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2,255,125

SPRAY HEAD FOR WASH FOUNTAINS

Filed July 9, 1937

2 Sheets-Sheet 1

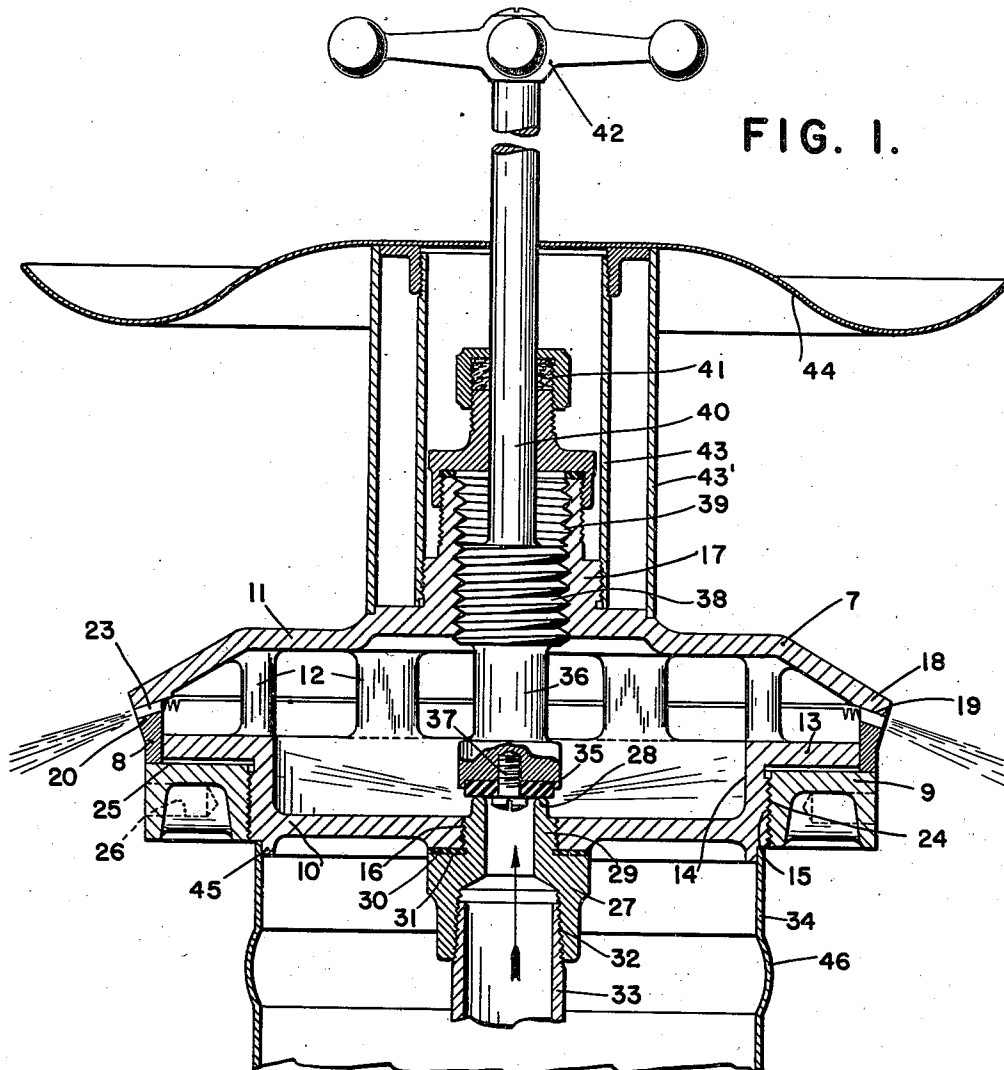


FIG. 1.

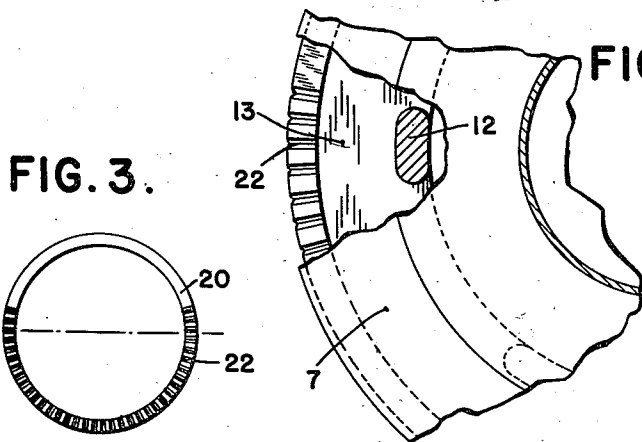


FIG. 2.

FIG. 3.

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FIG. 4.

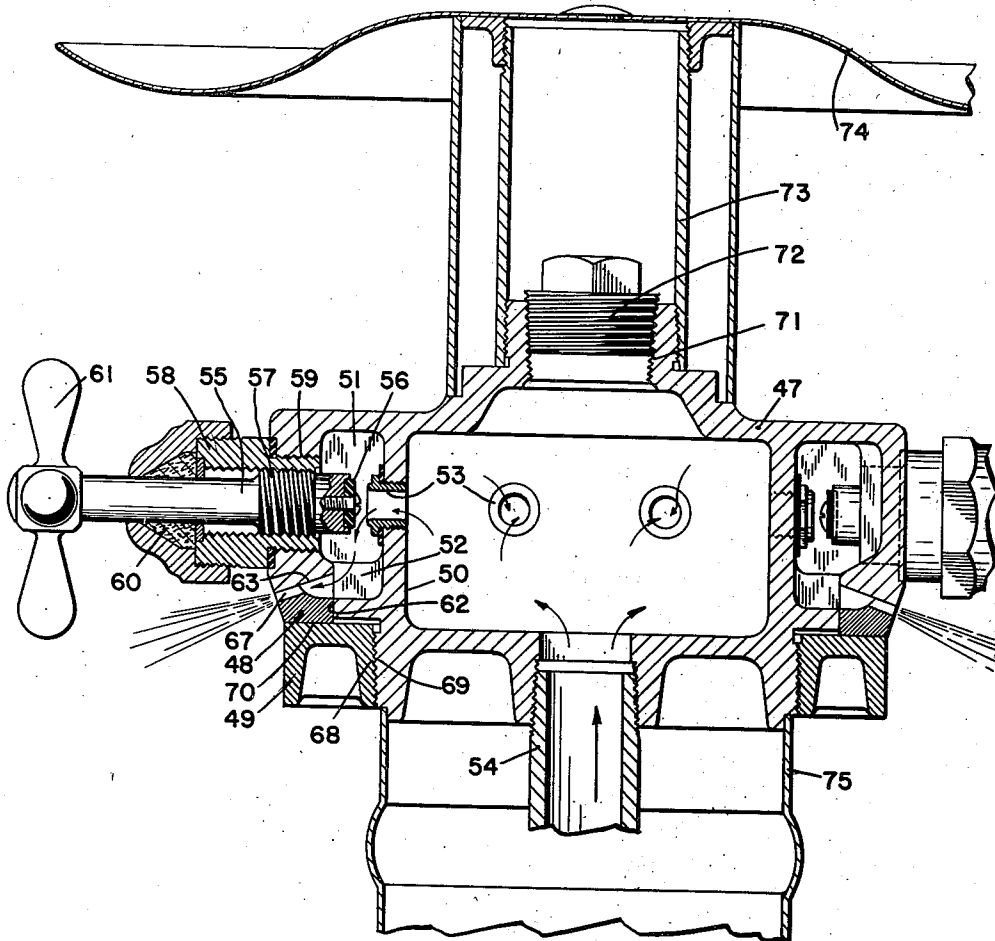


FIG. 5.

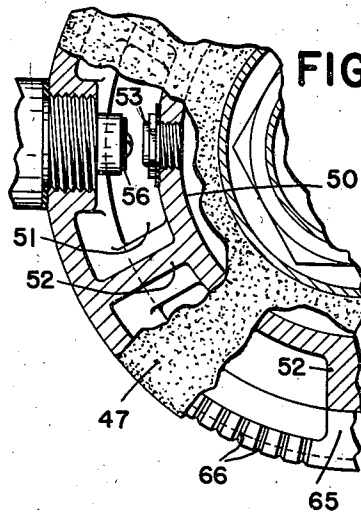
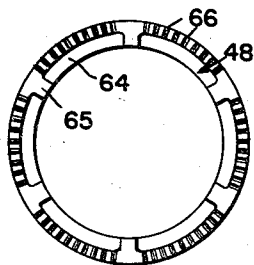


FIG. 6.



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SPRAY HEAD FOR WASH FOUNTAINS

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Application July 9, 1937, Serial No. 152,688

4 Claims. (Cl. 299-144)

The invention relates to sprayheads for wash-fountains.

One object of the invention is to provide a sprayhead in which the spraying portion is formed of separable members and in which the parts are so constructed and arranged that a single ring-shaped nozzle member may be used to provide a spray area formed of one or more segmental zones, and in this connection the present invention provides certain modifications in sprayhead over that of my copending application Serial No. 105,896, filed October 16, 1936.

A further object of the invention is to provide a sprayhead whose body portion is so constructed that it may be connected to its supply fitting by the engagement of a suitable turning tool with ribs on the interior of said body portion.

A further object of the invention is to provide a sprayhead in which the body portion is formed to provide a recessed portion, the walls of which deflect the incoming water from issuing in a straight path through the spray orifices so as to prevent water spurting out beyond the confines of the basin when the parts forming spray orifices are disconnected.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a vertical sectional view through a sprayhead embodying the invention;

Fig. 2 is a detail plan view of a portion of the sprayhead, parts being broken away and parts being shown in section;

Fig. 3 is a plan view of one of the sprayhead parts;

Fig. 4 is a sectional view through another form of sprayhead embodying the invention;

Fig. 5 is a detail plan view of the device shown in Fig. 4 with parts broken away at different depths to show the interior construction;

Fig. 6 is a detail view of one of the parts of the sprayhead.

Referring to Figs. 1 to 3 inclusive of the drawings, the sprayhead includes three main metal members 7, 8, and 9.

The member 7 is of circular shape formed to provide a cup-shaped base portion 10 and a top portion 11 spaced from said base portion by the integral ribs or spaced columns 12, said base portion having an annular flange 13 adjacent the recessed part 14 whose exterior wall is threaded at 15. The bottom of the cup has a centrally disposed threaded opening 16 therein.

The top portion 11 is of circular formation with

a centrally disposed valve stem mounting boss 17 and a conically inclined outer edge portion 18 having a lower flat nozzle forming surface 19.

The member 8 is a ring having a thickened conical top edge 20 which through a portion of its periphery is provided with a plurality of nozzle forming notches 22 which have the same inclination as the surface 19 and cooperate therewith when the parts are in assembled position to provide a plurality of downwardly inclined closely associated spray orifices 23. This member 20 is centered by the peripheral edge of the flange 13 and is held in assembled relation with the member 7 by the member 9 in the form of an annular clamping ring having a threaded portion 24 engaging the thread 15 and a flat top portion 25 engageable with the bottom side of the ring 8. This ring is provided with openings 26 in fillets thereof for the engagement of a suitable spanner wrench.

A pipe fitting 27 is formed at its upper end 28 to provide a renewable valve seat and is threaded at 29 to removably engage the threaded opening 16 of the part 7, a washer 30 being interposed between said part 7 and a shoulder 31 on said fitting. This fitting has an enlarged bore 32 at its lower end threaded to receive the washing fluid supply pipe 33. This fitting 27 when screwed into the base portion 10 acts as a hold-down means for bringing the member 7 against the upper end of the standard 34.

A flat face rubber or suitable composition valve 35 cooperates with the seat 28 and is removably secured to its stem 36 by a screw 37, said stem having a threaded portion 38 engaging the threaded bore 39 of the boss 17, the upper end 40 of said stem working through a stuffing box 41 of known construction, the exposed end of said stem carrying an operating handle 42. Part of the stem is shown enclosed by a tubular member 43 which is used to carry a soap tray 44. An additional tubular member 43' is also shown interposed between the member 7 and the tray 44.

The head engages the hollow tubular standard 34 whose upper end seats in a recess formed by the flange 45 in the part 10, and at some point below this end it is provided with an annular stop shoulder 46 to limit the movement of the member 9 when it is moved to release the nozzle ring member 8 so as to prevent the clamping ring 9 falling upon the enameled or other finished surface of the bowl beneath it.

With this construction, the turning of the stem 36 in the proper direction raises the valve 35 from its seat 28 and allows water to pass

into the interior of the body 7 and thence through the orifices 23 in a downwardly inclined direction at a greater or less velocity depending upon the amount of opening of the valve 35 and in an annularly spaced series of small streams of relatively low velocity since the chamber in the body acts to reduce the pressure from that in the supply pipe 33. If the orifices 23 should tend to clog, then the clamping ring 9 may be loosened so that the ring 8 may be dropped down to an open position in which ready access is had to the parts forming the orifice and to the interior of the body. It is also to be noted that by forming the part 20 as a separable ring, the notches 22 may be provided on only a part of the periphery thereof and be positioned in any angular position desired relative to the body 7 and clamped in this position by the ring 9 so that the device may be used on semi-circular or sectional head washfountains. Furthermore, the side walls of the recessed portion 14 act to deflect the water, issuing from the inlet fitting 21, from a straight path through the orifices 23 so as to prevent water spurting out beyond the confines of the basin.

In some forms of washfountains in order to conserve the supply of water the sprayhead is formed of a plurality of outlet compartments, each controlled by its own valve, and Figs. 4, 5, and 6 show the invention applied to this form of fountain.

In these figures the numeral 47 designates the main body portion, 48 the nozzle ring member, and 49 the clamping ring.

The body portion 47 has a centrally disposed inlet chamber 50, and a plurality of annularly disposed outer chambers 51, separated from each other by the radial partitions 52 and having valve controlled inlet fittings 53 connecting them with the chamber 50 which is supplied with water from a central supply pipe 54.

Each control valve 55 has a head 56 engageable with a seat on the fitting 53 to close off the outer from the inner chamber, and its stem is threaded to engage the threaded bore 57 of the plug fitting 58 which has a detachable screw thread connection 59 with said body. The stem of the valve extends through a stuffing box 60 and carries an operating handle 61.

The body portion 47 has an annular recess formed in its bottom having a vertically disposed cylindrical wall 62 and a downwardly inclined wall 63.

The nozzle ring member 48 is formed with top and inner side walls to engage the walls 62 and 63 and is also formed to provide recessed segmental sections 64 with partition portions 65 between the sections. The top portions of the sections 64 are provided with a plurality of nozzle forming notches 66 which have the same inclination as the wall 63 and cooperate therewith when the parts are in assembled position to provide a plurality of downwardly inclined closely associated spray orifices 67 for each of the outer chamber portions of the head.

The nozzle ring member 48 is held in assembled relation with the body 47 by the clamping ring 49 which has a threaded portion 68 engaging the threaded lower end 69 of said body and a flat top portion 70 engageable with the bottom side of the ring member 48.

The top of the body 47 has a centrally disposed threaded opening 71 closed by a pipe plug 72 except when the inlet pipe 54 is connected thereto in case the supply comes in from above the

sprayhead. The exterior sides of the opening 71 are threaded to receive a tubular member 73 which is used to carry a soap tray 74. The head is mounted on a standard 75 in a manner similar to the mounting of the first described sprayhead on the standard 46.

With this construction, the opening of any one of the valves 56 allows water to enter the outer chamber 51 controlled thereby and thence pass through the spray openings 67 provided for that chamber and directing the water in a series of downwardly inclined low velocity streams into the wash basin, not shown. It is to be noted that the partition portion 65 of the ring 48 is adapted to cooperate with the partitions 52 to separate the outer chambers from each other.

I desire it to be understood that this invention it not to be limited to any particular form or arrangements of parts except in so far as such limitations are included in the claims.

What I claim as my invention is:

1. A sprayhead for washfountains comprising a body member having a chamber provided with separated wall portions, the edge of one of said wall portions being downwardly inclined, a ring member closing the space between said wall portions and rotatably shiftable relative thereto and having a surface abutting the inclined edge of said wall portion and provided with orifice forming notches and a flat base portion, the shifting of said ring member permitting angular adjustment of said notches independent of said body member, and an annular nut having a flat top portion engageable with the base portion of said ring for clamping said ring member in assembled relation relative to said body member.

2. A sprayhead for washfountains comprising separable members formed to provide a chamber having downwardly inclined peripheral spraying orifices, one of said members having spaced top and bottom walls, another of said members being a ring member movable to a cleaning position to permit flushing of said chamber and having orifice forming notches therein on its top edge and a plain base at its opposite edge, a plain clamping ring having threaded engagement with the first of said members and abutting the base of said first named ring member to secure the same in assembled relation, said ring member being rotatably adjustable to change the angular position of said notches relative to said first named member and means for introducing water into said chamber.

3. A sprayhead for washfountains comprising a body member having a central chamber and outer chamber portions, valve controlled connections between said chambers, said member having an annular recess intersecting the walls of said outer chambers, one wall of said recess being downwardly inclined, a ring member fitting in said recess and engageable with the walls of said outer chambers and provided with downwardly inclined notches cooperating with the inclined wall of said recess to form spraying orifices, means for securing said ring member in assembled relation with said body member, and means for introducing water into said central chamber.

4. A sprayhead for washfountains comprising a body member having a chamber with a water supply connection with an annular channel having an extension for one side provided with a downwardly inclined surface, a ring member closing the channel except for a surface abutting the inclined surface of said extension and provided with notches to form with said surface

a plurality of orifices, said ring member being rotatably shiftable relative to said body member to bring said notches to any desired circumferential position independent of the mounting position of said chamber, and a clamping member 5 carried by said body member and engaging the

base of said ring member to form a fluid tight joint therewith and holding the notched surface thereof in angularly adjusted position against said extension.

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