Duscheinrichtungen, bestehendaus Speicherbehaelter mit Umwaelzpumpe, Rohr- und Schlauchleitungen einschl. Rohr- und Schlauchverbindungen.

Machine translation: (Claim 1) 1 Duschwasseru waeizeinrichtung m for the construction and zumNachruesten of existing shower facilities, bestehendaus Speicherbehaelter with circulation pumps, pipes and hoses includes pipe and hose connections.

Probable Assignee: MAINEWITSCH REINHOLD

Earliest Publication Date: 19960620



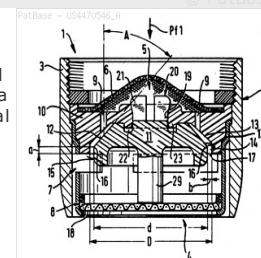
79) Family number: 17824498 (US4470546A)

SPRAY ADJUSTER FOR CONNECTION TO A **FAUCET** OR THE LIKE

Abstract: Source: US4470546A Disclosed is a **spray** adjuster composed of a tubular housing in which a perforated flow dispersing member, a flow deflecting member having a bevelled buffer surface, and an aerating member with a sieve-like outlet are arranged. The bevelled deflecting surface of the deflecting member is inserted in a frustoconical recess in the dispersion member to form therewith an outwardly diverging annular passage including with a central axis of the housing an angle of about 45 DEG. The inclined annular passage transits into a tubular annular passage which is coaxial with the housing, whereby a connection line of an inner edge between the bevelled surface and the cylindrical surface of the deflecting member and the outer edge of the cylindrical recess of the dispersion plate is aligned with the bevelled surface. In this manner, the operational noise of the **spray** adjuster is considerably reduced.

Probable Assignee: DIETER WILDFANG KG

Earliest Publication Date: 19830505



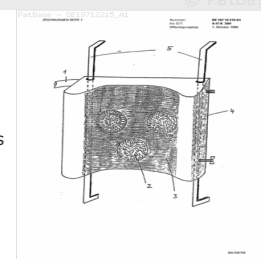
80) Family number: 18014852 (DE19712215A1)

SHOWER AND MASSAGE DEVICE

Abstract: Source: DE19712215A1 The shower and massage device has its own water connection (1) whose water flow moves the shower and massage elements (2) which are mounted on one side of a housing (4) which is shaped to fit the body form. The housing is fixed to the wall or floor by guides (5) which allow horizontal and/or vertical displacement of the housing. The housing is preferably made of flexible plastics or metal and the massage elements are rotating and/or vibrating brush studs.

Probable Assignee: POTERA HARALD

Earliest Publication Date: 19981001



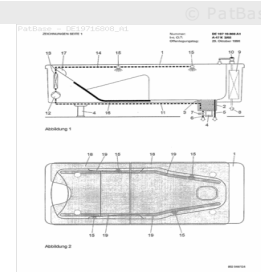
81) Family number: 18017473 (DE19716808A1)

BATH WITH CLOSED WATER CIRCULATION SYSTEM

Abstract: Source: DE19716808A1 The bath water, which is moved in a closed circuit, is contained in a supply container (2) from where it is sucked up through a pipeline (11) from the pressure pump (12) and moved through a through-flow heater (13) and pipe line (14) to one or more **spray** nozzles (15) which **spray** onto the bather. The water then flows into the bath tub from where it is returned to the supply container. The supply container has an overflow pipe (5) and outlet pipe (6) with magnetic valve (7) and screen plate (3). The heater can be switched in between a fresh water connection and a bath filling and shower fitting. A **head** rest and heating mat can be provided in the bath. The water can contain medicaments or bath salts, etc..

Probable Assignee: BERND KRAFT GMBH AND CO KG

Earliest Publication Date: 19981029



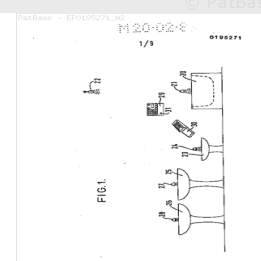
82) Family number: 18079710 (EP0195271A2)

WATER SUPPLY INSTALLATION FOR ABLUTIONARY PURPOSES.

Abstract: Source: EP0195271A2 A water supply installation for selectively controlling the supply of water to respective discharge outlets (21,22,24,27 and 28) of a plurality of ablutionary appliances consisting of a bath, shower, bidet and separate washbasins. The installation includes a control unit (35) housing a mixing valve having separate inlet connections to cold and hot water supplies (36) and (37) respectively and an outlet connection to a common manifold having a plurality of outlets each connected to a respective single appliance supply pipe (38,39,40,41 and 42) for delivery of mixed water to the associated discharge outlet (21,22,24,27 and 28). For operating an appliance, a master control panel (29) remote from the control unit (35) is operable by the user to select an appliance and operate control valve means) permitting flow of mixed water from the manifold to the associated discharge outlet (21,22,24,27 and 28) through the single supply pipe (28,39,40,41 and 42) respectively. Additionally, individual appliance control panels (32,33 and 34) connected through the main control panel (29) to the control unit (35) permit operation of the associated appliance. In a further embodiment, the master control panel (29) is responsive to infra-red signals generated by a portable controller permitting remote selection and operation of an appliance.

Probable Assignee: CARADON MIRA LIMITED

Earliest Publication Date: 19860917



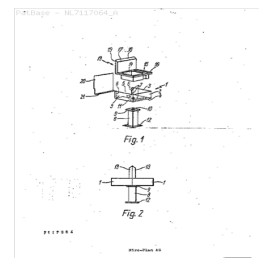
83) Family number: 18179300 (IT945313A)

DISPOSITIVO PORTANTE E DI FISSAGGIO PER CATINI DI PULIZIA LAVAGGIO E SIMILI

Abstract: Source: CH531101A [Source: Claim 1] 1. Vorrichtung nach Patentanspruch an einem Reinigungsbecken mit aus der Beckenebene vertikal herausragender Rueckwand zum Anbringen von Armaturen, dadurch gekennzeichnet, dass die Rueckseitenflaeche mit einer Aussparung (5) versehen ist und dass eine sich ueber die ausgesparte Rueckseitenflaeche und gegebenenfalls eine aus der Beckenebene vertikal herausragende Rueckwand (17) des Beckens erstreckende Abdeckplatte (20) vorgesehen ist. [Source: claim 1] 1 device according to claim to a cleaning tank with out the pool level of vertical outstanding back panel for attaching fittings, characterised in that the rear side with a cut-out (5) is provided and that a plate (20) the recessed rear area and, if necessary, one from the level of the basin roughly vertically 5 Vivek outstanding rear panel (17) of the basin is provided.

Probable Assignee: NITRO PLAN AG

Earliest Publication Date: 19710325



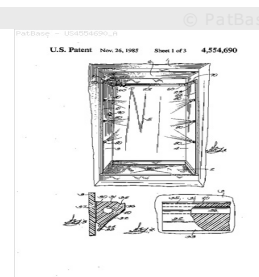
84) Family number: 18302108 (US4554690A)

WATER DISTRIBUTION SYSTEM FOR SHOWERS

Abstract: Source: US4554690A A water distribution system for a shower enclosure (1) including longitudinal water channels (20-24), each having an internal passage (36), and covering clips (60,70) secured to each of a pair of water channels at a corner therebetween.

Probable Assignee: KOHLER CO

Earliest Publication Date: 19851126



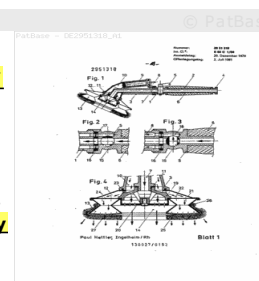
85) Family number: 1844289 (DE2951318A1)

SANITAERE HANDBRAUSE MIT MEHRFACHFUNKTION HAND HELD MULTI PURPOSE BATH SPRAY - HAS WATER CURRENT DEFLECTABLE THROUGH CENTRAL HEAD OR SURROUNDING ELASTIC SPRAY

Abstract: Source: DE2951318A1 Sanitaere Handbrause mit Mehrfachfunktion, dadurch gekennzeichnet, dass der Wasserstrom im Griffrohr umlenkbar ist und je nach Schaltstellung eines Umschaltahnes durch einen zentrisch angeordneten Brausekopf oder durch eine ringfoermig um diesen angeordnete Elastikbrause aus treten kann. Time is saved in bathing, and overall hygiene improved by simple and inexpensive means, by use of a hand-held spray, serving a number of functions. The flow of water is deflectable in the handle tube. In each case, following switching-on of a deflecting tap, it is able to emerge through a centrally sited spray head or through an elastic shower spray mounted in a ring shape round this. A cartridge chamber outflow may incorporate a throttling disc, to generate fall in pressure towards a soaped water duct. This permits even soaping over the whole body, with foam generated in the spray head, and easy rinsing, plus massage.

Probable Assignee: HETTLER PAUL

Earliest Publication Date: 19810702



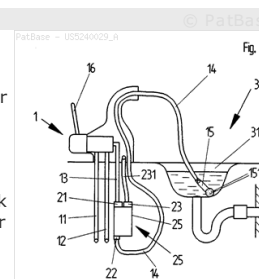
86) Family number: 18906772 (US5240029A)

HOSE-TYPE FAUCET WITH BACKFLOW PREVENTER

Abstract: Source: US5240029A A backflow preventer used in combination with a valve that normally supplies water under pressure to a feed conduit and with an outlet device having a supply hose to which water is normally supplied under pressure has a housing forming a generally closed chamber and formed with an inlet port connected with the feed conduit and opening into the chamber, an outlet port connected to the hose and opening into the chamber directly underneath the inlet port, and a vent port having an outside exposed to ambient air and forming substantially the only direct passage between the chamber and an ambient atmosphere around the housing. A check valve in the vent port only permits flow through the port into the chamber so that air can be drawn into the chamber through the vent port when pressure in the chamber is below ambient pressure. A nozzle fitted to the inlet port directed downward along a vertical axis into the outlet port forms therewith a jet pump for transferring water from the inlet port to the outlet port.

Probable Assignee: FRIEDRICH GROHE AND CO AG KG

Earliest Publication Date: 19920601



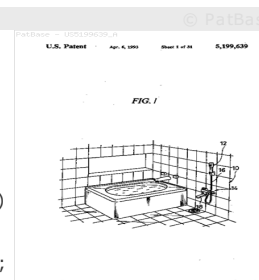
87) Family number: 18974586 (US5199639A)

SHOWER WITH A MICROMOTOR OPERATED REVOLVING SHOWER HEAD

Abstract: Source: US5199639A A hand-held shower unit (12; 250; 504; 540) is disclosed which comprises a rotatable shower head (94) provided with a plurality of spray heads (132; 134; 136; 138) having different spray or water delivery characteristics. The rotatable head (94) is mounted on a shaft (122) driven by a micromotor (190) received in an inner cavity (64) which is formed in a handle casing (52; 252) by offsetting a water conduit (58). Upon pressing a control button (200), the rotatable head (94) is rotated such that water is delivered through selected one of the spray heads (132; 134; 136; 138). To establish a fluid tight seal between the rotary head (94) and the water conduit (58) while avoiding frictional contact therebetween in order to reduce the torque required for the micromotor (190) to rotate the head (94), a water pressure-responsive movable sealing member (104; 260) is arranged. Also disclosed is a shower bath system (10; 500) including in combination the hand-held shower unit (12; 250; 504; 540). An automatic faucet is also disclosed which is capable of automatically varying the water delivery patterns. Various other embodiments and method of use are also disclosed.

Probable Assignee: TOTO LTD

Earliest Publication Date: 19920819



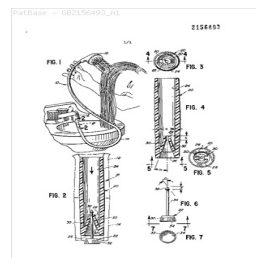
88) Family number: 1949969 (GB2156493A)

ONE-WAY LIQUID FLOW CONTROL VALVES AND SPRAYER ATTACHMENT WITH ANTI-SIPHON VALVE

Abstract: Source: GB2156493A An antisiphon valve (18) includes a one-piece valve body (20) and a one-piece reciprocable valve member (22). The valve member is guided for reciprocal motion by a support sleeve (28). In its open position the valve member is retained by a retaining barb (38), and when the water flow is reversed a conical valve plug (32) becomes seated upon corresponding seat, thus preventing siphoning. The valve may be used in a flexible base **sprayer** attachment for use with a domestic tap.

Probable Assignee: SELFIX INC

Earliest Publication Date: 19851003



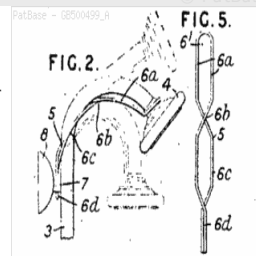
89) Family number: 19683287 (GB500499A)

IMPROVEMENTS IN SUPPORTING BRACKETS FOR SHOWER OR **SPRAY** DEVICES

Abstract: Source: GB500499A 27280. [Class 26] [Also in Group XIV] A supporting bracket for a rubber-hose shower, including a metallic **spray head** 4 having a connection with the hose 3 at its outer end, comprises a rubber suction cup base 8, Fig. 2 and a metallic bracket arm 5 having a lower portion 6c, 6d embracing the hose and extending into a socket 7 in the base, an intermediate hose supporting portion 6b, 6a, of goose-neck shape and an outer U-shaped end 6 <1> adapted to engage the hose near the **spray head** 4. The bracket 5 is made from metal wire which may be bent and will retain its bent formation so that the position and direction of the **spray head** 4 may be adjusted, and is formed as a loop crossed at 6b, Fig. 5 and again at 6d. The ends 6d are thrust through a tight circular socket in the rubber member 7, so that the bracket may be swung horizontally and will retain its adjusted position.

Probable Assignee: JOHN EDWARD CONKLIN

Earliest Publication Date: 19390210



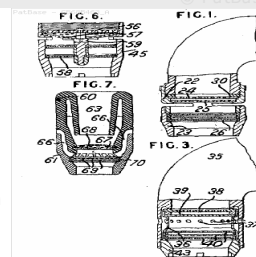
90) Family number: 19750779 (GB685463A)

FLUID MIXING DEVICES

Abstract: Source: GB685463A 685,463. Mixing appliances. AGHNIDES, E. P. Dec. 1, 1949 [Dec. 2, 1948; April 21, 1949], Nos. 30915/49 and 30916/49. Class 86 [Also in Group VI] A device for producing a stream of water containing air bubbles comprises a body member defining a chamber, one end of the body member being adapted to be connected to or comprising the discharge end of a conduit adapted to deliver water under pressure to the chamber, the other end of the body member providing an outlet from the chamber for the discharge of a stream of water containing bubbles therein, perforate diaphragms comprising jet forming means and mixing means downstream thereof being secured in the chamber in predetermined positions by locating and holding means and an air inlet downstream of the jet forming means for admitting air to the space between the jet forming means and mixing means. In the embodiment of Fig. 1 mixing means comprising screens 26 are gripped between upper and lower body member parts 22, 23 which are in screw-threaded engagement. The jet forming means comprises perforate discs 24 and 25 seated upon steps or shoulders in the member 22. The member 22 is screwed on to the end of the **faucet** 20 and a sealing washer 30 is carried between the **faucet** and disc 24. The jet forming and mixing means may be formed as a unit insertable into the body member and in one of the constructions described it comprises a shell 36, Fig. 3, having jet forming discs 38, 39 and fine mesh screens 40 held at opposite ends and having apertures 37 in its central portion for the inlet of air, the unit being retained within the outlet of the spout 35 by means of a threaded member 43. In the form shown in Fig. 6 the jet forming means comprising a perforated rubber disc 56 and a concave perforated disc 57 and the mixing means comprising screens 58 are secured in spaced relation upon a central stud 59 to form a unit insertable into a body member 45. The body member may be formed by a moulding which can be in one piece as in the embodiments of Figs. 14-22 (not shown), or in two complementary parts as shown in Fig. 7 wherein the upper part 60 of the moulding is of resilient material and has an intumed inlet neck 63 adapted to be caused by water pressure to grip the **faucet** to which it is applied. The lower end of the member 60 has ribs 66 which are frictionally engaged by the lower member 61 and which define air inlets opening into the chamber between the jet forming and mixing means. The jet forming means 67, 68 are held resiliently in an annular channel in the member 60 and the screens 69 are held by a peripheral rim 70 on the member 61. Various forms of jet forming means and wire mesh screens are described. Specifications 468,687 and 625,084 are referred to.

Probable Assignee: ELIE PRODRAMOS AGHNIDES

Earliest Publication Date: 19530107



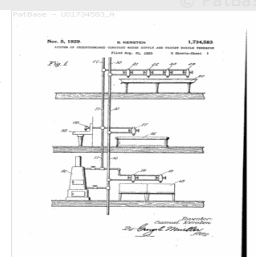
91) Family number: 19771261 (US1734583A)

SYSTEM OF PREDETERMINED CONSTANT WATER SUPPLY AND **FAUCET** NOZZLE THEREFOR

Abstract: Source: US1734583A 1. What I claim as new and desire to secure by United States Letters Patent is: 1. A nozzle for use on Water **faucets** comprising a short tubular member for attachment to the outlet of the **faucet** and including a cap portion extending up into the **faucet** outlet and having an outlet chamber extending upwardly from the mouth of the nozzle to the **head**, and a Water inlet extending laterally through the Wall of the **head** into the outlet chamber of an area sufficiently reduced below that of the outlet chamber to substantially fill the outlet chamber during delivery with a substantially reduced velocity of delivery flow.

Probable Assignee: SAMUEL KERSTEN

Earliest Publication Date: 19291105



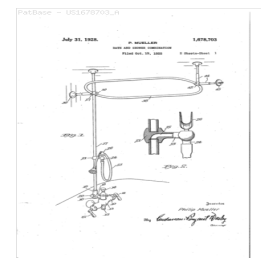
92) Family number: 19791135 (US1678703A)

BATH AND SHOWER COMBINATION

Abstract: Source: US1678703A 1. A **faucet** and shower combination comprising the combination with hot and cold water valves and connections therefor, of a mixing chamber structure between said valves, a supply spout leading from said chamber, a rigid shower column leading upwardly from said chamber, a switch valve in said chamber for controlling the discharge through said spout and shower column, and means connecting said column to said chamber structure permitting adjustment of said column about a horizontal axis relative to said chamber.

Probable Assignee: ADOLPH MUELLER

Earliest Publication Date: 19280731



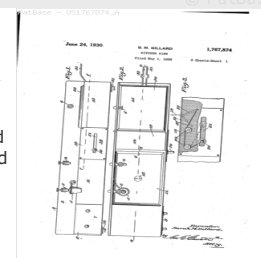
93) Family number: 19954151 (US1767874A)

KITCHEN SINK

Abstract: Source: US1767874A 1. I claimIn a kitchen sink with a depending front wall section, a vessel in said sink behind said wall section, a tilting cover for said vessel, said cover having a bell-crank lever projecting downwardly behind said Wall section, pulleys' below the surface of said cover behind said section, a, horizontal slot _through said front wall section, a horizontally movable knob slidable in said slot, a- cable connecting said bell-crank and said knob and passing over said pulleys, whereby the sliding of said knob in said slot serves to raise said cover, and said cover adapted to close upon the release' of said knob- i In testimony whereof I hereby affix my signature.

Probable Assignee: GILLARD SARAH M

Earliest Publication Date: 19300624



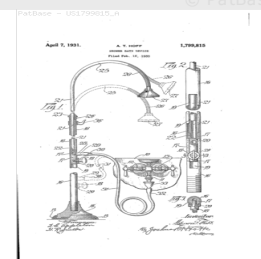
94) Family number: 20055068 (US1799815A)

SHOWER-BATH DEVICE

Abstract: Source: US1799815A 1. A shower bath device comprising a portable stand including a supporting base and a tubular standard, said standard having a longitudinally slotted lower portion, a longitudinally slidable supporting member in said standard, means projected through the longitudinally slotted portion of said standard for releasably locking said supporting member in adjusted position, a tubular member slidable longitudinally in said standard and being attached at its inner end to said longitudinally slidable supporting member, and having at its outer end a **spray** nozzle, and a flexible tube connected at one end to said longitudinally slidable supporting member and being communicable with said first mentioned tubular member, and having provision at its opposite end for detachable connection with a aucet.

Probable Assignee: HALFDAN BJORN

Earliest Publication Date: 19310407



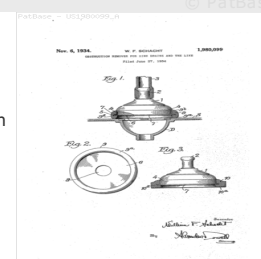
95) Family number: 20207793 (US1980099A)

OBSTRUCTION REMOVER FOR SINK DRAINS AND THE LIKE

Abstract: Source: US1980099A 1. In combination withss a **head** having an open face and having an annular exterior rib adjacent the open face, a plate across the open face of the **head** having one or more relatively large openings substantially axially disposed therein, and a resilient bumper ring of substantially rectangular cross-section stretched around the rib making a tight contact therewith, the ring protruding beyond the plate face; and the inner wall of the ring contacting with the **head**.

Probable Assignee: SCHACHT WILLIAM F

Earliest Publication Date: 19341106



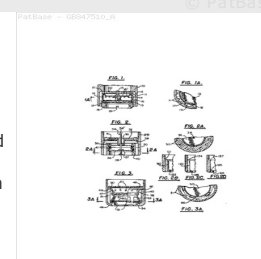
96) Family number: 20411997 (GB847510A)

IMPROVEMENTS IN AND RELATING TO AERATING DEVICES FOR LIQUIDS

Abstract: Source: GB847510A 847,510. Aerating devices. AGHNIDES, E. P. Jan. 21, 1957, No. 2140/57. Class 14(1). An aerating device for producing a stream of water containing air bubbles comprises an aerator body 10, a diaphragm 20 with at least one inflow orifice and a mixing space downstream of the diaphragm with at least one perforated screen 13 to break up the water and mix it with air which enters at the common outflow of the space and the body and passes upstream between the outer wall of the body and the mixing space into the space itself. The diaphragm 20 may be attached by a rivet 15 to the shell 16 enclosing the mixing space, or to the screens direct as in Fig. 2, or by a screwed bolt as in Fig. 5; or they may be separate (Fig. 3 not shown). The shell 16 may have inlet holes 14 or be open ended as in Fig. 2. The aeration assembly may be supported in the body by a screwed ring 18 as in Fig. 1, or on internal projections on the body, as in Fig. 2. To provide air inlets the body may be bored or cut away as seen in end-view in Figs. 1A or 2A. Other variants are illustrated in Figs. 3 to 8 (not shown). Specification 685,463 is referred to.

Probable Assignee: ELIE PRODRAMOS AGHNIDES

Earliest Publication Date: 19600907



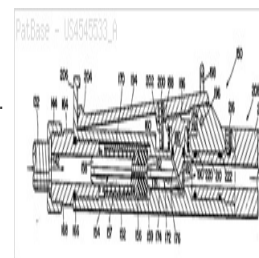
97) Family number: 2045959 (US4545533A)

ABLUTION **FAUCET**

Abstract: Source: US4545533A An ablation **faucet** includes a wall-mounted control valve and a flexible conduit having a hand-held control unit at the end thereof. The hand-held control unit includes a body portion from which a nozzle projects, and a lever for controlling the flow of water through the nozzle. The body portion includes a piston which is always urged into engagement with a valve seat by water pressure and a piston-actuating member engageable by the lever. Various alternative embodiments of the piston and piston-actuating member are disclosed. The wall-mounted control valve also includes a piston which is biased to a valve-closed position by water pressure, as well as a vacuum breaker. An alternative embodiment of the invention employs a cable disposed within the hose and connected in valve-actuating relationship between the lever and the wall-mounted control valve. With this embodiment of the invention, actuation of the lever actuates the wall-mounted control valve, thereby avoiding the need for manually controlling the wall-mounted control valve.

Probable Assignee: JOSAM DEVELOPMENTS INC

Earliest Publication Date: 19840301



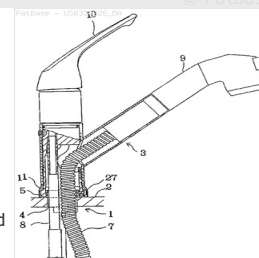
98) Family number: 20688977 (US6334226B)

FAUCET SUPPORT MEMBER

Abstract: Source: US6334226B A **faucet** support member for fixing a **faucet** in a mounting hole made in a base plate, comprising tightening members which are fixed to a support seat, which is provided to support a base end portion of the **faucet**, by connectors so that the tightening members are pivotable with the connectors and slidable along the connectors, and which are formed so that the tightening members can be inserted into the mounting hole when the front end portions thereof are directed inward, and open beyond the diameter of the mounting hole when the front end portions of the tightening members are directed outward; and members for preventing the tightening members opening beyond the diameter of the mounting hole, from being turned further, the tightening members opening beyond the diameter of the mounting hole being moved toward a bottom surface of the support seat to hold the base plate between the bottom surface of the support seat and an upper surface of the tightening members and support the **faucet** on the base plate.

Probable Assignee: TOTO LTD

Earliest Publication Date: 19990429



99) Family number: 20769619 (GB830673A)

IMPROVEMENTS IN, OR RELATING TO, SPRAY NOZZLES

Abstract: Source: GB830673A 830,673. **Spray**-producers. WALKER CROSWELLER and CO. Ltd. June 23, 1958 [June 22, 1957], No. 19719/57. Class 69 (3). A **spray** nozzle is fed with water through a bore 11, the water passes through a chamber 13 and draws air into it through ducts 14 whereupon the mixture passes from an outlet 7 to strike an imperforate part 16 of a **spray** plate before being emitted from the perforations 15. The jet 10 containing the bore 11 can be replaced by jets having bores of different diameters.

Probable Assignee: CROSWELLER AND CO LTD W

Earliest Publication Date: 19600316

